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<td>7.4.5 Querying All EVS Disk Transfers</td>
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8 OpenStack Cinder API v2

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Public cloud Application Programming Interfaces (APIs) comply with the RESTful API design principles. REST-based Web services are organized into resources. Each resource is identified by one or more Uniform Resource Identifiers (URIs). An application accesses a resource based on the resource's Unified Resource Locator (URL). A URL is usually in the following format: https://Endpoint/uri. In the URL, uri indicates the resource path, that is, the API access path.

Public cloud APIs use HTTPS as the transmission protocol. Requests/Responses are transmitted by using JSON messages, with media type represented by Application/json.

For details about how to use APIs, see API Usage Guidelines.
Currently, the default EVS v3 API version is 3.0, and the maximum version is 3.50.

The usage of some EVS v3 API parameters subject to the version number. For the detailed information, see the corresponding parameter description.

You can specify the version number by adding `OpenStack-API-Version:volume Version number` to the request header. For example, add `OpenStack-API-Version:volume 3.50`. 
3 API Version Query

3.1 Querying Information of API Versions
3.2 Querying Information of an API Version

3.1 Querying Information of API Versions

Function

This API is used to query information of the API versions.

URI

- URI format
  
  GET /

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>versions</td>
<td>array</td>
<td>Specifies the information of the API versions.</td>
</tr>
<tr>
<td>min_version</td>
<td>string</td>
<td>Specifies the minimum API version.</td>
</tr>
<tr>
<td>media-types</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the request message type of the API version.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the API version.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the API version.</td>
</tr>
</tbody>
</table>
### Parameter Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>updated</td>
<td>string</td>
<td>Specifies the last time when the API version was updated.</td>
</tr>
<tr>
<td>version</td>
<td>string</td>
<td>Specifies the subversion of the API version.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the API version status.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>type</td>
<td>string</td>
<td>Specifies the response type.</td>
</tr>
<tr>
<td>base</td>
<td>string</td>
<td>Specifies the text type.</td>
</tr>
</tbody>
</table>

- **Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the domain name description.</td>
</tr>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the domain name.</td>
</tr>
<tr>
<td>type</td>
<td>string</td>
<td>Specifies the response type.</td>
</tr>
</tbody>
</table>

### Example response

```json
{
  "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",
      "version": "",
      "status": "SUPPORTED"
    },
    {
      "min_version": ""
    }
  ]
}
```
"media-types": [
  {
    "type": "application/vnd.openstack.volume+xml;version=1",
    "base": "application/xml"
  },
  {
    "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",
"version": "",
"status": "SUPPORTED"
},
{
  "min_version": "3.0",
  "media-types": [
    {
      "type": "application/vnd.openstack.volume+xml;version=1",
      "base": "application/xml"
    },
    {
      "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"
}]

Returned Values

- Normal
  200 or 300

Error Codes

For details, see A.1 Error Codes.
3.2 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>api_version</td>
<td>String</td>
<td>Specifies the target API version.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about how to obtain the version, see 3.1 Querying Information of API Versions.</td>
</tr>
</tbody>
</table>

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>versions</td>
<td>array</td>
<td>Specifies the information of the API version.</td>
</tr>
<tr>
<td>min_version</td>
<td>string</td>
<td>Specifies the minimum API version.</td>
</tr>
<tr>
<td>media-types</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the request message type of the API version.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the API version.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the API version.</td>
</tr>
<tr>
<td>updated</td>
<td>string</td>
<td>Specifies the last time when the API version was updated.</td>
</tr>
<tr>
<td>version</td>
<td>string</td>
<td>Specifies the subversion of the API version.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the API version status.</td>
</tr>
</tbody>
</table>

- Parameters in the media-types field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>type</td>
<td>string</td>
<td>Specifies the response type.</td>
</tr>
<tr>
<td>base</td>
<td>string</td>
<td>Specifies the text type.</td>
</tr>
</tbody>
</table>
Parameters in the **links** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the domain name description.</td>
</tr>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the domain name.</td>
</tr>
<tr>
<td>type</td>
<td>string</td>
<td>Specifies the response type.</td>
</tr>
</tbody>
</table>

Example response

```json
{
    "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",
            "version": "",
            "status": "SUPPORTED"
        }
    ]
}
```

Returned Values

- Normal
  - 200

Error Codes

For details, see [A.1 Error Codes](#).
4.1 EVS Disk

4.1.1 Creating EVS Disks

Function

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

URI

- URI format
  POST /v3/{project_id}/cloudvolumes

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;strings&gt;</td>
<td>Yes</td>
<td>Specifies the EVS disk to be created.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>------------</td>
<td>-----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>backup_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the backup that can be used to create an EVS disk. This parameter is mandatory when you use a backup to create the disk.</td>
</tr>
</tbody>
</table>
| availability_zone| string     | Yes       | Specifies the AZ where you want to create the disk. If the specified AZ does not exist or is different from the AZ to which the backup belongs, the disk will fail to create.  

