

# Cloud Bastion Host (CBH)

## API Reference

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# 1 Before You Start

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## Overview

Cloud Bastion Host (CBH) is a unified security management and control platform provided by Huawei Cloud. It provides account, authorization, authentication, and audit management services.

Before calling CBH APIs, ensure that you are familiar with CBH concepts. For details, see [Service Overview](#).

## API Calling

CBH supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For more information, see [Calling APIs](#).

## Endpoints

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

## Basic Concepts

- Account  
An account is created upon successful registration. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The domain is a payment entity and should not be used directly to perform routine management. For security purposes, create users and grant them permissions for routine management.
- User  
A user is created using a domain to use cloud services. Each 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 users. A dedicated region provides services of the same type only or for specific users.

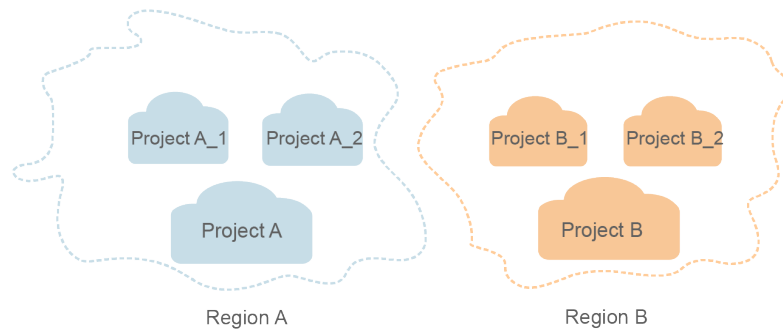
- Availability Zone (AZ)

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

- 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 create 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 enterprise project features, see [Enterprise Management User Guide](#).

## API Versions

CBH provides V1 and V2 APIs for you.

APIs of V2 are recommended. APIs of V1 are no longer maintained.

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

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

**Figure 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/v3.0/OS-USER/users
```

## Request Header

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

Common request header fields are as follows:

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

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

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

#### NOTE

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

For more information, see [AK/SK-based Authentication](#).

## Request Body

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

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

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

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

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

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

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

If all data required for the API request is available, you can send the request to call the API through [curl](#), [Postman](#), or coding.

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

### Token-based Authentication

#### NOTE

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

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

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

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

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 **ABCDEFGH...**, add **X-Auth-Token: ABCDEFGH...** to a request as follows:

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

## AK/SK-based Authentication

### NOTE

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

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

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

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

### NOTICE

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

## 2.3 Response

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

### Status Codes

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

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

### Response Header

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

If the API is used to [obtain a user token](#), the response header shown in [Figure 2-2](#) is returned.

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

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

## Response body

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

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

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

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

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

In the preceding information, **error\_code** is an error code, and **error\_msg** describes the error.

# 3 API Description

---

## 3.1 Querying AZs

### 3.1.1 Obtaining AZs Where CBH Is Available

#### Function

This API is used to query AZs where CBH is available.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

GET /v2/{project\_id}/cbs/available-zone

**Table 3-1** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-2** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

**Status code: 200**

**Table 3-3** Response body parameters

Parameter	Type	Description
availability_zone	Array of <a href="#">AvailabilityZones</a> objects	AZ information.

**Table 3-4** AvailabilityZones

Parameter	Type	Description
region_id	String	AZ ID.
id	String	AZ ID.
display_name	String	Displayed AZ name.
status	String	AZ status. <ul style="list-style-type: none"> <li>Running</li> </ul>
type	String	AZ type. <ul style="list-style-type: none"> <li>Core: core AZ</li> <li>Dedicated: dedicated AZ, which is open only to internal users.</li> </ul>

**Status code: 400**

**Table 3-5** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-6** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-7** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-8** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

List AvailableZone Info Success

```
{  
  "availability_zone": [ {
```

```

    "region_id" : "cn-north-4",
    "id" : "cn-north-4a",
    "type" : "Core",
    "display_name" : "AZ 1",
    "status" : "Running"
  }, {
    "region_id" : "cn-north-4",
    "id" : "cn-north-4b",
    "type" : "Core",
    "display_name" : "AZ 2",
    "status" : "Running"
  }, {
    "region_id" : "cn-north-4",
    "id" : "cn-north-4c",
    "type" : "Core",
    "display_name" : "AZ 3",
    "status" : "Running"
  }
}

```

## Status Codes

Status Code	Description
200	List AvailableZone Info Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.2 Quota Management

### 3.2.1 Obtaining the ECS Resource Quota Required for Creating a CBH Instance

#### Function

Check whether the ECS specifications can be used for the CBH instance in the selected region.

#### Calling Method

For details, see [Calling APIs](#).

## URI

GET /v2/{project\_id}/cbs/instance/ecs-quota

**Table 3-9** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

**Table 3-10** Query Parameters

Parameter	Mandatory	Type	Description
availability_zone	Yes	String	AZ name. For details, see "Obtaining AZs Where CBH Is Available."
resource_spec_code	Yes	String	ID of the specifications of the CBH instance to be created. Options <ul style="list-style-type: none"> <li>• <b>cbh.basic.10</b>: Standard edition - Asset 10</li> <li>• <b>cbh.enhance.10</b>: Professional edition - Asset 10</li> </ul> For details, see "Querying CBH Instance Specifications."

## Request Parameters

**Table 3-11** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

### Status code: 200

**Table 3-12** Response body parameters

Parameter	Type	Description
status_v6	String	Status of CBH specifications that support IPv6. <ul style="list-style-type: none"> <li>● <b>sellout</b>: sold out.</li> <li>● <b>normal</b>: in normal commercial use.</li> </ul>
status	String	Status of CBH specifications. <ul style="list-style-type: none"> <li>● <b>sellout</b>: sold out.</li> <li>● <b>normal</b>: in normal commercial use.</li> </ul>

### Status code: 400

**Table 3-13** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

### Status code: 401

**Table 3-14** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

### Status code: 403

**Table 3-15** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-16** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

### Example Requests

None

### Example Responses

**Status code: 200**

Get Ecs Quota Success

```
{  
  "status_v6" : "sellout",  
  "status" : "normal"  
}
```

### Status Codes

Status Code	Description
200	Get Ecs Quota Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

### Error Codes

See [Error Codes](#).

## 3.2.2 Obtaining the CBH Instance Quota

### Function

This API is used to obtain the CBH instance quota.

### Calling Method

For details, see [Calling APIs](#).

## URI

GET /v2/{project\_id}/cbs/instance/quota

**Table 3-17** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-18** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

**Status code: 200**

**Table 3-19** Response body parameters

Parameter	Type	Description
quota	Integer	The maximum number of CBH instances that can be created.
quota_used	Integer	The number of created CBH instances.

**Status code: 400**

**Table 3-20** Response body parameters

Parameter	Type	Description
error_code	String	Error code

Parameter	Type	Description
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-21** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-22** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-23** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Search Quota success

```
{  
  "quota" : 5,  
  "quota_used" : 1  
}
```

## Status Codes

Status Code	Description
200	Search Quota success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

# 3.3 Operation Management

## 3.3.1 Obtaining the CBH Instance List

### Function

This API is used to obtain the CBH instance list of the current account.

### Calling Method

For details, see [Calling APIs](#).

### URI

GET /v2/{project\_id}/cbs/instance/list

**Table 3-24** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

**Table 3-25** Query Parameters

Parameter	Mandatory	Type	Description
instance_id	No	Long	CBH instance ID. This parameter is mandatory only when you want to query details of a single instance.

## Request Parameters

**Table 3-26** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

**Status code: 200**

**Table 3-27** Response body parameters

Parameter	Type	Description
total	Integer	The total number of CBH instances.
instance	Array of <a href="#">InstanceDetail</a> objects	CBH instance list.

**Table 3-28** InstanceDetail

Parameter	Type	Description
name	String	CBH instance name.
server_id	String	ID of the server where the CBH instance is deployed.
instance_id	String	CBH instance ID.

Parameter	Type	Description
alter_permit	Boolean	Whether the CBH instance can be expanded. <ul style="list-style-type: none"> <li>• <b>true</b>: Yes</li> <li>• <b>false</b>: No</li> </ul>
enterprise_project_id	String	Project ID.
period_num	String	Number of subscription periods of a CBH instance.
start_time	String	Start time of the CBH instance, in timestamp format.
end_time	String	End time of the CBH instance, in timestamp format.
created_time	String	Time when the CBH instance was created, in UTC format.
upgrade_time	Long	Upgrade schedule of the CBH instance, in the format of timestamp.
update	String	Whether the CBH instance can be upgraded. <ul style="list-style-type: none"> <li>• <b>OLD</b>: The current version is the latest one.</li> <li>• <b>NEW</b>: Can be upgraded.</li> <li>• <b>CROSS_OS</b>: Can be upgraded to any later versions.</li> <li>• <b>ROLLBACK</b>: Can be rolled back.</li> </ul>
bastion_version	String	Current version of the CBH instance.
az_info	<b>az_info</b> object	AZ information.
status_info	<b>status_info</b> object	Status information.
resource_info	<b>resource_info</b> object	Resource information.
network	<b>network</b> object	Network information.
ha_info	<b>ha_info</b> object	Active and standby node information.

**Table 3-29** az\_info

Parameter	Type	Description
region	String	ID of the AZ where the CBH instance locates.

Parameter	Type	Description
zone	String	ID of the AZ where the CBH instance locates. (In primary/standby mode, the ID of the AZ where the primary instance locates is required.)
availability_zone_display	String	AZ where the CBH instance locates. (In primary/standby mode, the ID of the AZ where the primary instance locates is required. Name)
slave_zone	String	AZ where the standby CBH instance locates.
slave_zone_display	String	AZ where the standby CBH instance locates.

**Table 3-30** status\_info

Parameter	Type	Description
status	String	<p>CBH instance status</p> <ul style="list-style-type: none"> <li>● <b>SHOUTOFF</b>: Closed</li> <li>● <b>ACTIVE</b>: Running</li> <li>● <b>DELETING</b>: Deleting</li> <li>● <b>BUILD</b>: Creating</li> <li>● <b>DELETED</b>: Deleting</li> <li>● <b>ERROR</b>: Faulty</li> <li>● <b>HAWAIT</b>: Waiting for the standby node to be created</li> <li>● <b>FROZEN</b>: Frozen</li> <li>● <b>UPGRADING</b>: Upgrading</li> <li>● <b>UNPAID</b>: Pending Payment</li> <li>● <b>RESIZE</b>: Changing specifications</li> <li>● <b>DILATATION</b>: Expanding capacity</li> <li>● <b>HA</b>: Configuring HA</li> </ul>

Parameter	Type	Description
task_status	String	<p>CBH instance status.</p> <ul style="list-style-type: none"> <li>powering-on: Started</li> <li>powering-off: Stopped</li> <li>rebooting: Rebooting</li> <li>delete_wait: Deleting</li> <li>frozen: Frozen</li> <li>NO_TASK: Running</li> <li>unfrozen: Unfrozen</li> <li>alter: Changing</li> <li>updating: Upgrading</li> <li>configuring-ha: Configuring HA</li> <li>data-migrating: Migrating data</li> <li>rollback: Rolling back to the previous version.</li> <li>traffic-switchover: Traffic switching</li> </ul>
create_instance_status	String	<p>Statuses of the task for creating a CBH instance.</p> <ul style="list-style-type: none"> <li><b>Waiting for payment:</b> Pending payment</li> <li><b>creating-network:</b> Creating the network</li> <li><b>creating-server:</b> Creating the instance</li> <li><b>tranfering-horizontal-network:</b> Establishing the connection</li> <li><b>adding-policy-route:</b> Adding a routing policy</li> <li><b>configing-dns:</b> Configuring DNS</li> <li><b>starting-cbs-service:</b> Running</li> <li><b>setting-init-conf:</b> Initiating</li> <li><b>buying-EIP:</b> Purchasing an EIP</li> </ul>

Parameter	Type	Description
instance_status	String	CBH instance status. <ul style="list-style-type: none"> <li>• <b>building</b>: Creating</li> <li>• <b>deleting</b>: Deleting</li> <li>• <b>deleted</b>: Deleted</li> <li>• <b>unpaid</b>: Unpaid</li> <li>• <b>upgrading</b>: Upgrading</li> <li>• <b>resizing</b>: Resizing</li> <li>• <b>abnormal</b>: Abnormal</li> <li>• <b>error</b>: Faulty</li> <li>• <b>ok</b>: Normal</li> </ul>
instance_description	String	CBH instance description.
fail_reason	String	Instance creation failure causes.

**Table 3-31** resource\_info

Parameter	Type	Description
specification	String	CBH instance specifications.
order_id	String	Order ID.
resource_id	String	CBH instance ID, in the UUID format.
data_disk_size	Number	Size of the data disk for the CBH instance, in TB.
disk_resource_id	Array of strings	ID of the data disk for the CBH instance.

**Table 3-32** network

Parameter	Type	Description
vip	String	Floating IP address of the CBH instance (This field is returned when the instance is deployed in primary/standby mode.)
web_port	String	Port used for accessing the CBH instance with a web browser.
public_ip	String	EIP bound to the CBH instance.

Parameter	Type	Description
public_id	String	ID of the EIP bound to the CBH instance, in the UUID format.
private_ip	String	Private IP address of the CBH instance
vpc_id	String	ID of the VPC where the CBH instance locates.
subnet_id	String	ID of the subnet where the CBH instance locates.
security_group_id	String	ID of the Security group where the CBH instance locates.

**Table 3-33** ha\_info

Parameter	Type	Description
ha_id	String	IDs of the primary and standby instances.
instance_type	String	Instance type. The value can be: <ul style="list-style-type: none"> <li>• <b>master</b>: Primary instance</li> <li>• <b>slave</b>: Standby instance</li> </ul>

**Status code: 400**

**Table 3-34** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-35** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-36** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-37** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Cbh List Instance Success

