Elastic Volume Service

API Reference (ME-Abu Dhabi Region)

Issue	01
Date	2020-09-20

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1 Before You Start

1.1 Overview

Welcome to *Elastic Volume Service API Reference*. Elastic Volume Service (EVS) offers scalable block storage for servers. With high reliability, high performance, and rich specifications, EVS disks can be used for distributed file systems, development and testing environments, data warehouse applications, and high-performance computing (HPC) scenarios to meet diverse service requirements.

This document describes how to use application programming interfaces (APIs) to perform operations on EVS resources, such as creating, querying, deleting, and updating an EVS resource. For details about all supported operations, see **API Overview**.

Before calling an EVS API, ensure that you are familiar with the EVS concepts. For details, see **Service Overview** in the *Elastic Volume Service User Guide*.

1.2 API Calling

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

1.3 Endpoints

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

1.4 Constraints

- For detailed constraints, see the constraints described in specific APIs.

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.

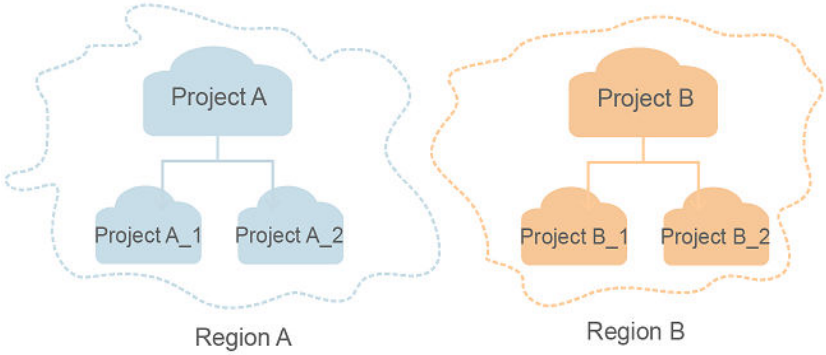
- AZ

  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



1.6 API Types/Versions/Microversions

API Type Description

EVS APIs are classified as follows:

- APIs for EVS with customized specifications, which are also referred to as APIs
- Native OpenStack APIs that comply with OpenStack community specifications, which are also referred to as OpenStack Cinder APIs

The two types of APIs offer similar functions but are used in different scenarios. OpenStack Cinder APIs are used to meet open-source ecosystem requirements, while APIs for EVS with customized specifications are developed based on native OpenStack APIs with the following enhanced functions:

API Version Description

EVS custom APIs provide multiple versions. If those APIs offer the same functions, you are advised to use the v2 APIs.

2 API Overview

EVS APIs include APIs and OpenStack Cinder APIs.

A combination of these two types of APIs allows you to use all EVS functions.

Table 2-1 API overview

Type	Subtype	Description
API	EVS disk	These APIs provide the functions, such as creating disks, deleting disks, and querying disk details.
	EVS snapshot	An EVS snapshot is a complete copy or image of the disk data at a specific time point. These APIs provide the function of rolling back the snapshot data to the disk.
OpenStack Cinder API	EVS disk	These APIs provide the functions, such as creating disks, updating disks, querying disks, querying images, and querying quotas.
	EVS disk action	These APIs provide the functions, such as expanding disks, reserving disks, exporting disk data as images, and setting the bootable attribute for disks.
	EVS snapshot	An EVS snapshot is a complete copy or image of the disk data at a specific time point. These APIs provide the functions, such as creating snapshots, querying snapshots, updating snapshot metadata, and querying snapshot metadata.
	EVS disk transfer	Through the disk transfer function, disks can be transferred from one tenant to another. After the transfer succeeds, the ownerships of the disks belong to the target tenant only. These APIs provide the functions, such as creating, accepting, deleting, and querying disk transfers.

3 Calling APIs

3.1 Making an API Request

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

Request URI

A request URI is in the following format:

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

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

Table 3-1 URI parameter description

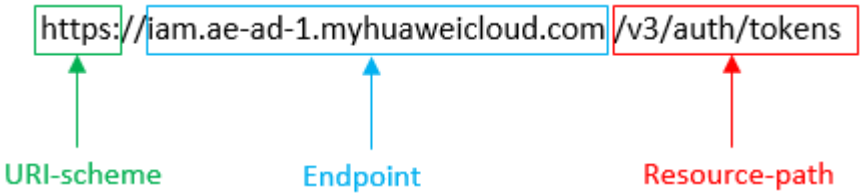
Parameter	Description
URI-scheme	Protocol used to transmit requests. All APIs use HTTPS.
Endpoint	Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from **Regions and Endpoints**. For example, the endpoint of IAM in the **UAE-Abu Dhabi** region is **iam.ae-ad-1.myhuaweicloud.com**.
resource-path	Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the **resource-path** of the API used to obtain a user token is **/v3/auth/tokens**.

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 *Parameter name=Parameter value*. For example, **?limit=10** indicates that a maximum of 10 data records will be displayed.

For example, to obtain an IAM token in the **UAE-Abu Dhabi** region, obtain the endpoint of IAM (**iam.ae-ad-1.myhuaweicloud.com**) for this region and the **resource-path** (**/v3/auth/tokens**) in the URI of the API used to **obtain a user token**. Then, construct the URI as follows:

```
https://iam.ae-ad-1.myhuaweicloud.com/v3/auth/tokens
```

Figure 3-1 Example URI



NOTE

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

Request Methods

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

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.

Method	Description
PATCH	Requests the server to update partial content of a specified resource. If the resource does not exist, a new resource will be created.

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

```
POST https://iam.ae-ad-1.myhuaweicloud.com/v3/auth/tokens
```

Request Header

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

Common request header fields are as follows.

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 *Hostname:Port number*. If the port number is not specified, the default port is used. The default port number for **https** is **443**.	No This field is mandatory for AK/SK authentication.	code.test.com or code.test.com:443
Content-Type	Specifies the type (or format) of the message body. The default value **application/json** is recommended. Other values of this field will be provided for specific APIs if any.	Yes	application/json
Content-Length	Specifies the length of the request body. The unit is byte.	No	3495

Parameter	Description	Mandatory	Example Value
X-Project-Id	Specifies the project ID. Obtain the project ID by following the instructions in **Obtaining a Project ID**.	No	e9993fc787d94b6c886cbaa340f9c0f4
X-Auth-Token	Specifies the user token. It is a response to the API for **obtaining a user token** (This is the only API that does not require authentication). After the request is processed, the value of **X-Subject-Token** in the response header is the token value.	No This field is mandatory for token authentication.	The following is part of an example token: MIIPAgYJKoZIhvcNAQcCo...ggg1BBIINPXsidG9rZ

NOTE

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

For more details, see "Authentication Using AK/SK" in **Authentication**.

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

```
POST https://iam.ae-ad-1.myhuaweicloud.com/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 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 *xxxxxxxxxxxxxxxxx* (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://iam.ae-ad-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json

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

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

3.2 Authentication

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

- Token-based authentication: Requests are authenticated using a token.
- AK/SK-based authentication: Requests are authenticated by encrypting the request body using an AK/SK pair. AK/SK-based authentication is recommended because it is more secure than token-based authentication.

Token-based Authentication

NOTE

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

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

You can obtain a token by calling the **Obtaining User Token** API. When you call the API, set **auth.scope** in the request body to **project**.

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

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

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

AK/SK-based Authentication

NOTE

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

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

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

In AK/SK-based authentication, you can use an AK/SK to sign requests based on the signature algorithm or 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 **HTTP 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 3-2 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.

Figure 3-2 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 structured format 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 format of message is error",
    "error_code": "AS.0001"
}
```

In the response body, **error_code** is an error code, and **error_msg** provides information about the error.

4 Getting Started

4.1 Creating an EVS Disk

Scenarios

This topic describes how to create an EVS disk by calling APIs. For details about how to call APIs, see **Calling APIs**.

In the following example, APIs are called to create a disk from a snapshot.

Prerequisites

You have planned the region where you want to create the disk and obtained the endpoint required for API calls. For details, see **Endpoints**.

Procedure

Step 1 Query the snapshots and obtain information of the snapshot you desire.

API: **Querying Details About EVS Snapshots**

- Example request

  https://*{endpoint}*/v2/ba546eb46e7247c9aadb566ed7a1d31f/snapshots/detail

- Example response

```
{
  "snapshots": [
    {
      "status": "available",
      "description": null,
      "updated_at": "2019-06-18T12:47:38.234689",
      "volume_id": "037cf89a-8cea-4d63-ac57-345c0ffccfc2",
      "id": "0b126d3b-f2af-404d-8d39-a42fce70065a",
      "size": 40,
      "os-extended-snapshot-attributes:progress": "100%",
      "name": "snapshot-test",
      "os-extended-snapshot-attributes:project_id": "ba546eb46e7247c9aadb566ed7a1d31f",
      "created_at": "2019-06-18T12:47:33.700070",
      "metadata": {}
    }
  ]
}
```


In the response, **id** indicates the snapshot ID.

Step 2 Create a disk from the snapshot.

API: **Creating EVS Disks**

- Example request

  POST https://*{endpoint}*/v2/ba546eb46e7247c9aadb566ed7a1d31f/cloudvolumes

```
{
    "volume": {
        "count": 1,
        "availability_zone": "az-dc-1",
        "description": "test_volume_1",
        "size": 120,
        "snapshot_id": "0b126d3b-f2af-404d-8d39-a42fce70065a",
        "name": "test_volume_1",
        "volume_type": "SATA"
    }
}
```

- Example response

```
{
  "job_id": "ff8080816b512df7016b6ab8982b496b"
}
```

----End

5 API Version Query

5.1 Querying Information of API Versions

Function

This API is used to query information of API versions.

URI

- URI format
  GET /

Request

- Example request
  ```
  GET https://{endpoint}/
  ```

Response

- Parameter description

Parameter	Type	Description
versions	Array of objects	Specifies the API versions. For details, see **Parameters in the versions field**.

- Parameters in the **versions** field

Parameter	Type	Description
min_version	String	Specifies the minimum microversion supported. If this version does not support microversions, the value is an empty string.
media-types	Array of objects	Specifies the request message type of the API version. For details, see **Parameters in the media-types field**.

Parameter	Type	Description
links	Array of objects	Specifies the URI of the API version. For details, see **Parameters in the links field**.
id	String	Specifies the ID of the API version.
updated	String	Specifies the last time when the API version was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
version	String	Specifies the maximum microversion supported. If this version does not support microversions, the value is an empty string.
status	String	Specifies the API version status. The value can be as follows: • **CURRENT**: indicates a major version. • **SUPPORTED**: indicates an earlier version which is still supported. • **DEPRECATED**: indicates a deprecated version that may be deleted later.

- Parameters in the **media-types** field

Parameter	Type	Description
type	String	Specifies the response type.
base	String	Specifies the text type.

- Parameters in the **links** field

Parameter	Type	Description
rel	String	Specifies the domain name description.
href	String	Specifies the domain name.
type	String	Specifies the response type.

- Example response

```
{
    "versions": [
        {
            "min_version": "",
            "media-types": [
                {
                    "type": "application/vnd.openstack.volume+json;version=1",
                    "base": "application/json"
                },
                {
                    "type": "application/vnd.openstack.volume+xml;version=1",
                    "base": "application/xml"
```



```
            }
        ],
        "links": [
            {
                "rel": "describedby",
                "href": "http://docs.openstack.org/",
                "type": "text/html"
            },
            {
                "rel": "self",
                "href": "https://evs.localdomain.com/v1"
            }
        ],
        "id": "v1.0",
        "updated": "2014-06-28T12:20:21Z",
        "version": "",
        "status": "SUPPORTED"
    },
    {
        "min_version": "",
        "media-types": [
            {
                "type": "application/vnd.openstack.volume+json;version=1",
                "base": "application/json"
            },
            {
                "type": "application/vnd.openstack.volume+xml;version=1",
                "base": "application/xml"
            }
        ],
        "links": [
            {
                "rel": "describedby",
                "href": "http://docs.openstack.org/",
                "type": "text/html"
            },
            {
                "rel": "self",
                "href": "https://evs.localdomain.com/v2"
            }
        ],
        "id": "v2.0",
        "updated": "2014-06-28T12:20:21Z",
        "version": "",
        "status": "SUPPORTED"
    },
    {
        "min_version": "3.0",
        "media-types": [
            {
                "type": "application/vnd.openstack.volume+json;version=1",
                "base": "application/json"
            },
            {
                "type": "application/vnd.openstack.volume+xml;version=1",
                "base": "application/xml"
            }
        ],
        "links": [
            {
                "rel": "describedby",
                "href": "http://docs.openstack.org/",
                "type": "text/html"
            },
            {
                "rel": "self",
                "href": "https://evs.localdomain.com/v3"
            }
        ],
```

```
            "id": "v3.0",
            "updated": "2016-02-08T12:20:21Z",
            "version": "3.0",
            "status": "CURRENT"
        }
    ]
}
```

Status Codes

- Normal

  300

Error Codes

For details, see **Error Codes**.

5.2 Querying Information of an API Version

Function

This API is used to query information of an API version.

URI

- URI format

  GET /{api_version}

- Parameter description

Parameter	Type	Description
api_version	String	Specifies the target API version. The value can be **v1** or **v2**.

Request

- Example request

```
GET https://{endpoint}/v2
```

Response

- Parameter description

Parameter	Type	Description
versions	Array of objects	Specifies the API version information. For details, see **Parameters in the versions field**.

- Parameters in the **versions** field

Parameter	Type	Description
min_version	String	Specifies the minimum microversion supported. If this version does not support microversions, the value is an empty string.
media-types	Array of objects	Specifies the request message type of the API version. For details, see **Parameters in the media-types field**.
links	Array of objects	Specifies the URI of the API version. For details, see **Parameters in the links field**.
id	String	Specifies the ID of the API version.
updated	String	Specifies the last time when the API version was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
version	String	Specifies the maximum microversion supported. If this version does not support microversions, the value is an empty string.
status	String	Specifies the API version status. The value can be as follows: • **CURRENT**: indicates a major version. • **SUPPORTED**: indicates an earlier version which is still supported. • **DEPRECATED**: indicates a deprecated version that may be deleted later.

- Parameters in the **media-types** field

Parameter	Type	Description
type	String	Specifies the response type.
base	String	Specifies the text type.

- Parameters in the **links** field

Parameter	Type	Description
rel	String	Specifies the domain name description.
href	String	Specifies the domain name.
type	String	Specifies the response type.

- Example response


```
{
   "versions": [
      {
         "min_version": "",
         "media-types": [
            {
               "type": "application/vnd.openstack.volume+json;version=1",
               "base": "application/json"
            },
            {
               "type": "application/vnd.openstack.volume+xml;version=1",
               "base": "application/xml"
            }
         ],
         "links": [
            {
               "rel": "describedby",
               "href": "http://docs.openstack.org/",
               "type": "text/html"
            },
            {
               "rel": "self",
               "href": "https://evs.localdomain.com/v2"
            }
         ],
         "id": "v2.0",
         "updated": "2014-06-28T12:20:21Z",
         "version": "",
         "status": "SUPPORTED"
      }
   ]
}
```


Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

6 API v2

6.1 EVS Disk

6.1.1 Creating EVS Disks

Function

This API is used to create one or multiple EVS disks.

URI

- URI format
  POST /v2/{project_id}/cloudvolumes
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

Request

- Parameter description

Parameter	Type	Mandatory	Description
volume	Object	Yes	Specifies the information of the disks to be created. For details, see **Parameters in the volume field**.

- Parameters in the **volume** field

Parameter	Type	Mandatory	Description
backup_id	String	No	Specifies the ID of the backup that can be used to create a disk. This parameter is mandatory when you use a backup to create the disk. **NOTE** For how to obtain the backup ID, see **Querying All Backups** in the *Cloud Backup and Recovery API Reference*.
availability_zone	String	Yes	Specifies the AZ where you want to create the disk. If the AZ does not exist, the disk will fail to create. **NOTE** For details about how to obtain the AZ, see **Querying All AZs**.
description	String	No	Specifies the disk description. The value can contain a maximum of 255 bytes.
size	Integer	No	Specifies the disk size, in GB. Its value can be as follows: • System disk: 1 GB to 1024 GB • Data disk: 10 GB to 32768 GB This parameter is mandatory when you create an empty disk. You can specify the parameter value as required within the value range. This parameter is mandatory when you create the disk from a snapshot. Ensure that the disk size is greater than or equal to the snapshot size. This parameter is mandatory when you create the disk from an image. Ensure that the disk size is greater than or equal to the minimum disk capacity required by **min_disk** in the image attributes. This parameter is optional when you create the disk from a backup. If this parameter is not specified, the disk size is equal to the backup size. **NOTE** If the specified parameter value is a decimal, the integral part of the value is used by default when the request is sent.

Parameter	Type	Mandatory	Description
name	String	No	Specifies the disk name. • If you create disks one by one, the **name** value is the disk name. The value can contain a maximum of 255 bytes. • If you create multiple disks (the **count** value is greater than **1**), the system automatically adds a hyphen followed by a four-digit incremental number, such as **-0000**, to the end of each disk name. For example, the disk names can be **volume-0001** and **volume-0002**. The value can contain a maximum of 250 bytes.
snapshot_id	String	No	Specifies the snapshot ID. If this parameter is specified, the disk is created from a snapshot. **NOTE** For details about how to obtain the snapshot ID, see **Querying Details About EVS Snapshots**.
imageRef	String	No	Specifies the image ID. If this parameter is specified, the disk is created from an image.
volume_type	String	Yes	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type. If the specified disk type is not available in the AZ, the disk will fail to create. **NOTE** • If the disk is created from a snapshot, the volume_type field must be the same as that of the snapshot's source disk. • For details about disk types, see **Disk Types and Disk Performance** in the *Elastic Volume Service User Guide*.

Parameter	Type	Mandatory	Description
count	Integer	No	Specifies the number of disks to be created in a batch. If this parameter is not specified, only one disk is created. You can create a maximum of 100 disks in a batch. If disks are created from a backup, batch creation is not supported, and this parameter must be set to **1**. **NOTE** If the specified parameter value is a decimal, the integral part of the value is used by default when the request is sent.
shareable	String	No	Specifies whether the disk is shareable. The value can be **true** (shared disk) or **false** (common disk). **NOTE** This field is no longer used. Use **multiattach**.
metadata	Object	No	Specifies the metadata of the created disk. The length of the key or value in the metadata cannot exceed 255 bytes. For details about **metadata**, see **Parameters in the metadata field**. Only the listed parameters can be specified when creating a disk. **NOTE** Parameter values under **metadata** cannot be **null**.
multiattach	Boolean	No	Specifies whether the disk is shareable. The default value is **false**. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.

NOTE

Specifying either two of the **backup_id**, **snapshot_id**, and **imageRef** fields is not supported.

- Parameters in the **metadata** field

Parameter	Type	Mandatory	Description
hw:passthrough	String	No	• If this parameter is set to **true**, the disk device type will be SCSI, which allows ECS OSs to directly access underlying storage media. SCSI reservation command is supported. • If this parameter is set to **false**, the disk device type will be VBD, that is, Virtual Block Device, which supports only simple SCSI read/write commands. • If this parameter does not exist, the disk device type will be VBD, the default type.
full_clone	String	No	If the disk is created from a snapshot and linked cloning needs to be used, set this parameter to **0**.

NOTE

When creating a disk, you can only specify the fields of **metadata** listed in the preceding table.

- If the disk is created from a snapshot, **hw:passthrough** is not supported, and the newly created disk has the same device type as that of the snapshot's source disk.
- If the disk is created from an image, **hw:passthrough** is not supported, and the device type of newly created disk is VBD.

