

# Volume Backup Service

## API Reference

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# 1 Before You Start

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- [1.5 Concepts](#)

## 1.1 Overview

Welcome to *Volume Backup Service API Reference*. Volume Backup Service (VBS) provides snapshot-based data protection for Elastic Volume Service (EVS) disks.

VBS secures your data, even if an EVS disk is faulty or encounters a logical error, for example, accidental deletion, hacker attacks, and virus infection. It allows you to back up your data, and use these data backups to restore data with ease.

You can use APIs provided in this document to perform operations on VBS, such as creating and deleting a backup and creating a policy. For details about all supported operations, see [2 API Overview](#).

## 1.2 API Calling

VBS supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [3 Calling APIs](#).

## 1.3 Endpoints

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

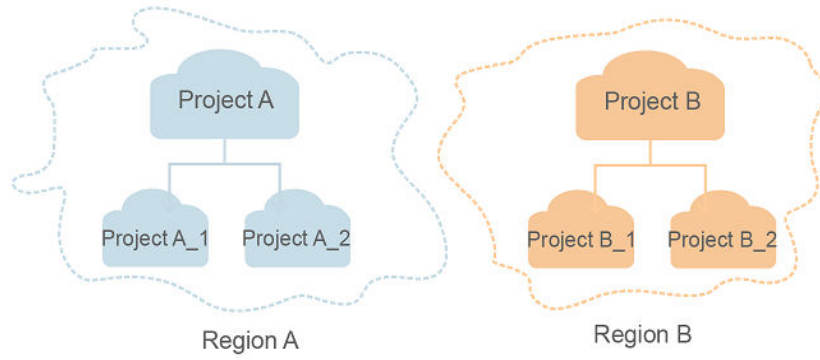
## 1.4 Constraints

For more constraints, see the API description.

## 1.5 Concepts

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

**Figure 1-1** Project isolation model



# 2 API Overview

VBS provides VBS APIs and some native OpenStack APIs.

With these APIs, you can use all functions provided by VBS.

**Table 2-1** APIs

API Type	Category	Description
VBS APIs	Backup management	Query the backup and restoration capabilities of target resources, as well as create backups for target resources.
	Backup policy management	Create backup policies for automatic backups and manage backup policies.
	Tag management	Tag shared backups, making backups easier to be backed up.
	Quota management	Manage quotas.
Native OpenStack APIs	Backup management	Manage backups, including creating, deleting, and sharing backups, as well as restoring data using backups.



# 3 Calling APIs

## 3.1 Making an API Request

### 3.2 Authentication

### 3.3 Response

## 3.1 Making an API Request

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

### Request URI

A request URI is in the following format:

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

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

**Table 3-1** URI parameter description

Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from <a href="#">Regions and Endpoints</a> .
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the <b>resource-path</b> of the API used to obtain a user token is <b>/v3/auth/tokens</b> .

Parameter	Description
query-string	Query parameter, which is optional. Ensure that a question mark (?) is included before each query parameter that is in the format of <i>Parameter name=Parameter value</i> . For example, <b>?limit=10</b> indicates that a maximum of 10 data records will be displayed.

 **NOTE**

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

## Request Methods

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

**Table 3-2** HTTP methods

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

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

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

## Request Header

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

Common request header fields are as follows.

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

Parameter	Description	Mandatory	Example Value
Host	Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of <i>Hostname:Port number</i> . If the port number is not specified, the default port is used. The default port number for <b>https</b> is <b>443</b> .	No This field is mandatory for AK/SK authentication.	code.test.com or code.test.com:443
Content-Type	Specifies the type (or format) of the message body. The default value <b>application/json</b> is recommended. Other values of this field will be provided for specific APIs if any.	Yes	application/json
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495
X-Project-Id	Specifies the project ID. Obtain the project ID by following the instructions in <a href="#">6.3 Obtaining a Project ID</a> .	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	<p>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).</p> <p>After the request is processed, the value of <b>X-Subject-Token</b> in the response header is the token value.</p>	<p>No</p> <p>This field is mandatory for token authentication.</p>	<p>The following is part of an example token:</p> <p>MIIPAgYJKoZlhvcNAQcCo...ggg1BBIINPXsidG9rZ</p>

 **NOTE**

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

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

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

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

### (Optional) Request Body

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

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

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

 **NOTE**

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

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

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

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

## 3.2 Authentication

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

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

### Token Authentication

#### NOTE

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

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

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

```
{
  "auth": {
    "identity": {
      "methods": [
        "password"
      ],
      "password": {
        "user": {
          "name": "username", // IAM user name
        }
      }
    }
  }
}
```

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

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

```
POST https://{{endpoint}}/v3/auth/projects
Content-Type: application/json
X-Auth-Token: ABCDEFJ....
```

## AK/SK Authentication

### 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 [6.1 Status Codes](#).

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

## Response Header

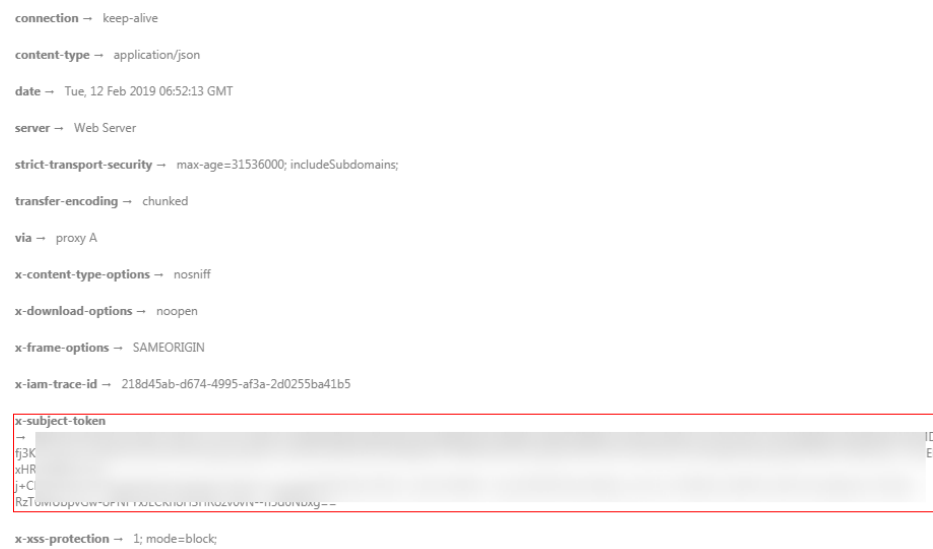
Similar to a request, a response also has a header, for example, **Content-Type**.

**Figure 3-1** shows the response header fields for the API used to obtain a user token. The **X-Subject-Token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

### NOTE

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

**Figure 3-1** Header fields of the response to the request for obtaining a user token



## (Optional) Response Body

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

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

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

```

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

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

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



# 4 Getting Started

This section describes how to create a VBS backup by calling VBS APIs.

## NOTE

- The token obtained from IAM is valid for only 24 hours. If you want to use one token for authentication, you can cache it to avoid frequent calling.

## Involved APIs

To use token authentication, you need to obtain a token and add **X-Auth-Token** to the request header of API calls.

- API for obtaining tokens from IAM
- VBS API for creating backups

## Procedure

1. Obtain the token by following instructions in [3 Calling APIs](#).
2. Send POST `https://VBS_endpoint/v2/project ID/cloudbackups`.
3. Add the **X-Auth-Token** request header.
4. Specify the following parameters in the request body:

