

# Cloud Backup and Recovery

## API Reference

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# 1 Before You Start

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## 1.1 Overview

Welcome to *Cloud Backup and Recovery API Reference*. Cloud Backup and Recovery (CBR) allows you to easily back up Elastic Cloud Servers (ECSs) and Elastic Volume Service (EVS) disks. If there is a virus attack, accidental deletion, or software or hardware fault, data can be restored to any point in the past when the data was backed up. With CBR, you can back up and restore data on the cloud.

You can use APIs provided in this document to perform operations on CBR, such as creating and deleting a vault, and creating a policy. For details about all supported operations, see [API Overview](#).

Before calling CBR APIs, ensure that you have fully understood relevant concepts. For details, see section "Service Overview" in the *Cloud Backup and Recovery User Guide*.

## 1.2 API Calling

CBR supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [Making an API Request](#).

## 1.3 Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the administrator.

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.

## 1.4 Constraints

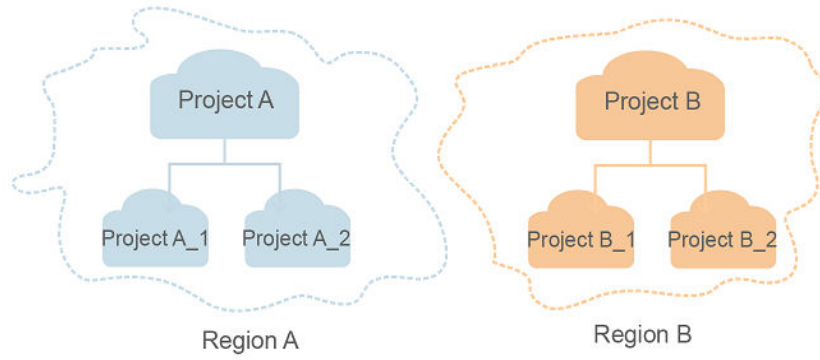
The numbers of CBR resources that you can create are determined by your quota. To view or increase the quota, see section "Quotas" in the *Cloud Backup and Recovery User Guide*.

For more constraints, see API description.

## 1.5 Concepts

- **Domain**  
A domain 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 should not be used directly to perform routine management. For security purposes, create Identity and Access Management (IAM) users and grant them permissions for routine management.
- **User**  
An IAM user is created by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).  
API authentication requires information such as the domain name, username, and password.
- **Region**  
A region is a geographic area in which cloud resources are deployed. Availability zones (AZs) in the same region can communicate with each other over an intranet, while AZs in different regions are isolated from each other. Deploying cloud resources in different regions can better suit certain user requirements or comply with local laws or regulations.
- **AZ**  
An AZ comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.
- **Project**  
A project corresponds to a region. Default projects are defined to group and physically isolate resources (including computing, storage, and network resources) across regions. Users can be granted permissions in a default project to access all resources under their domains in the region associated with the project. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

**Figure 1-1** Project isolation model



# 2 API Overview

CBR APIs allow you to use all functions provided by CBR.

**Table 2-1** API description

Type	Description
Task	Query the task list and the information about a single task.
Vault	Create and query vaults and apply policies to the vaults.
Backup sharing	Share backups with other users. You can perform operations related to backup sharing through this type of APIs.
Restore point	Back up and replicate vaults, and query the time when backups are created.
Backup	Query and synchronize backups, and use backups to restore data.
Policy	Vaults with applied policies can be backed up periodically. You can create, modify, and query policies through policy-related APIs.



# 3 Calling APIs

## 3.1 Making an API Request

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

### Request URI

A request URI is in the following format:

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

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

**Table 3-1** URI parameter description

Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from the administrator.
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the <b>resource-path</b> of the API used to obtain a user token is <b>/v3/auth/tokens</b> .
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of <i>Parameter name=Parameter value</i> . For example, <b>?limit=10</b> indicates that a maximum of 10 data records will be displayed.

 **NOTE**

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

## Request Methods

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

**Table 3-2** HTTP methods

Method	Description
GET	Requests the server to return specified resources.
PUT	Requests the server to update specified resources.
POST	Requests the server to add resources or perform special operations.
DELETE	Requests the server to delete specified resources, for example, an object.
HEAD	Same as GET except that the server must return only the response header.
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://{{endpoint}}/v3/auth/tokens
```

## Request Header

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

Common request header fields are as follows.

**Table 3-3** Common request header fields

Parameter	Description	Mandatory	Example Value
Host	Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of <i>Hostname:Port number</i> . If the port number is not specified, the default port is used. The default port number for <b>https</b> is <b>443</b> .	No This field is mandatory for AK/SK authentication.	code.test.com or code.test.com:443
Content-Type	Specifies the type (or format) of the message body. The default value <b>application/json</b> is recommended. Other values of this field will be provided for specific APIs if any.	Yes	application/json
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495
X-Project-Id	Specifies the project ID. Obtain the project ID by following the instructions in <a href="#">Obtaining a Project ID</a> .	No	e9993fc787d94b6c886cbaa340f9c0f4
X-Auth-Token	Specifies the user token. It is a response to the API for obtaining a user token (This is the only API that does not require authentication). After the request is processed, the value of <b>X-Subject-Token</b> in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQcCo...ggg1BBIINPXsidG9rZ

 NOTE

In addition to supporting authentication using tokens, APIs support authentication using AK/SK, which uses SDKs to sign a request. During the signature, the **Authorization** (signature authentication) and **X-Sdk-Date** (time when a request is sent) headers are automatically added in the request.

For more details, see "Authentication Using AK/SK" in [Authentication](#).

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

```
POST https://{{endpoint}}/v3/auth/tokens
Content-Type: application/json
```

### (Optional) Request Body

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

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

In the case of the API used to obtain a user token, the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*, *domainname*, *\$ADMIN\_PASS* (login password), and *xxxxxxxxxxxxxxxxxxxx* (project name) with the actual values. Obtain a project name from the administrator.

 NOTE

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

```
POST https://{{endpoint}}/v3/auth/tokens
Content-Type: application/json

{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username",
          "password": "$ADMIN_PASS", //You are advised to store it in ciphertext in the
configuration file or an environment variable and decrypt it when needed to ensure security.
          "domain": {
            "name": "domainname"
          }
        }
      }
    },
    "scope": {
      "project": {
        "name": "xxxxxxxxxxxxxxxxxxxx"
      }
    }
  }
}
```

```
}  
}
```

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

## 3.2 Authentication

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

- Token authentication: Requests are authenticated using tokens.
- AK/SK authentication: Requests are encrypted using AK/SK pairs. AK/SK authentication is recommended because it is more secure than token authentication.

### Token Authentication

#### NOTE

The validity period of a token is 24 hours. When using a token for authentication, cache it to prevent frequently calling the IAM API used to obtain a user token.

A token specifies temporary permissions in a computer system. During API authentication using a token, the token is added to requests to get permissions for calling the API. You can obtain a token by calling the Obtaining User Token API.

CBR is a project-level service. When you call the API, set **auth.scope** in the request body to **project**.

```
{  
  "auth": {  
    "identity": {  
      "methods": [  
        "password"  
      ],  
      "password": {  
        "user": {  
          "name": "username", // IAM user name  
          "password": "*****", // IAM user password  
          "domain": {  
            "name": "domainname" // Name of the account to which the IAM user belongs  
          }  
        }  
      }  
    },  
    "scope": {  
      "project": {  
        "name": "xxxxxxx" // Project Name  
      }  
    }  
  }  
}
```

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

```
POST https://{{endpoint}}/v3/auth/projects
```

Content-Type: application/json  
X-Auth-Token: ABCDEFJ....

## AK/SK Authentication

An AK/SK is used to verify the identity of a request sender. In AK/SK authentication, a signature needs to be obtained and then added to requests.

### NOTE

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, which is used in conjunction with an AK to sign requests cryptographically. It identifies a request sender and prevents the request from being modified.

The following uses a demo project to show how to sign a request and use an HTTP client to send an HTTPS request.

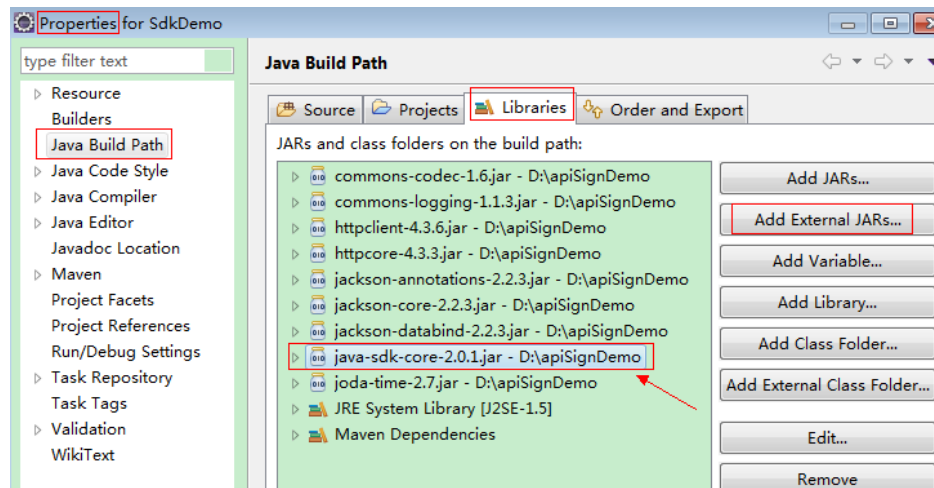
Download the demo project at <https://github.com/api-gate-way/SdkDemo>.

If you do not need the demo project, visit the following URL to download the API Gateway signing SDK:

Obtain the API Gateway signing SDK from the enterprise administrator.

Decompress the downloaded package and reference the obtained JAR files as dependencies.

**Figure 3-1** Introducing the API Gateway signing SDK



**Step 1** Generate an AK/SK. (If an AK/SK file has already been obtained, skip this step and locate the downloaded AK/SK file. Generally, the file name will be **credentials.csv**.)

1. Log in to the management console.
2. Hover over the username in the upper right corner and choose **My Credentials** from the drop-down list.
3. In the navigation pane, choose **Access Keys**.
4. Click **Add Access Key**.

5. Enter an access key description and click **OK**.
6. Enter the verification code your email, mobile phone, or virtual MFA device received and click **OK**.

**NOTE**

A verification code is required only when you have enabled operation protection. If operation protection is not enabled, you can skip this substep.

7. Download the access key file.

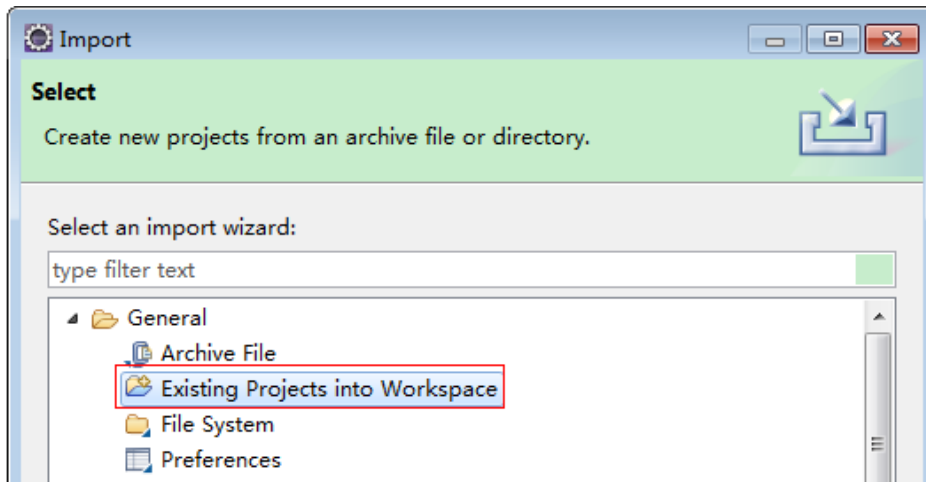
**NOTE**

Keep the access key secure.

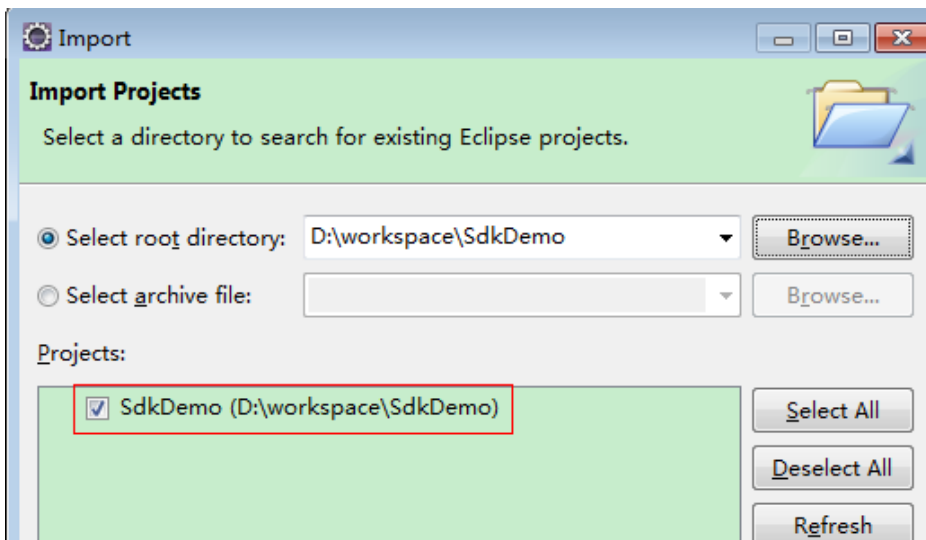
**Step 2** Download and decompress the demo project.

**Step 3** Import the demo project to Eclipse.

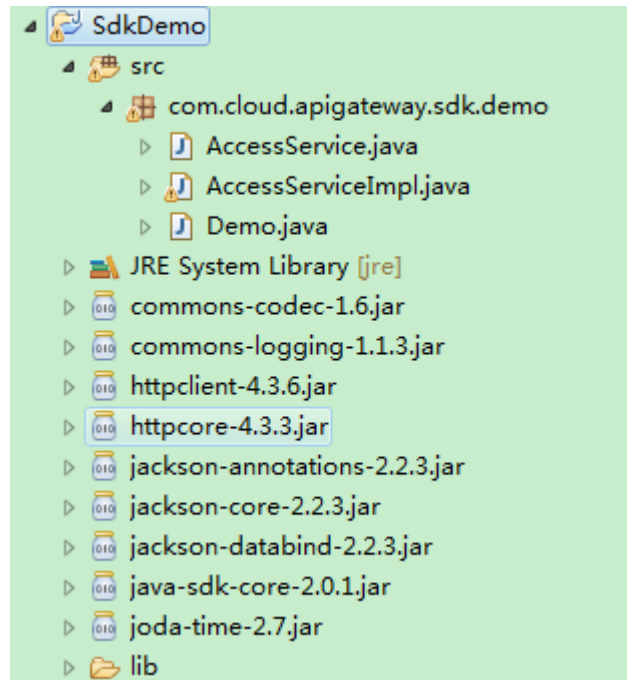
**Figure 3-2** Selecting Existing Projects into Workspace



**Figure 3-3** Selecting the demo project



**Figure 3-4** Structure of the demo project



**Step 4** Sign the request.

The request signing method is integrated in the JAR files imported in [Step 3](#). The request needs to be signed before it is sent. The signature will then be added as part of the HTTP header to the request.

The demo code is classified into the following classes to demonstrate signing and sending the HTTP request:

- **AccessService**: An abstract class that merges the GET, POST, PUT, and DELETE methods into the **access** method.
- **Demo**: Execution entry used to simulate the sending of GET, POST, PUT, and DELETE requests.
- **AccessServiceImpl**: Implements the **access** method, which contains the code required for communication with API Gateway.

1. Edit the main method in the **Demo.java** file, and replace the bold text with actual values.

If you use other methods such as POST, PUT, and DELETE, see the corresponding comment.

Specify **region**, **serviceName**, **ak/sk**, and **url** as the actual values. In this demo, the URLs for accessing VPC resources are used.

To obtain the project ID in the URLs, see [Obtaining a Project ID](#).

To obtain the endpoint, contact the enterprise administrator.

```
//TODO: Replace region with the name of the region in which the service to be accessed is located.
private static final String region = "";

//TODO: Replace vpc with the name of the service you want to access. For example, ecs, vpc, iam,
and elb.
private static final String serviceName = "";

public static void main(String[] args) throws UnsupportedOperationException
```



```
{
//TODO: Replace the AK and SK with those obtained on the My Credentials page.
String ak = "ZIRRKMTWP*****1WKNKB";
String sk = "Us0mdMNHk*****YrRCnW0ecfzl";

//TODO: To specify a project ID (multi-project scenarios), add the X-Project-Id header.
//TODO: To access a global service, such as IAM, DNS, CDN, and TMS, add the X-Domain-Id header to
specify an account ID.
//TODO: To add a header, find "Add special headers" in the AccessServiceImple.java file.

//TODO: Test the API
String url = "https://{Endpoint}/v1/{project_id}/vpcs";
get(ak, sk, url);

//TODO: When creating a VPC, replace {project_id} in postUrl with the actual value.
//String postUrl = "https://serviceEndpoint/v1/{project_id}/cloudservers";
//String postbody = "{\"vpc\": {\"name\": \"vpc\", \"cidr\": \"192.168.0.0/16\"}}";
//post(ak, sk, postUrl, postbody);

//TODO: When querying a VPC, replace {project_id} in url with the actual value.
//String url = "https://serviceEndpoint/v1/{project_id}/vpcs/{vpc_id}";
//get(ak, sk, url);

//TODO: When updating a VPC, replace {project_id} and {vpc_id} in putUrl with the actual values.
//String putUrl = "https://serviceEndpoint/v1/{project_id}/vpcs/{vpc_id}";
//String putbody = "{\"vpc\": {\"name\": \"vpc1\", \"cidr\": \"192.168.0.0/16\"}}";
//put(ak, sk, putUrl, putbody);

//TODO: When deleting a VPC, replace {project_id} and {vpc_id} in deleteUrl with the actual values.
//String deleteUrl = "https://serviceEndpoint/v1/{project_id}/vpcs/{vpc_id}";
//delete(ak, sk, deleteUrl);
}
```

2. Compile the code and call the API.

In the **Package Explorer** area on the left, right-click **Demo.java**, choose **Run AS > Java Application** from the shortcut menu to run the demo code.

You can view API call logs on the console.

----End

## 3.3 Response

### Status Code

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

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

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

### Response Header

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

**Figure 3-5** shows the response header fields for the API used to obtain a user token. The **X-Subject-Token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

 NOTE

For security purposes, you are advised to set the token in ciphertext in configuration files or environment variables and decrypt it when using it.

**Figure 3-5** Header fields of the response to the request for obtaining a user token

```

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

### (Optional) Response Body

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

The following is part of the response body for the API used to obtain a user token.

```

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

If an error occurs during API calling, an error code and a message will be displayed. The following shows an error response body.

```

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

In the response body, **error\_code** is an error code, and **error\_msg** provides information about the error.

# 4 CBR APIs

---

## 4.1 Tasks

### 4.1.1 Querying a Single Task

#### Function

This API is used to query a task by task ID.

#### URI

GET /v3/{project\_id}/operation-logs/{operation\_log\_id}

**Table 4-1** Path Parameters

Parameter	Mandatory	Type	Description
operation_log_id	Yes	String	Task ID
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-2** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

Status code: 200

**Table 4-3** Response body parameters

Parameter	Type	Description
operation_log	<b>OperationLog</b> object	Task information

**Table 4-4** OperationLog

Parameter	Type	Description
checkpoint_id	String	Backup record ID
created_at	String	Creation time, for example, <b>2020-02-23T01:00:32Z</b>
ended_at	String	Task end time, for example, <b>2020-02-23T01:00:32Z</b>
error_info	<b>OpErrorInfo</b> object	Task error message
extra_info	<b>OpExtraInfo</b> object	Task extension information
id	String	Task ID

Parameter	Type	Description
operation_type	String	Task type Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>copy</b></li> <li>• <b>replication</b></li> <li>• <b>restore</b></li> <li>• <b>delete</b></li> <li>• <b>sync</b></li> <li>• <b>vault_delete</b></li> <li>• <b>remove_resource</b></li> </ul>
policy_id	String	Policy ID
project_id	String	Project ID
provider_id	String	Backup provider ID, which specifies whether the backup object is a server or disk
started_at	String	Task start time, for example, <b>2020-02-23T01:00:32Z</b>
status	String	Task status Enumeration values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>skipped</b></li> <li>• <b>failed</b></li> <li>• <b>running</b></li> <li>• <b>timeout</b></li> <li>• <b>waiting</b></li> </ul>
updated_at	String	Modification time, for example, <b>2020-02-23T01:00:32Z</b>
vault_id	String	ID of the vault with which the target resource is associated
vault_name	String	Name of the vault with which the target resource is associated

**Table 4-5** OpErrorInfo

Parameter	Type	Description
code	String	For details, see <a href="#">Error Codes</a> .
message	String	Error message

**Table 4-6** OpExtraInfo

Parameter	Type	Description
backup	<a href="#">OpExtendInfoBackup</a> object	Extended parameters of backup
common	<a href="#">OpExtendInfoCommon</a> object	Common parameters
delete	<a href="#">OpExtendInfoDelete</a> object	Extended parameters of deletion
sync	<a href="#">OpExtendInfoSync</a> object	Extended parameters of synchronization
remove_resources	<a href="#">OpExtendInfoRemoveResources</a> object	Extended parameters of removing resources from a vault
resource	<a href="#">Resource</a> object	Resource information
restore	<a href="#">OpExtendInfoRestore</a> object	Extended parameters of restoration
vault_delete	<a href="#">OpExtendInfoVaultDelete</a> object	Extended parameters of deleting a vault

**Table 4-7** OpExtendInfoBackup

Parameter	Type	Description
app_consistency_error_code	String	Error code returned if application-consistent backup fails. For details, see <a href="#">Error Codes</a> .
app_consistency_error_message	String	Error message returned if application-consistent backup fails
app_consistency_status	String	Application-consistent backup status, which can be set to <b>0</b> (non-application-consistent backup) or <b>1</b> (application-consistent backup) Enumeration values: <ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> </ul>
backup_id	String	Backup ID

Parameter	Type	Description
backup_name	String	Backup name
incremental	String	Whether incremental backup is used Enumeration values: <ul style="list-style-type: none"> <li>• "true"</li> <li>• "false"</li> </ul>

**Table 4-8** OpExtendInfoCommon

Parameter	Type	Description
progress	Integer	Progress of the query task. The value ranges from <b>0</b> to <b>100</b> . Minimum: <b>0</b> Maximum: <b>100</b>
request_id	String	Request ID
task_id	String	Backup task ID

**Table 4-9** OpExtendInfoDelete

Parameter	Type	Description
backup_id	String	Backup ID
backup_name	String	Backup name

**Table 4-10** OpExtendInfoSync

Parameter	Type	Description
sync_backup_num	Integer	Number of synchronized backups
delete_backup_num	Integer	Number of deleted backups
err_sync_backup_num	Integer	Number of backups that failed to be synchronized

**Table 4-11** OpExtendInfoRemoveResources

Parameter	Type	Description
fail_count	Integer	Number of resources that fail to be deleted
total_count	Integer	Number of deleted backups
resources	Array of <a href="#">Resource</a> objects	Resource information

**Table 4-12** Resource

Parameter	Type	Description
extra_info	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up. The value consists of 0 to 255 characters. Minimum: <b>0</b> Maximum: <b>255</b>
type	String	-

**Table 4-13** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-14** OpExtendInfoRestore

Parameter	Type	Description
backup_id	String	Backup ID
backup_name	String	Backup name
target_resource_id	String	ID of the resource to be restored



Parameter	Type	Description
target_resource_name	String	Name of the resource to be restored

**Table 4-15** OpExtendInfoVaultDelete

Parameter	Type	Description
fail_count	Integer	Number of resources that fail to be deleted in this task
total_count	Integer	Number of backups deleted in this task

**Status code: 404**

**Table 4-16** Response body parameters

Parameter	Type	Description
error_code	String	For details, see <a href="#">Error Codes</a> .
error_msg	String	Error message

## Example Requests

```
GET https://{endpoint}/v3/{project_id}/operation-logs/{operation_log_id}
```

## Example Responses

**Status code: 200**

OK

```
{
  "operation_log" : {
    "status" : "success",
    "provider_id" : "0daac4c5-6707-4851-97ba-169e36266b66",
    "checkpoint_id" : "b432511f-d889-428f-8b0e-5f47c524c6b6",
    "updated_at" : "2019-05-23T14:35:23.584+00:00",
    "error_info" : {
      "message" : "",
      "code" : ""
    },
  },
  "started_at" : "2019-05-23T14:31:36.007+00:00",
  "id" : "4827f2da-b008-4507-ab7d-42d0df5ed912",
  "extra_info" : {
    "resource" : {
      "type" : "OS::Nova::Server",
      "id" : "1dab32fa-ebf2-415a-ab0b-eabe6353bc86",
      "name" : "ECS-0001"
    },
  },
  "backup" : {
    "backup_name" : "manualbk_1234",
    "backup_id" : "0e5d0ef6-7f0a-4890-b98c-cb12490e31c1"
  }
}
```

```
},  
"common": {  
  "progress": 100,  
  "request_id": "req-cdb98cc4-e87b-4f40-9b4a-57ec036620bc"  
}  
},  
"ended_at": "2019-05-23T14:35:23.511+00:00",  
"created_at": "2019-05-23T14:31:36.039+00:00",  
"operation_type": "backup",  
"project_id": "04f1829c788037ac2fb8c01eb2b04b95"  
}  
}
```

**Status code: 404**

The task ID does not exist.

```
{  
  "error_code": "BackupService.6500",  
  "error_msg": "Operation log does not exist."  
}
```

### Status Codes

Status Code	Description
200	OK
404	The task ID does not exist.

