

Cloud Backup and Recovery

API Reference

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1 Before You Start

Overview

Welcome to *Cloud Backup and Recovery API Reference*. Cloud Backup and Recovery (CBR) allows you to easily back up Elastic Cloud Servers (ECSs), Bare Metal Servers (BMSs), 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, or synchronize on-premises data to the cloud for future restoration.

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 [2 API Overview](#).

Before calling CBR APIs, ensure that you have fully understood relevant concepts. For details, see [Service Overview](#).

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](#).

Endpoints

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

Constraints

The numbers of CBR resources that you can create are determined by your quota. To view or increase the quota, see [Quotas](#).

For more constraints, see the API description.

Concepts

- Account

An account is created upon successful signing up. The account has full access permissions for all of its cloud services and resources. It can be used to reset

user passwords and grant user permissions. The account is a payment entity, which should not be used directly to perform routine management. To ensure account security, 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 account name, username, and password.

- Region

Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service (EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified into universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.

For details, see [Region and AZ](#).

- 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. Users can be granted permissions in a default project to access all resources under their accounts 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.

- Enterprise project

Enterprise projects group and manage resources across regions. Resources in different enterprise projects are logically isolated.

For details about enterprise projects and about how to obtain enterprise project IDs, see [Enterprise Management User Guide](#).

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.
Tag	Add, edit, or delete tags for vaults. Vault tags are used to filter and manage vaults only.

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 [creating an IAM user](#) as an example to demonstrate how to call an API.

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 "Regions and Endpoints". For example, the endpoint of IAM in region Dublin is iam.myhuaweicloud.eu .
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the resource-path of the API used to obtain a user token is /v3/auth/tokens .
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of <i>Parameter name=Parameter value</i> . For example, ?limit=10 indicates that a maximum of 10 data records will be displayed.

IAM is a global service. You can create an IAM user using the endpoint of IAM in any region. For example, to create an IAM user in the **EU-Dublin** region, obtain the endpoint of IAM (**iam.myhuaweicloud.eu**) for this region and the **resource-path** (**/v3.0/OS-USER/users**) in the URI of the API for **creating an IAM user**. Then construct the URI as follows:

```
https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
```

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 for **creating an IAM user**, the request method is **POST**. An example request is as follows:

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
```

Request Header

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

Common request header fields are as follows.

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 https is 443 .	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 application/json 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 7.3 Obtaining a Project ID .	No This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario.	e9993fc787d94b6c886cbaa340f9c0f4

Parameter	Description	Mandatory	Example Value
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 X-Subject-Token in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZlhvcNAQcCo...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 following shows an example request of the API for [creating an IAM user](#) when AK/SK authentication is used:

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

(Optional) Request Body

This part is optional. A request body is generally sent in a structured format (for example, JSON or XML), which is specified by **Content-Type** in the request header. It is used to transfer content other than the request header. If the request body contains full-width characters, these characters must be coded in UTF-8.

The request body varies depending on APIs. Certain APIs do not require the request body, such as the APIs requested using the GET and DELETE methods.

The following shows an example request (a request body included) of the API for [creating an IAM user](#). You can learn about request parameters and related description from this example. The bold parameters need to be replaced for a real request.

- **accountid**: account ID of an IAM user
- **username**: name of an IAM user
- **email**: email of an IAM user
- **password**: login password of an IAM user

```
POST https://iam.myhuaweicloud.eu/v3.0/OS-USER/users
Content-Type: application/json
```

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

{
  "user": {
    "domain_id": "accountid",
    "name": "username",
    "password": "*****",
    "email": "email",
    "description": "IAM User Description"
  }
}
```

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

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 a User Token](#) API.

When you call the API, a project-level token is required. Therefore, you need to 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 **ABCDEFGH....**, **X-Auth-Token: ABCDEFGH....** can be added to a request as follows:

```
GET https://iam.myhuaweicloud.eu/v3/auth/projects  
Content-Type: application/json  
X-Auth-Token: ABCDEFGH....
```

AK/SK Authentication

NOTE

AK/SK authentication supports API requests with a body not larger than 12 MB. For API requests with a larger body, token authentication is recommended.

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

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

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

NOTE

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

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 [7.1 Status Codes](#).

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

Response Header

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

Figure 3-1 shows the response header fields for the API used to [create an IAM user](#). 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 3-1 Header fields of the response to the request for creating an IAM user

```
"X-Frame-Options": "SAMEORIGIN",
"X-IAM-ETag-id": "2562365939-d8f6f12921974cb097338ac11fceac8a",
"Transfer-Encoding": "chunked",
"Strict-Transport-Security": "max-age=31536000; includeSubdomains;",
"Server": "api-gateway",
"X-Request-Id": "af2953f2bcc67a42325a69a19e6c32a2",
"X-Content-Type-Options": "nosniff",
"Connection": "keep-alive",
"X-Download-Options": "noopen",
"X-XSS-Protection": "1; mode=block;",
"X-IAM-Trace-Id": "token_ null_af2953f2bcc67a42325a69a19e6c32a2",
"Date": "Tue, 21 May 2024 09:03:40 GMT",
"Content-Type": "application/json; charset=utf8"
```

(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 shows part of the response body for the API used to [create an IAM user](#).

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

If an error occurs during API calling, 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-3 Response body parameters

Parameter	Type	Description
operation_log	OperationLog object	Task information

Table 4-4 OperationLog

Parameter	Type	Description
checkpoint_id	String	Backup record ID
created_at	String	Creation time, for example, 2020-02-23T01:00:32Z
ended_at	String	Task end time, for example, 2020-02-23T01:00:32Z
error_info	OpErrorInfo object	Task error message
extra_info	OpExtraInfo object	Task extension information
id	String	Task ID
operation_type	String	Task type
policy_id	String	Policy ID
project_id	String	Project ID

Parameter	Type	Description
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, 2020-02-23T01:00:32Z
status	String	Task status
updated_at	String	Modification time, for example, 2020-02-23T01:00:32Z
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 Error Codes .
message	String	Error message

Table 4-6 OpExtraInfo

Parameter	Type	Description
backup	OpExtendInfoBackup object	Extended parameters of backup
common	OpExtendInfoCommon object	Common parameters
delete	OpExtendInfoDelete object	Extended parameters of deletion
sync	OpExtendInfoSync object	Extended parameters of synchronization
remove_resources	OpExtendInfoRemoveResources object	Extended parameters of removing resources from a vault
resource	Resource object	Resource information
restore	OpExtendInfoRestore object	Extended parameters of restoration

Parameter	Type	Description
vault_delete	OpExtendInfoVaultDelete object	Extended parameters of deleting a vault

Table 4-7 OpExtendInfoBckup

Parameter	Type	Description
backup_id	String	Backup ID.
backup_name	String	Backup name

Table 4-8 OpExtendInfoCommon

Parameter	Type	Description
progress	Integer	Progress of the query task. The value ranges from 0 to 100 .
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 Resource objects	Resource information

Table 4-12 Resource

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironi::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems

Table 4-13 OpExtendInfoRestore

Parameter	Type	Description
backup_id	String	Backup replica ID.
backup_name	String	Backup name
target_resource_id	String	Target resource ID. It is in UUID format.
target_resource_name	String	Name of the resource to be restored

Table 4-14 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 4-15** Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .
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 4-16 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Table 4-17 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, 2018-02-01T12:00:00Z .

Parameter	Mandatory	Type	Description
limit	No	Integer	Number of items displayed on each page. The value is a positive integer. You are advised to explicitly define the value of the parameter.
offset	No	Integer	Offset value. The value must be a positive integer.
operation_type	No	String	Task type
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, 2018-01-01T12:00:00Z .
status	No	String	Task status
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 4-18 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-19 Response body parameters

Parameter	Type	Description
operation_logs	Array of OperationLog objects	Task list
count	Integer	Number of tasks
limit	Integer	Number of records displayed on each page
offset	Integer	Offset where the query starts

Table 4-20 OperationLog

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

Parameter	Type	Description
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 4-21 OpErrorInfo

Parameter	Type	Description
code	String	For details, see Error Codes .
message	String	Error message

Table 4-22 OpExtralInfo

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

Table 4-23 OpExtendInfoBackup

Parameter	Type	Description
backup_id	String	Backup ID.
backup_name	String	Backup name

Table 4-24 OpExtendInfoCommon

Parameter	Type	Description
progress	Integer	Progress of the query task. The value ranges from 0 to 100 .
request_id	String	Request ID
task_id	String	Backup task ID

Table 4-25 OpExtendInfoDelete

Parameter	Type	Description
backup_id	String	Backup ID.
backup_name	String	Backup name

Table 4-26 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 4-27 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 Resource objects	Resource information

Table 4-28 Resource

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems

Table 4-29 OpExtendInfoRestore

Parameter	Type	Description
backup_id	String	Backup replica ID.
backup_name	String	Backup name
target_resource_id	String	Target resource ID. It is in UUID format.
target_resource_name	String	Name of the resource to be restored

Table 4-30 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 4-31 Response body parameters

Parameter	Type	Description
operation_logs	Array of OperationLog objects	Task list
count	Integer	Number of tasks
limit	Integer	Number of records displayed on each page
offset	Integer	Offset where the query starts

Table 4-32 OperationLog

Parameter	Type	Description
checkpoint_id	String	Backup record ID
created_at	String	Creation time, for example, 2020-02-23T01:00:32Z
ended_at	String	Task end time, for example, 2020-02-23T01:00:32Z
error_info	OpErrorInfo object	Task error message
extra_info	OpExtraInfo object	Task extension information
id	String	Task ID
operation_type	String	Task type
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, 2020-02-23T01:00:32Z
status	String	Task status
updated_at	String	Modification time, for example, 2020-02-23T01:00:32Z
vault_id	String	ID of the vault with which the target resource is associated

Parameter	Type	Description
vault_name	String	Name of the vault with which the target resource is associated

Table 4-33 OpErrorInfo

Parameter	Type	Description
code	String	For details, see Error Codes .
message	String	Error message

Table 4-34 OpExtraInfo

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

Table 4-35 OpExtendInfoBackup

Parameter	Type	Description
backup_id	String	Backup ID.
backup_name	String	Backup name

Table 4-36 OpExtendInfoCommon

Parameter	Type	Description
progress	Integer	Progress of the query task. The value ranges from 0 to 100 .
request_id	String	Request ID
task_id	String	Backup task ID

Table 4-37 OpExtendInfoDelete

Parameter	Type	Description
backup_id	String	Backup ID.
backup_name	String	Backup name

Table 4-38 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 4-39 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 Resource objects	Resource information

Table 4-40 Resource

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems

Table 4-41 OpExtendInfoRestore

Parameter	Type	Description
backup_id	String	Backup replica ID.
backup_name	String	Backup name
target_resource_id	String	Target resource ID. It is in UUID format.
target_resource_name	String	Name of the resource to be restored

Table 4-42 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 4-43 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

Table 4-44 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 X-Subject-Token in the response header is the user token.

Table 4-45 Request body parameters

Parameter	Mandatory	Type	Description
vault	Yes	VaultCreate object	Parameters for creating a vault

Table 4-46 VaultCreate

Parameter	Mandatory	Type	Description
backup_policy_id	No	String	Backup policy ID, which is used to specify the backup policy for automatic backups. The default value is null .
billing	Yes	BillingCreate object	Billing parameter for creating a vault.
description	No	String	Description of the vault. It can contain a maximum of 255 characters.

Parameter	Mandatory	Type	Description
name	Yes	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
resources	Yes	Array of ResourceCreate objects	Resources to be associated with the vault. If there is no need to associate resources during vault creation, enter []. A maximum of 255 resources can be associated.
tags	No	Array of Tag objects	Tag list. Constraints: The list can contain up to 10 keys. This list cannot be an empty list. Keys on this list must be unique.
auto_bind	No	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: - true: Automatic association is supported. - false: Automatic association is not supported.
bind_rules	No	VaultBindRules 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. It can contain a maximum of 32 characters.
sys_lock_source_service	No	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.

Table 4-47 BillingCreate

Parameter	Mandatory	Type	Description
cloud_type	No	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	Yes	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	Yes	String	Object type. The value can be server, disk, turbo, workspace, vmware, rds, or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
protect_type	Yes	String	Protection type. The value can be: backup or replication
size	Yes	Integer	Resource capacity, in GB. The value ranges from 10 to 10485760.
charging_mode	No	String	description: - Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
is_auto_renew	No	Boolean	Specifies whether to automatically renew the subscription upon expiration. The default value is false . The options are as follows: • true: The subscription is automatically renewed upon expiration. • false: The subscription is not automatically renewed upon expiration.

Parameter	Mandatory	Type	Description
is_auto_pay	No	Boolean	Specifies whether to automatically pay for the order. The default value is false . The options are as follows: • true: The payment is automatically made after the order is placed. • false: The payment is not automatically made after the order is placed.
console_url	No	String	Cloud service console URL. The URL used to switch to the cloud service console to view information after the subscription is complete. (This parameter is used only for manual payment.)