- Example request

```
{
    "volume": {
        "backup_id": null,
        "count": 1,
        "availability_zone": "az-dc-1",
        "description": "test_volume_1",
        "size": 120,
        "name": "test_volume_1",
        "imageRef": null,
        "volume_type": "SSD"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
job_id	String	Specifies the task ID. **NOTE** For details about how to query the task status, see **Querying Task Status**.

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

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

or

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

6.1.2 Querying Details About All Disks

Function

This API is used to query details about all disks.

URI

- URI format

  GET /v2/{project_id}/cloudvolumes/detail

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
marker	String	No	Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.
name	String	No	Specifies the disk name. The value can contain a maximum of 255 bytes.
status	String	No	Specifies the disk status. For details, see **EVS Disk Status**.
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit.
availability_zone	String	No	Specifies the AZ.
sort_key	String	No	Specifies the keyword based on which the returned results are sorted. The value can be **id**, **status**, **size**, or **created_at**, and the default value is **created_at**.
sort_dir	String	No	Specifies the result sorting order. The default value is **desc**. • **desc**: indicates the descending order. • **asc**: indicates the ascending order.

Request

The following example shows how to query the disks in the **available** state.

- Example request
  GET https://{endpoint}/v2/{project_id}/cloudvolumes/detail?status=available

Response

- Parameter description

Parameter	Type	Description
volumes	Array of objects	Specifies the list of queried disks. For details, see **Parameters in the volumes field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volumes** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	Array of objects	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	Array of objects	Specifies the disk attachment information. For details, see **Parameters in the attachments field**.
availability_zone	String	Specifies the AZ to which the disk belongs.
source_volid	String	Specifies the source disk ID. This parameter has a value if the disk is created from a source disk. Currently, this field is not supported by EVS.
snapshot_id	String	Specifies the snapshot ID. This parameter has a value if the disk is created from a snapshot.
description	String	Specifies the disk description.
os-vol-tenant-attr:tenant_id	String	Specifies the ID of the tenant to which the disk belongs. The tenant ID is actually the project ID.
volume_image_metadata	Object	Specifies the metadata of the disk image. **NOTE** For details about **volume_image_metadata**, see **Querying Image Details** in the *Image Management Service API Reference*.

Parameter	Type	Description
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
size	Integer	Specifies the disk size, in GB.
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
metadata	Object	Specifies the disk metadata. For details, see **Parameters in the metadata field**. If **metadata** does not contain the **hw:passthrough** field, the disk device type is VBD.
os-vol-host-attr:host	String	Reserved field
shareable	String	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.

Parameter	Type	Description
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
   "volumes": [
      {
         "id": "c6ccc84e-feff-4114-ad83-42a11c0434e2",
         "links": [
            {
               "href": "https://volume.az0.dc1.domainname.com/
v2/9e179fd535e44f19a9dabb36deadf47e/volumes/c6ccc84e-feff-4114-ad83-42a11c0434e2",
               "rel": "self"
            },
            {
               "href": "https://volume.az0.dc1.domainname.com/9e179fd535e44f19a9dabb36deadf47e/
volumes/c6ccc84e-feff-4114-ad83-42a11c0434e2",
               "rel": "bookmark"
```



```
            }
        ],
        "name": "test_volume",
        "status": "available",
        "attachments": [ ],
        "description": null,
        "size": 100,
        "metadata": null,
        "bootable": "false",
        "availability_zone": "az-dc-1",
        "os-vol-host-attr:host": "az-dc-1#sata",
        "source_volid": null,
        "snapshot_id": null,
        "created_at": "2015-09-17T06:37:16.275659",
        "volume_type": "SATA",
        "os-vol-tenant-attr:tenant_id": "9e179fd535e44f19a9dabb36deadf47e",
        "volume_image_metadata": null
    },
    {
        "id": "a05d9342-bf27-44a6-8ab8-33afc7545d19",
        "links": [
            {
                "href": "https://volume.az0.dc1.domainname.com/
v2/9e179fd535e44f19a9dabb36deadf47e/volumes/a05d9342-bf27-44a6-8ab8-33afc7545d19",
                "rel": "self"
            },
            {
                "href": "https://volume.az0.dc1.domainname.com/9e179fd535e44f19a9dabb36deadf47e/
volumes/a05d9342-bf27-44a6-8ab8-33afc7545d19",
                "rel": "bookmark"
            }
        ],
        "name": "test_volume",
        "status": "available",
        "attachments": [ ],
        "description": null,
        "size": 100,
        "metadata": null,
        "bootable": "false",
        "availability_zone": "az-dc-1",
        "os-vol-host-attr:host": "az-dc-1#sata",
        "source_volid": null,
        "snapshot_id": null,
        "created_at": "2015-09-17T06:37:16.192556",
        "volume_type": "SATA",
        "os-vol-tenant-attr:tenant_id": "9e179fd535e44f19a9dabb36deadf47e",
        "volume_image_metadata": null
    }
  ]
}
```


or


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


Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

6.1.3 Deleting an EVS Disk (Deprecated)

Function

This API is used to delete an EVS disk.

NOTICE

This API has been deprecated. Use another API. For details, see **Deleting an EVS Disk**.

URI

- URI format

  DELETE /v2/{project_id}/cloudvolumes/{volume_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Example request

```
DELETE https://{endpoint}/v2/{project_id}/cloudvolumes/b104b8db-170d-441b-897a-3c8ba9c5a214
```

Response

- Parameter description

Parameter	Type	Description
job_id	String	Specifies the task ID. **NOTE** For details about how to query the task status, see **Querying Task Status**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

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

or

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

6.1.4 Updating an EVS Disk (Deprecated)

Function

This API is used to update the name and description of an EVS disk.

NOTICE

This API has been deprecated. Use another API. For details, see **Updating an EVS Disk**.

URI

- URI format

  PUT /v2/{project_id}/cloudvolumes/{volume_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
volume	Object	Yes	Specifies the information of the disk to be updated. For details, see **Parameters in the volume field**.

- Parameters in the **volume** field

Parameter	Type	Mandatory	Description
name	String	No	Specifies the new name of the disk. Parameters **name** and **description** cannot be null at the same time. The value can contain a maximum of 255 bytes.
description	String	No	Specifies the new description of the disk. **name** and **description** cannot be null at the same time. The value can contain a maximum of 255 bytes.

- Example request

```
{
   "volume": {
      "name": "test_volume",
      "description": "test"
   }
}
```

Response

- Parameter description

Parameter	Type	Description
id	String	Specifies the disk ID.

Parameter	Type	Description
links	Array of objects	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	Array of objects	Specifies the disk attachment information. For details, see **Parameters in the attachments field**.
availability_zone	String	Specifies the AZ to which the disk belongs.
source_volid	String	Specifies the source disk ID. This parameter has a value if the disk is created from a source disk. Currently, this field is not supported by EVS.
snapshot_id	String	Specifies the snapshot ID. This parameter has a value if the disk is created from a snapshot.
description	String	Specifies the disk description.
os-vol-tenant-attr:tenant_id	String	Specifies the ID of the tenant to which the disk belongs. Currently, the returned parameter value is invalid. The tenant ID is actually the project ID.
volume_image_metadata	Object	Specifies the metadata of the disk image. Currently, the returned parameter value is invalid. **NOTE** For details about **volume_image_metadata**, see **Querying Image Details** in the *Image Management Service API Reference*.
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
size	Integer	Specifies the disk size, in GB.

Parameter	Type	Description
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
metadata	Object	Specifies the disk metadata. For details, see **Parameters in the metadata field**.
os-vol-host-attr:host	String	Reserved field
shareable	String	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.
os-volume-replication:extended_status	String	Reserved field

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX

Parameter	Type	Description
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response


```
{
    "id": "36ba39af-3579-4e6e-adfc-b764349c0f77",
    "links": [
        {
            "href": "https://volume.region.xxx.xxx-tsi.de/v2/3cfb09080bd944d0b4cdd72ef26857bd/
volumes/36ba39af-3579-4e6e-adfc-b764349c0f77",
            "rel": "self"
        },
        {
            "href": "https://volume.region.xxx.xxx-tsi.de/3cfb09080bd944d0b4cdd72ef26857bd/volumes/
36ba39af-3579-4e6e-adfc-b764349c0f77",
            "rel": "bookmark"
        }
    ],
    "name": "newVolume",
    "status": "in-use",
    "attachments": [
        {
            "server_id": "c3d3250c-7ce5-42cc-b620-dd2b63d19ca5",
            "attachment_id": "011a2bdb-a033-4479-845b-50bd8ed7f4d4",
            "attached_at": "2017-05-23T11:27:38.604815",
            "host_name": null,
            "volume_id": "36ba39af-3579-4e6e-adfc-b764349c0f77",
            "device": "/dev/sdf",
```



```
            "id": "36ba39af-3579-4e6e-adfc-b764349c0f77"
        }
    ],
    "description": "new volume",
    "multiattach": false,
    "shareable": false,
    "size": 10,
    "metadata": {
        "policy": "dc71a9c9-b3fa-429d-a070-037682d82d21",
        "attached_mode": "rw",
        "readonly": "False",
        "hw:passthrough": "false"
    },
    "bootable": "false",
    "availability_zone": "az-dc-1",
    "os-vol-host-attr:host": null,
    "source_volid": null,
    "snapshot_id": null,
    "created_at": "2017-05-23T09:49:44.481299",
    "volume_type": "SATA",
    "os-vol-tenant-attr:tenant_id": null,
    "os-volume-replication:extended_status": null,
    "volume_image_metadata": null
}
```


or


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


Status Codes

- Normal
  200

Error Codes

For details, see **Error Codes**.

6.1.5 Querying Details About a Disk

Function

This API is used to query details about a disk.

URI

- URI format
  GET /v2/{project_id}/os-vendor-volumes/{volume_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Example request
  GET https://{endpoint}/v2/{project_id}/os-vendor-volumes/b104b8db-170d-441b-897a-3c8ba9c5a214

Response

- Parameter description

Parameter	Type	Description
volume	Object	Specifies the queried disk. For details, see **Parameters in the volume field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volume** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	Array of objects	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	Array of objects	Specifies the disk attachment information. For details, see **Parameters in the attachments field**.
availability_zone	String	Specifies the AZ to which the disk belongs.
source_volid	String	Specifies the source disk ID. This parameter has a value if the disk is created from a source disk. Currently, this field is not supported by EVS.

Parameter	Type	Description
snapshot_id	String	Specifies the snapshot ID. This parameter has a value if the disk is created from a snapshot.
description	String	Specifies the disk description.
os-vol-tenant-attr:tenant_id	String	Specifies the ID of the tenant to which the disk belongs. The tenant ID is actually the project ID.
volume_image_metadata	Object	Specifies the metadata of the disk image. **NOTE** For details about **volume_image_metadata**, see **Querying Image Details** in the *Image Management Service API Reference*.
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
size	Integer	Specifies the disk size, in GB.
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
metadata	Object	Specifies the disk metadata. For details, see **Parameters in the metadata field**. If **metadata** does not contain the **hw:passthrough** field, the disk device type is VBD.
os-vol-host-attr:host	String	Reserved field
encrypted	Boolean	Currently, this field is not supported by EVS.
updated_at	String	Specifies the time when the disk was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX

Parameter	Type	Description
os-volume-replication:extended_status	String	Reserved field
replication_status	String	Reserved field
os-vol-mig-status-attr:migstat	String	Reserved field
consistencygroup_id	String	Reserved field
os-vol-mig-status-attr:name_id	String	Reserved field
shareable	String	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
user_id	String	Reserved field
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.
dedicated_storage_id	String	Specifies the ID of the DSS storage pool accommodating the disk.
dedicated_storage_name	String	Specifies the name of the DSS storage pool accommodating the disk.
wwn	String	Specifies the unique identifier used when attaching the disk.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "volume": {
        "attachments": [ ],
        "links": [
            {
                "href": "https://volume.az0.dc1.domainname.com/v2/40acc331ac784f34842ba4f08ff2be48/volumes/591ac654-26d8-41be-bb77-4f90699d2d41",
                "rel": "self"
            },
            {
                "href": "https://volume.az0.dc1.domainname.com/40acc331ac784f34842ba4f08ff2be48/
```



```
volumes/591ac654-26d8-41be-bb77-4f90699d2d41",
                "rel": "bookmark"
            }
        ],
        "availability_zone": "az-dc-1",
        "os-vol-host-attr:host": "az-dc-1#SSD",
        "encrypted": false,
        "multiattach": true,
        "updated_at": "2016-02-03T02:19:29.895237",
        "os-volume-replication:extended_status": null,
        "replication_status": "disabled",
        "snapshot_id": null,
        "id": "591ac654-26d8-41be-bb77-4f90699d2d41",
        "size": 40,
        "user_id": "fd03ee73295e45478d88e15263d2ee4e",
        "os-vol-tenant-attr:tenant_id": "40acc331ac784f34842ba4f08ff2be48",
        "volume_image_metadata": null,
        "os-vol-mig-status-attr:migstat": null,
        "metadata": {},
        "status": "available",
        "description": "auto-created_from_restore_from_backup",
        "source_volid": null,
        "consistencygroup_id": null,
        "os-vol-mig-status-attr:name_id": null,
        "name": "restore_backup_0115efb3-678c-4a9e-bff6-d3cd278238b9",
        "bootable": "false",
        "created_at": "2016-02-03T02:19:11.723797",
        "volume_type": null,
        "service_type": "EVS",
        "dedicated_storage_id": null,
        "dedicated_storage_name": null,
        "wwn": " 688860300000d136fa16f48f05992360"
    }
}
```


or


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


In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:


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


Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

6.1.6 Querying EVS Disks (Deprecated)

Function

This API is used to query EVS disks and display the query results in a list.

NOTICE

This API has been deprecated. Use another API. For details, see **Querying EVS Disks**.

URI

- URI format

  GET /v2/{project_id}/cloudvolumes

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
marker	String	No	Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.
name	String	No	Specifies the disk name. The value can contain a maximum of 255 bytes.
status	String	No	Specifies the disk status. For details, see **EVS Disk Status**.
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit.
availability_zone	String	No	Specifies the AZ.

Parameter	Type	Mandatory	Description
sort_key	String	No	Specifies the keyword based on which the returned results are sorted. The value can be **id**, **status**, **size**, or **created_at**, and the default value is **created_at**.
sort_dir	String	No	Specifies the result sorting order. The default value is **desc**. • **desc**: indicates the descending order. • **asc**: indicates the ascending order.

Request

The following example shows how to query the disks in the **available** state.

- Example request
  GET https://{endpoint}/v2/{project_id}/cloudvolumes?status=available

Response

- Parameter description

Parameter	Type	Description
volumes	Array of objects	Specifies the list of queried disks. For details, see **Parameters in the volumes field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volumes** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	Array of objects	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name. The value can contain a maximum of 255 bytes.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
   "volumes": [
      {
         "id": "e6cf4401-15f6-44bd-ae2b-cff4dc9523e6",
         "links": [
            {
               "href": "https://volume.az0.dc1.domainname.com/v2/
cd631140887d4b6e9c786b67a6dd4c02/volumes/e6cf4401-15f6-44bd-ae2b-cff4dc9523e6",
               "rel": "self"
            },
            {
               "href": "https://volume.az0.dc1.domainname.com/
cd631140887d4b6e9c786b67a6dd4c02/volumes/e6cf4401-15f6-44bd-ae2b-cff4dc9523e6",
               "rel": "bookmark"
            }
         ],
         "name": "hallo5"
      },
      {
         "id": "4c5e8203-f70e-4717-90cd-4a8f636888d1",
         "links": [
            {
               "href": "https://volume.az0.dc1.domainname.com/v2/
cd631140887d4b6e9c786b67a6dd4c02/volumes/4c5e8203-f70e-4717-90cd-4a8f636888d1",
               "rel": "self"
            },
            {
               "href": "https://volume.az0.dc1.domainname.com/
cd631140887d4b6e9c786b67a6dd4c02/volumes/4c5e8203-f70e-4717-90cd-4a8f636888d1",
               "rel": "bookmark"
            }
         ],
         "name": "hallo4"
      }
   ]
}
```

or

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


Status Codes

- Normal
  200

Error Codes

For details, see **Error Codes**.

6.1.7 Expanding Capacity of an EVS Disk (Deprecated)

Function

This API is used to expand the capacity of an EVS disk.

NOTICE

This API call exists for compatibility reasons only and is not meant to be used.

URI

- URI format
  POST /v2/{project_id}/cloudvolumes/{volume_id}/action
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the ID of the disk.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-extend	Object	Yes	Specifies the disk expansion marker. For details, see **Parameter in the os-extend field**.

- Parameter in the **os-extend** field

Parameter	Type	Mandatory	Description
new_size	Integer	Yes	Specifies the size of the disk after capacity expansion, in GB. The new disk size ranges from the original disk size to the maximum size (**32768** for a data disk and **1024** for a system disk). **NOTE** If the specified parameter value is a decimal, the integral part of the value is used by default when the request is sent.

- Example request

```
{
   "os-extend": {
      "new_size": 200
   }
}
```

Response

- Parameter description

Parameter	Type	Description
job_id	String	Specifies the task ID. **NOTE** For details about how to query the task status, see **Querying Task Status**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

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

or


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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

6.2 EVS Snapshot

6.2.1 Rolling Back a Snapshot to an EVS Disk

Function

This API is used to roll back a snapshot to an EVS disk.

Constraints

- When you roll back a snapshot to a disk, you can only roll back the snapshot to the source disk. Rollback to a specified disk is not supported.
- You can roll back a disk from a snapshot only when the disk is in the **available** or **error_rollbacking** state.
- Snapshots whose names started with prefix **autobk_snapshot_** are automatically created by the system during backup creations. Do not use these snapshots to roll back the disk data.

URI

- URI format

  POST /v2/{project_id}/os-vendor-snapshots/{snapshot_id}/rollback

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
rollback	Object	Yes	Specifies the snapshot rollback information. For details, see **Parameters in the rollback field**.

- Parameters in the **rollback** field

Parameter	Type	Mandatory	Description
volume_id	String	Yes	Specifies the ID of the target disk.
name	String	No	Specifies the name of the target disk. The value can contain a maximum of 255 bytes. **NOTE** Parameter **name** cannot be used independently. When **name** is going to be used, **volume_id** must also be specified.

- Example request

```
{
   "rollback": {
      "name": "test-001",
      "volume_id": "5aa119a8-d25b-45a7-8d1b-88e127885635"
   }
}
```

Response

- Parameter description

Parameter	Type	Description
rollback	Object	Specifies the snapshot rollback information. For details, see **Parameter in the rollback field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameter in the **rollback** field

Parameter	Type	Description
volume_id	String	Specifies the ID of the target disk.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "rollback": {
        "volume_id": "5aa119a8-d25b-45a7-8d1b-88e127885635"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7 OpenStack Cinder API v2

7.1 EVS Disk

7.1.1 Creating EVS Disks

Function

This API is used to create one or multiple EVS disks.

URI

- URI format

  POST /v2/{project_id}/volumes
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

Request

- Parameter description

Parameter	Type	Mandatory	Description
volume	Object	Yes	Specifies the information of the disks to be created. For details, see **Parameters in the volume field**.