**NOTE**
For details about how to obtain the AZ, see [8.1.17 Querying Information About All AZs](#).

| description      | string     | No        | Specifies the EVS disk description. The value can contain a maximum of 255 bytes.                                                                                                       |
| size             | int        | No        | Specifies the EVS disk size (GB). Its values are 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 EVS disk or use an image or a snapshot to create an EVS disk. If you use an image or a snapshot to create an EVS disk, the disk size must be greater than or equal to the image or snapshot size.  

This parameter is optional when you use a backup to create an EVS disk. 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.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If you create EVS disks in batches, the actual disk names use this parameter value as the prefix, and each disk name has a unique four-digit number starting with a hyphen (-). For example, the disk name can be <code>shan-0001</code>. The value can contain a maximum of 250 bytes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If you create EVS disks one by one, the name value is the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of a snapshot. If this parameter is specified, the EVS disk is created from the snapshot.</td>
</tr>
<tr>
<td>imageRef</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the image in IMS. If you specify this parameter, the EVS disk is created from an image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong> BMS system disks cannot be created from BMS images.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-----------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| volume_type | string  | Yes       | Specifies the EVS disk type. Currently, the value can be SSD, SAS, SATA, co-p1, or uh-l1.  
- **SSD**: specifies the ultra-high I/O disk type.  
- **SAS**: specifies the high I/O disk type.  
- **SATA**: specifies the common I/O disk type.  
- **co-p1**: specifies the high I/O (performance-optimized I) disk type.  
- **uh-l1**: specifies the ultra-high I/O (latency-optimized) disk type.  
  EVS disks of the co-p1 and uh-l1 types are used exclusively for high performance computing (HPC) and SAP HANA Elastic Cloud Servers (ECSs).  
  If the specified EVS disk type is not available in the AZ, the disk will fail to create.  
  **NOTE**  
  - When EVS disks are created using backups:  
    If the type of the backup's source disk is SSD, SAS, or SATA, you can create disks of any of these types.  
    If the type of the backup's source disk is co-p1 or uh-l1, you can create disks of any of the two types.  
  - If the EVS disk is created from a snapshot, the volume_type field must be the same as that of the snapshot’s source disk. |
| count       | int     | No        | Specifies the number of EVS disks to be created in a batch. If this parameter is not specified, only one EVS disk is created. You can create a maximum of 100 EVS 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. |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>shareable</td>
<td>string</td>
<td>No</td>
<td>Specifies whether the EVS disk is shareable. The value can be <strong>true</strong> (specifies a shared disk) or <strong>false</strong> (specifies a common disk). <strong>NOTE</strong> This field is no longer used. Use <code>multiattach</code>.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>No</td>
<td>Specifies the metadata of the created EVS disk. The length of the key or value in the metadata cannot exceed 255 bytes. <strong>NOTE</strong> Parameter values under <code>metadata</code> cannot be <code>null</code>.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>No</td>
<td>Specifies the shared EVS disk information. The default value is <strong>false</strong>.</td>
</tr>
</tbody>
</table>
| tags      | map<string, string> | No        | Specifies the tags bound to the EVS disk during the disk creation. A maximum of 10 tags can be created for an EVS disk. Tag keys of a tag must be unique. Deduplication will be performed for duplicate keys. Therefore, only one tag key in the duplicate keys is valid. **Tag key:** String type  
  - Cannot be left blank.  
  - Must be unique for each resource.  
  - Can contain a maximum of 36 characters.  
  - Can contain only digits, letters, hyphens (-), and underscores (_). **Tag value:** String type  
  - Can contain a maximum of 43 characters.  
  - Can contain only digits, letters, hyphens (-), and underscores (_). |
### Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>enterprise_project_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the enterprise project ID. This ID is bound to the EVS disk during the disk creation. Currently, the field is not supported by EVS.</td>
</tr>
</tbody>
</table>

**NOTE**

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

* Parameters in the **metadata** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>No</td>
<td>Specifies the parameter that describes the encryption function in metadata. The value can be 0 (encryption function disabled) or 1 (encryption function enabled). If this parameter does not exist, the disk will not be encrypted by default.</td>
</tr>
</tbody>
</table>
| __system__cmkid         | string  | No        | Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes. **NOTE** For details about how to obtain the CMK ID, see section **Querying the List of CMKs** in the **Key Management Service API Reference**.
### Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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.  

**NOTE**  
- If parameter `shareable` is set to true and parameter `hw:passthrough` is not specified, shared SCSI disks are created.  
- SCSI EVS disks cannot be created from backups, which means that the `hw:passthrough` value cannot be true if `backup_id` has been specified.

| full_clone         | string| No        | If the EVS 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 EVS disk is created from a snapshot, the `__system__encrypted` and `__system__cmkid` fields are not supported, and the newly created disk has the same encryption attribute as that of the source EVS disk of the snapshot.
- If the EVS disk is created from an image, the `__system__encrypted` and `__system__cmkid` fields are not supported, and the newly created disk has the same encryption attribute as that of the image.
- If the EVS disk is created from a snapshot, the `hw:passthrough` field is not supported, and the newly created disk has the same attribute as that of the source EVS disk of the snapshot.
- If the EVS disk is created from an image, the `hw:passthrough` field is not supported, and the device type of newly created disk is VBD.