```
{
  "total": 1,
  "instance": [ {
    "name": "CBH-e2b4",
    "server_id": "760aeee4-9916-436a-8854-837a9ae94b2b",
    "instance_id": "5473",
    "alter_permit": false,
    "enterprise_project_id": "0",
    "period_num": "1,2",
    "start_time": 1692245215000,
    "end_time": 1694966399000,
    "created_time": "2023-08-17 12:05:02.0",
    "update": false,
    "bastion_version": "3.3.49.0",
    "az_info": {
      "region": "cn-north-7",
      "zone": "cn-north-7a",
      "availability_zone_display": "AZ 1",
      "slave_zone": "cn-north-7b",
      "slave_zone_display": "AZ 2"
    },
    "status_info": {
      "status": "ACTIVE",
      "task_status": "NO_TASK",
      "create_instance_status": "NO_TASK",
      "fail_reason": "No FailReason Now",
      "instance_status": "ok",
      "instance_description": "2023-08-21 15:19:07,{\"d_usage\": \"0.30\", \"m_usage\": \"43.66\", \"c_usage\": \"1.00\", \"session_count\": \"0\""}",
    },
    "resource_info": {
```

```

"specification" : "cbh.basic.5",
"order_id" : "CS2308171141G8C14",
"resource_id" : "c7a07a7f-e5ee-49cf-8355-ae46c5a4fcf",
"data_disk_size" : 200,
"disk_resource_id" : [ ]
},
"network" : {
"vip" : "192.168.0.228",
"web_port" : "443",
"public_ip" : "100.xx.xx.1",
"public_id" : "56220ed7-0f75-4d42-85c4-013d5414c81c",
"private_ip" : "192.168.0.190",
"vpc_id" : "03211ecf-697e-4306-a7a0-6e939bf948de",
"subnet_id" : "dd08a6a9-ced7-484b-ace6-1b821854a772",
"security_group_id" : "02dcf62d-b84d-4a14-aad3-c310f2ceea55"
},
"ha_info" : {
"ha_id" : "332",
"instance_type" : "master"
}
}
}
}

```

## Status Codes

Status Code	Description
200	Cbh List Instance Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.3.2 Obtaining the Status of a CBH Instance

#### Function

This API is used to obtain the instance of CBH instances that have not been deleted.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

GET /v2/{project\_id}/cbs/instance/{server\_id}/status

**Table 3-38** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .
server_id	Yes	String	CBH instance ID, in UUID format. For details about how to obtain the value, see "Viewing CBH Instance Details" in <i>Cloud Bastion Host User Guide</i> .

## Request Parameters

**Table 3-39** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

**Status code: 200**

**Table 3-40** Response body parameters

Parameter	Type	Description
name	String	CBH instance name.

Parameter	Type	Description
status	String	CBH instance status. <ul style="list-style-type: none"> <li>● <b>POWERING_ON</b>: The instance is being started.</li> <li>● <b>POWERING_OFF</b>: The instance is being shut down.</li> <li>● <b>DELETE_WAITE</b>: This instance is waiting to be deleted.</li> <li>● <b>REBOOTING</b>: The instance is being restarting.</li> <li>● <b>RESIZE</b>: The instance is being changed.</li> <li>● <b>UPGRADING</b>: The instance is being upgraded.</li> <li>● <b>FROZEN</b>: The instance is frozen.</li> <li>● <b>ACTIVE</b>: The instance is running.</li> </ul>
server_id	String	CBH instance ID, in UUID format.

**Status code: 400**

**Table 3-41** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-42** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-43** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-44** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Search Instance Info Success

```
{  
  "name" : "cbh-test",  
  "status" : "POWERING_ON",  
  "server_id" : "e113077b-xxxx-xxxx-xxxx-be60289cd258"  
}
```

## Status Codes

Status Code	Description
200	Search Instance Info Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.3.3 Starting a CBH Instance

#### Function

This API is used to start a CBH instance.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

POST /v2/{project\_id}/cbs/instance/start

**Table 3-45** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

#### Request Parameters

**Table 3-46** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-47** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	Instance ID.

#### Response Parameters

**Status code: 200**

Start Cbh Instance Success

**Status code: 400**

**Table 3-48** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-49** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-50** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-51** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{  
  "server_id" : "c7277d87-5a0d-4cfc-a418-97acb567cf29"  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Start Cbh Instance Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.3.4 Stopping a CBH Instance

### Function

This API is used to stop a CBH instance.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/stop

**Table 3-52** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-53** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-54** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	Instance ID.

## Response Parameters

**Status code: 200**

Stop Cbh Instance Success

**Status code: 400**

**Table 3-55** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-56** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-57** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-58** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

### Example Requests

```
{  
  "server_id" : "c7277d87-5a0d-4cfc-a418-97acb567cf29"  
}
```

### Example Responses

None

### Status Codes

Status Code	Description
200	Stop Cbh Instance Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

### Error Codes

See [Error Codes](#).

## 3.3.5 Restarting a CBH Instance

### Function

This API is used to restart a CBH instance.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/reboot

**Table 3-59** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

### Request Parameters

**Table 3-60** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-61** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	CBH instance ID, in UUID format.

Parameter	Mandatory	Type	Description
reboot_type	Yes	String	Restart mode, which is case insensitive. <ul style="list-style-type: none"> <li>• <b>SOFT</b>: Common restart, stopping the corresponding VM.</li> <li>• <b>HARD</b>: Forcibly restart the VM.</li> </ul>

## Response Parameters

**Status code: 200**

Restart Cbh Instance Success

**Status code: 400**

**Table 3-62** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-63** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-64** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-65** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{  
  "server_id" : "c7277d87-5a0d-4cfc-a418-97acb567cf29",  
  "reboot_type" : "SOFT"  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Restart Cbh Instance Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.3.6 Upgrading a CBH Instance

### Function

This API is used to upgrade a CBH instance.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/upgrade

**Table 3-66** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-67** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-68** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	Instance ID.
upgrade_time	Yes	Long	Scheduled upgrade time, which must be 24 hours later than the current time.
cancel	No	Boolean	Whether to cancel the scheduled upgrade task. Once a task starts, it cannot be canceled. <ul style="list-style-type: none"> <li><b>true</b>: Cancel</li> <li><b>false</b>: No impact</li> </ul>

## Response Parameters

**Status code: 200**

Upgrade Cbh Instance Success

**Status code: 400**

**Table 3-69** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-70** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-71** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	The current version is the latest. There is no need to upgrade. The agent is not started.

**Status code: 404**

**Table 3-72** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{
  "server_id" : "c7277d87-5a0d-4cfc-a418-97acb567cf29",
  "upgrade_time" : 1702974655000
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Upgrade Cbh Instance Success
400	Bad Request
401	Unauthorized
403	The current version is the latest. There is no need to upgrade./The agent is not started.
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.3.7 Log In to a CBH Instance Console as an IAM User

### Function

This API is used to log in to a CBH instance console as an IAM user.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/login

**Table 3-73** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-74** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-75** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	Instance ID.

## Response Parameters

**Status code: 200**

**Table 3-76** Response body parameters

Parameter	Type	Description
login_url	String	CBH login link.

**Status code: 400**

**Table 3-77** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-78** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-79** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-80** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{  
  "server_id" : "c7277d87-5a0d-4cfc-a418-97acb567cf29"  
}
```

## Example Responses

**Status code: 200**

Cbh Login Instance Success

```
{  
  "login_url" : "https://x.x.x.x:443?cbhinfo=xxxx"  
}
```

## Status Codes

Status Code	Description
200	Cbh Login Instance Success

Status Code	Description
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.3.8 Resetting the admin Password of a CBH Instance

#### Function

This API is used to reset the password of user admin, which is used for logging in to the CBH instance over a web client.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

PUT /v2/{project\_id}/cbs/instance/password

**Table 3-81** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-82** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-83** Request body parameters

Parameter	Mandatory	Type	Description
new_password	Yes	String	The new password of user <b>admin</b> can contain 8 to 32 characters, including letters, digits, and special characters.
server_id	Yes	String	CBH instance ID, in UUID format.

## Response Parameters

**Status code: 200**

Reset Instance Password Success

**Status code: 400**

**Table 3-84** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-85** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-86** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-87** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{
  "new_password" : "xxxxxxxx",
  "server_id" : "6e22aced-xxxx-xxxx-xxxx-4796fbe9fc23"
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Reset Instance Password Success
400	Bad Request
401	Unauthorized

Status Code	Description
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.3.9 Resetting the Login Mode for User Admin for a CBH Instance

#### Function

This API is used to reset the login mode for user Admin for a CBH instance.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

PUT /v2/{project\_id}/cbs/instance/login-method

**Table 3-88** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-89** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-90** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	Instance ID.

## Response Parameters

**Status code: 200**

Reset Instance LoginMethod Success

**Status code: 400**

**Table 3-91** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-92** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

### Status code: 403

**Table 3-93** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

### Status code: 404

**Table 3-94** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{  
  "server_id" : "c7277d87-5a0d-4cfc-a418-97acb567cf29"  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Reset Instance LoginMethod Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.3.10 Obtaining an O&M URL

### Function

This API is used to obtain an O&M URL.

### Calling Method

For details, see [Calling APIs](#).

### URI

GET /v2/{project\_id}/cbs/instance/get-om-url

**Table 3-95** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

**Table 3-96** Query Parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	ID of the server where the CBH instance is deployed.
ip_address	Yes	String	IP address of the server managed by the CBH instance.
host_account_name	Yes	String	Account that the managed server belongs to.

## Request Parameters

**Table 3-97** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

Status code: 200

**Table 3-98** Response body parameters

Parameter	Type	Description
state	String	Link acquisition status. <ul style="list-style-type: none"> <li>• <b>SUCCESS(0)</b>: successful. If the status is not <b>SUCCESS</b>, the request fails, and an error code and description need to be displayed.</li> <li>• <b>IAM_USER_CONFLICT(1016)</b>: IAM user conflict.</li> <li>• <b>HOST_NOT_MANAGE(1)</b>: The host is not managed.</li> <li>• <b>HOST_ACCOUNT_NOT_EXIST(553)</b>: The host account is unavailable.</li> <li>• <b>IAM_USER_NO_PERMISSION(901)</b>: The IAM user does not have the permission to operate the host.</li> <li>• <b>CUR_VERSION_NOT_SUPPORT_OPERATION(9001)</b>: The operation is not supported by the current service version.</li> <li>• <b>INS_WHITE_LIST_INITIALIZING(9002)</b>: The instance whitelist is being initialized. Try again later.</li> <li>• <b>UNKNOWN_ERROR(9003)</b>: unknown error</li> </ul>

Parameter	Type	Description
description	String	Message displayed when the task for obtaining an URL fails.
login_url	String	ECS O&M login address

**Status code: 400**

**Table 3-99** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-100** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-101** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-102** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Get HOST O&M URL Success

```
{  
  "state": "SUCCESS",  
  "login_url": "xxxxxx"  
}
```

## Status Codes

Status Code	Description
200	Get HOST O&M URL Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.3.11 Deleting a Faulty CBH Instance

#### Function

This API is used to delete a faulty CBH instance.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

DELETE /v2/{project\_id}/cbs/instance

**Table 3-103** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

**Table 3-104** Query Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	Long	ID of the faulty CBH instance you want to delete.

## Request Parameters

**Table 3-105** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

**Status code: 200**

Delete Cbh Instance Success

**Status code: 400**

**Table 3-106** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-107** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-108** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-109** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

None

## Status Codes

Status Code	Description
200	Delete Cbh Instance Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.3.12 Changing a CBH Instance

### Function

This API is used to change a CBH instance.

### Calling Method

For details, see [Calling APIs](#).