- Parameters in the **volume** field

Parameter	Type	Mandatory	Description
availability_zone	String	Yes	Specifies the AZ where you want to create the disk. If the AZ does not exist, the disk will fail to create. **NOTE** For details about how to obtain the AZ, see **Querying All AZs**.
source_volid	String	No	Specifies the source disk ID. If this parameter is specified, the disk is cloned from an existing disk. Currently, this function is not supported.
description	String	No	Specifies the disk description. The value can contain a maximum of 255 bytes.
snapshot_id	String	No	Specifies the snapshot ID. If this parameter is specified, the disk is created from a snapshot. **NOTE** For details about how to obtain the snapshot ID, see **Querying Details About EVS Snapshots**.
size	Integer	Yes	Specifies the disk size, in GB. Its value can be as follows: • System disk: 1 GB to 1024 GB • Data disk: 10 GB to 32768 GB This parameter is mandatory when you create an empty disk. You can specify the parameter value as required within the value range. This parameter is mandatory when you create the disk from a snapshot. Ensure that the disk size is greater than or equal to the snapshot size. This parameter is mandatory when you create the disk from an image. Ensure that the disk size is greater than or equal to the minimum disk capacity required by **min_disk** in the image attributes.
name	String	No	Specifies the disk name. The value can contain a maximum of 255 bytes.
imageRef	String	No	Specifies the image ID. If this parameter is specified, the disk is created from an image.

Parameter	Type	Mandatory	Description
volume_type	String	No	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type. If the specified disk type is not available in the AZ, the disk will fail to create. **NOTE** • If the disk is created from a snapshot, the volume_type field must be the same as that of the snapshot's source disk. • For details about disk types, see **Disk Types and Disk Performance** in the *Elastic Volume Service User Guide*.
metadata	Object	No	Specifies the disk metadata. The length of the key or value in the metadata cannot exceed 255 bytes. For details about **metadata**, see **Parameters in the metadata field**. The table lists some fields. You can also specify other fields based on the disk creation requirements. **NOTE** Parameter values under **metadata** cannot be **null**.
source_replica	String	No	Specifies the source disk ID. If this parameter is specified, the disk is cloned from an existing disk. Currently, this function is not supported.
consistencygroup_id	String	No	Reserved field
shareable	String	No	Specifies whether the disk is shareable. The value can be **true** (sharable) or **false** (not sharable). This is an extended attribute. Currently, this field is not supported by EVS. **NOTE** This field is no longer used. Use **multiattach**.

Parameter	Type	Mandatory	Description
multiattach	Boolean	No	Specifies whether the disk is shareable. The default value is **false**. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.

NOTE

Specifying either two of the **source_volid**, **snapshot_id**, and **imageRef** fields is not supported.

- Parameters in the **metadata** field

Parameter	Type	Mandatory	Description
hw:passthrough	String	No	• If this parameter is set to **true**, the disk device type is SCSI, which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands. • If this parameter is set to **false**, the disk device type will be VBD, which supports only simple SCSI read/write commands. • If this parameter does not exist, the disk device type will be VBD, the default type. **NOTE** If parameter **shareable** is set to **true** and parameter **hw:passthrough** is not specified, shared VBD disks are created.
full_clone	String	No	If the disk is created from a snapshot and linked cloning needs to be used, set this parameter to **0**.

NOTE

The preceding table provides only some parameters in **metadata** for your reference. You can also specify other fields based on the disk creation requirements.

- If the disk is created from a snapshot, **hw:passthrough** is not supported, and the newly created disk has the same device type as that of the snapshot's source disk.
- If the disk is created from an image, **hw:passthrough** is not supported, and the device type of newly created disk is VBD.

- Example request

```
{
    "volume": {
        "name": "openapi_vol01",
        "imageRef": "027cf713-45a6-45f0-ac1b-0ccc57ac12e2",
        "availability_zone": "az-dc-1",
        "description": "create for api test",
        "volume_type": "SATA",
        "metadata": {
            "volume_owner": "openapi"
        },
        "multiattach": false,
        "size": 40
    },
}
```

Response

- Parameter description

Parameter	Type	Description
volume	Object	Specifies the information of the created disks. For details, see **Parameters in the volumes field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volumes** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	list	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	list	Specifies the disk attachment information. For details, see **Parameters in the attachments field**.
availability_zone	String	Specifies the AZ to which the disk belongs.
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
encrypted	Boolean	Currently, this field is not supported by EVS.

Parameter	Type	Description
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
description	String	Specifies the disk description.
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
replication_status	String	Reserved field
consistencygroup_id	String	Specifies the ID of the consistency group where the disk belongs. Currently, this field is not supported by EVS.
source_volid	String	Specifies the source disk ID. Currently, this field is not supported by EVS.
snapshot_id	String	Specifies the snapshot ID.
metadata	Object	Specifies the disk metadata. For details, see **Parameters in the metadata field**.
size	Integer	Specifies the disk size, in GB.
user_id	String	Reserved field
updated_at	String	Specifies the time when the disk was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
shareable	Boolean	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response


```
{
    "volume": {
        "attachments": [ ],
        "availability_zone": "az-dc-1",
        "bootable": "false",
        "consistencygroup_id": null,
        "created_at": "2016-05-25T02:38:40.392463",
        "description": "create for api test",
        "encrypted": false,
        "id": "8dd7c486-8e9f-49fe-bceb-26aa7e312b66",
        "links": [
            {
                "href": "https://volume.localdomain.com:8776/v2/5dd0b0056f3d47b6ab4121667d35621a/
volumes/8dd7c486-8e9f-49fe-bceb-26aa7e312b66",
                "rel": "self"
            },
            {
                "href": "https://volume.localdomain.com:8776/5dd0b0056f3d47b6ab4121667d35621a/
volumes/8dd7c486-8e9f-49fe-bceb-26aa7e312b66",
                "rel": "bookmark"
            }
        ],
        "metadata": {
            "volume_owner": "openapi"
        },
        "name": "openapi_vol01",
        "replication_status": "disabled",
        "multiattach": false,
        "size": 40,
        "snapshot_id": null,
        "source_volid": null,
        "status": "creating",
        "updated_at": null,
        "user_id": "39f6696ae23740708d0f358a253c2637",
        "volume_type": "SATA"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.1.2 Deleting an EVS Disk

Function

This API is used to delete an EVS disk.

URI

- URI format

  DELETE /v2/{project_id}/volumes/{volume_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

- Request filter parameters

Parameter	Type	Mandatory	Description
cascade	Boolean	No	Specifies to delete all snapshots associated with the disk. The default value is **false**.

Request

The following example shows how to delete a disk and all its snapshots.

- Example request

```
DELETE https://{endpoint}/v2/{project_id}/volumes/{volume_id}?cascade=true
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.1.3 Updating an EVS Disk

Function

This API is used to update the EVS disk information.

URI

- URI format

  PUT /v2/{project_id}/volumes/{volume_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
volume	Object	Yes	Specifies the information of the disk to be updated. For details, see **Parameters in the volume field**.

- Parameters in the **volume** field

Parameter	Type	Mandatory	Description
name	String	No	Specifies the disk name. The value can contain a maximum of 255 bytes.
description	String	No	Specifies the disk description. The value can contain a maximum of 255 bytes.
metadata	Object	No	Specifies the disk metadata. The length of the key or value in the metadata cannot exceed 255 bytes.
display_name	String	No	Specifies also the disk name. You can specify either parameter **name** or **display_name**. If both parameters are specified, the **name** value is used. The value can contain a maximum of 255 bytes.
display_description	String	No	Specifies also the disk description. You can specify either parameter **description** or **display_description**. If both parameters are specified, the **description** value is used. The value can contain a maximum of 255 bytes.

- Example request


```
{
    "volume": {
        "name": "test_volume",
        "description": "test"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
volume	Object	Specifies the information of the updated disk. For details, see **Parameters in the volumes field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volumes** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	list<map<String,String>>	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	list	Specifies the disk attachment information. For details, see **Parameters in the attachments field**.
availability_zone	String	Specifies the AZ to which the disk belongs.
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
encrypted	Boolean	Currently, this field is not supported by EVS.
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
description	String	Specifies the disk description.

Parameter	Type	Description
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
replication_status	String	Reserved field
consistencygroup_id	String	Reserved field
source_volid	String	Specifies the source disk ID. Currently, this field is not supported by EVS.
snapshot_id	String	Specifies the snapshot ID.
metadata	Object	Specifies the disk metadata. For details, see **Parameters in the metadata field**.
size	Integer	Specifies the disk size, in GB.
user_id	String	Reserved field
updated_at	String	Specifies the time when the disk was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
shareable	Boolean	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.
storage_cluster_id	String	This is a reserved attribute.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "volume": {
        "attachments": [ ],
        "availability_zone": "az-dc-1",
        "bootable": "false",
        "consistencygroup_id": null,
        "created_at": "2016-05-25T02:38:40.392463",
        "description": "create for api test",
        "encrypted": false,
        "id": "8dd7c486-8e9f-49fe-bceb-26aa7e312b66",
        "links": [
```



```
            {
                "href": "https://volume.localdomain.com:8776/v2/5dd0b0056f3d47b6ab4121667d35621a/
volumes/8dd7c486-8e9f-49fe-bceb-26aa7e312b66",
                "rel": "self"
            },
            {
                "href": "https://volume.localdomain.com:8776/5dd0b0056f3d47b6ab4121667d35621a/
volumes/8dd7c486-8e9f-49fe-bceb-26aa7e312b66",
                "rel": "bookmark"
            }
        ],
        "metadata": {
            "volume_owner": "openapi"
        },
        "name": "openapi_vol01",
        "replication_status": "disabled",
        "multiattach": false,
        "size": 40,
        "snapshot_id": null,
        "source_volid": null,
        "status": "creating",
        "updated_at": null,
        "user_id": "39f6696ae23740708d0f358a253c2637",
        "volume_type": "SATA"
    }
}
```


or


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


In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:


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


Status Codes

- Normal
  200

Error Codes

For details, see **Error Codes**.

7.1.4 Querying EVS Disks

Function

This API is used to query EVS disks.

URI

- URI format
  GET /v2/{project_id}/volumes

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
marker	String	No	Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.
name	String	No	Specifies the disk name. The value can contain a maximum of 255 bytes.
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit. If the tenant has more than 50 disks in total, you are advised to use this parameter and set its value to **50** to improve the query efficiency. Examples are provided as follows: **GET /v2/*xxx*/volumes?limit=50**: Queries the 1–50 disks. **GET /v2/*xxx*/volumes?offset=50&limit=50**: Queries the 51–100 disks.
sort_key	String	No	Specifies the keyword based on which the returned results are sorted. The value can be **id**, **status**, **size**, or **created_at**, and the default value is **created_at**.

Parameter	Type	Mandatory	Description
sort_dir	String	No	Specifies the result sorting order. The default value is **desc**. • **desc**: indicates the descending order. • **asc**: indicates the ascending order.
offset	Integer	No	Specifies the offset. All disks after this offset will be queried. The value must be an integer greater than 0 but less than the number of disks.
status	String	No	Specifies the disk status. For details, see **EVS Disk Status**.
metadata	String	No	Specifies the disk metadata.
availability_zone	String	No	Specifies the AZ.

Request

The following example shows how to query the disks in the **available** state.

- Example request
  GET https://{endpoint}/v2/{project_id}/volumes?status=available

Response

- Parameter description

Parameter	Type	Description
volumes	list	Specifies the list of queried disks. For details, see **Parameters in the volumes field**.
volumes_links	list	Specifies the query position marker in the disk list. If only some disks are returned in this query, the URL of the last disk queried will be returned. You can use this URL to continue to query the remaining disks in the next query.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volumes** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	list<map<String, String>>	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name. The value can contain a maximum of 255 bytes.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "volumes": [
        {
            "id": "6b604cef-9bd8-4f5a-ae56-45839e6e1f0a",
            "links": [
                {
                    "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/volumes/6b604cef-9bd8-4f5a-ae56-45839e6e1f0a",
                    "rel": "self"
                },
                {
                    "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60bf2f/volumes/6b604cef-9bd8-4f5a-ae56-45839e6e1f0a",
                    "rel": "bookmark"
                }
            ],
            "name": "zjb_u25_test"
        },
        {
            "id": "2bce4552-9a7d-48fa-8484-abbbf64b206e",
            "links": [
                {
                    "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/volumes/2bce4552-9a7d-48fa-8484-abbbf64b206e",
                    "rel": "self"
                },
                {
```



```
                "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60bf2f/
volumes/2bce4552-9a7d-48fa-8484-abbbf64b206e",
                "rel": "bookmark"
            }
        ],
        "name": "zjb_u25_test"
    },
    {
        "id": "3f1b98ec-a8b5-4e92-a727-88def62d5ad3",
        "links": [
            {
                "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/
volumes/3f1b98ec-a8b5-4e92-a727-88def62d5ad3",
                "rel": "self"
            },
            {
                "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60bf2f/
volumes/3f1b98ec-a8b5-4e92-a727-88def62d5ad3",
                "rel": "bookmark"
            }
        ],
        "name": "zjb_u25_test"
    }
  ],
  "volumes_links": [
    {
        "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/
volumes?limit=3&marker=3f1b98ec-a8b5-4e92-a727-88def62d5ad3",
        "rel": "next"
    }
  ]
}
```


or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.5 Querying Details About All Disks

Function

This API is used to query details about all disks.

URI

- URI format

  GET /v2/{project_id}/volumes/detail

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
marker	String	No	Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.
name	String	No	Specifies the disk name. The value can contain a maximum of 255 bytes.
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit. If the tenant has more than 50 disks in total, you are advised to use this parameter and set its value to **50** to improve the query efficiency. Examples are provided as follows: **GET /v2/*xxx*/volumes/detail?limit=50**: Queries the 1–50 disks. **GET /v2/*xxx*/volumes/detail?offset=50&limit=50**: Queries the 51–100 disks.
sort_key	String	No	Specifies the keyword based on which the returned results are sorted. The value can be **id**, **status**, **size**, or **created_at**, and the default value is **created_at**.

Parameter	Type	Mandatory	Description
sort_dir	String	No	Specifies the result sorting order. The default value is **desc**. • **desc**: indicates the descending order. • **asc**: indicates the ascending order.
offset	Integer	No	Specifies the offset. All disks after this offset will be queried. The value must be an integer greater than 0 but less than the number of disks.
status	String	No	Specifies the disk status. For details, see **EVS Disk Status**.
metadata	String	No	Specifies the disk metadata.
availability_zone	String	No	Specifies the AZ.

Request

The following example shows how to query details of the disks in the **available** state.

- Example request
  GET https://{endpoint}/v2/{project_id}/volumes/detail?status=available

Response

- Parameter description

Parameter	Type	Description
volumes	list	Specifies the list of queried disks. For details, see **Parameters in the volumes field**.
volumes_links	list	Specifies the query position marker in the disk list. If only some disks are returned in this query, the URL of the last disk queried will be returned. You can use this URL to continue to query the remaining disks in the next query. For details, see **Parameters in the links field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volumes** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	list<map<String,String>>	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	list	Specifies the disk attachment information. For details, see **Parameters in the attachments field**.
availability_zone	String	Specifies the AZ to which the disk belongs.
os-vol-host-attr:host	String	Reserved field
source_volid	String	Specifies the source disk ID. This parameter has a value if the disk is created from a source disk. Currently, this field is not supported by EVS.
snapshot_id	String	Specifies the snapshot ID. This parameter has a value if the disk is created from a snapshot.
description	String	Specifies the disk description.
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
os-vol-tenant-attr:tenant_id	String	Specifies the ID of the tenant to which the disk belongs. The tenant ID is actually the project ID.
size	Integer	Specifies the disk size, in GB.

Parameter	Type	Description
metadata	Object	Specifies the disk metadata. For details, see **Parameters in the metadata field**. If **metadata** does not contain the **hw:passthrough** field, the disk device type is VBD.
os-vol-mig-status-attr:migstat	String	Reserved field
os-vol-mig-status-attr:name_id	String	Reserved field
os-volume-replication:extended_status	String	Reserved field
encrypted	Boolean	Currently, this field is not supported by EVS.
replication_status	String	Reserved field
user_id	String	Reserved field
consistencygroup_id	String	Specifies the ID of the consistency group where the disk belongs. Currently, this field is not supported by EVS.
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
updated_at	String	Specifies the time when the disk was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
shareable	Boolean	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.

Parameter	Type	Description
volume_image_metadata	Object	Specifies whether the disk is created from an image. This field has a value if the disk is created from an image. Otherwise, it is left empty. **NOTE** For details about **volume_image_metadata**, see **Querying Image Details** in the *Image Management Service API Reference*.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
   "volumes": [
      {
         "attachments": [ ],
         "availability_zone": "az-dc-1",
         "bootable": "false",
         "consistencygroup_id": null,
         "created_at": "2016-05-25T02:42:10.856332",
         "description": null,
         "encrypted": false,
         "id": "b104b8db-170d-441b-897a-3c8ba9c5a214",
         "links": [
            {
               "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/
volumes/b104b8db-170d-441b-897a-3c8ba9c5a214",
               "rel": "self"
            },
            {
               "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60bf2f/
volumes/b104b8db-170d-441b-897a-3c8ba9c5a214",
               "rel": "bookmark"
            }
         ],
         "metadata": {},
         "name": "zjb_u25_test",
         "os-vol-host-attr:host": "pod01.xxx#SATA",
         "volume_image_metadata": { },
         "os-vol-mig-status-attr:migstat": null,
         "os-vol-mig-status-attr:name_id": null,
         "os-vol-tenant-attr:tenant_id": "dd14c6ac581f40059e27f5320b60bf2f",
         "os-volume-replication:extended_status": null,
         "replication_status": "disabled",
         "multiattach": false,
         "size": 1,
         "snapshot_id": null,
         "source_volid": null,
         "status": "available",
         "updated_at": "2016-05-25T02:42:22.341984",
         "user_id": "b0524e8342084ef5b74f158f78fc3049",
         "volume_type": "SATA"
      }
   ],
   "volumes_links": [
      {
         "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/
volumes/detail?limit=1&marker=b104b8db-170d-441b-897a-3c8ba9c5a214",
         "rel": "next"
      }
   ]
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.6 Querying Details About a Disk

Function

This API is used to query details about a disk.

URI

- URI format

  GET /v2/{project_id}/volumes/{volume_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214
```

Response

- Parameter description

Parameter	Type	Description
volume	Object	Specifies the queried disk. For details, see **Parameters in the volume field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volume** field

Parameter	Type	Description
id	String	Specifies the disk ID.
links	list<map<String, String>>	Specifies the disk URI. For details, see **Parameters in the links field**.
name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	list<map<String, String>>	Specifies the disk attachment information. For details, see **Parameters in the attachments field**.
availability_zone	String	Specifies the AZ to which the disk belongs.
source_volid	String	Specifies the source disk ID. This parameter has a value if the disk is created from a source disk. Currently, this field is not supported by EVS.
snapshot_id	String	Specifies the snapshot ID. This parameter has a value if the disk is created from a snapshot.
description	String	Specifies the disk description.
os-vol-tenant-attr:tenant_id	String	Specifies the ID of the tenant to which the disk belongs. The tenant ID is actually the project ID.
volume_image_metadata	Object	Specifies the metadata of the disk image. **NOTE** For details about **volume_image_metadata**, see **Querying Image Details** in the *Image Management Service API Reference*.

Parameter	Type	Description
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
size	Integer	Specifies the disk size, in GB.
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
metadata	Object	Specifies the disk metadata. For details, see **Parameters in the metadata field**. If **metadata** does not contain the **hw:passthrough** field, the disk device type is VBD.
os-vol-host-attr:host	String	Reserved field
encrypted	Boolean	Currently, this field is not supported by EVS.
updated_at	String	Specifies the time when the disk was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
os-volume-replication:extended_status	String	Reserved field
replication_status	String	Reserved field
os-vol-mig-status-attr:migstat	String	Reserved field
consistencygroup_id	String	Reserved field
os-vol-mig-status-attr:name_id	String	Reserved field

Parameter	Type	Description
shareable	Boolean	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
user_id	String	Reserved field
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.
storage_cluster_id	String	This is a reserved attribute.