### Error Codes

See [Error Codes](#).

## 4.1.2 Querying the Task List

### Function

Querying the Task List

### URI

GET /v3/{project\_id}/operation-logs

**Table 4-17** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 4-18** Query Parameters

Parameter	Mandatory	Type	Description
end_time	No	String	End time of a task, in %YYYY-%mm-%ddT%HH:%MM:%SSZ format. For example, <b>2018-02-01T12:00:00Z</b> .
enterprise_project_id	No	String	Enterprise project ID or <b>all_granted_eps</b> . <b>all_granted_eps</b> indicates querying the IDs of all enterprise projects on which the user has permissions.
limit	No	Integer	Number of records displayed per page. The value must be a positive integer. Minimum: <b>1</b>
offset	No	Integer	Offset value. The value must be a positive integer. Minimum: <b>1</b>
operation_type	No	String	Task type Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>copy</b></li> <li>• <b>replication</b></li> <li>• <b>delete</b></li> <li>• <b>restore</b></li> <li>• <b>vault_delete</b></li> <li>• <b>remove_resource</b></li> <li>• <b>sync</b></li> </ul>
provider_id	No	String	Backup provider ID, which specifies whether the backup object is a server or disk
resource_id	No	String	Backup resource ID
resource_name	No	String	Backup resource name
start_time	No	String	Start time of a task, in %YYYY-%mm-%ddT%HH:%MM:%SSZ format. For example, <b>2018-01-01T12:00:00Z</b> .

Parameter	Mandatory	Type	Description
status	No	String	Task status Enumeration values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>skipped</b></li> <li>• <b>failed</b></li> <li>• <b>running</b></li> <li>• <b>timeout</b></li> <li>• <b>waiting</b></li> </ul>
vault_id	No	String	ID of the vault with which the target resource is associated
vault_name	No	String	Name of the vault with which the target resource is associated

## Request Parameters

**Table 4-19** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

**Status code: 200**

**Table 4-20** Response body parameters

Parameter	Type	Description
operation_logs	Array of <b>OperationLog</b> objects	Task list
count	Integer	Number of tasks

Parameter	Type	Description
limit	Integer	Number of records displayed on each page Minimum: <b>1</b> Maximum: <b>1000</b> Default: <b>1000</b>
offset	Integer	Offset where the query starts Minimum: <b>0</b> Default: <b>0</b>

**Table 4-21** OperationLog

Parameter	Type	Description
checkpoint_id	String	Backup record ID
created_at	String	Creation time, for example, <b>2020-02-23T01:00:32Z</b>
ended_at	String	Task end time, for example, <b>2020-02-23T01:00:32Z</b>
error_info	<b>OpErrorInfo</b> object	Task error message
extra_info	<b>OpExtraInfo</b> object	Task extension information
id	String	Task ID
operation_type	String	Task type Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>copy</b></li> <li>• <b>replication</b></li> <li>• <b>restore</b></li> <li>• <b>delete</b></li> <li>• <b>sync</b></li> <li>• <b>vault_delete</b></li> <li>• <b>remove_resource</b></li> </ul>
policy_id	String	Policy ID
project_id	String	Project ID
provider_id	String	Backup provider ID, which specifies whether the backup object is a server or disk

Parameter	Type	Description
started_at	String	Task start time, for example, <b>2020-02-23T01:00:32Z</b>
status	String	Task status Enumeration values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>skipped</b></li> <li>• <b>failed</b></li> <li>• <b>running</b></li> <li>• <b>timeout</b></li> <li>• <b>waiting</b></li> </ul>
updated_at	String	Modification time, for example, <b>2020-02-23T01:00:32Z</b>
vault_id	String	ID of the vault with which the target resource is associated
vault_name	String	Name of the vault with which the target resource is associated

**Table 4-22** OpErrorInfo

Parameter	Type	Description
code	String	For details, see <a href="#">Error Codes</a> .
message	String	Error message

**Table 4-23** OpExtralInfo

Parameter	Type	Description
backup	<a href="#">OpExtendInf</a> <a href="#">oBckup</a> object	Extended parameters of backup
common	<a href="#">OpExtendInf</a> <a href="#">oCommon</a> object	Common parameters
delete	<a href="#">OpExtendInf</a> <a href="#">oDelete</a> object	Extended parameters of deletion
sync	<a href="#">OpExtendInf</a> <a href="#">oSync</a> object	Extended parameters of synchronization

Parameter	Type	Description
remove_resources	<a href="#">OpExtendInfoRemoveResources</a> object	Extended parameters of removing resources from a vault
resource	<a href="#">Resource</a> object	Resource information
restore	<a href="#">OpExtendInfoRestore</a> object	Extended parameters of restoration
vault_delete	<a href="#">OpExtendInfoVaultDelete</a> object	Extended parameters of deleting a vault

**Table 4-24** OpExtendInfoBckup

Parameter	Type	Description
app_consistency_error_code	String	Error code returned if application-consistent backup fails. For details, see <a href="#">Error Codes</a> .
app_consistency_error_message	String	Error message returned if application-consistent backup fails
app_consistency_status	String	Application-consistent backup status, which can be set to <b>0</b> (non-application-consistent backup) or <b>1</b> (application-consistent backup) Enumeration values: <ul style="list-style-type: none"> <li>• <b>0</b></li> <li>• <b>1</b></li> </ul>
backup_id	String	Backup ID
backup_name	String	Backup name
incremental	String	Whether incremental backup is used Enumeration values: <ul style="list-style-type: none"> <li>• <b>"true"</b></li> <li>• <b>"false"</b></li> </ul>

**Table 4-25** OpExtendInfoCommon

Parameter	Type	Description
progress	Integer	Progress of the query task. The value ranges from <b>0</b> to <b>100</b> . Minimum: <b>0</b> Maximum: <b>100</b>
request_id	String	Request ID
task_id	String	Backup task ID

**Table 4-26** OpExtendInfoDelete

Parameter	Type	Description
backup_id	String	Backup ID
backup_name	String	Backup name

**Table 4-27** OpExtendInfoSync

Parameter	Type	Description
sync_backup_num	Integer	Number of synchronized backups
delete_backup_num	Integer	Number of deleted backups
err_sync_backup_num	Integer	Number of backups that failed to be synchronized

**Table 4-28** OpExtendInfoRemoveResources

Parameter	Type	Description
fail_count	Integer	Number of resources that fail to be deleted
total_count	Integer	Number of deleted backups
resources	Array of <b>Resource</b> objects	Resource information



**Table 4-29** Resource

Parameter	Type	Description
extra_info	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up. The value consists of 0 to 255 characters. Minimum: <b>0</b> Maximum: <b>255</b>
type	String	-

**Table 4-30** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-31** OpExtendInfoRestore

Parameter	Type	Description
backup_id	String	Backup ID
backup_name	String	Backup name
target_resource_id	String	ID of the resource to be restored
target_resource_name	String	Name of the resource to be restored

**Table 4-32** OpExtendInfoVaultDelete

Parameter	Type	Description
fail_count	Integer	Number of resources that fail to be deleted in this task
total_count	Integer	Number of backups deleted in this task

**Status code: 404**

**Table 4-33** Response body parameters

Parameter	Type	Description
operation_logs	Array of <b>OperationLog</b> objects	Task list
count	Integer	Number of tasks
limit	Integer	Number of records displayed on each page Minimum: <b>1</b> Maximum: <b>1000</b> Default: <b>1000</b>
offset	Integer	Offset where the query starts Minimum: <b>0</b> Default: <b>0</b>

**Table 4-34** OperationLog

Parameter	Type	Description
checkpoint_id	String	Backup record ID
created_at	String	Creation time, for example, <b>2020-02-23T01:00:32Z</b>
ended_at	String	Task end time, for example, <b>2020-02-23T01:00:32Z</b>
error_info	<b>OpErrorInfo</b> object	Task error message
extra_info	<b>OpExtraInfo</b> object	Task extension information
id	String	Task ID

Parameter	Type	Description
operation_type	String	Task type Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>copy</b></li> <li>• <b>replication</b></li> <li>• <b>restore</b></li> <li>• <b>delete</b></li> <li>• <b>sync</b></li> <li>• <b>vault_delete</b></li> <li>• <b>remove_resource</b></li> </ul>
policy_id	String	Policy ID
project_id	String	Project ID
provider_id	String	Backup provider ID, which specifies whether the backup object is a server or disk
started_at	String	Task start time, for example, <b>2020-02-23T01:00:32Z</b>
status	String	Task status Enumeration values: <ul style="list-style-type: none"> <li>• <b>success</b></li> <li>• <b>skipped</b></li> <li>• <b>failed</b></li> <li>• <b>running</b></li> <li>• <b>timeout</b></li> <li>• <b>waiting</b></li> </ul>
updated_at	String	Modification time, for example, <b>2020-02-23T01:00:32Z</b>
vault_id	String	ID of the vault with which the target resource is associated
vault_name	String	Name of the vault with which the target resource is associated

**Table 4-35** OpErrorInfo

Parameter	Type	Description
code	String	For details, see <a href="#">Error Codes</a> .
message	String	Error message

**Table 4-36** OpExtralInfo

Parameter	Type	Description
backup	<a href="#">OpExtendInfoBackup</a> object	Extended parameters of backup
common	<a href="#">OpExtendInfoCommon</a> object	Common parameters
delete	<a href="#">OpExtendInfoDelete</a> object	Extended parameters of deletion
sync	<a href="#">OpExtendInfoSync</a> object	Extended parameters of synchronization
remove_resources	<a href="#">OpExtendInfoRemoveResources</a> object	Extended parameters of removing resources from a vault
resource	<a href="#">Resource</a> object	Resource information
restore	<a href="#">OpExtendInfoRestore</a> object	Extended parameters of restoration
vault_delete	<a href="#">OpExtendInfoVaultDelete</a> object	Extended parameters of deleting a vault

**Table 4-37** OpExtendInfoBackup

Parameter	Type	Description
app_consistency_error_code	String	Error code returned if application-consistent backup fails. For details, see <a href="#">Error Codes</a> .
app_consistency_error_message	String	Error message returned if application-consistent backup fails
app_consistency_status	String	Application-consistent backup status, which can be set to <b>0</b> (non-application-consistent backup) or <b>1</b> (application-consistent backup) Enumeration values: <ul style="list-style-type: none"> <li>• 0</li> <li>• 1</li> </ul>
backup_id	String	Backup ID

Parameter	Type	Description
backup_name	String	Backup name
incremental	String	Whether incremental backup is used Enumeration values: <ul style="list-style-type: none"> <li>• "true"</li> <li>• "false"</li> </ul>

**Table 4-38** OpExtendInfoCommon

Parameter	Type	Description
progress	Integer	Progress of the query task. The value ranges from <b>0</b> to <b>100</b> . Minimum: <b>0</b> Maximum: <b>100</b>
request_id	String	Request ID
task_id	String	Backup task ID

**Table 4-39** OpExtendInfoDelete

Parameter	Type	Description
backup_id	String	Backup ID
backup_name	String	Backup name

**Table 4-40** OpExtendInfoSync

Parameter	Type	Description
sync_backup_num	Integer	Number of synchronized backups
delete_backup_num	Integer	Number of deleted backups
err_sync_backup_num	Integer	Number of backups that failed to be synchronized

**Table 4-41** OpExtendInfoRemoveResources

Parameter	Type	Description
fail_count	Integer	Number of resources that fail to be deleted
total_count	Integer	Number of deleted backups
resources	Array of <a href="#">Resource</a> objects	Resource information

**Table 4-42** Resource

Parameter	Type	Description
extra_info	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up. The value consists of 0 to 255 characters. Minimum: <b>0</b> Maximum: <b>255</b>
type	String	-

**Table 4-43** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-44** OpExtendInfoRestore

Parameter	Type	Description
backup_id	String	Backup ID
backup_name	String	Backup name
target_resource_id	String	ID of the resource to be restored

Parameter	Type	Description
target_resource_name	String	Name of the resource to be restored

**Table 4-45** OpExtendInfoVaultDelete

Parameter	Type	Description
fail_count	Integer	Number of resources that fail to be deleted in this task
total_count	Integer	Number of backups deleted in this task

## Example Requests

```
GET https://{endpoint}/v3/{project_id}/operation-logs
```

## Example Responses

**Status code: 200**

OK

```
{
  "count": 1,
  "operation_logs": [ {
    "status": "success",
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "checkpoint_id": "b432511f-d889-428f-8b0e-5f47c524c6b6",
    "updated_at": "2019-05-23T14:35:23.584+00:00",
    "error_info": {
      "message": "",
      "code": ""
    },
  },
  "started_at": "2019-05-23T14:31:36.007+00:00",
  "id": "4827f2da-b008-4507-ab7d-42d0df5ed912",
  "extra_info": {
    "resource": {
      "type": "OS::Nova::Server",
      "id": "1dab32fa-ebf2-415a-ab0b-eabe6353bc86",
      "name": "ECS-0001"
    },
    "backup": {
      "backup_name": "manualbk_backup",
      "backup_id": "0e5d0ef6-7f0a-4890-b98c-cb12490e31c1"
    },
    "common": {
      "progress": 100,
      "request_id": "req-cdb98cc4-e87b-4f40-9b4a-57ec036620bc"
    }
  },
  "ended_at": "2019-05-23T14:35:23.511+00:00",
  "created_at": "2019-05-23T14:31:36.039+00:00",
  "operation_type": "backup",
  "project_id": "04f1829c788037ac2fb8c01eb2b04b95"
} ] }
```

## Status Codes

Status Code	Description
200	OK
404	Not Found

## Error Codes

See [Error Codes](#).

# 4.2 Vaults

## 4.2.1 Creating a Vault

### Function

Creating a Vault

### URI

POST /v3/{project\_id}/vaults

**Table 4-46** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-47** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.



**Table 4-48** Request body parameters

Parameter	Mandatory	Type	Description
vault	Yes	<b>VaultCreate</b> object	Parameters for creating a vault

**Table 4-49** VaultCreate

Parameter	Mandatory	Type	Description
backup_policy_id	No	String	Backup policy ID. If the value of this parameter is null, automatic backup is not performed.
billing	Yes	<b>BillingCreate</b> object	Parameter information for creation
description	No	String	Description Minimum: <b>0</b> Maximum: <b>64</b>
name	Yes	String	Vault name Minimum: <b>1</b> Maximum: <b>64</b>
resources	Yes	Array of <b>ResourceCreate</b> objects	Associated resources. Set this parameter to [] if no resources are associated when creating a vault. Array Length: <b>0 - 255</b>
tags	No	Array of <b>Tag</b> objects	Tags. This list cannot be an empty list. tags can contain a maximum of 20 keys.] (tag:h cso_dt) Keys in this list must be unique.
auto_bind	No	Boolean	Whether automatic association is supported
bind_rules	No	<b>VaultBindRules</b> object	Rules for automatic association
backup_name_prefix	No	String	Backup name prefix. If configured, the names of all automatic backups generated for the vault will use this prefix. Minimum: <b>0</b> Maximum: <b>32</b>

Parameter	Mandatory	Type	Description
sys_lock_source_service	No	String	Used to identify the SMB service. You can set it to <b>SMB</b> or leave it empty. Enumeration values: <ul style="list-style-type: none"> <li>• <b>SMB</b></li> <li>• "</li> </ul>

**Table 4-50** BillingCreate

Parameter	Mandatory	Type	Description
cloud_type	No	String	-
consistent_level	Yes	String	-
object_type	Yes	String	-
protect_type	Yes	String	-
size	Yes	Integer	Capacity, in GB Minimum: <b>10</b> Maximum: <b>10485760</b>
charging_mode	No	String	- Default: <b>post_paid</b>
is_auto_renew	No	Boolean	Whether to automatically renew the subscription after expiration. By default, it is not renewed. Default: <b>false</b>
is_auto_pay	No	Boolean	Whether the fee is automatically deducted from the customer's account balance after an order is submitted. The non-automatic payment mode is used by default. Default: <b>false</b>
console_url	No	String	Redirection URL Minimum: <b>1</b> Maximum: <b>255</b>

**Table 4-51 ResourceCreate**

Parameter	Mandatory	Type	Description
extra_info	No	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	Yes	String	ID of the resource to be backed up
type	Yes	String	-
name	No	String	Backup name Minimum: <b>0</b> Maximum: <b>255</b>

**Table 4-52 ResourceExtraInfo**

Parameter	Mandatory	Type	Description
exclude_volumes	No	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-53 Tag**

Parameter	Mandatory	Type	Description
key	Yes	String	Key It can contain a maximum of 36 characters. It cannot be an empty string. Spaces before and after a key will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

Parameter	Mandatory	Type	Description
value	Yes	String	<p>Value</p> <p>It is mandatory when a tag is added and optional when a tag is deleted.</p> <p>It can contain a maximum of 43 characters.</p> <p>It can be an empty string.</p> <p>Spaces before and after a value will be discarded.</p> <p>It cannot contain non-printable ASCII characters (0-31) and the following characters: =*&lt;&gt;, /</p>

**Table 4-54** VaultBindRules

Parameter	Mandatory	Type	Description
tags	No	Array of <a href="#">BindRulesTags</a> objects	<p>Filters automatically associated resources by tag.</p> <p>Minimum length: 0 characters</p> <p>Maximum length: 5 characters</p> <p>Array Length: <b>0 - 5</b></p>

**Table 4-55** BindRulesTags

Parameter	Mandatory	Type	Description
key	Yes	String	The key cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	Yes	String	The value cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

## Response Parameters

Status code: 200

**Table 4-56** Response body parameters

Parameter	Type	Description
vault	<b>VaultCreateResource</b> object	Objects returned after a vault query

**Table 4-57** VaultCreateResource

Parameter	Type	Description
billing	<b>Billing</b> object	Operation info
description	String	User-defined vault description Minimum: <b>0</b> Maximum: <b>255</b>
id	String	Vault ID
name	String	Vault name Minimum: <b>1</b> Maximum: <b>64</b>
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of <b>ResourceResop</b> objects	Vault resources
tags	Array of <b>Tag</b> objects	Vault tags
enterprise_project_id	String	Enterprise project ID. Its default value is <b>0</b> .
auto_bind	Boolean	Indicates whether automatic association is enabled. Its default value is <b>false</b> (not enabled).
bind_rules	<b>VaultBindRules</b> object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
auto_expand	Boolean	-

Parameter	Type	Description
backup_name_prefix	String	Backup name prefix Minimum: <b>0</b> Maximum: <b>32</b>
demand_billing	Boolean	Whether the vault capacity can be exceeded. Default: <b>false</b>
cbc_delete_count	Integer	Vault deletion count Default: <b>0</b>
frozen	Boolean	Whether the vault is frozen Default: <b>false</b>

**Table 4-58** Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	-
cloud_type	String	-
consistent_level	String	-
object_type	String	-
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	-
size	Integer	Capacity, in GB Minimum: <b>1</b> Maximum: <b>10485760</b>
spec_code	String	Specification code
status	String	Vault status Enumeration values: <ul style="list-style-type: none"> <li>● <b>available</b></li> <li>● <b>lock</b></li> <li>● <b>frozen</b></li> <li>● <b>deleting</b></li> <li>● <b>error</b></li> </ul>

Parameter	Type	Description
storage_unit	String	Name of the bucket for the vault
used	Integer	Used capacity, in MB.
frozen_scene	String	Scenario when an account is frozen