### URI

PUT /v2/{project\_id}/cbs/instance

**Table 3-110** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

### Request Parameters

**Table 3-111** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-112** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	CBH instance ID, in UUID format.
new_resource_spec_code	No	String	ID of the specifications of the CBH instance to be changed. <ul style="list-style-type: none"> <li>• <b>cbh.basic.50</b></li> <li>• <b>cbh.enhance.50</b></li> </ul> For details, see "Querying CBH Instance Specifications."
attach_disk_size	No	Integer	Additional disk size. Unit: TB <b>NOTE</b> Note: The size of the additional disk and the built-in disk cannot exceed 300 TB.
is_auto_pay	No	Integer	Whether an order is automatically paid from your Huawei Cloud account. <ul style="list-style-type: none"> <li>• <b>1</b>: Yes. (Discounts and coupons are automatically selected. The fee will be automatically deducted from your Huawei Cloud account.) If the automatic payment fails, an unpaid order will be generated, and you need to manually complete the payment. (During manual payment, you can still modify the discounts and coupons that were automatically selected.)</li> <li>• <b>0</b>: No. (The customer needs to manually pay for the bill. Discounts and coupons can be used.)</li> </ul> The default value is <b>0</b> .

## Response Parameters

Status code: 200

**Table 3-113** Response body parameters

Parameter	Type	Description
order_id	String	Order ID.

**Status code: 400**

**Table 3-114** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-115** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-116** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-117** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{  
  "server_id" : "xxxxxx",  
  "new_resource_spec_code" : "cbh.basic.10",  
  "attach_disk_size" : 1,  
  "is_auto_pay" : 1  
}
```

## Example Responses

**Status code: 200**

Create Alter Task Success

```
{  
  "order_id" : "CS22xxx82xx5AssGxxx"  
}
```

## Status Codes

Status Code	Description
200	Create Alter Task Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.3.13 Rolling Back a CBH Instance

#### Function

This API is used to roll back a CBH instance after an upgrade.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

POST /v2/{project\_id}/cbs/instance/rollback

**Table 3-118** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-119** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-120** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	ID of the instance you want to roll back.

## Response Parameters

**Status code: 200**

Upgrade Rollback Cbh Instance Success

**Status code: 400**

**Table 3-121** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-122** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-123** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-124** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{
  "server_id" : "e113077b-xxxx-xxxx-xxxx-be60289cd258"
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Upgrade Rollback Cbh Instance Success
400	Bad Request
401	Unauthorized
403	Access denied.

Status Code	Description
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.3.14 Logging In to a CBH Instance Console as User admin

#### Function

This API is used to log in to a CBH instance console as user admin.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

GET /v2/{project\_id}/cbs/instances/{server\_id}/admin-url

**Table 3-125** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .
server_id	Yes	String	CBH instance ID, in UUID format. For details about how to obtain the value, see "Viewing CBH Instance Details" in <i>Cloud Bastion Host User Guide</i> .

## Request Parameters

**Table 3-126** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

**Status code: 200**

**Table 3-127** Response body parameters

Parameter	Type	Description
admin_url	String	URL for logging in to a CBH instance as user admin.

**Status code: 400**

**Table 3-128** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-129** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-130** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-131** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Cbh Login Instance admin Success

```
{  
  "admin_url" : "https://x.x.x.x:443?cbhinfo=xxxx"  
}
```

## Status Codes

Status Code	Description
200	Cbh Login Instance admin Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.3.15 Changing the Type of a Single-Node CBH Instance

### Function

This API is used to change the type of a single-node CBH instance.

### Calling Method

For details, see [Calling APIs](#).

### URI

PUT /v2/{project\_id}/cbs/instance/type

**Table 3-132** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

**Table 3-133** Query Parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	Instance ID.
availability_zone	No	String	AZ name. For details, see "Obtaining AZs Where CBH Is Available."

Parameter	Mandatory	Type	Description
is_auto_pay	No	Integer	<p>Whether an order is automatically paid from your Huawei Cloud account.</p> <ul style="list-style-type: none"> <li>• <b>1</b>: Yes. (Discounts and coupons are automatically selected. The fee will be automatically charged to your Huawei Cloud account.) If the automatic payment fails, an unpaid order will be generated, and you need to manually complete the payment. (During the manual payment, you can still modify the discounts and coupons that were automatically selected.)</li> <li>• <b>0</b>: No. (You need to manually pay for the bill. Discounts and coupons can be used.)</li> </ul> <p>The default value is <b>0</b>.</p>

## Request Parameters

**Table 3-134** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	<p>User token.</p> <p>You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header.</p> <p>For details, see <a href="#">Obtaining a User Token</a>.</p>

## Response Parameters

**Status code: 200**

**Table 3-135** Response body parameters

Parameter	Type	Description
order_id	String	Order ID.

**Status code: 400**

**Table 3-136** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-137** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-138** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-139** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Change Single-Node Instance type to HA success

```
{  
  "order_id" : "CS22xxx82xx5AssGxxx"  
}
```

## Status Codes

Status Code	Description
200	Change Single-Node Instance type to HA success
400	Bad Request
401	Unauthorized
403	Access denied.
404	Not Found

## Error Codes

See [Error Codes](#).

# 3.4 Lifecycle Management

## 3.4.1 Creating a CBH Instance

### Function

Creating a CBH Instance

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance

**Table 3-140** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-141** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-142** Request body parameters

Parameter	Mandatory	Type	Description
specification	Yes	String	ID of the specifications of the CBH instance to be created. Options: <ul style="list-style-type: none"> <li>• <b>cbh.basic.50</b></li> <li>• <b>cbh.enhance.50</b></li> </ul> For details, see "Querying CBH Instance Specifications."
instance_name	Yes	String	CBH instance name. Value range: It can contain 1 to 64 characters, including only letters, digits, underscores (_), and hyphens (-). Example: CBH-6b8e

Parameter	Mandatory	Type	Description
password	Yes	String	<p>Password for logging in to the CBH instance.</p> <p>The password can contain 8 to 32 characters, excluding <b>amdin</b>, <b>nidma</b> and their uppercase letters. The password must contain at least three types of the following characters: uppercase letters, lowercase letters, digits, and special characters (!@\$%^&amp;_-=+[{ }];,./?~#*). The password cannot contain more than two consecutive identical characters (case-sensitive).</p>
region	Yes	String	<p>ID of the site for the CBH instance.</p> <p>For details, see "Querying CBH Instance Specifications."</p>
availability_zone	Yes	String	<p>Name of the AZ for the CBH instance. (For primary/standby instances, you need to specify the AZ where you want the primary host to be deployed.)</p> <p>For details, see "Obtaining AZs Where CBH Is Available."</p>
slave_availability_zone	No	String	<p>Name of the AZ for the standby CBH host. (This parameter is not required for single-node instances.)</p> <p>For details, see "Obtaining AZs Where CBH Is Available."</p>
charging_mode	Yes	Integer	<p>Billing mode.</p> <ul style="list-style-type: none"> <li>• <b>0</b>: yearly/monthly billing mode.</li> </ul>
period_type	No	Integer	<p>Subscription period type. (This parameter is mandatory for yearly/monthly billing mode.)</p> <ul style="list-style-type: none"> <li>• <b>2</b>: month</li> <li>• <b>3</b>: year</li> </ul>

Parameter	Mandatory	Type	Description
period_num	No	Integer	<p>Number of subscription periods. (This parameter is mandatory for yearly/monthly billing mode.)</p> <ul style="list-style-type: none"> <li>• If <b>period_type</b> is set to <b>2</b> (month), the value ranges from <b>1</b> to <b>9</b>.</li> <li>• If <b>period_type</b> is set to <b>3</b> (year), the value ranges from <b>1</b> to <b>10</b>.</li> </ul>
is_auto_renew	No	Integer	<p>Whether auto-renewal is enabled.</p> <ul style="list-style-type: none"> <li>• <b>1</b>: Auto-renewal is enabled.</li> <li>• <b>0</b>: Auto-renewal is disabled.</li> </ul> <p>The default value is <b>0</b>.</p>
is_auto_pay	No	Integer	<p>Whether an order is automatically paid from your Huawei Cloud account.</p> <ul style="list-style-type: none"> <li>• <b>1</b>: Yes. (Discounts and coupons are automatically selected. The fee will be automatically deducted from your Huawei Cloud account.) If the automatic payment fails, an unpaid order will be generated, and you need to manually complete the payment. (During manual payment, you can still modify the discounts and coupons that were automatically selected.)</li> <li>• <b>0</b>: No. (The customer needs to manually pay for the bill. Discounts and coupons can be used.)</li> </ul> <p>The default value is <b>0</b>.</p>
network	Yes	<a href="#">NetworkInfo Create</a> object	The network information required for changing the VPC the CBH instance belongs to.
ipv6_enable	No	Boolean	<p>Whether the CBH instance supports IPv6 addresses.</p> <p>The default value is <b>false</b>.</p>

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID. The default value is <b>0</b> .
attach_disk_size	No	Integer	Additional disk size. Unit: TB The total size of the additional disk and the built-in disk cannot exceed 300 TB.
tags	No	Array of <b>ResourceTag</b> objects	Tag information.

**Table 3-143** NetworkInfoCreate

Parameter	Mandatory	Type	Description
vpc_id	Yes	String	ID of the VPC to which the ECS belongs. The value is in UUID format.  You can obtain the VPC ID from the management console or by following the instructions provided in "Querying VPCs" in <i>Virtual Private Cloud API Reference</i> . Example: 03211ecf-xxxx-4306-xxxx-6e939bfxxxxx
subnet_id	Yes	String	Subnet ID, which consists of letters, digits, and underscores (_).
public_ip	Yes	<b>PublicIp</b> object	EIP bound to the CBH instance. The value can be null.
security_groups	Yes	Array of <b>SecurityGroup</b> objects	Security group information.
private_ip	No	<b>PrivateIp</b> object	EIP bound to the CBH instance.

**Table 3-144** PublicIp

Parameter	Mandatory	Type	Description
id	No	String	ID of the EIP.

Parameter	Mandatory	Type	Description
public_eip	No	String	Elastic IP address.

**Table 3-145** SecurityGroup

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the security group that the CBH instance belongs to. The value consists of letters, digits, and underscores (_).

**Table 3-146** Privatelp

Parameter	Mandatory	Type	Description
ip	Yes	String	Private IP address.
slave_ip	No	String	Private IP address of standby instance.
floating_ip	No	String	Floating IP address.

**Table 3-147** ResourceTag

Parameter	Mandatory	Type	Description
key	Yes	String	Tag key. The value can contain up to 128 characters.
value	Yes	String	Value. Each value can contain a maximum of 255 characters.

## Response Parameters

**Status code: 200**

**Table 3-148** Response body parameters

Parameter	Type	Description
order_id	String	Order ID.

**Status code: 400**

**Table 3-149** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-150** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-151** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-152** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{
  "specification" : "cbh.basic.50",
  "instance_name" : "CBH-155f",
  "password" : "1xxx6xxxx",
  "region" : "cn-north-4",
  "availability_zone" : "cn-north-4a",
  "slave_availability_zone" : "cn-north-4a",
  "charging_mode" : 0,
  "period_type" : 2,
  "period_num" : 1,
}
```

```
"is_auto_renew" : 0,  
"is_auto_pay" : 0,  
"ipv6_enable" : false,  
"enterprise_project_id" : "0",  
"attach_disk_size" : 1,  
"tags" : [ {  
  "key" : "key",  
  "value" : "value"  
} ],  
"network" : {  
  "vpc_id" : "279e8217-xxxx-4d83-xxxx-b8f14d47170b",  
  "subnet_id" : "a86217e6-xxxx-4803-xxxx-b57da681xxxx",  
  "private_ip" : {  
    "ip" : "123.xxx.41.xx",  
    "slave_ip" : "123.xxx.41.xx",  
    "floating_ip" : "123.xxx.41.xx"  
  },  
  "public_ip" : {  
    "id" : "cfcab481-xxxx-4e23-xxxx-d6cdd0efxxxx",  
    "public_eip" : "123.xxx.41.xx"  
  },  
  "security_groups" : [ {  
    "id" : "1e10bc4f-xxxx-4452-xxxx-8ddb4348xxx"  
  } ]  
}
```

## Example Responses

**Status code: 200**

Cbh Create Instance Success

```
{  
  "order_id" : "CS22xxx82xx5AssGxxx"  
}
```

## Status Codes

Status Code	Description
200	Cbh Create Instance Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.5 Network Management

## 3.5.1 Binding an EIP to a CBH Instance

### Function

This API is used to bind an EIP to a CBH instance.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/{server\_id}/eip/bind

**Table 3-153** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .
server_id	Yes	String	CBH instance ID, in UUID format. For details about how to obtain the value, see "Viewing CBH Instance Details" in <i>Cloud Bastion Host User Guide</i> .

### Request Parameters

**Table 3-154** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-155** Request body parameters

Parameter	Mandatory	Type	Description
publicip_id	Yes	String	EIP ID, in UUID format.

## Response Parameters

**Status code: 200**

Install Instance Eip Success

**Status code: 400**

**Table 3-156** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-157** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-158** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-159** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

### Example Requests

```
{  
  "publicip_id" : "59f0dd3c-xxxx-xxxx-xxxx-9ffb8ea5f0cd"  
}
```

### Example Responses

None

### Status Codes

Status Code	Description
200	Install Instance Eip Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

### Error Codes

See [Error Codes](#).