```
{
  "backup": {
    "volume_id": "c68ae7fb-0aa5-4a97-ab01-ed02c5b7e768",
    "name": "backup1",
    "description": "Backup_Demo",
    "tags": [{
      "key": "key",
      "value": "value"
    }]
  }
}
```

If the request is responded, a job ID is returned.

If the request fails, an error code and error information are returned. For details, see [6.2 Error Codes](#).

5. Query job details using the job ID by referring to [5.1.8 Querying the Job Status](#).

If the returned job status is **SUCCESS**, the VBS backup is successfully created.

For details about error codes, see [6.2 Error Codes](#).

6. Obtain the backup ID (**backup\_id**) from the request body for querying job details and then use the ID to query or delete the backup, as well as use the backup to restore data.

# 5 API Description

[5.1 VBS Backups](#)

[5.2 Backup Policies](#)

## 5.1 VBS Backups

### 5.1.1 Creating a VBS Backup

#### Function

This API is used to create a VBS backup.

If the API is successfully called, the backup task is successfully delivered. You can query the backup status by using the API for [5.1.7 Querying Details About a VBS Backup \(Native OpenStack API\)](#).

#### URI

- URI format  
POST /v2/{project\_id}/cloudbackups
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .

#### Request

- Parameter description

Parameter	Mandatory	Type	Description
backup	Yes	dict	Backup to be created. For details, see the <b>backup</b> field description.

- **backup** field description

Parameter	Mandatory	Type	Description
volume_id	Yes	string	ID of the disk to be backed up
snapshot_id	No	string	Snapshot ID of the disk to be backed up
name	Yes	string	Backup name. The value is a string of 1 to 64 characters that can contain digits, letters, underscores (_), and hyphens (-), not starting with <b>auto</b> .
description	No	string	Backup description. The value is a string of 1 to 64 characters and cannot contain the less-than sign (<) or greater-than sign (>).

- **tag** field description

Parameter	Mandatory	Type	Description
-----------	-----------	------	-------------

- Example request

```
{
  "backup": {
    "volume_id": "c68ae7fb-0aa5-4a97-ab01-ed02c5b7e768",
    "snapshot_id": null,
    "name": "backup1",
    "description": "Backup_Demo"
  }
}
```

## Response

- Parameter description

Parameter	Type	Description
job_id	string	Job ID
message	string	Error message returned after an error occurs

Parameter	Type	Description
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "job_id": "70a599e0-31e7-49b7-b260-868f441e862b"
}
```

or

```
{
  "error": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.

Status Code	Description
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.1.2 Deleting a VBS Backup (Deprecated)

### Function

This API is used to delete a VBS backup. This API is deprecated. You are advised to use the API described in [5.1.9 Deleting a VBS Backup \(Native OpenStack API\)](#) to delete a backup.

### URI

- URI format  
POST /v2/{project\_id}/cloudbackups/{backup\_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .
backup_id	Yes	ID of the backup to be deleted

### Request

None

### Response

- Parameter description

Parameter	Type	Description
job_id	string	Job ID
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "job_id": "70a599e0-31e7-49b7-b260-868f441e862b"
}
```

or

```
{
  "error": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```

## Status Codes

- Normal  
200
- Abnormal

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

Status Code	Description
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

### 5.1.3 Restoring a Disk Using a VBS Backup

#### Function

This API is used to restore a disk using a VBS backup.

#### URI

- URI format  
POST /v2/{project\_id}/cloudbackups/{backup\_id}/restore
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .
backup_id	Yes	ID of the backup used to restore a disk

#### Request

- Parameter description



Parameter	Mandatory	Type	Description
restore	Yes	dict	Restoration operation
volume_id	Yes	string	ID of the disk to be restored

- Example request

```
{
  "restore":{
    "volume_id":"c96e4a94-927a-425c-8795-63f9964cfebd"
  }
}
```

## Response

- Parameter description

Parameter	Type	Description
job_id	string	Job ID
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "job_id": "70a599e0-31e7-49b7-b260-868f441e862b"
}
```

or

```
{
  "error": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.

Status Code	Description
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

### 5.1.4 Creating a VBS Backup (Native OpenStack API)

#### Function

This API is used to create a VBS backup.

#### URI

- URI format  
POST /v2/{project\_id}/backups
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .

## Request

- Parameter description

Parameter	Mandatory	Type	Description
backup	Yes	dict	Backup to be created. For details, see the <b>backup</b> field description.

- backup** field description

Parameter	Mandatory	Type	Description
volume_id	Yes	string	ID of the disk to be backed up
snapshot_id	Yes	string	Snapshot ID of the disk to be backed up
name	No	string	Backup name. The value is a string of 1 to 64 characters that can contain digits, letters, underscores (_), and hyphens (-), not starting with <b>auto</b> .
description	No	string	Backup description. The value consists of 0 to 255 characters and must not contain a greater-than sign (>) or less-than sign (<).
container	No	string	Backup container. This parameter is reserved and will be skipped.
incremental	No	boolean	Whether it is an incremental backup. The value <b>true</b> indicates an incremental backup and <b>false</b> indicates a full backup. By default, VBS generates a full backup for the initial backup operation and incremental backups for subsequent backup operations. Therefore, this parameter is skipped.

Parameter	Mandatory	Type	Description
force	No	boolean	Whether to forcibly back up the attached disks. <b>true</b> indicates a forcible backup and <b>false</b> indicates a non-forcible backup. The value defaults to <b>false</b> .
project_id	No	string	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .

- Example request

```
{
  "backup": {
    "volume_id": "c68ae7fb-0aa5-4a97-ab01-ed02c5b7e768",
    "snapshot_id": "2bb856e1-b3d8-4432-a858-09e4ce939389",
    "name": "backup1",
    "description": "Backup_Demo"
  }
}
```

## Response

- Parameter description

Parameter	Type	Description
backup	dict	Information about the created backup
id	string	Backup ID
name	string	Backup name
links	list<dict>	Information about the backup URL
href	string	Backup URL
rel	string	Relationship between the query result and <b>href</b>

- Example response

```
{
  "backup": {
    "id": "54ba0e69-48a0-4a77-9cdf-a7979a7e2648",
    "links": [
      {
        "href": "https://volume.Region.dc1.domainname.com/v2/5751d8c3f2f6415993ee4326b41630ec/backups/54ba0e69-48a0-4a77-9cdf-a7979a7e2648",
        "rel": "self"
      },
      {
        "href": "https://volume.Region.dc1.domainname.com/5751d8c3f2f6415993ee4326b41630ec/backups/54ba0e69-48a0-4a77-9cdf-a7979a7e2648",
        "rel": "bookmark"
      }
    ],
    "name": "backup1"
  }
}
```

or

```
{
  "badRequest": {
    "code": "XXXX",
    "message": "XXX"
  }
}
```

## Status Codes

- Normal  
202
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.1.5 Querying Summary Information About VBS Backups (Native OpenStack API)

### Function

This API is used to query summary information about VBS backups.

### URI

- URI format  
GET /v2/{project\_id}/backups
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .

- Request filter parameter description

Parameter	Mandatory	Type	Description
name	No	string	Name of the backups to be queried. This parameter is used to query the backups whose names are specified character strings.
status	No	string	Status of the backups to be queried. This parameter is used to query the backups in a specified state. The value can be <b>available</b> , <b>error</b> , <b>restoring</b> , <b>creating</b> , <b>deleting</b> , or <b>error_restoring</b> .
offset	No	int	Offset of the queried information
limit	No	int	Maximum number of query results that can be returned
volume_id	No	string	Disk ID of the backups to be queried. It is used to query the backups for specific disks.

- Example request  
GET /v2/{project\_id}/backups?name=backup&status=error&limit=10&volume\_id=7d7c6fbe-d7ee-4b4d-8bae-bdd08b5604bb

## Request

None

## Response

- Parameter description

Parameter	Type	Description
backups	list<dict>	Backup list returned by the query request. For details, see the <b>backup</b> field description.

- backup** field description

Parameter	Type	Description
id	string	Backup ID
links	list<dict>	Backup URL. For details, see the <b>links</b> field description.
name	string	Backup name
backups_links	list<dict>	Only part of a tenant's backup information is queried, such as query by page with the <b>limit</b> specified and when the number of backups exceeds 1000.

- links** field description

Parameter	Type	Description
href	string	URL of the last backup queried
rel	string	Relationship between the query result and <b>href</b> . The value <b>next</b> indicates that some backups are not obtained.

- Example response