### Example request

```json
{
  "volume": {
    "backup_id": null,
    "count": 1,
    "availability_zone": "az1.dc1",
    "description": "test_volume_1",
    "size": 120,
    "name": "test_volume_1",
    "volume_type": "SSD",
    "metadata": {
      "__system__encrypted": "1",
```
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| job_id    | string | Specifies the task ID.  
                  NOTE  
                  For details about how to query the task status, see 6.1 Querying Task Status. |
| message   | string | Specifies the returned error message when an error occurs. |
| code      | string | Specifies the returned error code when an error occurs.  
                  For details about the error code, see A.1 Error Codes. |

- Example response

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

or

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

Returned Values

- Normal  
  200

Error Codes

For details, see A.1 Error Codes.

4.1.2 Querying EVS Disk Details by Service

Function

This API is used to query EVS disk details by service.

URI

- URI format  
  GET /v3/{project_id}/os-vendor-volumes/detail
### Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

### Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is <strong>1000</strong>.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>Specifies the keyword based on which the returned results are sorted. The value can be <strong>id, status, size, or created_at</strong>, and the default value is <strong>created_at</strong>.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is <strong>desc</strong> (descending order).</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of disks, all disks after this offset will be queried.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see <a href="#">A.3 EVS Disk Status</a>.</td>
</tr>
<tr>
<td>metadata</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>No</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>changes-since</td>
<td>string</td>
<td>No</td>
<td>Specifies the time when the disk was updated, for example, 2016-01-08T09:41:18. This is an extended attribute. Only administrators can set this parameter.</td>
</tr>
<tr>
<td>dedicated_storage_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the DSS storage pool. All EVS disks in the DSS storage pool can be filtered out. Only precise match is supported.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>dedicated_storage_name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the DSS storage pool. All EVS disks in the DSS storage pool can be filtered out. Fuzzy match is supported.</td>
</tr>
<tr>
<td>volume_type_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk type ID.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>
| ids                  | list<string> | No        | Specifies the EVS disk IDs. The parameter value is in the \ids=\['id1','id2',...,\idx\] format. In the response, the ids value contains valid disk IDs only. Invalid disk IDs will be ignored.

Details about a maximum of 60 EVS disks can be queried.

If parameters id and ids are both specified in the request, id will be ignored.

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>count</td>
<td>int</td>
<td>Specifies the number of queried EVS disks.</td>
</tr>
</tbody>
</table>

- Parameters in the volumes field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata. If metadata does not contain the hw:passthrough field, the disk device type is VBD. If metadata does not contain the __system__encrypted field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Specifies the EVS disk migration status.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Specifies the ID of the migrated EVS disk.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Specifies the disk replication extended status.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the EVS disk backup status.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong> This field is no longer used. Use <code>multiattach</code>.</td>
</tr>
<tr>
<td>multiattach</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies whether the EVS disk is created from an image. This parameter is specified when the disk is created from an image. Otherwise, it is left empty.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong> For details about the <code>volume_image_metadata</code> field, see Querying Image Details (Native OpenStack API) in the Image Management Service API Reference.</td>
</tr>
<tr>
<td>volumes_links</td>
<td>array</td>
<td>Specifies the query position marker in the disk list. This parameter is at the same level as parameter <code>volumes</code> in the response body. 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.</td>
</tr>
<tr>
<td>dedicated_storage_id</td>
<td>string</td>
<td>Specifies the ID of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>dedicated_storage_name</td>
<td>string</td>
<td>Specifies the name of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>tags</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the tags of the EVS disk. This parameter is specified when the EVS disk has tags. Otherwise, it is left empty.</td>
</tr>
<tr>
<td>wwn</td>
<td>string</td>
<td>Specifies the unique identifier used for mounting the EVS disk.</td>
</tr>
<tr>
<td>count</td>
<td>integer</td>
<td>Specifies the number of queried EVS disks.</td>
</tr>
<tr>
<td>enterprise_project_id</td>
<td>string</td>
<td>Specifies the enterprise project ID bound to the EVS disk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currently, the field is not supported by EVS.</td>
</tr>
</tbody>
</table>

- **Parameters in the `links` field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- Parameters in the **attachments** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the **metadata** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__encrypted | string | Specifies the parameter that describes the encryption function in metadata. The value can be 0 or 1.  
  - 0: indicates the disk is not encrypted.  
  - 1: indicates the disk is encrypted.  
  - If this parameter does not appear, the disk is not encrypted by default. |
<p>| __system__cmkid | string | Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes. |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in metadata. The value can be <strong>true</strong> or <strong>false</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to <strong>true</strong>, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to <strong>false</strong>, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be <strong>True</strong> or <strong>False</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>True</strong>: indicates that the disk is read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>False</strong>: indicates that the disk is read-writable.</td>
</tr>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be <strong>ro</strong> or <strong>rw</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>ro</strong>: indicates the disk is attached as read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>rw</strong>: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
  "count": 1,
  "volumes": [
    {
      "attachments": [],
      "availability_zone": "xxx",
      "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/v3/"  
```
In the preceding example, `error` indicates a general error, for example, `badRequest` or `itemNotFound`. An example is provided as follows:

```json
{
  "badRequest": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```
Returned Values

- Normal
  - 200

Error Codes

For details, see A.1 Error Codes.