**Table 4-59** ResourceResp

Parameter	Type	Description
extra_info	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up Minimum: <b>0</b> Maximum: <b>255</b>
protect_status	String	Protection status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>error</b></li> <li>• <b>protecting</b></li> <li>• <b>restoring</b></li> <li>• <b>removing</b></li> </ul>
size	Integer	Allocated capacity for the associated resource, in GB
type	String	-
backup_size	Integer	Backup size
backup_count	Integer	Number of backups

**Table 4-60** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-61 Tag**

Parameter	Type	Description
key	String	Key It can contain a maximum of 36 characters. It cannot be an empty string. Spaces before and after a key will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	String	Value It is mandatory when a tag is added and optional when a tag is deleted. It can contain a maximum of 43 characters. It can be an empty string. Spaces before and after a value will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

**Table 4-62 VaultBindRules**

Parameter	Type	Description
tags	Array of <a href="#">BindRulesTags</a> objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters Array Length: <b>0 - 5</b>

**Table 4-63 BindRulesTags**

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	String	The value cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

**Status code: 400**



**Table 4-64** Response body parameters

Parameter	Type	Description
error_code	String	For details, see <a href="#">Error Codes</a> .
error_msg	String	Error message

## Example Requests

- Creating a 100-GB pay-per-use cloud server backup vault, associating resources, and adding tags

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults
{
  "vault": {
    "backup_policy_id": "6dd81d7d-a4cb-443e-b8ed-1af0bd3a261b",
    "billing": {
      "cloud_type": "public",
      "consistent_level": "crash_consistent",
      "object_type": "server",
      "protect_type": "backup",
      "size": 100,
      "charging_mode": "post_paid",
      "is_auto_renew": false,
      "is_auto_pay": false,
      "console_url": "https://console.demo.com/cbr/?agencyId=97fcd896b7914cb98f553a087232e243&region=testregion/cbr/manager/csbs/vaultList"
    },
    "description": "vault_description",
    "name": "vault_name",
    "resources": [ {
      "extra_info": {
        "exclude_volumes": [ "43a320a5-3efd-4568-b1aa-8dd9183cc64b" ]
      },
      "id": "23a320a5-3efd-4568-b1aa-8dd9183cc64c",
      "type": "OS::Nova::Server"
    } ],
    "tags": [ {
      "key": "key01",
      "value": "value01"
    } ],
    "enterprise_project_id": "0"
  }
}
```

- Creating a 40-GB pay-per-use cloud disk backup vault

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults
{
  "vault": {
    "billing": {
      "consistent_level": "crash_consistent",
      "object_type": "disk",
      "protect_type": "backup",
      "size": 40,
      "charging_mode": "post_paid",
      "is_auto_renew": false,
      "is_auto_pay": false
    },
    "name": "test",
    "resources": [ ]
  }
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "vault": {
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "description": "vault_description",
    "tags": [ {
      "value": "value01",
      "key": "key01"
    } ],
    "enterprise_project_id": 0,
    "auto_bind": false,
    "id": "ad7627ae-5b0b-492e-b6bd-cd809b745197",
    "user_id": "38d65be2ecd840d19046e239e841a734",
    "name": "vault_name",
    "billing": {
      "status": "available",
      "used": 0,
      "protect_type": "backup",
      "object_type": "server",
      "allocated": 40,
      "spec_code": "vault.backup.server.normal",
      "size": 100,
      "cloud_type": "public",
      "consistent_level": "crash_consistent",
      "charging_mode": "post_paid"
    },
    "created_at": "2019-05-23T12:51:10.071+00:00",
    "project_id": "fc347bc64ccd4589ae52e4f44b7433c7",
    "resources": [ {
      "name": "ecs-b977-0002",
      "backup_size": 0,
      "protect_status": "available",
      "backup_count": 0,
      "extra_info": {
        "exclude_volumes": [ "1855eb9a-2b5e-4938-a9f0-aea08b6f9243", "5a51e8b3-2f65-4045-896f-f8ffae14b064" ]
      }
    },
    "type": "OS::Nova::Server",
    "id": "23a320a5-3efd-4568-b1aa-8dd9183cc64c",
    "size": 40
  } ]
}
```

## Status Codes

Status Code	Description
200	OK
400	Bad Request

## Error Codes

See [Error Codes](#).

## 4.2.2 Querying a Specified Vault

### Function

This API is used to query a specified vault based on its ID.

### URI

GET /v3/{project\_id}/vaults/{vault\_id}

**Table 4-65** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
vault_id	Yes	String	Vault ID

### Request Parameters

**Table 4-66** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

### Response Parameters

Status code: 200

**Table 4-67** Response body parameters

Parameter	Type	Description
vault	<b>Vault</b> object	Objects returned after a vault query

**Table 4-68** Vault

Parameter	Type	Description
billing	<b>Billing</b> object	Operation info

Parameter	Type	Description
description	String	User-defined vault description Minimum: <b>0</b> Maximum: <b>255</b>
id	String	Vault ID
name	String	Vault name Minimum: <b>1</b> Maximum: <b>64</b>
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of <a href="#">ResourceRes</a> <a href="#">p</a> objects	Vault resources
tags	Array of <a href="#">Tag</a> objects	Vault tags
enterprise_project_id	String	Enterprise project ID. Its default value is <b>0</b> .
auto_bind	Boolean	Indicates whether automatic association is enabled. Its default value is <b>false</b> (not enabled).
bind_rules	<a href="#">VaultBindRules</a> object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
auto_expand	Boolean	-
sys_lock_source_service	String	Used to identify the SMB service. You can set it to <b>SMB</b> or leave it empty. Minimum: <b>0</b> Maximum: <b>32</b> Enumeration values: <ul style="list-style-type: none"> <li>● <b>SMB</b></li> <li>● <b>"</b></li> </ul>

**Table 4-69** Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	-
cloud_type	String	-
consistent_level	String	-
object_type	String	-
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	-
size	Integer	Capacity, in GB Minimum: <b>1</b> Maximum: <b>10485760</b>
spec_code	String	Specification code
status	String	Vault status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>lock</b></li> <li>• <b>frozen</b></li> <li>• <b>deleting</b></li> <li>• <b>error</b></li> </ul>
storage_unit	String	Name of the bucket for the vault
used	Integer	Used capacity, in MB.
frozen_scene	String	Scenario when an account is frozen

**Table 4-70** ResourceResp

Parameter	Type	Description
extra_info	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	String	ID of the resource to be backed up

Parameter	Type	Description
name	String	Name of the resource to be backed up Minimum: <b>0</b> Maximum: <b>255</b>
protect_status	String	Protection status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>error</b></li> <li>• <b>protecting</b></li> <li>• <b>restoring</b></li> <li>• <b>removing</b></li> </ul>
size	Integer	Allocated capacity for the associated resource, in GB
type	String	-
backup_size	Integer	Backup size
backup_count	Integer	Number of backups

**Table 4-71** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-72** Tag

Parameter	Type	Description
key	String	Key It can contain a maximum of 36 characters. It cannot be an empty string. Spaces before and after a key will be discarded. It cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, /

Parameter	Type	Description
value	String	Value It is mandatory when a tag is added and optional when a tag is deleted. It can contain a maximum of 43 characters. It can be an empty string. Spaces before and after a value will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

**Table 4-73** VaultBindRules

Parameter	Type	Description
tags	Array of <b>BindRulesTags</b> objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters Array Length: <b>0 - 5</b>

**Table 4-74** BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	String	The value cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

**Status code: 404**

**Table 4-75** Response body parameters

Parameter	Type	Description
vault	<b>Vault</b> object	Objects returned after a vault query

**Table 4-76** Vault

Parameter	Type	Description
billing	<b>Billing</b> object	Operation info
description	String	User-defined vault description Minimum: <b>0</b> Maximum: <b>255</b>
id	String	Vault ID
name	String	Vault name Minimum: <b>1</b> Maximum: <b>64</b>
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of <b>ResourceRes</b> <b>p</b> objects	Vault resources
tags	Array of <b>Tag</b> objects	Vault tags
enterprise_project_id	String	Enterprise project ID. Its default value is <b>0</b> .
auto_bind	Boolean	Indicates whether automatic association is enabled. Its default value is <b>false</b> (not enabled).
bind_rules	<b>VaultBindRules</b> object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
auto_expand	Boolean	-
sys_lock_source_service	String	Used to identify the SMB service. You can set it to <b>SMB</b> or leave it empty. Minimum: <b>0</b> Maximum: <b>32</b> Enumeration values: <ul style="list-style-type: none"> <li>● <b>SMB</b></li> <li>● <b>"</b></li> </ul>



**Table 4-77** Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	-
cloud_type	String	-
consistent_level	String	-
object_type	String	-
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	-
size	Integer	Capacity, in GB Minimum: <b>1</b> Maximum: <b>10485760</b>
spec_code	String	Specification code
status	String	Vault status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>lock</b></li> <li>• <b>frozen</b></li> <li>• <b>deleting</b></li> <li>• <b>error</b></li> </ul>
storage_unit	String	Name of the bucket for the vault
used	Integer	Used capacity, in MB.
frozen_scene	String	Scenario when an account is frozen

**Table 4-78** ResourceResp

Parameter	Type	Description
extra_info	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	String	ID of the resource to be backed up

Parameter	Type	Description
name	String	Name of the resource to be backed up Minimum: <b>0</b> Maximum: <b>255</b>
protect_status	String	Protection status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>error</b></li> <li>• <b>protecting</b></li> <li>• <b>restoring</b></li> <li>• <b>removing</b></li> </ul>
size	Integer	Allocated capacity for the associated resource, in GB
type	String	-
backup_size	Integer	Backup size
backup_count	Integer	Number of backups

**Table 4-79** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-80** Tag

Parameter	Type	Description
key	String	Key It can contain a maximum of 36 characters. It cannot be an empty string. Spaces before and after a key will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

Parameter	Type	Description
value	String	Value It is mandatory when a tag is added and optional when a tag is deleted. It can contain a maximum of 43 characters. It can be an empty string. Spaces before and after a value will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

**Table 4-81** VaultBindRules

Parameter	Type	Description
tags	Array of <a href="#">BindRulesTags</a> objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters Array Length: <b>0 - 5</b>

**Table 4-82** BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	String	The value cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

## Example Requests

Querying a vault

```
GET https://{endpoint}/v3/{project_id}/vaults/{vault_id}
```

## Example Responses

**Status code: 200**

OK

```
{
  "vault": {
    "id": "2b076f26-391f-40fa-bf71-a798940faccf",
    "name": "sdk-vault1595581958",
    "resources": [ ],
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "created_at": "2020-07-24T09:12:49.492+00:00",
    "project_id": "0605767b5780d5762fc5c0118072a564",
    "enterprise_project_id": 0,
    "auto_bind": true,
    "bind_rules": { },
    "auto_expand": false,
    "user_id": "aa2999fa5ae640f28926f8fd79188934",
    "billing": {
      "allocated": 0,
      "cloud_type": "public",
      "consistent_level": "crash_consistent",
      "charging_mode": "post_paid",
      "protect_type": "backup",
      "object_type": "server",
      "spec_code": "vault.backup.server.normal",
      "used": 0,
      "status": "available",
      "size": 40
    },
    "tags": [ {
      "key": "fds"
    } ]
  }
}
```

## Status Codes

Status Code	Description
200	OK
404	Not Found

## Error Codes

See [Error Codes](#).

## 4.2.3 Querying the Vault List

### Function

Querying the Vault List

### URI

GET /v3/{project\_id}/vaults

**Table 4-83** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 4-84** Query Parameters

Parameter	Mandatory	Type	Description
cloud_type	No	String	-
enterprise_project_id	No	String	Enterprise project ID or <b>all_granted_eps</b> . <b>all_granted_eps</b> indicates querying the IDs of all enterprise projects on which the user has permissions.
id	No	String	Vault ID
limit	No	Integer	Number of records displayed on each page Minimum: <b>1</b> Maximum: <b>1000</b>
name	No	String	Vault name
object_type	No	String	-
offset	No	Integer	Query offset, which is a positive integer
policy_id	No	String	Policy ID
protect_type	No	String	-
resource_ids	No	String	Resource ID. Multiple resources are separated with commas (,).
status	No	String	Status

## Request Parameters

**Table 4-85** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

Status code: 200

**Table 4-86** Response body parameters

Parameter	Type	Description
vaults	Array of <b>Vault</b> objects	Vault instance list
count	Integer	Number of vaults
limit	Integer	Number of records displayed on each page Minimum: <b>1</b> Maximum: <b>1000</b> Default: <b>1000</b>
offset	Integer	Offset where the query starts Minimum: <b>0</b> Default: <b>0</b>

**Table 4-87** Vault

Parameter	Type	Description
billing	<b>Billing</b> object	Operation info
description	String	User-defined vault description Minimum: <b>0</b> Maximum: <b>255</b>
id	String	Vault ID

Parameter	Type	Description
name	String	Vault name Minimum: <b>1</b> Maximum: <b>64</b>
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of <b>ResourceRes</b> <b>p</b> objects	Vault resources
tags	Array of <b>Tag</b> objects	Vault tags
enterprise_project_id	String	Enterprise project ID. Its default value is <b>0</b> .
auto_bind	Boolean	Indicates whether automatic association is enabled. Its default value is <b>false</b> (not enabled).
bind_rules	<b>VaultBindRules</b> object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
auto_expand	Boolean	-
sys_lock_source_service	String	Used to identify the SMB service. You can set it to <b>SMB</b> or leave it empty. Minimum: <b>0</b> Maximum: <b>32</b> Enumeration values: <ul style="list-style-type: none"> <li>● <b>SMB</b></li> <li>● <b>"</b></li> </ul>

**Table 4-88** Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	-
cloud_type	String	-

Parameter	Type	Description
consistent_level	String	-
object_type	String	-
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	-
size	Integer	Capacity, in GB Minimum: <b>1</b> Maximum: <b>10485760</b>
spec_code	String	Specification code
status	String	Vault status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>lock</b></li> <li>• <b>frozen</b></li> <li>• <b>deleting</b></li> <li>• <b>error</b></li> </ul>
storage_unit	String	Name of the bucket for the vault
used	Integer	Used capacity, in MB.
frozen_scene	String	Scenario when an account is frozen

**Table 4-89** ResourceResp

Parameter	Type	Description
extra_info	<b>ResourceExtraInfo</b> object	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up Minimum: <b>0</b> Maximum: <b>255</b>



Parameter	Type	Description
protect_status	String	Protection status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>error</b></li> <li>• <b>protecting</b></li> <li>• <b>restoring</b></li> <li>• <b>removing</b></li> </ul>
size	Integer	Allocated capacity for the associated resource, in GB
type	String	-
backup_size	Integer	Backup size
backup_count	Integer	Number of backups

**Table 4-90** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-91** Tag

Parameter	Type	Description
key	String	Key It can contain a maximum of 36 characters. It cannot be an empty string. Spaces before and after a key will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

Parameter	Type	Description
value	String	Value It is mandatory when a tag is added and optional when a tag is deleted. It can contain a maximum of 43 characters. It can be an empty string. Spaces before and after a value will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

**Table 4-92** VaultBindRules

Parameter	Type	Description
tags	Array of <a href="#">BindRulesTags</a> objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters Array Length: <b>0 - 5</b>

**Table 4-93** BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	String	The value cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

## Example Requests

Querying a vault list

```
GET https://{endpoint}/v3/{project_id}/vaults
```

## Example Responses

**Status code: 200**

OK

```
{
  "vaults": [ {
    "id": "a335f9e1-1628-4c64-a7be-38656e5ec19c",
    "name": "vault-8538",
    "resources": [ ],
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "created_at": "2020-09-04T06:57:37.344+00:00",
    "project_id": "0605767b5780d5762fc5c0118072a564",
    "enterprise_project_id": 0,
    "auto_bind": false,
    "bind_rules": { },
    "auto_expand": false,
    "user_id": "aa2999fa5ae640f28926f8fd79188934",
    "billing": {
      "allocated": 0,
      "cloud_type": "public",
      "consistent_level": "crash_consistent",
      "charging_mode": "post_paid",
      "protect_type": "backup",
      "object_type": "server",
      "spec_code": "vault.backup.server.normal",
      "used": 0,
      "status": "available",
      "size": 100
    },
    "tags": [ ]
  } ],
  "count": 50
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.2.4 Modifying a Vault

### Function

This API is used to modify a vault based on its ID.

### URI

PUT /v3/{project\_id}/vaults/{vault\_id}

**Table 4-94** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
vault_id	Yes	String	Vault ID

## Request Parameters

**Table 4-95** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-96** Request body parameters

Parameter	Mandatory	Type	Description
vault	Yes	<b>VaultUpdate</b> object	Parameters for modifying a vault.

**Table 4-97** VaultUpdate

Parameter	Mandatory	Type	Description
billing	No	<b>BillingUpdate</b> object	Bill information
name	No	String	Vault name Minimum: <b>1</b> Maximum: <b>64</b>
auto_bind	No	Boolean	Whether automatic association is supported
bind_rules	No	<b>VaultBindRules</b> object	Association rule
auto_expand	No	Boolean	-
smn_notify	No	Boolean	Exception notification function Default: <b>true</b>

Parameter	Mandatory	Type	Description
threshold	No	Integer	Vault capacity threshold. If the vault capacity usage exceeds this threshold and smn_notify is true, an exception notification is sent. Minimum: <b>1</b> Maximum: <b>100</b> Default: <b>80</b>

**Table 4-98** BillingUpdate

Parameter	Mandatory	Type	Description
consistent_level	No	String	Vault specifications Enumeration values: <ul style="list-style-type: none"> <li>• <b>app_consistent</b></li> <li>• <b>crash_consistent</b></li> </ul>
size	No	Integer	Vault size, in GB Minimum: <b>1</b> Maximum: <b>10485760</b>

**Table 4-99** VaultBindRules

Parameter	Mandatory	Type	Description
tags	No	Array of <b>BindRulesTags</b> objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters Array Length: <b>0 - 5</b>

**Table 4-100** BindRulesTags

Parameter	Mandatory	Type	Description
key	Yes	String	The key cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

Parameter	Mandatory	Type	Description
value	Yes	String	The value cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

## Response Parameters

Status code: 200

Table 4-101 Response body parameters

Parameter	Type	Description
vault	<b>Vault</b> object	Objects returned after a vault query

Table 4-102 Vault

Parameter	Type	Description
billing	<b>Billing</b> object	Operation info
description	String	User-defined vault description Minimum: <b>0</b> Maximum: <b>255</b>
id	String	Vault ID
name	String	Vault name Minimum: <b>1</b> Maximum: <b>64</b>
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of <b>ResourceRes</b> <b>p</b> objects	Vault resources
tags	Array of <b>Tag</b> objects	Vault tags
enterprise_pro ject_id	String	Enterprise project ID. Its default value is <b>0</b> .
auto_bind	Boolean	Indicates whether automatic association is enabled. Its default value is <b>false</b> (not enabled).

Parameter	Type	Description
bind_rules	<b>VaultBindRules</b> object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
auto_expand	Boolean	-
sys_lock_source_service	String	Used to identify the SMB service. You can set it to <b>SMB</b> or leave it empty. Minimum: <b>0</b> Maximum: <b>32</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>SMB</b></li> <li>• <b>"</b></li> </ul>

**Table 4-103** Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	-
cloud_type	String	-
consistent_level	String	-
object_type	String	-
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	-
size	Integer	Capacity, in GB Minimum: <b>1</b> Maximum: <b>10485760</b>
spec_code	String	Specification code

Parameter	Type	Description
status	String	Vault status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>lock</b></li> <li>• <b>frozen</b></li> <li>• <b>deleting</b></li> <li>• <b>error</b></li> </ul>
storage_unit	String	Name of the bucket for the vault
used	Integer	Used capacity, in MB.
frozen_scene	String	Scenario when an account is frozen

**Table 4-104** ResourceResp

Parameter	Type	Description
extra_info	<a href="#">ResourceExtraInfo</a> object	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up Minimum: <b>0</b> Maximum: <b>255</b>
protect_status	String	Protection status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>error</b></li> <li>• <b>protecting</b></li> <li>• <b>restoring</b></li> <li>• <b>removing</b></li> </ul>
size	Integer	Allocated capacity for the associated resource, in GB
type	String	-
backup_size	Integer	Backup size
backup_count	Integer	Number of backups



**Table 4-105** ResourceExtraInfo

Parameter	Type	Description
exclude_volumes	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

**Table 4-106** Tag

Parameter	Type	Description
key	String	Key It can contain a maximum of 36 characters. It cannot be an empty string. Spaces before and after a key will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	String	Value It is mandatory when a tag is added and optional when a tag is deleted. It can contain a maximum of 43 characters. It can be an empty string. Spaces before and after a value will be discarded. It cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

**Table 4-107** VaultBindRules

Parameter	Type	Description
tags	Array of <a href="#">BindRulesTags</a> objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters Array Length: <b>0 - 5</b>

**Table 4-108** BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /
value	String	The value cannot contain non-printable ASCII characters (0-31) and the following characters: =*<>, /

## Example Requests

Modifying a vault (vault capacity changed to 200 GB and vault name changed to **vault\_name02**)

```
PUT https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults/79bd9daa-884f-4f84-b8fe-235d58cd927d
{
  "vault": {
    "billing": {
      "size": 200
    },
    "name": "vault_name02"
  }
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "vault": {
    "name": "vault_name02",
    "billing": {
      "status": "available",
      "used": 0,
      "protect_type": "backup",
      "object_type": "server",
      "allocated": 40,
      "spec_code": "vault.backup.server.normal",
      "size": 200,
      "cloud_type": "public",
      "consistent_level": "crash_consistent",
      "charging_mode": "post_paid"
    },
    "tags": [ {
      "value": "value01",
      "key": "key01"
    } ],
    "created_at": "2019-05-08T09:31:21.840+00:00",
    "project_id": "4229d7a45436489f8c3dc2b1d35d4987",
    "enterprise_project_id": 0,
    "id": "2402058d-8373-4b0a-b848-d3c0dfdc71a8",
    "resources": [ {
      "name": "ecs-1f0f-0003",
      "protect_status": "available",
      "extra_info": {
```

```

    "exclude_volumes" : [ "bdef09bb-293f-446a-88a4-86e9f14408c4" ]
  },
  "type" : "OS::Nova::Server",
  "id" : "97595625-198e-4e4d-879b-9d53f68ba551",
  "size" : 40
} ],
"description" : "vault_description"
}
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.2.5 Deleting a Vault

### Function

This API is used to delete vaults. Once a vault is deleted, all backups in the vault are cleared.