```
{
  "backups": [
    {
      "id": "1d1139d8-8989-49d3-8aa1-83eb691e6db2",
      "links": [
        {
          "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups/1d1139d8-8989-49d3-8aa1-83eb691e6db2",
          "rel": "self"
        }
      ],
      "name": "bookmark"
    }
  ]
}
```

```

    }
  ],
  "name": null
},
{
  "id": "b3cf7a16-decc-4beb-8077-682737d94a58",
  "links": [
    {
      "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups/b3cf7a16-decc-4beb-8077-682737d94a58",
      "rel": "self"
    },
    {
      "href": "http://192.168.82.222:8776/b23b579f08c84228b9b4673c46f0c442/backups/b3cf7a16-decc-4beb-8077-682737d94a58",
      "rel": "bookmark"
    }
  ],
  "name": null
}
],
"backups_links": [
  {
    "href": "http://192.168.82.222:8776/b23b579f08c84228b9b4673c46f0c442/backups?limit=1&offset=1&marker=b3cf7a16-decc-4beb-8077-682737d94a58",
    "rel": "next"
  }
]
}

```

## Status Codes

- Normal  
200
- Abnormal

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



Status Code	Description
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.1.6 Querying Details About VBS Backups (Native OpenStack API)

### Function

This API is used to query the details about VBS backups.

### URI

- URI format  
GET /v2/{project\_id}/backups/detail
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .

- **Request filter** parameter description

Parameter	Mandatory	Type	Description
name	No	string	Name of the backups to be queried. This parameter is used to query the backups whose names are specified character strings.
status	No	string	Status of the backups to be queried. This parameter is used to query the backups in a specified state. The value can be <b>available</b> , <b>error</b> , <b>restoring</b> , <b>creating</b> , <b>deleting</b> , or <b>error_restoring</b> .
sort_key	No	string	Sorts by attribute. Possible values are <b>name</b> , <b>status</b> , <b>container_format</b> , <b>disk_format</b> , <b>size</b> , <b>id</b> , <b>created_at</b> , and <b>updated_at</b> . The default value is <b>created_at</b> . This API uses the natural sort direction of the <b>sort_key</b> attribute.
sort_dir	No	string	Sorts by a set of one or more sort direction and attribute ( <b>sort_key</b> ) combinations. If you omit the sort direction in a set, the value defaults to <b>desc</b> .
offset	No	int	Offset of the queried information
limit	No	int	Maximum number of query results that can be returned
volume_id	No	string	Disk ID of the backups to be queried. It is used to query the backups for specific disks.

- Example request

```
GET /v2/{project_id}/backups/detail?name=backup&status=error&limit=10&volume_id=7d7c6fbe-d7ee-4b4d-8bae-bdd08b5604bb
```

## Request

None

## Response

- Parameter description

Parameter	Type	Description
backups	list<dict>	List of queried backups
status	string	Backup status
description	string	Backup description
links	list<dict>	Backup URL

Parameter	Type	Description
availability_zone	string	AZ where the backup resides
volume_id	string	Source disk ID of the backup
fail_reason	string	Cause of the backup failure
id	string	Backup ID
size	int	Backup size
object_count	int	Number of objects on Object Storage Service (OBS) for the disk data
container	string	Container of the backup
name	string	Backup name
created_at	string	Backup creation time
os-bak-tenant-attr:tenant_id	string	ID of the project that owns the VBS backup
service_metadata	string	Backup metadata
updated_at	string	Time when the backup was updated
data_timestamp	string	Current time
has_dependent_backups	boolean	Whether a dependent backup exists. VBS generates a full backup for the initial backup operation and incremental backups for subsequent backup operations. Therefore, this parameter will be skipped.
snapshot_id	string	ID of the snapshot associated with the backup
is_incremental	boolean	Whether the backup is an incremental backup. VBS generates a full backup for the initial backup operation and incremental backups for subsequent backup operations. Therefore, this parameter will be skipped.
backups_links	list<dict>	Only part of a tenant's backup information is queried, such as query by page with the <b>limit</b> specified and when the number of backups exceeds 1000.
href	string	URL of the last backup queried
rel	string	Relationship between the query result and <b>href</b> . The value <b>next</b> indicates that some backups are not obtained.

- **service\_metadata** parameter description

Parameter	Type	Description
DL	int	<b>0</b> : non-deduplication and non-compression; <b>1</b> : deduplication and non-compression; <b>2</b> : non-deduplication and compression; <b>3</b> : deduplication and compression If this key is not specified, the value is 0 (non-deduplication and non-compression).
VK	string	Encryption VK of an encrypted volume. The value is a string of 64 characters.
bootable	boolean	Whether the disk is the boot disk
backupurl	string	Backup image ID on the backup system
SP	string	Path name of the backup image in the storage unit
VMID	string	ID of the VM to which the backup image belongs
ST	int	Backup service type. <b>0</b> : disk backup; <b>1</b> : VM backup; <b>4</b> : disk backup copy, <b>5</b> : VM backup copy. If this tag does not exist, disk backup is specified.
BT	int	Backup storage type
SS	int	Space saving rate
BP	string	Storage unit path
CMKID	string	CMK ID of an encrypted volume. The content is UUID and contains 36 characters.
progress	int	Backup progress
CS	int	Total backup data of the chain where the backup is located. The unit is MB.
VT	string	Production storage disk type
OMID	string	Host ID of the job execution node
Type	int	Backup type. <b>0</b> : full backup; <b>1</b> : incremental backup
ebk_T_I	string	Job ID of the backup system
AT	float	Average rate (Average Throughput). The unit is MB/s. One digit is reserved after the decimal point.

- **description** parameter description

Parameter	Type	Description
DESC	string	Backup description
INC	int	Whether the backup request was an incremental backup call. <b>1</b> : incremental backup; <b>0</b> : full backup

- Example response

```
{
  "backups": [
    {
      "status": "error",
      "description": null,
      "links": [
        {
          "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups/1d1139d8-8989-49d3-8aa1-83eb691e6db2",
          "rel": "self"
        },
        {
          "href": "http://192.168.82.222:8776/b23b579f08c84228b9b4673c46f0c442/backups/1d1139d8-8989-49d3-8aa1-83eb691e6db2",
          "rel": "bookmark"
        }
      ],
      "availability_zone": null,
      "volume_id": "2748f2f2-4394-4e6e-af8d-8dd34496c024",
      "fail_reason": "Connection to swift failed: [Errno 111] ECONNREFUSED",
      "id": "1d1139d8-8989-49d3-8aa1-83eb691e6db2",
      "size": 1,
      "object_count": null,
      "container": "volumebackups",
      "name": null,
      "created_at": "2013-06-27T08:48:03.000000",
      "os-bak-tenant-attr:tenant_id": "b23b579f08c84228b9b4673c46f0c442",
      "service_metadata": " {\"bootable\": false, \"backupurl\": \"58d94782-6509-45ad-9442-970d2a005050\", \"BackupSize\": 0, \"progress\": \"0\", \"snap_id\": \"665e411f5d87431ca98c199fbd4a64fd\", \"Type\": 0} "
    },
    {
      "status": "error",
      "description": null,
      "links": [
        {
          "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups/80e17946-6e56-46e0-9547-e9ba4f1619bd",
          "rel": "self"
        },
        {
          "href": "http://192.168.82.222:8776/b23b579f08c84228b9b4673c46f0c442/backups/80e17946-6e56-46e0-9547-e9ba4f1619bd",
          "rel": "bookmark"
        }
      ],
      "availability_zone": null,
      "volume_id": "2748f2f2-4394-4e6e-af8d-8dd34496c024",
      "fail_reason": "Connection to swift failed: [Errno 111] ECONNREFUSED",
      "id": "80e17946-6e56-46e0-9547-e9ba4f1619bd",
      "size": 1,
      "object_count": null,
      "container": "volumebackups",
      "name": null,
    }
  ]
}
```