Table 4-48 ResourceCreate

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
type	Yes	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
name	No	String	Backup name

Table 4-49 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
value	Yes	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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-50 VaultBindRules

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

Table 4-51 BindRulesTags

Parameter	Mandatory	Type	Description
key	Yes	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	Yes	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

Response Parameters

Status code: 200

Table 4-52 Response body parameters

Parameter	Type	Description
vault	VaultCreateResource object	Vaults displayed during a query (displayed only during the creation of pay-per-use vaults).
retCode	Integer	Yearly/monthly subscription result.
errText	String	Error code displayed during the creation of a yearly/monthly vault.
error_code	String	Error code displayed during the creation of a yearly/monthly vault.

Table 4-53 VaultCreateResource

Parameter	Type	Description
billing	Billing object	Operation info
description	String	User-defined vault description
id	String	Vault ID

Parameter	Type	Description
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Vault resources
tags	Array of Tag objects	Vault tags
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
backup_name_prefix	String	Backup name prefix. If configured, the names of all automatic backups generated for the vault will use this prefix. It can contain a maximum of 32 characters.
demand_billing	Boolean	Whether the vault capacity can be exceeded.
cbc_delete_count	Integer	Vault deletion count
frozen	Boolean	Whether the vault is frozen

Parameter	Type	Description
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.

Table 4-54 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB
spec_code	String	Specification codeServer backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status

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 4-55 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-56 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-57 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-58 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

Status code: 400**Table 4-59** Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .
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

Response body for successful creation of a vault. For a pay-per-use vault, only vault is returned. For a yearly/monthly vault, only orders, retCode, errText, and error_code are returned.

```
{  
  "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	Response body for successful creation of a vault. For a pay-per-use vault, only vault is returned. For a yearly/monthly vault, only orders, retCode, errText, and error_code are returned.
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 4-60 Path Parameters

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

Request Parameters

Table 4-61 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-62 Response body parameters

Parameter	Type	Description
vault	Vault object	Objects returned after a vault query

Table 4-63 Vault

Parameter	Type	Description
billing	Billing object	Operation info
description	String	User-defined vault description
id	String	Vault ID
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Vault resources
tags	Array of Tag objects	Vault tags

Parameter	Type	Description
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.

Table 4-64 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency

Parameter	Type	Description
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB
spec_code	String	Specification codeServer backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status
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 4-65 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB

Parameter	Type	Description
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-66 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-67 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-68 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

Status code: 404**Table 4-69** Response body parameters

Parameter	Type	Description
vault	Vault object	Objects returned after a vault query

Table 4-70 Vault

Parameter	Type	Description
billing	Billing object	Operation info
description	String	User-defined vault description
id	String	Vault ID
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).

Parameter	Type	Description
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Vault resources
tags	Array of Tag objects	Vault tags
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.

Table 4-71 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.

Parameter	Type	Description
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB
spec_code	String	Specification codeServer backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status
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 4-72 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.

Parameter	Type	Description
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-73 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).

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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-74 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-75 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

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 4-76 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Table 4-77 Query Parameters

Parameter	Mandatory	Type	Description
cloud_type	No	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
id	No	String	Vault ID
limit	No	Integer	Maximum number of records to be returned. The value ranges from 1 to 1000 . The default value is 1000 .
name	No	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
object_type	No	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
offset	No	Integer	Offset. The default value is 0 .
policy_id	No	String	Policy ID.
protect_type	No	String	Protection type. The value can be: backup or replication

Parameter	Mandatory	Type	Description
resource_ids	No	String	Resource ID list. Use commas (,) to separate multiple resource IDs. The resource IDs are in UUID format.
status	No	String	Vault status. The value can be: • available: The vault is available. • lock: The vault is locked. • frozen: The vault is frozen. • deleting: The vault is being deleted. • error: The vault is abnormal.

Request Parameters

Table 4-78 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-79 Response body parameters

Parameter	Type	Description
vaults	Array of Vault objects	Vault instance list
count	Integer	Number of vaults
limit	Integer	Number of records displayed on each page
offset	Integer	Offset where the query starts

Table 4-80 Vault

Parameter	Type	Description
billing	Billing object	Operation info
description	String	User-defined vault description
id	String	Vault ID
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Vault resources
tags	Array of Tag objects	Vault tags
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).

Parameter	Type	Description
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.

Table 4-81 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB
spec_code	String	Specification code Server backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status

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 4-82 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-83 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-84 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-85 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

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 4-86 Path Parameters

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

Request Parameters

Table 4-87 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 X-Subject-Token in the response header is the user token.

Table 4-88 Request body parameters

Parameter	Mandatory	Type	Description
vault	Yes	VaultUpdate object	Parameters for modifying a vault.

Table 4-89 VaultUpdate

Parameter	Mandatory	Type	Description
billing	No	BillingUpdate object	Bill information
name	No	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
auto_bind	No	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	No	VaultBindRules object	Association rule
auto_expand	No	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
smn_notify	No	Boolean	Whether to send SMN notifications. The default value is true . The options are as follows: • true: SMN notifications will be sent. • false: SMN notifications will not be sent.

Parameter	Mandatory	Type	Description
threshold	No	Integer	Vault capacity threshold. If the vault usage exceeds this threshold and smn_notify is true , a notification will be sent. Value range: 1 to 100. The default value is 80 .

Table 4-90 BillingUpdate

Parameter	Mandatory	Type	Description
size	No	Integer	Vault size, in GB

Table 4-91 VaultBindRules

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

Table 4-92 BindRulesTags

Parameter	Mandatory	Type	Description
key	Yes	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	Yes	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

Response Parameters

Status code: 200

Table 4-93 Response body parameters

Parameter	Type	Description
vault	Vault object	Objects returned after a vault query

Table 4-94 Vault

Parameter	Type	Description
billing	Billing object	Operation info
description	String	User-defined vault description
id	String	Vault ID
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Vault resources
tags	Array of Tag objects	Vault tags
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782

Parameter	Type	Description
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.

Table 4-95 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB

Parameter	Type	Description
spec_code	String	Specification codeServer backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status
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 4-96 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-97 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-98 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-99 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

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 a vault. Once a vault is deleted, all backups in the vault will be deleted.

URI

DELETE /v3/{project_id}/vaults/{vault_id}

Table 4-100 Path Parameters

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

Request Parameters

Table 4-101 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 204

No Content

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 remove a resource from a vault. If a resource is removed, the backup of the resource in the vault will also be deleted.

URI

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

Table 4-102 Path Parameters

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

Request Parameters

Table 4-103 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 X-Subject-Token in the response header is the user token.

Table 4-104 Request body parameters

Parameter	Mandatory	Type	Description
resource_ids	Yes	Array of strings	IDs of resources to be removed. Use commas (,) to separate multiple resource IDs. The resource IDs are in UUID format. Minimum length: 1 Maximum length: 256

Response Parameters

Status code: 200

Table 4-105 Response body parameters

Parameter	Type	Description
remove_resource_ids	Array of strings	IDs of resources to be removed. Use commas (,) to separate multiple resource IDs. The resource IDs are in UUID format.

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 4-106 Path Parameters

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

Request Parameters

Table 4-107 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 X-Subject-Token in the response header is the user token.

Table 4-108 Request body parameters

Parameter	Mandatory	Type	Description
resources	Yes	Array of ResourceCreate objects	Resource list Minimum length: 1 Maximum length: 256

Table 4-109 ResourceCreate

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
type	Yes	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::IroniC::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems

Parameter	Mandatory	Type	Description
name	No	String	Backup name

Response Parameters

Status code: 200

Table 4-110 Response body parameters

Parameter	Type	Description
add_resource_ids	Array of strings	List of added resource IDs. Multiple resource IDs are separated by commas (,). The resource IDs are in UUID format.

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 4-111 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 X-Subject-Token in the response header is the user token.

Table 4-113 Request body parameters

Parameter	Mandatory	Type	Description
policy_id	No	String	Policy ID.

Response Parameters

Status code: 200

Table 4-114 Response body parameters

Parameter	Type	Description
associate_policy	VaultPolicyResp object	Details of applying a policy to a vault

Table 4-115 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 4-116 Path Parameters

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

Request Parameters

Table 4-117 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 X-Subject-Token in the response header is the user token.

Table 4-118 Request body parameters

Parameter	Mandatory	Type	Description
policy_id	Yes	String	Policy ID

Response Parameters

Status code: 200

Table 4-119 Response body parameters

Parameter	Type	Description
dissociate_policy	VaultPolicyResp object	Details of removing a policy from a vault

Table 4-120 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 Migrating Resources

Function

This API is used to associate resources with another vault and migrate the resource backups to that destination vault.

URI

POST /v3/{project_id}/vaults/{vault_id}/migrateresources

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	No	String	User token The token can be obtained by calling the IAM API used to obtain a user token. The value of X-Subject-Token in the response header is the user token.

Table 4-123 Request body parameters

Parameter	Mandatory	Type	Description
destination_vault_id	Yes	String	Destination vault ID.
resource_ids	Yes	Array of strings	IDs of resources to be migrated. Use commas (,) to separate multiple resource IDs. The resource IDs are in UUID format.

Response Parameters

Status code: 200

Table 4-124 Response body parameters

Parameter	Type	Description
migrated_resources	Array of strings	List of migrated resources

Example Requests

Migrating resources as well as their backups to a different vault

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

```
{
  "resource_ids" : [ "abcdde3f-e0e3-403a-b690-fc259dd70008" ],
  "destination_vault_id" : "fe578a6c-d1a8-4790-bd52-5954af4d446c"
}
```

Example Responses

Status code: 200

OK

```
{
  "migrated_resources" : [ "fe578a6c-d1a8-4790-bd52-5954af4d446c" ]
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

4.3 Policies

4.3.1 Creating a Policy

Function

This API is used to create a policy. Policies are divided into backup policies and replication policies.

URI

POST /v3/{project_id}/policies

Table 4-125 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

Table 4-126 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 X-Subject-Token in the response header is the user token.

Table 4-127 Request body parameters

Parameter	Mandatory	Type	Description
policy	Yes	PolicyCreate object	Body of the request for creating a policy.

Table 4-128 PolicyCreate

Parameter	Mandatory	Type	Description
enabled	No	Boolean	Whether to enable the policy. • true: The policy is enabled, and tasks are triggered periodically. • false: The policy is disabled, and tasks are not triggered periodically.
name	Yes	String	Policy name. The value consists of 1 to 64 characters, including only letters, digits, underscores (_), and hyphens (-).
operation_definition	Yes	PolicyODCreate object	Parameter for scheduling the policy.
operation_type	Yes	String	Protection type, which can be backup or replication
trigger	Yes	PolicyTriggerReq object	Time rule for the policy execution

Table 4-129 PolicyoDCreate

Parameter	Mandatory	Type	Description
day_backups	No	Integer	Maximum number of daily backups that can be retained. The latest backup of each day is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.

Parameter	Mandatory	Type	Description
max_backups	No	Integer	Maximum number of backups that can be automatically created for a resource. The value can be -1 or in the range 1 to 99,999 . If the value is set to -1 , backups will not be cleared when they reach the quantity limit. If this parameter and retention_duration_days are both left unspecified, backups will be retained permanently. This parameter and retention_duration_days cannot be both specified.
month_backups	No	Integer	Maximum number of monthly backups that can be retained. The latest backup of each month is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
retention_duration_days	No	Integer	Duration of retaining a backup, in days. The maximum value is 99999 . If the value is set to -1 , backups will not be cleared by retention duration. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. This parameter cannot be applied together with max_backups , day_backups , week_backups , month_backups , and year_backups .

Parameter	Mandatory	Type	Description
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: day_backups , week_backups , month_backups , year_backups
week_backups	No	Integer	Maximum number of weekly backups that can be retained. The latest backup of each week is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
year_backups	No	Integer	Maximum number of yearly backups that can be retained. The latest backup of each year is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
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: 100

Table 4-130 PolicyTriggerReq

Parameter	Mandatory	Type	Description
properties	Yes	PolicyTriggerPropertiesReq object	Policy scheduler attributes.

Table 4-131 PolicyTriggerPropertiesReq

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

Response Parameters

Status code: 200

Table 4-132 Response body parameters

Parameter	Type	Description
policy	Policy object	Response to the request for creating a policy

Table 4-133 Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name
operation_definition	PolicyoODCreate object	Policy attributes.
operation_type	String	Protection type, which can be backup or replication
trigger	PolicyTriggerResp object	Time scheduling rule for the policy
associated_vaults	Array of PolicyAssociate-Vault objects	Associated vault
policy_type	String	Policy type.

Table 4-134 PolicyoODCreate

Parameter	Type	Description
day_backups	Integer	Maximum number of daily backups that can be retained. The latest backup of each day is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.

Parameter	Type	Description
max_backups	Integer	Maximum number of backups that can be automatically created for a resource. The value can be -1 or in the range 1 to 99,999 . If the value is set to -1 , backups will not be cleared when they reach the quantity limit. If this parameter and retention_duration_days are both left unspecified, backups will be retained permanently. This parameter and retention_duration_days cannot be both specified.
month_backups	Integer	Maximum number of monthly backups that can be retained. The latest backup of each month is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
retention_duration_days	Integer	Duration of retaining a backup, in days. The maximum value is 99999 . If the value is set to -1 , backups will not be cleared by retention duration. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. This parameter cannot be applied together with max_backups , day_backups , week_backups , month_backups , and year_backups .
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: day_backups , week_backups , month_backups , year_backups

Parameter	Type	Description
week_backups	Integer	Maximum number of weekly backups that can be retained. The latest backup of each week is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
year_backups	Integer	Maximum number of yearly backups that can be retained. The latest backup of each year is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
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: 100

Table 4-135 PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	PolicyTriggerPropertiesResp object	Policy scheduler attributes.
type	String	Scheduler type. Currently, only time (periodic scheduling) is supported.