## 3.5.2 Unbinding an EIP from a CBH Instance

### Function

This API is used to unbind an EIP from a CBH instance.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/{server\_id}/eip/unbind

**Table 3-160** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .
server_id	Yes	String	CBH instance ID, in UUID format. For details about how to obtain the value, see "Viewing CBH Instance Details" in <i>Cloud Bastion Host User Guide</i> .

## Request Parameters

**Table 3-161** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-162** Request body parameters

Parameter	Mandatory	Type	Description
publicip_id	Yes	String	EIP ID, in UUID format.

## Response Parameters

**Status code: 200**

Uninstall Instance Eip Success

**Status code: 400**

**Table 3-163** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-164** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-165** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-166** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{
  "publicip_id" : "59f0dd3c-xxxx-xxxx-xxxx-9ffb8ea5f0cd"
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Uninstall Instance Eip Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

### 3.5.3 Changing the Security Group for a CBH Instance

#### Function

This API is used to change the security group for a CBH instance.

#### Calling Method

For details, see [Calling APIs](#).

#### URI

PUT /v2/{project\_id}/cbs/instance/{server\_id}/security-groups

**Table 3-167** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .
server_id	Yes	String	CBH instance ID, in UUID format. For details about how to obtain the value, see "Viewing CBH Instance Details" in <i>Cloud Bastion Host User Guide</i> .

## Request Parameters

**Table 3-168** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-169** Request body parameters

Parameter	Mandatory	Type	Description
security_groups	Yes	Array of strings	Security group information.

## Response Parameters

**Status code: 200**

Change Instance SecurityGroups Success

**Status code: 400**

**Table 3-170** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-171** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-172** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-173** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

### Example Requests

```
{  
  "security_groups" : [ "4967c8c3-xxxx-xxxx-xxxx-ee9638683471", "a78a0603-xxxx-xxxx-xxxx-  
e1313589137e" ]  
}
```

### Example Responses

None

### Status Codes

Status Code	Description
200	Change Instance SecurityGroups Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

### Error Codes

See [Error Codes](#).

## 3.5.4 Changing the VPC A CBH Instance Belongs To

### Function

This API is used to change the VPC a CBH instance belongs to.

### Calling Method

For details, see [Calling APIs](#).

### URI

PUT /v2/{project\_id}/cbs/instance/vpc

**Table 3-174** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

### Request Parameters

**Table 3-175** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-176** Request body parameters

Parameter	Mandatory	Type	Description
server_id	Yes	String	ID of the instance for which you want to change the VPC it belongs to.
network	Yes	<a href="#">NetworkInfo Create</a> object	The network information required for changing the VPC the CBH instance belongs to.

**Table 3-177** NetworkInfoCreate

Parameter	Mandatory	Type	Description
vpc_id	Yes	String	ID of the VPC to which the ECS belongs. The value is in UUID format.  You can obtain the VPC ID from the management console or by following the instructions provided in "Querying VPCs" in <i>Virtual Private Cloud API Reference</i> .  Example: 03211ecf-xxxx-4306-xxxx-6e939bfxxxxx
subnet_id	Yes	String	Subnet ID, which consists of letters, digits, and underscores (_).
public_ip	Yes	<b>PublicIp</b> object	EIP bound to the CBH instance. The value can be null.
security_groups	Yes	Array of <b>SecurityGroup</b> objects	Security group information.
private_ip	No	<b>PrivateIp</b> object	EIP bound to the CBH instance.

**Table 3-178** PublicIp

Parameter	Mandatory	Type	Description
id	No	String	ID of the EIP.
public_eip	No	String	Elastic IP address.

**Table 3-179** SecurityGroup

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the security group that the CBH instance belongs to. The value consists of letters, digits, and underscores (_).

**Table 3-180** Privatelp

Parameter	Mandatory	Type	Description
ip	Yes	String	Private IP address.
slave_ip	No	String	Private IP address of standby instance.
floating_ip	No	String	Floating IP address.

## Response Parameters

**Status code: 200**

Switch Cbh Instance Vpc Success

**Status code: 400**

**Table 3-181** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-182** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-183** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-184** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

### Example Requests

```
{
  "server_id" : "0f2c69d1-e420-4ae1-9b43-ab8699883678",
  "network" : {
    "vpc_id" : "760071b3-34a3-4359-bf18-3af24e77c1cf",
    "subnet_id" : "90b6be71-e72a-4d5a-8838-5924bce3c583",
    "private_ip" : {
      "ip" : "192.168.0.3",
      "slave_ip" : null,
      "floating_ip" : null
    },
    "public_ip" : null,
    "security_groups" : [ {
      "id" : "21321412321321321"
    } ]
  }
}
```

### Example Responses

None

### Status Codes

Status Code	Description
200	Switch Cbh Instance Vpc Success
400	Bad Request
401	Unauthorized
403	Access denied.
404	Not Found

### Error Codes

See [Error Codes](#).

## 3.6 Agency Authorization

## 3.6.1 Authorizing CBH

### Function

This API is used to authorize CBH.

### Calling Method

For details, see [Calling APIs](#).

### URI

GET /v2/{project\_id}/cbs/agency/authorization

**Table 3-185** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

### Request Parameters

**Table 3-186** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

### Response Parameters

Status code: 200

**Table 3-187** Response body parameters

Parameter	Type	Description
authorization	<a href="#">AgencyAuthorizeInfoRsp</a> object	Returned object of the CBH agencies.

**Table 3-188** AgencyAuthorizeInfoRsp

Parameter	Type	Description
csms	Boolean	CSMS authorization information.
kms	Boolean	KMS authorization information.

**Status code: 400**

**Table 3-189** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-190** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-191** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-192** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

CBH authorization details queried

```
{  
  "authorization" : {  
    "csms" : true,  
    "kms" : true  
  }  
}
```

## Status Codes

Status Code	Description
200	CBH authorization details queried
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.6.2 Creating or Canceling an Agency Authorization for CBH.

### Function

This API is used to create or cancel an agency authorization for CBH.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/agency/authorization

**Table 3-193** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-194** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-195** Request body parameters

Parameter	Mandatory	Type	Description
authorization	Yes	<a href="#">AgencyAuthorizeInfo</a> object	Request object for setting CBH agencies for Cloud Secret Management Service (CSMS) and Key Management Service (KMS). Either KMS or CSMS must be specified.

**Table 3-196** AgencyAuthorizeInfo

Parameter	Mandatory	Type	Description
csms	No	Boolean	Credential management permission information.
kms	No	Boolean	Key management permission information.

## Response Parameters

### Status code: 200

Authorize Csms And Kms Success

### Status code: 400

Table 3-197 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

### Status code: 401

Table 3-198 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

### Status code: 403

Table 3-199 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

### Status code: 404

Table 3-200 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{  
  "authorization" : {
```

```
"csms" : true  
}  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
200	Authorize Csms And Kms Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

# 3.7 Label Management

## 3.7.1 Querying Resource Tags of an Account in a Project

### Function

This API is used to query the resource tags of an account in a project.

### Calling Method

For details, see [Calling APIs](#).

### URI

GET /v2/{project\_id}/cbs/instance/tags

**Table 3-201** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-202** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

Status code: 200

**Table 3-203** Response body parameters

Parameter	Type	Description
tags	Array of <a href="#">Tags</a> objects	Tag list.

**Table 3-204** Tags

Parameter	Type	Description
key	String	The tag key. <ul style="list-style-type: none"> <li>A key can contain 1 to 128 characters. It cannot be left blank. UTF-8 letters, digits, spaces, and the following characters are allowed: <code>_ . :=+ - @</code>. <b>sys</b> is reserved as the prefix of system tags and cannot be used by users. Recommended regular expression: <code>^((?!sys)[\p{L}\p{Z}]{1,128} _\.:=+[-@]*)\$.c</code></li> </ul>

Parameter	Type	Description
values	Array of strings	<p>The tag value list.</p> <ul style="list-style-type: none"> <li>Length: 0 to 255 characters</li> <li>UTF-8 letters, digits, spaces, and the following characters are allowed: _ . :/=+-@. Recommended regular expression: ^([\p{L}\p{Z}\p{N}_.:/=+-@]*)\$. The tag value can be empty or null. The predefined tag value cannot be empty.</li> </ul>

**Status code: 400**

**Table 3-205** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-206** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-207** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-208** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Show Project Tags Success

```
{  
  "tags" : [ {  
    "key" : "cbh-test",  
    "values" : [ "test1", "test2" ]  
  }, {  
    "key" : "cbh-test1",  
    "values" : [ "test3", "test4" ]  
  } ]  
}
```

## Status Codes

Status Code	Description
200	Show Project Tags Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.7.2 Querying the Tag Information of a CBH Instance

### Function

This API is used to query the tag information of a CBH instance.

## Calling Method

For details, see [Calling APIs](#).

## URI

GET /v2/{project\_id}/cbs/instance/{resource\_id}/tags

**Table 3-209** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .
resource_id	Yes	String	Resource ID. Obtain its value by calling the list API.

## Request Parameters

**Table 3-210** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

Status code: 200

**Table 3-211** Response body parameters

Parameter	Type	Description
tags	Array of <a href="#">ResourceTag</a> objects	Tag list.

**Table 3-212** ResourceTag

Parameter	Type	Description
key	String	Tag key. The value can contain up to 128 characters.
value	String	Value. Each value can contain a maximum of 255 characters.

**Status code: 400**

**Table 3-213** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-214** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-215** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-216** Response body parameters

Parameter	Type	Description
error_code	String	Error code

Parameter	Type	Description
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

Show ResourceIdTags Success

```
{  
  "tags": [ {  
    "key": "1",  
    "value": "2"  
  } ]  
}
```

## Status Codes

Status Code	Description
200	Show ResourceIdTags Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.7.3 Counting the Number of Instances with a Specified Tag

### Function

This API is used to count the number of instances with a specified tag.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/count

**Table 3-217** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-218** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-219** Request body parameters

Parameter	Mandatory	Type	Description
without_any_tag	No	Boolean	Specifies any tag that is not contained. If this parameter is set to <b>true</b> , all resources without tags are queried. In this case, the tags, tags_any, not_tags, and not_tags_any fields are ignored.

Parameter	Mandatory	Type	Description
tags	No	Array of <b>Tags</b> objects	<p>The resources to be queried contain tags listed in <b>tags</b>. Each instance to be queried contains a maximum of 50 keys. Each tag key can have a maximum of 10 tag values. The tag value corresponding to each tag key can be an empty array but the structure cannot be missing.</p> <ul style="list-style-type: none"> <li>• Each tag key and each value of the same tag key must be unique.</li> <li>• Resources containing all the specified tags are returned. Keys are in the AND relationship and values in each key-value structure are in the OR relationship.</li> <li>• If no tag is specified, all resources are returned.</li> </ul>
tags_any	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• The instances to be queried contain any tag listed in this field. Each instance to be queried contains a maximum of 50 keys. Each tag key has a maximum of 10 tag values.</li> <li>• Each tag value can be an empty array but the structure cannot be missing. Each tag key and each value of the same tag key must be unique.</li> <li>• Resources with any tag listed in this field will be returned. Keys in this list are in the OR relationship and values in each key-value structure are also in the OR relationship.</li> <li>• If no filtering condition is specified, full data is returned.</li> </ul>

Parameter	Mandatory	Type	Description
not_tags	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• The instances to be queried do not contain any tag listed in this field. Each instance to be queried contains a maximum of 50 keys. Each tag key has a maximum of 10 tag values.</li> <li>• Each tag value can be an empty array but the structure cannot be missing. Each tag key and each value of the same tag key must be unique.</li> <li>• Resources without the tags listed in this field will be returned. Keys are in the AND relationship and values in each key-value structure are in the OR relationship.</li> <li>• If no filtering condition is specified, full data is returned.</li> </ul>
not_tags_any	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• The resources to be queried do not contain any tag listed in this field. Each resource to be queried contains a maximum of 50 keys. Each tag key can have a maximum of 10 tag values.</li> <li>• Each tag value can be an empty array but the structure cannot be missing. Each tag key and each value of the same tag key must be unique.</li> <li>• Resources without any tag listed in this field will be returned. Keys are in the OR relationship and values in each key-value structure are also in the OR relationship.</li> <li>• If no filtering condition is specified, full data is returned.</li> </ul>

Parameter	Mandatory	Type	Description
sys_tags	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• Only users with the permission <b>op_service</b> can use this field to filter resources.</li> <li>• Currently, TMS can invoke only one tag structure.</li> <li>• <b>key:</b> <b>_sys_enterprise_project_id</b></li> <li>• <b>value:</b> enterprise project ID list</li> <li>• Currently, each key can contain only one value for calling by TMS. <b>0</b> indicates the default enterprise project.</li> <li>• <b>sys_tags</b> and tenant tag filtering conditions (<b>without_any_tag</b>, <b>tags</b>, <b>tags_any</b>, <b>not_tags</b>, and <b>not_tags_any</b>) cannot be used at the same time.</li> <li>• If <b>sys_tags</b> is not used, resources are filtered by <b>tag</b>. If no tag filtering condition is specified, all data will be returned.</li> </ul>