```

"created_at": "2013-06-27T08:56:58.000000"
},
{
  "status": "error",
  "description": null,
  "links": [
    {
      "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups/b3cf7a16-decc-4beb-8077-682737d94a58",
      "rel": "self"
    },
    {
      "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups/b3cf7a16-decc-4beb-8077-682737d94a58",
      "rel": "bookmark"
    }
  ],
  "availability_zone": null,
  "volume_id": "2748f2f2-4394-4e6e-af8d-8dd34496c024",
  "fail_reason": "Connection to swift failed: [Errno 111] ECONNREFUSED",
  "id": "b3cf7a16-decc-4beb-8077-682737d94a58",
  "size": 1,
  "object_count": null,
  "container": "volumebackups",
  "name": null,
  "created_at": "2013-06-27T08:46:31.000000"
},
"backups_links": [
  {
    "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups?limit=1&offset=1&marker=b3cf7a16-decc-4beb-8077-682737d94a58",
    "rel": "next"
  }
]
}

```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

### 5.1.7 Querying Details About a VBS Backup (Native OpenStack API)

#### Function

This API is used to query details about a VBS backup.

#### URI

- URI format  
GET /v2/{project\_id}/backups/{backup\_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .
backup_id	Yes	Backup ID

## Request

None

## Response

- Parameter description

Parameter	Type	Description
backup	dict	List of queried backups
status	string	Backup status
description	string	Backup description
links	list<dict>	Backup URL
availability_zone	string	AZ where the backup resides
volume_id	string	Source disk ID of the backup
fail_reason	string	Cause of the backup failure
id	string	Backup ID
size	int	Backup size
object_count	int	Number of objects on OBS for the disk data
container	string	Container of the backup
name	string	Backup name
created_at	string	Backup creation time
os-bak-tenant-attr:tenant_id	string	ID of the project that owns the VBS backup
service_metadata	string	Backup metadata
updated_at	string	Time when the backup was updated
data_timestamp	string	Current time
has_dependent_backups	boolean	Whether a dependent backup exists
snapshot_id	string	ID of the snapshot associated with the backup
is_incremental	boolean	Whether the backup is an incremental backup

- service\_metadata** parameter description



Parameter	Type	Description
DL	int	<b>0</b> : non-deduplication and non-compression; <b>1</b> : deduplication and non-compression; <b>2</b> : non-deduplication and compression; <b>3</b> : deduplication and compression. If this key is not specified, the value is <b>0</b> (non-deduplication and non-compression).
VK	string	Encryption VK of an encrypted volume. The value is a string of 64 characters.
bootable	boolean	Whether the disk is the boot disk
backupurl	string	Backup image ID on the backup system
SP	string	Path name of the backup image in the storage unit
VMID	string	ID of the VM to which the backup image belongs
ST	int	Backup service type. <b>0</b> : disk backup; <b>1</b> : VM backup; <b>4</b> : disk backup copy, <b>5</b> : VM backup copy. If this tag does not exist, disk backup is specified.
BT	int	Backup storage type
SS	int	Space saving rate
BP	string	Storage unit path
CMKID	string	CMK ID of an encrypted volume. The content is UUID and contains 36 characters.
progress	int	Backup progress
CS	int	Total backup data of the chain where the backup is located. The unit is MB.
VT	string	Production storage disk type
OMID	string	Host ID of the job execution node
Type	int	Backup type. <b>0</b> : full backup; <b>1</b> : incremental backup
ebk_T_I	string	Job ID of the backup system
AT	float	Average rate (Average Throughput). The unit is MB/s. One digit is reserved after the decimal point.

- **description** parameter description

Parameter	Type	Description
DESC	string	Backup description
INC	int	Whether the backup request was an incremental backup call. <b>1</b> : incremental backup; <b>0</b> : full backup

- Example response

```
{
  "backup": {
    "status": "error",
    "description": null,
    "links": [
      {
        "href": "http://192.168.82.222:8776/v2/b23b579f08c84228b9b4673c46f0c442/backups/1d1139d8-8989-49d3-8aa1-83eb691e6db2",
        "rel": "self"
      },
      {
        "href": "http://192.168.82.222:8776/b23b579f08c84228b9b4673c46f0c442/backups/1d1139d8-8989-49d3-8aa1-83eb691e6db2",
        "rel": "bookmark"
      }
    ],
    "availability_zone": null,
    "volume_id": "2748f2f2-4394-4e6e-af8d-8dd34496c024",
    "fail_reason": "Connection to swift failed: [Errno 111] ECONNREFUSED",
    "id": "1d1139d8-8989-49d3-8aa1-83eb691e6db2",
    "size": 1,
    "object_count": null,
    "container": "volumebackups",
    "name": null,
    "created_at": "2013-06-27T08:48:03.000000",
    "os-bak-tenant-attr:tenant_id": "b23b579f08c84228b9b4673c46f0c442",
    "service_metadata": " {\\"bootable\\": false, \\"backupurl\\": \\"58d94782-6509-45ad-9442-970d2a005050\\", \\"BackupSize\\": 0, \\"progress\\": \\"0\\", \\"snap_id\\": \\"665e411f5d87431ca98c199fbd4a64fd\\", \\"Type\\": 0} "
  }
}
```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.

Status Code	Description
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

### 5.1.8 Querying the Job Status

#### Function

This API is used to query the execution status of a job, such as VBS backup creation, VBS backup deletion, and VBS backup-based disk restoration.

#### URI

- URI format  
GET /v1/{project\_id}/jobs/{job\_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .
job_id	Yes	Job ID

## Request

None

## Response

- Parameter description

Parameter	Type	Description
status	string	Job status <ul style="list-style-type: none"> <li><b>SUCCESS:</b> The job is successfully executed.</li> <li><b>RUNNING:</b> The job is in progress.</li> <li><b>FAIL:</b> The job failed.</li> <li><b>INIT:</b> The job is being initialized.</li> </ul>
entities	map<string, string>	Response to the job. Each type of job has different contents.
job_id	string	Job ID
job_type	string	Job type
begin_time	string	Time when the job started
end_time	string	Time when the job finished
error_code	string	Error code returned after the job execution fails
fail_reason	string	Cause of the execution failure
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

Parameter	Type	Description
sub_jobs	list	Execution information about a sub-job. When no sub-job exists, the value of this parameter is left blank. The structure of each sub-job is similar to that of the parent job.

- Example response

```
{
  "status": "SUCCESS",
  "entities": {
    "bks_create_volume_name": "autobk_volume",
    "backup_id": "ba5401a2-7cd2-4c01-8c0d-c936ab412d6d",
    "volume_id": "7e5fdc5a-5e36-4b22-8bcc-7f17037290cc",
    "snapshot_id": "a77a96bf-dd18-40bf-a446-fdcefc1719ec"
  },
  "job_id": "4010b39b5281d3590152874bfa3b1604",
  "job_type": "bksCreateBackup",
  "begin_time": "2016-01-28T16:14:09.466Z",
  "end_time": "2016-01-28T16:25:27.690Z",
  "error_code": null,
  "fail_reason": null
}
```

or

```
{
  "error": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

### 5.1.9 Deleting a VBS Backup (Native OpenStack API)

#### Function

This API is used to delete a VBS backup.

#### URI

- URI format  
DELETE /v2/{project\_id}/backups/{backup\_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .
backup_id	Yes	ID of the backup to be deleted

## Request

None

## Response

- Parameter description

Parameter	Type	Description
message	string	Error message returned after an error occurs
code	int	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

None

or

```
{
  "itemNotFound": {
    "message": "Backup 592a0c4d-65a3-4051-8d51-1e2b6401b2d8 could not be found.",
    "code": 404 }
}
```

## Status Codes

- Normal  
202
- Abnormal

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

Status Code	Description
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

### 5.1.10 Restoring a Disk Using a VBS Backup (Native OpenStack API)

#### Function

This API is used to restore a disk using a VBS backup.