Table 4-136 PolicyTriggerPropertiesResp

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

Table 4-137 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

- The backup policy is created. The replication policy is to automatically replicate backups at 14:00 everyday and save each backup for one day.

```
{
  "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",
  "policy_type": "custom_policy"
}
```

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 4-138 Path Parameters

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

Request Parameters

Table 4-139 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-140 Response body parameters

Parameter	Type	Description
policy	Policy object	Response to the request for creating a policy

Table 4-141 Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name
operation_definition	PolicyODCreate object	Policy attributes.
operation_type	String	Protection type, which can be backup or replication
trigger	PolicyTriggerResp object	Time scheduling rule for the policy
associated_vaults	Array of PolicyAssociate-Vault objects	Associated vault
policy_type	String	Policy type.

Table 4-142 PolicyoODCreate

Parameter	Type	Description
day_backups	Integer	Maximum number of daily backups that can be retained. The latest backup of each day is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
max_backups	Integer	Maximum number of backups that can be automatically created for a resource. The value can be -1 or in the range 1 to 99,999 . If the value is set to -1 , backups will not be cleared when they reach the quantity limit. If this parameter and retention_duration_days are both left unspecified, backups will be retained permanently. This parameter and retention_duration_days cannot be both specified.

Parameter	Type	Description
month_backups	Integer	Maximum number of monthly backups that can be retained. The latest backup of each month is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
retention_duration_days	Integer	Duration of retaining a backup, in days. The maximum value is 99999 . If the value is set to -1 , backups will not be cleared by retention duration. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. This parameter cannot be applied together with max_backups , day_backups , week_backups , month_backups , and year_backups .
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: day_backups , week_backups , month_backups , year_backups
week_backups	Integer	Maximum number of weekly backups that can be retained. The latest backup of each week is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
year_backups	Integer	Maximum number of yearly backups that can be retained. The latest backup of each year is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.

Parameter	Type	Description
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: 100

Table 4-143 PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	PolicyTriggerPropertiesResp object	Policy scheduler attributes.
type	String	Scheduler type. Currently, only time (periodic scheduling) is supported.

Table 4-144 PolicyTriggerPropertiesResp

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

Table 4-145 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",
    "policy_type" : "custom_policy"
  }
}
```

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 4-146 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Table 4-147 Query Parameters

Parameter	Mandatory	Type	Description
operation_type	No	String	Policy type. Backup or replication
vault_id	No	String	Vault ID.

Request Parameters

Table 4-148 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-149 Response body parameters

Parameter	Type	Description
policies	Array of Policy objects	Policy list
count	Integer	Total number of policies

Table 4-150 Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name
operation_definition	PolicyODCreate object	Policy attributes.
operation_type	String	Protection type, which can be backup or replication
trigger	PolicyTriggerResp object	Time scheduling rule for the policy
associated_vaults	Array of PolicyAssociate-Vault objects	Associated vault
policy_type	String	Policy type.

Table 4-151 PolicyoODCreate

Parameter	Type	Description
day_backups	Integer	Maximum number of daily backups that can be retained. The latest backup of each day is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
max_backups	Integer	Maximum number of backups that can be automatically created for a resource. The value can be -1 or in the range 1 to 99,999 . If the value is set to -1 , backups will not be cleared when they reach the quantity limit. If this parameter and retention_duration_days are both left unspecified, backups will be retained permanently. This parameter and retention_duration_days cannot be both specified.

Parameter	Type	Description
month_backups	Integer	Maximum number of monthly backups that can be retained. The latest backup of each month is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
retention_duration_days	Integer	Duration of retaining a backup, in days. The maximum value is 99999 . If the value is set to -1 , backups will not be cleared by retention duration. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. This parameter cannot be applied together with max_backups , day_backups , week_backups , month_backups , and year_backups .
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: day_backups , week_backups , month_backups , year_backups
week_backups	Integer	Maximum number of weekly backups that can be retained. The latest backup of each week is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
year_backups	Integer	Maximum number of yearly backups that can be retained. The latest backup of each year is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.

Parameter	Type	Description
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: 100

Table 4-152 PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	PolicyTriggerPropertiesResp object	Policy scheduler attributes.
type	String	Scheduler type. Currently, only time (periodic scheduling) is supported.

Table 4-153 PolicyTriggerPropertiesResp

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

Table 4-154 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",
    "policy_type" : "custom_policy"
  } ],
  "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 4-155 Path Parameters

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

Request Parameters

Table 4-156 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 X-Subject-Token in the response header is the user token.

Table 4-157 Request body parameters

Parameter	Mandatory	Type	Description
policy	Yes	PolicyUpdate object	Request body for modifying a policy

Table 4-158 PolicyUpdate

Parameter	Mandatory	Type	Description
enabled	No	Boolean	Whether to enable the policy. - true: The policy is enabled, and tasks are triggered periodically. - false: The policy is disabled, and tasks are not triggered periodically.
name	No	String	Policy name. The value contains 1 to 64 characters and can contain only letters, digits, underscores (_), and hyphens (-).

Parameter	Mandatory	Type	Description
operation_definition	No	PolicyODCreate object	Parameter for scheduling the policy.
trigger	No	PolicyTriggerReq object	Time rule for the policy execution

Table 4-159 PolicyODCreate

Parameter	Mandatory	Type	Description
day_backups	No	Integer	Maximum number of daily backups that can be retained. The latest backup of each day is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
max_backups	No	Integer	Maximum number of backups that can be automatically created for a resource. The value can be -1 or in the range 1 to 99,999 . If the value is set to -1 , backups will not be cleared when they reach the quantity limit. If this parameter and retention_duration_days are both left unspecified, backups will be retained permanently. This parameter and retention_duration_days cannot be both specified.

Parameter	Mandatory	Type	Description
month_backups	No	Integer	Maximum number of monthly backups that can be retained. The latest backup of each month is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
retention_duration_days	No	Integer	Duration of retaining a backup, in days. The maximum value is 99999 . If the value is set to -1 , backups will not be cleared by retention duration. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. This parameter cannot be applied together with max_backups , day_backups , week_backups , month_backups , and year_backups .
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: day_backups , week_backups , month_backups , year_backups

Parameter	Mandatory	Type	Description
week_backups	No	Integer	Maximum number of weekly backups that can be retained. The latest backup of each week is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
year_backups	No	Integer	Maximum number of yearly backups that can be retained. The latest backup of each year is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
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: 100

Table 4-160 PolicyTriggerReq

Parameter	Mandatory	Type	Description
properties	Yes	PolicyTriggerPropertiesReq object	Policy scheduler attributes.

Table 4-161 PolicyTriggerPropertiesReq

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

Response Parameters

Status code: 200

Table 4-162 Response body parameters

Parameter	Type	Description
policy	Policy object	Response to the request for creating a policy

Table 4-163 Policy

Parameter	Type	Description
enabled	Boolean	Whether the policy is enabled
id	String	Policy ID
name	String	Policy Name
operation_definition	PolicyODCreate object	Policy attributes.
operation_type	String	Protection type, which can be backup or replication
trigger	PolicyTriggerResp object	Time scheduling rule for the policy
associated_vaults	Array of PolicyAssociate-Vault objects	Associated vault
policy_type	String	Policy type.

Table 4-164 PolicyoODCreate

Parameter	Type	Description
day_backups	Integer	Maximum number of daily backups that can be retained. The latest backup of each day is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
max_backups	Integer	Maximum number of backups that can be automatically created for a resource. The value can be -1 or in the range 1 to 99,999 . If the value is set to -1 , backups will not be cleared when they reach the quantity limit. If this parameter and retention_duration_days are both left unspecified, backups will be retained permanently. This parameter and retention_duration_days cannot be both specified.

Parameter	Type	Description
month_backups	Integer	Maximum number of monthly backups that can be retained. The latest backup of each month is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
retention_duration_days	Integer	Duration of retaining a backup, in days. The maximum value is 99999 . If the value is set to -1 , backups will not be cleared by retention duration. If this parameter and max_backups are left blank at the same time, the backups will be retained permanently. This parameter cannot be applied together with max_backups , day_backups , week_backups , month_backups , and year_backups .
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: day_backups , week_backups , month_backups , year_backups
week_backups	Integer	Maximum number of weekly backups that can be retained. The latest backup of each week is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.
year_backups	Integer	Maximum number of yearly backups that can be retained. The latest backup of each year is saved in the long term. This parameter and max_backups will both be applied. The value ranges from 0 to 100 . If this parameter is configured, timezone is mandatory. This parameter and retention_duration_days cannot be both applied.

Parameter	Type	Description
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: 100

Table 4-165 PolicyTriggerResp

Parameter	Type	Description
id	String	Scheduler ID
name	String	Scheduler name
properties	PolicyTriggerPropertiesResp object	Policy scheduler attributes.
type	String	Scheduler type. Currently, only time (periodic scheduling) is supported.

Table 4-166 PolicyTriggerPropertiesResp

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

Table 4-167 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",
    "policy_type": "custom_policy"
  }
}
```

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 4-168 Path Parameters

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

Request Parameters

Table 4-169 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 204

No Content

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 4-170 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

Table 4-171 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 X-Subject-Token in the response header is the user token.

Table 4-172 Request body parameters

Parameter	Mandatory	Type	Description
sync	Yes	Array of BackupSync objects	List of backups to be imported

Table 4-173 BackupSync

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Backup ID.
backup_name	Yes	String	Backup name
bucket_name	Yes	String	Bucket name. The value can contain a maximum of 255 characters.
image_path	Yes	String	Backup's path on the storage unit.
resource_id	Yes	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
resource_name	Yes	String	Backup object name
resource_type	Yes	String	Type of the resource to be backed up. The default value is OS::Native::Server . The options are as follows: • OS::Native::Server: local server • OS::VMware::Server: VMware server
created_at	Yes	Integer	Backup time, in seconds. For example, 1548898428 .

Response Parameters

Status code: 200

Table 4-174 Response body parameters

Parameter	Type	Description
sync	Array of BackupSyncRespBody objects	Return information of the API for importing backups

Table 4-175 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::Nova::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 a backup by ID.

URI

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

Table 4-176 Path Parameters

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

Request Parameters

Table 4-177 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-178 Response body parameters

Parameter	Type	Description
backup	BackupResp object	Backup

Table 4-179 BackupResp

Parameter	Type	Description
checkpoint_id	String	Checkpoint ID.
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
description	String	Backup description
expired_at	String	Expiration time, for example, 2020-02-05T10:38:34.209782
extend_info	BackupExtendInfo object	Extended information
id	String	Backup ID
image_type	String	Backup type. The value can be backup (common backup) or replication (cross-region replication backup).
name	String	Backup name. The value can contain a maximum of 255 characters, including digits, uppercase letters, lowercase letters, underscores (_), and hyphens (-).
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, in UUID format. You can query the resource status based on the type of the resource to be backed up.
resource_name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
resource_size	Integer	Resource size, in GB
resource_type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::IroniC::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
status	String	Backup status
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782

Parameter	Type	Description
vault_id	String	Vault ID
children	Array of BackupResp objects	Backup list
incremental	Boolean	Whether incremental backup is used.
version	Integer	Backup snapshot type.

Table 4-180 BackupExtendInfo

Parameter	Type	Description
auto_trigger	Boolean	Whether the backup is automatically generated. • true: The backup is automatically generated. • false: The backup is not automatically generated.
bootable	Boolean	Whether the backup is a system disk backup. - true: The backup is a system disk backup. - false: The backup is not a system disk backup.
snapshot_id	String	Snapshot ID of the disk backup
support_lld	Boolean	Whether to allow lazy loading for fast restoration. - true: Lazy loading is allowed for quick restoration. - false: Lazy loading is not allowed for quick restoration.
supported_restore_mode	String	Restoration mode. Possible values are na , snapshot , and backup . snapshot indicates the backup can be used to create a full-server image. backup indicates the data is restored from backups of the EVS disks of the server. na indicates the backup can only be used to create new resources but cannot be used for restoration.
os_images_data	Array of ImageData objects	ID list of images created using backups

Parameter	Type	Description
contain_system_disk	Boolean	Whether the system disk is included in the entire-server backup. The options are as follows: - true: The system disk is included in the entire-server backup. - false: The system disk is not included in the entire-server backup.
encrypted	Boolean	Whether the backup is encrypted. The options are as follows: - true: The backup is encrypted. - false: The backup is not encrypted.
system_disk	Boolean	Specifies whether the disk is a system disk. - true: The disk is a system disk. - false: The disk is not a system disk.