### URI

DELETE /v3/{project\_id}/vaults/{vault\_id}

**Table 4-109** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
vault_id	Yes	String	Vault ID

## Request Parameters

**Table 4-110** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

None

## Example Requests

Deleting a vault

```
DELETE https://{endpoint}/v3/{project_id}/vaults/{vault_id}
```

## Example Responses

None

## Status Codes

Status Code	Description
204	No Content

## Error Codes

See [Error Codes](#).

## 4.2.6 Dissociating Resources

### Function

This API is used to dissociate resources from a vault.

### URI

```
POST /v3/{project_id}/vaults/{vault_id}/removeresources
```

**Table 4-111** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
vault_id	Yes	String	Vault ID

## Request Parameters

**Table 4-112** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-113** Request body parameters

Parameter	Mandatory	Type	Description
resource_ids	Yes	Array of strings	IDs of the resources to be removed Minimum length: 1 Maximum length: 256 Array Length: <b>1 - 256</b>

## Response Parameters

**Status code: 200**

**Table 4-114** Response body parameters

Parameter	Type	Description
remove_resource_ids	Array of strings	Removed resource IDs

## Example Requests

Dissociating resources from a vault and deleting the backups of the resources

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults/79bd9daa-884f-4f84-b8fe-235d58cd927d/removeresources
```

```
{
  "resource_ids" : [ "97595625-198e-4e4d-879b-9d53f68ba551" ]
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "remove_resource_ids" : [ "97595625-198e-4e4d-879b-9d53f68ba551" ]
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.2.7 Associating Resources

### Function

This API is used to associate resources with a vault.

### URI

POST /v3/{project\_id}/vaults/{vault\_id}/addresources

**Table 4-115** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
vault_id	Yes	String	Vault ID

## Request Parameters

**Table 4-116** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-117** Request body parameters

Parameter	Mandatory	Type	Description
resources	Yes	Array of <b>ResourceCreate</b> objects	Resource list Minimum length: 1 Maximum length: 256 Array Length: <b>1 - 256</b>

**Table 4-118** ResourceCreate

Parameter	Mandatory	Type	Description
extra_info	No	<b>ResourceExtraInfo</b> object	Extra information of the resource
id	Yes	String	ID of the resource to be backed up
type	Yes	String	-
name	No	String	Backup name Minimum: <b>0</b> Maximum: <b>255</b>

**Table 4-119** ResourceExtraInfo

Parameter	Mandatory	Type	Description
exclude_volumes	No	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

## Response Parameters

**Status code: 200**

**Table 4-120** Response body parameters

Parameter	Type	Description
add_resource_ids	Array of strings	List of resource IDs that have been added

## Example Requests

POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults/79bd9daa-884f-4f84-b8fe-235d58cd927d/addresources

```
{
  "resources": [ {
    "extra_info": {
      "exclude_volumes": [ "bdef09bb-293f-446a-88a4-86e9f14408c4" ]
    },
    "id": "97595625-198e-4e4d-879b-9d53f68ba551",
    "type": "OS::Nova::Server"
  } ]
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "add_resource_ids": [ "97595625-198e-4e4d-879b-9d53f68ba551" ]
}
```



## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.2.8 Applying a Policy to a Vault

### Function

This API is used to apply a policy to a vault.

### URI

POST /v3/{project\_id}/vaults/{vault\_id}/associatepolicy

**Table 4-121** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
vault_id	Yes	String	Vault ID

## Request Parameters

**Table 4-122** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-123** Request body parameters

Parameter	Mandatory	Type	Description
policy_id	No	String	Policy ID.

## Response Parameters

**Status code: 200**

**Table 4-124** Response body parameters

Parameter	Type	Description
associate_policy	<b>VaultPolicyResp</b> object	Details of applying a policy to a vault

**Table 4-125** VaultPolicyResp

Parameter	Type	Description
policy_id	String	Configured policy ID
vault_id	String	Vault ID for configuring the policy ID

## Example Requests

Applying a policy to a vault

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults/79bd9daa-884f-4f84-b8fe-235d58cd927d/associatepolicy
{
  "policy_id": "7075c397-25a0-43e2-a83a-bb16eaca3ee5"
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "associate_policy": {
    "vault_id": "2402058d-8373-4b0a-b848-d3c0dfdc71a8",
    "policy_id": "7075c397-25a0-43e2-a83a-bb16eaca3ee5"
  }
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.2.9 Removing a Policy from a Vault

### Function

This API is used to remove a policy from a vault.

### URI

POST /v3/{project\_id}/vaults/{vault\_id}/dissociatepolicy

**Table 4-126** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
vault_id	Yes	String	Vault ID

### Request Parameters

**Table 4-127** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-128** Request body parameters

Parameter	Mandatory	Type	Description
policy_id	Yes	String	Policy ID

### Response Parameters

Status code: 200

**Table 4-129** Response body parameters

Parameter	Type	Description
dissociate_policy	<b>VaultPolicyResp</b> object	Details of removing a policy from a vault

**Table 4-130** VaultPolicyResp

Parameter	Type	Description
policy_id	String	Configured policy ID
vault_id	String	Vault ID for configuring the policy ID

## Example Requests

Removing a policy from a vault

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults/79bd9daa-884f-4f84-
b8fe-235d58cd927d/dissociatepolicy
{
  "policy_id" : "7075c397-25a0-43e2-a83a-bb16eaca3ee5"
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "dissociate_policy" : {
    "vault_id" : "2402058d-8373-4b0a-b848-d3c0dfdc71a8",
    "policy_id" : "7075c397-25a0-43e2-a83a-bb16eaca3ee5"
  }
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.2.10 Batch Modifying Vaults

### Function

This API is used to batch modify all vaults in a project.

### URI

PUT /v3/{project\_id}/vaults/batch-update

**Table 4-131** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-132** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-133** Request body parameters

Parameter	Mandatory	Type	Description
vault	Yes	<a href="#">VaultBatchUpdate</a> object	Parameters for modifying a vault.

**Table 4-134** VaultBatchUpdate

Parameter	Mandatory	Type	Description
smn_notify	No	Boolean	Exception notification function Default: <b>true</b>
threshold	No	Integer	Vault capacity threshold Minimum: <b>1</b> Maximum: <b>100</b> Default: <b>80</b>

## Response Parameters

Status code: 200

**Table 4-135** Response body parameters

Parameter	Type	Description
updated_vaults_id	Array of strings	IDs of vaults that have been modified in batches Minimum: <b>0</b>

## Example Requests

Batch modifying capacities of vaults to 60 GB

```
PUT https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/vaults/batch-update
{
  "vault": {
    "smn_notify": true,
    "threshold": 60
  }
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "updated_vaults_id": [ "79bd9daa-884f-4f84-b8fe-235d58cd927d" ]
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

# 4.3 Policies

## 4.3.1 Creating a Policy

### Function

-

## URI

POST /v3/{project\_id}/policies

**Table 4-136** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-137** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-138** Request body parameters

Parameter	Mandatory	Type	Description
policy	Yes	<a href="#">PolicyCreate</a> object	Request body for creating a policy

**Table 4-139** PolicyCreate

Parameter	Mandatory	Type	Description
enabled	No	Boolean	Whether to enable the policy Default: <b>true</b>
name	Yes	String	Specifies the policy name. The value consists of 1 to 64 characters and can contain only letters, digits, underscores (_), and hyphens (-). Minimum: <b>1</b> Maximum: <b>64</b>
operation_definition	Yes	<a href="#">PolicyoODCreate</a> object	Scheduling parameter

Parameter	Mandatory	Type	Description
operation_type	Yes	String	-
trigger	Yes	<a href="#">PolicyTriggerReq</a> object	Time rule for the policy execution

**Table 4-140** PolicyoODCreate

Parameter	Mandatory	Type	Description
day_backups	No	Integer	Specifies the number of retained daily backups. The latest backup of each day is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
max_backups	No	Integer	Maximum number of retained backups. The value can be <b>-1</b> or ranges from <b>0</b> to <b>99999</b> . If the value is set to <b>-1</b> , the backups will not be cleared even though the configured retained backup quantity is exceeded. If this parameter and <b>retention_duration_days</b> are both left blank, the backups will be retained permanently. Minimum: <b>1</b> Maximum: <b>99999</b> Default: <b>-1</b>



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

Parameter	Mandatory	Type	Description
year_backups	No	Integer	Specifies the number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
full_backup_interval	No	Integer	Defines how often (after how many incremental backups) a full backup is performed. If <b>-1</b> is specified, full backup will not be performed. Minimum value: <b>-1</b> Maximum value: <b>100</b> Minimum: <b>-1</b> Maximum: <b>100</b>

**Table 4-141** PolicyTriggerReq

Parameter	Mandatory	Type	Description
properties	Yes	<b>PolicyTriggerPropertiesReq</b> object	Scheduler attributes

**Table 4-142** PolicyTriggerPropertiesReq

Parameter	Mandatory	Type	Description
pattern	Yes	Array of strings	Scheduling rule of the scheduler. A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only the <b>FREQ</b> , <b>BYDAY</b> , <b>BYHOUR</b> , <b>BYMINUTE</b> , and <b>INTERVAL</b> parameters. <b>FREQ</b> can be set only to <b>WEEKLY</b> or <b>DAILY</b> . <b>BYDAY</b> can be set to <b>MO</b> , <b>TU</b> , <b>WE</b> , <b>TH</b> , <b>FR</b> , <b>SA</b> , and <b>SU</b> (seven days of a week). <b>BYHOUR</b> ranges from 0 to 23 hours. <b>BYMINUTE</b> ranges from 0 to 59 minutes. The scheduling interval cannot be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 (UTC) from Monday to Sunday, set the scheduling rule as follows: <b>FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00</b> . If the scheduling time is 14:00 (UTC +8) every day, set the scheduling rule as follows: <b>FREQ=DAILY;INTERVAL=1;BYHOUR=6;BYMINUTE=00</b>

## Response Parameters

Status code: 200

**Table 4-143** Response body parameters

Parameter	Type	Description
policy	<b>Policy</b> object	Response to the request for creating a policy

**Table 4-144** Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name
operation_definition	<a href="#">PolicyODCreate</a> object	Policy attributes
operation_type	String	- Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>replication</b></li> </ul>
trigger	<a href="#">PolicyTriggerResp</a> object	Time scheduling rule for the policy
associated_vaults	Array of <a href="#">PolicyAssociateVault</a> objects	Associated vault

**Table 4-145** PolicyODCreate

Parameter	Type	Description
day_backups	Integer	Specifies the number of retained daily backups. The latest backup of each day is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>

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

Parameter	Type	Description
year_backups	Integer	Specifies the number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
full_backup_interval	Integer	Defines how often (after how many incremental backups) a full backup is performed. If -1 is specified, full backup will not be performed. Minimum value: -1 Maximum value: <b>100</b> Minimum: <b>-1</b> Maximum: <b>100</b>

**Table 4-146** PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	<a href="#">PolicyTriggerPropertiesResp</a> object	Scheduler attributes
type	String	Scheduler type. Currently, only <b>time</b> (periodic scheduling) is supported. Enumeration values: <ul style="list-style-type: none"> <li><b>time</b></li> </ul>

**Table 4-147** PolicyTriggerPropertiesResp

Parameter	Type	Description
pattern	Array of strings	Scheduling rule of the scheduler. A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only the <b>FREQ</b> , <b>BYDAY</b> , <b>BYHOUR</b> , <b>BYMINUTE</b> , and <b>INTERVAL</b> parameters. <b>FREQ</b> can be set only to <b>WEEKLY</b> or <b>DAILY</b> . <b>BYDAY</b> can be set to <b>MO</b> , <b>TU</b> , <b>WE</b> , <b>TH</b> , <b>FR</b> , <b>SA</b> , and <b>SU</b> (seven days of a week). <b>BYHOUR</b> ranges from 0 to 23 hours. <b>BYMINUTE</b> ranges from 0 to 59 minutes. The scheduling interval cannot be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 (UTC) from Monday to Sunday, set the scheduling rule as follows: <b>FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00</b> . If the scheduling time is 14:00 (UTC+8) every day, set the scheduling rule as follows: <b>FREQ=DAILY;INTERVAL=1;BYHOUR=6;BYMINUTE=00</b>
start_time	String	Start time of the scheduler, for example, <b>2020-01-08 09:59:49</b>

**Table 4-148** PolicyAssociateVault

Parameter	Type	Description
destination_vault_id	String	ID of the associated remote vault
vault_id	String	Vault ID

## Example Requests

Creating a backup policy with backups automatically executed at 14:00 everyday and with each backup saved for one day

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/policies
```

```
{
  "policy" : {
    "enabled" : true,
    "name" : "policy001",
    "operation_definition" : {
      "day_backups" : 0,
      "month_backups" : 0,
      "retention_duration_days" : 1,
      "timezone" : "UTC+08:00",
      "week_backups" : 0,

```

```

    "year_backups" : 0
  },
  "operation_type" : "backup",
  "trigger" : {
    "properties" : {
      "pattern" : [ "FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00" ]
    }
  }
}
}
}

```

## Example Responses

**Status code: 200**

OK

```

{
  "policy" : {
    "name" : "policy001",
    "enabled" : true,
    "trigger" : {
      "properties" : {
        "pattern" : [ "FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00" ],
        "start_time" : "2019-05-08T06:57:05.000+00:00"
      },
      "type" : "time",
      "id" : "d67269a6-5369-42d7-8150-5254bd446328",
      "name" : "default"
    },
    "operation_definition" : {
      "retention_duration_days" : 1,
      "year_backups" : 0,
      "day_backups" : 0,
      "month_backups" : 0,
      "week_backups" : 0,
      "timezone" : "UTC+08:00"
    },
    "operation_type" : "backup",
    "id" : "cbb3ce6f-3332-4e7c-b98e-77290d8471ff"
  }
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.3.2 Querying a Single Policy

#### Function

Querying a Single Policy



## URI

GET /v3/{project\_id}/policies/{policy\_id}

**Table 4-149** Path Parameters

Parameter	Mandatory	Type	Description
policy_id	Yes	String	Policy ID
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-150** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token. Default: <b>MIIDkgYJKoZIhvc-NAQcCoIIDgzCCXXXXX...</b>

## Response Parameters

Status code: 200

**Table 4-151** Response body parameters

Parameter	Type	Description
policy	<b>Policy</b> object	Response to the request for creating a policy

**Table 4-152** Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name

Parameter	Type	Description
operation_definition	<a href="#">PolicyODCreate</a> object	Policy attributes
operation_type	String	- Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>replication</b></li> </ul>
trigger	<a href="#">PolicyTriggerResp</a> object	Time scheduling rule for the policy
associated_vaults	Array of <a href="#">PolicyAssociateVault</a> objects	Associated vault

**Table 4-153** PolicyODCreate

Parameter	Type	Description
day_backups	Integer	Specifies the number of retained daily backups. The latest backup of each day is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
max_backups	Integer	Maximum number of retained backups. The value can be <b>-1</b> or ranges from <b>0</b> to <b>99999</b> . If the value is set to <b>-1</b> , the backups will not be cleared even though the configured retained backup quantity is exceeded. If this parameter and <b>retention_duration_days</b> are both left blank, the backups will be retained permanently. Minimum: <b>1</b> Maximum: <b>99999</b> Default: <b>-1</b>

Parameter	Type	Description
month_backups	Integer	Specifies the number of retained monthly backups. The latest backup of each month is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
retention_duration_days	Integer	Duration of retaining a backup, in days. The maximum value is <b>99999</b> . <b>-1</b> indicates that the backups will not be cleared based on the retention duration. If this parameter and <b>max_backups</b> are left blank at the same time, the backups will be retained permanently. Minimum: <b>1</b> Maximum: <b>99999</b> Default: <b>-1</b>
timezone	String	Time zone where the user is located, for example, UTC+08:00. Set this parameter if you have configured any of the parameters: <b>day_backups</b> , <b>week_backups</b> , <b>month_backups</b> , <b>year_backups</b> .
week_backups	Integer	Specifies the number of retained weekly backups. The latest backup of each week is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory.
year_backups	Integer	Specifies the number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>

Parameter	Type	Description
full_backup_interval	Integer	Defines how often (after how many incremental backups) a full backup is performed. If <b>-1</b> is specified, full backup will not be performed. Minimum value: <b>-1</b> Maximum value: <b>100</b> Minimum: <b>-1</b> Maximum: <b>100</b>

**Table 4-154** PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	<a href="#">PolicyTriggerPropertiesResp</a> object	Scheduler attributes
type	String	Scheduler type. Currently, only <b>time</b> (periodic scheduling) is supported. Enumeration values: <ul style="list-style-type: none"> <li><b>time</b></li> </ul>

**Table 4-155** PolicyTriggerPropertiesResp

Parameter	Type	Description
pattern	Array of strings	Scheduling rule of the scheduler. A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only the <b>FREQ</b> , <b>BYDAY</b> , <b>BYHOUR</b> , <b>BYMINUTE</b> , and <b>INTERVAL</b> parameters. <b>FREQ</b> can be set only to <b>WEEKLY</b> or <b>DAILY</b> . <b>BYDAY</b> can be set to <b>MO</b> , <b>TU</b> , <b>WE</b> , <b>TH</b> , <b>FR</b> , <b>SA</b> , and <b>SU</b> (seven days of a week). <b>BYHOUR</b> ranges from 0 to 23 hours. <b>BYMINUTE</b> ranges from 0 to 59 minutes. The scheduling interval cannot be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 (UTC) from Monday to Sunday, set the scheduling rule as follows: <b>FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00</b> . If the scheduling time is 14:00 (UTC+8) every day, set the scheduling rule as follows: <b>FREQ=DAILY;INTERVAL=1;BYHOUR=6;BYMINUTE=00</b>
start_time	String	Start time of the scheduler, for example, <b>2020-01-08 09:59:49</b>

**Table 4-156** PolicyAssociateVault

Parameter	Type	Description
destination_vault_id	String	ID of the associated remote vault
vault_id	String	Vault ID

## Example Requests

Querying a policy

```
GET https://{endpoint}/v3/{project_id}/policies/{policy_id}
```

## Example Responses

**Status code: 200**

OK

```
{
  "policy" : {
    "name" : "policy001",
    "associated_vaults" : [ ],
```

```

"enabled" : true,
"trigger" : {
  "properties" : {
    "pattern" : [ "FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00" ],
    "start_time" : "2019-05-08T06:57:05.000+00:00"
  },
  "type" : "time",
  "id" : "d67269a6-5369-42d7-8150-5254bd446328",
  "name" : "default"
},
"operation_definition" : {
  "retention_duration_days" : 1,
  "year_backups" : 0,
  "day_backups" : 0,
  "month_backups" : 0,
  "week_backups" : 0,
  "timezone" : "UTC+08:00"
},
"operation_type" : "backup",
"id" : "cbb3ce6f-3332-4e7c-b98e-77290d8471ff"
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.3.3 Querying the Policy List

#### Function

Querying the Policy List

#### URI

GET /v3/{project\_id}/policies

**Table 4-157** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 4-158** Query Parameters

Parameter	Mandatory	Type	Description
operation_type	No	String	Policy type Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>replication</b></li> </ul>
vault_id	No	String	Vault ID

## Request Parameters

**Table 4-159** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

Status code: 200

**Table 4-160** Response body parameters

Parameter	Type	Description
policies	Array of <b>Policy</b> objects	Policy list
count	Integer	Total number of policies

**Table 4-161** Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name

Parameter	Type	Description
operation_definition	<a href="#">PolicyODCreate</a> object	Policy attributes
operation_type	String	- Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>replication</b></li> </ul>
trigger	<a href="#">PolicyTriggerResp</a> object	Time scheduling rule for the policy
associated_vaults	Array of <a href="#">PolicyAssociateVault</a> objects	Associated vault

**Table 4-162** PolicyODCreate

Parameter	Type	Description
day_backups	Integer	Specifies the number of retained daily backups. The latest backup of each day is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
max_backups	Integer	Maximum number of retained backups. The value can be <b>-1</b> or ranges from <b>0</b> to <b>99999</b> . If the value is set to <b>-1</b> , the backups will not be cleared even though the configured retained backup quantity is exceeded. If this parameter and <b>retention_duration_days</b> are both left blank, the backups will be retained permanently. Minimum: <b>1</b> Maximum: <b>99999</b> Default: <b>-1</b>



Parameter	Type	Description
month_backups	Integer	Specifies the number of retained monthly backups. The latest backup of each month is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
retention_duration_days	Integer	Duration of retaining a backup, in days. The maximum value is <b>99999</b> . <b>-1</b> indicates that the backups will not be cleared based on the retention duration. If this parameter and <b>max_backups</b> are left blank at the same time, the backups will be retained permanently. Minimum: <b>1</b> Maximum: <b>99999</b> Default: <b>-1</b>
timezone	String	Time zone where the user is located, for example, UTC+08:00. Set this parameter if you have configured any of the parameters: <b>day_backups</b> , <b>week_backups</b> , <b>month_backups</b> , <b>year_backups</b> .
week_backups	Integer	Specifies the number of retained weekly backups. The latest backup of each week is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory.
year_backups	Integer	Specifies the number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>

Parameter	Type	Description
full_backup_interval	Integer	Defines how often (after how many incremental backups) a full backup is performed. If <b>-1</b> is specified, full backup will not be performed. Minimum value: <b>-1</b> Maximum value: <b>100</b> Minimum: <b>-1</b> Maximum: <b>100</b>

**Table 4-163** PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	<a href="#">PolicyTriggerPropertiesResp</a> object	Scheduler attributes
type	String	Scheduler type. Currently, only <b>time</b> (periodic scheduling) is supported. Enumeration values: <ul style="list-style-type: none"> <li><b>time</b></li> </ul>

**Table 4-164** PolicyTriggerPropertiesResp

Parameter	Type	Description
pattern	Array of strings	Scheduling rule of the scheduler. A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only the <b>FREQ</b> , <b>BYDAY</b> , <b>BYHOUR</b> , <b>BYMINUTE</b> , and <b>INTERVAL</b> parameters. <b>FREQ</b> can be set only to <b>WEEKLY</b> or <b>DAILY</b> . <b>BYDAY</b> can be set to <b>MO</b> , <b>TU</b> , <b>WE</b> , <b>TH</b> , <b>FR</b> , <b>SA</b> , and <b>SU</b> (seven days of a week). <b>BYHOUR</b> ranges from 0 to 23 hours. <b>BYMINUTE</b> ranges from 0 to 59 minutes. The scheduling interval cannot be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 (UTC) from Monday to Sunday, set the scheduling rule as follows: <b>FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00</b> . If the scheduling time is 14:00 (UTC+8) every day, set the scheduling rule as follows: <b>FREQ=DAILY;INTERVAL=1;BYHOUR=6;BYMINUTE=00</b>
start_time	String	Start time of the scheduler, for example, <b>2020-01-08 09:59:49</b>