Parameter	Mandatory	Type	Description
matches	No	Array of <b>Match</b> objects	<ul style="list-style-type: none"> <li>Search field. <b>key</b> indicates the field to be matched, for example, <b>resource_name</b>.</li> <li><b>value</b>: indicates the value to be matched. The key is a fixed dictionary value and cannot be a duplicate key or unsupported key.</li> <li>Check whether fuzzy match is required based on the key value. For example, if key is set to <b>resource_name</b>, fuzzy search (case-insensitive) is performed by default. If <b>value</b> is empty, exact match is performed. Most services do not have resources without names. In this case, an empty list is returned.</li> <li><b>resource_id</b>: exact match is used. Only <b>resource_name</b> is supported currently. More fields will be supported later.</li> </ul>

**Table 3-220** Tags

Parameter	Mandatory	Type	Description
key	Yes	String	<p>The tag key.</p> <ul style="list-style-type: none"> <li>A key can contain 1 to 128 characters. It cannot be left blank. UTF-8 letters, digits, spaces, and the following characters are allowed: <code>_ . :=+ - @</code>. <b>sys</b> is reserved as the prefix of system tags and cannot be used by users. Recommended regular expression: <code>^((?!sys)[\p{L}\p{Z}\p{N}_:=+\-@]*)\$.c</code></li> </ul>

Parameter	Mandatory	Type	Description
values	Yes	Array of strings	<p>The tag value list.</p> <ul style="list-style-type: none"> <li>Length: 0 to 255 characters</li> <li>UTF-8 letters, digits, spaces, and the following characters are allowed: <code>_ . :/=+-@</code>. Recommended regular expression: <code>^([\p{L}\p{Z}\p{N}_:/=+-@]*)\$</code>. The tag value can be empty or null. The predefined tag value cannot be empty.</li> </ul>

Table 3-221 Match

Parameter	Mandatory	Type	Description
key	Yes	String	The tag key. Only <b>resource_name</b> is supported currently. More options will be available later.
value	Yes	String	The tag value. It can contain a maximum of 255 Unicode characters. The character set range is not verified.

## Response Parameters

Status code: 200

Table 3-222 Response body parameters

Parameter	Type	Description
total_count	Integer	Total records.

Status code: 400

Table 3-223 Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-224** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-225** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-226** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{
  "matches": [ {
    "key": "resource_name",
    "value": "resource1"
  } ],
  "not_tags": [ {
    "key": "key1",
    "values": [ "*"value1", "value2" ]
  } ],
  "tags": [ {
    "key": "key1",
    "values": [ "*"value1", "value2" ]
  } ],
  "tags_any": [ {
    "key": "key1",
    "values": [ "value1", "value2" ]
  } ],
  "not_tags_any": [ {
    "key": "key1",
    "values": [ "value1", "value2" ]
  } ],
  "sys_tags": [ {
    "key": "_sys_enterprise_project_id",
```

```
"values" : [ "5aa119a8-d25b-45a7-8d1b-88e127885635" ]  
  } ]  
}
```

## Example Responses

**Status code: 200**

Show Project Tags Success

```
{  
  "total_count" : 1000  
}
```

## Status Codes

Status Code	Description
200	Show Project Tags Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

## 3.7.4 Querying Instances by Tags

### Function

This API is used to query instance by tags.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/filter

**Table 3-227** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

## Request Parameters

**Table 3-228** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .
limit	No	String	Specifies the number of records to be queried. This parameter is not available when action is set to count. If action is set to filter, the default value is 1000. The maximum value is 1000, and the minimum value is 1.
offset	No	String	Index position. This parameter is not available when <b>action</b> is set to <b>count</b> . If <b>offset</b> is set to <i>N</i> , the resource query starts from the <i>N</i> +1 piece of data. If <b>action</b> is set to <b>filter</b> , the value of <b>offset</b> is <b>0</b> by default, indicating that the query starts from the first piece of data. The <b>offset</b> value must be a number and cannot be a negative number.

**Table 3-229** Request body parameters

Parameter	Mandatory	Type	Description
without_any_tag	No	Boolean	Specifies any tag that is not contained. If this parameter is set to <b>true</b> , all resources without tags are queried.  In this case, the tags, tags_any, not_tags, and not_tags_any fields are ignored.
tags	No	Array of <b>Tags</b> objects	The resources to be queried contain tags listed in <b>tags</b> . Each instance to be queried contains a maximum of 50 keys. Each tag key can have a maximum of 10 tag values. The tag value corresponding to each tag key can be an empty array but the structure cannot be missing. <ul style="list-style-type: none"> <li>• Each tag key and each value of the same tag key must be unique.</li> <li>• Resources containing all the specified tags are returned. Keys are in the AND relationship and values in each key-value structure are in the OR relationship.</li> <li>• If no tag is specified, all resources are returned.</li> </ul>

Parameter	Mandatory	Type	Description
tags_any	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• The instances to be queried contain any tag listed in this field. Each instance to be queried contains a maximum of 50 keys. Each tag key has a maximum of 10 tag values.</li> <li>• Each tag value can be an empty array but the structure cannot be missing. Each tag key and each value of the same tag key must be unique.</li> <li>• Resources with any tag listed in this field will be returned. Keys in this list are in the OR relationship and values in each key-value structure are also in the OR relationship.</li> <li>• If no filtering condition is specified, full data is returned.</li> </ul>
not_tags	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• The instances to be queried do not contain any tag listed in this field. Each instance to be queried contains a maximum of 50 keys. Each tag key has a maximum of 10 tag values.</li> <li>• Each tag value can be an empty array but the structure cannot be missing. Each tag key and each value of the same tag key must be unique.</li> <li>• Resources without the tags listed in this field will be returned. Keys are in the AND relationship and values in each key-value structure are in the OR relationship.</li> <li>• If no filtering condition is specified, full data is returned.</li> </ul>

Parameter	Mandatory	Type	Description
not_tags_any	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• The resources to be queried do not contain any tag listed in this field. Each resource to be queried contains a maximum of 50 keys. Each tag key can have a maximum of 10 tag values.</li> <li>• Each tag value can be an empty array but the structure cannot be missing. Each tag key and each value of the same tag key must be unique.</li> <li>• Resources without any tag listed in this field will be returned. Keys are in the OR relationship and values in each key-value structure are also in the OR relationship.</li> <li>• If no filtering condition is specified, full data is returned.</li> </ul>

Parameter	Mandatory	Type	Description
sys_tags	No	Array of <b>Tags</b> objects	<ul style="list-style-type: none"> <li>• Only users with the permission <b>op_service</b> can use this field to filter resources.</li> <li>• Currently, TMS can invoke only one tag structure.</li> <li>• <b>key:</b> <b>_sys_enterprise_project_id</b></li> <li>• <b>value:</b> enterprise project ID list</li> <li>• Currently, each key can contain only one value for calling by TMS. <b>0</b> indicates the default enterprise project.</li> <li>• <b>sys_tags</b> and tenant tag filtering conditions (<b>without_any_tag</b>, <b>tags</b>, <b>tags_any</b>, <b>not_tags</b>, and <b>not_tags_any</b>) cannot be used at the same time.</li> <li>• If <b>sys_tags</b> is not used, resources are filtered by <b>tag</b>. If no tag filtering condition is specified, all data will be returned.</li> </ul>

Parameter	Mandatory	Type	Description
matches	No	Array of <b>Match</b> objects	<ul style="list-style-type: none"> <li>• Search field. <b>key</b> indicates the field to be matched, for example, <b>resource_name</b>.</li> <li>• <b>value</b>: indicates the value to be matched. The key is a fixed dictionary value and cannot be a duplicate key or unsupported key.</li> <li>• Check whether fuzzy match is required based on the key value. For example, if key is set to <b>resource_name</b>, fuzzy search (case-insensitive) is performed by default. If <b>value</b> is empty, exact match is performed. Most services do not have resources without names. In this case, an empty list is returned.</li> <li>• <b>resource_id</b>: exact match is used. Only <b>resource_name</b> is supported currently. More fields will be supported later.</li> </ul>

**Table 3-230** Tags

Parameter	Mandatory	Type	Description
key	Yes	String	<p>The tag key.</p> <ul style="list-style-type: none"> <li>• A key can contain 1 to 128 characters. It cannot be left blank. UTF-8 letters, digits, spaces, and the following characters are allowed: <code>_ . :=+ - @</code>. <b>sys</b> is reserved as the prefix of system tags and cannot be used by users. Recommended regular expression: <code>^((?!sys)[\p{L}\p{Z}\p{N}_:=+\-@]*)\$.c</code></li> </ul>

Parameter	Mandatory	Type	Description
values	Yes	Array of strings	<p>The tag value list.</p> <ul style="list-style-type: none"> <li>Length: 0 to 255 characters</li> <li>UTF-8 letters, digits, spaces, and the following characters are allowed: _ . :/=+-@. Recommended regular expression: <code>^([\p{L}\p{Z}\p{N}_:/=+-@]*)\$</code>. The tag value can be empty or null. The predefined tag value cannot be empty.</li> </ul>

**Table 3-231** Match

Parameter	Mandatory	Type	Description
key	Yes	String	The tag key. Only <b>resource_name</b> is supported currently. More options will be available later.
value	Yes	String	The tag value. It can contain a maximum of 255 Unicode characters. The character set range is not verified.

## Response Parameters

Status code: 200

**Table 3-232** Response body parameters

Parameter	Type	Description
resources	Array of <b>Resources</b> objects	Resource instance details obtained by the query mode.
total_count	Integer	Total records.

**Table 3-233** Resources

Parameter	Type	Description
resource_id	String	Instance ID.

Parameter	Type	Description
resource_detail	<a href="#">InstanceDetail</a> object	CBH instance details
tags	Array of <a href="#">ResourceTag</a> objects	Tags.
sys_tags	Array of <a href="#">ResourceTag</a> objects	sys_tags.
resource_name	String	Resource name.

**Table 3-234** InstanceDetail

Parameter	Type	Description
name	String	CBH instance name.
server_id	String	ID of the server where the CBH instance is deployed.
instance_id	String	CBH instance ID.
alter_permit	Boolean	Whether the CBH instance can be expanded. <ul style="list-style-type: none"> <li>• <b>true</b>: Yes</li> <li>• <b>false</b>: No</li> </ul>
enterprise_project_id	String	Project ID.
period_num	String	Number of subscription periods of a CBH instance.
start_time	String	Start time of the CBH instance, in timestamp format.
end_time	String	End time of the CBH instance, in timestamp format.
created_time	String	Time when the CBH instance was created, in UTC format.
upgrade_time	Long	Upgrade schedule of the CBH instance, in the format of timestamp.

Parameter	Type	Description
update	String	Whether the CBH instance can be upgraded. <ul style="list-style-type: none"> <li>• <b>OLD</b>: The current version is the latest one.</li> <li>• <b>NEW</b>: Can be upgraded.</li> <li>• <b>CROSS_OS</b>: Can be upgraded to any later versions.</li> <li>• <b>ROLLBACK</b>: Can be rolled back.</li> </ul>
bastion_version	String	Current version of the CBH instance.
az_info	<a href="#">az_info</a> object	AZ information.
status_info	<a href="#">status_info</a> object	Status information.
resource_info	<a href="#">resource_info</a> object	Resource information.
network	<a href="#">network</a> object	Network information.
ha_info	<a href="#">ha_info</a> object	Active and standby node information.

**Table 3-235** az\_info

Parameter	Type	Description
region	String	ID of the AZ where the CBH instance locates.
zone	String	ID of the AZ where the CBH instance locates. (In primary/standby mode, the ID of the AZ where the primary instance locates is required.)
availability_zone_display	String	AZ where the CBH instance locates. (In primary/standby mode, the ID of the AZ where the primary instance locates is required. Name)
slave_zone	String	AZ where the standby CBH instance locates.
slave_zone_display	String	AZ where the standby CBH instance locates.

**Table 3-236** status\_info

Parameter	Type	Description
status	String	CBH instance status <ul style="list-style-type: none"> <li>● <b>SHOUTOFF</b>: Closed</li> <li>● <b>ACTIVE</b>: Running</li> <li>● <b>DELETING</b>: Deleting</li> <li>● <b>BUILD</b>: Creating</li> <li>● <b>DELETED</b>: Deleting</li> <li>● <b>ERROR</b>: Faulty</li> <li>● <b>HAWAIT</b>: Waiting for the standby node to be created</li> <li>● <b>FROZEN</b>: Frozen</li> <li>● <b>UPGRADING</b>: Upgrading</li> <li>● <b>UNPAID</b>: Pending Payment</li> <li>● <b>RESIZE</b>: Changing specifications</li> <li>● <b>DILATATION</b>: Expanding capacity</li> <li>● <b>HA</b>: Configuring HA</li> </ul>
task_status	String	CBH instance status. <ul style="list-style-type: none"> <li>● powering-on: Started</li> <li>● powering-off: Stopped</li> <li>● rebooting: Rebooting</li> <li>● delete_wait: Deleting</li> <li>● frozen: Frozen</li> <li>● NO_TASK: Running</li> <li>● unfrozen: Unfrozen</li> <li>● alter: Changing</li> <li>● updating: Upgrading</li> <li>● configuring-ha: Configuring HA</li> <li>● data-migrating: Migrating data</li> <li>● rollback: Rolling back to the previous version.</li> <li>● traffic-switchover: Traffic switching</li> </ul>

Parameter	Type	Description
create_instance_status	String	<p>Statuses of the task for creating a CBH instance.</p> <ul style="list-style-type: none"> <li>• <b>Waiting for payment:</b> Pending payment</li> <li>• <b>creating-network:</b> Creating the network</li> <li>• <b>creating-server:</b> Creating the instance</li> <li>• <b>transferring-horizontal-network:</b> Establishing the connection</li> <li>• <b>adding-policy-route:</b> Adding a routing policy</li> <li>• <b>configing-dns:</b> Configuring DNS</li> <li>• <b>starting-cbs-service:</b> Running</li> <li>• <b>setting-init-conf:</b> Initiating</li> <li>• <b>buying-EIP:</b> Purchasing an EIP</li> </ul>
instance_status	String	<p>CBH instance status.</p> <ul style="list-style-type: none"> <li>• <b>building:</b> Creating</li> <li>• <b>deleting:</b> Deleting</li> <li>• <b>deleted:</b> Deleted</li> <li>• <b>unpaid:</b> Unpaid</li> <li>• <b>upgrading:</b> Upgrading</li> <li>• <b>resizing:</b> Resizing</li> <li>• <b>abnormal:</b> Abnormal</li> <li>• <b>error:</b> Faulty</li> <li>• <b>ok:</b> Normal</li> </ul>
instance_description	String	CBH instance description.
fail_reason	String	Instance creation failure causes.

**Table 3-237** resource\_info

Parameter	Type	Description
specification	String	CBH instance specifications.
order_id	String	Order ID.
resource_id	String	CBH instance ID, in the UUID format.
data_disk_size	Number	Size of the data disk for the CBH instance, in TB.

Parameter	Type	Description
disk_resource_id	Array of strings	ID of the data disk for the CBH instance.

**Table 3-238** network

Parameter	Type	Description
vip	String	Floating IP address of the CBH instance (This field is returned when the instance is deployed in primary/standby mode.)
web_port	String	Port used for accessing the CBH instance with a web browser.
public_ip	String	EIP bound to the CBH instance.
public_id	String	ID of the EIP bound to the CBH instance, in the UUID format.
private_ip	String	Private IP address of the CBH instance
vpc_id	String	ID of the VPC where the CBH instance locates.
subnet_id	String	ID of the subnet where the CBH instance locates.
security_group_id	String	ID of the Security group where the CBH instance locates.

**Table 3-239** ha\_info

Parameter	Type	Description
ha_id	String	IDs of the primary and standby instances.
instance_type	String	Instance type. The value can be: <ul style="list-style-type: none"> <li>• <b>master</b>: Primary instance</li> <li>• <b>slave</b>: Standby instance</li> </ul>

**Table 3-240** ResourceTag

Parameter	Type	Description
key	String	Tag key. The value can contain up to 128 characters.
value	String	Value. Each value can contain a maximum of 255 characters.

**Status code: 400**

**Table 3-241** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-242** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-243** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-244** Response body parameters

Parameter	Type	Description
error_code	String	Error code

Parameter	Type	Description
error_description	String	Not CBH instances found.

## Example Requests