Table 4-181 ImageData

Parameter	Type	Description
image_id	String	Image ID

Table 4-182 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 the task is automatically triggered. Default value: false. - true: The task is automatically triggered. - false: The task is not automatically triggered.
destination_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_lld" : 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 4-183 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Table 4-184 Query Parameters

Parameter	Mandatory	Type	Description
checkpoint_id	No	String	Checkpoint ID.
dec	No	Boolean	Whether it is a DeC scenario. The value can be true (DeC scenario) or false (non-DeC scenario).
end_time	No	String	Time when the backup ends, in %YYYY-%mm-%ddT%HH:%MM:%SSZ format. For example, 2018-02-01T12:00:00Z .
image_type	No	String	Backup type. The value can be backup (common backup) or replication (cross-region replication backup).
incremental	No	Boolean	Whether the backup is an incremental backup. • true: incremental backup • false: full backup
limit	No	Integer	Maximum number of records to be returned. The value ranges from 1 to 1000 . The default value is 1000 .

Parameter	Mandatory	Type	Description
marker	No	String	ID of the last record displayed on the previous page
member_status	No	String	Sharing status. The value can be: • pending: The sharing invitation has been sent, but the target project (or user) has not accepted or rejected the request. • accepted: The target project (or user) has accepted the request and can use the backup in their vault. • rejected: The target project (or user) has rejected the request.
name	No	String	Backup name. The value can contain a maximum of 255 characters, including only letters, digits, underscores (_), and hyphens (-).
offset	No	Integer	Offset. The default value is 0 .
own_type	No	String	Ownership type. The default value is private . • private: private backup. Only the backups owned in the current project are queried. • shared: shared backup. Backups shared by other projects to the current project are queried. • all_granted: all backups. All private and shared backups are queried.
parent_id	No	String	Parent backup ID, in UUID format.
resource_az	No	String	ID of the region where the backup resources are located.
resource_id	No	String	Resource ID, in UUID format.
resource_name	No	String	Resource name, which can contain a maximum of 255 characters.

Parameter	Mandatory	Type	Description
resource_type	No	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
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 asc (ascending order) or desc (descending order). If a direction is not specified, the default sorting direction is desc . The value of sort can contain a maximum of 255 characters. The key can be as follows: created_at , updated_at , name , status , protected_at , id
start_time	No	String	Time when the backup starts, in %YYYY-%mm-%ddT%HH:%MM:%SSZ format. For example, 2018-02-01T12:00:00Z .

Parameter	Mandatory	Type	Description
status	No	String	Backup status. When the API is called, multiple status values can be transferred for filtering. Example: status=available&status=error The options are as follows: • available: The backup is available. • protecting: The backup is being protected. • deleting: The backup is being deleted. • restoring: The restoration in progress. • error: The backup is abnormal. • waiting_protect: The backup is waiting to be protected. • waiting_delete: The backup is waiting to be deleted. • waiting_restore: The backup is waiting to be restored.
used_percent	No	String	Backups are filtered based on the occupied vault capacity. The value ranges from 1 to 100 . For example, if used_percent is set to 80 , all backups who occupied 80% or more of the vault capacity are displayed.
vault_id	No	String	Vault ID.

Request Parameters

Table 4-185 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200**Table 4-186** Response body parameters

Parameter	Type	Description
backups	Array of BackupResp objects	Backup list
count	Integer	Number of backups
offset	Integer	Offset where the query starts
limit	Integer	Number of records displayed on each page

Table 4-187 BackupResp

Parameter	Type	Description
checkpoint_id	String	Checkpoint ID.
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
description	String	Backup description
expired_at	String	Expiration time, for example, 2020-02-05T10:38:34.209782
extend_info	BackupExtendInfo object	Extended information
id	String	Backup ID

Parameter	Type	Description
image_type	String	Backup type. The value can be backup (common backup) or replication (cross-region replication backup).
name	String	Backup name. The value can contain a maximum of 255 characters, including digits, uppercase letters, lowercase letters, underscores (_), and hyphens (-).
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, in UUID format. You can query the resource status based on the type of the resource to be backed up.
resource_name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
resource_size	Integer	Resource size, in GB
resource_type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
status	String	Backup status
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782
vault_id	String	Vault ID
children	Array of BackupResp objects	Backup list
incremental	Boolean	Whether incremental backup is used.
version	Integer	Backup snapshot type.

Table 4-188 BackupExtendInfo

Parameter	Type	Description
auto_trigger	Boolean	Whether the backup is automatically generated. • true: The backup is automatically generated. • false: The backup is not automatically generated.
bootable	Boolean	Whether the backup is a system disk backup. - true: The backup is a system disk backup. - false: The backup is not a system disk backup.
snapshot_id	String	Snapshot ID of the disk backup
support_ild	Boolean	Whether to allow lazy loading for fast restoration. - true: Lazy loading is allowed for quick restoration. - false: Lazy loading is not allowed for quick restoration.
supported_restore_mode	String	Restoration mode. Possible values are na , snapshot , and backup . snapshot indicates the backup can be used to create a full-server image. backup indicates the data is restored from backups of the EVS disks of the server. na indicates the backup can only be used to create new resources but cannot be used for restoration.
os_images_data	Array of ImageData objects	ID list of images created using backups
contain_system_disk	Boolean	Whether the system disk is included in the entire-server backup. The options are as follows: - true: The system disk is included in the entire-server backup. - false: The system disk is not included in the entire-server backup.
encrypted	Boolean	Whether the backup is encrypted. The options are as follows: - true: The backup is encrypted. - false: The backup is not encrypted.
system_disk	Boolean	Specifies whether the disk is a system disk. - true: The disk is a system disk. - false: The disk is not a system disk.

Table 4-189 ImageData

Parameter	Type	Description
image_id	String	Image ID

Table 4-190 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 the task is automatically triggered. Default value: false. • true: The task is automatically triggered. • false: The task is not automatically triggered.
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_llid" : 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_llid" : 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 4-191 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 4-192 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 204

No Content

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 Replicating a Backup

Function

This API is used to replicate a backup across regions.

URI

POST /v3/{project_id}/backups/{backup_id}/replicate

Table 4-193 Path Parameters

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

Request Parameters

Table 4-194 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 X-Subject-Token in the response header is the user token.

Table 4-195 Request body parameters

Parameter	Mandatory	Type	Description
replicate	Yes	BackupReplicateReqBody object	Replication parameter

Table 4-196 BackupReplicateReqBody

Parameter	Mandatory	Type	Description
description	No	String	Replication description. The value can contain a maximum of 255 characters.
destination_project_id	Yes	String	Project ID of the destination region.
destination_region	Yes	String	Destination region for replication.
destination_cloud_type	No	String	Cloud type of the target region. The default value is HC .
destination_vault_id	Yes	String	ID of the vault in the destination region.
enable_acceleration	No	Boolean	Whether to enable acceleration to shorten the cross-region replication time. If this parameter is not set, the acceleration function is disabled. If enabled, the acceleration function is additionally charged. • true: The acceleration function is enabled. • false: The acceleration function is disabled.
name	No	String	Replica name. It can contain a maximum of 64 characters, including only letters, digits, underscores (_), and hyphens (-).

Response Parameters

Status code: 200

Table 4-197 Response body parameters

Parameter	Type	Description
replication	BackupReplicateRespBody object	Replication response parameter

Table 4-198 BackupReplicateRespBody

Parameter	Type	Description
backup_id	String	ID of the backup to be replicated.
destination_project_id	String	Destination project ID.
destination_region	String	Destination region.
destination_vault_id	String	ID of the vault in the destination region.
project_id	String	ID of the project where replication is performed
provider_id	String	Resource type ID
replication_record_id	String	Replication record ID
source_region	String	Source region.

Example Requests

Replicating a backup from the source vault to the destination vault

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

```
{
  "replicate": {
    "description": "backup_description",
    "destination_project_id": "68589cac08274b82b4e254268a3862d8",
    "destination_region": "region2",
    "destination_vault_id": "0ca3eb86-8800-46da-9c37-9d657a825274",
    "enable_acceleration": false,
    "name": "backup_name"
  }
}
```

Example Responses

Status code: 200

OK

```
{
  "replication": {
    "destination_vault_id": "0ca3eb86-8800-46da-9c37-9d657a825274",
    "provider_id": "0daac4c5-6707-4851-97ba-169e36266b66",
    "backup_id": "6df2b54c-dd62-4059-a07c-1b8f24f2725d",
    "destination_project_id": "68589cac08274b82b4e254268a3862d8",
    "destination_region": "region2",
    "source_region": "region1",
    "project_id": "4229d7a45436489f8c3dc2b1d35d4987",
    "replication_record_id": "1579a71e-8d8d-41e6-85dc-d77f5ce8d91a"
  }
}
```


Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

4.4.6 Restoring a Backup

Function

This API is used to restore backup data.

URI

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

Table 4-199 Path Parameters

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

Request Parameters

Table 4-200 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 X-Subject-Token in the response header is the user token.

Table 4-201 Request body parameters

Parameter	Mandatory	Type	Description
restore	Yes	BackupRestore object	Request body of restoring a backup

Table 4-202 BackupRestore

Parameter	Mandatory	Type	Description
mappings	No	Array of BackupRestoreServerMapping objects	Restored mapping relationship. This parameter is mandatory for VM restoration and optional for disk restoration.
power_on	No	Boolean	Whether to start the VM after the restoration. The default value is true . - true: Start the VM. - false: Stop the VM.
server_id	No	String	ID of the VM to be restored. This parameter is mandatory for entire-server restoration.
volume_id	No	String	ID of the volume to be restored. This parameter is mandatory for volume restoration.

Table 4-203 BackupRestoreServerMapping

Parameter	Mandatory	Type	Description
backup_id	Yes	String	Volume backup ID. You can view the disk-level backup ID in the cloud server backups backup details on the console or obtain the disk-level backup ID in children of the backup by calling the API for querying a specified backup.
volume_id	Yes	String	ID of the volume to be restored.

Table 4-204 RestoreDetails

Parameter	Mandatory	Type	Description
destination_path	Yes	String	Destination path. The value can contain a maximum of 255 characters and can contain only letters, digits, colons (:), backslashes (\), and slashes (/).

Response Parameters

Status code: 202

Accepted

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 Protection

4.5.1 Querying Protectable Resources

Function

Protection

URI

GET /v3/{project_id}/protectables/{protectable_type}/instances

Table 4-205 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID
protectable_type	Yes	String	Object Type • server: Cloud servers • disk: Cloud disks • turbo: SFS Turbo file systems • workspace: Workspace desktop • workspace_v2: workspace_v2 desktops

Table 4-206 Query Parameters

Parameter	Mandatory	Type	Description
id	No	String	Filters by resource ID.
limit	No	Integer	Number of records displayed per page. A maximum of 50 records can be displayed on each page.
marker	No	String	ID of the last record displayed on the previous page
name	No	String	Filters by resource name.
offset	No	Integer	Offset value

Parameter	Mandatory	Type	Description
server_id	No	String	Filters all disks that belong to the server based on the server ID. This parameter is mandatory only for users who have enabled enterprise multi-project.
status	No	String	Resource status
enterprise_project_id	No	String	Enterprise project ID.

Request Parameters

None

Response Parameters

Status code: 200

Table 4-207 Response body parameters

Parameter	Type	Description
instances	Array of ProtectablesResp objects	Instance of querying protectable resources

Table 4-208 ProtectablesResp

Parameter	Type	Description
children	Array of objects	Child resource
detail	Object	Resource details
id	String	id
name	String	Backup name
protectable	ProtectableResult object	Whether backup is supported
size	Integer	Size of the resource, in GB
status	String	Resource status

Parameter	Type	Description
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems

Table 4-209 ProtectableResult

Parameter	Type	Description
code	String	Error code returned indicating backup is not supported
reason	String	Reason why backup is not supported
result	Boolean	Whether backup is supported
vault	VaultGet object	Associated vault

Table 4-210 VaultGet

Parameter	Type	Description
billing	Billing object	Operation info
description	String	User-defined vault description
id	String	Vault ID
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Resource
tags	Array of Tag objects	Vault tags

Parameter	Type	Description
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782
version	String	Version

Table 4-211 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud

Parameter	Type	Description
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB
spec_code	String	Specification codeServer backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status
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 4-212 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB

Parameter	Type	Description
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-213 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-214 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-215 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

Example Requests

Querying protectable resources

```
GET https://{endpoint}/v3/{project_id}/protectables/{protectable_type}/instances
```

```
GET https://{endpoint}/v3/{project_id}/protectables/server/instances
```