**Table 4-165** PolicyAssociateVault

Parameter	Type	Description
destination_vault_id	String	ID of the associated remote vault
vault_id	String	Vault ID

## Example Requests

Querying the backup policy list

```
GET https://{endpoint}/v3/{project_id}/policies
```

## Example Responses

**Status code: 200**

OK

```
{
  "policies" : [ {
    "name" : "policy001",
    "associated_vaults" : [ ],
```

```

"enabled" : true,
"trigger" : {
  "properties" : {
    "pattern" : [ "FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00" ],
    "start_time" : "2019-05-08T06:57:05.000+00:00"
  },
  "type" : "time",
  "id" : "d67269a6-5369-42d7-8150-5254bd446328",
  "name" : "default"
},
"operation_definition" : {
  "retention_duration_days" : 1,
  "year_backups" : 0,
  "day_backups" : 0,
  "month_backups" : 0,
  "week_backups" : 0,
  "timezone" : "UTC+08:00"
},
"operation_type" : "backup",
"id" : "cbb3ce6f-3332-4e7c-b98e-77290d8471ff"
}],
"count" : 10
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.3.4 Modifying a Policy

#### Function

Modifying a Policy

#### URI

PUT /v3/{project\_id}/policies/{policy\_id}

**Table 4-166** Path Parameters

Parameter	Mandatory	Type	Description
policy_id	Yes	String	Policy ID
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-167** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-168** Request body parameters

Parameter	Mandatory	Type	Description
policy	Yes	<b>PolicyUpdate</b> object	Request body for modifying a policy

**Table 4-169** PolicyUpdate

Parameter	Mandatory	Type	Description
enabled	No	Boolean	Whether to enable the policy Default: <b>true</b>
name	No	String	Policy Name Minimum: <b>1</b> Maximum: <b>64</b>
operation_definition	No	<b>PolicyODCreate</b> object	Scheduling parameter
trigger	No	<b>PolicyTriggerReq</b> object	Time rule for the policy execution

**Table 4-170** PolicyoODCreate

Parameter	Mandatory	Type	Description
day_backups	No	Integer	Specifies the number of retained daily backups. The latest backup of each day is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
max_backups	No	Integer	Maximum number of retained backups. The value can be <b>-1</b> or ranges from <b>0</b> to <b>99999</b> . If the value is set to <b>-1</b> , the backups will not be cleared even though the configured retained backup quantity is exceeded. If this parameter and <b>retention_duration_days</b> are both left blank, the backups will be retained permanently. Minimum: <b>1</b> Maximum: <b>99999</b> Default: <b>-1</b>
month_backups	No	Integer	Specifies the number of retained monthly backups. The latest backup of each month is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>

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

Parameter	Mandatory	Type	Description
full_backup_interval	No	Integer	Defines how often (after how many incremental backups) a full backup is performed. If -1 is specified, full backup will not be performed. Minimum value: -1 Maximum value: <b>100</b> Minimum: -1 Maximum: <b>100</b>

**Table 4-171** PolicyTriggerReq

Parameter	Mandatory	Type	Description
properties	Yes	<a href="#">PolicyTriggerPropertiesReq</a> object	Scheduler attributes



**Table 4-172** PolicyTriggerPropertiesReq

Parameter	Mandatory	Type	Description
pattern	Yes	Array of strings	Scheduling rule of the scheduler. A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only the <b>FREQ</b> , <b>BYDAY</b> , <b>BYHOUR</b> , <b>BYMINUTE</b> , and <b>INTERVAL</b> parameters. <b>FREQ</b> can be set only to <b>WEEKLY</b> or <b>DAILY</b> . <b>BYDAY</b> can be set to <b>MO</b> , <b>TU</b> , <b>WE</b> , <b>TH</b> , <b>FR</b> , <b>SA</b> , and <b>SU</b> (seven days of a week). <b>BYHOUR</b> ranges from 0 to 23 hours. <b>BYMINUTE</b> ranges from 0 to 59 minutes. The scheduling interval cannot be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 (UTC) from Monday to Sunday, set the scheduling rule as follows: <b>FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00</b> . If the scheduling time is 14:00 (UTC +8) every day, set the scheduling rule as follows: <b>FREQ=DAILY;INTERVAL=1;BYHOUR=6;BYMINUTE=00</b>

## Response Parameters

Status code: 200

**Table 4-173** Response body parameters

Parameter	Type	Description
policy	<b>Policy</b> object	Response to the request for creating a policy

**Table 4-174** Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name
operation_definition	<a href="#">PolicyODCreate</a> object	Policy attributes
operation_type	String	- Enumeration values: <ul style="list-style-type: none"> <li>• <b>backup</b></li> <li>• <b>replication</b></li> </ul>
trigger	<a href="#">PolicyTriggerResp</a> object	Time scheduling rule for the policy
associated_vaults	Array of <a href="#">PolicyAssociateVault</a> objects	Associated vault

**Table 4-175** PolicyODCreate

Parameter	Type	Description
day_backups	Integer	Specifies the number of retained daily backups. The latest backup of each day is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>

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

Parameter	Type	Description
year_backups	Integer	Specifies the number of retained yearly backups. The latest backup of each year is saved in the long term. This parameter can be effective together with the maximum number of retained backups specified by <b>max_backups</b> . The value ranges from 0 to 100. If this parameter is configured, <b>timezone</b> is mandatory. Minimum: <b>0</b> Maximum: <b>100</b>
full_backup_interval	Integer	Defines how often (after how many incremental backups) a full backup is performed. If -1 is specified, full backup will not be performed. Minimum value: -1 Maximum value: <b>100</b> Minimum: <b>-1</b> Maximum: <b>100</b>

**Table 4-176** PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	<a href="#">PolicyTriggerPropertiesResp</a> object	Scheduler attributes
type	String	Scheduler type. Currently, only <b>time</b> (periodic scheduling) is supported. Enumeration values: <ul style="list-style-type: none"> <li><b>time</b></li> </ul>

**Table 4-177** PolicyTriggerPropertiesResp

Parameter	Type	Description
pattern	Array of strings	Scheduling rule of the scheduler. A maximum of 24 rules can be configured. The scheduling rule complies with iCalendar RFC 2445, but it supports only the <b>FREQ</b> , <b>BYDAY</b> , <b>BYHOUR</b> , <b>BYMINUTE</b> , and <b>INTERVAL</b> parameters. <b>FREQ</b> can be set only to <b>WEEKLY</b> or <b>DAILY</b> . <b>BYDAY</b> can be set to <b>MO</b> , <b>TU</b> , <b>WE</b> , <b>TH</b> , <b>FR</b> , <b>SA</b> , and <b>SU</b> (seven days of a week). <b>BYHOUR</b> ranges from 0 to 23 hours. <b>BYMINUTE</b> ranges from 0 to 59 minutes. The scheduling interval cannot be less than 1 hour. A maximum of 24 time points are allowed in a day. For example, if the scheduling time is 14:00 (UTC) from Monday to Sunday, set the scheduling rule as follows: <b>FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00</b> . If the scheduling time is 14:00 (UTC+8) every day, set the scheduling rule as follows: <b>FREQ=DAILY;INTERVAL=1;BYHOUR=6;BYMINUTE=00</b>
start_time	String	Start time of the scheduler, for example, <b>2020-01-08 09:59:49</b>

**Table 4-178** PolicyAssociateVault

Parameter	Type	Description
destination_vault_id	String	ID of the associated remote vault
vault_id	String	Vault ID

## Example Requests

Modifying a backup policy with backups automatically executed at 14:00 everyday and with each backup saved for one day

```
PUT https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/policies/cbb3ce6f-3332-4e7c-b98e-77290d8471ff
```

```
{
  "policy" : {
    "enabled" : true,
    "name" : "policy001",
    "operation_definition" : {
      "day_backups" : 0,
      "month_backups" : 0,
      "max_backups" : 1,
      "timezone" : "UTC+08:00",
```

```

    "week_backups" : 0,
    "year_backups" : 0
  },
  "trigger" : {
    "properties" : {
      "pattern" : [ "FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00" ]
    }
  }
}
}
}

```

## Example Responses

**Status code: 200**

OK

```

{
  "policy" : {
    "name" : "policy001",
    "associated_vaults" : [ ],
    "enabled" : true,
    "trigger" : {
      "properties" : {
        "pattern" : [ "FREQ=WEEKLY;BYDAY=MO,TU,WE,TH,FR,SA,SU;BYHOUR=14;BYMINUTE=00" ],
        "start_time" : "2019-05-08T06:57:05.000+00:00"
      },
      "type" : "time",
      "id" : "d67269a6-5369-42d7-8150-5254bd446328",
      "name" : "default"
    },
    "operation_definition" : {
      "max_backups" : 1,
      "year_backups" : 0,
      "day_backups" : 0,
      "month_backups" : 0,
      "week_backups" : 0,
      "timezone" : "UTC+08:00"
    },
    "operation_type" : "backup",
    "id" : "cbb3ce6f-3332-4e7c-b98e-77290d8471ff"
  }
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.3.5 Deleting a Policy

#### Function

Deleting a Policy

## URI

DELETE /v3/{project\_id}/policies/{policy\_id}

**Table 4-179** Path Parameters

Parameter	Mandatory	Type	Description
policy_id	Yes	String	Policy ID
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-180** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

None

## Example Requests

Deleting a backup policy

DELETE https://{endpoint}/v3/{project\_id}/policies/{policy\_id}

## Example Responses

None

## Status Codes

Status Code	Description
204	No Content

## Error Codes

See [Error Codes](#).

## 4.4 Backups

### 4.4.1 Synchronizing a Backup

#### Function

This API is used to synchronize on-premises VMware backups.

#### URI

POST /v3/{project\_id}/backups/sync

**Table 4-181** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

#### Request Parameters

**Table 4-182** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-183** Request body parameters

Parameter	Mandatory	Type	Description
sync	Yes	Array of <b>BackupSync</b> objects	List of backups to be imported Array Length: <b>1 - 50</b>

**Table 4-184** BackupSync

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID



Parameter	Mandatory	Type	Description
backup_name	Yes	String	Backup name Minimum: <b>1</b> Maximum: <b>64</b>
bucket_name	Yes	String	Bucket name
image_path	Yes	String	Path to the backup chain on the storage unit
resource_id	Yes	String	ID of the object to be backed up
resource_name	Yes	String	Backup object name
resource_type	Yes	String	Resource type of the backup object Default: <b>OS::Native::Server</b>
created_at	Yes	Integer	Backup time, in seconds. For example, <b>1548898428</b> .

## Response Parameters

Status code: 200

**Table 4-185** Response body parameters

Parameter	Type	Description
sync	Array of <a href="#">BackupSyncRespBody</a> objects	Return information of the API for importing backups

**Table 4-186** BackupSyncRespBody

Parameter	Type	Description
backup_id	String	Backup ID
operation_log_id	String	Import task ID

## Example Requests

Synchronizing an on-premises VMware backup

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/backups/sync
{
  "sync": [ {
    "backup_id": "1f9e6b47-7655-4a19-b563-21b4ef023025",
    "resource_id": "96f7512d-239d-3f31-80cf-d1ce041df9a6",
    "resource_name": "resource_name",
    "resource_type": "OS::Native::Server",
    "bucket_name": "1555230361623e4ce4700dab84b7d8169a5eaec05227d",
    "image_path": "6abec15e-7baf-4d79-b5a9-6b98a2da7020/cfe0295c-5939-4b31-96cd-161b4725e7ad/cfe0295c-5939-4b31-96cd-161b4725e7ad",
    "created_at": 1553587260,
    "backup_name": "backup_name"
  } ]
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "sync": [ {
    "backup_id": "1f9e6b47-7655-4a19-b563-21b4ef023025",
    "operation_log_id": "154f0a9d-ba53-4e91-a3e2-a918710a9e0d"
  } ]
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.4.2 Querying a Specified Backup

#### Function

This API is used to query the backup of a specific ID.

#### URI

GET /v3/{project\_id}/backups/{backup\_id}

**Table 4-187** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-188** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

**Status code: 200**

**Table 4-189** Response body parameters

Parameter	Type	Description
backup	<b>BackupResp</b> object	Backup

**Table 4-190** BackupResp

Parameter	Type	Description
checkpoint_id	String	Restore point ID
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
description	String	Backup description
expired_at	String	Expiration time, for example, <b>2020-02-05T10:38:34.209782</b>
extend_info	<b>BackupExtendInfo</b> object	Extended information
id	String	Backup ID
image_type	String	-

Parameter	Type	Description
name	String	Backup name
parent_id	String	Parent backup ID
project_id	String	Project ID
protected_at	String	Backup time
resource_az	String	Resource availability zone
resource_id	String	Resource ID
resource_name	String	Resource name
resource_size	Integer	Resource size, in GB
resource_type	String	-
status	String	Backup status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>protecting</b></li> <li>• <b>deleting</b></li> <li>• <b>restoring</b></li> <li>• <b>error</b></li> <li>• <b>waiting_protect</b></li> <li>• <b>waiting_delete</b></li> <li>• <b>waiting_restore</b></li> </ul>
updated_at	String	Update time, for example, <b>2020-02-05T10:38:34.209782</b>
vault_id	String	Vault ID
enterprise_project_id	String	Enterprise project ID. Its default value is <b>0</b> .
children	Array of <a href="#">BackupResp</a> objects	Backup list
incremental	Boolean	Whether it is an incremental backup.

**Table 4-191** BackupExtendInfo

Parameter	Type	Description
auto_trigger	Boolean	Whether the backup is automatically generated

Parameter	Type	Description
bootable	Boolean	Whether the backup is a system disk backup
snapshot_id	String	Snapshot ID of the disk backup
support_lld	Boolean	Whether to allow <b>lazyloading</b> for fast restoration
supported_restore_mode	String	Restoration mode. Possible values are <b>na</b> , <b>snapshot</b> , and <b>backup</b> . <b>snapshot</b> indicates the backup can be used to create a full-server image. <b>backup</b> indicates the data is restored from backups of the EVS disks of the server. <b>na</b> indicates the backup can only be used to create new resources but cannot be used for restoration. Default: <b>na</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>na</b></li> <li>• <b>backup</b></li> <li>• <b>snapshot</b></li> </ul>
os_images_data	Array of <a href="#">ImageData</a> objects	ID list of images created using backups
contain_system_disk	Boolean	Whether the VM backup data contains system disk data
encrypted	Boolean	Whether the backup is encrypted
system_disk	Boolean	Whether the disk is a system disk

**Table 4-192** ImageData

Parameter	Type	Description
image_id	String	Image ID

**Table 4-193** ReplicationRecordsExtraInfo

Parameter	Type	Description
progress	Integer	Replication progress
fail_code	String	Error code. This field is empty if the operation is successful.
fail_reason	String	Error cause

Parameter	Type	Description
auto_trigger	Boolean	Whether replication is automatically scheduled
destinatio_vault_id	String	Destination vault ID

## Example Requests

Querying a backup

```
GET https://{endpoint}/v3/{project_id}/backups/{backup_id}
```

## Example Responses

Status code: 200

OK

```
{
  "backup": {
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "checkpoint_id": "8b0851a8-adf3-4f4c-a914-dead08bf9664",
    "enterprise_project_id": 0,
    "vault_id": "3b5816b5-f29c-4172-9d9a-76c719a659ce",
    "id": "6df2b54c-dd62-4059-a07c-1b8f24f2725d",
    "resource_az": "az1.dc1",
    "image_type": "backup",
    "resource_id": "94eba8b2-acc9-4d82-badc-127144cc5526",
    "resource_size": 40,
    "children": [ {
      "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
      "checkpoint_id": "8b0851a8-adf3-4f4c-a914-dead08bf9664",
      "vault_id": "3b5816b5-f29c-4172-9d9a-76c719a659ce",
      "id": "5d822633-2bbf-4af8-a16e-5ab1c7705235",
      "image_type": "backup",
      "resource_id": "eccbcfdd-f843-4bbb-b2c0-a5ce861f9376",
      "resource_size": 40,
      "children": [ ],
      "parent_id": "6df2b54c-dd62-4059-a07c-1b8f24f2725d",
      "extend_info": {
        "auto_trigger": true,
        "snapshot_id": "5230a977-1a94-4092-8edd-519303a44cda",
        "bootable": true,
        "encrypted": true
      }
    } ],
    "project_id": "4229d7a45436489f8c3dc2b1d35d4987",
    "status": "available",
    "resource_name": "ecs-1f0f-0002",
    "name": "autobk_a843_ecs-1f0f-0002",
    "created_at": "2019-05-10T07:59:59.451+00:00",
    "resource_type": "OS::Cinder::Volume"
  } ],
  "extend_info": {
    "auto_trigger": true,
    "supported_restore_mode": "backup",
    "contain_system_disk": true,
    "support_llid": true
  },
  "project_id": "4229d7a45436489f8c3dc2b1d35d4987",
  "status": "available",
  "resource_name": "ecs-1f0f-0002",
  "description": "backup_description",
}
```

```

"name" : "backup_name",
"created_at" : "2019-05-10T07:59:12.085+00:00",
"resource_type" : "OS::Nova::Server"
}
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.4.3 Querying All Backups

#### Function

This API is used to query all backups.

#### URI

GET /v3/{project\_id}/backups

**Table 4-194** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 4-195** Query Parameters

Parameter	Mandatory	Type	Description
checkpoint_id	No	String	Restore point ID
dec	No	Boolean	Dedicated cloud tag, which only takes effect in dedicated cloud scenarios
end_time	No	String	Time when the backup ends, in %YYYY-%mm-%ddT%HH:%MM:%SSZ format. For example, <b>2018-02-01T12:00:00Z</b> .

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID or <b>all_granted_eps</b> . <b>all_granted_eps</b> indicates querying the IDs of all enterprise projects on which the user has permissions.
image_type	No	String	-
incremental	No	Boolean	Whether incremental backup is used Default: <b>false</b>
limit	No	Integer	Number of records displayed per page. The value must be a positive integer.
marker	No	String	ID of the last record displayed on the previous page
member_status	No	String	Backup sharing status Enumeration values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>accepted</b></li> <li>• <b>rejected</b></li> </ul>
name	No	String	Backup name
offset	No	Integer	Offset value. The value must be a positive integer.
own_type	No	String	Owning type of a backup. <b>private</b> backups are queried by default. Default: <b>private</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>all_granted</b></li> <li>• <b>private</b></li> <li>• <b>shared</b></li> </ul>
parent_id	No	String	Parent backup ID
resource_az	No	String	AZ-based filtering is supported.
resource_id	No	String	Resource ID
resource_name	No	String	Resource name
resource_type	No	String	-



Parameter	Mandatory	Type	Description
sort	No	String	A group of properties separated by commas (,) and sorting directions. The value is in the format of <key1>[:<direction>],<key2>[:<direction>], where the value of direction is <b>asc</b> (ascending order) or <b>desc</b> (descending order). If a direction is not specified, the default sorting direction is <b>desc</b> . The value of <b>sort</b> can contain a maximum of 255 characters. The key can be as follows: <b>created_at</b> , <b>updated_at</b> , <b>name</b> , <b>status</b> , <b>protected_at</b> , <b>id</b>
start_time	No	String	Time when the backup starts, in %YYYY-%mm-%ddT%HH:%MM:%SSZ format. For example, <b>2018-02-01T12:00:00Z</b> .
status	No	String	Status When the API is called, multiple statuses can be transferred for filtering, for example, <b>status=available&amp;status=error</b> . Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>protecting</b></li> <li>• <b>deleting</b></li> <li>• <b>restoring</b></li> <li>• <b>error</b></li> <li>• <b>waiting_protect</b></li> <li>• <b>waiting_delete</b></li> <li>• <b>waiting_restore</b></li> </ul>
used_percent	No	String	Backups are filtered based on the occupied vault capacity. The value ranges from <b>1</b> to <b>100</b> . For example, if <b>used_percent</b> is set to <b>80</b> , all backups who occupied 80% or more of the vault capacity are displayed.
vault_id	No	String	Vault ID

## Request Parameters

**Table 4-196** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

Status code: 200

**Table 4-197** Response body parameters

Parameter	Type	Description
backups	Array of <b>BackupResp</b> objects	Backup list
count	Integer	Number of backups
offset	Integer	Offset where the query starts Minimum: <b>0</b> Default: <b>0</b>
limit	Integer	Number of records displayed on each page Minimum: <b>1</b> Maximum: <b>1000</b> Default: <b>1000</b>

**Table 4-198** BackupResp

Parameter	Type	Description
checkpoint_id	String	Restore point ID
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
description	String	Backup description

Parameter	Type	Description
expired_at	String	Expiration time, for example, <b>2020-02-05T10:38:34.209782</b>
extend_info	<b>BackupExtendInfo</b> object	Extended information
id	String	Backup ID
image_type	String	-
name	String	Backup name
parent_id	String	Parent backup ID
project_id	String	Project ID
protected_at	String	Backup time
resource_az	String	Resource availability zone
resource_id	String	Resource ID
resource_name	String	Resource name
resource_size	Integer	Resource size, in GB
resource_type	String	-
status	String	Backup status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>protecting</b></li> <li>• <b>deleting</b></li> <li>• <b>restoring</b></li> <li>• <b>error</b></li> <li>• <b>waiting_protect</b></li> <li>• <b>waiting_delete</b></li> <li>• <b>waiting_restore</b></li> </ul>
updated_at	String	Update time, for example, <b>2020-02-05T10:38:34.209782</b>
vault_id	String	Vault ID
enterprise_project_id	String	Enterprise project ID. Its default value is <b>0</b> .
children	Array of <b>BackupResp</b> objects	Backup list
incremental	Boolean	Whether it is an incremental backup.

**Table 4-199** BackupExtendInfo

Parameter	Type	Description
auto_trigger	Boolean	Whether the backup is automatically generated
bootable	Boolean	Whether the backup is a system disk backup
snapshot_id	String	Snapshot ID of the disk backup
support_llid	Boolean	Whether to allow <b>lazyloading</b> for fast restoration
supported_restore_mode	String	Restoration mode. Possible values are <b>na</b> , <b>snapshot</b> , and <b>backup</b> . <b>snapshot</b> indicates the backup can be used to create a full-server image. <b>backup</b> indicates the data is restored from backups of the EVS disks of the server. <b>na</b> indicates the backup can only be used to create new resources but cannot be used for restoration. Default: <b>na</b> Enumeration values: <ul style="list-style-type: none"> <li>• <b>na</b></li> <li>• <b>backup</b></li> <li>• <b>snapshot</b></li> </ul>
os_images_data	Array of <a href="#">ImageData</a> objects	ID list of images created using backups
contain_system_disk	Boolean	Whether the VM backup data contains system disk data
encrypted	Boolean	Whether the backup is encrypted
system_disk	Boolean	Whether the disk is a system disk

**Table 4-200** ImageData

Parameter	Type	Description
image_id	String	Image ID

**Table 4-201** ReplicationRecordsExtraInfo

Parameter	Type	Description
progress	Integer	Replication progress
fail_code	String	Error code. This field is empty if the operation is successful.
fail_reason	String	Error cause
auto_trigger	Boolean	Whether replication is automatically scheduled
destination_vault_id	String	Destination vault ID

## Example Requests

Querying all backups

GET https://{endpoint}/v3/{project\_id}/backups

## Example Responses

**Status code: 200**

OK

```
{
  "count" : 2,
  "backups" : [ {
    "provider_id" : "0daac4c5-6707-4851-97ba-169e36266b66",
    "checkpoint_id" : "1fced58b-2a31-4851-bcbb-96216f83ce99",
    "updated_at" : "2020-02-21T07:07:25.114+00:00",
    "vault_id" : "cca85ea5-00a4-418d-9222-bd83985bc515",
    "id" : "b1c4afd9-e7a6-4888-9010-c2bac3aa7910",
    "resource_az" : "br-iaas-odin1a",
    "image_type" : "backup",
    "resource_id" : "1a503932-ee8f-4dd5-8248-8dfb57e584c5",
    "resource_size" : 40,
    "children" : [ ],
    "extend_info" : {
      "auto_trigger" : true,
      "supported_restore_mode" : "backup",
      "contain_system_disk" : true,
      "support_lld" : true,
      "system_disk" : false
    }
  },
  "project_id" : "0605767b5780d5762fc5c0118072a564",
  "status" : "available",
  "resource_name" : "test001-02",
  "description" : "",
  "expired_at" : "2020-05-21T07:00:54.060+00:00",
  "name" : "autobk_b629",
  "created_at" : "2020-02-21T07:00:54.065+00:00",
  "resource_type" : "OS::Nova::Server"
}, {
  "provider_id" : "d1603440-187d-4516-af25-121250c7cc97",
  "checkpoint_id" : "f64c351f-769f-4c04-8806-fd90a59e9b12",
  "updated_at" : "2020-02-21T07:09:37.767+00:00",
  "vault_id" : "79bd9daa-884f-4f84-b8fe-235d58cd927d",
  "id" : "5606aab5-2dc2-4498-8144-dc848d099af5",
  "resource_az" : "br-iaas-odin1a",
```

```

"image_type" : "backup",
"resource_id" : "54f7ccbc-072f-4ec5-a7b7-b24dabdb4539",
"resource_size" : 40,
"children" : [ ],
"extend_info" : {
  "auto_trigger" : true,
  "snapshot_id" : "e3def9a8-e4b4-4c12-b132-f4ba8ce9a34f",
  "bootable" : true,
  "support_ild" : true,
  "encrypted" : false,
  "system_disk" : false
},
"project_id" : "0605767b5780d5762fc5c0118072a564",
"status" : "available",
"resource_name" : "qsy_000",
"description" : "",
"expired_at" : "2020-03-22T07:00:34.878+00:00",
"name" : "autobk_6809",
"created_at" : "2020-02-21T07:00:34.882+00:00",
"resource_type" : "OS::Cinder::Volume"
}]
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.4.4 Deleting a Backup

#### Function

This API is used to delete a single backup.