#### URI

- URI format  
POST /v2/{project\_id}/backups/{backup\_id}/restore
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .
backup_id	Yes	ID of the backup used to restore a disk

#### Request

- Parameter description



Parameter	Mandatory	Type	Description
restore	Yes	dict	Information about the disk to be restored
volume_id	Yes	string	ID of the disk to be restored

- Example request

```
{
  "restore": {
    "volume_id": "2748f2f2-4394-4e6e-af8d-8dd34496c024"
  }
}
```

## Response

- Parameter description

Parameter	Type	Description
backup_id	String	Backup ID
volume_id	String	Disk ID
volume_name	String	Disk name

- Example response

```
{
  "restore": {
    "backup_id": "1d1139d8-8989-49d3-8aa1-83eb691e6db2",
    "volume_id": "2748f2f2-4394-4e6e-af8d-8dd34496c024",
    "volume_name": "test_volume"
  }
}
```

## Status Codes

- Normal  
202
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page or resources.
405 Method Not Allowed	You are not allowed to use the method specified in the request.

Status Code	Description
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.2 Backup Policies

### 5.2.1 Creating a Backup Policy

#### Function

This API is used to create a backup policy. A tenant can create a maximum of 10 backup policies.

#### URI

- URI format  
POST /v2/{project\_id}/backuppolicy
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID

## Request

- Parameter description

Parameter	Mandatory	Type	Description
backup_policy_name	Yes	string	Backup policy name The name can contain 1 to 64 characters consisting of letters, digits, underscores (_), or hyphens (-).
scheduled_policy	Yes	dict	Details about the scheduling policy
start_time	Yes	string	Backup execution time (UTC), in the format of <b>HH:mm</b> You need to set the execution time to a full hour. To set multiple backup execution times, enter them in ascending order by local time. For example, if your local time is 2 hours ahead of UTC and you want to perform backups at the local times 00:00, 02:00, and 04:00, set this parameter to <b>22:00,00:00,02:00</b> (UTC times) and <b>time_zone</b> to <b>UTC+02:00</b> .
frequency	Yes	integer	Backup interval (1 to 30 days)
rentention_num	No \	integer	Number (from 2 to 99) of retained backups
remain_first_backup_of_curMonth	No	string	Whether to retain the first backup in the current month <ul style="list-style-type: none"> <li>Y</li> <li>N</li> </ul>
status	Yes	string	Backup policy status <ul style="list-style-type: none"> <li>ON</li> <li>OFF</li> </ul>

- Example request

```
{
  "backup_policy_name": "policy_01",
  "scheduled_policy": {
    "remain_first_backup_of_curMonth": "Y",
    "rentention_num": 10,
    "frequency": 1,
    "start_time": "12:00",
```

```

    "status" : "ON"
  }
}

```

## Response

- Parameter description

Parameter	Type	Description
backup_policy_id	string	Backup policy ID returned if the operation is successful
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```

{
  "backup_policy_id": "af8a20b0-117d-4fc3-ae53-aa3968a4f870"
}

```

or

```

{
  "error": {
    "code": "XXXX",
    "message": "XXX"
  }
}

```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.2.2 Querying Backup Policies

### Function

This API is used to query all backup policies of a tenant.

### URI

- URI format  
GET /v2/{project\_id}/backuppolicy
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID

### Request

None

## Response

- Parameter description

Parameter	Type	Description
backup_policies	list<dict>	List of backup policies
backup_policy_name	string	Backup policy name
scheduled_policy	dict	Details about the scheduling policy
start_time	string	Backup execution time (on a full hour), which is expressed in the UTC format.
frequency	integer	Backup interval (1 to 14 days)
rentention_num	integer	Number of retained backups. The value must be an integer from 2 to 14.
remain_first_backup_of_curMonth	string	Whether to retain the first backup in the current month <ul style="list-style-type: none"> <li>Y</li> <li>N</li> </ul>
status	string	Backup policy status <ul style="list-style-type: none"> <li>ON</li> <li>OFF</li> </ul>
backup_policy_id	string	Backup policy ID
policy_resource_count	integer	Number of volumes associated with the backup policy
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "backup_policies": [
    {
      "backup_policy_id": "XX",
      "backup_policy_name": "plan01",
      "scheduled_policy": {
        "remain_first_backup_of_curMonth": "Y",
        "rentention_num": 10,
        "frequency": 1,
        "start_time": "12:00",
        "status": "ON"
      },
      "policy_resource_count": 0
    },
    {
      "backup_policy_id": "YY",
```

```

"backup_policy_name ": "plan02",
"scheduled_policy" : {
  "remain_first_backup_of_curMonth" : "Y",
  "rentention_num" : 10,
  "frequency" : 1,
  "start_time" : "14:00",
  "status" : "ON"
},
"policy_resource_count": 10
}]
}

```

or

```

{
  "error": {
    "code": "XXXX",
    "message": "XXX"
  }
}

```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.

Status Code	Description
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

### 5.2.3 Modifying a Backup Policy

#### Function

This API is used to modify a backup policy.

#### URI

- URI format  
PUT /v2/{project\_id}/backuppolicy/{policy\_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID
policy_id	Yes	Backup policy ID

#### Request

- Parameter description

Parameter	Mandatory	Type	Description
backup_policy_name	No	string	Backup policy name The name is a string of 1 to 64 characters consisting of letters, digits, underscores (_), and hyphens (-). It cannot start with <b>default</b> . The default backup policy cannot be renamed.
scheduled_policy	No	dict	Details about the scheduling policy



Parameter	Mandatory	Type	Description
start_time	No	string	Backup execution time (UTC), in the format of <b>HH:mm</b> You need to set the execution time to a full hour. To set multiple backup execution times, enter them in ascending order by local time. For example, if your local time is 2 hours ahead of UTC and you want to perform backups at the local times 00:00, 02:00, and 04:00, set this parameter to <b>22:00,00:00,02:00</b> (UTC times) and <b>time_zone</b> to <b>UTC+02:00</b> .
frequency	Yes	integer	Backup interval (1 to 14 days)
rentention_num	No	integer	Number of retained backups. The value must be an integer from 2 to 14.
remain_first_backup_of_curMonth	No	string	Whether to retain the first backup in the current month <ul style="list-style-type: none"> <li>• Y</li> <li>• N</li> </ul>
status	No	string	Backup policy status <ul style="list-style-type: none"> <li>• ON</li> <li>• OFF</li> </ul>

- Example request

```
{
  "backup_policy_name": "policy_01",
  "scheduled_policy": {
    "remain_first_backup_of_curMonth": "Y",
    "rentention_num": 10,
    "week_frequency": ["MON"],
    "start_time": "12:00",
    "status": "ON"
  },
}
```

## Response

- Parameter description

Parameter	Type	Description
backup_policy_id	string	Backup policy ID returned if the operation is successful

Parameter	Type	Description
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "backup_policy_id": "af8a20b0-117d-4fc3-ae53-aa3968a4f870"
}
```

or

```
{
  "error": {
    "code": "XXXX",
    "message": "XXX"
  }
}
```

## Status Code

- Normal  
200
- Abnormal

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

Status Code	Description
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.2.4 Deleting a Backup Policy

### Function

This API is used to delete a backup policy.

### URI

- URI format  
DELETE /v2/{project\_id}/backuppolicy/{policy\_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID
policy_id	Yes	Backup policy ID

### Request

None

### Response

- Parameter description

Parameter	Type	Description
message	string	Error message returned after an error occurs

Parameter	Type	Description
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

None

or

```
{
  "error": {
    "code": "XXXX",
    "message": "XXX"
  }
}
```

## Status Codes

- Normal  
204
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.

Status Code	Description
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.2.5 Associating Resources with a Backup Policy

### Function

This API is used to associate one or more resources with a backup policy.

### URI

- URI format  
POST /v2/{project\_id}/backuppolicyresources
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID For details about how to obtain the project ID, see <a href="#">6.3 Obtaining a Project ID</a> .

### Request

- Parameter description

Parameter	Mandatory	Type	Description
backup_policy_id	Yes	string	Backup policy ID
resources	Yes	list<dict>	Information about the associated resource
resource_id	Yes	string	Resource ID

Parameter	Mandatory	Type	Description
resource_type	Yes	string	Resource type. The options are as follows: <ul style="list-style-type: none"> <li>volume</li> </ul>

- Example request