Example Responses

Status code: 200

OK

```
{
  "instances": [ {
    "status": "ACTIVE",
    "children": [ {
      "status": "in-use",
      "name": "no_delete_for_cbr_interface-volume-0000",
      "detail": {
        "attachments": [ {
          "server_id": "55ecd8b8-1457-4a2a-a9df-53756a690082",
          "attachment_id": "e16631fa-0522-4ac8-8f78-19db435caf68",
          "volume_id": "13eb535f-8635-4faf-9f08-584d21e78f0a",
          "attached_at": "2019-05-08T06:55:26.564+00:00",
          "device": "/dev/vda",
          "id": "13eb535f-8635-4faf-9f08-584d21e78f0a"
        } ],
      }
    } ],
  } ],
}
```

```
"links" : [ {
  "href" : "https://volume.region1.com/v2/3aec9116a6a5487ca14987121d2818fe/volumes/
13eb535f-8635-4faf-9f08-584d21e78f0a",
  "rel" : "self"
}, {
  "href" : "https://volume.region1.com/3aec9116a6a5487ca14987121d2818fe/volumes/
13eb535f-8635-4faf-9f08-584d21e78f0a",
  "rel" : "bookmark"
} ],
"availability_zone" : "AZ1",
"os-vol-host-attr:host" : "AZ1.xxxxxx#kvm_fusionstorage",
"encrypted" : false,
"updated_at" : "2019-05-08T08:33:07.855+00:00",
"replication_status" : "disabled",
"id" : "13eb535f-8635-4faf-9f08-584d21e78f0a",
"size" : 40,
"user_id" : "3204777a731c4ebea330350c04f41b92",
"os-vol-tenant-attr:tenant_id" : "3aec9116a6a5487ca14987121d2818fe",
"metadata" : {
  "policy" : "2ecbcffd-08ba-43f7-bf8d-95daba753464",
  "readonly" : "False",
  "attached_mode" : "rw"
},
"status" : "in-use",
"volume_image_metadata" : {
  "container_format" : "bare",
  "min_ram" : 0,
  "__account_code" : "",
  "__os_bit" : 64,
  "size" : 2,
  "__os_version" : "CentOS 7.2 64bit",
  "__backup_id" : "",
  "__description" : "",
  "__support_diskintensive" : "true",
  "disk_format" : "vhd",
  "__isregistered" : "true",
  "__image_size" : 3295645696,
  "__platform" : "CentOS",
  "__root_origin" : "file",
  "__originalimagename" : "703eb90a-a65f-4c72-b4c1-f070a55d068b",
  "__quick_start" : "true",
  "image_name" : "CentOS7.2-cloudinit",
  "image_id" : "703eb90a-a65f-4c72-b4c1-f070a55d068b",
  "__os_type" : "Linux",
  "__image_location" : "172.100.45.130:443:pcsimsf8bd00bf6c304d2e8cf4e2beb0aed702:703eb90a-
a65f-4c72-b4c1-f070a55d068b",
  "min_disk" : 40,
  "__data_origin" : "file,jingxiang:CentOS-7.2-64bit.zvhd2",
  "__support_kvm" : "true",
  "virtual_env_type" : "FusionCompute",
  "__image_source_type" : "uds",
  "__support_xen" : "true",
  "checksum" : "99914b932bd37a50b983c5e7c90ae93b",
  "__imagetype" : "gold",
  "__productcode" : ""
},
"multiattach" : false,
"name" : "no_delete_for_cbr_interface-volume-0000",
"bootable" : "true",
"created_at" : "2019-05-08T06:54:58.478+00:00",
"volume_type" : "SATA",
"shareable" : false
},
"children" : [ ],
"type" : "OS::Cinder::Volume",
"id" : "13eb535f-8635-4faf-9f08-584d21e78f0a",
"size" : 40
}, {
  "status" : "in-use",
```

```
"name" : "volume-f926-0001",
"detail" : {
  "attachments" : [ {
    "server_id" : "55ecd8b8-1457-4a2a-a9df-53756a690082",
    "attachment_id" : "3b32cb75-bd96-493b-8fb2-13f063c876d5",
    "volume_id" : "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
    "attached_at" : "2019-05-08T06:56:25.892+00:00",
    "device" : "/dev/vdb",
    "id" : "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99"
  } ],
  "links" : [ {
    "href" : "https://volume.region1.com/v2/3aec9116a6a5487ca14987121d2818fe/volumes/8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
    "rel" : "self"
  }, {
    "href" : "https://volume.region1.com/3aec9116a6a5487ca14987121d2818fe/volumes/8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
    "rel" : "bookmark"
  } ],
  "availability_zone" : "AZ1",
  "os-vol-host-attr:host" : "AZ1.xxxxxx#FusionStorage",
  "encrypted" : false,
  "updated_at" : "2019-05-08T06:56:26.207+00:00",
  "replication_status" : "disabled",
  "id" : "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
  "size" : 10,
  "user_id" : "f3d66502790d4ddaedef5056059ed8f4",
  "os-vol-tenant-attr:tenant_id" : "3aec9116a6a5487ca14987121d2818fe",
  "metadata" : {
    "policy" : "cf3274fc-d23e-4c12-8be7-1e41b3c2faea",
    "readonly" : "False",
    "attached_mode" : "rw"
  },
  "status" : "in-use",
  "multiattach" : false,
  "name" : "volume-f926-0001",
  "bootable" : "false",
  "created_at" : "2019-03-26T09:30:46.784+00:00",
  "volume_type" : "SATA",
  "shareable" : false
},
"children" : [ ],
"type" : "OS::Cinder::Volume",
"id" : "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
"size" : 10
} ],
"protectable" : {
  "reason" : "",
  "code" : "",
  "result" : true
},
"name" : "no_delete_for_cbr_interface",
"detail" : {
  "addresses" : {
    "94b88790-c906-4450-b7c2-1c2b1ea639bf" : [ {
      "OS-EXT-IPS-MAC:mac_addr" : "fa:16:3e:9b:9d:af",
      "version" : 4,
      "OS-EXT-IPS:port_id" : "f22f531a-d38a-480b-b59e-f7e5db0dcdcc",
      "addr" : "192.168.1.44",
      "OS-EXT-IPS:type" : "fixed"
    }, {
      "OS-EXT-IPS-MAC:mac_addr" : "fa:16:3e:9b:9d:af",
      "version" : 4,
      "OS-EXT-IPS:port_id" : "f22f531a-d38a-480b-b59e-f7e5db0dcdcc",
      "addr" : "100.78.0.199",
      "OS-EXT-IPS:type" : "floating"
    } ]
  },
  "OS-EXT-SRV-ATTR:ramdisk_id" : ""
```

```
"image" : "",
"enterprise_project_id" : 0,
"updated" : "2019-05-08T06:57:02.000+00:00",
"OS-EXT-SRV-ATTR:user_data" :
"lyEvYmluL2Jhc2gKZWNoYm9vdDokNiQ5c1FaeXlkdnk5N1pGYXg5WUUpRTUpPRElGdGdjYnovTUdEZ1dad
3E4VTM1dWE4MjQxTmtDTG1GRjUUm1BdnZSQnNCLy93VER0aFVRNUt0Z1p6dUlrenp2NmQwYTAnIHwgY2h
wYXNzd2QgLUU7",
"OS-EXT-STS:vm_state" : "active",
"OS-EXT-SRV-ATTR:instance_name" : "instance-0004456e",
"OS-EXT-SRV-ATTR:root_device_name" : "/dev/vda",
"OS-SRV-USG:launched_at" : "2019-05-08T06:55:38.000+00:00",
"flavor" : {
  "vcpus" : 1,
  "disk" : 0,
  "ram" : 1024,
  "id" : "s3.small.1",
  "name" : "s3.small.1"
},
"id" : "55ecd8b8-1457-4a2a-a9df-53756a690082",
"security_groups" : [ {
  "name" : "default"
} ],
"os-extended-volumes:volumes_attached" : [ {
  "device" : "/dev/vda",
  "id" : "13eb535f-8635-4faf-9f08-584d21e78f0a",
  "delete_on_termination" : false,
  "bootIndex" : 0
}, {
  "device" : "/dev/vdb",
  "id" : "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
  "delete_on_termination" : false
} ],
"user_id" : "f3d66502790d4ddaedef5056059ed8f4",
"OS-EXT-SRV-ATTR:hostname" : "no-delete-for-cbr-interface",
"OS-DCF:diskConfig" : "MANUAL",
"accessIPv4" : "",
"accessIPv6" : "",
"OS-EXT-SRV-ATTR:reservation_id" : "r-kpb5xckf",
"progress" : 0,
"OS-EXT-STS:power_state" : 1,
"OS-EXT-AZ:availability_zone" : "AZ1",
"metadata" : {
  "metering.image_id" : "703eb90a-a65f-4c72-b4c1-f070a55d068b",
  "metering.imagetype" : "gold",
  "metering.resourcespeccode" : "s3.small.1.linux",
  "metering.cloudServiceType" : "sys.service.type.ec2",
  "virtual_env_type" : "FusionCompute",
  "image_name" : "CentOS7.2-cloudinit",
  "metering.resourcetype" : 1,
  "vpc_id" : "94b88790-c906-4450-b7c2-1c2b1ea639bf",
  "os_bit" : 64,
  "cascaded.instance_extrainfo" : "",
  "os_type" : "Linux",
  "charging_mode" : 0
},
"status" : "ACTIVE",
"sys_tags" : [ {
  "value" : 0,
  "key" : "_sys_enterprise_project_id"
} ],
"os:scheduler_hints" : { },
"hostId" : "179f22cafe6b951921bd6deb3b13a978df620427fb37bbb7c619de98",
"OS-EXT-SRV-ATTR:host" : "AZ1.xxxxxx",
"description" : "",
"tags" : [ ],
"OS-EXT-SRV-ATTR:kernel_id" : "",
"locked" : false,
"OS-EXT-SRV-ATTR:hypervisor_hostname" : "nova003@36",
"name" : "no_delete_for_cbr_interface",
```

```
"OS-EXT-SRV-ATTR:launch_index" : 0,  
"created" : "2019-05-08T06:55:22.000+00:00",  
"tenant_id" : "3aec9116a6a5487ca14987121d2818fe",  
"host_status" : "UP",  
"config_drive" : ""  
},  
"type" : "OS::Nova::Server",  
"id" : "55ecd8b8-1457-4a2a-a9df-53756a690082",  
"size" : 50  
}]  
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

4.5.2 Querying a Specified Protectable Resource

Function

This API is used to query a specified resource that can be protected by its ID.

URI

GET /v3/{project_id}/protectables/{protectable_type}/instances/{instance_id}

Table 4-216 Path Parameters

Parameter	Mandatory	Type	Description
instance_id	Yes	String	Resource ID
project_id	Yes	String	Project ID
protectable_type	Yes	String	Protection type

Request Parameters

None

Response Parameters

Status code: 200

Table 4-217 Response body parameters

Parameter	Type	Description
instance	ProtectablesResp object	Resources that can be protected

Table 4-218 ProtectablesResp

Parameter	Type	Description
children	Array of objects	Child resource
detail	Object	Resource details
id	String	id
name	String	Backup name
protectable	ProtectableResult object	Whether backup is supported
size	Integer	Size of the resource, in GB
status	String	Resource status
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems

Table 4-219 ProtectableResult

Parameter	Type	Description
code	String	Error code returned indicating backup is not supported
reason	String	Reason why backup is not supported
result	Boolean	Whether backup is supported
vault	VaultGet object	Associated vault

Table 4-220 VaultGet

Parameter	Type	Description
billing	Billing object	Operation info

Parameter	Type	Description
description	String	User-defined vault description
id	String	Vault ID
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Resource
tags	Array of Tag objects	Vault tags
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782

Parameter	Type	Description
version	String	Version

Table 4-221 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB
spec_code	String	Specification codeServer backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status
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 4-222 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-223 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).

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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Table 4-224 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-225 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

Example Requests

Querying a specified protectable resource

GET https://{endpoint}/v3/{project_id}/protectables/{protectable_type}/instances/{instance_id}

Example Responses

Status code: 200

OK

```
{
  "instance": {
    "status": "ACTIVE",
    "children": [ {
      "status": "in-use",
      "name": "volume-f926-0001",
      "detail": {
        "attachments": [ {
          "server_id": "55ecd8b8-1457-4a2a-a9df-53756a690082",
          "attachment_id": "3b32cb75-bd96-493b-8fb2-13f063c876d5",
          "volume_id": "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
          "attached_at": "2019-05-08T06:56:25.892+00:00",
          "device": "/dev/vdb",
          "id": "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99"
        } ],
        "links": [ {
          "href": "https://volume.region1.com/v2/3aec9116a6a5487ca14987121d2818fe/volumes/8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
          "rel": "self"
        }, {
          "href": "https://volume.region1.com/3aec9116a6a5487ca14987121d2818fe/volumes/8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
          "rel": "bookmark"
        } ],
        "availability_zone": "AZ1",
        "os-vol-host-attr:host": "AZ1.xxxxxx#FusionStorage",
        "encrypted": false,
        "updated_at": "2019-05-08T06:56:26.207+00:00",
        "replication_status": "disabled",
        "id": "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
        "size": 10,
        "user_id": "f3d66502790d4ddaadef5056059ed8f4",
        "os-vol-tenant-attr:tenant_id": "3aec9116a6a5487ca14987121d2818fe",
        "metadata": {
          "policy": "cf3274fc-d23e-4c12-8be7-1e41b3c2faea",
          "readonly": "False",
          "attached_mode": "rw"
        },
        "status": "in-use",
        "multiattach": false,
        "name": "volume-f926-0001",
        "bootable": "false",
        "created_at": "2019-03-26T09:30:46.784+00:00",
        "volume_type": "SATA",
        "shareable": false
      },
      "children": [ ],
      "type": "OS::Cinder::Volume",
      "id": "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99",
      "size": 10
    }, {
      "status": "in-use",
      "name": "no_delete_for_cbr_interface-volume-0000",
      "detail": {
        "attachments": [ {
          "server_id": "55ecd8b8-1457-4a2a-a9df-53756a690082",
          "attachment_id": "e16631fa-0522-4ac8-8f78-19db435caf68",
          "volume_id": "13eb535f-8635-4faf-9f08-584d21e78f0a",
          "attached_at": "2019-05-08T06:55:26.564+00:00",
          "device": "/dev/vda",
          "id": "13eb535f-8635-4faf-9f08-584d21e78f0a"
        } ]
      }
    }
  ]
}
```