#### URI

DELETE /v3/{project\_id}/backups/{backup\_id}

**Table 4-202** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	ID of the backup to be deleted
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-203** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

None

## Example Requests

This API is used to delete a single backup.

```
DELETE https://{endpoint}/v3/{project_id}/backups/{backup_id}
```

## Example Responses

None

## Status Codes

Status Code	Description
204	No Content

## Error Codes

See [Error Codes](#).

## 4.4.5 Restoring a Backup

### Function

This API is used to restore backup data.

### URI

```
POST /v3/{project_id}/backups/{backup_id}/restore
```

**Table 4-204** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-205** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-206** Request body parameters

Parameter	Mandatory	Type	Description
restore	Yes	<b>BackupRestore</b> object	Request body of restoring a backup

**Table 4-207** BackupRestore

Parameter	Mandatory	Type	Description
mappings	No	Array of <b>BackupRestoreServerMapping</b> objects	Restored mapping relationship. This parameter is mandatory for VM restoration and optional for disk restoration.
power_on	No	Boolean	Whether the server is powered on after restoration. By default it is powered on after restoration. Default: <b>true</b>
server_id	No	String	ID of the target VM to be restored. This parameter is mandatory for VM restoration.



Parameter	Mandatory	Type	Description
volume_id	No	String	ID of the target disk to be restored. This parameter is mandatory for disk restoration.
resource_id	No	String	ID of the resource to be restored

**Table 4-208** BackupRestoreServerMapping

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Disk backup ID
volume_id	Yes	String	ID of the disk to which data is restored

**Table 4-209** RestoreDetails

Parameter	Mandatory	Type	Description
destination_path	Yes	String	Destination path Minimum: 1 Maximum: 255

## Response Parameters

None

## Example Requests

Restoring from a specified backup

POST https://{endpoint}/v3/{f841e01fd2b14e7fa41b6ae7aa6b0594}/backups/a5200268-74a5-4806-acc6-95793ab0228b/restore

```
{
  "restore": {
    "mappings": [ {
      "backup_id": "5d822633-2bbf-4af8-a16e-5ab1c7705235",
      "volume_id": "eccbcfdd-f843-4bbb-b2c0-a5ce861f9376"
    } ],
    "power_on": true,
    "server_id": "94eba8b2-acc9-4d82-badc-127144cc5526"
  }
}
```

## Example Responses

None

## Status Codes

Status Code	Description
202	Accepted

## Error Codes

See [Error Codes](#).

# 4.5 Backup Sharing

## 4.5.1 Adding a Share Member

### Function

This interface is used to add members who can share a backup. Only ECS and VBS backups can be shared. Backups can be shared among different projects or users.

### URI

POST /v3/{project\_id}/backups/{backup\_id}/members

**Table 4-210** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID
project_id	Yes	String	Project ID

### Request Parameters

**Table 4-211** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-212** Request body parameters

Parameter	Mandatory	Type	Description
members	Yes	Array of strings	Project IDs of the backup share members to be added Array Length: <b>1 - 10</b>

## Response Parameters

**Status code: 200**

**Table 4-213** Response body parameters

Parameter	Type	Description
members	Array of <b>Member</b> objects	Response parameters of adding a backup share member
count	Integer	Number of share members that the backup is shared to

**Table 4-214** Member

Parameter	Type	Description
status	String	Backup sharing status Enumeration values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>accepted</b></li> <li>• <b>rejected</b></li> </ul>
created_at	String	Backup sharing time, for example, <b>2020-02-05T10:38:34.209782</b>
updated_at	String	Update time, for example, <b>2020-02-05T10:38:34.209782</b>
backup_id	String	Backup ID
image_id	String	ID of the image created from the accepted backup
dest_project_id	String	ID of the project with which the backup is shared
vault_id	String	ID of the vault where the shared backup is stored
id	String	ID of the shared record

## Example Requests

Adding members with whom the backup is shared

```
POST https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/backups/0b07081e-3ec7-4e77-8571-54e2947da422/members
{
  "members" : [ "075e6035d300d48c2fd0c00b78b71ebf" ]
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "members" : [ {
    "status" : "pending",
    "backup_id" : "0b07081e-3ec7-4e77-8571-54e2947da422",
    "dest_project_id" : "075e6035d300d48c2fd0c00b78b71ebf",
    "created_at" : "2020-02-05T10:38:34.210+00:00",
    "id" : "3c5a3015-c3a0-4dc6-a1e2-917b90f62319"
  } ]
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.5.2 Updating the Share Member Status

### Function

This API is used to update the status of a backup share member.

### URI

PUT /v3/{project\_id}/backups/{backup\_id}/members/{member\_id}

**Table 4-215** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID

Parameter	Mandatory	Type	Description
member_id	Yes	String	Member ID, which is the same ID as in project ID.
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-216** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-217** Request body parameters

Parameter	Mandatory	Type	Description
status	Yes	String	Status of a shared backup Enumeration values: <ul style="list-style-type: none"> <li>• <b>accepted</b></li> <li>• <b>pending</b></li> <li>• <b>rejected</b></li> </ul>
vault_id	No	String	Vault in which the shared backup is to be stored. Only UUID is supported. When updating the status of a backup sharing member, if the backup is accepted, <b>vault_id</b> must be specified. If the backup is rejected, <b>vault_id</b> is not required.

## Response Parameters

**Status code: 200**

**Table 4-218** Response body parameters

Parameter	Type	Description
member	<b>Member</b> object	Response parameters of querying the details of a backup share member

**Table 4-219** Member

Parameter	Type	Description
status	String	Backup sharing status Enumeration values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>accepted</b></li> <li>• <b>rejected</b></li> </ul>
created_at	String	Backup sharing time, for example, <b>2020-02-05T10:38:34.209782</b>
updated_at	String	Update time, for example, <b>2020-02-05T10:38:34.209782</b>
backup_id	String	Backup ID
image_id	String	ID of the image created from the accepted backup
dest_project_id	String	ID of the project with which the backup is shared
vault_id	String	ID of the vault where the shared backup is stored
id	String	ID of the shared record

## Example Requests

```
PUT https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/backups/a5200268-74a5-4806-acc6-95793ab0228b/members/f841e01fd2b14e7fa41b6ae7aa6b0594
```

```
{
  "status": "accepted",
  "vault_id": "4b27c05b-8ad7-48c6-a886-526666c035f0"
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "member": {
    "status": "accepted",
```

```

"backup_id" : "17c9acd8-3af3-4401-bab9-ff1cfac15561",
"vault_id" : "4b27c05b-8ad7-48c6-a886-526666c035f0",
"dest_project_id" : "0761021b8900d2622f38c0115db0b331",
"created_at" : "2020-02-24T09:36:00.479+00:00",
"id" : "824a90b3-c562-448b-ab04-60ea4a97cf60"
}
}

```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

### 4.5.3 Querying Share Member Details

#### Function

This API is used to obtain the details of a backup share member.

#### URI

GET /v3/{project\_id}/backups/{backup\_id}/members/{member\_id}

**Table 4-220** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID
member_id	Yes	String	Member ID, which is the project ID of the tenant who receives the shared backup.
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-221** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

Status code: 200

**Table 4-222** Response body parameters

Parameter	Type	Description
member	<b>Member</b> object	Response parameters of querying the details of a backup share member

**Table 4-223** Member

Parameter	Type	Description
status	String	Backup sharing status Enumeration values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>accepted</b></li> <li>• <b>rejected</b></li> </ul>
created_at	String	Backup sharing time, for example, <b>2020-02-05T10:38:34.209782</b>
updated_at	String	Update time, for example, <b>2020-02-05T10:38:34.209782</b>
backup_id	String	Backup ID
image_id	String	ID of the image created from the accepted backup
dest_project_id	String	ID of the project with which the backup is shared
vault_id	String	ID of the vault where the shared backup is stored



Parameter	Type	Description
id	String	ID of the shared record

## Example Requests

```
GET https://{endpoint}/v3/{project_id}/backups/{backup_id}/members/{member_id}
```

## Example Responses

**Status code: 200**

OK

```
{
  "member": {
    "status": "accepted",
    "backup_id": "17c9acd8-3af3-4401-bab9-ff1cfac15561",
    "vault_id": "4b27c05b-8ad7-48c6-a886-526666c035f0",
    "dest_project_id": "0761021b8900d2622f38c0115db0b331",
    "created_at": "2020-02-24T09:36:00.479+00:00",
    "id": "824a90b3-c562-448b-ab04-60ea4a97cf60"
  }
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.5.4 Obtaining the Share Member List

### Function

This API is used to obtain the list of backup share members.

### URI

```
GET /v3/{project_id}/backups/{backup_id}/members
```

**Table 4-224** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

**Table 4-225** Query Parameters

Parameter	Mandatory	Type	Description
dest_project_id	No	String	ID of the project with which the backup is shared
image_id	No	String	ID of the image created from the accepted backup
limit	No	Integer	Number of records displayed per page. The value must be a positive integer.
marker	No	String	ID of the last record displayed on the previous page. Only UUID is supported.
offset	No	Integer	Offset value. The value must be a positive integer.
sort	No	String	A group of properties separated by commas (,) and sorting directions. The value is in the format of <key1>[:<direction>],<key2>[:<direction>], where the value of direction is <b>asc</b> (ascending order) or <b>desc</b> (descending order). If a direction is not specified, the default sorting direction is <b>desc</b> . The value of <b>sort</b> can contain a maximum of 255 characters.
status	No	String	Status of a shared backup
vault_id	No	String	ID of the vault where the shared backup is stored. Only UUID is supported.

## Request Parameters

**Table 4-226** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

Status code: 200

**Table 4-227** Response body parameters

Parameter	Type	Description
members	Array of <b>Member</b> objects	Response parameters of adding a backup share member
count	Integer	Number of share members that the backup is shared to

**Table 4-228** Member

Parameter	Type	Description
status	String	Backup sharing status Enumeration values: <ul style="list-style-type: none"> <li>• <b>pending</b></li> <li>• <b>accepted</b></li> <li>• <b>rejected</b></li> </ul>
created_at	String	Backup sharing time, for example, <b>2020-02-05T10:38:34.209782</b>
updated_at	String	Update time, for example, <b>2020-02-05T10:38:34.209782</b>
backup_id	String	Backup ID
image_id	String	ID of the image created from the accepted backup

Parameter	Type	Description
dest_project_id	String	ID of the project with which the backup is shared
vault_id	String	ID of the vault where the shared backup is stored
id	String	ID of the shared record

## Example Requests

```
GET https://{endpoint}/v3/{project_id}/backups/{backup_id}/members
```

## Example Responses

**Status code: 200**

OK

```
{
  "members": [ {
    "status": "pending",
    "backup_id": "0b07081e-3ec7-4e77-8571-54e2947da422",
    "dest_project_id": "075e6035d300d48c2fd0c00b78b71ebf",
    "created_at": "2020-02-05T10:38:34.210+00:00",
    "id": "3c5a3015-c3a0-4dc6-a1e2-917b90f62319"
  } ],
  "count": 50
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.5.5 Deleting a Specified Share Member

### Function

This API is used to delete a specified backup share member.

### URI

```
DELETE /v3/{project_id}/backups/{backup_id}/members/{member_id}
```

**Table 4-229** Path Parameters

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID
member_id	Yes	String	Member ID, which is the same ID as in project ID.
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-230** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

## Response Parameters

None

## Example Requests

```
DELETE https://{endpoint}/v3/{project_id}/backups/{backup_id}/members/{member_id}
```

## Example Responses

None

## Status Codes

Status Code	Description
204	No Content

## Error Codes

See [Error Codes](#).

## 4.6 Restore Points

### 4.6.1 Querying a Restore Point

#### Function

This API is used to query a specified restore point based on its ID.

#### URI

GET /v3/{project\_id}/checkpoints/{checkpoint\_id}

**Table 4-231** Path Parameters

Parameter	Mandatory	Type	Description
checkpoint_id	Yes	String	Restore point ID
project_id	Yes	String	Project ID

#### Request Parameters

**Table 4-232** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	No	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

#### Response Parameters

Status code: 200

**Table 4-233** Response body parameters

Parameter	Type	Description
checkpoint	<a href="#">CheckpointCreate</a> object	Restore point information

**Table 4-234** CheckpointCreate

Parameter	Type	Description
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
id	String	Restore point ID
project_id	String	Project ID
status	String	Status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>deleting</b></li> <li>• <b>protecting</b></li> <li>• <b>deleted</b></li> <li>• <b>error-deleting</b></li> <li>• <b>error</b></li> </ul>
vault	<a href="#">CheckpointPlanCreate</a> object	Vault information
extra_info	<a href="#">CheckpointExtraInfoResp</a> object	Extended information

**Table 4-235** CheckpointPlanCreate

Parameter	Type	Description
id	String	Vault ID
name	String	Vault name
resources	Array of <a href="#">CheckpointResourceResp</a> objects	Backup objects
skipped_resources	Array of <a href="#">CheckpointCreateSkippedResource</a> objects	Resources skipped during backup

**Table 4-236** CheckpointResourceResp

Parameter	Type	Description
extra_info	String	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up
protect_status	String	Protected status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>error</b></li> <li>• <b>protecting</b></li> <li>• <b>restoring</b></li> <li>• <b>removing</b></li> </ul>
resource_size	String	Allocated capacity for the associated resource, in GB
type	String	-
backup_size	String	Backup size
backup_count	String	Number of backups

**Table 4-237** CheckpointCreateSkippedResource

Parameter	Type	Description
id	String	Resource ID
type	String	Resource type
name	String	Resource name
code	String	For details, see <a href="#">Error Codes</a> .
reason	String	Reason for the skipping. For example, the resource is being backed up.

**Table 4-238** CheckpointExtraInfoResp

Parameter	Type	Description
name	String	Backup name
description	String	Backup description
retention_duration	Integer	Number of days that backups can be retained



## Example Requests

```
GET https://{endpoint}/v3/4229d7a45436489f8c3dc2b1d35d4987/checkpoints/8b0851a8-adf3-4f4c-a914-dead08bf9664
```

## Example Responses

**Status code: 200**

OK

```
{
  "checkpoint" : {
    "status" : "available",
    "created_at" : "2019-05-10T07:59:12.037+00:00",
    "vault" : {
      "id" : "3b5816b5-f29c-4172-9d9a-76c719a659ce",
      "resources" : [ {
        "name" : "ecs-1f0f-0002",
        "resource_size" : 40,
        "protect_status" : "available",
        "type" : "OS::Nova::Server",
        "id" : "94eba8b2-acc9-4d82-badc-127144cc5526"
      } ],
      "name" : "vault-be94"
    },
    "project_id" : "4229d7a45436489f8c3dc2b1d35d4987",
    "id" : "8b0851a8-adf3-4f4c-a914-dead08bf9664"
  }
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

## 4.6.2 Creating a Restore Point

### Function

This API is used to back up a vault and generate a restore point.

### URI

POST /v3/{project\_id}/checkpoints

**Table 4-239** Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

## Request Parameters

**Table 4-240** Request header parameters

Parameter	Mandatory	Type	Description
X-Auth-Token	Yes	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of <b>X-Subject-Token</b> in the response header is the user token.

**Table 4-241** Request body parameters

Parameter	Mandatory	Type	Description
checkpoint	Yes	<b>VaultBackup</b> object	Parameters for backing up the vault

**Table 4-242** VaultBackup

Parameter	Mandatory	Type	Description
parameters	No	<b>CheckpointParam</b> object	Parameters
vault_id	Yes	String	Vault ID

**Table 4-243** CheckpointParam

Parameter	Mandatory	Type	Description
auto_trigger	No	Boolean	Whether automatic triggering is enabled. Possible values are <b>true</b> (yes) and <b>false</b> (no). Default: <b>false</b>

Parameter	Mandatory	Type	Description
description	No	String	Backup description Minimum: <b>0</b> Maximum: <b>255</b>
incremental	No	Boolean	Whether the backup is an incremental backup. Possible values are <b>true</b> (yes) and <b>false</b> (no). Default: <b>true</b>
name	No	String	Backup name, which can contain only digits, letters, underscores (_), and hyphens (-) Minimum: <b>1</b> Maximum: <b>64</b>
resources	No	Array of strings	UUID list of resources to be backed up
resource_details	No	Array of <b>Resource</b> objects	Resource details Array Length: <b>0 - 256</b>

**Table 4-244** Resource

Parameter	Mandatory	Type	Description
extra_info	No	<b>ResourceExtraInfo</b> object	Extra information of the resource
id	Yes	String	ID of the resource to be backed up
name	No	String	Name of the resource to be backed up. The value consists of 0 to 255 characters. Minimum: <b>0</b> Maximum: <b>255</b>
type	Yes	String	-

**Table 4-245** ResourceExtraInfo

Parameter	Mandatory	Type	Description
exclude_volumes	No	Array of strings	IDs of the disks that will not be backed up. This parameter is used when servers are added to a vault, which include all server disks. But some disks do not need to be backed up. Or in case that a server was previously added and some disks on this server do not need to be backed up.

## Response Parameters

Status code: 200

**Table 4-246** Response body parameters

Parameter	Type	Description
checkpoint	<a href="#">CheckpointCreate</a> object	Restore point information

**Table 4-247** CheckpointCreate

Parameter	Type	Description
created_at	String	Creation time, for example, <b>2020-02-05T10:38:34.209782</b>
id	String	Restore point ID
project_id	String	Project ID
status	String	Status Enumeration values: <ul style="list-style-type: none"> <li>● <b>available</b></li> <li>● <b>deleting</b></li> <li>● <b>protecting</b></li> <li>● <b>deleted</b></li> <li>● <b>error-deleting</b></li> <li>● <b>error</b></li> </ul>
vault	<a href="#">CheckpointPlanCreate</a> object	Vault information

Parameter	Type	Description
extra_info	<a href="#">CheckpointExtraInfoResp</a> object	Extended information

**Table 4-248** CheckpointPlanCreate

Parameter	Type	Description
id	String	Vault ID
name	String	Vault name
resources	Array of <a href="#">CheckpointResourceResp</a> objects	Backup objects
skipped_resources	Array of <a href="#">CheckpointCreateSkippedResource</a> objects	Resources skipped during backup

**Table 4-249** CheckpointResourceResp

Parameter	Type	Description
extra_info	String	Extra information of the resource
id	String	ID of the resource to be backed up
name	String	Name of the resource to be backed up
protect_status	String	Protected status Enumeration values: <ul style="list-style-type: none"> <li>• <b>available</b></li> <li>• <b>error</b></li> <li>• <b>protecting</b></li> <li>• <b>restoring</b></li> <li>• <b>removing</b></li> </ul>
resource_size	String	Allocated capacity for the associated resource, in GB
type	String	-
backup_size	String	Backup size

Parameter	Type	Description
backup_count	String	Number of backups

**Table 4-250** CheckpointCreateSkippedResource

Parameter	Type	Description
id	String	Resource ID
type	String	Resource type
name	String	Resource name
code	String	For details, see <a href="#">Error Codes</a> .
reason	String	Reason for the skipping. For example, the resource is being backed up.