- Parameters in the **links** field

Parameter	Type	Description
href	String	Specifies the corresponding shortcut link.
rel	String	Specifies the shortcut link marker name.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached.
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "volume": {
        "attachments": [ ],
        "links": [
            {
                "href": "https://volume.az0.dc1.domainname.com/v2/40acc331ac784f34842ba4f08ff2be48/volumes/591ac654-26d8-41be-bb77-4f90699d2d41",
                "rel": "self"
            },
            {
                "href": "https://volume.az0.dc1.domainname.com/40acc331ac784f34842ba4f08ff2be48/volumes/591ac654-26d8-41be-bb77-4f90699d2d41",
                "rel": "bookmark"
            }
        ],
        "availability_zone": "az-dc-1",
        "os-vol-host-attr:host": "az-dc-1#SSD",
        "encrypted": false,
        "multiattach": true,
        "updated_at": "2016-02-03T02:19:29.895237",
        "os-volume-replication:extended_status": null,
        "replication_status": "disabled",
        "snapshot_id": null,
        "id": "591ac654-26d8-41be-bb77-4f90699d2d41",
        "size": 40,
        "user_id": "fd03ee73295e45478d88e15263d2ee4e",
        "os-vol-tenant-attr:tenant_id": "40acc331ac784f34842ba4f08ff2be48",
        "volume_image_metadata": null,
        "os-vol-mig-status-attr:migstat": null,
        "metadata": {},
        "status": "error_restoring",
        "description": "auto-created_from_restore_from_backup",
        "source_volid": null,
        "consistencygroup_id": null,
        "os-vol-mig-status-attr:name_id": null,
        "name": "restore_backup_0115efb3-678c-4a9e-bff6-d3cd278238b9",
        "bootable": "false",
        "created_at": "2016-02-03T02:19:11.723797",
        "volume_type": null
    }
}
```

or

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


In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.7 Querying EVS Disk Types

Function

This API is used to query EVS disk types and display the query results in a list.

URI

- URI format

  GET /v2/{project_id}/types

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/types
```

Response

- Parameter description

Parameter	Type	Description
volume_types	list	Specifies the list of queried disk types. For details, see **Parameters in the volume_types field**.

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volume_types** field

Parameter	Type	Description
extra_specs	Object	Specifies the disk type specifications. For details, see **Parameters in the extra_specs field**.
name	String	Specifies the name of the disk type.
id	String	Specifies the ID of the disk type.
description	String	Specifies the description of the disk type.
qos_specs_id	String	Reserved field
is_public	Boolean	Reserved field

- Parameters in the **extra_specs** field

Parameter	Type	Description
volume_backend_name	String	Reserved field
availability-zone	String	Reserved field
HW:availability_zone	String	Reserved field

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
   "volume_types": [
      {
         "extra_specs": {
```



```
            "volume_backend_name": "SAS",
            "availability-zone": "az-dc-1"
        },
        "name": "SAS",
        "qos_specs_id": null,
        "id": "6c81c680-df58-4512-81e7-ecf66d160638",
        "is_public": true,
        "description": null
    },
    {
        "extra_specs": {
            "volume_backend_name": "SATA",
            "availability-zone": "az-dc-1"
        },
        "name": "SATA",
        "qos_specs_id": "585f29d6-7147-42e7-bfb8-ca214f640f6f",
        "is_public": true,
        "id": "ea6e3c13-aac5-46e0-b280-745ed272e662",
        "description": null
    },
    {
        "extra_specs": {
            "volume_backend_name": "SSD",
            "availability-zone": "az-dc-1"
        },
        "name": "SSD",
        "qos_specs_id": "39b0c29a-308b-4f86-b478-5d3d02a43837",
        "is_public": true,
        "id": "6f2dee9e-82f0-4be3-ad89-bae605a3d24f",
        "description": null
    }
  ]
}
```


or

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

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.8 Querying Details About an EVS Disk Type

Function

This API is used to query details about an EVS disk type.

URI

- URI format

  GET /v2/{project_id}/types/{type_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
type_id	Yes	Specifies the disk type ID.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/types/6c81c680-df58-4512-81e7-ecf66d160638
```

Response

- Parameter description

Parameter	Type	Description
volume_type	Object	Specifies the details of queried disk types. For details, see **Parameters in the volume_type field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volume_type** field

Parameter	Type	Description
extra_specs	Object	Specifies the disk type specifications. For details, see **Parameters in the extra_specs field**.
name	String	Specifies the name of the disk type.
id	String	Specifies the ID of the disk type.
description	String	Specifies the description of the disk type.
qos_specs_id	String	Reserved field
is_public	Boolean	Reserved field

- Parameters in the **extra_specs** field

Parameter	Type	Description
volume_backend_name	String	Reserved field
availability-zone	String	Reserved field
HW:availability_zone	String	Reserved field

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "volume_type": {
        "extra_specs": {
            "volume_backend_name": "SATA",
            "availability-zone": "az-dc-1"
        },
        "name": "SATA",
        "qos_specs_id": null,
        "is_public": true,
        "id": "ea6e3c13-aac5-46e0-b280-745ed272e662",
        "description": null
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.9 Querying Details of Tenant Quotas

Function

This API is used to query the details of tenant quotas.

URI

- URI format

  GET /v2/{project_id}/os-quota-sets/{target_project_id}?usage=True

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
target_project_id	Yes	Specifies the ID of the target project. Set this parameter to the value of **project_id**.
usage	Yes	Specifies whether to query the quota details. Only value **true** is supported currently.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/os-quota-sets/{project_id}?usage=True
```

Response

- Parameter description

Parameter	Type	Description
quota_set	Object	Specifies the queried quota information. For details, see **Parameters in the quota_set field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **quota_set** field

Parameter	Type	Description
volumes	Object	Specifies the number of disks. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
snapshots	Object	Specifies the number of snapshots. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
gigabytes	Object	Specifies the total size (GB) of disks and snapshots allowed by the quota. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
volumes_SSD	Object	Specifies the number of reserved ultra-high I/O disks. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
volumes_SAS	Object	Specifies the number of reserved high I/O disks. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
snapshots_SSD	Object	Specifies the number of snapshots reserved for ultra-high I/O disks. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
snapshots_SAS	Object	Specifies the number of snapshots reserved for high I/O disks. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
gigabytes_SSD	Object	Specifies the size reserved for ultra-high I/O disks, in GB. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
gigabytes_SAS	Object	Specifies the size reserved for high I/O disks, in GB. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
id	String	Specifies the tenant ID. The tenant ID is actually the project ID.

Parameter	Type	Description
backups	Object	Specifies the number of backups. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
backup_gigabytes	Object	Specifies the backup size, in GB. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.
per_volume_gigabytes	Object	Specifies the capacity quota of each EVS disk. The sub-parameters include **reserved**, **allocated**, **limit**, **in_use**, and are made up of key-value pairs.

NOTE

If the **limit** value returned in the response is **-1**, no quota limit has been set.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "quota_set": {
        "gigabytes_SAS": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 21
        },
        "volumes_SATA": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 8
        },
        "gigabytes": {
            "reserved": 0,
            "allocated":0,
            "limit": 42790,
            "in_use": 2792
        },
        "backup_gigabytes": {
            "reserved": 0,
            "allocated":0,
            "limit": 5120,
```



```
            "in_use": 51
        },
        "snapshots_SAS": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 0
        },
        "volumes_SSD": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 28
        },
        "snapshots": {
            "reserved": 0,
            "allocated":0,
            "limit": 10,
            "in_use": 6
        },
        "id": "cd631140887d4b6e9c786b67a6dd4c02",
        "volumes_SAS": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 2
        },
        "snapshots_SSD": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 0
        },
        "volumes": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 108
        },
        "gigabytes_SATA": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 168
        },
        "backups": {
            "reserved": 0,
            "allocated":0,
            "limit": 100,
            "in_use": 10
        },
        "gigabytes_SSD": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 1085
        },
        "snapshots_SATA": {
            "reserved": 0,
            "allocated":0,
            "limit": -1,
            "in_use": 0
        }
    }
}
```


or


```
{
    "error": {
        "message": "XXXX",
```

```
    "code": "XXX"
  }
}
```

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.10 Adding Metadata of an EVS Disk

Function

This API is used to add or update the metadata of an EVS disk.

URI

- URI format

  POST /v2/{project_id}/volumes/{volume_id}/metadata

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
metadata	Object	Yes	Specifies the metadata to be updated. For details, see **Parameter in the metadata field**. The length of the key or value in the metadata cannot exceed 255 bytes.

- Parameter in the **metadata** field

Parameter	Type	Mandatory	Description
key_val	String	No	Specifies the metadata information, which is made up of one or multiple key-value pairs.

- Example request

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
metadata	Object	Specifies the disk metadata, which is made up of key-value pairs.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "metadata": {
```



```
        "key1": "value1",
        "key2": "value2"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.11 Querying Metadata of an EVS Disk

Function

This API is used to query the metadata of an EVS disk.

URI

- URI format

  GET /v2/{project_id}/volumes/{volume_id}/metadata

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/volumes/{volume_id}/metadata
```


Response

- Parameter description

Parameter	Type	Description
metadata	Object	Specifies the disk metadata, which is made up of key-value pairs.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.12 Updating Metadata of an EVS Disk

Function

This API is used to update the metadata of an EVS disk.

URI

- URI format

  PUT /v2/{project_id}/volumes/{volume_id}/metadata

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
metadata	Object	Yes	Specifies the disk metadata to be updated. For details, see **Parameter in the metadata field**. The length of the key or value in the metadata cannot exceed 255 bytes.

- Parameter in the **metadata** field

Parameter	Type	Mandatory	Description
key_val	String	No	Specifies the metadata information, which is made up of one or multiple key-value pairs.

- Example request

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```


Response

- Parameter description

Parameter	Type	Description
metadata	Object	Specifies the disk metadata, which is made up of key-value pairs.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.13 Querying One Piece of Metadata for an EVS Disk

Function

This API is used to query one piece of the EVS disk metadata.

URI

- URI format

  GET /v2/{project_id}/volumes/{volume_id}/metadata/{key}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.
key	Yes	Specifies the key of the piece of metadata to be queried.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214/metadata/value1
```

Response

- Parameter description

Parameter	Type	Description
meta	Object	Specifies a piece of the disk metadata, which is made up of a key-value pair.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.

Parameter	Type	Description
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "meta": {
        "key1": "value1"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.14 Updating One Piece of Metadata for an EVS Disk

Function

This API is used to update one piece of the EVS disk metadata.

URI

- URI format

  PUT /v2/{project_id}/volumes/{volume_id}/metadata/{key}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.
key	Yes	Specifies the key of the piece of metadata to be updated.

Request

- Parameter description

Parameter	Type	Mandatory	Description
meta	Object	Yes	Specifies the disk metadata to be updated. For details, see **Parameter in the meta field**.

- Parameter in the **meta** field

Parameter	Type	Mandatory	Description
key_val	String	No	Specifies a piece of metadata, which is made up of a key-value pair.

- Example request

```
{
   "meta": {
      "key1": "value1"
   }
}
```

Response

- Parameter description

Parameter	Type	Description
meta	Object	Specifies a piece of the disk metadata, which is made up of a key-value pair.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "meta": {
        "key1": "value1"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.15 Deleting One Piece of Metadata for an EVS Disk

Function

This API is used to delete one piece of the EVS disk metadata.

URI

- URI format

  DELETE /v2/{project_id}/volumes/{volume_id}/metadata/{key}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.
key	Yes	Specifies the key of the piece of metadata to be deleted.

Request

- Example request

```
DELETE https://{endpoint}/v2/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214/metadata/value1
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

```
{
    "itemNotFound": {
```



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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.1.16 Querying Extension APIs

Function

This API is used to query extension APIs.

URI

- URI format

  GET /v2/{project_id}/extensions

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/extensions
```

Response

- Parameter description

Parameter	Type	Description
extensions	list	Specifies the extension APIs. For details, see **Parameters in the extensions field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **extensions** field

Parameter	Type	Description
updated	String	Specifies the last update time. Time format: UTC YYYY-MM-DDTHH:MM:SS.+XX.XX
description	String	Specifies the description.
links	list<map<String,String>>	Reserved field
alias	String	Specifies the extension parameter alias.
name	String	Specifies the extension parameter name.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
   "extensions": [
      {
         "updated": "2013-04-18T00:00:00+00:00",
         "name": "SchedulerHints",
         "links": [ ],
         "alias": "OS-SCH-HNT",
         "description": "Pass arbitrary key/value pairs to the scheduler."
      },
      {
         "updated": "2011-06-29T00:00:00+00:00",
         "name": "Hosts",
         "links": [ ],
         "alias": "os-hosts",
         "description": "Admin-only host administration."
      },
      {
         "updated": "2011-11-03T00:00:00+00:00",
         "name": "VolumeTenantAttribute",
         "links": [ ],
         "alias": "os-vol-tenant-attr",
         "description": "Expose the internal project_id as an attribute of a volume."
      },
      {
         "updated": "2011-08-08T00:00:00+00:00",
         "name": "Quotas",
         "links": [ ],
         "alias": "os-quota-sets",
         "description": "Quota management support."
      },
      {
         "updated": "2011-08-24T00:00:00+00:00",
         "name": "TypesManage",
```



```
        "links": [ ],
        "alias": "os-types-manage",
        "description": "Types manage support."
    },
    {
        "updated": "2013-07-10T00:00:00+00:00",
        "name": "VolumeEncryptionMetadata",
        "links": [ ],
        "alias": "os-volume-encryption-metadata",
        "description": "Volume encryption metadata retrieval support."
    },
    {
        "updated": "2012-12-12T00:00:00+00:00",
        "name": "Backups",
        "links": [ ],
        "alias": "backups",
        "description": "Backups support."
    },
    {
        "updated": "2013-07-16T00:00:00+00:00",
        "name": "SnapshotActions",
        "links": [ ],
        "alias": "os-snapshot-actions",
        "description": "Enable snapshot manager actions."
    },
    {
        "updated": "2012-05-31T00:00:00+00:00",
        "name": "VolumeActions",
        "links": [ ],
        "alias": "os-volume-actions",
        "description": "Enable volume actions
"
    },
    {
        "updated": "2013-10-03T00:00:00+00:00",
        "name": "UsedLimits",
        "links": [ ],
        "alias": "os-used-limits",
        "description": "Provide data on limited resources that are being used."
    },
    {
        "updated": "2012-05-31T00:00:00+00:00",
        "name": "VolumeUnmanage",
        "links": [ ],
        "alias": "os-volume-unmanage",
        "description": "Enable volume unmanage operation."
    },
    {
        "updated": "2011-11-03T00:00:00+00:00",
        "name": "VolumeHostAttribute",
        "links": [ ],
        "alias": "os-vol-host-attr",
        "description": "Expose host as an attribute of a volume."
    },
    {
        "updated": "2013-07-01T00:00:00+00:00",
        "name": "VolumeTypeEncryption",
        "links": [ ],
        "alias": "encryption",
        "description": "Encryption support for volume types."
    },
    {
        "updated": "2013-06-27T00:00:00+00:00",
        "name": "AvailabilityZones",
        "links": [ ],
        "alias": "os-availability-zone",
        "description": "Describe Availability Zones."
    },
    {
```



```
        "updated": "2013-08-02T00:00:00+00:00",
        "name": "Qos_specs_manage",
        "links": [ ],
        "alias": "qos-specs",
        "description": "QoS specs support."
    },
    {
        "updated": "2011-08-24T00:00:00+00:00",
        "name": "TypesExtraSpecs",
        "links": [ ],
        "alias": "os-types-extra-specs",
        "description": "Type extra specs support."
    },
    {
        "updated": "2013-08-08T00:00:00+00:00",
        "name": "VolumeMigStatusAttribute",
        "links": [ ],
        "alias": "os-vol-mig-status-attr",
        "description": "Expose migration_status as an attribute of a volume."
    },
    {
        "updated": "2012-08-13T00:00:00+00:00",
        "name": "CreateVolumeExtension",
        "links": [ ],
        "alias": "os-image-create",
        "description": "Allow creating a volume from an image in the Create Volume v1 API."
    },
    {
        "updated": "2014-01-10T00:00:00-00:00",
        "name": "ExtendedServices",
        "links": [ ],
        "alias": "os-extended-services",
        "description": "Extended services support."
    },
    {
        "updated": "2012-06-19T00:00:00+00:00",
        "name": "ExtendedSnapshotAttributes",
        "links": [ ],
        "alias": "os-extended-snapshot-attributes",
        "description": "Extended SnapshotAttributes support."
    },
    {
        "updated": "2012-12-07T00:00:00+00:00",
        "name": "VolumeImageMetadata",
        "links": [ ],
        "alias": "os-vol-image-meta",
        "description": "Show image metadata associated with the volume."
    },
    {
        "updated": "2012-03-12T00:00:00+00:00",
        "name": "QuotaClasses",
        "links": [ ],
        "alias": "os-quota-class-sets",
        "description": "Quota classes management support."
    },
    {
        "updated": "2013-05-29T00:00:00+00:00",
        "name": "VolumeTransfer",
        "links": [ ],
        "alias": "os-volume-transfer",
        "description": "Volume transfer management support."
    },
    {
        "updated": "2014-02-10T00:00:00+00:00",
        "name": "VolumeManage",
        "links": [ ],
        "alias": "os-volume-manage",
        "description": "Allows existing backend storage to be 'managed' by Cinder."
    },
```



```
        {
            "updated": "2012-08-25T00:00:00+00:00",
            "name": "AdminActions",
            "links": [ ],
            "alias": "os-admin-actions",
            "description": "Enable admin actions."
        },
        {
            "updated": "2012-10-28T00:00:00-00:00",
            "name": "Services",
            "links": [ ],
            "alias": "os-services",
            "description": "Services support."
        }
    ]
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal
  200

Error Codes

For details, see **Error Codes**.

7.1.17 Querying All AZs

Function

This API is used to query all AZs.

URI

- URI format
  GET /v2/{project_id}/os-availability-zone
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

Request

- Example request
  GET https://{endpoint}/v2/{project_id}/os-availability-zone

Response

- Parameter description

Parameter	Type	Description
availabilityZoneInfo	list	Specifies the list of queried AZs. For details, see **Parameters in the availabilityZoneInfo field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **availabilityZoneInfo** field

Parameter	Type	Description
zoneState	Object	Specifies the status of the AZ. For details, see **Parameter in the zoneState field**.
zoneName	String	Specifies the AZ name.

- Parameter in the **zoneState** field

Parameter	Type	Description
available	Boolean	Specifies whether the AZ is available. • **true**: available • **false**: unavailable

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.

Parameter	Type	Description
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "availabilityZoneInfo": [
        {
            "zoneState": {
                "available": true
            },
            "zoneName": "az-dc-1"
        }
    ]
}
```

or

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.2 EVS Disk Actions

7.2.1 Expanding Capacity of an EVS Disk

Function

This API is used to expand the capacity of an EVS disk.

URI

- URI format

  POST /v2/{project_id}/volumes/{volume_id}/action

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the ID of a non-yearly/monthly billed disk.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-extend	Object	Yes	Specifies the disk expansion marker. For details, see **Parameter in the os-extend field**.

- Parameter in the **os-extend** field

Parameter	Type	Mandatory	Description
new_size	Integer	Yes	Specifies the size of the disk after capacity expansion, in GB. The new disk size ranges from the original disk size to the maximum size (**32768** for a data disk and **1024** for a system disk).

- Example request

```
{
    "os-extend": {
        "new_size": 100
    }
}
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.2.2 Setting Bootable Flag for an EVS Disk

Function

This API is used to set the bootable flag for an EVS disk.