```
{
  "backup_policy_id": "915d1fd8-63cb-4054-a2b0-2778210e3a75",
  "resources": [{
    "resource_id": "0f187b65-8d0e-4fc0-9096-3b55d330531e",
    "resource_type": "volume"
  }, {
    "resource_id": "0f187b65-8d0e-4fc0-9096-3b55d330531d",
    "resource_type": "volume"
  }
}]
```

## Response

- Parameter description

Parameter	Type	Description
success_resources	list<dict>	List of successfully associated resources
resource_id	string	Resource ID
resource_type	string	Resource type
availability_zone	string	AZ to which the resource belongs
os_vol_host_attr	string	Point of delivery (POD) to which the resource belongs
fail_resources	list<dict>	List of the resources that fail to be associated
resource_id	string	Resource ID
resource_type	string	Resource type
availability_zone	string	AZ to which the resource belongs
os_vol_host_attr	string	POD to which the resource belongs
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "success_resources": [
    {
```

```

    "resource_id": "bce8d47a-af17-4169-901f-4c7ae9f29c2c",
    "os_vol_host_attr": "pod01.",
    "availability_zone": "",
    "resource_type": "volume"
  }
],
"fail_resources": [ ]
}

```

or

```

{
  "error": {
    "code": "XXXX",
    "message": "XXX"
  }
}

```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.

Status Code	Description
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.2.6 Disassociating Resources from a Backup Policy

### Function

This API is used to disassociate one or more resources from a backup policy.

### URI

- URI format  
POST /v2/{project\_id}/backuppolicyresources/{policy\_id}/deleted\_resources
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID
policy_id	Yes	Backup policy ID

### Request

- Parameter description

Parameter	Mandatory	Type	Description
resources	Yes	list<dict>	Information about the associated resource
resource_id	Yes	string	Resource ID

- Example request

```
{
  "resources": [
    {
      "resource_id": "bce8d47a-af17-4169-901f-4c7ae9f29c2c"
    }
  ]
}
```



## Response

- Parameter description

Parameter	Type	Description
success_resources	list<dict>	List of successfully disassociated resources
resource_id	string	Resource ID
fail_resources	list<dict>	List of the resources that fail to be disassociated
resource_id	string	Resource ID
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "success_resources": [],
  "fail_resources": [
    {
      "resource_id": "bbba7509-f457-4732-97f1-a8e24b6ed9bc"
    }
  ]
}
```

or

```
{
  "error": {
    "code": "XXXX",
    "message": "XXX"
  }
}
```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.

Status Code	Description
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.2.7 Executing a Backup Policy At Once

### Function

This API is used to back up resources associated with a backup policy at once.

### URI

- URI format  
POST /v2/{project\_id}/backuppolicy/{policy\_id}/action
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID
policy_id	Yes	Backup policy ID

## Request

None

## Response

- Parameter description

Parameter	Type	Description
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

None

or

```
{
  "error": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```

## Status Codes

- Normal  
204
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
407 Proxy Authentication Required	You must use the proxy server for authentication so that the request can be processed.

Status Code	Description
408 Request Timeout	The request timed out.
409 Conflict	The request could not be processed due to a conflict.
500 Internal Server Error	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).

## 5.2.8 Enabling or Disabling a Backup Policy

### Function

This API is used to enable or disable a backup policy. After a backup policy is enabled, it will be scheduled based on the specified time. After a backup policy is disabled, it will not be scheduled.

Set the backup policy status to **ON** or **OFF**. For details, see [5.2.3 Modifying a Backup Policy](#).

Parameter	Mandatory	Type	Description
status	Yes	string	Backup policy status <ul style="list-style-type: none"> <li>ON</li> <li>OFF</li> </ul>

## 5.2.9 Querying Backup Jobs Triggered by a Backup Policy

### Function

This API is used to query the status of backup jobs triggered by a backup policy.

## URI

- URI format  
GET /v2/{project\_id}/backuppolicy/{policy\_id}/backuptasks
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Project ID
policy_id	Yes	Backup policy ID

- Request filter parameter description

Parameter	Mandatory	Type	Description
sort_order	No	string	Sorting order. Possible values are <b>asc</b> (ascending) and <b>desc</b> (descending).
limit	No	integer	Maximum number of query results that can be returned. The default value is 20.
marker	No	string	Start number from which backup jobs are queried. The value is the backup job ID.
job_id	No	string	Backup job ID
status	No	string	Backup job status <ul style="list-style-type: none"> <li>• RUNNING</li> <li>• EXECUTE_TIMEOUT</li> <li>• WAITING</li> <li>• EXECUTE_FAIL</li> <li>• EXECUTE_SUCCESS</li> <li>• SKIP</li> </ul>
sort_key	No	string	Keyword for sorting query results. The value must be <b>created_at</b> .
offset	No	integer	Query offset. The default value is 0.

- Example request  
GET /v2/{project\_id}/backuppolicy/{policy\_id}/backuptasks?limit=10

## Request

None

## Response

- Parameter description

Parameter	Type	Description
count	integer	Total number of queried jobs
tasks	list<dict>	Details about the backup jobs
status	string	Backup job status <ul style="list-style-type: none"> <li>• RUNNING</li> <li>• EXECUTE_TIMEOUT</li> <li>• WAITING</li> <li>• EXECUTE_FAIL</li> <li>• EXECUTE_SUCCESS</li> <li>• SKIP</li> </ul>
job_id	string	Backup job ID
created_at	string	Time the backup job was created. The time is in UTC format, for example, 2016-12-02T09:06:46.706.
finished_at	string	Time the backup job was completed. The time is in UTC format, for example, 2016-12-02T13:00:00.121.
backup_name	string	Backup name
resource_id	string	Resource ID
resource_type	string	Resource type
vbs_job_id	string	VBS backup job ID
message	string	Error message returned after an error occurs
code	string	Error code returned after an error occurs For details about error codes, see <a href="#">6.2 Error Codes</a> .

- Example response

```
{
  "tasks": [
    {
      "status": "RUNNING",
      "job_id": "0781095c-b8ab-4ce5-99f3-4c5f6ff75319",
      "created_at": "2016-12-03T06:24:34.467",
      "backup_name": "autobk_a61d",
      "resource_id": "f47a4ab5-11f5-4509-97f5-80ce0dd74e37",
      "resource_type": "volume"
    },
    {
      "status": "EXECUTE_SUCCESS",
      "job_id": "c11b5a18-4559-4731-b7b3-58e2bd89cdb9",
      "created_at": "2016-12-02T09:06:46.706",
      "finished_at": "2016-12-02T13:00:00.121",
      "backup_name": "autobk_e6d2",
    }
  ]
}
```

```

    "resource_id": "f47a4ab5-11f5-4509-97f5-80ce0dd74e37",
    "resource_type": "volume"
  }
],
"count": 2
}

```

or

```

{
  "error": {
    "message": "XXXX",
    "code": "XXX"
  }
}

```

## Status Codes

- Normal  
200
- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.

Status Code	Description
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## Error Codes

For details, see [6.2 Error Codes](#).



# 6 Appendix

[6.1 Status Codes](#)

[6.2 Error Codes](#)

[6.3 Obtaining a Project ID](#)

## 6.1 Status Codes

- Normal

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

- Abnormal

Status Code	Description
400 Bad Request	The server failed to process the request.
401 Unauthorized	You must enter the username and password to access the requested page.
403 Forbidden	You are forbidden to access the requested page.
404 Not Found	The server could not find the requested page.

Status Code	Description
405 Method Not Allowed	You are not allowed to use the method specified in the request.
406 Not Acceptable	The response generated by the server could not be accepted by the client.
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	Failed to complete the request because of an internal service error.
501 Not Implemented	Failed to complete the request because the server does not support the requested function.
502 Bad Gateway	Failed to complete the request because the request is invalid.
503 Service Unavailable	Failed to complete the request because the service is unavailable.
504 Gateway Timeout	A gateway timeout error occurred.