4.1.3 Querying Details About a Single EVS Disk

Function

This API is used to query details about a single EVS disk.

URI

- URI format
  
  GET /v3/{project_id}/os-vendor-volumes/{volume_id}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map</td>
<td>Specifies the queried EVS disk.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk UUID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the EVS disk attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the metadata of the EVS disk image.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata does not contain the hw:passthrough field, the disk device type is VBD.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata does not contain the __system__encrypted field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>consistency group_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>shareable</td>
<td>boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NOTE  This field is no longer used. Use multiattach.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies the shared EVS disk information.</td>
</tr>
<tr>
<td>service_type</td>
<td>string</td>
<td>Specifies the service type. The value can be EVS or DSS.</td>
</tr>
<tr>
<td>dedicated_storage_id</td>
<td>string</td>
<td>Specifies the ID of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>dedicated_storage_name</td>
<td>string</td>
<td>Specifies the name of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>tags</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the tags of the EVS disk. If the disk has tags, this field has values. Otherwise, this field is null.</td>
</tr>
<tr>
<td>wwn</td>
<td>string</td>
<td>Specifies the unique identifier used for mounting the EVS disk.</td>
</tr>
<tr>
<td>enterprise_project_id</td>
<td>string</td>
<td>Specifies the enterprise project ID bound to the EVS disk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Currently, the field is not supported by EVS.</td>
</tr>
</tbody>
</table>

- Parameters in the **links** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- Parameters in the **attachments** field
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__encrypted| string    | Specifies the parameter that describes the encryption function in metadata. The value can be 0 or 1.  
  - 0: indicates the disk is not encrypted.  
  - 1: indicates the disk is encrypted.  
  - If this parameter does not appear, the disk is not encrypted by default. |
| __system__cmkid    | string    | Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes. |
| hw:passthrough     | string    | Specifies the parameter that describes the disk device type in metadata. The value can be true or false.  
  - If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (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 is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.  
  - If this parameter does not appear, the disk device type is VBD. |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be <strong>True</strong> or <strong>False</strong>. <strong>True</strong>: indicates that the disk is read-only. <strong>False</strong>: indicates that the disk is read-writable.</td>
</tr>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be <strong>ro</strong> or <strong>rw</strong>. <strong>ro</strong>: indicates the disk is attached as read-only. <strong>rw</strong>: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
   "volume": {
      "attachments": [ ],
      "links": [
        {
          "href": "https://volume.az0.dc1.domainname.com/v3/40acc331ac784f34842ba4f08ff2be48/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": "az1.dc1",
      "os-vol-host-attr:host": "az1.dc1#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": "fd03ee73295e45478e15263d2ee4e",
      "os-vol-tenant-attr:tenant_id": "40acc331ac784f34842ba4f08ff2be48",
      "volume_image_metadata": null,
      "os-vol-mig-status-attr:migstat": null,
      "metadata": {
        "__openstack_region_name": "az1.dc1",
        "quantityGB": "40"
      },
      "tags": {
        "key1": "value1",
        "key2": "value2"
      }
   }
}
```
"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,
"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"
}
}

Returned Values

- Normal
- 200

Error Codes

For details, see A.1 Error Codes.

4.1.4 Querying Loading Progress of a Lazyloading EVS Disk Function

This API is used to query the loading progress of a lazyloading EVS disk.

URI

- URI format
  GET /v3/{project_id}/os-vendor-volumes/{volume_id}/internal-info
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>
Request
None

Response
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>info</td>
<td>map</td>
<td>Specifies the loading information.</td>
</tr>
<tr>
<td>loading_progress</td>
<td>int</td>
<td>Specifies the loading progress of the lazyloading EVS disk.</td>
</tr>
</tbody>
</table>

- Example response

```
{  
   "info": {  
      "loading_progress": 36  
   }  
}
```

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"  
   }  
}
```

Returned Values
- Normal
  200

Error Codes
For details, see A.1 Error Codes.

4.2 EVS Snapshot

4.2.1 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 an EVS disk, you can only roll back the snapshot to the source EVS disk. Rollback to a specified disk is not supported.
- You can roll back an EVS disk from a snapshot only when the disk is in the `available` or `error_rollbacking` state.