Constraints

A data disk cannot be used as system disk for an ECS even if this API has been called to set the bootable flag for it.

URI

- URI format

  POST /v2/{project_id}/volumes/{volume_id}/action

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-set_bootable	Object	Yes	Specifies the disk bootable marker. For details, see **Parameter in the os-set_bootable field**.

- Parameter in the **os-set_bootable** field

Parameter	Type	Mandatory	Description
bootable	Boolean	Yes	Specifies whether to set the bootable flag for the disk. • **false**: does not set the flag. • **true**: sets the flag.

- Example request

```
{
    "os-set_bootable": {
        "bootable": true
    }
}
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.2.3 Setting Read-Only Flag for an EVS Disk

Function

This API is used to set the read-only flag for the EVS disk.

URI

- URI format

  POST /v2/{project_id}/volumes/{volume_id}/action

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-update_readonly_flag	Object	Yes	Specifies the disk read-only flag. For details, see **Parameter in the os-update_readonly_flag field**.

- Parameter in the **os-update_readonly_flag** field

Parameter	Type	Mandatory	Description
readonly	Boolean	Yes	Specifies the read-only flag. • **true**: specifies the disk is read-only. • **false**: specifies the disk is not read-only.

- Example request

```
{
    "os-update_readonly_flag": {
        "readonly": true
    }
}
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.2.4 Exporting EVS Disk Data as an Image

Function

This API is used to export the system disk data or data disk data as an IMS image. The exported image will be displayed in the IMS private image list and can be viewed and used.

URI

- URI format

  POST /v2/{project_id}/volumes/{volume_id}/action

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-volume_upload_image	Object	Yes	Specifies the operation to export the disk data as an image. For details, see **Parameters in the os-volume_upload_image field**.

- Parameters in the **os-volume_upload_image** field

Parameter	Type	Mandatory	Description
disk_format	String	No	Specifies the format of the exported image. The value can be **vhd**, **zvhd**, **zvhd2**, **raw**, or **qcow2**. The default value is **zvhd2**.
image_name	String	Yes	Specifies the name of the exported image. • The name cannot start or end with space. • The name contains 1 to 128 characters. • The name contains the following characters: uppercase letters, lowercase letters, Chinese characters, digits, and special characters, such as hyphens (-), periods (.), underscores (_), and spaces.

Parameter	Type	Mandatory	Description
force	Boolean	No	Specifies whether to forcibly export the image. The default value is **false**. • If **force** is set to **false** and the disk is in the **in-use** state, the image cannot be forcibly exported. • If **force** is set to **true** and the disk is in the **in-use** state, the image can be forcibly exported.
container_format	String	No	Specifies the container type of the exported image. The value can be **ami**, **ari**, **aki**, **ovf**, or **bare**. The default value is **bare**.
__os_type	String	No	Specifies the OS type of the exported image. Currently, only **windows** and **linux** are supported. The default value is **linux**. **NOTE** • There are two underscores (_) in front of **os** and one underscore (_) after **os**. • This parameter setting takes effect only when the **__os_type** field is not included in **volume_image_metadata** and the disk status is **available**. • If this parameter is not specified, default value **linux** is used as the OS type of the image.

- Example request

```
{
    "os-volume_upload_image": {
        "image_name": "sxmatch2",
        "force": true,
        "container_format": "bare",
        "disk_format": "vhd",
        "__os_type": "linux"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
os-volume_upload_image	Object	Specifies the operation to export the disk data as an image. For details, see **Parameters in the os-volume_upload_image field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **os-volume_upload_image** field

Parameter	Type	Description
status	String	Specifies the disk status after the image is exported. The correct value is **uploading**.
image_id	String	Specifies the ID of the exported image.
image_name	String	Specifies the name of the exported image.
volume_type	Object	Specifies the disk type information. For details, see **Parameters in the volume_type field**.
container_format	String	Specifies the container type of the exported image. The value can be **ami**, **ari**, **aki**, **ovf**, or **bare**. The default value is **bare**.
size	Integer	Specifies the disk size, in GB.
disk_format	String	Specifies the format of the exported image. The value can be **vhd**, **zvhd**, **zvhd2**, **raw**, or **qcow2**. The default value is **vhd**.
id	String	Specifies the disk ID.
display_description	String	Specifies the disk description.
updated_at	String	Specifies the time when the disk was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX

- Parameters in the **volume_type** field

Parameter	Type	Description
id	String	Specifies the ID of the disk type.

Parameter	Type	Description
name	String	Specifies the name of the disk type.
deleted	Boolean	Specifies whether to delete the disk type.
is_public	Boolean	Reserved field
extra_spec	Object	Specifies the disk type specifications. For details, see **Parameters in the extra_specs field**.
description	Integer	Specifies the description of the disk type.
created_at	String	Specifies the time when the disk type was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
updated_at	String	Specifies the time when the disk type was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
deleted_at	String	Specifies the time when the disk type was deleted. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX

- Parameters in the **extra_specs** field

Parameter	Type	Description
volume_backend_name	String	Reserved field
availability-zone	String	Reserved field
HW:availability_zone	String	Reserved field

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "os-volume_upload_image": {
        "status": "uploading",
        "size": 40,
        "id": "16369c5d-384d-4e64-b37a-56d898769362",
        "image_id": "c5333daa-fbc8-4d1d-bf79-b0567bb45d15",
        "image_name": "evs-ims-test1027",
        "volume_type": {
            "description": "None",
            "deleted": false,
            "created_at": "2015-05-24T14:47:22.132268",
            "updated_at": "2017-07-29T11:29:33.730076",
            "extra_specs": {
                "volume_backend_name": "<or> iaas blockstorage_SATA <or> iaas blockstorage_SAS <or>
iaas blockstoragesata",
                "XX:availability_zone": "az-dc-1"
            },
            "is_public": true,
            "deleted_at": null,
            "id": "8247b6ed-37f0-4c48-8ef1-f0027fb332bc",
            "name": "SATA"
        },
        "container_format": "bare",
        "disk_format": "vhd",
        "display_description": "",
        "updated_at": "2018-01-11T01:50:25.800931"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.2.5 Attaching an EVS Disk (Deprecated)

Function

This API is only used to change the EVS disk status from **available** to **in-use**.

NOTICE

This API call exists for compatibility reasons only and is not meant to be used.

Constraints

Do not call this API to attach a disk. If you need to attach a disk, call the ECS Attach Volume API.

URI

- URI format

  POST /v2/{project_id}/volumes/{volume_id}/action

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-attach	Object	Yes	Specifies the disk attachment marker. For details, see **Parameters in the os-attach field**.

- Parameters in the **os-attach** field

Parameter	Type	Mandatory	Description
instance_uuid	String	Yes	Specifies the UUID of the host to be attached to.
mountpoint	String	Yes	Specifies the device name.
host_name	String	No	Specifies the name of the host to be attached to. The value can contain a maximum of 255 bytes.

Parameter	Type	Mandatory	Description
mode	String	No	Specifies the attachment mode. The value can be **rw** (read/write) or **ro** (read-only).

- Example request

```
POST https://{endpoint}/v2/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214/action
{
    "os-attach": {
        "instance_uuid": "95D9EF50-507D-11E5-B970-0800200C9A66",
        "mountpoint": "/dev/vdc"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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


Status Codes

- Normal
  202

Error Codes

For details, see **Error Codes**.

7.2.6 Detaching an EVS Disk (Deprecated)

Function

This API is only used to change the EVS disk status from **in-use** to **available**.

NOTICE

This API call exists for compatibility reasons only and is not meant to be used.

Constraints

Do not call this API to detach a disk. If you need to detach a disk, call the ECS Detach Volume API.

URI

- URI format
  POST /v2/{project_id}/volumes/{volume_id}/action
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-detach	Object	Yes	Specifies disk detachment marker.

- Parameter in the **os-detach** field

Parameter	Type	Mandatory	Description
attachment_id	String	No	Specifies the attachment ID. If the disk has only one attachment, this parameter is optional. If it has multiple attachments, the parameter is optional.

- Example request

```
POST https://{endpoint}/v2/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214/action
{
    "os-detach": {
        "attachment_id": "d8777f54-84cf-4809-a679-468ffed56cf1"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

```
{
    "itemNotFound": {
```



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

Status Codes

- Normal
  202

Error Codes

For details, see **Error Codes**.

7.2.7 Reserving an EVS Disk (Deprecated)

Function

This API is used to reserve an EVS disk.

NOTICE

This API call exists for compatibility reasons only and is not meant to be used.

URI

- URI format
  POST /v2/{project_id}/volumes/{volume_id}/action
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-reserve	Object	Yes	Specifies disk reservation marker. Defining a value for this parameter is not mandatory, and you are advised to leave it blank.

- Example request

```
POST https://{endpoint}/v2/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214/action
{
    "os-reserve": {}
}
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.2.8 Canceling Reservation of an EVS Disk (Deprecated)

Function

This API is used to cancel the reservation of an EVS disk.

NOTICE

This API call exists for compatibility reasons only and is not meant to be used.

URI

- URI format

  POST /v2/{project_id}/volumes/{volume_id}/action

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
os-unreserve	Object	Yes	Specifies disk reservation canceling marker. Defining a value for this parameter is not mandatory, and you are advised to leave it blank.

- Example request

```
POST https://{endpoint}/v2/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214/action
{
    "os-unreserve": {}
}
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.3 EVS Snapshot

7.3.1 Creating an EVS Snapshot

Function

This API is used to create an EVS snapshot.

URI

- URI format

  POST /v2/{project_id}/snapshots

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

Request

- Parameter description

Parameter	Type	Mandatory	Description
snapshot	Object	Yes	Specifies the information of the snapshot to be created. For details, see **Parameters in the snapshot field**.

- Parameters in the **snapshot** field

Parameter	Type	Mandatory	Description
volume_id	String	Yes	Specifies the ID of the snapshot's source disk.
force	Boolean	No	Specifies the flag for forcibly creating a snapshot. The default value is **false**. • If this parameter is set to **false** and the disk is in the **attaching** state, the snapshot cannot be forcibly created. • If this parameter is set to **true** and the disk is in the **attaching** state, the snapshot can be forcibly created.

Parameter	Type	Mandatory	Description
metadata	Object	No	Specifies the snapshot metadata.
description	String	No	Specifies the snapshot description. The value can be **null**. The value can contain a maximum of 255 bytes.
name	String	No	Specifies the snapshot name. The value can contain a maximum of 255 bytes. **NOTE** When creating a backup for a disk, a snapshot will be created and named with prefix **autobk_snapshot_**. The EVS console has imposed operation restrictions on snapshots with prefix **autobk_snapshot_**. Therefore, you are advised not to use **autobk_snapshot_** as the name prefix for the snapshots you created. Otherwise, the snapshots cannot be used normally.

- Example request

```
{
    "snapshot": {
        "name": "snap-001",
        "description": "Daily backup",
        "volume_id": "5aa119a8-d25b-45a7-8d1b-88e127885635",
        "force": false,
        "metadata": { }
    }
}
```

Response

- Parameter description

Parameter	Type	Description
snapshot	Object	Specifies the snapshot information. For details, see **Parameters in the snapshot field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **snapshot** field

Parameter	Type	Description
id	String	Specifies the snapshot ID.
status	String	Specifies the snapshot status. For details, see **EVS Snapshot Status**.

Parameter	Type	Description
name	String	Specifies the snapshot name.
description	String	Specifies the snapshot description.
created_at	String	Specifies the time when the snapshot was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
metadata	Object	Specifies the snapshot metadata.
volume_id	String	Specifies the ID of the snapshot's source disk.
size	Integer	Specifies the snapshot size, in GB.
updated_at	String	Specifies the time when the snapshot was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
os-extended-snapshot-attributes:progress	String	Reserved field
os-extended-snapshot-attributes:project_id	String	Reserved field

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "snapshot": {
        "status": "creating",
        "description": "Daily backup",
        "created_at": "2013-02-25T03:56:53.081642",
        "metadata": { },
        "volume_id": "5aa119a8-d25b-45a7-8d1b-88e127885635",
        "size": 1,
        "id": "ffa9bc5e-1172-4021-acaf-cdcd78a9584d",
        "name": "snap-001",
```



```
    "updated_at": "2013-02-25T03:56:53.081642"
  }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.3.2 Deleting an EVS Snapshot

Function

This API is used to delete an EVS snapshot.

Constraints

- A snapshot can be deleted only when it is in the **available** or **error** state.

URI

- URI format

  DELETE /v2/{project_id}/snapshots/{snapshot_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.

Request

- Example request
  DELETE https://{endpoint}/v2/{project_id}/snapshots/f9faf7df-fdc1-4093-9ef3-5cba06eef995

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.3.3 Updating an EVS Snapshot

Function

This API is used to update an EVS snapshot.

URI

- URI format

  PUT /v2/{project_id}/snapshots/{snapshot_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
snapshot	Object	Yes	Specifies the information of the snapshot to be updated. For details, see **Parameters in the snapshot field**.

- Parameters in the **snapshot** field

Parameter	Type	Mandatory	Description
name	String	No	Specifies the snapshot name. The value can contain a maximum of 255 bytes. **NOTE** When creating a backup for a disk, a snapshot will be created and named with prefix **autobk_snapshot_**. The EVS console has imposed operation restrictions on snapshots with prefix **autobk_snapshot_**. Therefore, you are advised not to use **autobk_snapshot_** as the name prefix for the snapshots you created. Otherwise, the snapshots cannot be used normally.

Parameter	Type	Mandatory	Description
description	String	No	Specifies the snapshot description. The value can contain a maximum of 255 bytes.

- Example request

```
{
   "snapshot": {
      "name": "snap-001",
      "description": "Daily backup"
   }
}
```

Response

- Parameter description

Parameter	Type	Description
snapshot	Object	Specifies the snapshot information. For details, see **Parameters in the snapshot field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **snapshot** field

Parameter	Type	Description
id	String	Specifies the snapshot ID.
status	String	Specifies the snapshot status. For details, see **EVS Snapshot Status**.
name	String	Specifies the snapshot name.
description	String	Specifies the snapshot description.
created_at	String	Specifies the time when the snapshot was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
metadata	Object	Specifies the snapshot metadata.
volume_id	String	Specifies the ID of the snapshot's source disk.
size	Integer	Specifies the snapshot size, in GB.

Parameter	Type	Description
updated_at	String	Specifies the time when the snapshot was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
os-extended-snapshot-attributes:progress	String	Reserved field
os-extended-snapshot-attributes:project_id	String	Reserved field

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "snapshot": {
        "status": "available",
        "description": "Daily backup",
        "created_at": "2013-02-25T03:56:53.081642",
        "metadata": { },
        "volume_id": "5aa119a8-d25b-45a7-8d1b-88e127885635",
        "size": 1,
        "id": "f9faf7df-fdc1-4093-9ef3-5cba06eef995",
        "name": "snap-001",
        "updated_at": "2013-02-25T03:56:53.081642"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

```
{
    "itemNotFound": {
        "message": "XXXX",
        "code": "XXX"
```



```
    }
}
```

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.4 Querying EVS Snapshots

Function

This API is used to query the EVS snapshots.

URI

- URI format

  GET /v2/{project_id}/snapshots

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
marker	String	No	Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.
offset	Integer	No	Specifies the offset. **NOTE** This parameter is used when snapshots are queried by page and is used together with the **limit** parameter. For example, there are a total of 30 snapshots. If you set **offset** to **11** and **limit** to **10**, the queried snapshot starts from the twelfth snapshot, and at most 10 snapshots can be queried at a time.

Parameter	Type	Mandatory	Description
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit. If the tenant has more than 50 snapshots in total, you are advised to use this parameter and set its value to **50** to improve the query efficiency. Examples are provided as follows: **GET /v2/*xxx*/snapshots?limit=50**: Queries the 1–50 snapshots. **GET /v2/*xxx*/snapshots?offset=50&limit=50**: Queries the 51–100 snapshots.
name	String	No	Specifies the snapshot name. This parameter does not support fuzzy search. The value can contain a maximum of 255 bytes.
status	String	No	Specifies the snapshot status. For details, see **EVS Snapshot Status**.
volume_id	String	No	Specifies the ID of the snapshot's source disk.

Request

The following example shows how to query the snapshots in the **available** state.

- Example request
  ```
  GET https://{endpoint}/v2/{project_id}/snapshots?status=available
  ```

Response

- Parameter description

Parameter	Type	Description
snapshots	Object	Specifies the snapshot information. For details, see **Parameters in the snapshots field**.

Parameter	Type	Description
snapshots_links	list<map<String,String>>	Specifies the query position marker in the snapshot list. This parameter is at the same level as parameter **snapshots** in the response body. This parameter is returned only when parameter **limit** is specified in the request, and this parameter indicates that only some snapshots are returned in this query.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **snapshots** field

Parameter	Type	Description
id	String	Specifies the snapshot ID.
status	String	Specifies the snapshot status. For details, see **EVS Snapshot Status**.
name	String	Specifies the snapshot name.
description	String	Specifies the snapshot description.
created_at	String	Specifies the time when the snapshot was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
metadata	Object	Specifies the snapshot metadata. If **metadata** contains the **__system__enableActive** field, the snapshot is automatically created during the backup of a server.
volume_id	String	Specifies the ID of the snapshot's source disk.
size	Integer	Specifies the snapshot size, in GB.
updated_at	String	Specifies the time when the snapshot was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response


```
{
   "snapshots": [
      {
         "created_at": "2016-02-16T16:54:14.981520",
         "description": null,
         "id": "b836dc3d-4e10-4ea4-a34c-8f6b0460a583",
         "metadata": { },
         "name": "test01",
         "size": 1,
         "status": "available",
         "volume_id": "ba5730ea-8621-4ae8-b702-ff0ffc12c209",
         "updated_at": null
      },
      {
         "created_at": "2016-02-16T16:54:19.475397",
         "description": null,
         "id": "83be494d-329e-4a78-8ac5-9af900f48b95",
         "metadata": { },
         "name": "test02",
         "size": 1,
         "status": "available",
         "volume_id": "ba5730ea-8621-4ae8-b702-ff0ffc12c209",
         "updated_at": null
      },
      {
         "created_at": "2016-02-16T16:54:24.367414",
         "description": null,
         "id": "dd360f46-7593-4d35-8f2c-5566fd0bd79e",
         "metadata": { },
         "name": "test03",
         "size": 1,
         "status": "available",
         "volume_id": "ba5730ea-8621-4ae8-b702-ff0ffc12c209",
         "updated_at": null
      },
      {
         "created_at": "2016-02-16T16:54:29.766740",
         "description": null,
         "id": "4c29796a-8cf4-4482-9afc-e66da9a81240",
         "metadata": { },
         "name": "test04",
         "size": 1,
         "status": "available",
         "volume_id": "ba5730ea-8621-4ae8-b702-ff0ffc12c209",
         "updated_at": null
      }
   ],
   "snapshots_links": null
}
```


or