## 6.2 Error Codes

Status Code	Error Code	Error Message	Description	Solution
404	common.0011	query job fail	Failed to query the task.	Check whether the parameters are correct.
400	VolumeBackup.p.0014	submit job exception	Failed to submit the task.	Try again. If the fault persists, contact the technical support.
401	VolumeBackup.p.0041	api roles is null or empty	Failed to check user rights.	Add the required permissions for the user.

Status Code	Error Code	Error Message	Description	Solution
403	VolumeBackup.0042	user role is not allowed for this action	The user does not have the rights to perform operations.	Add the required permissions for the user.
401	VolumeBackup.0044	invalid token roles	User rights are invalid.	Obtain a valid token.
400	VolumeBackup.0002	api request parameter instance null	The request format is incorrect.	Use a valid format.
400	VolumeBackup.0003	api request parameter name over length	Parameter <b>name</b> in the request is too long.	Use a valid name.
400	VolumeBackup.0004	api request parameter name invalid character	Parameter <b>name</b> in the request contains invalid characters.	Use a valid name.
400	VolumeBackup.0005	api request parameter name invalid prefix	Parameter <b>name</b> in the request starts with <b>auto</b> .	Use a valid name.
400	VolumeBackup.0006	api request parameter description is invalid	Parameter <b>description</b> in the request is too long or contains invalid characters.	Use valid parameter description.
400	VolumeBackup.0007	api request parameter name is null	Parameter <b>name</b> in the request is empty.	Use a valid name.
400	VolumeBackup.0008	get assume role token fail	Failed to obtain the permission.	Use a valid token.
400	VolumeBackup.0009	call IAM api to get shadow domain ak and sk fail.	Failed to obtain the key.	For details, contact the technical support.

Status Code	Error Code	Error Message	Description	Solution
400	VolumeBackup.0010	api request parameter volume_id null	Parameter <b>volume_id</b> in the request is empty.	Use a valid disk ID.
400	VolumeBackup.0011	api request parameter volume_id invalid UUID pattern	The format of parameter <b>volume_id</b> in the request is incorrect.	Use a valid disk ID.
400	VolumeBackup.0012	volume status is not available or in-use	The disk status is not <b>available</b> or <b>in_use</b> .	Try again in an allowed state of disk.
400	VolumeBackup.0013	volume's last backup progress is not finished	The previous backup creation task is not complete.	Back up data again after the previous backup task is complete.
400	VolumeBackup.0017	fsp cinder create snapshot exception	Failed to create the snapshot.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0018	fsp cinder return null snapshot	The snapshot creation result is empty.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0019	fsp cinder get snapshot detail exception	Failed to query the snapshot during backup creation.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0020	got snapshot detail is null	The snapshot query result is empty.	Try again. If the fault persists, contact the technical support.
404	VolumeBackup.0021	volume not exists	The EVS disk does not exist or has been deleted.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0022	fsp cinder create volume exception	Failed to create the temporary disk.	Try again. If the fault persists, contact the technical support.

Status Code	Error Code	Error Message	Description	Solution
400	VolumeBackup.0023	fsp cinder return null volume	The result of creating the temporary disk is empty.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0024	fsp cinder get volume detail exception	Failed to query the temporary disk.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0025	got volume detail is null	The result of querying the temporary disk is empty.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0026	api request parameter name length is too short	Parameter <b>name</b> in the request is too short.	Use a valid name.
400	VolumeBackup.0027	fsp cinder or ebackup create backup exception	Failed to create the backup.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0028	fsp cinder or ebackup return null backup	The backup creation result is empty.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0029	fsp cinder get backup detail exception	Failed to query the backup result.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0030	got backup detail is null	The backup query result is empty.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0035	fsp cinder get volume details exception	Failed to query all disks of a user.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0036	fsp cinder get backup details exception	Failed to query all backups of a user.	Try again. If the fault persists, contact the technical support.

Status Code	Error Code	Error Message	Description	Solution
400	VolumeBackup.0037	created snapshot status is not available or query snapshot exception	Failed to query the snapshot status.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0038	created volume status is not available or query volume exception	Failed to query the status of a temporary disk.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0039	created backup status is not available or query backup exception	Failed to query the backup status.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0040	volume's backup number is over limit	The number of existing VBS backups has reached the upper limit.	Contact the administrator to increase quota.
400	VolumeBackup.0043	fsp cinder get volume or backup detail exception	Failed to query the disk or backup.	Use a correct disk or backup.
400	VolumeBackup.0049	api request tag parameter is invalid	The tag parameter is invalid.	Use a valid tag parameter.
400	VolumeBackup.0050	The number of tags exceeded	The number of tags has reached the upper limit.	Use the tag function as required.
400	VolumeBackup.0051	volume of this pod does not support backup	The disk does not support backup.	Backup is not supported currently. Contact the technical support.
400	VolumeBackup.0053	DESS volume type is not support backup	DESS disks do not support backup.	Backup is not supported currently. Contact the technical support.

Status Code	Error Code	Error Message	Description	Solution
400	VolumeBackup.0062	fsp cinder return snapshot status is error	The snapshot status is <b>error</b> .	Try again in an allowed state of disk.
400	VolumeBackup.0063	fsp cinder return temp volume status is error	The status of the temporary disk is <b>error</b> .	Try again in an allowed state of disk.
400	VolumeBackup.0064	fsp cinder return backup status is error	The backup status is <b>error</b> .	Try again in an allowed state of disk.
400	VolumeBackup.0070	query quota usage exception	Failed to query the quota information.	For details, contact the technical support.
400	VolumeBackup.0071	no enough sas volume quota num	The quota for the number of SAS disks has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0072	no enough sas volume quota bytes	The quota for the capacity of SAS disks has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0073	no enough sata volume quota num	The quota for the number of SATA disks has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0074	no enough sata volume quota bytes	The quota for the capacity of SATA disks has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0075	no enough ssd volume quota num	The quota for the number of SSD disks has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0076	no enough ssd volume quota bytes	The quota for the capacity of SSD disks has been used up.	Contact the administrator to increase quota.

Status Code	Error Code	Error Message	Description	Solution
400	VolumeBackup.0077	no enough sas snapshot quota num	The quota for the number of SAS disk snapshots has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0078	no enough sata snapshot quota num	The quota for the number of SATA disk snapshots has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0079	no enough ssd snapshot quota num	The quota for the number of SSD disk snapshots has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0080	no enough backup quota num	The quota for the number of backups has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0081	no enough backup quota bytes	The quota for the capacity of backups has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0082	no enough volume quota num	The quota for the number of disks has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0083	no enough volume quota bytes	The quota for the capacity of disks has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0084	no enough snapshot quota num	The quota for the number of snapshots has been used up.	Contact the administrator to increase quota.
400	VolumeBackup.0100	submit subjob exception in delete backup status	Failed to submit the subtask.	Try again. If the fault persists, contact the technical support.



Status Code	Error Code	Error Message	Description	Solution
400	VolumeBackup.0101	delete snapshot exception in delete backup status	Failed to delete the snapshot.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0102	delete backup exception when call openstack api	Failed to delete the backup.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0103	query backup detail exception in delete backup status	Failed to query the backup details.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0104	get glance msg from fsp failed.	Failed to obtain the image information.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0105	the url is invalid	The format of the backup deletion request is incorrect.	Use valid request parameters.
400	VolumeBackup.0109	query snapshot from fsp failed	Failed to query the snapshot during backup deletion.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0110	the backup details msg is null	Failed to query the backup.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0113	The backup has been made as an image, cannot delete it	The backup has already been used to create an image and cannot be deleted.	Delete the created image first and then the backup.
400	VolumeBackup.0123	query the backup details is null from FSP	Failed to query all backups.	Try again. If the fault persists, contact the technical support.