**Table 4-251** CheckpointExtraInfoResp

Parameter	Type	Description
name	String	Backup name
description	String	Backup description
retention_duration	Integer	Number of days that backups can be retained

## Example Requests

Automatically backing up a vault and generating a restore point

```
POST https://{endpoint}/v3/f841e01fd2b14e7fa41b6ae7aa6b0594/checkpoints
```

```
{
  "checkpoint" : {
    "parameters" : {
      "auto_trigger" : true,
      "description" : "backup_description",
      "incremental" : true,
      "name" : "backup_name",
      "resources" : [ "94eba8b2-acc9-4d82-badc-127144cc5526" ]
    },
    "vault_id" : "3b5816b5-f29c-4172-9d9a-76c719a659ce"
  }
}
```

## Example Responses

**Status code: 200**

OK

```
{
  "checkpoint": {
    "status": "protecting",
    "created_at": "2019-05-10T07:59:12.733+00:00",
    "vault": {
      "skipped_resources": [ ],
      "id": "3b5816b5-f29c-4172-9d9a-76c719a659ce",
      "resources": [ {
        "name": "ecs-1f0f-0002",
        "resource_size": 40,
        "protect_status": "available",
        "type": "OS::Nova::Server",
        "id": "94eba8b2-acc9-4d82-badc-127144cc5526"
      } ],
      "name": "vault-be94"
    },
    "project_id": "4229d7a45436489f8c3dc2b1d35d4987",
    "id": "8b0851a8-adf3-4f4c-a914-dead08bf9664",
    "extra_info": {
      "retention_duration": -1,
      "name": "backup_name",
      "description": "backup_description"
    }
  }
}
```

## Status Codes

Status Code	Description
200	OK

## Error Codes

See [Error Codes](#).

# 5 Application Cases

---

## 5.1 Example 1: Creating an ECS Backup

### Scenarios

You can back up resources including cloud servers and disks. This section uses an ECS as an example to describe how to create a cloud server backup by calling APIs. For details on how to call APIs, see [Calling APIs](#).

### Involved APIs

To create a cloud server backup, you need to create a vault for storing backups, associate the target server with the vault, and then back up the server. The following APIs are required:

- Creating a Vault: Create a container for storing backups.
- Associating Resources: Determine the cloud server or disk to be backed up.
- Creating a Restore Point: Create a backup.
- Querying a Restore Point: Confirm that a backup has been created.

### Procedure

1. Create a vault.
  - a. Create a vault with simple configurations.
    - API  
URI format: POST /v3/{project\_id}/vaults  
For details, see "Creating a Vault".
    - Sample request  
POST: https://{endpoint}/v3/{project\_id}/vaults  
Obtain the value of **{endpoint}** from the administrator.  
Body:

```
{  
  "vault": {
```



```

    "billing": {
      "cloud_type": "public",
      "consistent_level": "crash_consistent",
      "object_type": "server",
      "protect_type": "backup",
      "size": 200
    },
    "name": "my_vault",
    "resources": []
  }
}

```

- Sample response

```

{
  "vault": {
    "id": "ea7b8717-2543-478a-a92d-3ca7ee448f67",
    "name": "my_vault",
    "description": null,
    "resources": [],
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "created_at": "2020-08-17T03:51:24.678916",
    "project_id": "0605767b5780d5762fc5c0118072a564",
    "enterprise_project_id": "0",
    "auto_bind": false,
    "bind_rules": {},
    "user_id": "aa2999fa5ae640f28926f8fd79188934",
    "billing": {
      "allocated": 0,
      "cloud_type": "public",
      "consistent_level": "crash_consistent",
      "frozen_scene": null,
      "charging_mode": "post_paid",
      "order_id": null,
      "product_id": null,
      "protect_type": "backup",
      "object_type": "server",
      "spec_code": "vault.backup.server.normal",
      "used": 0,
      "storage_unit": null,
      "status": "available",
      "size": 200
    },
    "tags": []
  }
}

```

2. Associate a server or disk with the vault.

a. Associate resources.

- API

URI format: POST /v3/{project\_id}/vaults/{vault\_id}/addressources  
For details, see "Associating Resources".

- Sample request

POST: https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564 / vaults/ea7b8717-2543-478a-a92d-3ca7ee448f67/addressources

Obtain the value of **{endpoint}** from the administrator.

Body:

```

{
  "resources": [
    {
      "id": "e8cc6bfd-d324-4b88-9109-9fb0ba70676f",
      "type": "OS::Nova::Server",
      "name": "server-4690-0002"
    }
  ]
}

```

- Sample response

```
{
  "add_resource_ids": [
    "e8cc6bfd-d324-4b88-9109-9fb0ba70676f"
  ]
}
```

- b. In the request body, select the ID of an ECS that is in the **Running** state and has not been associated with a vault.

3. Create a restore point.

- a. Create a restore point.

- API

URI format: POST /v3/{project\_id}/checkpoints

For details, see "Creating a Restore Point".

- Sample request

POST: https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/checkpoints

Obtain the value of **{endpoint}** from the administrator.

Body:

```
{
  "checkpoint": {
    "parameters": {
      "auto_trigger": false,
      "description": "backupauto",
      "incremental": true,
      "name": "backup_auto",
      "resources": ["e8cc6bfd-d324-4b88-9109-9fb0ba70676f"]
    },
    "vault_id": "ea7b8717-2543-478a-a92d-3ca7ee448f67"
  }
}
```

- Sample response

```
{
  "checkpoint": {
    "id": "d9ce6924-d753-4132-bd16-a9f8838ea7d2",
    "project_id": "0605767b5780d5762fc5c0118072a564",
    "status": "protecting",
    "vault": {
      "id": "ea7b8717-2543-478a-a92d-3ca7ee448f67",
      "name": "my_vault",
      "resources": [
        {
          "id": "e8cc6bfd-d324-4b88-9109-9fb0ba70676f",
          "type": "OS::Nova::Server",
          "name": "ecs-9f93-0002",
          "extra_info": "{}",
          "resource_size": "40",
          "backup_size": "0",
          "backup_count": "0",
          "protect_status": "available"
        }
      ]
    },
    "skipped_resources": []
  },
  "created_at": "2020-08-17T06:49:06.307378",
  "extra_info": {
    "name": "backup_auto",
    "description": "backupauto",
    "retention_duration": -1
  }
}
```

```
}  
}
```

- b. Record the ID of the restore point in the response message body.
4. Verify that the server is backed up successfully.
  - API  
URI format: GET /v3/{project\_id}/checkpoints/{checkpoint\_id}  
For details, see "Querying a Restore Point".  
Obtain the value of **{endpoint}** from the administrator.
  - Sample request  
GET: https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/checkpoints/d9ce6924-d753-4132-bd16-a9f8838ea7d2
  - Sample response
 

```
{  
  "checkpoint": {  
    "id": "d9ce6924-d753-4132-bd16-a9f8838ea7d2",  
    "project_id": "0605767b5780d5762fc5c0118072a564",  
    "status": "available",  
    "vault": null,  
    "created_at": "2020-08-17T06:49:06.260790",  
    "extra_info": null  
  }  
}
```

## 5.2 Example 2: Implementing Automatic Backup for a Vault

### Scenarios

This section describes how to use APIs to set a backup policy and apply the policy to a vault for automatic backup.

### Involved APIs

- Creating a Policy: Define when a backup task runs and how long the backups are retained.
- Applying a Policy to a Vault: Apply a policy to a vault.

### Procedure

1. Create a backup policy.
  - API  
URI format: POST /v3/{project\_id}/policies  
For details, see "Creating a Policy".
  - Sample request  
POST: https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/policies  
Obtain the value of **{endpoint}** from the administrator.  
Body:  

```
{  
  "policy": {
```

```

    "name": "dh_test_policy",
    "trigger": {
      "properties": {
        "pattern":
["FREQ=WEEKLY;BYDAY=SU,MO,TU,WE,TH,FR,SA;BYHOUR=23;BYMINUTE=00"]
      }
    },
    "operation_definition": {
      "retention_duration_days": 30
    }
  }
}

```

– Sample response

```

{
  "policy": {
    "id": "30d7cf2d-14fc-415b-b7da-858b37f47250",
    "name": "dh_test_policy",
    "operation_type": "backup",
    "operation_definition": {
      "retention_duration_days": 30
    },
    "enabled": true,
    "trigger": {
      "id": "7954175b-ef2c-432c-b936-f6c83df7a593",
      "name": "default",
      "type": "time",
      "properties": {
        "pattern": [
          "FREQ=WEEKLY;BYDAY=SU,MO,TU,WE,TH,FR,SA;BYHOUR=23;BYMINUTE=00"
        ],
        "start_time": "2020-08-17 08:39:44"
      }
    },
    "associated_vaults": null
  }
}

```

2. Apply the policy to a vault.

– API

POST /v3/{project\_id}/vaults/{vault\_id}/associatepolicy

For details, see "Applying a Policy to a Vault".

– Sample request

POST: [https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564 / vaults/ea7b8717-2543-478a-a92d-3ca7ee448f67/associatepolicy](https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/vaults/ea7b8717-2543-478a-a92d-3ca7ee448f67/associatepolicy)

Obtain the value of **{endpoint}** from the administrator.

Body:

```

{
  "policy_id": "30d7cf2d-14fc-415b-b7da-858b37f47250"
}

```

– Sample response

```

{
  "associate_policy": {
    "vault_id": "ea7b8717-2543-478a-a92d-3ca7ee448f67",
    "policy_id": "30d7cf2d-14fc-415b-b7da-858b37f47250"
  }
}

```

## 5.3 Example 3: Querying Backups

### Scenarios

This section describes how to use APIs to query all backups of a tenant by page.

The operations described in this section include information query by page and data filtering and sorting. For details about the parameters, see "Querying All Backups".

### Involved APIs

Querying backups involves the following APIs:

- [Querying backups based on a given limit and offset](#)
- [Querying backups based on a given resource type](#)

### Procedure

1. Query backups based on a given **limit** and **offset**.

- API

URI format: GET /v3/{project\_id}/backups

For details, see "Querying All Backups".

- Sample request

```
GET:https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/backups?limit=100&offset=0
```

Obtain the value of **{endpoint}** from the administrator.

- Sample response

```
{
  "backups": [
    .....
    {
      "children": [],
      "checkpoint_id": "e6aec7a9-7b03-4c1d-8a07-5983b53c53f3",
      "created_at": "2020-08-18T06:00:45.375070",
      "description": null,
      "expired_at": null,
      "extend_info": {
        },
      "auto_trigger": true,
      "bootable": null,
      "os_images_data": null,
      "progress": null,
      "snapshot_id": null,
      "support_ll": false,
      "supported_restore_mode": "backup",
      "system_disk": false,
      "contain_system_disk": true,
      "architecture": "x86_64"
    },
    "id": "62617971-839d-4d23-8dfd-4ca65c039bdf",
    "image_type": "backup",
    "name": "autobk_cf91_0003",
    "parent_id": null,
    "project_id": "0605767b5780d5762fc5c0118072a564",
    "protected_at": "2020-08-18T06:01:10.432117",
```

```

        "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
        "resource_az": "br-iaas-odin1a",
        "resource_id": "d6bf7592-ca52-43a2-9979-e418d64b29bb",
        "resource_name": "xzl_ecs-0003-0001",
        "resource_size": 40,
        "resource_type": "OS::Nova::Server",
        "status": "available",
        "updated_at": "2020-08-18T06:06:44.928325",
        "vault_id": "1572bd27-e221-4f28-94ca-9777d232fcd7",
        "replication_records": []
    }
],
"count": 1663
}

```

## 2. Query backups based on a given resource type.

### – API

URI format: GET /v3/{project\_id}/backups

The used API is the same as that provided in [1](#).

### – Sample request

GET: https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/backups?resource\_type=OS::Nova::Server&limit=5&offset=0

Obtain the value of **{endpoint}** from the administrator.

### – Sample response

```

{
  "backups": [
    .....
    {
      "children": [],
      "checkpoint_id": "e328d05e-4b28-4898-b8c1-2bfe6621ec03",
      "created_at": "2020-08-18T07:00:46.932061",
      "description": null,
      "expired_at": null,
      "extend_info": {
        "app_consistency": {
          "app_consistency": "0",
          "app_consistency_status": "0",
          "app_consistency_error_code": "0",
          "app_consistency_error_message": ""
        }
      },
      "auto_trigger": true,
      "bootable": null,
      "os_images_data": null,
      "progress": null,
      "snapshot_id": null,
      "support_llid": false,
      "supported_restore_mode": "backup",
      "system_disk": false,
      "contain_system_disk": true,
      "architecture": "x86_64"
    },
    "id": "c892ed58-3a18-47c2-9e31-a1d543dc490a",
    "image_type": "backup",
    "name": "autobk_7234_0003",
    "parent_id": null,
    "project_id": "0605767b5780d5762fc5c0118072a564",
    "protected_at": "2020-08-18T07:01:12.675112",
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "resource_az": "br-iaas-odin1a",
    "resource_id": "d6bf7592-ca52-43a2-9979-e418d64b29bb",
    "resource_name": "xzl_ecs-0003-0001",
    "resource_size": 40,
    "resource_type": "OS::Nova::Server",
    "status": "available",
    "updated_at": "2020-08-18T07:06:47.518054",

```

```
    "vault_id": "1572bd27-e221-4f28-94ca-9777d232fcd7",  
    "replication_records": []  
  }  
],  
"count": 150  
}
```

# 6 Permissions Policies and Supported Actions

---

## 6.1 Introduction

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

New IAM users do not have any permissions assigned by default. You need to first add them to one or more groups and attach policies or roles to these groups. The users then inherit permissions from the groups and can perform specified operations on cloud services based on the permissions they have been assigned.

You can grant users permissions using roles and policies. Roles are provided by IAM to define service-based permissions that match user's job responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

### NOTE

If you want to allow or deny the access to an API, use policy-based authorization.

Each account has all the permissions required to call all APIs, but 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. For example, if an IAM user wants to query ECSs using an API, the user must have been granted permissions that allow the `ecs:servers:list` action.

## Supported Actions

CBR 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 are common concepts related to policies:



- Permissions: statements in a policy that allow or deny certain operations
- APIs: REST APIs that can be called by a user who has been granted specific permissions
- 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.

 **NOTE**

The check mark (√) and cross symbol (x) indicate that an action takes effect or does not take effect for the corresponding type of projects.

CBR supports the following actions in custom policies:

- [Example] Vault actions (**Vault**), including all of the actions supported by CBR vault APIs, such as the APIs for creating, modifying, and deleting a vault, querying the vault list, as well as adding and removing resources.
- [Example] Backup sharing actions (**Backup Sharing**), including actions supported by CBR backup sharing APIs, such as APIs for adding share members, obtaining the share member list, and updating the share member status.

## 6.2 Category of CBR Actions

### Task

Permission	API	Action	IAM Project	Enterprise Project
Querying the task list	GET /v3/{project_id}/operation-logs	cbr:tasks:list	√	√
Querying a single task	GET /v3/{project_id}/operation-logs/{operation_log_id}	cbr:tasks:get	√	√

## Protection

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Querying protectable resources	GET /v3/{project_id}/protectables/{protectable_type}/instances	cbr:vaults:listProtectables	ecs:cloudServers:list evs:volumes:list	√	√
Querying a specified protectable resource	GET /v3/{project_id}/protectables/{protectable_type}/instances/{instance_id}	cbr:vaults:getProtectables	ecs:cloudServers:list evs:volumes:list	√	√
Querying the agent status	POST /v3/{project_id}/agent/check	cbr:backups:checkAgent	ecs:cloudServers:list	√	√

## Vault

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Applying a policy to a vault	POST /v3/{project_id}/vaults/{vault_id}/associatepolicy	cbr:vaults:associatePolicy	-	√	√
Querying a specified vault	GET /v3/{project_id}/vaults/{vault_id}	cbr:vaults:get	-	√	√
Modifying a vault	PUT /v3/{project_id}/vaults/{vault_id}	cbr:vaults:update	-	√	√

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Deleting a vault	DELETE /v3/ {project_id} /vaults/ {vault_id}	cbr:vaults:delete	-	√	√
Dissociating resources	POST /v3/ {project_id} /vaults/ {vault_id}/ removeresources	cbr:vaults:removeResources	-	√	√
Associating resources	POST /v3/ {project_id} /vaults/ {vault_id}/ addresources	cbr:vaults:addResources	ecs:cloudServers:list evs:volumes:list	√	√
Querying the vault list	GET /v3/ {project_id} /vaults	cbr:vaults:list	-	√	√
Creating a vault	POST /v3/ {project_id} /vaults	cbr:vaults:create	ecs:cloudServers:list evs:volumes:list	√	x
Querying the vault list in other regions	GET /v3/ {project_id} / external_vaults	cbr:vaults:listExternalVaults	cbr:vaults:listVaults	√	√
Removing a policy from a vault	POST /v3/ {project_id} /vaults/ {vault_id}/ dissociatepolicy	cbr:vaults:dissociatePolicy	-	√	√
Migrating a resource	POST /v3/ {project_id} /vaults/ {vault_id}/ migrateresources	cbr:vaults:migrateResources	cbr:vaults:addResources	√	√

## Restore Point

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Creating a restore point	POST /v3/{project_id}/checkpoints	cbr:vaults:backup	ecs:cloudServers:list evs:volumes:list	√	√

## Backup Sharing

Permission	API	Action	IAM Project	Enterprise Project
Adding a share member	POST /v3/{project_id}/backups/{backup_id}/members	cbr:member:create	√	√
Updating the share member status	PUT /v3/{project_id}/backups/{backup_id}/members/{member_id}	cbr:member:update	√	√
Querying details about a share member	GET /v3/{project_id}/backups/{backup_id}/members/{member_id}	cbr:member:get	√	√
Obtaining the share member list	GET /v3/{project_id}/backups/{backup_id}/members	cbr:member:list	√	√
Deleting a specified share member	DELETE /v3/{project_id}/backups/{backup_id}/members/{member_id}	cbr:member:delete	√	√

## Backup

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Querying all backups	GET /v3/{project_id}/backups	cbr:backups:list	-	√	√
Querying a specified backup	GET /v3/{project_id}/backups/{backup_id}	cbr:backups:get	-	√	√
Deleting a backup	DELETE /v3/{project_id}/backups/{backup_id}	cbr:backups:delete	-	√	√
Synchronizing a backup	POST /v3/{project_id}/backups/sync	cbr:backups:sync	-	√	√
Restoring data from a backup	POST /v3/{project_id}/backups/{backup_id}/restore	cbr:backups:restore	ecs:cloudServers:list evs:volumes:list	√	√

## Policy

Permission	API	Action	IAM Project	Enterprise Project
Querying the policy list	GET /v3/{project_id}/policies	cbr:policies:list	√	√
Creating a policy	POST /v3/{project_id}/policies	cbr:policies:create	√	√
Querying a policy	GET /v3/{project_id}/policies/{policy_id}	cbr:policies:get	√	√

Permission	API	Action	IAM Project	Enterprise Project
Modifying a policy	PUT /v3/{project_id}/policies/{policy_id}	cbr:policies:update	√	√
Deleting a policy	DELETE /v3/{project_id}/policies/{policy_id}	cbr:policies:delete	√	√

## Metering

Permission	API	Action	IAM Project	Enterprise Project
Querying the storage usage	GET /v3/{project_id}/storage_usage	cbr:backups:listStorageUsage	√	√

## Operation

Permission	API	Action	IAM Project	Enterprise Project
Change	PUT /v3/{project_id}/orders/{order_id}	cbr:vaults:updateOrder	√	√

# 7 Appendix

## 7.1 Status Codes

- Normal

Status Code	Description
200 OK	Specifies the normal response code for the GET and PUT operations.
201 Created	Specifies the normal response code for the POST operation.
202 Accepted	The request has been accepted for processing.
204 No Content	Specifies the normal response code for the DELETE operation.

- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You need to enter the username and password to access the requested page.
403 Forbidden	Access to the requested page is forbidden.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	The method specified in the request is not allowed.
406 Not Acceptable	The response generated by the server could not be accepted by the client.

Status Code	Description
407 Proxy Authentication Required	You must use the proxy server for authentication so that the request can be processed.
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	The request is not completed because of a service error.
501 Not Implemented	The request is not completed because the server does not support the requested function.
502 Bad Gateway	The request is not completed because the server receives an invalid request.
503 Service Unavailable	The request is not completed because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurs.

## 7.2 Error Codes

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.0001	No resource is available for backup.	No resource is available for backup.	Check whether resources are being backed up or contact technical support.
400	BackupService.1011	The destination project does not support replication.	The destination project does not support replication.	Contact technical support.
400	BackupService.1012	The maximum number of backup replicas has been reached.	The maximum number of backup replicas has been reached.	Check whether the maximum number of backup replicas for the resource has been reached.



Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.2001	Restoration cannot be executed because the size of the disk on the server is smaller than the backup size.	Restoration cannot be executed because the size of the disk on the server is smaller than the backup size.	Perform the operation according to the constraints.
400	BackupService.2002	The resource is being backed up. Restore the resource after the backup is complete.	The resource is being backed up. Restore the resource after the backup is complete.	Perform the operation according to the constraints.
400	BackupService.2003	Restoration to a different server is not allowed.	Restoration to a different server is not allowed.	Perform the operation according to the constraints.
400	BackupService.2004	Backup replicas cannot be used for restoration.	Backup replicas cannot be used for restoration.	Perform the operation according to the constraints.
400	BackupService.2005	Restoration is not allowed in the current backup status.	Restoration is not allowed in the current backup status.	Perform the operation according to the constraints.
400	BackupService.2006	An ECS backup cannot be restored to a BMS.	An ECS backup cannot be restored to a BMS.	Perform the operation according to the constraints.
400	BackupService.2007	A terminated ECS cannot be restored.	A terminated ECS cannot be restored.	Ensure that the ECS status is available and then perform backups.
400	BackupService.2008	Restoration is not allowed in the current ECS status.	Restoration is not allowed in the current ECS status.	Check the ECS status.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.2009	Restoration is not allowed in the current disk type.	Restoration is not allowed in the current disk type.	Perform the operation according to the constraints.
400	BackupService.2010	The resource is being restored.	The resource is being restored.	Try again later.
400	BackupService.2011	Restoration is not allowed in the current disk status.	Restoration is not allowed in the current disk status.	Check the disk status.
400	BackupService.2012	Restoration of some disks is not allowed.	Restoration of some disks is not allowed.	Contact technical support.
400	BackupService.2013	Backup data of a data disk cannot be restored to a system disk.	Backup data of a data disk cannot be restored to a system disk.	Use valid values for restoration parameters.
400	BackupService.2014	A BMS backup cannot be restored to an ECS.	A BMS backup cannot be restored to an ECS.	Select a proper backup for restoration.
400	BackupService.2015	Restoration is not allowed between different architectures.	Restoration is not allowed between different architectures.	Select a proper architecture for restoration.
400	BackupService.6001	The maximum number of this type of policies has been reached.	The maximum number of this type of policies has been reached.	Contact technical support.
400	BackupService.6003	The destination region cannot be changed because the policy has been applied to a replication vault.	The destination region cannot be changed because the policy has been applied to a replication vault.	Remove the policy from the vault and try again.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6100	The maximum number of vault resources has been reached.	The maximum number of vault resources has been reached.	Create a new vault and associate resources with the new vault.
400	BackupService.6101	Invalid vault capacity.	Invalid vault capacity.	Use valid values for vault parameters.
400	BackupService.6102	The vault does not support this resource type.	The vault does not support this resource type.	Use valid values for vault type parameters.
400	BackupService.6103	The resource has been associated with a vault.	The resource has been associated with a vault.	Use valid values for resource parameters.
400	BackupService.6104	Duplicate vault resources.	Duplicate vault resources.	Use valid values for resource parameters.
400	BackupService.6106	The vault already exists.	The vault already exists.	Use valid values for vault parameters.
400	BackupService.6107	Vault capacity expansion failed.	Vault capacity expansion failed.	Try again. If the fault persists, contact technical support.
400	BackupService.6108	New resources cannot be associated with the vault.	New resources cannot be associated with the vault.	Try again. If the fault persists, contact technical support.
400	BackupService.6109	The bill does not exist.	The bill does not exist.	Contact technical support.
400	BackupService.6110	The vault cannot be updated.	The vault cannot be updated.	Try again. If the fault persists, contact technical support.
400	BackupService.6111	The vault cannot be deleted.	The vault cannot be deleted.	Try again. If the fault persists, contact technical support.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6112	Invalid vault status.	Invalid vault status.	Perform the operation in the correct status.
400	BackupService.6113	Backup is not allowed in the current vault status.	Backup is not allowed in the current vault status.	Perform the operation in the correct status.
400	BackupService.6114	The used capacity of the vault exceeds the maximum capacity.	The used capacity of the vault exceeds the maximum capacity.	Use vaults properly.
400	BackupService.6115	Failed to delete the backups of vault resources.	Failed to delete the backups of vault resources.	Try again. If the fault persists, contact technical support.
400	BackupService.6116	Unsupported resource type.	Unsupported resource type.	Enter a valid <b>protect type</b> value.
400	BackupService.6117	Unknown policy type.	Unknown policy type.	Enter a valid <b>OperationType</b> value.
400	BackupService.6118	Failed to check the destination vault.	Failed to check the destination vault.	Try again. If the fault persists, contact technical support.
400	BackupService.6119	The destination vault does not support replication.	The destination vault does not support replication.	Check whether the destination vault supports replication.
400	BackupService.6120	The destination vault does not exist.	The destination vault does not exist.	Check whether the destination vault exists.
400	BackupService.6121	Vault deletion failed.	Vault deletion failed.	Try again. If the fault persists, contact technical support.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6122	The resource type does not support replication.	The resource type does not support replication.	Check whether the resource type supports replication.
400	BackupService.6123	Capacity expansion failed. There may be unprocessed capacity expansion orders or capacity expansion is in progress.	Capacity expansion failed. There may be unprocessed capacity expansion orders or capacity expansion is in progress.	Try again. If the fault persists, contact technical support.
400	BackupService.6124	Backup is not allowed for the current type of vaults.	Backup is not allowed for the current type of vaults.	Use different types of vaults properly.
400	BackupService.6125	A backup task is in progress.	A backup task is in progress.	Perform backups after the current backup task is complete.
400	BackupService.6126	Database backup is not allowed for this vault.	Database backup is not allowed for this vault.	Use different types of vaults properly.
400	BackupService.6127	This policy cannot be applied to this vault.	This policy cannot be applied to this vault.	Use different types of vaults properly.
400	BackupService.6128	Replication is not allowed for the current type of vaults.	Replication is not allowed for the current type of vaults.	Use a proper type of vault for replication.
400	BackupService.6129	The maximum capacity of the destination vault has been reached.	The maximum capacity of the destination vault has been reached.	Expand the vault capacity and then perform this operation.
400	BackupService.6130	The vault is being replicated.	The vault is being replicated.	Try again later.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6131	The traffic record does not exist.	The traffic record does not exist.	Contact technical support.
400	BackupService.6133	The maximum number of vaults has been reached.	The maximum number of vaults has been reached.	Contact technical support.
400	BackupService.6134	Resources are being removed from the vault.	Resources are being removed from the vault.	Try again later.
400	BackupService.6135	The resource does not exist in the vault.	The resource does not exist in the vault.	Check whether the resource has been associated with the vault.
400	BackupService.6136	Backup policies cannot be applied with hybrid cloud backup vaults.	Backup policies cannot be applied with hybrid cloud backup vaults.	Contact technical support.
400	BackupService.6140	An encrypted disk cannot be specified as a system disk.	An encrypted disk cannot be specified as a system disk.	Perform the operation according to the constraints.
400	BackupService.6141	A SCSI disk cannot be specified as a system disk.	A SCSI disk cannot be specified as a system disk.	Perform the operation according to the constraints.
400	BackupService.6142	Maximum capacities of all vaults have been reached.	Maximum capacities of all vaults have been reached.	Expand vault capacities and try again.
400	BackupService.6201	The backup cannot be deleted.	The backup cannot be deleted.	Try again. If the fault persists, contact technical support.
400	BackupService.6202	Backups can be used for restoration only when the vault status is Available.	Backups can be used for restoration only when the vault status is Available.	Perform the operation in the correct status.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6203	Performing backups.	Performing backups.	Perform backups after the current task is complete.
400	BackupService.6204	The backup cannot be deleted because it has been used to create an image.	The backup cannot be deleted because it has been used to create an image.	Delete the created image and then delete the backup.
400	BackupService.6206	Metadata query is not allowed in the current backup status.	Metadata query is not allowed in the current backup status.	Try again later.
400	BackupService.6215	Backup is not allowed in the current resource status.	Backup is not allowed in the current resource status.	Check whether the resource can be backed up in the current status.
400	BackupService.6216	The backup cannot be deleted because it is in use.	The backup cannot be deleted because it is in use.	Try again later.
400	BackupService.6300	The resource type and backup provider do not match.	The resource type and backup provider do not match.	Contact technical support.
400	BackupService.6301	Invalid backup provider ID.	Invalid backup provider ID.	Use a valid provider ID.
400	BackupService.6400	Bucket creation failed.	Bucket creation failed.	Try again. If the fault persists, contact technical support.
400	BackupService.6401	Failed to set the bucket quota.	Failed to set the bucket quota.	Try again. If the fault persists, contact technical support.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6403	Failed to obtain bucket storage information.	Failed to obtain bucket storage information.	Try again. If the fault persists, contact technical support.
400	BackupService.6404	Bucket deletion failed.	Bucket deletion failed.	Try again. If the fault persists, contact technical support.
400	BackupService.6405	Bucket object deletion failed.	Bucket object deletion failed.	Try again. If the fault persists, contact technical support.
400	BackupService.6406	Failed to list bucket objects.	Failed to list bucket objects.	Try again. If the fault persists, contact technical support.
400	BackupService.6407	Failed to set the bucket ACL.	Failed to set the bucket ACL.	Try again. If the fault persists, contact technical support.
400	BackupService.6408	Failed to set the bucket policy.	Failed to set the bucket policy.	Try again. If the fault persists, contact technical support.
400	BackupService.6600	The maximum number of tags has been reached for the resource.	The maximum number of tags has been reached for the resource.	Delete some tags and try again.
400	BackupService.6700	Only cloud server backups can be shared.	Only cloud server backups can be shared.	Share cloud server backups.
400	BackupService.6701	The maximum number of backups that can be shared has been reached.	The maximum number of backups that can be shared has been reached.	Check whether the maximum number of backups that can be shared has been reached.
400	BackupService.6702	Only backups in the Available status can be shared.	Only backups in the Available status can be shared.	Share backups that are in the Available status.



Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6703	The backup has been shared.	The backup has been shared.	Check whether the backup has already been shared to a user.
400	BackupService.6704	Invalid project ID of the tenant for sharing.	Invalid project ID of the tenant for sharing.	Use a correct project ID for sharing.
400	BackupService.6706	Invalid update parameter value for the share member.	Invalid update parameter value for the share member.	Use valid values for update parameters.
400	BackupService.6707	Backup sharing is not allowed.	Backup sharing is not allowed.	Check whether backup sharing is supported.
400	BackupService.6708	Failed to update the status of a share member.	Failed to update the status of a share member.	Contact technical support.
400	BackupService.6709	Backup sharing is not allowed for cloud servers using encrypted disks.	Backup sharing is not allowed for cloud servers using encrypted disks.	Perform the operation according to the constraints.
400	BackupService.6710	The shared backup has been used to register an image.	The shared backup has been used to register an image.	Delete the image first.
400	BackupService.6711	Shared backup deletion failed.	Shared backup deletion failed.	Contact technical support.
400	BackupService.6712	Backup sharing is not allowed in the current vault status.	Backup sharing is not allowed in the current vault status.	Perform the operation according to the constraints.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.6713	The type of the vault accepting the shared backup and the backup resource type are different.	The type of the vault accepting the shared backup and the backup resource type are different.	The vault type and resource type must be the same.
400	BackupService.6714	A shared backup cannot be shared to the same member again.	A shared backup cannot be shared to the same member again.	Perform the operation according to the constraints.
400	BackupService.7001	DESS disks cannot be backed up.	DESS disks cannot be backed up.	Perform the operation according to the constraints.
400	BackupService.7002	SCSI disks cannot be backed up.	SCSI disks cannot be backed up.	Perform the operation according to the constraints.
400	BackupService.7003	Backup is not allowed in the current disk status.	Backup is not allowed in the current disk status.	Perform the operation in the correct status.
400	BackupService.7004	Backup or restoration is not allowed for this disk.	Backup or restoration is not allowed for this disk.	Contact technical support.
400	BackupService.7006	The disk already exists in the vault.	The disk already exists in the vault.	Dissociate the disk from the vault and then perform this operation.
400	BackupService.7007	A disk created a long time ago cannot be backed up.	A disk created a long time ago cannot be backed up.	Replace the disk and perform backups.
400	BackupService.7008	Disks at the disaster recovery site cannot be restored.	Disks at the disaster recovery site cannot be restored.	Perform the operation in the correct status.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.7101	Backup is not allowed in the current server status.	Backup is not allowed in the current server status.	Perform the operation in the correct status.
400	BackupService.7102	The server has stopped.	The server has stopped.	Perform the operation in the correct status.
400	BackupService.7103	The server cannot be backed up.	The server cannot be backed up.	Contact technical support.
400	BackupService.7104	Backup is not allowed for servers using SCSI disks.	Backup is not allowed for servers using SCSI disks.	Detach the SCSI disks and then perform backups.
400	BackupService.7105	Inconsistent disk backends.	Inconsistent disk backends.	Contact technical support.
400	BackupService.7106	Shared disks cannot be backed up.	Shared disks cannot be backed up.	Perform the operation according to the constraints.
400	BackupService.7107	The maximum number of shared disks has been reached.	The maximum number of shared disks has been reached.	Exclude the shared disks and then perform backups.
400	BackupService.7108	Backup is not allowed for servers containing no disks.	Backup is not allowed for servers containing no disks.	Attach disks to the server and then perform backups.
400	BackupService.7109	BMSs cannot be backed up.	BMSs cannot be backed up.	Perform the operation according to the constraints.
400	BackupService.7110	The resource type and provider ID do not match.	The resource type and provider ID do not match.	Use a valid provider ID.
400	BackupService.7111	Backup is not allowed for servers using DESS disks.	Backup is not allowed for servers using DESS disks.	Detach DESS disks and then perform backups.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.7113	BMS local disks cannot be backed up.	BMS local disks cannot be backed up.	Exclude local disks and then perform backups.
400	BackupService.7114	Restoration to the source server running a different operating system is not allowed.	Restoration to the source server running a different operating system is not allowed.	Use valid values for restoration parameters.
400	BackupService.7115	The backup server and the destination server to be restored have different types.	The backup server and the destination server to be restored have different types.	Use valid values for restoration parameters.
400	BackupService.7116	The server has been associated with the vault.	The server has been associated with the vault.	Dissociate the server from the vault and then perform this operation.
400	BackupService.7117	Restoration is not allowed for disaster recovery site servers.	Restoration is not allowed for disaster recovery site servers.	Use valid values for restoration parameters.
400	BackupService.7200	Cloud databases are being backed up.	Cloud databases are being backed up.	Try again later.
400	BackupService.7201	The disk is not attached to any server.	The disk is not attached to any server.	Confirm and then try again.
400	BackupService.7203	The snapshot is not in the correct status.	The snapshot is not in the correct status.	Try again later.
400	BackupService.7204	The snapshot and disk do not match.	The snapshot and disk do not match.	Confirm and then try again.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.7300	The vault does not support synchronization.	The vault does not support synchronization.	Check whether the vault type supports synchronization.
400	BackupService.7301	The vault is not empty.	The vault is not empty.	Perform the operation according to the constraints.
400	BackupService.7302	Backups are being synchronized.	Backups are being synchronized.	Perform the operation according to the constraints.
400	BackupService.7303	The maximum number of vaults has been reached.	The maximum number of vaults has been reached.	Contact technical support.
400	BackupService.7501	SFS Turbo file systems are being backed up.	SFS Turbo file systems are being backed up.	Try again later.
400	BackupService.7502	Backup is not allowed in the current status of the SFS Turbo file system.	Backup is not allowed in the current status of the SFS Turbo file system.	Perform the operation in the correct status.
400	BackupService.7503	Backup is not allowed in the current sub-status of the SFS Turbo file system.	Backup is not allowed in the current sub-status of the SFS Turbo file system.	Perform the operation in the correct status.
400	BackupService.7504	Failed to freeze the SFS Turbo file system.	Failed to freeze the SFS Turbo file system.	Try again later.
400	BackupService.7505	Failed to unfreeze the SFS Turbo file system.	Failed to unfreeze the SFS Turbo file system.	Try again later.

Status Code	Error Code	Error Message	Description	Handling Measure
400	BackupService.7506	Failed to execute tasks of the SFS Turbo file system.	Failed to execute tasks of the SFS Turbo file system.	Try again later or contact technical support.
400	BackupService.7507	Restoration is not allowed because the SFS Turbo file system is different from when it is backed up.	Restoration is not allowed because the SFS Turbo file system is different from when it is backed up.	Perform the operation in the correct status.
400	BackupService.7508	SFS Turbo file system pre-restoration failed.	SFS Turbo file system pre-restoration failed.	Try again. If the fault persists, contact technical support.
400	BackupService.7509	SFS Turbo file system restoration failed.	SFS Turbo file system restoration failed.	Try again. If the fault persists, contact technical support.
400	BackupService.7510	SFS Turbo backups can only be restored to original SFS Turbo file systems.	SFS Turbo backups can only be restored to original SFS Turbo file systems.	Restore to the original SFS Turbo file system.
400	BackupService.7511	Restoration is not allowed in the current status of the SFS Turbo file system.	Restoration is not allowed in the current status of the SFS Turbo file system.	Perform the operation in the correct status.
400	BackupService.8300	Insufficient snapshot quota.	Insufficient snapshot quota.	Increase quota and then try again.
400	BackupService.9900	Parameter verification failed.	Parameter verification failed.	Use valid parameter values.
403	BackupService.8600	Not authenticated.	Not authenticated.	Complete real-name authentication.

Status Code	Error Code	Error Message	Description	Handling Measure
404	BackupService.4001	The migration record does not exist.	The migration record does not exist.	Provide a correct migration record ID.
404	BackupService.6000	The policy does not exist.	The policy does not exist.	Check whether the policy exists.
404	BackupService.6002	The vault is not applied with the policy.	The vault is not applied with the policy.	Apply the backup policy to the vault first.
404	BackupService.6105	The vault does not exist.	The vault does not exist.	Use valid values for vault parameters.
404	BackupService.6200	The backup does not exist.	The backup does not exist.	Check whether the backup exists.
404	BackupService.6217	The backup restore point does not exist.	The backup restore point does not exist.	Check whether the backup restore point exists.
404	BackupService.6302	The resource does not exist.	The resource does not exist.	Confirm the queried resource.
404	BackupService.6402	The bucket is not empty.	The bucket is not empty.	Delete backups and backup policies to empty the bucket.
404	BackupService.6500	The operation log does not exist.	The operation log does not exist.	Check whether the respective task exists.
404	BackupService.6501	The task does not exist.	The task does not exist.	Check whether the task exists.
404	BackupService.6601	The key does not exist.	The key does not exist.	Enter a correct key.
404	BackupService.6705	The share member does not exist.	The share member does not exist.	Check whether the share member exists.
404	BackupService.7000	The disk does not exist.	The disk does not exist.	Perform the operation according to the constraints.
404	BackupService.7100	The server does not exist.	The server does not exist.	Perform the operation in the correct status.

Status Code	Error Code	Error Message	Description	Handling Measure
404	BackupService.7202	Failed to obtain the snapshot.	Failed to obtain the snapshot.	Confirm the query parameters.
404	BackupService.7500	The SFS Turbo file system does not exist.	The SFS Turbo file system does not exist.	Checks whether the SFS Turbo file system exists.
500	BackupService.0002	Resources are being backed up.	Resources are being backed up.	Try again later.
500	BackupService.1001	Replication is not allowed in the current backup status.	Replication is not allowed in the current backup status.	Check whether the backup status is Available.
500	BackupService.1002	Replication is not allowed for the current type of backups.	Replication is not allowed for the current type of backups.	Ensure that the image type is <b>backup</b> or <b>sync</b> .
500	BackupService.1003	Replication is not allowed because the backup source is not an ECS.	Replication is not allowed because the backup source is not an ECS.	Ensure that the backup source is an ECS.
500	BackupService.1004	Replication is not allowed because the source server of the backup does not contain any system disk.	Replication is not allowed because the source server of the backup does not contain any system disk.	Ensure that the server contains a system disk.
500	BackupService.1005	The destination region does not support replication.	The destination region does not support replication.	Check whether the current region supports replication.
500	BackupService.1006	Failed to import the backup replica.	Failed to import the backup replica.	Contact technical support.



Status Code	Error Code	Error Message	Description	Handling Measure
500	BackupService.1007	Replication is not allowed because the system cannot identify whether the backup has been replicated to the destination region.	Replication is not allowed because the system cannot identify whether the backup has been replicated to the destination region.	Try again later.
500	BackupService.1008	Replication is not allowed because the system cannot detect the destination vault.	Replication is not allowed because the system cannot detect the destination vault.	Try again later.
500	BackupService.1009	The backup is being replicated or has been replicated to the destination region.	The backup is being replicated or has been replicated to the destination region.	Check whether the backup replica already exists in the destination region.
500	BackupService.1013	Replication is not allowed because the resource of the backup does not contain a system disk.	Replication is not allowed because the resource of the backup does not contain a system disk.	Select a proper backup for replication.
500	BackupService.4004	Failed to clean up data.	Failed to clean up data.	Try again later.
500	BackupService.4005	Failed to check the destination vault.	Failed to check the destination vault.	Try again later.

Status Code	Error Code	Error Message	Description	Handling Measure
500	BackupService.4006	Failed to migrate the backup in an intermediate status.	Failed to migrate the backup in an intermediate status.	Try again later.
500	BackupService.4007	Failed to check the migration progress of other regions.	Failed to check the migration progress of other regions.	Try again later.
500	BackupService.6132	Vault creation failed.	Vault creation failed.	Try again. If the fault persists, contact technical support.
500	BackupService.6137	One disk on cloud servers cannot be backed up in multiple vaults.	One disk on cloud servers cannot be backed up in multiple vaults.	Associate servers using the same disk to the same vault.
500	BackupService.6138	Failed to obtain language preferences from CBC.	Failed to obtain language preferences from CBC.	Only Chinese and English are supported.
500	BackupService.6139	Failed to obtain <b>xdomain_type</b> .	Failed to obtain <b>xdomain_type</b> .	Try again later.
500	BackupService.6207	This type of backups cannot be used to create images.	This type of backups cannot be used to create images.	Perform the operation according to the constraints.
500	BackupService.6208	Image creation is not allowed in the current backup status.	Image creation is not allowed in the current backup status.	Try again later or contact technical support.

Status Code	Error Code	Error Message	Description	Handling Measure
500	BackupService.6209	The backup does not contain the system disk data and cannot be used to create an image.	The backup does not contain the system disk data and cannot be used to create an image.	Perform the operation according to the constraints.
500	BackupService.6210	An image has been created using the backup.	An image has been created using the backup.	Perform the operation according to the constraints.
500	BackupService.6211	An image has been created using the backup.	An image has been created using the backup.	Perform the operation according to the constraints.
500	BackupService.6212	Image creation failed.	Image creation failed.	Contact technical support.
500	BackupService.6213	The backup and the image do not match.	The backup and the image do not match.	Contact technical support.
500	BackupService.6214	Failed to deregister the image.	Failed to deregister the image.	Contact technical support.
500	BackupService.7009	The disk backup is being lazyloaded after deleted.	The disk backup is being lazyloaded after deleted.	Perform the operation in the correct status.
500	BackupService.8400	Failed to obtain the product from CBC.	Failed to obtain the product from CBC.	Try again later.
500	BackupService.9910	Unknown error.	Unknown error.	Contact technical support.
500	BackupService.9998	Authentication failed.	Authentication failed.	Confirm user information.

## 7.3 Obtaining a Project ID

### Scenarios

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

- [Obtain the Project ID by Calling an API](#)
- [Obtain the Project ID from the Console](#)

### Obtain the Project ID by Calling an API

You can obtain the project ID by calling the IAM 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](#).

The following is an example response. The value of `id` is the project ID.

```
{
  "projects": [
    {
      "domain_id": "65ewtrgaggshhk1223245sghjlse684b",
      "is_domain": false,
      "parent_id": "65ewtrgaggshhk1223245sghjlse684b",
      "name": "project_name",
      "description": "",
      "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects/a4adasfjljaaaakla12334jklga9sasfg"
      },
      "id": "a4adasfjljaaaakla12334jklga9sasfg",
      "enabled": true
    }
  ],
  "links": {
    "next": null,
    "previous": null,
    "self": "https://www.example.com/v3/projects"
  }
}
```

### Obtain a Project ID from the Console

To obtain a project ID from the console, perform the following operations:

1. Log in to the management console.
2. Click the username and select **My Credentials** from the drop-down list.

On the **My Credentials** page, view the project ID (value in the **Project ID** column).

# A Change History

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Released On	Description
2024-04-15	This issue is the first official release.