```
{
  "matches": [ {
    "key": "resource_name",
    "value": "resource1"
  } ],
  "not_tags": [ {
    "key": "key1",
    "values": [ "*"value1", "value2" ]
  } ],
  "tags": [ {
    "key": "key1",
    "values": [ "*"value1", "value2" ]
  } ],
  "tags_any": [ {
    "key": "key1",
    "values": [ "value1", "value2" ]
  } ],
  "not_tags_any": [ {
    "key": "key1",
    "values": [ "value1", "value2" ]
  } ],
  "sys_tags": [ {
    "key": "_sys_enterprise_project_id",
    "values": [ "5aa119a8-d25b-45a7-8d1b-88e127885635" ]
  } ]
}
```

## Example Responses

**Status code: 200**

List CBH ByTags Success

```
{
  "resources": [ {
    "resource_id": "cdfs_cefs_wesas_12_dsad",
    "resource_name": "resource1",
    "tags": [ {
      "key": "key1",
      "value": "value1"
    } ],
    "sys_tags": [ {
      "key": "_sys_enterprise_project_id",
      "value": "5aa119a8-xxxx-45a7-xxxx-88e12788xxxx"
    } ]
  } ],
  "total_count": 1000
}
```

## Status Codes

Status Code	Description
200	List CBH ByTags Success
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
500	System error.

## Error Codes

See [Error Codes](#).

## 3.7.5 Performing Operations on a CBH Instance Tag

### Function

This API is used to perform operations on a CBH tag.

### Calling Method

For details, see [Calling APIs](#).

### URI

POST /v2/{project\_id}/cbs/instance/{resource\_id}/tags/action

**Table 3-245** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .
resource_id	Yes	String	Resource ID. Obtain its value by calling the list API.

## Request Parameters

**Table 3-246** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

**Table 3-247** Request body parameters

Parameter	Mandatory	Type	Description
action	Yes	String	Action. <ul style="list-style-type: none"> <li>• <b>create</b></li> <li>• <b>delete</b></li> </ul>
tags	Yes	Array of <a href="#">ResourceTag</a> objects	Tag list. This parameter is mandatory when the tenant permission is used. For the op_service permission, choose either this field or sys_tags.
sys_tags	No	Array of <a href="#">ResourceTag</a> objects	<ul style="list-style-type: none"> <li>• The system tag list.</li> <li>• This field is only available to the <b>op_service</b> permission. Choose either this field or <b>tags</b>.</li> <li>• <b>_sys_enterprise_project_id</b> is the only <b>resource_tag</b> structure key used in TMS calls.</li> <li>• The value is <b>UUID</b> or <b>0. 0</b> indicates the default enterprise project.</li> <li>• Only <b>create</b> is supported.</li> </ul>

**Table 3-248** ResourceTag

Parameter	Mandatory	Type	Description
key	Yes	String	Tag key. The value can contain up to 128 characters.
value	Yes	String	Value. Each value can contain a maximum of 255 characters.

## Response Parameters

### Status code: 204

A request has succeeded, but that the client does not need to navigate away from its current page.

### Status code: 401

**Table 3-249** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

### Status code: 403

**Table 3-250** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

### Status code: 404

**Table 3-251** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

```
{  
  "action": "create",  
  "tags": [{  
    "key": "key1",  
    "value": "value1"  
  }, {  
    "key": "key",  
    "value": "value3"  
  }]  
}
```

## Example Responses

None

## Status Codes

Status Code	Description
204	A request has succeeded, but that the client does not need to navigate away from its current page.
400	Invalid parameters
401	Unauthorized
403	Forbidden
404	Not Found
500	System error.

## Error Codes

See [Error Codes](#).

# 3.8 Specifications Management

## 3.8.1 Querying CBH Instance Specifications

### Function

This API is used to query CBH instance specifications.

### Calling Method

For details, see [Calling APIs](#).

### URI

GET /v2/{project\_id}/cbs/instance/specification

**Table 3-252** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID. To obtain the value, see <a href="#">Obtaining a Project ID</a> .

**Table 3-253** Query Parameters

Parameter	Mandatory	Type	Description
action	Yes	String	This API is used to query what action is performed for the CBH instance specifications. <ul style="list-style-type: none"> <li>• create: queries the specifications of CBH instances that can be created.</li> <li>• update: queries the specifications of a CBH instance that can be modified.</li> </ul>
spec_code	No	String	CBH instance specifications. This parameter is mandatory when <b>action</b> is set to <b>update</b> .

## Request Parameters

**Table 3-254** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token. You can obtain it by calling the IAM API for obtaining a user token. The token is the value of <b>X-Subject-Token</b> in the response header. For details, see <a href="#">Obtaining a User Token</a> .

## Response Parameters

**Status code: 200**

**Table 3-255** Response body parameters

Parameter	Type	Description
[items]	Array of <a href="#">CbsGetSpecInfo</a> objects	CBH instance specifications.

**Table 3-256** CbsGetSpecInfo

Parameter	Type	Description
resource_spec_code	String	CBH instance specification name.
ecs_system_data_size	Integer	CBH instance system disk size, in GB.
cpu	Integer	The number of CPU cores of a CBH instance.
ram	Integer	The memory (GB) of the CBH instance.
asset	Integer	The number of assets for the CBH instance.
connection	Integer	The maximum number of concurrent connections for a CBH instance.
type	String	CBH instance specification type. <ul style="list-style-type: none"> <li>● <b>basic</b>: Standard edition</li> <li>● <b>enhance</b>: Professional edition</li> </ul>
data_disk_size	Number	Size of the data disk for the CBH instance, in TB.

**Status code: 400**

**Table 3-257** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Incorrect request parameters.

**Status code: 401**

**Table 3-258** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Failed to verify the token.

**Status code: 403**

**Table 3-259** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Permissions required.

**Status code: 404**

**Table 3-260** Response body parameters

Parameter	Type	Description
error_code	String	Error code
error_description	String	Not CBH instances found.

## Example Requests

None

## Example Responses

**Status code: 200**

CBH instance specifications queried