Status Code	Error Code	Error Message	Description	Solution
400	VolumeBackup.0125	failed to delete the backup.	Failed to perform the backup deletion operation.	Try again. If the fault persists, contact the technical support.
400	VolumeBackup.0129	Deleting this type of backups is not allowed	Deleting this type of backups is not allowed.	For details, contact the technical support.
400	VolumeBackup.0900	error with ClientException	The service is unavailable.	For details, contact the technical support.
404	VolumeBackup.0111	the volume info or backup detail is not exist	The disk to be restored or the backup used to restore the disk does not exist.	Use valid disk and backup.
400	VolumeBackup.0200	restore backup exception	Failed to restore data.	For details, contact the technical support.
400	VolumeBackup.0201	restore backup null response	The data restoration result is empty.	For details, contact the technical support.
400	VolumeBackup.0202	restore backup volume error	The disk status is <b>error</b> .	For details, contact the technical support.
400	VolumeBackup.0203	api request parameter backup_id null	Parameter <b>backup_id</b> in the request is empty.	Use a valid backup ID.
400	VolumeBackup.0204	api request parameter backup_id invalid UUID pattern	The format of parameter <b>backup_id</b> in the request is incorrect.	Use a valid backup ID.
400	VolumeBackup.0205	volume for restore state is not available	The disk status is <b>unavailable</b> .	Use a disk in a valid state.
400	VolumeBackup.0206	volume for restore is creating backup	A backup is being created for the disk.	Wait until the backup is complete and try again.

Status Code	Error Code	Error Message	Description	Solution
404	VolumeBackup.0207	query the volume backup details msg is null	The disk does not exist.	Use a valid disk.
400	VolumeBackup.0208	volumeID in body is null or empty	Parameter <b>volume_id</b> in the request is incorrect.	Use a valid disk ID.
400	VolumeBackup.0209	volume size is less than backup size	The capacity of the disk must be greater than or equal to that of the backup.	Expand the capacity of the disk.
400	VolumeBackup.0210	body in request is empty	The format of the disk restoration request is incorrect.	Use valid restoration parameters.
400	VolumeBackup.0211	Cloud disks at the disaster recovery site cannot be restored.	Cloud disks at the disaster recovery site cannot be restored.	Use valid restoration parameters.
400	VolumeBackup.0089	backup status is not available	The disk backup status is <b>unavailable</b> .	Use a backup in an allowed state.
400	AutoBackup.0000	request body is empty	The request is empty.	Use a valid request body.
400	AutoBackup.0001	request body exist empty structure	The object contained in the request is empty.	Use a valid request body.
401	AutoBackup.0002	request token is empty	The token contained in the request header is empty.	Use a valid token.
401	AutoBackup.0003	request token is expired	The token contained in the request header has expired.	Use a valid token.

Status Code	Error Code	Error Message	Description	Solution
401	AutoBackup.0005	request domain id is empty	Failed to obtain the domain ID from the token contained in the request header.	Use a valid token.
400	AutoBackup.0006	request policy id is empty	The policy ID contained in the request is empty.	Use valid request parameters.
400	AutoBackup.0008	convert request to JSON object failed	Failed to convert the request into a JSON object.	Use valid request parameters.
500	AutoBackup.0009	internal error	An exception occurred in internal system processing.	Try again. If the fault persists, contact the technical support.
400	AutoBackup.0100	normal tenant has no right to operator default policy	The tenant cannot modify the default backup policy.	For details, contact the technical support.
400	AutoBackup.0101	backup policy name length is illegal	The length of the backup policy name is invalid.	Use a valid policy length.
400	AutoBackup.0102	backup policy name is invalid	The parameter of the backup policy name is invalid.	Use a valid policy name.
400	AutoBackup.0103	schedule policy start time format error	The parameter of the backup job start time is invalid.	Use a valid backup job start time.
400	AutoBackup.0104	schedule policy status is illegal	The parameter of the backup policy status is invalid.	Use a valid policy state.

Status Code	Error Code	Error Message	Description	Solution
400	AutoBackup.0 105	schedule policy remain firstbackup of cur month is illegal	The parameter of whether to retain the first backup in the current month is invalid.	Use a valid parameter.
400	AutoBackup.0 106	schedule policy frequency is out of range	The parameter of the backup job interval is invalid.	Use a valid parameter.
400	AutoBackup.0 107	schedule policy retention num is out of range	The parameter of the number of retained backups is invalid.	Use a valid parameter.
400	AutoBackup.0 108	schedule policy retention day is out of range	The parameter of the retention days is invalid.	Use a valid parameter.
400	AutoBackup.0 109	schedule policy week frequency is illegal, must in (SUN, MON, TUE, WED, THU, FRI, SAT)	The parameter of the backup job interval is invalid.	Use a valid parameter.
400	AutoBackup.0 203	backup policy num over limit	The number of existing backup policies has reached the upper limit.	Use the policy function as required.
400	AutoBackup.0 204	number of volumes reaches limit	The number of associated volumes has reached the upper limit.	Associated the exceeded disk with a new policy.
404	AutoBackup.0 205	policyId is not exist	The policy does not exist.	Use a valid policy.
400	AutoBackup.1 100	query policy with null input or null tenantId	The queried policy does not exist.	Use a valid policy.

Status Code	Error Code	Error Message	Description	Solution
400	AutoBackup.1300	delete policy: delete policy by policyId failed	Failed to delete the policy.	Try again. If the fault persists, contact the technical support.
400	AutoBackup.1400	policy bind resources: resources illegal	The resource to be associated is invalid.	Use valid resource parameters.
400	AutoBackup.1700	execute policy: input param invalid	Failed to execute the backup policy.	Try again. If the fault persists, contact the technical support.
400	AutoBackup.0206	volume to bind is in bad status	The status of the disk to be associated is invalid.	Try again in an allowed state of disk.
400	AutoBackup.0207	resource to bind is empty	The resource to be associated is empty.	Use valid association parameters.
404	AutoBackup.0208	unable to get specified resource detail, may be incorrect resource id	Operation failed because the disk you want to associate to or disassociate from a backup policy does not exist.	Specify the operation restrictions.
400	AutoBackup.0209	resource id or resource name is empty	The resource ID or type is empty.	Use valid resource parameters.
400	AutoBackup.0210	HANA volume cannot bind to backup policy	HANA disks cannot be associated with the backup policy.	Backup is not supported currently. Contact the technical support.
400	AutoBackup.0211	bad resource type	The resource type is invalid.	Use valid resource parameters.
400	AutoBackup.0213	Unauthorized request	The request is not authorized.	Add the required permissions for the user.

Status Code	Error Code	Error Message	Description	Solution
400	AutoBackup.0 217	Snapshot quota is not enough	The snapshot quota is insufficient.	Contact the administrator to increase quota.
400	AutoBackup.0 218	Backup number quota is not enough	The backup quota is insufficient.	Contact the administrator to increase quota.
400	AutoBackup.0 220	DESS volume cannot bind to backup policy	DESS disks cannot be associated with the backup policy.	Backup is not supported currently. Contact the technical support.
400	AutoBackup.0 221	The request contains invalid parameters The request contains invalid parameters	The request cannot contain less-than signs (<) or greater-than signs (>).	Use valid parameters.
400	AutoBackup.0 222	Only specified action is supported	Only specified actions are supported.	For details, contact the technical support.
400	AutoBackup.0 225	the backup policy is being executed, failed to execute the backup task	Failed to perform the backup job because the backup policy is being executed.	Perform the job after the backup is complete.
401	AutoBackup.9 002	authorization Filter fail	An internal exception occurred in system authentication.	Try again. If the fault persists, contact the technical support.

## 6.3 Obtaining a Project ID

A project ID is required for some URLs when an API is called. Therefore, you need to obtain a project ID in advance. The steps are as follows:

1. Obtain the token.  
For details, see [Token Authentication](#).
2. Obtain a project ID.

The API for obtaining the project ID is **GET https://iam.eu-west-0.myhuaweicloud.com/v3/projects**.

Add **X-Auth-Token** to the request header and set its value to the token obtained in the preceding step.

The following is an example response. The value of **id** is the project ID to be obtained.

```
{
  "links": {},
  "projects": [
    {
      "is_domain": ,
      "description": "",
      "links": {},
      "enabled": true,
      "id": "", // Project ID
      "parent_id": "",
      "domain_id": "",
      "name": ""
    },
    ...
  ]
}
```



# A Change History

---

Released On	Description
2018-12-29	This issue is the first official release.