**URI**

- URI format
  POST /v3/{project_id}/os-vendor-snapshots/{snapshot_id}/rollback

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rollback</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the snapshot rollback information.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the UUID of the EVS disk to be rolled back.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the EVS disk to be rolled back. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong> Parameter <code>name</code> cannot be used independently. When <code>name</code> is going to be used, <code>volume_id</code> must also be specified.</td>
</tr>
</tbody>
</table>

- Example request

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

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rollback</td>
<td>map</td>
<td>Specifies the snapshot rollback information.</td>
</tr>
</tbody>
</table>
### Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the UUID of the target EVS disk in a snapshot rollback.</td>
</tr>
</tbody>
</table>

**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"
    }
}
```

### Returned Values

- Normal 202

### Error Codes

For details, see [A.1 Error Codes](#).

## 4.3 EVS Tag

### 4.3.1 Batch Adding Tags for the Specified EVS Disk

**Function**

This API is used to batch add tags for the specified EVS disk. TMS uses this API to batch manage tags of an EVS disk.

- When tags are being added and some tags in the request have the same tag keys, an error will be reported.
- When tags are being added and some tags in the request have the same tag keys as the tags associated with existing disks, the new tags will overwrite the existing tags.
- A maximum of 10 tags can be created for an EVS disk.
Constraints

None

URI

- **URI format**
  
  POST /v3/{project_id}/os-vendor-volumes/{volume_id}/tags/action

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>List&lt;resource_tag&gt;</td>
<td>Yes</td>
<td>Specifies the tag list.</td>
</tr>
</tbody>
</table>
| action    | String                  | Yes       | Specifies the operation to perform. The value can be **create** or **delete**.
|           |                         |           | - **create**: specifies to add tags.                                       |
|           |                         |           | - **delete**: specifies to delete tags.                                    |

- **Parameters in the tags field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| key       | String | Yes       | Tag key:
|           |        |           |  - Cannot be left blank.                                                     |
|           |        |           |  - Must be unique for each resource.                                       |
|           |        |           |  - Can contain a maximum of 36 characters.                                 |
|           |        |           |  - Can contain only digits, letters, hyphens (-), and underscores (_).      |
| value     | String | Yes       | Tag value:
|           |        |           |  - Can contain a maximum of 43 characters.                                 |
|           |        |           |  - Can contain only digits, letters, hyphens (-), and underscores (_).      |
4.3.2 Batch Deleting Tags for the Specified EVS Disk

Function

This API is used to batch delete tags for the specified EVS disk. TMS uses this API to batch manage tags of an EVS disk.

When tags are being deleted and some tags do not exist, the operation is considered successful by default, and the tags will not be checked upon deletion.

Constraints

None

URI

- URI format
  POST /v3/{project_id}/os-vendor-volumes/{volume_id}/tags/action

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>
Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>List&lt;resource_tag&gt;</td>
<td>Yes</td>
<td>Specifies the tag list.</td>
</tr>
<tr>
<td>action</td>
<td>String</td>
<td>Yes</td>
<td>Specifies the operation to perform. The value can be create or delete.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• create: specifies to add tags.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• delete: specifies to delete tags.</td>
</tr>
</tbody>
</table>

- Parameters in the tags field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>String</td>
<td>Yes</td>
<td>Tag key:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Cannot be left blank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Must be unique for each resource.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Can contain a maximum of 36 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
</tbody>
</table>

- Example request

```json
{
  "action": "delete",
  "tags": [
    {
      "key": "key1"
    },
    {
      "key": "key2"
    }
  ]
}
```

Response

None

Returned Values

- Normal
  204

Error Codes

For details, see A.1 Error Codes.
### 4.3.3 Querying Tags of an EVS Disk

**Function**

This API is used to query the tags of the specified EVS disk. TMS may use this API to query all tags of the specified EVS disk.

**Constraints**

None

**URI**

- **URI format**
  
  GET /v3/{project_id}/os-vendor-volumes/{volume_id}/tags

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>List&lt;resource_tag&gt;</td>
<td>Specifies the tag list.</td>
</tr>
</tbody>
</table>

- **Parameters in the tags field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>String</td>
<td>Tag key:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Cannot be left blank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Must be unique for each resource.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Can contain a maximum of 36 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>value</td>
<td>String</td>
<td>Tag value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Can contain a maximum of 43 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
</tbody>
</table>

- Example response