```
[ {  
  "data_disk_size" : 1,  
  "ecs_system_data_size" : 10,  
  "cpu" : 4,  
  "connection" : 10,  
  "resource_spec_code" : "cbh.basic.xxx",  
  "asset" : 10,  
  "type" : "basic",  
  "ram" : 8  
}]
```

## Status Codes

Status Code	Description
200	CBH instance specifications queried
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found

## Error Codes

See [Error Codes](#).

# 4 Permissions and Supported Actions

## 4.1 Overview

You can use Identity and Access Management (IAM) for fine-grained permissions management of your CBH. If your HUAWEI ID does not need individual IAM users, you can skip this section.

With IAM, you can control access to specific Huawei Cloud resources from principals (IAM users, user groups, agencies, or trust agencies). IAM supports role/policy-based authorization and identity policy-based authorization.

The following table describes the differences between these two authorization models.

**Table 4-1** Differences between role/policy-based and identity policy-based authorization

Name	Core Relationship	Permission	Authorization Method	Application Scenario
Role/Policy-based authorization	User-permission-authorization scope	<ul style="list-style-type: none"> <li>System-defined roles</li> <li>System-defined policies</li> <li>Custom policies</li> </ul>	Assigning roles or policies to principals	To authorize a user, you need to add it to a user group first and then specify the scope of authorization. It provides a limited number of condition keys and cannot meet the requirements of fine-grained permissions control. This method is suitable for small and medium-sized enterprises.

Name	Core Relationship	Permission	Authorization Method	Application Scenario
Identity policy	User-policy	<ul style="list-style-type: none"> <li>System-defined identity policies</li> <li>Custom identity policies</li> </ul>	<ul style="list-style-type: none"> <li>Assigning identity policies to principals</li> <li>Attaching identity policies to principals</li> </ul>	You can authorize a user by attaching an identity policy to it. User-specific authorization and a variety of key conditions allow for more fine-grained permissions control. However, this model can be hard to set up. It requires a certain amount of expertise and is suitable for medium- and large-sized enterprises.

Assume that you want to grant IAM users permission to create ECSs in CN North-Beijing4 and OBS buckets in CN South-Guangzhou. With role/policy-based authorization, the administrator needs to create two custom policies and assign both to the IAM users. With identity policy-based authorization, the administrator only needs to create one custom identity policy and configure the condition key **g:RequestedRegion** for the policy, and then attach the policy to the users or grant the users the access permissions to the specified regions. Identity policy-based authorization is more flexible than role/policy-based authorization.

Policies/identity policies and actions in the two authorization models are not interoperable. You are advised to use the identity policy-based authorization model.

If you use IAM users in your account to call an API, the IAM users must be granted the required permissions. The required permissions are determined by the actions supported by the API. Only users with the policies allowing for those actions can call the API successfully.

## 4.2 Actions Supported by Policy-based Authorization

This section describes the actions supported policy-based authorization for CBH.

### Supported Actions

CBH provides system-defined policies that can be directly used in IAM. You can also create custom policies to supplement system-defined policies for more refined access control. Operations supported by policies are specific to APIs. The following table describes the actions supported by policies.

- Permissions: statements that allow or deny specific operations on specified resources under specific conditions.

- APIs: REST APIs that can be called in a custom policy
- Actions: specific operations that are allowed or denied.
- Dependencies: actions which a specific action depends on. When allowing an action for a user, you also need to allow any existing action dependencies for that user.
- IAM projects/Enterprise projects: the authorization scope of a custom policy. A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions for both IAM and enterprise projects can be used and applied for both IAM and Enterprise Management. Policies that contain actions only for IAM projects can be used and applied to IAM only. Administrators can check whether an action supports IAM projects or enterprise projects in the action list. For details about the differences between IAM projects and enterprise projects, see [What Are the Differences Between IAM and Enterprise Management?](#)

[Table 4-2](#) and [Table 4-3](#) list the API actions supported by CBH.

**Table 4-2** Actions Supported by IAM 3.0

Permission	API	Action	IAM Project	Enterprise Project
Querying total ECS quota	GET /v2/{project_id}/cbs/instance/ecs-quota	cbh:instance:getEcsQuota	√	×
Querying the AZ of a CBH instance	GET /v2/{project_id}/cbs/available-zone	cbh:instance:getAvailableZones	√	×
Logging in to a CBH instance	POST /v2/{project_id}/cbs/instance/login	cbh:instance:login	√	×
Stopping a CBH instance	POST /v2/{project_id}/cbs/instance/stop	cbh:instance:stop	√	×
Restarting a CBH instance	POST /v2/{project_id}/cbs/instance/reboot	cbh:instance:reboot	√	×
Upgrading the CBH system version	POST /v2/{project_id}/cbs/instance/upgrade	cbh:instance:upgrade	√	×

Permission	API	Action	IAM Project	Enterprise Project
Changing the password of the <b>admin</b> user for a CBH instance	PUT /v2/{project_id}/cbs/instance/password	cbh:instance:resetPassword	√	×
Starting a CBH instance	POST /v2/{project_id}/cbs/instance/start	cbh:instance:start	√	×
Expanding a CBH instance edition	PUT /v2/{project_id}/cbs/instance	cbh:instance:alterSpec	√	×
Creating a CBH instance	POST /v2/{project_id}/cbs/instance	cbh:instance:create	√	√
Binding or unbinding an EIP	<ul style="list-style-type: none"> <li>POST /v2/{project_id}/cbs/instance/{server_id}/eip/bind</li> <li>POST /v2/{project_id}/cbs/instance/{server_id}/eip/unbind</li> </ul>	cbh:instance:eipOperate	√	×
Creating a CBH agency	POST /v2/{project_id}/cbs/agency/authorization	cbh:agency:authorize	√	×
Querying the CBH instance list	GET /v2/{project_id}/cbs/instance/list	cbh:instance:list	√	×
Changing the VPC a bastion host instance belongs to	PUT /v2/{project_id}/cbs/instance/vpc	cbh:instance:switchInstanceVpc	√	×
Logging in to a bastion host instance as user <b>admin</b>	GET /v2/{project_id}/cbs/instances/{server_id}/admin-url	cbh:instance:loginInstanceAdmin	√	×

Permission	API	Action	IAM Project	Enterprise Project
Changing the type of a single-node CBH instance	PUT /v2/{project_id}/cbs/instance/type	cbh:instance:changeInstanceType	√	×
Obtaining the operation link for an asset managed by the bastion host	GET /v2/{project_id}/cbs/instance/get-om-url	cbh:instance:getOmUrl	√	×

**Table 4-3** Actions Supported by IAM 5.0

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Grants the permission to obtain the ECS quota.	GET /v2/{project_id}/cbs/instance/ecs-quota	cbh::getEcsQuota	ecs:cloudServerFlavors:get	√	×
Grants the permission to query the CBH instance quotas.	GET /v2/{project_id}/cbs/instance/quota	cbh::getQuota	-	√	×
Grants the permission to query the CBH status.	GET /v2/{project_id}/cbs/instance/{server_id}/status	cbh:instance:getInstanceStatus	-	√	×

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Grants the permission to obtain the URLs for O&M of assets managed in CBH.	GET /v2/{project_id}/cbs/instance/get-om-url	cbh:instance:getOmUrl	-	√	×
Grants the permission to obtain the authorization information of the CBH service from the tenant.	GET /v2/{project_id}/cbs/agency/authorization	cbh::getAuthorization	<ul style="list-style-type: none"> <li>iam:agencies:listAgencies</li> <li>iam:permissions:listRolesForAgencyOnProject</li> </ul>	√	×
Grants the permission to query tags of CBH instances.	GET /v2/{project_id}/cbs/instance/{resource_id}/tags	cbh:instance:getInstanceTags	-	√	×
Grants the permission to start a CBH instance.	POST /v2/{project_id}/cbs/instance/start	cbh:instance:startInstance	-	√	×
Grants the permission to disable a CBH instance.	POST /v2/{project_id}/cbs/instance/stop	cbh:instance:stopInstance	-	√	×
Grants the permission to restart a CBH instance.	POST /v2/{project_id}/cbs/instance/reboot	cbh:instance:rebootInstance	-	√	×
Grants the permission to upgrade a CBH instance.	POST /v2/{project_id}/cbs/instance/upgrade	cbh:instance:upgradeInstance	-	√	×

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Grants the permission to roll back a CBH instance.	POST /v2/{project_id}/cbs/instance/rollback	cbh:instance:rollbackInstance	-	√	×
Grants the permission to log in to a CBH instance as an IAM user.	POST /v2/{project_id}/cbs/instance/login	cbh:instance:loginInstance	-	√	×
Grants the permission to reset a password for logging in to a CBH.	PUT /v2/{project_id}/cbs/instance/password	cbh:instance:resetInstancePassword	-	√	×
Grant the permission to switch the VPC of the bastion host instance.	PUT /v2/{project_id}/cbs/instance/vpc	cbh:instance:switchInstanceVpc	vpc:subnets:get	√	×
Grants the permission to reset the CBH instance login mode.	PUT /v2/{project_id}/cbs/instance/login-method	cbh:instance:resetInstanceLoginMethod	-	√	×
Grants the permission to delete a faulty CBH instance.	DELETE /v2/{project_id}/cbs/instance	cbh:instance:deleteInstance	-	√	×
Grants the permission to change a CBH instance.	PUT /v2/{project_id}/cbs/instance	cbh:instance:alterInstance	-	√	×

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Grants the permission to create a CBH instance.	POST /v2/{project_id}/cbs/instance	cbh:instance:createInstance	<ul style="list-style-type: none"> <li>vpc:quotas:list</li> <li>vpc:subnets:list</li> <li>vpc:subnets:get</li> <li>vpc:securityGroups:get</li> <li>ecs:cloudServerFlavors:get</li> </ul>	√	√
Grants the permission to bind an EIP to a CBH instance.	POST /v2/{project_id}/cbs/instance/{server_id}/eip/bind	cbh:instance:bindInstanceEip	<ul style="list-style-type: none"> <li>eip:publicips:list</li> <li>eip:publicips:update</li> <li>eip:publicips:get</li> <li>eip:publicips:associateInstance</li> </ul>	√	×
Grants the permission to unbind an EIP from a CBH instance.	POST /v2/{project_id}/cbs/instance/{server_id}/eip/unbind	cbh:instance:unbindInstanceEip	<ul style="list-style-type: none"> <li>eip:publicips:list</li> <li>eip:publicips:update</li> <li>eip:publicips:disassociateInstance</li> </ul>	√	×
Grants the permission to update the security group of a CBH instance.	PUT /v2/{project_id}/cbs/instance/{server_id}/security-groups	cbh:instance:updateInstanceSecurityGroup	<ul style="list-style-type: none"> <li>vpc:ports:update</li> <li>vpc:securityGroups:list</li> </ul>	√	×

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Grants the permission to create or cancel the agency authorization for the CBH service.	POST /v2/{project_id}/cbs/agency/authorization	cbh::operateAuthorization	<ul style="list-style-type: none"> <li>iam:agencies:listAgencies</li> <li>iam:permissions:listRolesForAgencyOnProject</li> <li>iam:agencies:createAgency</li> <li>iam:agencies:deleteAgency</li> <li>iam:permissions:grantRoleToAgencyOnProject</li> <li>iam:permissions:revokeRoleFromAgencyOnProject</li> </ul>	√	×
Grants the permission to log in to a CBH instance as user <b>admin</b> .	GET /v2/{project_id}/cbs/instances/{server_id}/admin-url	cbh:instance:loginInstanceAdmin	-	√	×

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Grants the permission to modify the type of single-node CBH instances.	PUT /v2/{project_id}/cbs/instance/type	cbh:instance:changeInstanceType	<ul style="list-style-type: none"> <li>vpc:quotas:list</li> <li>vpc:subnets:list</li> <li>vpc:subnets:get</li> <li>vpc:securityGroups:get</li> <li>ecs:cloudServerFlavors:get</li> </ul>	√	×
Grants the permission to query all AZs.	GET /v2/{project_id}/cbs/available-zone	cbh::listAvailableZones	-	√	×
Grants the permission to query the CBH specifications.	GET /v2/{project_id}/cbs/instance/specification	cbh::listSpecifications	-	√	×
Grants the permission to list CBH instances.	GET /v2/{project_id}/cbs/instance/list	cbh:instance:listInstances	eps:enterpriseProjects:list	√	×
Grants the permission to query all tags.	GET /v2/{project_id}/cbs/instance/tags	cbh::listTags	-	√	×
Grants the permission to search for instances by tag.	POST /v2/{project_id}/cbs/instance/filter	cbh:instance:listInstancesByTag	-	√	×

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Grants the permission to count the number of instances that meet the tag conditions.	POST /v2/{project_id}/cbs/instance/count	cbh:instance:countInstancesByTag	-	√	×
Grants the permission to operate the resource tags of the CBH instance.	POST /v2/{project_id}/cbs/instance/{resource_id}/tags/action	cbh:instance:operateInstanceTags	-	√	×

### 4.3 Actions Supported by Identity Policy-based Authorization

IAM provides system-defined identity policies to define typical cloud service permissions. You can also create custom identity policies using the actions supported by cloud services for more refined access control.

In addition to IAM, the **Organizations** service also provides **Service Control Policies (SCPs)** to set access control policies.

SCPs do not actually grant any permissions to an entity. They only set the permissions boundary for the entity. When SCPs are attached to an organizational unit (OU) or a member account, the SCPs do not directly grant permissions to that OU or member account. Instead, the SCPs only determine what permissions are available for that member account or those member accounts under that OU. The granted permissions can be applied only if they are allowed by the SCPs.

To learn more about how IAM is different from Organizations for access control, see **How IAM Is Different from Organizations for Access Control?**

This section describes the elements used by IAM custom identity policies and Organizations SCPs. The elements include actions, resources, and conditions.

- For details about how to use these elements to edit an IAM custom identity policy, see **Creating a Custom Identity Policy**.
- For details about how to use these elements to edit a custom SCP, see **Creating an SCP**.

## Actions

Actions are specific operations that are allowed or denied in an identity policy.

- The Access Level column describes how the action is classified (List, Read, or Write). This classification helps you understand the level of access that an action grants when you use it in an identity policy.
- The Resource Type column indicates whether the action supports resource-level permissions.
  - You can use a wildcard (\*) to indicate all resource types. If this column is empty (-), the action does not support resource-level permissions and you must specify all resources ("\*") in your identity policy statements.
  - If this column includes a resource type, you must specify the URN in the Resource element of your identity policy statements.
  - Required resources are marked with asterisks (\*) in the table. If you specify a resource in a statement using this action, then it must be of this type.

For details about the resource types defined by CBH, see [Resources](#).

- The Condition Key column contains keys that you can specify in the Condition element of an identity policy statement.
  - If the Resource Type column has values for an action, the condition key takes effect only for the listed resource types.