```
    },
    "links": [ {
      "href": "https://volume.region1.com/v2/3aec9116a6a5487ca14987121d2818fe/volumes/13eb535f-8635-4faf-9f08-584d21e78f0a",
      "rel": "self"
    }, {
      "href": "https://volume.region1.com/3aec9116a6a5487ca14987121d2818fe/volumes/13eb535f-8635-4faf-9f08-584d21e78f0a",
      "rel": "bookmark"
    } ],
    "availability_zone": "AZ1",
    "os-vol-host-attr:host": "AZ1.xxxxxx#kvm_fusionstorage",
    "encrypted": false,
    "updated_at": "2019-05-08T08:33:07.855+00:00",
    "replication_status": "disabled",
    "id": "13eb535f-8635-4faf-9f08-584d21e78f0a",
    "size": 40,
    "user_id": "3204777a731c4ebea330350c04f41b92",
    "os-vol-tenant-attr:tenant_id": "3aec9116a6a5487ca14987121d2818fe",
    "metadata": {
      "policy": "2ecbcffd-08ba-43f7-bf8d-95daba753464",
      "readonly": "False",
      "attached_mode": "rw"
    },
    "status": "in-use",
    "volume_image_metadata": {
      "container_format": "bare",
      "min_ram": 0,
      "__account_code": "",
      "__os_bit": 64,
      "size": 2,
      "__os_version": "CentOS 7.2 64bit",
      "__backup_id": "",
      "__description": "",
      "__support_diskintensive": "true",
      "disk_format": "vhd",
      "__isregistered": "true",
      "__image_size": 3295645696,
      "__platform": "CentOS",
      "__root_origin": "file",
      "__originalimagename": "703eb90a-a65f-4c72-b4c1-f070a55d068b",
      "__quick_start": "true",
      "image_name": "CentOS7.2-cloudinit",
      "image_id": "703eb90a-a65f-4c72-b4c1-f070a55d068b",
      "__os_type": "Linux",
      "__image_location": "172.100.45.130:443:pcsimsf8bd00bf6c304d2e8cf4e2beb0aed702:703eb90a-a65f-4c72-b4c1-f070a55d068b",
      "min_disk": 40,
      "__data_origin": "file,jingxiang:CentOS-7.2-64bit.zvhd2",
      "__support_kvm": "true",
      "virtual_env_type": "FusionCompute",
      "__image_source_type": "uds",
      "__support_xen": "true",
      "checksum": "99914b932bd37a50b983c5e7c90ae93b",
      "__imagetype": "gold",
      "__productcode": ""
    },
    "multiattach": false,
    "name": "no_delete_for_cbr_interface-volume-0000",
    "bootable": "true",
    "created_at": "2019-05-08T06:54:58.478+00:00",
    "volume_type": "SATA",
    "shareable": false
  },
  "children": [ ],
  "type": "OS::Cinder::Volume",
  "id": "13eb535f-8635-4faf-9f08-584d21e78f0a",
  "size": 40
} ],
```

```
"protectable" : {
  "reason" : "",
  "code" : "",
  "result" : true
},
"name" : "no_delete_for_cbr_interface",
"detail" : {
  "addresses" : [
    {
      "94b88790-c906-4450-b7c2-1c2b1ea639bf" : [ {
        "OS-EXT-IPS-MAC:mac_addr" : "fa:16:3e:9b:9d:af",
        "version" : 4,
        "addr" : "192.168.1.44",
        "OS-EXT-IPS:type" : "fixed"
      } ],
      {
        "OS-EXT-IPS-MAC:mac_addr" : "fa:16:3e:9b:9d:af",
        "version" : 4,
        "addr" : "100.78.0.199",
        "OS-EXT-IPS:type" : "floating"
      }
    ]
  },
  "links" : [ {
    "href" : "https://compute.region1.com/v2.1/3aec9116a6a5487ca14987121d2818fe/servers/55ecd8b8-1457-4a2a-a9df-53756a690082",
    "rel" : "self"
  }, {
    "href" : "https://compute.region1.com/3aec9116a6a5487ca14987121d2818fe/servers/55ecd8b8-1457-4a2a-a9df-53756a690082",
    "rel" : "bookmark"
  } ],
  "image" : "",
  "OS-EXT-STS:vm_state" : "active",
  "OS-EXT-SRV-ATTR:instance_name" : "instance-0004456e",
  "OS-SRV-USG:launched_at" : "2019-05-08T06:55:38.000+00:00",
  "flavor" : {
    "id" : "s3.small.1",
    "links" : [ {
      "href" : "https://compute.region1.com/3aec9116a6a5487ca14987121d2818fe/flavors/s3.small.1",
      "rel" : "bookmark"
    } ]
  },
  "id" : "55ecd8b8-1457-4a2a-a9df-53756a690082",
  "security_groups" : [ {
    "name" : "default"
  } ],
  "user_id" : "f3d66502790d4ddaadef5056059ed8f4",
  "OS-DCF:diskConfig" : "MANUAL",
  "accessIPv4" : "",
  "accessIPv6" : "",
  "progress" : 0,
  "OS-EXT-STS:power_state" : 1,
  "OS-EXT-AZ:availability_zone" : "AZ1",
  "config_drive" : "",
  "status" : "ACTIVE",
  "updated" : "2019-05-08T06:57:02.000+00:00",
  "hostId" : "179f22cafe6b951921bd6deb3b13a978df620427fb37bbb7c619de98",
  "OS-EXT-SRV-ATTR:host" : "AZ1.xxxxxx",
  "OS-EXT-SRV-ATTR:hypervisor_hostname" : "nova003@36",
  "name" : "no_delete_for_cbr_interface",
  "created" : "2019-05-08T06:55:22.000+00:00",
  "tenant_id" : "3aec9116a6a5487ca14987121d2818fe",
  "os-extended-volumes:volumes_attached" : [ {
    "id" : "8d3d519f-d409-4be3-8a1f-9f7a5ecb7a99"
  } ],
  {
    "id" : "13eb535f-8635-4faf-9f08-584d21e78f0a"
  } ],
  "metadata" : {
    "metering.image_id" : "703eb90a-a65f-4c72-b4c1-f070a55d068b",
    "metering.imagetype" : "gold",
    "metering.resourcespeccode" : "s3.small.1.linux",
```

```
{
  "metering.cloudServiceType" : "sys.service.type.ec2",
  "virtual_env_type" : "FusionCompute",
  "image_name" : "CentOS7.2-cloudinit",
  "metering.resourcetype" : 1,
  "vpc_id" : "94b88790-c906-4450-b7c2-1c2b1ea639bf",
  "os_bit" : 64,
  "cascaded.instance_extrainfo" : "",
  "os_type" : "Linux",
  "charging_mode" : 0
},
{
  "type" : "OS::Nova::Server",
  "id" : "55ecd8b8-1457-4a2a-a9df-53756a690082",
  "size" : 50
}
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

4.5.3 Querying the Replication Capability

Function

This API is used to query the replication capability of the current region.

URI

GET /v3/{project_id}/replication-capabilities

Table 4-226 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Request Parameters

Table 4-227 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-228 Response body parameters

Parameter	Type	Description
regions	Array of ProtectableReplicationCapabilitiesRespRegion objects	List of regions that support replication

Table 4-229 ProtectableReplicationCapabilitiesRespRegion

Parameter	Type	Description
name	String	Region where the cloud service resides
replication_destinations	Array of strings	List of destination regions where data can be replicated to.

Example Requests

```
GET https://{endpoint}/v3/{project_id}/replication-capabilities
```

Example Responses

Status code: 200

OK

```
{  
  "regions": [ {  
    "replication_destinations": [ "region-1", "region-2" ],
```



```
"name" : "southchina"  
}]  
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

4.6 Backup Sharing

4.6.1 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 4-230 Path Parameters

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

Request Parameters

Table 4-231 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 X-Subject-Token in the response header is the user token.

Table 4-232 Request body parameters

Parameter	Mandatory	Type	Description
members	No	Array of strings	Project IDs of the backup share members to be added
domains	No	Array of strings	Domain IDs of the backup share members to be added. NOTE This feature is in the open beta test (OBT) phase and may be unavailable in some regions.

Response Parameters

Status code: 200

Table 4-233 Response body parameters

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

Table 4-234 Member

Parameter	Type	Description
status	String	Backup sharing status

Parameter	Type	Description
created_at	String	Backup sharing time, for example, 2020-02-05T10:38:34.209782
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782
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](#).

4.6.2 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 4-235 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 4-236 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 X-Subject-Token in the response header is the user token.

Table 4-237 Request body parameters

Parameter	Mandatory	Type	Description
status	Yes	String	Status of a shared backup

Parameter	Mandatory	Type	Description
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, vault_id must be specified. If the backup is rejected, vault_id is not required.

Response Parameters

Status code: 200

Table 4-238 Response body parameters

Parameter	Type	Description
member	Member object	Response parameters of querying the details of a backup share member

Table 4-239 Member

Parameter	Type	Description
status	String	Backup sharing status
created_at	String	Backup sharing time, for example, 2020-02-05T10:38:34.209782
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782
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](#).

4.6.3 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 4-240 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 project ID of the tenant who receives the shared backup.
project_id	Yes	String	Project ID

Request Parameters

Table 4-241 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-242 Response body parameters

Parameter	Type	Description
member	Member object	Response parameters of querying the details of a backup share member

Table 4-243 Member

Parameter	Type	Description
status	String	Backup sharing status
created_at	String	Backup sharing time, for example, 2020-02-05T10:38:34.209782
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782
backup_id	String	Backup ID.

Parameter	Type	Description
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

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](#).

4.6.4 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 4-244 Path Parameters

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

Table 4-245 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 asc (ascending order) or desc (descending order). If a direction is not specified, the default sorting direction is desc . The value of sort 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 4-246 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200

Table 4-247 Response body parameters

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

Table 4-248 Member

Parameter	Type	Description
status	String	Backup sharing status
created_at	String	Backup sharing time, for example, 2020-02-05T10:38:34.209782
updated_at	String	Update time, for example, 2020-02-05T10:38:34.209782
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

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](#).

4.6.5 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 4-249 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 4-250 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 204

No Content

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](#).

4.7 Tags

4.7.1 Querying Vault Resources

Function

This API is used to filter resources by tag.

Tag Management Service (TMS) uses this API to filter and list resources of each service by tag. These services must have the query capabilities.

URI

POST /v3/{project_id}/vault/resource_instances/action

Table 4-251 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Table 4-252 Query Parameters

Parameter	Mandatory	Type	Description
enterprise_project_id	No	String	Enterprise project ID.

Request Parameters

Table 4-253 Request body parameters

Parameter	Mandatory	Type	Description
without_any_tag	No	Boolean	If this parameter is set to true , all resources without tags are queried. In this case, the tag , not_tags , tags_any , and not_tags_any fields are ignored.

Parameter	Mandatory	Type	Description
tags	No	Array of TagsReq objects	List of included tags. Backups with these tags will be filtered. This list cannot be an empty list. The list can contain up to 10 keys. Keys in this list must be unique. The response returns resources containing any tags in this list. Keys in this list are in an AND relationship while values in each key-value structure is in an OR relationship. If no tag filtering condition is specified, full data is returned.
tags_any	No	Array of TagsReq objects	List of tags. Backups with any tags in this list will be filtered. This list cannot be an empty list. The list can contain up to 10 keys. Keys in this list must be unique. The response returns resources containing any tags in this list. Keys in this list are in an OR relationship while values in each key-value structure is in an OR relationship. If no tag filtering condition is specified, full data is returned.

Parameter	Mandatory	Type	Description
not_tags	No	Array of TagsReq objects	List of excluded tags. Backups without these tags will be filtered. This list cannot be an empty list. The list can contain up to 10 keys. Keys in this list must be unique. The response returns resources containing no tags in this list. Keys in this list are in an AND relationship while values in each key-value structure is in an OR relationship. If no tag filtering condition is specified, full data is returned.
not_tags_any	No	Array of TagsReq objects	List of tags. Backups without any tags in this list will be filtered. This list cannot be an empty list. The list can contain up to 10 keys. Keys in this list must be unique. The response returns resources without any tags in this list. Keys in this list are in an OR relationship while values in each key-value structure is in an OR relationship. If no tag filtering condition is specified, full data is returned.
limit	No	String	Query count. (This parameter is not displayed when action is set to count.) If action is set to filter, the value defaults to 1000. The value ranges from 1 to 1000. If you set a value not within this range, an error will be reported. The number of returned records does not exceed the value of limit.

Parameter	Mandatory	Type	Description
offset	No	String	Index position. (This parameter is not displayed when action is set to count .) If action is set to filter , the value defaults to 0 and the minimum value of offset is 0 . The first record in the query result is the offset+1 record that meets the query criteria.
action	Yes	String	Operation identifier. Possible values are filter and count . The value filter indicates pagination query. The value count indicates that the total number of query results meeting the search criteria will be returned.
matches	No	Array of Match objects	Search criteria supported by resources Keys in this list must be unique. Only one key is supported currently. Multiple-key support will be available later.
cloud_type	No	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
object_type	No	String	Resource type

Table 4-254 TagsReq

Parameter	Mandatory	Type	Description
key	Yes	String	Key It contains a maximum of 127 Unicode characters. A tag key cannot be an empty string. Spaces before and after a key will be deprecated.

Parameter	Mandatory	Type	Description
values	Yes	Array of strings	List of values The list can contain up to 10 values. A tag value contains up to 255 Unicode characters. Spaces before and after a key will be deprecated. Values in this list must be unique. Values in this list are in an OR relationship. This list can be empty and each value can be an empty character string. If this list is left blank, it indicates that all values are included. The asterisk (*) is a reserved character in the system. If the value starts with *, it indicates that fuzzy match is performed based on the value following *. The value cannot contain only asterisks.

Table 4-255 Match

Parameter	Mandatory	Type	Description
key	Yes	String	Key A key can only be set to resource_name, indicating the resource name.
value	Yes	String	Value A value consists of up to 255 characters If key is set to resource_name, an empty character string indicates exact match and any non-empty string indicates fuzzy match.

Response Parameters

Status code: 200

Table 4-256 Response body parameters

Parameter	Type	Description
resources	Array of TagResource objects	List of matched resources (This parameter is not displayed if action is set to count .)
total_count	Integer	Total number of matched resources

Table 4-257 TagResource

Parameter	Type	Description
resource_id	String	Resource ID, in UUID format.
resource_detail	InstancesResourceDetail object	Resource details
tags	Array of Tag objects	Tag list If there is no tag, an empty array is used by default.
resource_name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.

Table 4-258 InstancesResourceDetail

Parameter	Type	Description
vault	Vault object	Vaults

Table 4-259 Vault

Parameter	Type	Description
billing	Billing object	Operation info
description	String	User-defined vault description
id	String	Vault ID

Parameter	Type	Description
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
project_id	String	Project ID
provider_id	String	ID of the vault resource type
resources	Array of ResourceResp objects	Vault resources
tags	Array of Tag objects	Vault tags
auto_bind	Boolean	Whether automatic association is supported. Default value: false. The options are as follows: • true: Automatic association is supported. • false: Automatic association is not supported.
bind_rules	VaultBindRules object	Association rule
user_id	String	User ID
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
auto_expand	Boolean	Whether to enable automatic capacity expansion (supported for pay-per-use vaults only). The default value is false . The value can be true (supporting automatic capacity expansion) or false (not supporting automatic capacity expansion).
sys_lock_source_service	String	SMB service identifier. The value can be SMB or an empty string. By default, this parameter is left blank. SMB: CBR is called as an SMB service. An empty string: CBR is called as a common service.

Table 4-260 Billing

Parameter	Type	Description
allocated	Integer	Allocated capacity, in GB.
charging_mode	String	Billing mode. The default value is post_paid . post_paid : pay-per-use; pre_paid : yearly/monthly
cloud_type	String	Cloud type. The default value is public . The following types are supported: public: public cloud; hybrid: hybrid cloud
consistent_level	String	Vault specifications. app_consistent: application consistency; crash_consistent: crash consistency
object_type	String	Object type. The value can be server , disk , turbo , workspace , vmware , rds , or file . server: cloud server; disk: EVS disk; turbo: file system; workspace: Workspace; vmware: VMware; rds: RDS; file: file
order_id	String	Order ID
product_id	String	Product ID
protect_type	String	Protection type. The value can be: backup or replication
size	Integer	Capacity, in GB
spec_code	String	Specification codeServer backup vault: vault.backup.server.normal ; Disk backup vault: vault.backup.volume.normal ; File system backup vault: vault.backup.turbo.normal
status	String	Vault status
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 4-261 ResourceResp

Parameter	Type	Description
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protection status
size	Integer	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	Integer	Backup replica size. Unit: GB
backup_count	Integer	Number of backups

Table 4-262 VaultBindRules

Parameter	Type	Description
tags	Array of BindRulesTags objects	Filters automatically associated resources by tag. Minimum length: 0 characters Maximum length: 5 characters

Table 4-263 BindRulesTags

Parameter	Type	Description
key	String	The key cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The key can contain only letters, digits, hyphens (-), and underscores (_).

Parameter	Type	Description
value	String	The value cannot contain non-printable ASCII characters (0–31) and the following characters: =*<>, / The value can contain only letters, digits, periods (.), hyphens (-), and underscores (_).

Table 4-264 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Status code: 400

Table 4-265 Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .
error_msg	String	Error message

Example Requests

Querying vault resources by tag