```
{
   "error": {
      "message": "XXXX",
```



```
    "code": "XXX"
  }
}
```

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.5 Querying Details About EVS Snapshots

Function

This API is used to query details about the EVS snapshots.

URI

- URI format

  GET /v2/{project_id}/snapshots/detail

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
marker	String	No	Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.

Parameter	Type	Mandatory	Description
offset	Integer	No	Specifies the offset. **NOTE** This parameter is used when snapshots are queried by page and is used together with the **limit** parameter. For example, there are a total of 30 snapshots. If you set **offset** to **11** and **limit** to **10**, the queried snapshot starts from the twelfth snapshot, and at most 10 snapshots can be queried at a time.
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit. If the tenant has more than 50 snapshots in total, you are advised to use this parameter and set its value to **50** to improve the query efficiency. Examples are provided as follows: **GET /v2/*xxx*/snapshots/detail?limit=50**: Queries the 1–50 snapshots. **GET /v2/*xxx*/snapshots/detail?offset=50&limit=50**: Queries the 51–100 snapshots.
name	String	No	Specifies the snapshot name. The value can contain a maximum of 255 bytes.
status	String	No	Specifies the snapshot status. For details, see **EVS Snapshot Status**.
volume_id	String	No	Specifies the ID of the snapshot's source disk.

Request

The following example shows how to query details of the snapshots in the **available** state.

- Example request
  GET https://{endpoint}/v2/{project_id}/snapshots/detail?status=available

Response

- Parameter description

Parameter	Type	Description
snapshots	Object	Specifies the snapshot information. For details, see **Parameters in the snapshots field**.
snapshots_links	list<map<String,String>>	Specifies the query position marker in the snapshot list. This parameter is at the same level as parameter **snapshots** in the response body. This parameter is returned only when parameter **limit** is specified in the request, and this parameter indicates that only some snapshots are returned in this query.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **snapshots** field

Parameter	Type	Description
id	String	Specifies the snapshot ID.
status	String	Specifies the snapshot status. For details, see **EVS Snapshot Status**.
name	String	Specifies the snapshot name.
description	String	Specifies the snapshot description.
created_at	String	Specifies the time when the snapshot was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
updated_at	String	Specifies the time when the snapshot was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
metadata	Object	Specifies the snapshot metadata. If **metadata** contains the **__system__enableActive** field, the snapshot is automatically created during the backup of a server.
volume_id	String	Specifies the ID of the snapshot's source disk.
size	Integer	Specifies the snapshot size, in GB.

Parameter	Type	Description
os-extended-snapshot-attributes:project_id	String	Specifies the tenant ID. The tenant ID is actually the project ID.
os-extended-snapshot-attributes:progress	String	Reserved field

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "snapshots": [
        {
            "status": "available",
            "os-extended-snapshot-attributes:progress": "100%",
            "description": null,
            "created_at": "2013-06-19T07:15:29.000000",
            "metadata": { },
            "volume_id": "ae11e59c-bd56-434a-a00c-04757e1c066d",
            "os-extended-snapshot-attributes:project_id": "d6c277ba8820452e83df36f33c9fa561",
            "size": 5,
            "id": "6cd26877-3ca3-4f4e-ae2a-38cc3d6183fa",
            "name": "name_xx2-snap",
            "updated_at": null
        },
        {
            "status": "available",
            "os-extended-snapshot-attributes:progress": "100%",
            "description": null,
            "created_at": "2013-06-19T09:08:08.000000",
            "metadata": { },
            "volume_id": "ae11e59c-bd56-434a-a00c-04757e1c066d",
            "os-extended-snapshot-attributes:project_id": "d6c277ba8820452e83df36f33c9fa561",
            "size": 5,
            "id": "b3253e26-5c37-48dd-8bf2-8795dd1e848f",
            "name": "name_xx2-snap",
            "updated_at": null
        }
    ]
}
```

or

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



```
    }
}
```

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.6 Querying Details About an EVS Snapshot

Function

This API is used to query details about an EVS snapshot.

URI

- URI format

  GET /v2/{project_id}/snapshots/{snapshot_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/snapshots/f9faf7df-fdc1-4093-9ef3-5cba06eef995
```

Response

- Parameter description

Parameter	Type	Description
snapshot	Object	Specifies the snapshot information. For details, see **Parameters in the snapshot field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **snapshot** field

Parameter	Type	Description
id	String	Specifies the snapshot ID.
status	String	Specifies the snapshot status. For details, see **EVS Snapshot Status**.
name	String	Specifies the snapshot name. Snapshots whose names started with prefix **autobk_snapshot_** are automatically created by the system during backup creations. Do not delete these snapshots or use them to roll back the disk data.
description	String	Specifies the snapshot description.
created_at	String	Specifies the time when the snapshot was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
updated_at	String	Specifies the time when the snapshot was updated. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
metadata	Object	Specifies the snapshot metadata. If **metadata** contains the **__system__enableActive** field, the snapshot is automatically created during the backup of a server.
volume_id	String	Specifies the ID of the snapshot's source disk.
size	Integer	Specifies the snapshot size, in GB.
os-extended-snapshot-attributes:project_id	String	Specifies the tenant ID. The tenant ID is actually the project ID.

Parameter	Type	Description
os-extended-snapshot-attributes:progress	String	Reserved field

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "snapshot": {
        "status": "available",
        "os-extended-snapshot-attributes:progress": "100%",
        "description": "daily backup",
        "created_at": "2013-02-25t04:13:17.000000",
        "metadata": {},
        "volume_id": "5aa119a8-d25b-45a7-8d1b-88e127885635",
        "os-extended-snapshot-attributes:project_id": "0c2eba2c5af04d3f9e9d0d410b371fde",
        "size": 1,
        "id": "2bb856e1-b3d8-4432-a858-09e4ce939389",
        "name": "snap-001",
        "updated_at": null

    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.7 Adding Metadata of an EVS Snapshot

Function

This API is used to add the metadata of an EVS snapshot.

URI

- URI format

  POST /v2/{project_id}/snapshots/{snapshot_id}/metadata

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
metadata	Object	Yes	Specifies the metadata to be added. For details, see **Parameter in the metadata field**.

- Parameter in the **metadata** field

Parameter	Type	Mandatory	Description
key_val	String	No	Specifies the metadata information, which is made up of one or multiple key-value pairs.

- Example request

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```


Response

- Parameter description

Parameter	Type	Description
metadata	Object	Specifies the snapshot metadata, which is made up of key-value pairs.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.8 Querying Metadata of an EVS Snapshot

Function

This API is used to query the metadata of an EVS snapshot.

URI

- URI format

  GET /v2/{project_id}/snapshots/{snapshot_id}/metadata

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/snapshots/f9faf7df-fdc1-4093-9ef3-5cba06eef995/metadata
```

Response

- Parameter description

Parameter	Type	Description
metadata	Object	Specifies the snapshot metadata, which is made up of key-value pairs. If **metadata** contains the **__system__enableActive** field, the snapshot is automatically created during the backup of a server.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.

Parameter	Type	Description
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.9 Updating One Piece of Metadata for an EVS Snapshot

Function

This API is used to update one piece of the EVS snapshot metadata.

URI

- URI format

  PUT /v2/{project_id}/snapshots/{snapshot_id}/metadata/{key}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.
key	Yes	Specifies the key of the piece of metadata to be updated.

Request

- Parameter description

Parameter	Type	Mandatory	Description
meta	Object	Yes	Specifies the metadata to be updated. For details, see **Parameter in the metadata field**.

- Parameter in the **metadata** field

Parameter	Type	Mandatory	Description
key_val	String	No	Specifies a piece of metadata, which is made up of a key-value pair.

- Example request

```
{
    "meta": {
        "key1": "value1"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
meta	Object	Specifies a piece of snapshot metadata, which is made up of a key-value pair.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "meta": {
        "key1": "value1"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.10 Updating Metadata of an EVS Snapshot

Function

This API is used to update the metadata of an EVS snapshot.

URI

- URI format

  PUT /v2/{project_id}/snapshots/{snapshot_id}/metadata

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
metadata	Object	Yes	Specifies the metadata to be updated. For details, see **Parameter in the metadata field**.

- Parameter in the **metadata** field

Parameter	Type	Mandatory	Description
key_val	String	No	Specifies the metadata information, which is made up of one or multiple key-value pairs.

- Example request

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
metadata	Object	Specifies the snapshot metadata, which is made up of key-value pairs.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "metadata": {
        "key1": "value1",
        "key2": "value2"
    }
}
```

or

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

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.11 Querying One Piece of Metadata for an EVS Snapshot

Function

This API is used to query one piece of the EVS snapshot metadata.

URI

- URI format

  GET /v2/{project_id}/snapshots/{snapshot_id}/metadata/{key}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.
key	Yes	Specifies the key of the piece of metadata to be queried.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/snapshots/f9faf7df-fdc1-4093-9ef3-5cba06eef995/metadata/value1
```

Response

- Parameter description

Parameter	Type	Description
meta	Object	Specifies a piece of snapshot metadata, which is made up of a key-value pair.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "meta": {
        "key1": "value1"
    }
}
```

or

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



```
    }
}
```

In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.3.12 Deleting One Piece of Metadata for an EVS Snapshot

Function

This API is used to delete one piece of the EVS snapshot metadata.

URI

- URI format

  DELETE /v2/{project_id}/snapshots/{snapshot_id}/metadata/{key}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
snapshot_id	Yes	Specifies the snapshot ID.
key	Yes	Specifies the key of the piece of metadata to be deleted.

Request

- Example request

```
DELETE https://{endpoint}/v2/{project_id}/snapshots/f9faf7df-fdc1-4093-9ef3-5cba06eef995/metadata/value1
```

Response

- Parameter description

Parameter	Type	Description
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

  None

  or

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

  In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.4 EVS Disk Transfer

7.4.1 Creating a Disk Transfer

Function

This API is used to create a disk transfer. After the transfer has been created, a transfer ID and an authentication key are returned.

After a disk transfer is created, the disk status changes from **available** to **awaiting-transfer**. Once the disk transfer is accepted, the disk status changes to **available** again.

Constraints

A disk transfer can be created only when the disk status is **available**. The detailed constraints are as follows:

- EVS disks with backups and snapshots available cannot be transferred.
- EVS disks associated with backup policies cannot be transferred.
- EVS disks used as system disks cannot be transferred.

NOTE

If the disk transfer is created using one of the unsupported disks, error code 400 will be returned.

URI

- URI format

  POST /v2/{project_id}/os-volume-transfer

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

Request

- Parameter description

Parameter	Type	Mandatory	Description
transfer	Object	Yes	Specifies the disk transfer marker. For details, see **Parameters in the transfer field**.

- Parameters in the **transfer** field

Parameter	Type	Mandatory	Description
volume_id	String	Yes	Specifies the disk ID.
name	String	No	Specifies the disk transfer name. The value can contain a maximum of 255 bytes.

- Example request

```
{
    "transfer": {
        "volume_id": "c86b9af4-151d-4ead-b62c-5fb967af0e37",
        "name": "first volume"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
transfer	Object	Specifies the disk transfer information. For details, see **Parameters in the transfer field**.

- Parameters in the **transfer** field

Parameter	Type	Description
auth_key	String	Specifies the authentication key of the disk transfer.
links	List< Dict >	Specifies the links of the disk transfer.
created_at	String	Specifies the time when the disk transfer was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_id	String	Specifies the disk ID.
id	String	Specifies the disk transfer ID.
name	String	Specifies the name of the disk transfer.

- Example response

```
{
    "transfer": {
        "id": "1a7059f5-8ed7-45b7-8d05-2811e5d09f24",
        "created_at": "2015-02-25T03:56:53.081642",
        "name": "first volume",
        "volume_id": "c86b9af4-151d-4ead-b62c-5fb967af0e37",
        "auth_key": "9266c59563c84664",
        "links": [
            {
```



```
            "href": "https://localhost/v2/firstproject/os-volume-transfer/3",
            "rel": "self"
        },
        {
            "href": "https://localhost/firstproject/os-volume-transfer/3",
            "rel": "bookmark"
        }
    ]
  }
}
```

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.4.2 Accepting a Disk Transfer

Function

This API is used to accept a disk transfer through the transfer ID and authentication key.

Constraints

- EVS disks with backups and snapshots available cannot be transferred.
- EVS disks associated with backup policies cannot be transferred.
- EVS disks used as system disks cannot be transferred.

NOTE

If the disk transfer is created using one of the unsupported disks, error code 400 will be returned.

URI

- URI format

  POST /v2/{project_id}/os-volume-transfer/{transfer_id}/accept

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
transfer_id	Yes	Specifies the disk transfer ID.

Request

- Parameter description

Parameter	Type	Mandatory	Description
accept	Object	Yes	Specifies the disk transfer acceptance marker. For details, see **Parameter in the accept field**.

- Parameter in the **accept** field

Parameter	Type	Mandatory	Description
auth_key	String	Yes	Specifies the authentication key of the disk transfer. Specifies the authentication key returned during the disk transfer creation.

- Example request

```
{
    "accept": {
        "auth_key": "9266c59563c84664"
    }
}
```

Response

- Parameter description

Parameter	Type	Description
transfer	Object	Specifies the disk transfer information. For details, see **Parameters in the transfer field**.

- Parameters in the **transfer** field

Parameter	Type	Description
volume_id	String	Specifies the disk ID.
id	String	Specifies the disk transfer ID.
name	String	Specifies the name of the disk transfer.
links	List< Dict >	Specifies the links of the disk transfer.

- Example response

```
{
    "transfer": {
```



```
    "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
    "name": "first volume transfer",
    "volume_id": "894623a6-e901-4312-aa06-4275e6321cce",
    "links": [
      {
        "href": "https://localhost/v2/firstproject/os-volume-transfer/1",
        "rel": "self"
      },
      {
        "href": "https://localhost/firstproject/os-volume-transfer/1",
        "rel": "bookmark"
      }
    ]
  }
}
```

Status Codes

- Normal
  202

Error Codes

For details, see **Error Codes**.

7.4.3 Deleting a Disk Transfer

Function

This API is used to delete a disk transfer. A disk transfer can be deleted if it is not accepted. Accepted disk transfers cannot be deleted.

URI

- URI format
  DELETE /v2/{project_id}/os-volume-transfer/{transfer_id}
- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
transfer_id	Yes	Specifies the disk transfer ID.

Request

- Example request
  ```
  DELETE https://{endpoint}/v2/{project_id}/os-volume-transfer/cac5c677-73a9-4288-bb9c-b2ebfb547377
  ```

Response

None

Status Codes

- Normal

  202

Error Codes

For details, see **Error Codes**.

7.4.4 Querying Details of a Disk Transfer

Function

This API is used to query the details of a disk transfer, including the transfer creation time, transfer ID, and transfer name.

URI

- URI format

  GET /v2/{project_id}/os-volume-transfer/{transfer_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
transfer_id	Yes	Specifies the disk transfer ID.

Request

- Example request

```
GET https://{endpoint}/v2/{project_id}/os-volume-transfer/cac5c677-73a9-4288-bb9c-b2ebfb547377
```

Response

- Parameter description

Parameter	Type	Description
transfer	Object	Specifies the disk transfer details. For details, see **Parameters in the transfer field**.

- Parameters in the **transfer** field

Parameter	Type	Description
links	List< Dict >	Specifies the links of the disk transfer.

Parameter	Type	Description
created_at	String	Specifies the time when the disk transfer was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_id	String	Specifies the disk ID.
id	String	Specifies the disk transfer ID.
name	String	Specifies the name of the disk transfer.

- Example response

```
{
    "transfer": {
        "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
        "created_at": "2015-02-25T03:56:53.081642",
        "name": "first volume transfer",
        "volume_id": "894623a6-e901-4312-aa06-4275e6321cce",
        "links": [
            {
                "href": "https://localhost/v2/firstproject/os-volume-transfer/1",
                "rel": "self"
            },
            {
                "href": "https://localhost/firstproject/os-volume-transfer/1",
                "rel": "bookmark"
            }
        ]
    }
}
```

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.4.5 Querying All Disk Transfers

Function

This API is used to query all disk transfers of the current tenant.

URI

- URI format

  GET /v2/{project_id}/os-volume-transfer

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit.
offset	Integer	No	Specifies the offset. All disk transfers after this offset will be queried. The value must be an integer greater than 0 but less than the number of disk transfers.

Request

The following example shows how to query details of the disk transfers whose limit is no more than 50.

- Example request

```
GET https://{endpoint}/v2/{project_id}/os-volume-transfer?limit=50
```

Response

- Parameter description

Parameter	Type	Description
transfers	List<Transfer>	Specifies the disk transfers. For details, see **Parameters in the transfers field**.

- Parameters in the **transfers** field

Parameter	Type	Description
links	List< Dict >	Specifies the links of the disk transfer.
volume_id	String	Specifies the disk ID.
id	String	Specifies the disk transfer ID.

Parameter	Type	Description
name	String	Specifies the name of the disk transfer.

- Example response

```
{
   "transfers": [
      {
         "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
         "name": "first volume transfer",
         "volume_id": "894623a6-e901-4312-aa06-4275e6321cce",
         "links": [
            {
               "href": "https://localhost/v2/firstproject/os-volume-transfer/1",
               "rel": "self"
            },
            {
               "href": "https://localhost/firstproject/os-volume-transfer/1",
               "rel": "bookmark"
            }
         ]
      },
      {
         "id": "f26c0dee-d20d-4e80-8dee-a8d91b9742a1",
         "name": "second volume transfer",
         "volume_id": "673db275-379f-41af-8371-e1652132b4c1",
         "links": [
            {
               "href": "https://localhost/v2/firstproject/os-volume-transfer/2",
               "rel": "self"
            },
            {
               "href": "https://localhost/firstproject/os-volume-transfer/2",
               "rel": "bookmark"
            }
         ]
      }
   ]
}
```

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

7.4.6 Querying Details of All Disk Transfers

Function

This API is used to query the details of all disk transfers, including the transfer creation time, transfer IDs, and transfer names.

URI

- URI format

  GET /v2/{project_id}/os-volume-transfer/detail

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.

- Request filter parameters

Parameter	Type	Mandatory	Description
limit	Integer	No	Specifies the maximum number of query results that can be returned. The value ranges from 1 to 1000, and the default value is 1000. The returned value cannot exceed this limit.
offset	Integer	No	Specifies the offset. All disk transfers after this offset will be queried. The value must be an integer greater than 0 but less than the number of disk transfers.

Request

The following example shows how to query details of the disk transfers whose limit is no more than 50.

- Example request
  GET https://{endpoint}/v2/{project_id}/os-volume-transfer/detail?limit=50

Parameter description

- Parameter description

Parameter	Type	Description
transfers	List<Transfer>	Specifies the disk transfer details. For details, see **Parameters in the transfers field**.

- Parameters in the **transfers** field

Parameter	Type	Description
links	List< Dict >	Specifies the links of the disk transfer.

Parameter	Type	Description
created_at	String	Specifies the time when the disk transfer was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_id	String	Specifies the disk ID.
id	String	Specifies the disk transfer ID.
name	String	Specifies the name of the disk transfer.

- Example response