```
{
    "tags": [
        {
            "value": "value1",
            "key": "key1"
        },
        {
            "value": "value2",
            "key": "key2"
        }
    ]
}
```

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see [A.1 Error Codes](#).

### 4.3.4 Querying the Number of EVS Disks by Tag

**Function**

This API is used to query the number of EVS disks by tag.

**Constraints**

None

**URI**

- URI format
  
  POST /v3/{project_id}/os-vendor-volumes/resource_instances/action

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>
### Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>list&lt;resource_tag&gt;</td>
<td>No</td>
<td>Specifies the key-value pairs of the tag. The <code>tags</code> field cannot be left empty. One tag list can contain a maximum of 10 keys. Tag keys in a tag list must be unique. When multiple keys are specified in a tag list, only the EVS disks having all specified keys are queried. <strong>NOTE</strong> If multiple tag lists are specified in the request, only the EVS disks that meet the requirements of the last tag list are queried.</td>
</tr>
<tr>
<td>action</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the operation identifier. The value can be as follows: - filter - count Specifying <code>count</code> queries the number of EVS disks by tag.</td>
</tr>
<tr>
<td>matches</td>
<td>list&lt;match&gt;</td>
<td>No</td>
<td>Specifies the search criteria supported by the disks. The <code>matches</code> field cannot be left empty. Tag keys in the list must be unique.</td>
</tr>
</tbody>
</table>

- **Parameters in the `tags` field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>string</td>
<td>Yes</td>
<td>Tag key: - Cannot be left blank. - Must be unique for each resource. - Can contain a maximum of 36 characters. - Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| values    | list | Yes       | Tag value:  
  - Can contain a maximum of 43 characters.  
  - Can contain only digits, letters, hyphens (-), and underscores (_).  
  One value list can contain a maximum of 10 values.  
  Tag values in a value list must be unique.  
  If the value list is left empty, any tag value can be matched.  
  When multiple values are specified in a value list and the key requirements are met, EVS disks that have any of the specified values are queried. |

- Parameters in the matches field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| key       | string  | Yes       | Specifies the tag key. The value is of the enumerated type.  
  The value can be as follows:  
  - resource_name: disk name.  
  - service_type: service type. |
| value     | string  | Yes       | Specifies the tag value.  
  - It can contain up to 255 Unicode characters.  
  - An empty string specifies an exact match, and a non-empty string specifies a fuzzy query.  
  - If resource_name is specified for key, spaces before and after the tag value will be discarded.  
  - If service_type is specified for key, the value is of the enumerated type. It can be EVS or DSS and is case-insensitive. |

- Example request

```json
{
  "action": "count",
  "tags": [
    
  ]
}
Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>total_count</td>
<td>int</td>
<td>Specifies the total number of EVS disks that meet the query criteria.</td>
</tr>
</tbody>
</table>

- **Example response**

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

or

```json
{
   "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:

```json
{
   "computeFault": {
      "message": "The server has either erred or is incapable of performing the requested operation.",
      "code": 500
   }
}
```

**Returned Values**

- Normal
  
  200

**Error Codes**

For details, see [A.1 Error Codes](#).

```json
"key": "key1",
"values": [
   "value1",
   "value2"
]
},
],
"matches": [
   {
      "key": "resource_name",
      "value": "resource1"
   },
   {
      "key": "service_type",
      "value": "EVS"
   }
]
```
4.3.5 Querying Details of EVS Disks by Tag

Function

This API is used to query the details of the EVS disks by tag.

Constraints

None

URI

- URI format
  POST /v3/{project_id}/os-vendor-volumes/resource_instances/action
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>list&lt;resource_tag&gt;</td>
<td>No</td>
<td>Specifies the key-value pairs of the tag. One tag list can contain a maximum of 10 keys. Tag keys in a tag list must be unique. When multiple keys are specified in a tag list, only the EVS disks having all specified keys are queried. <strong>NOTE</strong> If multiple tag lists are specified in the request, only the EVS disks that meet the requirements of the last tag list are queried.</td>
</tr>
<tr>
<td>limit</td>
<td>string</td>
<td>No</td>
<td>Specifies the number of query records. The value ranges from 1 to 1000, and the default value is 1000. The number of query records in the response cannot exceed the limit value.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandator</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>----------</td>
<td>-------------</td>
</tr>
<tr>
<td>offset</td>
<td>string</td>
<td>No</td>
<td>Specifies the index location. The minimum value is 0, which is also the default value. The first record in the query result is the offset+1 record that meets the query criteria.</td>
</tr>
<tr>
<td>action</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the operation identifier. The value can be as follows: filter, count. Specifying filter queries the details of EVS disks by tag.</td>
</tr>
<tr>
<td>matches</td>
<td>list&lt;match&gt;</td>
<td>No</td>
<td>Specifies the search criteria supported by disks. Tag keys in the list must be unique.</td>
</tr>
</tbody>
</table>

- Parameters in the tags field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>string</td>
<td>Yes</td>
<td>Tag key: Cannot be left blank. Must be unique for each resource. Can contain a maximum of 36 characters. Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>values</td>
<td>list</td>
<td>Yes</td>
<td>Tag value: Can contain a maximum of 43 characters. Can contain only digits, letters, hyphens (-), and underscores (_). One value list can contain a maximum of 10 values. Tag values in a value list must be unique. If the value list is left empty, any tag value can be matched. When multiple values are specified in a value list and the key requirements are met, EVS disks that have any of the specified values are queried.</td>
</tr>
</tbody>
</table>
Parameters in the matches field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| key       | string| Yes       | Specifies the tag key. The value is of the enumerated type. The value can be as follows:  
  - resource_name: disk name.  
  - service_type: service type. |
| value     | string| Yes       | Specifies the tag value.  
  - It can contain up to 255 Unicode characters.  
  - If resource_name is specified for key, the tag value uses a fuzzy match.  
  - If service_type is specified for key, the value is of the enumerated type. It can be EVS or DSS and is case-insensitive. |

Example request