  - If the Resource Type column is empty (-) for an action, the condition key takes effect for all resources that action supports.
  - If the Condition Key column is empty (-) for an action, the action does not support any condition keys.

For details about the condition keys defined by CBH, see [Conditions](#).

- The Alias column lists the policy actions that are configured in identity policies. With these actions, you can use APIs for policy-based authorization. For details, see [Policies and Identity Policies](#).

The following table lists the actions that you can define in identity policy statements for CBH.

**Table 4-4** Actions supported by CBH

Action	Description	Access Level	Resource Type (*: required)	Condition Key	Alias
cbh::listAvailableZones	Grants permission to list AZs.	List	-	-	-

Action	Description	Access Level	Resource Type (*: required)	Condition Key	Alias
cbh::getEcsQuota	Grants permission to query ECS resource quotas.	Read	-	-	-
cbh::getQuota	Grants permission to query the quota of the bastion host.	Read	-	-	-
cbh::listSpecifications	Grants permission to list bastion host specifications.	List	-	-	-
cbh:instance:listInstances	Grants permission to list bastion hosts.	List	instance *	-	-
cbh:instance:getInstanceStatus	Grants permission to query bastion host status.	Read	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-
cbh:instance:startInstance	Grants permission to start bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-
cbh:instance:stopInstance	Grants permission to stop bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-

Action	Description	Access Level	Resource Type (*: required)	Condition Key	Alias
cbh:instance:rebootInstance	Grants permission to reboot bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/tag-key</li> </ul>	-
cbh:instance:upgradeInstance	Grants permission to upgrade bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/tag-key</li> </ul>	-
cbh:instance:loginInstance	Grants permission to login bastion host as the IAM user.	Write	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/tag-key</li> </ul>	-
cbh:instance:resetInstancePassword	Grants permission to reset the password of bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/tag-key</li> </ul>	-
cbh:instance:resetInstanceLoginMethod	Grants permission to reset the login mode of bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/tag-key</li> </ul>	-
cbh:instance:deleteInstance	Grants permission to delete faulty bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/tag-key</li> </ul>	-

Action	Description	Access Level	Resource Type (*: required)	Condition Key	Alias
cbh:instance:alterInstance	Grants permission to alter bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-
cbh:instance:createInstance	Grants permission to create bastion host.	Write	instance *	-	-
			-	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:RequestTag/tag-key</a></li> <li>• <a href="#">g:TagKeys</a></li> <li>• <a href="#">cbh:VpcId</a></li> <li>• <a href="#">cbh:SubnetId</a></li> <li>• <a href="#">cbh:AllowBindPublicIp</a></li> </ul>	
cbh:instance:bindInstanceEip	Grants permission to bind an EIP to bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-
cbh:instance:unbindInstanceEip	Grants permission to unbind an EIP to bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-
cbh:instance:updateInstanceSecurityGroup	Grants permission to update the security group of bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-

Action	Description	Access Level	Resource Type (*: required)	Condition Key	Alias
cbh::operateAuthorization	Grants permission to create or cancel the authorization of cloud bastion host service.	Write	-	-	-
cbh::getAuthorization	Grants permission to query the authorization of cloud bastion host service from the tenant.	Read	-	-	-
cbh::listTags	Grants permission to list all tags.	List	-	-	-
cbh:instance:getInstanceTags	Grants permission to query the tag information of bastion host instance.	Read	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-
cbh:instance:countInstancesByTag	Grants permission to count the number of instances that meet the label criteria.	List	instance *	-	-
cbh:instance:listInstancesByTag	Grants permission to filter instances by tags.	List	-	-	-

Action	Description	Access Level	Resource Type (*: required)	Condition Key	Alias
cbh:instance:operateInstanceTags	Grants permission to operate resource tags of bastion host instance.	Tagging	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/tag-key</li> </ul>	-
			-	<ul style="list-style-type: none"> <li>g:RequestTag/tag-key</li> <li>g:TagKeys</li> </ul>	
cbh:instance:getOmUrl	Grants permission to get O&M url.	Read	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/&lt;tag-key&gt;</li> </ul>	cbh:instance:getOmUrl
cbh:instance:rollbackInstance	Grants permission to rollback bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>g:EnterpriseProjectId</li> <li>g:ResourceTag/&lt;tag-key&gt;</li> </ul>	cbh:instance:upgrade
cbh:instance:switchInstanceVpc	Grants permission to switch virtual private cloud of bastion host.	Write	instance *	<ul style="list-style-type: none"> <li>g:ResourceTag/&lt;tag-key&gt;</li> <li>g:EnterpriseProjectId</li> <li>cbh:VpcId</li> <li>cbh:SubnetId</li> </ul>	-
cbh:instance:changeInstanceType	Changing the Type of a Single-Node Bastion Host Instance	Write	instance *	-	-

Action	Description	Access Level	Resource Type (*: required)	Condition Key	Alias
			-	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:RequestTag/tag-key</a></li> <li>• <a href="#">g:TagKeys</a></li> <li>• <a href="#">cbh:VpcId</a></li> <li>• <a href="#">cbh:SubnetId</a></li> <li>• <a href="#">cbh:AllowBindPublicIp</a></li> </ul>	
cbh:instance:loginInstanceAdmin	Log in to the console of the admin user of the bastion host instance.	Write	instance *	<ul style="list-style-type: none"> <li>• <a href="#">g:EnterpriseProjectId</a></li> <li>• <a href="#">g:ResourceTag/tag-key</a></li> </ul>	-

Each API of CBH usually supports one or more actions. [Table 4-5](#) lists the supported actions and dependencies.

**Table 4-5** Actions and dependencies supported by CBH APIs

API	Action	Dependencies
GET /v2/{project_id}/cbs/available-zone	cbh::listAvailableZones	-
GET /v2/{project_id}/cbs/instance/specification	cbh::listSpecifications	-
GET /v2/{project_id}/cbs/instance/list	cbh:instance:listInstances	eps:enterpriseProjects:list

API	Action	Dependencies
POST /v2/{project_id}/cbs/instance/start	cbh:instance:startInstance	-
POST /v2/{project_id}/cbs/instance/stop	cbh:instance:stopInstance	-
POST /v2/{project_id}/cbs/instance/upgrade	cbh:instance:upgradeInstance	-
POST /v2/{project_id}/cbs/instance/login	cbh:instance:loginInstance	-
PUT /v2/{project_id}/cbs/instance/password	cbh:instance:resetInstancePassword	-
PUT /v2/{project_id}/cbs/instance/login-method	cbh:instance:resetInstanceLoginMethod	-
DELETE /v2/{project_id}/cbs/instance	cbh:instance:deleteInstance	-
POST /v2/{project_id}/cbs/instance	cbh:instance:createInstance	<ul style="list-style-type: none"> <li>● vpc:quotas:list</li> <li>● vpc:subnets:list</li> <li>● vpc:subnets:get</li> <li>● vpc:securityGroups:list</li> <li>● ecs:cloudServerFlavors:get</li> </ul>
PUT /v2/{project_id}/cbs/instance/{server_id}/security-groups	cbh:instance:updateInstanceSecurityGroup	vpc:ports:update
GET /v2/{project_id}/cbs/agency/authorization	cbh::getAuthorization	-
GET /v2/{project_id}/cbs/instance/tags	cbh::listTags	-

API	Action	Dependencies
GET /v2/{project_id}/cbs/instance/{resource_id}/tags	cbh:instance:getInstanceTags	-
POST /v2/{project_id}/cbs/instance/count	cbh:instance:countInstancesByTag	-
POST /v2/{project_id}/cbs/instance/filter	cbh:instance:listInstancesByTag	-
POST /v2/{project_id}/cbs/instance/{server_id}/eip/bind	cbh:instance:bindInstanceEip	<ul style="list-style-type: none"> <li>eip:publicIps:list</li> <li>eip:publicIps:update</li> </ul>
POST /v2/{project_id}/cbs/instance/{server_id}/eip/unbind	cbh:instance:unbindInstanceEip	<ul style="list-style-type: none"> <li>eip:publicIps:update</li> <li>eip:publicIps:list</li> </ul>
GET /v2/{project_id}/cbs/instance/ecs-quota	cbh::getEcsQuota	ecs:cloudServerFlavors:get
GET /v2/{project_id}/cbs/instance/quota	cbh::getQuota	-
GET /v2/{project_id}/cbs/instance/{server_id}/status	cbh:instance:getInstanceStatus	-
POST /v2/{project_id}/cbs/instance/reboot	cbh:instance:rebootInstance	-
PUT /v2/{project_id}/cbs/instance	cbh:instance:alterInstance	evs:quotas:get
POST /v2/{project_id}/cbs/agency/authorization	cbh::operateAuthorization	-

API	Action	Dependencies
POST /v2/{project_id}/cbs/instance/{resource_id}/tags/action	cbh:instance:operateInstanceTags	-
GET /v2/{project_id}/cbs/instance/get-om-url	cbh:instance:getOmUrl	-
POST /v2/{project_id}/cbs/instance/rollback	cbh:instance:rollbackInstance	-
PUT /v2/{project_id}/cbs/instance/type	cbh:instance:changeInstanceType	<ul style="list-style-type: none"> <li>• vpc:quotas:list</li> <li>• vpc:subnets:list</li> <li>• vpc:subnets:get</li> <li>• vpc:securityGroups:list</li> <li>• ecs:cloudServerFlavors:get</li> </ul>
GET /v2/{project_id}/cbs/instances/{server_id}/admin-url	cbh:instance:loginInstanceAdmin	-
PUT /v2/{project_id}/cbs/instance/vpc	cbh:instance:switchInstanceVpc	-

## Resources

A resource type indicates the resources that an identity policy applies to. If you specify a resource type for any action in [Table 4-6](#), the resource URN must be specified in the identity policy statements using that action, and the identity policy applies only to resources of this type. If no resource type is specified, the Resource element is marked with an asterisk (\*) and the identity policy applies to all resources. You can also set condition keys in an identity policy to define resource types.

The following table lists the resource types that you can define in identity policy statements for CBH.

**Table 4-6** Resource types supported by CBH

Resource Type	URN
instance	cbh:<region>:<account-id>:instance:<instance-id>

## Conditions

### Condition Key Overview

A Condition element lets you specify conditions for when an identity policy is in effect. It contains [condition keys](#) and [operators](#).

- The condition key that you specify can be a global condition key or a service-specific condition key.
  - Global condition keys (with the g: prefix) apply to all actions. Cloud services do not need to provide user identity information. Instead, the system automatically obtains such information and authenticates users. For details, see [Global Condition Keys](#).
  - Service-specific condition keys (with the abbreviation of a service name plus a colon as the prefix, for example, cbh) apply only to operations of the xx service. For details, see [Table 4-7](#).
  - The number of values associated with a condition key in the request context of an API call makes the condition key single-valued or multivalued. Single-valued condition keys have at most one value in the request context of an API call. Multivalued condition keys can have multiple values in the request context of an API call. For example, a request can originate from at most one VPC endpoint, so g:SourceVpce is a single-valued condition key. You can tag resources and include multiple tag key-value pairs in a request, so g:TagKeys is a multivalued condition key.
- A condition operator, condition key, and a condition value together constitute a complete condition statement. An identity policy can be applied only when its request conditions are met. For supported condition operators, see [operators](#).

### Service-specific condition keys supported by CBH

The following table lists the condition keys that you can define in identity policies for CBH. You can include these condition keys to specify conditions for when your identity policy is in effect.

**Table 4-7** Service-specific condition keys supported by CBH

Service-specific Condition Key	Type	Single-valued/ Multivalued	Description
cbh:VpcId	string	Single-valued	Filters access to control which VPC (ID) the instance can communicate with.
cbh:SubnetId	string	Single-valued	Filters access to control which CIDR (ID) the instance can communicate with.

Service-specific Condition Key	Type	Single-valued/ Multivalued	Description
cbh:AllowBindPublicIp	boolean	Single-valued	Filters access to control whether EIPs can be bound to the instance.

# A Appendixes

## A.1 Status Codes

Code	Status	Description
200	OK	Request successful.
400	Bad Request	Request failed. Modify the request and then try again.
401	Unauthorized	Authentication failed. The authentication information provided by the client is incorrect or invalid.
403	Forbidden	Request rejected. Modify the request and then try again. The server has received and understood the request; yet it refused to respond, because the request is set to deny access.
404	NotFound	Cannot find the requested resource. Modify the request and then try again.
500	InternalServerError	Internal error. The server is able to receive the request but it could not understand the request.

## A.2 Error Codes

Status Code	Error Codes	Error Message	Description	Solution
400	CBH.10020001	Incorrect tenant ID.	Incorrect tenant ID.	Incorrect project ID. Please enter the correct project ID.
400	CBH.10020009	Request message format error	Request message format error	Please pass the correct message body.
400	CBH.10020010	Request message param error.	Request message param error.	Please check your request parameters.
400	CBH.10020011	Incorrect instance ID.	Incorrect instance ID.	Please enter the correct serverId.
400	CBH.10027007	No resource found.	No resource found.	Modifying a Resource ID
400	CBH.10027011	Operation failed. This operation is not allowed in the current instance status.	Operation failed. This operation is not allowed in the current instance status.	Check the current instance status
401	CBH.10020100	The IAM token is invalid.	The IAM token is invalid.	Please check if your token is correct.
403	CBH.10020002	Tenant has no authority.	Tenant has no authority.	The tenant has no permissions. Please go to IAM to confirm the user's permissions.
500	CBH.10020000	Unknown error.	Unknown error.	Unknown error. Please contact Huawei technical support for assistance.

Status Code	Error Codes	Error Message	Description	Solution
500	11000000	Internal system exception. Contact technical support engineers	Internal system exception. Contact technical support engineers	Please contact Huawei technical support for assistance.

## A.3 Obtaining a Project ID

### Obtaining a Project ID by Calling an API

You can obtain the project ID by calling the API used to [query project information based on the specified criteria](#).

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

In the following example, **id** indicates the project ID.

```
{
  "projects": [
    {
      "domain_id": "65382450e8f64ac0870cd180d14e684b",
      "is_domain": false,
      "parent_id": "65382450e8f64ac0870cd180d14e684b",
      "name": "xxxxxxx",
      "description": "",
      "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
      },
      "id": "a4a5d4098fb4474fa22cd05f897d6b99",
      "enabled": true
    }
  ],
  "links": {
    "next": null,
    "previous": null,
    "self": "https://www.example.com/v3/projects"
  }
}
```

### Obtaining a Project ID from the Console

A project ID is required for some URLs when an API is called. To obtain a project ID, perform the following operations:

1. [Log in to the management console](#).
2. Click the username and choose **Basic Information** from the drop-down list.
3. On the **Account Info** page, click **Manage** next to **Security Credentials**.

On the **My Credentials** page, view project IDs in the project list.

**Figure A-1** Viewing project IDs