```
{
   "transfers": [
      {
         "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
         "created_at": "2015-02-25T03:56:53.081642",
         "name": "first volume transfer",
         "volume_id": "894623a6-e901-4312-aa06-4275e6321cce",
         "links": [
            {
               "href": "https://localhost/v2/firstproject/os-volume-transfer/1",
               "rel": "self"
            },
            {
               "href": "https://localhost/firstproject/os-volume-transfer/1",
               "rel": "bookmark"
            }
         ]
      },
      {
         "id": "f26c0dee-d20d-4e80-8dee-a8d91b9742a1",
         "created_at": "2015-03-25T03:56:53.081642",
         "name": "second volume transfer",
         "volume_id": "673db275-379f-41af-8371-e1652132b4c1",
         "links": [
            {
               "href": "https://localhost/v2/firstproject/os-volume-transfer/2",
               "rel": "self"
            },
            {
               "href": "https://localhost/firstproject/os-volume-transfer/2",
               "rel": "bookmark"
            }
         ]
      }
   ]
}
```

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

8 Out-of-Date APIs

8.1 API v1

8.1.1 Querying Task Status

Function

This API is used to query the execution status of tasks, such as the status of disk creation, capacity expansion, and deletion.

URI

- URI format

  GET /v1/{project_id}/jobs/{job_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID.
job_id	Yes	Specifies the task ID.

Request

The following example shows how to query the status of the task whose task ID is ff808081692a62c70169b4dcf9514264.

- Example request

```
GET https://{endpoint}/v1/{project_id}/jobs/ff808081692a62c70169b4dcf9514264
```

Response

- Parameter description

Parameter	Type	Description
status	String	Specifies the task status. • **SUCCESS**: The task is successfully executed. • **RUNNING**: The task is in progress. • **FAIL**: The task fails. • **INIT**: The task is being initialized.
entities	Object	Specifies the response to the task. For details, see **•Parameters in the entities field**. The contents for each type of task are different.
job_id	String	Specifies the task ID.
job_type	String	Specifies the task type. • **createVolume**: creates a disk. • **batchCreateVolume**: batch creates disks. • **deleteVolume**: deletes a disk. • **extendVolume**: expands the disk capacity. • **bulkDeleteVolume**: batch deletes disks. • **deleteSingleVolume**: deletes disks one by one during a batch deletion.
begin_time	String	Specifies the time when the task was started. Time format: YYYY-MM-DDTHH:MM:SS.SSS'Z'
end_time	String	Specifies the time when the task finished. Time format: YYYY-MM-DDTHH:MM:SS.SSS'Z'
error_code	String	Specifies the returned error code when the task execution fails.
fail_reason	String	Specifies the cause of the task execution failure.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameter in the **entities** field

Parameter	Type	Description
name	String	Specifies the EVS disk name.
size	Integer	Specifies the disk size, in GB.
sub_jobs	Array of Objects	Specifies the information about a sub-job. For details, see **•Parameters in the sub_jobs field**.
volume_id	String	Specifies the disk ID.
volume_type	String	Specifies the disk type.

- Parameters in the **sub_jobs** field

Parameter	Type	Description
status	String	Specifies the task status. • **SUCCESS**: The task is successfully executed. • **RUNNING**: The task is in progress. • **FAIL**: The task fails. • **INIT**: The task is being initialized.
entities	Object	Specifies the response to the task. For details, see **•Parameters in the entities field**. The content for each type of task is different.
job_id	String	Specifies the task ID.
job_type	String	Specifies the task type. • **createVolume**: creates a disk. • **batchCreateVolume**: batch creates disks. • **deleteVolume**: deletes a disk. • **extendVolume**: expands the disk capacity. • **bulkDeleteVolume**: batch deletes disks. • **deleteSingleVolume**: deletes disks one by one during a batch deletion.
begin_time	String	Specifies the time when the task was started. Time format: YYYY-MM-DDTHH:MM:SS.SSS'Z'

Parameter	Type	Description
end_time	String	Specifies the time when the task finished. Time format: YYYY-MM-DDTHH:MM:SS.SSS'Z'
error_code	String	Specifies the returned error code when the task execution fails.
fail_reason	String	Specifies the cause of the task execution failure.

- Parameter in the **entities** field

Parameter	Type	Description
name	String	Specifies the EVS disk name.
size	Integer	Specifies the disk size, in GB.
volume_id	String	Specifies the disk ID.
volume_type	String	Specifies the disk type.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "status": "RUNNING",
    "entities": {
        "volume_id": "bdf1bb37-f20f-4266-9a04-f43e0a127376"
    },
    "job_id": "4010a32d535527910153552b492c0002",
    "job_type": "createVolume",
    "begin_time": "2016-03-08T07:40:13.219Z",
    "end_time": "",
    "error_code": null,
    "fail_reason": null
}
```

or

```
{
    "status": "SUCCESS",
    "entities": {
        "sub_jobs": [
            {
                "status": "SUCCESS",
                "entities": {
```



```
                "volume_id": "0b549095-4937-4849-8e4c-52aa027d64f7"
            },
            "job_id": "21917a8d52a19b040152a9f2f2e50041",
            "job_type": "createVolume",
            "begin_time": "2016-02-04T01:43:37.445Z",
            "end_time": "2016-02-04T01:44:02.239Z",
            "error_code": null,
            "fail_reason": null
        },
        {
            "status": "SUCCESS",
            "entities": {
                "volume_id": "e7bca1a2-d3ed-434f-86f4-a1f11aa80072"
            },
            "job_id": "21917a8d52a19b040152a9f2f2f60042",
            "job_type": "createVolume",
            "begin_time": "2016-02-04T01:43:37.462Z",
            "end_time": "2016-02-04T01:44:02.245Z",
            "error_code": null,
            "fail_reason": null
        }
    ]
},
"job_id": "21917a8d52a19b040152a9f2f1eb003e",
"job_type": "batchCreateVolume",
"begin_time": "2016-02-04T01:43:37.193Z",
"end_time": "2016-02-04T01:44:08.283Z",
"error_code": null,
"fail_reason": null
}
```


or


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


Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

8.2 OpenStack Cinder API v1 (Deprecated)

8.2.1 EVS Disk

8.2.1.1 Querying Details About a Disk (Deprecated)

Function

This API is used to query details about a disk.

NOTICE

This API has been deprecated. Use another API. For details, see **Querying Details About a Disk**.

URI

- URI format

  GET /v1/{project_id}/volumes/{volume_id}

- Parameter description

Parameter	Mandatory	Description
project_id	Yes	Specifies the project ID. For details about how to obtain the project ID, see **Obtaining a Project ID**.
volume_id	Yes	Specifies the disk ID.

Request

- Example request

```
GET https://{endpoint}/v1/{project_id}/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214
```

Response

- Parameter description

Parameter	Type	Description
volume	Object	Specifies the disk information. For details, see **Parameters in the volume field**.
error	Object	Specifies the error message returned when an error occurs. For details, see **Parameters in the error field**.

- Parameters in the **volume** field

Parameter	Type	Description
id	String	Specifies the disk ID.
display_name	String	Specifies the disk name.
status	String	Specifies the disk status. For details, see **EVS Disk Status**.
attachments	list	Specifies the attachment information.

Parameter	Type	Description
availability_zone	String	Specifies the AZ to which the disk belongs.
os-vol-host-attr:host	String	Reserved field
source_volid	String	Specifies the source disk ID. This parameter has a value if the disk is created from a source disk. Currently, this field is not supported by EVS.
snapshot_id	String	Specifies the snapshot ID. This parameter has a value if the disk is created from a snapshot.
display_description	String	Specifies the disk description.
created_at	String	Specifies the time when the disk was created. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
volume_type	String	Specifies the disk type. Currently, only **SSD** and **SAS** are supported. • **SSD**: specifies the ultra-high I/O disk type. • **SAS**: specifies the high I/O disk type.
os-vol-tenant-attr:tenant_id	String	Specifies the ID of the tenant to which the disk belongs. The tenant ID is actually the project ID.
size	Integer	Specifies the disk size, in GB.
metadata	Object	Specifies the disk metadata. If **metadata** does not contain the **hw:passthrough** field, the disk device type is VBD.
os-vol-mig-status-attr:migstat	String	Reserved field
os-vol-mig-status-attr:name_id	String	Reserved field

Parameter	Type	Description
os-volume-replication:extended_status	String	Reserved field
encrypted	Boolean	Currently, this field is not supported by EVS.
bootable	String	Specifies whether the disk is bootable. • **true**: specifies a bootable disk. • **false**: specifies a non-bootable disk.
shareable	String	Specifies whether the disk is shareable. **NOTE** This field is no longer used. Use **multiattach**.
multiattach	Boolean	Specifies whether the disk is shareable. • **true**: specifies a shared disk. • **false**: specifies a non-shared disk.
volume_image_metadata	Object	Specifies whether the disk is created from an image. This field has a value if the disk is created from an image. Otherwise, it is left empty. **NOTE** For details about **volume_image_metadata**, see **Querying Image Details** in the *Image Management Service API Reference*.

- Parameters in the **attachments** field

Parameter	Type	Description
server_id	String	Specifies the ID of the server to which the disk is attached.
attachment_id	String	Specifies the ID of the attachment information.
attached_at	String	Specifies the time when the disk was attached. Time format: UTC YYYY-MM-DDTHH:MM:SS.XXXXXX
host_name	String	Specifies the name of the physical host accommodating the server to which the disk is attached.
volume_id	String	Specifies the disk ID.
device	String	Specifies the device name.

Parameter	Type	Description
id	String	Specifies the ID of the attached resource.

- Parameters in the **metadata** field

Parameter	Type	Description
full_clone	String	Specifies the clone method. When the disk is created from a snapshot, the parameter value is **0**, indicating the linked cloning method.

- Parameters in the **error** field

Parameter	Type	Description
message	String	Specifies the error message returned when an error occurs.
code	String	Specifies the error code returned when an error occurs. For details about the error code, see **Error Codes**.

- Example response

```
{
    "volume": {
        "attachments": [],
        "availability_zone": "az-dc-1",
        "os-vol-host-attr:host": "db-rabbitmq201#LVM_iSCSI",
        "encrypted": false,
        "os-volume-replication:extended_status": null,
        "volume_image_metadata": null,
        "snapshot_id": null,
        "id": "da4f9c7a-c275-4bc9-80c4-76c7d479a218",
        "size": 1,
        "os-vol-tenant-attr:tenant_id": "3dab0aaf682849678a94ec7b5a3af2ce",
        "os-vol-mig-status-attr:migstat": null,
        "metadata": {},
        "status": "available",
        "display_description": null,
        "source_volid": null,
        "os-vol-mig-status-attr:name_id": null,
        "display_name": "test",
        "bootable": "false",
        "created_at": "2014-12-18T17:14:38.000000",
        "volume_type": "SATA",
        "multiattach": false
    }
}
```

or

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


In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

Status Codes

- Normal

  200

Error Codes

For details, see **Error Codes**.

A Appendix

A.1 Error Codes

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.0001	Incorrect tenant ID in the URI. The tenant ID is actually the project ID.	invalid tenant id!	Use the correct tenant ID.
400	EVS.0002	Header parameters in the HTTP request are incorrect.	invalid token!	Use the correct token.
403	EVS.0003	The token used is incorrect.	invalid token roles!	The account permission set is empty. Add the required permissions to this account.
400	EVS.1001	The name and description formats set in the request to update the disk are incorrect.	null volume!	Enter the disk name and description in the correct format.
400	EVS.1002	Incorrect disk ID.	invalid volume id!	Enter the disk ID in the correct format.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.1003	Incorrect disk name format.	invalid volume name!	Enter the disk name in the correct format.
400	EVS.1004	Incorrect disk description format.	invalid volume description!	Enter the disk description in the correct format.
400	EVS.1005	The size of the metadata set in the request to create the disk exceeds the upper limit.	size of metadata is too large!	Check whether the metadata is too large. The metadata size must be smaller than 1048576 bytes.
400	EVS.1006	The ID of the backup used to create the disk is incorrect.	invalid backup id!	Enter the correct backup ID.
400	EVS.1007	Parameters **name** and **description** are incorrect.	volume name and description can not both be empty!	Enter the correct disk name and description.
400	EVS.1008	The format of the request to create the disk is incorrect.	null createVolumeReq!	Use the correct request format.
400	EVS.1009	The body of the request to create the disk is incorrect.	invalid volumeForCreate!	Check the body of the request used to create the disk.
400	EVS.1010	Parameter **size** set in the request to create the disk is invalid.	invalid volume size!	Enter a valid **size** value.
400	EVS.1011	The format of the request to expand the disk capacity is incorrect.	null extendVolumeReq!	Use the correct request format.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.1012	You do not have the permission to access this disk.	temporary volume!	Do not perform operations for a temporary disk as it does not allow any operation.
400	EVS.1013	Request conversion error.	request transforming failed!	Check whether the request body is correct.
400	EVS.1014	Failed to meet the capacity expansion requirements.	volume can not be extended!	Ensure that the disk meets the expansion requirements.
400	EVS.1015	The new size of the disk is incorrect.	new volume Size must be greater than old Size!	Ensure that the new disk capacity is larger than the original disk capacity.
400	EVS.1016	Only one data source among image, snapshot, and backup can be selected when creating a disk from a data source.	Invalid input received: May specify only one of imageRef, snapshot_id, backup_id!	Select one data source.
400	EVS.1018	Type conversion error. The parameter type is unexpected.	Type conversion error , parameter type is unexpected	Check whether the input parameters are correct. See the parameter description in the *Elastic Volume Service API Reference*.
400	EVS.1020	The disk type set in the request to create the disk is incorrect.	invalid volume type!	Enter a valid disk type.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.1021	The disk quantity set in the request to batch create disks is incorrect.	the quantity of volume is invalid!	Enter a valid disk quantity.
400	EVS.1022	Parameter **size** set in the request to create the disk using a backup is incorrect.	the size param is less than backup size!	Ensure that the entered disk size is larger than the backup size.
400	EVS.1023	Parameter **limit** in the URL for querying the disk is incorrect.	invalid filter limit!	Ensure that the **limit** value ranges from **1** to **1000**. The default value is **1000**.
400	EVS.1024	Parameter **marker** in the URL for querying the disk is incorrect.	invalid filter marker!	Ensure that the **marker** value is in the UUID format.
400	EVS.1025	Metadata decoding error.	url encoding failed!	Check whether parameter **metadata** is correctly specified.
403	EVS.1027	You do not have the rights to perform the operation.	user role is not allowed for this action!	Check whether the account has relevant permissions, or the account is in arrears, does not pass real-name authentication, or has violations.
400	EVS.1031	Input value of parameter **resources status** is invalid.	invalid resources status!	Specify a valid value for **resources status**.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.1032	Parameter **resources id** cannot be left empty.	invalid resources ID!	Specify a valid value for **resources id**.
400	EVS.1033	Failed to query the tenant quota.	query quota failed!	Check whether the tenant quota is configured.
400	EVS.1034	Insufficient disk quantity quota assigned to the tenant.	volume count exceeded volume count quota!	Increase the disk quantity quota.
400	EVS.1036	Parameter **availability_zone** set in the request to create the disk is incorrect.	invalid availability zone!	Enter the correct AZ.
400	EVS.1039	Input parameter **sort_key** is incorrect.	invalid sort_key!	Check whether parameter **sort_key** is correctly specified.
400	EVS.1040	Parameter **sort_dir** in the URL for querying the disk is incorrect.	invalid sort_dir!	Ensure that the **sort_dir** value is **desc** or **asc**.
400	EVS.1041	Parameter **availability-zone** in the URL for querying the disk is incorrect.	invalid filter availablity-zone!	Check whether the AZ specified in the request is valid.
400	EVS.1042	Insufficient disk capacity quota assigned to the tenant.	volume gigabytes exceeded volume gigabytes quota!	Increase the disk capacity quota.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.1043	Parameters **__system__encrypted**, **__system__cmkid**, and **hw:passthrough** are not supported when a disk is created from an image or a snapshot.	encrypt and cmk and passthrougth in metadata is not support when create volume from snapshot or image!	Check whether the request body is correct. For details, see the **metadata** field description for creating disks.
400	EVS.1044	The backup cannot be used to create a disk.	backup status must be available when create a volume from it!	The backup is unavailable.
400	EVS.1045	Failed to query the backup details.	backupDetail returned by FSP is null!	Check whether the backup exists. Contact customer service.
400	EVS.1046	Failed to delete the disk because the disk status is incorrect.	volume status must be available, error, error_extending, error_restoring, error_rollbacking when delete volume!	Contact customer service.
400	EVS.1047	Failed to delete the snapshot because the snapshot status is incorrect.	snapshot status must be available or error when delete snapshot!	Contact customer service.
400	EVS.1048	Failed to expand the disk capacity because the disk status is incorrect.	volume status must be available when extend volume!	Ensure that the disk status meets the expansion requirements.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.1049	The backup used to create the disk is in the incorrect AZ.	available-zone is not equal to backup available-zone!	The backup and the disk to be created must in the same AZ.
400	EVS.1051	Batch creating disks from a backup is not available.	can not batch create volume from backup!	Batch creating disks from a backup is not available.
400	EVS.1052	Request conversion error.	invalid http body!	Check whether the request body is correct.
400	EVS.1053	Too many disks are specified in the request for batch deleting disks.	the size of volumes to be deleted is too large!	Reduce the number of disks specified in the batch.
400	EVS.1054	Input parameter **shareable** is invalid.	invalid shareable parameter!	Check whether parameter **shareable** is correctly specified.
400	EVS.1057	Input parameter **hw:passthrough** under **metadata** is invalid.	invalid hw:passthrough in metadata!	Check whether parameter **hw:passthrough** is correctly specified.
400	EVS.1058	Metadata decoding error.	invalid metadata filter!	Check whether parameter **metadata** is correctly specified.
400	EVS.1063	Input parameter **full_clone** under **metadata** is invalid.	invalid full_clone in metadata!	Check whether parameter **full_clone** in **metadata** is correctly specified.
400	EVS.1064	A disk can be expanded only when its status is **available** or **in-use**.	volume status must be available or in-use when extending!	Ensure that the disk is in the **available** or **in-use** state before expansion.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.1065	A shared disk can be expanded only when its status is **available**.	multiattach volume status must be available when extending!	Ensure that the shared disk is in the **available** state before expansion.
400	EVS.1066	The ECS or status fails to meet the requirement of online disk expansion.	status of ECS or BMS does not support volume online extension!	Ensure that the ECS or status meets the requirement.
400	EVS.1070	Request conversion error.	invalid request.	Check whether the request body is correct.
500	EVS.2001	Failed to submit the task.	submit job failed!	Contact customer service.
500	EVS.2002	The system is currently unavailable.	internal error!	Contact customer service.
500	EVS.2005	A connection exception occurs.	client exception!	Contact customer service.
500	EVS.2007	Updating the metadata of the disk timed out.	update volume timeout!	Try again later or contact customer service.
500	EVS.2010	Failed to obtain the token for the tenant.	exchange token failed!	Check the user permissions.
500	EVS.2011	Deleting order information from the disk metadata timed out.	delete orderId and productId timeout!	Try again later or contact customer service.
500	EVS.2013	Failed to elevate the permissions.	assume role error!	Contact customer service.

HTTP Status Code	Error Code	Description	Error Message	Solution
500	EVS.2014	Failed to escalate rights.	thread is interrupted when sleep!	Try again later or contact customer service.
500	EVS.2019	Failed to delete the snapshot because the snapshot is in the **error_deleting** status.	snapshot is error_deleting!	Contact customer service.
500	EVS.2020	Failed to delete the disk because the disk is in the **error_deleting** status.	volume is error_deleting!	Contact customer service.
500	EVS.2021	The disk status is **error_detaching**.	volume is error_detaching!	Try again later or contact customer service.
500	EVS.2023	Network connection timed out.	ConnectException happened!	Try again. If the network fails, check the network status. If the network status is abnormal, contact customer service.
500	EVS.2024	The status of the created disk is **error**.	volume is error!	Contact customer service.
500	EVS.2025	The status of the created disk is **error_restoring**.	volume is error_restoring!	Contact customer service.
500	EVS.2026	Failed to expand the disk capacity because the disk is in the **error_extending** state.	volume is error_extending!	Contact customer service.