```json
{
  "offset": "100",
  "limit": "100",
  "action": "filter",
  "tags": [
    {
      "key": "key1",
      "values": [
        "value1",
        "value2"
      ]
    }
  ],
  "matches": [
    {
      "key": "resource_name",
      "value": "resource1"
    },
    {
      "key": "service_type",
      "value": "EVS"
    }
  ]
}
```

Response

Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>total_count</td>
<td>int</td>
<td>Specifies the total number of EVS disks that meet the query criteria.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>resources</td>
<td>List&lt;resource &gt;</td>
<td>Specifies the list of EVS disks that meet the query criteria.</td>
</tr>
</tbody>
</table>

- **Parameters in the resources field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>resource_id</td>
<td>string</td>
<td>Specifies the disk ID.</td>
</tr>
<tr>
<td>resource_name</td>
<td>string</td>
<td>Specifies the disk name.</td>
</tr>
<tr>
<td>resource_detail</td>
<td>object</td>
<td>Specifies the disk details.</td>
</tr>
<tr>
<td>tags</td>
<td>list&lt;resource_tag&gt;</td>
<td>Specifies the tag list.</td>
</tr>
</tbody>
</table>

- **Parameters in the tags field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>string</td>
<td>Tag key:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cannot be left blank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Must be unique for each resource.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can contain a maximum of 36 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>value</td>
<td>string</td>
<td>Tag value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can contain a maximum of 43 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
  "total_count": 1,
  "resources": [
    {
      "sys_tags": [
        {
          "key": "_sys_enterprise_project_id",
          "value": "0"
        }
      ],
      "resource_name": "Test_VOLUME_20180804055602_0001",
      "resource_detail": {
        "status": "in-use",
        "migration_status": null,
        "volume_image_metadata": { },
        "attachments": [
          {
            "server_id": "6b48e854-2a68-4ae6-b7d1-c05262d3ebfe",
            "attachment_id": "fe4589a0-916c-49ed-b518-404514926d07",
            "attached_at": "2018-08-03T21:56:24.502050",
          }
        ]
      }
    }
  ]
}
```
"host_name": null,
"volume_id": "2f8d32db-25fe-4ce7-b235-8f62af285c31",
"device": "/dev/vda",
"id": "2f8d32db-25fe-4ce7-b235-8f62af285c31"
},
"links": [
{
"href": "https://172.28.11.187:8776/v2/bf1c5745683c479689c5bbedf0b029a69/volumes/2f8d32db-25fe-4ce7-b235-8f62af285c31",
"rel": "self"
},
{
"href": "https://172.28.11.187:8776/bf1c5745683c479689c5bbedf0b029a69/volumes/2f8d32db-25fe-4ce7-b235-8f62af285c31",
"rel": "bookmark"
}
],
"availability_zone": "kvmxen.dc1",
"os-vol-host-attr:host": "az21.dc1#SAS",
"encrypted": false,
"dedicated_storage_id": null,
"enterprise_project_id": "0",
"updated_at": "2018-08-03T21:56:24.538926",
"source_volume": null,
"os-volume-replication:extended_status": null,
"consistencygroup_id": null,
"replication_status": "disabled",
"snapshot_id": null,
"id": "2f8d32db-25fe-4ce7-b235-8f62af285c31",
"os-vol-mig-status-attr:name_id": null,
"description": null,
"user_id": "c9b85bd718a44b17adc75732c964750c",
"name": "Test_VOLUME_20180804055602_0001",
"bootable": "true",
"created_at": "2018-08-03T21:56:04.599491",
"multiattach": false,
"volume_type": "SATA",
"shareable": false,
"dedicated_storage_name": null,
"os-vol-tenant-attr:tenant_id": "bf1c5745683c479689c5bbedf0b029a69",
"service_type": "EVS",
"size": 1,
"os-vol-mig-status-attr:migstat": null,
"metadata": {
"__openstack_region_name": "az21.dc1",
"__system__volume_name": "Test_VOLUME_20180804055602_0001"
}
],
"tags": [
{
"key": "age",
"value": "1001"
},
{
"key": "age01",
"value": "100101"
}
],
"resource_id": "2f8d32db-25fe-4ce7-b235-8f62af285c31"
}
}

or

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

```
{
    "computeFault": {
        "message": "The server has either erred or is incapable of performing
        the requested operation.",
        "code": 500
    }
}
```

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see [A.1 Error Codes](#).
5 API v2