```
POST https://{endpoint}/v3/{project_id}/vault/resource_instances/action
{
  "tags" : [ {
    "key" : "string",
    "values" : [ "value" ]
  } ],
  "action" : "filter"
}
```

Example Responses

Status code: 200

OK

```
{
  "total_count" : 7,
  "resources" : [ {
    "resource_id" : "e54f7854-8de8-4f98-acf1-65f330bfe877",
    "resource_name" : "vault-7698-api-test",
    "resource_detail" : {
      "vault" : {
        "id" : "e54f7854-8de8-4f98-acf1-65f330bfe877",
        "name" : "vault-7698-api-test",
        "resources" : [ ],
        "provider_id" : "0daac4c5-6707-4851-97ba-169e36266b66",
        "created_at" : "2023-04-21T08:20:43.022+00:00",
        "project_id" : "667230ba418f48f1996329f174693053",
        "enterprise_project_id" : 0,
        "auto_bind" : false,
        "bind_rules" : { },
        "auto_expand" : false,
        "smn_notify" : true,
        "threshold" : 80,
        "user_id" : "0ae13f012b80d2d81f11c0129285d34b",
        "billing" : {
          "allocated" : 0,
          "cloud_type" : "public",
          "consistent_level" : "crash_consistent",
          "charging_mode" : "pre_paid",
          "order_id" : "CS23042116192E6CZ",
          "product_id" : "00301-231151-0--0",
          "protect_type" : "backup",
          "object_type" : "server",
          "spec_code" : "vault.backup.server.normal",
          "used" : 0,
          "status" : "available",
          "size" : 100
        },
        "tags" : [ ]
      }
    }
  } ]
}
```

```
},  
"tags" : [ ]  
}]  
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See [Error Codes](#).

4.7.2 Batch Adding or Deleting Tags of a Vault

Function

This API is used to add or delete tags of a specific resource in batches.

TMS may use this API to manage service resource tags.

A resource can have a maximum of 10 tags. (A maximum of 20 tags can be added to a resource in the region that supports Landing Zone.)

This API is idempotent.

If there are duplicate keys in the request body when you add tags, an error is reported.

If a to-be-added tag has the same key as an existing tag, the tag will be added and will overwrite the existing tag.

When deleting tags, duplicate keys are allowed.

When deleting tags, if some tags do not exist, the deletion is considered to be successful by default. The character set of the tags will not be verified. A key and a value can each consist of up to 127 and 255 characters. The tag structure cannot be missing, and the key cannot be left blank or an empty string.

URI

POST /v3/{project_id}/vault/{vault_id}/tags/action

Table 4-266 Path Parameters

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

Request Parameters

Table 4-267 Request body parameters

Parameter	Mandatory	Type	Description
tags	No	Array of Tag objects	Tag list This list cannot be an empty list. The list can contain up to 10 keys. Keys in this list must be unique.
action	Yes	String	Operation to be performed. The value can be set to create or delete only.

Table 4-268 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).

Parameter	Mandatory	Type	Description
value	Yes	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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Response Parameters

Status code: 204

No Content

Status code: 400

Table 4-269 Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .
error_msg	String	Error message

Example Requests

Example request

```
POST https://{endpoint}/v3/{project_id}/vault/{vault_id}/tags/action
```

```
{
  "tags": [ {
    "key": "string",
    "value": "string"
  }, {
    "key": "string1",
    "value": "string2"
  } ],
  "action": "create"
}
```

Example Responses

None

Status Codes

Status Code	Description
204	No Content
400	Bad Request

Error Codes

See [Error Codes](#).

4.7.3 Adding a Tag to an Associated Resource

Function

A resource can have a maximum of 10 tags. (A maximum of 20 tags can be added to a resource in the region that supports Landing Zone.)

This API is idempotent. If a to-be-added tag has the same key as an existing tag, the tag will be added and will overwrite the existing tag.

URI

POST /v3/{project_id}/vault/{vault_id}/tags

Table 4-270 Path Parameters

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

Request Parameters

Table 4-271 Request body parameters

Parameter	Mandatory	Type	Description
tag	No	Tag object	Tags

Table 4-272 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
value	Yes	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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Response Parameters

Status code: 204

No Content

Status code: 400

Table 4-273 Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .

Parameter	Type	Description
error_msg	String	Error message

Example Requests

Example request

```
POST https://{endpoint}/v3/{project_id}/vault/{vault_id}/tags
```

```
{
  "tag": {
    "key": "key1",
    "value": "key2"
  }
}
```

Example Responses

None

Status Codes

Status Code	Description
204	No Content
400	Bad Request

Error Codes

See [Error Codes](#).

4.7.4 Deleting a Tag from an Associated Resource

Function

This API is used to delete a tag from an associated resource. The API is idempotent. When you delete a nonexistent tag, error code 404 will be returned. Tag keys cannot be empty or be empty character strings.

URI

```
DELETE /v3/{project_id}/vault/{vault_id}/tags/{key}
```

Table 4-274 Path Parameters

Parameter	Mandatory	Type	Description
key	Yes	String	The key cannot be left blank or be an empty string. The key length and character set are not verified. Keys are verified and used after the spaces before and after them are deleted. Even invalid tags at the bottom layer can be deleted.
project_id	Yes	String	Project ID
vault_id	Yes	String	Resource ID

Request Parameters

None

Response Parameters

Status code: 204

No Content

Status code: 400

Table 4-275 Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .
error_msg	String	Error message

Example Requests

```
DELETE https://{endpoint}/v3/{project_id}/vault/{vault_id}/tags/{key}
```

Example Responses

None

Status Codes

Status Code	Description
204	No Content
400	Bad Request

Error Codes

See [Error Codes](#).

4.7.5 Querying Tags of an Associated Resource

Function

This API is used to query tags of a specified resource.

TMS uses this API to query all tags of a specified resource.

URI

GET /v3/{project_id}/vault/{vault_id}/tags

Table 4-276 Path Parameters

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

Request Parameters

None

Response Parameters

Status code: 200

Table 4-277 Response body parameters

Parameter	Type	Description
tags	Array of Tag objects	Tag list Keys in the tag list must be unique.

Table 4-278 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: =*<>, / It can contain only letters, digits, hyphens (-), and underscores (_).
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: =*<>, / It can contain only letters, digits, hyphens (-), underscores (_), and periods (.).

Status code: 400**Table 4-279** Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .
error_msg	String	Error message

Example Requests

```
GET https://{endpoint}/v3/{project_id}/vault/{vault_id}/tags
```

Example Responses

Status code: 200

OK

```
{
  "tags": [ {
    "key": "string",
    "value": ""
  } ]
}
```

Status code: 400

Bad Request

```
{
  "error_code": "BackupService.9900",
  "error_msg": "Invalid vault_id provided."
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See [Error Codes](#).

4.7.6 Querying Tags of a Vault Project

Function

This API is used to query a tenant's tag set in a specific region and of a specific instance type.

TMS uses this API to list tags created by a tenant to facilitate tag creation and resource filtering on the console.

URI

GET /v3/{project_id}/vault/tags

Table 4-280 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID

Request Parameters

None

Response Parameters

Status code: 200

Table 4-281 Response body parameters

Parameter	Type	Description
tags	Array of TagsResp objects	Tag list

Table 4-282 TagsResp

Parameter	Type	Description
key	String	Key It consists of up to 36 characters. It cannot be an empty string. It can contain only Chinese characters, letters, digits, hyphens, and underscores.
values	String	List of values It consists of up to 43 characters. It can be an empty string. It can contain only Chinese characters, letters, digits, hyphens, and underscores.

Status code: 400

Table 4-283 Response body parameters

Parameter	Type	Description
error_code	String	For details, see Error Codes .
error_msg	String	Error message

Example Requests

```
GET https://{endpoint}/v3/{project_id}/vault/tags
```

Example Responses

Status code: 200

OK