HTTP Status Code	Error Code	Description	Error Message	Solution
500	EVS.2029	Incorrect subtask quantity.	The size of joIdList and resultList are mismatched!	Contact customer service.
500	EVS.2030	Failed to submit the subtask again.	query context based on parent jobId exception!	Contact customer service.
500	EVS.2031	Failed to query the context.	result queried from context is null!	Contact customer service.
500	EVS.2032	Failed to query the disk quantity quota assigned to the tenant.	some volume count quota usage params are null!	Try again later or contact customer service.
500	EVS.2033	Failed to query the disk capacity quota assigned to the tenant.	some volume gigabytes quota usage params are null!	Try again later or contact customer service.
500	EVS.2034	Token resolution failure.	domainId decoded from token is null or empty!	Check whether the account information is correct.
500	EVS.2035	Token resolution failure.	domainName decoded from token is null or empty!	Check whether the account information is correct.
500	EVS.2036	Empty token.	the result of decode token is null!	Check whether the account information is correct.
400	EVS.2043	The snapshot status is in correct.	The status of snapshot is not available or backing-up.	Ensure that the snapshot status is **available** or **backing-up**.
404	EVS.2044	Failed to check KMS.	Failed to check the role of kms.	Try again later or contact customer service.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.2045	Input parameter **snapshot_id** is invalid.	invalid snapshot_id!	Ensure that the input **snapshot_id** value is correct.
400	EVS.2046	Input parameter **imageRef** is invalid.	invalid imageRef!	Ensure that the input **imageRef** value is correct.
400	EVS.2047	The **metadata** field cannot be modified.	the metadata Param is not allowed to be updated!	Ensure that the input **metadata** value is correct.
500	EVS.2050	Failed to set the disk QoS.	set volume Qos failed!	Ensure that the input **qos** value is correct.
400	EVS.2052	The job corresponding to the order ID is not unique.	the job result using order id to query is invalid!	Try again later or contact customer service.
400	EVS.2053	Input parameter **availability_zone** is invalid.	The az information from request is invalid!	Ensure that the input **availability_zone** value is correct.
400	EVS.2054	When the disk is created from a snapshot, the input **availability_zone** value of the disk is inconsistent with that of the snapshot.	Cannot create volume from snapshot as the az is invalid!	Ensure that the **availability_zone** value of the disk is consistent with that of the snapshot.
400	EVS.2068	Operations cannot be performed on locked resources.	operation failed because of volume be locked	Unlock the resource and then perform the operation.
400	EVS.2070	Disk type does not exist.	VolumeTypes are not supported !	Try again later or contact customer service.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.2071	This type of disks in the current AZ is sold out.	Invalid input received: Availability zone [%s] do not have volume type [%s]	Try again later or contact customer service.
400	EVS.2072	Disks of the ultra-high I/O type in AZ1 are sold out. **NOTE** The ultra-high I/O disk type and AZ1 are used as the sample disk type and AZ. The disk type and AZ vary depending on the actual condition.	Volume type [SSD] in availability zone [AZ1] is sold out !	Select another disk type or contact customer service.
400	EVS.2078	Request conversion error.	checkQuotaCapacity request body is invalid.	Check whether the request body is empty.
400	EVS.2083	The AZ or disk type parameter in the request is invalid.	AZ and volume type must not be empty or null!	Ensure that the input AZ and disk type parameters are correct.
400	EVS.2084	The disk size parameter in the request is invalid.	resource size must greater than zero!	Check whether the disk size specified in the request body is correct.
400	EVS.2085	The disk ID is invalid during expansion.	when operation type is SPEC_CHG, resource id must not be empty or null!	Check whether the disk ID specified in the request body is correct.
400	EVS.2087	Invalid request parameter.	retype failed. please make sure that type is supported and the new one is higher then origin	Ensure that the new type has higher specifications than the old type.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.2093	The disk is not an EVS disk.	operation failed because the volume is not EVS	This operation cannot be performed because the disk is not an EVS disk.
400	EVS.2094	A shared disk cannot be created from a system disk image.	system image is not support to create Multiattach/ shareable volume !	A shared disk cannot be created from a system disk image.
400	EVS.2096	When a disk is created from a snapshot, the disk type of the snapshot's source disk is inconsistent with that of the new disk.	Target volumeType[%s] is not matched with snapshot[%s] !	Ensure that the disk type of the snapshot's source disk is consistent with that of the new disk.
400	EVS.2108	Request conversion error.	Request body is invalid.	Check whether the request body is correct.
400	EVS.2130	Failed to delete the disk because the snapshot is in the **backing-up** state when a disk backup is being created.	Volume is backing-up, forbidden deleting!	Wait until the backup is created or contact customer service.
400	EVS.2131	Failed to query the server details.	Query server info from ecs fail	Try again later or contact customer service.
400	EVS.2134	Failed to attach the disk.	call ecs api - attach volume fail.	Try again later or contact customer service.
400	EVS.2142	Request parameter **limit** cannot be greater than **1000**.	invalid filter limit, can not greater than 1000.	Ensure that the **limit** value ranges from **1** to **1000**. The default value is **1000**.

HTTP Status Code	Error Code	Description	Error Message	Solution
403	EVS.2144	Insufficient permission because the account is frozen.	Your account is frozen and resources cannot be used.	Contact customer service.
403	EVS.2145	Insufficient permission because the account is suspended.	Your account is suspended and resources cannot be used.	Contact customer service.
400	EVS.5400	Incorrect request body parameter and format.	Malformed request body.	Check whether the parameters and format of the request body are correct.
400	EVS.5400	Incorrect request URL parameter and format.	Malformed request url.	Check whether the parameters and format of the request URL are correct.
400	EVS.5400	Request body and URI mismatch.	Request body and URI mismatch.	Check whether the request body and URI belong to the same API.
400	EVS.5400	The image is unavailable.	Invalid imageRef provided.	Select another image.
400	EVS.5400	The disk status is incorrect.	Must specify a valid status.	Specify a disk that is in the correct state.
400	EVS.5400	The value of parameter **offset** must be an integer.	offset param must be an integer.	Set the value of parameter **offset** to an integer.
400	EVS.5400	The value of parameter **limit** must be set to an integer.	limit param must be an integer.	Set the value of parameter **limit** to an integer.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	EVS.5400	The value of parameter **limit** must be a positive number.	limit param must be positive.	Ensure that the **limit** value is an integer ranging from **1** to **1000**. The default value is **1000**.
401	EVS.5401	This operation is unauthorized.	Authentication required.	Call the API after authorization.
403	EVS.5403	Insufficient permission.	Policy check failed.	Add the permission and try again.
403	EVS.5403	No operation permission.	metadata can not be operated.	Modifying parameter **metadata** is forbidden.
404	EVS.5404	Resources, such as the disk, snapshot, and backup, do not exist.	Resource(Volume, Snapshot, Backup .etc) cound not be found.	Check whether the resources are available.
413	EVS.5413	Insufficient disk quotas.	Insufficient volume quota.	Check whether the disk capacity and quantity quotas are sufficient.
500	EVS.5500	Internal server error.	Internal server error.	Try again later or contact customer service.
503	EVS.5503	The service is unavailable.	Service unavailable.	Try again later or contact customer service.
400	Common.0011	Incorrect tenant ID. The tenant ID is actually the project ID.	query job fail.	Use the correct tenant ID and ensure that the tenant has desired permissions. The tenant ID is actually the project ID.
400	Common.0011	**jobId** is empty.	No jobs found.	Enter the correct **jobId** value.

HTTP Status Code	Error Code	Description	Error Message	Solution
400	Common.0011	Failed to query JobVO using **jobId**.	query job fail.	Check whether the **jobId** value is correct. If the **jobId** value is correct, check whether the request is delivered to the target EVS service node. If the request has been delivered, contact customer service to locate the fault. If the request has not been delivered, contact customer service to deliver the request to the target EVS service node.
400	Common.0013	Failed to parse the token because the token expires or the token string is incomplete.	Invalid token in the header.	Obtain the token again and ensure that the token string is complete.
400	Common.0018	The project ID in the URI is different from the project ID in the token.	Invalid token in the header	Ensure that the project ID in the URI is the same as that in the token and try again.

A.2 HTTP Status Codes

- Normal

Status Code	Description
200	OK
201	Created
202	Accepted
204	No Content

- Abnormal

Status Code	Description
400	Bad Request
401	Unauthorized
403	Forbidden
404	Not Found
405	Method Not Allowed
406	Not Acceptable
407	Proxy Authentication Required
408	Request Timeout
409	Conflict
413	overLimit
415	badMediaType
500	Internal Server Error
501	Not Implemented
502	Bad Gateway
503	Service Unavailable
504	Gateway Timeout

A.3 EVS Disk Status

EVS Disk Status	Description
creating	The EVS disk is being created.
available	The EVS disk has not been attached to any server and can be attached.
in-use	The EVS disk is attached to a server and is in use.
error	An error occurs when you try to create an EVS disk.
attaching	The EVS disk is being attached.
detaching	The EVS disk is being detached.
restoring-backup	The EVS disk is being restored from a backup.
backing-up	The EVS disk is being created from a backup.

EVS Disk Status	Description
error_restoring	An error occurs when you try to restore the EVS disk from a backup.
uploading	Data on the EVS disk is being uploaded to an image. This status occurs when you create an image from a server.
downloading	Data is being downloaded from an image to the EVS disk. This status occurs when you create a server.
extending	The capacity of the EVS disk is being expanded.
error_extending	An error occurs when you try to expand the capacity of the EVS disk.
deleting	The EVS disk is being deleted.
error_deleting	An error occurs when you try to delete the EVS disk.
rollbacking	Data on the EVS disk is being restored from a snapshot. **NOTE** • When you roll back a snapshot to an EVS disk, you can only roll back the snapshot to the source EVS disk. Rollback to a specified disk is not possible. • You can roll back an EVS disk from a snapshot only when the disk is in the **available** or **error_rollbacking** state.
error_rollbacking	An error occurs when the EVS disk is being rolled back from a snapshot.
awaiting-transfer	The EVS disk is awaiting for a transfer.

A.4 EVS Snapshot Status

EVS Snapshot Status	Description
creating	The EVS snapshot is being created.
available	The EVS snapshot is successfully created.
error	An error occurs when you try to create an EVS snapshot.
deleting	The EVS snapshot is being deleted.
error_deleting	An error occurs when you try to delete an EVS snapshot.

EVS Snapshot Status	Description
rollbacking	The EVS snapshot is rolling back data. **NOTE** • When you roll back a snapshot to an EVS disk, you can only roll back the snapshot to the source EVS disk. Rollback to a specified disk is not possible. • You can roll back an EVS disk from a snapshot only when the disk is in the **available** or **error_rollbacking** state.
backing-up	The EVS snapshot is being created from a backup via a native OpenStack API. The system is automatically creating the EVS snapshot when an EVS disk is created from a backup via an API.

A.5 API Actions

API Version Query

Permissions	API	Action
Query API versions (OpenStack Cinder API).	GET /	None
Query the API version (OpenStack Cinder API).	GET /{api_version}	None

EVS Disk

Permissions	APIs	Action
Create EVS disks.	POST /v2/{project_id}/cloudvolumes	evs:volumes:create

Permissions	APIs	Action
Create EVS disks (OpenStack Cinder API).	POST /v2/{project_id}/volumes	• Create empty EVS disks. evs:volumes:create evs:volumes:get • Create EVS disks from images. evs:volumes:create ims:images:get evs:volumes:get • Create EVS disks from snapshots. evs:volumes:create evs:snapshots:get evs:volumes:get
Expand the capacity of an EVS disk.	POST /v2/{project_id}/cloudvolumes/{volume_id}/action	evs:volumes:extend
Query EVS disks.	GET /v2/{project_id}/cloudvolumes	evs:volumes:list
Query EVS disks (OpenStack Cinder API).	GET /v2/{project_id}/volumes	evs:volumes:list
Query details of all EVS disks.	GET /v2/{project_id}/cloudvolumes/detail	evs:volumes:list
Querying Details About All Disks	GET /v2/{project_id}/os-vendor-volumes/detail	evs:volumes:list
Query details of all EVS disks (OpenStack Cinder API).	GET /v2/{project_id}/volumes/detail	evs:volumes:list
Query details of an EVS disk.	GET /v2/{project_id}/os-vendor-volumes/{volume_id}	evs:volumes:get
Query details of an EVS disk (OpenStack Cinder API).	GET /v2/{project_id}/volumes/{volume_id}	evs:volumes:get
Delete an EVS disk.	DELETE /v2/{project_id}/cloudvolumes/{volume_id}	evs:volumes:delete
Delete an EVS disk (OpenStack Cinder API).	DELETE /v2/{project_id}/volumes/{volume_id}	evs:volumes:delete evs:volumes:get

Permissions	APIs	Action
Update EVS disk information.	PUT /v2/{project_id}/cloudvolumes/{volume_id}	evs:volumes:update
Update EVS disk information (OpenStack Cinder API).	PUT /v2/{project_id}/volumes/{volume_id}	evs:volumes:update evs:volumes:get
Update one piece of EVS disk metadata (OpenStack Cinder API).	PUT /v2/{project_id}/volumes/{volume_id}/metadata/{key}	evs:volumes:update evs:volumes:get
Update the metadata of an EVS disk (OpenStack Cinder API).	PUT /v2/{project_id}/volumes/{volume_id}/metadata	evs:volumes:update evs:volumes:get
Query one piece of EVS disk metadata (OpenStack Cinder API).	GET /v2/{project_id}/volumes/{volume_id}/metadata/{key}	evs:volumes:get
Delete one piece of EVS disk metadata (OpenStack Cinder API).	DELETE /v2/{project_id}/volumes/{volume_id}/metadata/{key}	evs:volumes:delete evs:volumes:get
Query the metadata of an EVS disk (OpenStack Cinder API).	GET /v2/{project_id}/volumes/{volume_id}/metadata/{key}	evs:volumes:get
Add the metadata of an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/metadata	evs:volumes:update evs:volumes:get
Query EVS disk types (OpenStack Cinder API).	GET /v2/{project_id}/types	evs:types:get
Query details of an EVS disk type (OpenStack Cinder API).	GET /v2/{project_id}/types/{type_id}	evs:types:get
Query tenant quotas (OpenStack Cinder API).	GET /v2/{project_id}/os-quota-sets/{project_id}	evs:quotas:get
Query extension APIs (OpenStack Cinder API).	GET /v2/{project_id}/extensions	None
Query information of all AZs (OpenStack Cinder API).	GET /v2/{project_id}/os-availability-zone	None

EVS Disk Actions

Permissions	APIs	Action
Expand the capacity of an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-extend"	evs:volumes:extend evs:volumes:get
Export the EVS disk data as an image (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-volume_upload_image"	evs:volumes:uploadImage
Attach an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-attach"	evs:volumes:attach evs:volumes:get
Detach an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-detach"	evs:volumes:detach evs:volumes:get
Reserve an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-reserve"	evs:volumes:attach
Cancel reservation of an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-unreserve"	evs:volumes:attach
Set the bootable flag for an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-set_bootable"	evs:volumes:update
Set the read-only attribute for an EVS disk (OpenStack Cinder API).	POST /v2/{project_id}/volumes/{volume_id}/action action="os-update_readonly_flag"	evs:volumes:update

EVS Snapshot

Permission	API	Action
Create an EVS snapshot (OpenStack Cinder API).	POST /v2/{project_id}/snapshots	evs:snapshots:create evs:volumes:get
Query EVS snapshots (OpenStack Cinder API).	GET /v2/{project_id}/snapshots	evs:snapshots:list
Query details of EVS snapshots (OpenStack Cinder API).	GET /v2/{project_id}/snapshots/detail	evs:snapshots:list
Update an EVS snapshot (OpenStack Cinder API).	PUT /v2/{project_id}/snapshots/{snapshot_id}	evs:snapshots:update evs:snapshots:get
Query details about a single EVS snapshot (OpenStack Cinder API).	GET /v2/{project_id}/snapshots/{snapshot_id}	evs:snapshots:get
Delete an EVS snapshot (OpenStack Cinder API).	DELETE /v2/{project_id}/snapshots/{snapshot_id}	evs:snapshots:delete evs:snapshots:get evs:volumes:get
Roll back a snapshot to an EVS disk.	POST /v2/{project_id}/os-vendor-snapshots/{snapshot_id}/rollback	evs:snapshots:rollback evs:snapshots:get evs:volumes:get
Add the metadata of an EVS snapshot (OpenStack Cinder API).	POST /v2/{project_id}/snapshots/{snapshot_id}/metadata	evs:snapshots:update evs:snapshots:get
Query the metadata of an EVS snapshot (OpenStack Cinder API).	GET /v2/{project_id}/snapshots/{snapshot_id}/metadata	evs:snapshots:get
Update one piece of EVS snapshot metadata (OpenStack Cinder API).	PUT /v2/{project_id}/snapshots/{snapshot_id}/metadata/{key}	evs:snapshots:update evs:snapshots:get
Update the metadata of an EVS snapshot (OpenStack Cinder API).	PUT /v2/{project_id}/snapshots/{snapshot_id}/metadata	evs:snapshots:update evs:snapshots:get
Query one piece of EVS snapshot metadata (OpenStack Cinder API).	GET /v2/{project_id}/snapshots/{snapshot_id}/metadata/{key}	evs:snapshots:get
Delete one piece of EVS snapshot metadata (OpenStack Cinder API).	DELETE /v2/{project_id}/snapshots/{snapshot_id}/metadata/{key}	evs:snapshots:delete evs:snapshots:get

EVS Disk Transfer

Permission	API	Action
Create an EVS disk transfer (OpenStack Cinder API).	POST /v2/{project_id}/os-volume-transfer	evs:transfers:create
Query all EVS disk transfers of a tenant (OpenStack Cinder API).	GET /v2/{project_id}/os-volume-transfer	evs:transfers:list
Query details of all EVS disk transfers of a tenant (OpenStack Cinder API).	GET /v2/{project_id}/os-volume-transfer/detail	evs:transfers:list
Query details of an EVS disk transfer (OpenStack Cinder API).	GET /v2/{project_id}/os-volume-transfer/{transfer_id}	evs:transfers:get
Accept an EVS disk transfer (OpenStack Cinder API).	POST /v2/{project_id}/os-volume-transfer/{transfer_id}/accept	evs:transfers:accept
Delete an EVS disk transfer (OpenStack Cinder API).	DELETE /v2/{project_id}/os-volume-transfer/{transfer_id}	evs:transfers:delete

A.6 Obtaining a Project ID

Scenarios

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

- **Obtain the Project ID by Calling an API**
- **Obtain the Project ID from the Console**

Obtain the Project ID by Calling an API

You can obtain the project ID by calling the IAM API used to query project information based on the specified criteria.

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

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

```
{
    "projects": [
        {
            "domain_id": "65382450e8f64ac0870cd180d14e684b",
            "is_domain": false,
            "parent_id": "65382450e8f64ac0870cd180d14e684b",
```



```
            "name": "project_name",
            "description": "",
            "links": {
                "next": null,
                "previous": null,
                "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
            },
            "id": "a4a5d4098fb4474fa22cd05f897d6b99",
            "enabled": true
        }
    ],
    "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects"
    }
}
```

Obtain a Project ID from the Console

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

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

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

A.7 Obtaining an Account ID

An account ID is required for some URLs when an API is called. To obtain an account ID, perform the following operations:

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

   On the **API Credentials** page, view **Account ID**.

B Change History

Released On	Description
2020-09-20	This issue is the first official release.