```
{
  "tags": [ {
    "values": [ "b" ],
    "key": "a"
  }, {
    "values": [ "", "string" ],
    "key": "string"
  } ]
}
```

Status Codes

Status Code	Description
200	OK
400	Bad Request

Error Codes

See [Error Codes](#).

4.8 Restore Points

4.8.1 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 4-284 Path Parameters

Parameter	Mandatory	Type	Description
checkpoint_id	Yes	String	Checkpoint ID.
project_id	Yes	String	Project ID.

Request Parameters

Table 4-285 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 X-Subject-Token in the response header is the user token.

Response Parameters

Status code: 200**Table 4-286** Response body parameters

Parameter	Type	Description
checkpoint	CheckpointCreate object	Checkpoint information.

Table 4-287 CheckpointCreate

Parameter	Type	Description
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
id	String	Restore point ID
project_id	String	Project ID
status	String	Status
vault	CheckpointPlanCreate object	Vault information
extra_info	CheckpointExtraInfoResp object	Extended information

Table 4-288 CheckpointPlanCreate

Parameter	Type	Description
id	String	Vault ID

Parameter	Type	Description
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
resources	Array of CheckpointResourceResp objects	Backup objects
skipped_resources	Array of CheckpointCreateSkippedResource objects	Resources skipped during backup

Table 4-289 CheckpointResourceResp

Parameter	Type	Description
extra_info	String	Extra information of the resource
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protected status
resource_size	String	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironi::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	String	Backup replica size in GB.
backup_count	String	Number of backups

Table 4-290 CheckpointCreateSkippedResource

Parameter	Type	Description
id	String	Resource ID

Parameter	Type	Description
type	String	Resource type. OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
code	String	For details, see Error Codes .
reason	String	Reason for the skipping. For example, the resource is being backed up.

Table 4-291 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](#).

4.8.2 Replicating a Restore Point

Function

This API is used to replicate a restore point.

URI

POST /v3/{project_id}/checkpoints/replicate

Table 4-292 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

Table 4-293 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 X-Subject-Token in the response header is the user token.

Table 4-294 Request body parameters

Parameter	Mandatory	Type	Description
replicate	Yes	CheckpointReplicateParam object	Request body parameters for replicating a backup.

Table 4-295 CheckpointReplicateParam

Parameter	Mandatory	Type	Description
auto_trigger	No	Boolean	Whether the task is automatically triggered. Default value: false. • true: The task is automatically triggered. • false: The task is not automatically triggered.
destination_project_id	Yes	String	Project ID of the destination region.
destination_region	Yes	String	ID of the destination region.
destination_vault_id	Yes	String	ID of the vault in the destination region.
enable_acceleration	No	Boolean	Whether to enable acceleration to shorten the cross-region replication time. If this parameter is not set, the acceleration function is disabled. If enabled, the acceleration function is additionally charged. • true: The acceleration function is enabled. • false: The acceleration function is disabled.
vault_id	Yes	String	Vault ID in UUID format.

Response Parameters

Status code: 200

Table 4-296 Response body parameters

Parameter	Type	Description
replication	CheckpointReplicateRespBody object	Restore point replication objects in the response

Table 4-297 CheckpointReplicateRespBody

Parameter	Type	Description
backups	Array of CheckpointReplicateRespbackups objects	List of backups to be replicated
destination_project_id	String	ID of the destination project.
destination_region	String	Destination region.
destination_vault_id	String	ID of the vault in the destination region.
project_id	String	ID of the project where replication is performed
provider_id	String	Backup provider ID, which specifies whether the backup object is a server or disk
source_region	String	Source region.
vault_id	String	Vault ID

Table 4-298 CheckpointReplicateRespbackups

Parameter	Type	Description
backup_id	String	ID of the backup to be replicated.
replication_record_id	String	Replication record ID

Example Requests

Manually replicating a backup from a source region to a destination region

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

```
{  
  "replicate" : {
```

```
"auto_trigger" : false,
"destination_project_id" : "68589cac08274b82b4e254268a3862d8",
"destination_region" : "region2",
"destination_vault_id" : "0ca3eb86-8800-46da-9c37-9d657a825274",
"enable_acceleration" : false,
"vault_id" : "3b5816b5-f29c-4172-9d9a-76c719a659ce"
}
```

Example Responses

Status code: 200

OK

```
{
  "replication" : {
    "destination_vault_id" : "0ca3eb86-8800-46da-9c37-9d657a825274",
    "provider_id" : "0daac4c5-6707-4851-97ba-169e36266b66",
    "source_region" : "region1",
    "vault_id" : "3b5816b5-f29c-4172-9d9a-76c719a659ce",
    "destination_region" : "region2",
    "destination_project_id" : "68589cac08274b82b4e254268a3862d8",
    "backups" : [ {
      "replication_record_id" : "de128dfa-5451-4905-9c11-8fc842b2f41e",
      "backup_id" : "7558e1a3-7046-4787-95cd-14b0ad0642a8"
    }, {
      "replication_record_id" : "892a7d1e-17c8-4751-ad75-cfbed7051857",
      "backup_id" : "6df2b54c-dd62-4059-a07c-1b8f24f2725d"
    }, {
      "replication_record_id" : "8bf5ce8f-bfa1-4d57-98de-d6159ab9d86d",
      "backup_id" : "aa00034d-ef40-443d-ab7a-dc846d988cdf"
    } ],
    "project_id" : "4229d7a45436489f8c3dc2b1d35d4987"
  }
}
```

Status Codes

Status Code	Description
200	OK

Error Codes

See [Error Codes](#).

4.8.3 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 4-299 Path Parameters

Parameter	Mandatory	Type	Description
project_id	Yes	String	Project ID.

Request Parameters

Table 4-300 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 X-Subject-Token in the response header is the user token.

Table 4-301 Request body parameters

Parameter	Mandatory	Type	Description
checkpoint	Yes	VaultBackup object	Parameters for backing up the vault

Table 4-302 VaultBackup

Parameter	Mandatory	Type	Description
parameters	No	CheckpointParam object	Parameters for backing up to a vault.
vault_id	Yes	String	Vault ID

Table 4-303 CheckpointParam

Parameter	Mandatory	Type	Description
auto_trigger	No	Boolean	Whether the task is automatically triggered. Default value: false. • true: The task is automatically triggered. • false: The task is not automatically triggered.
description	No	String	Backup description
incremental	No	Boolean	Whether the backup is an incremental backup. Possible values are true (yes) and false (no).
name	No	String	Backup name. The value can contain a maximum of 64 characters, including digits, uppercase letters, lowercase letters, underscores (_), and hyphens (-).
resources	No	Array of strings	IDs of the resources to be backed up. The IDs are in UUID format. The resources must have been associated with the vault and can be backed up.
resource_details	No	Array of Resource objects	Details about the resources to be backed up.

Table 4-304 Resource

Parameter	Mandatory	Type	Description
id	Yes	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	No	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.

Parameter	Mandatory	Type	Description
type	Yes	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems

Response Parameters

Status code: 200

Table 4-305 Response body parameters

Parameter	Type	Description
checkpoint	CheckpointCreate object	Checkpoint information.

Table 4-306 CheckpointCreate

Parameter	Type	Description
created_at	String	Creation time, for example, 2020-02-05T10:38:34.209782
id	String	Restore point ID
project_id	String	Project ID
status	String	Status
vault	CheckpointPlanCreate object	Vault information
extra_info	CheckpointExtraInfoResp object	Extended information

Table 4-307 CheckpointPlanCreate

Parameter	Type	Description
id	String	Vault ID

Parameter	Type	Description
name	String	Vault name. The value can contain a maximum of 64 characters, including letters, digits, underscores (_), and hyphens (-).
resources	Array of CheckpointResourceResp objects	Backup objects
skipped_resources	Array of CheckpointCreateSkippedResource objects	Resources skipped during backup

Table 4-308 CheckpointResourceResp

Parameter	Type	Description
extra_info	String	Extra information of the resource
id	String	ID of the resource to be backed up. The resource must have been associated with the vault and can be backed up.
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
protect_status	String	Protected status
resource_size	String	Allocated capacity for the associated resource, in GB
type	String	Type of the resource to be backed up: OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironi::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
backup_size	String	Backup replica size in GB.
backup_count	String	Number of backups

Table 4-309 CheckpointCreateSkippedResource

Parameter	Type	Description
id	String	Resource ID

Parameter	Type	Description
type	String	Resource type. OS::Nova::Server: ECS; OS::Cinder::Volume: EVS disks; OS::Ironic::BareMetalServer: Bare Metal Servers; OS::Sfs::Turbo: SFS Turbo file systems
name	String	Name of the resource to be backed up. The value can contain a maximum of 255 characters.
code	String	For details, see Error Codes .
reason	String	Reason for the skipping. For example, the resource is being backed up.

Table 4-310 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 [3 Calling APIs](#).

Constraints

The vault created using this API is in pay-per-use billing mode.

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 Regions and Endpoints.

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": []
  }
}
```

b. Create a pre-paid vault and associate it with a server.

■ API

URI format: POST /v3/{project_id}/vaults

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

■ Sample request

POST: https://{endpoint}/v3/{project_id}/vaults

Obtain the value of **{endpoint}** from Regions and Endpoints.

Body:

```
{
  "vault": {
    "billing": {
      "cloud_type": "public",
```

```
{
  "consistent_level": "crash_consistent",
  "object_type": "server",
  "protect_type": "backup",
  "size": 100,
  "charging_mode": "pre_paid",
  "period_type": "month",
  "period_num": 1,
  "is_auto_renew": false,
  "is_auto_pay": false
},
{
  "description": "vault_description",
  "name": "vault_name",
  "resources": [
    {
      "id": "97595625-198e-4e4d-879b-9d53f68ba551",
      "type": "OS::Nova::Server"
    }
  ]
}
```

- c. Record the vault ID in the response body.
2. Associate a server or disk with the vault.
 - a. Associate resources.
 - API
URI format: POST /v3/{project_id}/vaults/{vault_id}/addresources
For details, see "Associating Resources".
 - Sample request
POST: https://{endpoint}/v3/0605767b5780d5762fc5c0118072a564/vaults/ea7b8717-2543-478a-a92d-3ca7ee448f67/addresources
Obtain the value of **{endpoint}** from Regions and Endpoints.
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 Regions and Endpoints.

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 .

Obtain the value of **{endpoint}** from Regions and Endpoints.

– 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 Regions and Endpoints.

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 Regions and Endpoints.

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 Regions and Endpoints.

- 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": {
        "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": "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 Regions and Endpoints.

– 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 Huawei 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 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	√	×
Querying the replication capability	GET /v3/{project_id}/replication-capabilities	cbr:backups:queryReplicationCapability	-	√	×

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	-	√	√

Permissi on	API	Action	Dependen cies	IAM Project	Enterprise Project
Modifying a vault	PUT /v3/{project_id}/vaults/{vault_id}	cbr:vaults:update	-	√	√
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	√	√
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	-	√	√

Restore Point

Permissi on	API	Action	Dependenc ies	IAM Project	Enterprise Project
Synchroni zing a restore point	POST /v3/ {project_id}/ checkpoints/ sync	cbr:vaults: sync	-	√	√
Creating a restore point	POST /v3/ {project_id}/ checkpoints	cbr:vaults: backup	ecs:cloudSer vers:list evs:volumes :list	√	√

Backup Sharing

Permissio n	API	Action	IAM Project	Enterprise Project
Creating a share member	POST /v3/ {project_id}/ backups/ {backup_id}/ members	cbr:member:cre ate	√	√
Updating the share member status	PUT /v3/{project_id}/ backups/ {backup_id}/ members/ {member_id}	cbr:member:up date	√	√
Querying a specified share member	GET /v3/{project_id}/ backups/ {backup_id}/ members/ {member_id}	cbr:member:get	√	√
Querying the share member list	GET /v3/{project_id}/ backups/ {backup_id}/ members	cbr:member:list	√	√

Permission	API	Action	IAM Project	Enterprise Project
Deleting a share member	DELETE /v3/{project_id}/backups/{backup_id}/members/{member_id}	cbr:member:delete	√	√

Backup

Permission	API	Action	Dependencies	IAM Project	Enterprise Project
Listing 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 from a backup	POST /v3/{project_id}/backups/{backup_id}/restore	cbr:backups:restore	ecs:cloudServers:list evs:volumes:list	√	√

Policy

Permissi on	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 specified policy	GET /v3/{project_id}/policies/{policy_id}	cbr:policies:get	√	×
Updating 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	√	×

Tag

Permission	API	Action	IAM Project	Enterprise Project
Querying the vault resources	POST /v3/{project_id}/vault/resource_instances/action	cbr:vaults:listResourceInstances	√	√
Batch adding or deleting tags of a vault resource	POST /v3/{project_id}/vault/{vault_id}/tags/action	cbr:vaults:bulkCreateOrDeleteTags	√	√
Adding a tag to a vault resource	POST /v3/{project_id}/vault/{vault_id}/tags	cbr:vaults:setTags	√	√

Permission	API	Action	IAM Project	Enterprise Project
Deleting a tag of a vault resource	DELETE /v3/{project_id}/vault/{vault_id}/tags/{key}	cbr:vaults:deleteTags	√	√
Querying tags of a vault resource	GET /v3/{project_id}/vault/{vault_id}/tags	cbr:vaults:getTags	√	√
Querying tags of a vault project	GET /v3/{project_id}/vault/tags	cbr:vaults:listProjectTags	√	√

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
Updating vault orders	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.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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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 protect type value.
400	BackupService.6117	Unknown policy type.	Unknown policy type.	Enter a valid OperationType 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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.6220	Automatic backups in the locked repository are prohibited from being manually deleted.	Automatic backups in locked vaults cannot be manually deleted.	Automatic backups in locked vaults cannot be manually deleted.
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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.
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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
500	BackupService.6139	Failed to obtain xdomain_type .	Failed to obtain xdomain_type .	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.
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.

Status Code	Error Code	Error Message	Description	Handling Measure
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 a project ID by calling the API used to [query projects based on 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 [3.2 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 **API Credentials** page, view the project ID in the project list.