5.1 EVS Disk

5.1.1 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies the EVS disk to be created.</td>
</tr>
<tr>
<td>backup_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the backup that can be used to create an EVS disk. This parameter is mandatory when you use a backup to create the disk.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the AZ where you want to create the disk. If the specified AZ does not exist or is different from the AZ to which the backup belongs, the disk will fail to create.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong> For details about how to obtain the AZ, see 8.1.17 Querying Information About All AZs.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk description. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>No</td>
<td>Specifies the EVS disk size (GB). Its values are 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 EVS disk or use an image or a snapshot to create an EVS disk. If you use an image or a snapshot to create an EVS disk, the disk size must be greater than or equal to the image or snapshot size. This parameter is optional when you use a backup to create an EVS disk. If this parameter is not specified, the disk size is equal to the backup size. <strong>NOTE</strong> If the specified parameter value is a decimal, the integral part of the value is used by default when the request is sent.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If you create EVS disks in batches, the actual disk names use this parameter value as the prefix, and each disk name has a unique four-digit number starting with a hyphen (-). For example, the disk name can be <em>shan-0001</em>. The value can contain a maximum of 250 bytes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If you create EVS disks one by one, the <em>name</em> value is the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of a snapshot. If this parameter is specified, the EVS disk is created from the snapshot.</td>
</tr>
<tr>
<td>imageRef</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the image in IMS. If you specify this parameter, the EVS disk is created from an image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong> BMS system disks cannot be created from BMS images.</td>
</tr>
</tbody>
</table>
### Parameter Table

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the EVS disk type. Currently, the value can be SSD, SAS, SATA, co-p1, or uh-l1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- SSD: specifies the ultra-high I/O disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- SAS: specifies the high I/O disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- SATA: specifies the common I/O disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- co-p1: specifies the high I/O (performance-optimized I) disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- uh-l1: specifies the ultra-high I/O (latency-optimized) disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EVS disks of the co-p1 and uh-l1 types are used exclusively for high performance computing (HPC) and SAP HANA Elastic Cloud Servers (ECSs). If the specified EVS disk type is not available in the AZ, the disk will fail to create.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong> When EVS disks are created using backups:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If the type of the backup's source disk is SSD, SAS, or SATA, you can create disks of any of these types.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If the type of the backup's source disk is co-p1 or uh-l1, you can create disks of any of the two types.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If the EVS disk is created from a snapshot, the volume_type field must be the same as that of the snapshot’s source disk.</td>
</tr>
<tr>
<td>count</td>
<td>int</td>
<td>No</td>
<td>Specifies the number of EVS disks to be created in a batch. If this parameter is not specified, only one EVS disk is created. You can create a maximum of 100 EVS disks in a batch.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If disks are created from a backup, batch creation is not supported, and this parameter must be set to 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong> If the specified parameter value is a decimal, the integral part of the value is used by default when the request is sent.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>shareable</td>
<td>string</td>
<td>No</td>
<td>Specifies whether the EVS disk is shareable. The value can be <strong>true</strong> (specifies a shared disk) or <strong>false</strong> (specifies a common disk). <strong>NOTE</strong> This field is no longer used. Use <strong>multiattach</strong>.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>No</td>
<td>Specifies the metadata of the created EVS disk. The length of the key or value in the metadata cannot exceed 255 bytes. For details about <strong>metadata</strong>, see the <strong>Parameters in the metadata field</strong> table. Only the fields listed in this table can be specified when creating a disk. <strong>NOTE</strong> Parameter values under <strong>metadata</strong> cannot be null.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>No</td>
<td>Specifies the shared EVS disk information. The default value is <strong>false</strong>.</td>
</tr>
</tbody>
</table>
| tags | map<string, string> | No | Specifies the tags bound to the EVS disk during the disk creation. A maximum of 10 tags can be created for an EVS disk. Tag keys of a tag must be unique. Deduplication will be performed for duplicate keys. Therefore, only one tag key in the duplicate keys is valid.  
  - Tag key: String type  
    - Cannot be left blank.  
    - Must be unique for each resource.  
    - Can contain a maximum of 36 characters.  
    - Can contain only digits, letters, hyphens (-), and underscores (_).  
  - Tag value: String type  
    - Can contain a maximum of 43 characters.  
    - Can contain only digits, letters, hyphens (-), and underscores (_). |
### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>enterprise_project_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the enterprise project ID. This ID is bound to the EVS disk during the disk creation. Currently, the field is not supported by EVS.</td>
</tr>
</tbody>
</table>

**NOTE**

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

- Parameters in the `metadata` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>No</td>
<td>Specifies the parameter that describes the encryption function in <code>metadata</code>. The value can be 0 (encryption function disabled) or 1 (encryption function enabled). If this parameter does not exist, the disk will not be encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>No</td>
<td>Specifies the parameter that describes the encryption CMK ID in <code>metadata</code>. This parameter is used together with <code>__system__encrypted</code> for encryption. The length of <code>cmkid</code> is fixed at 36 bytes. <strong>NOTE</strong> For details about how to obtain the CMK ID, see section Querying the List of CMKs in the Key Management Service API Reference.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 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.  
**NOTE**  
• If parameter shareable is set to true and parameter hw:passthrough is not specified, shared SCSI disks are created.  
• SCSI EVS disks cannot be created from backups, which means that the hw:passthrough value cannot be true if backup_id has been specified. |
| full_clone         | string   | No        | If the EVS 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 EVS disk is created from a snapshot, the __system__encrypted and __system__cmkid fields are not supported, and the newly created disk has the same encryption attribute as that of the source EVS disk of the snapshot.

• If the EVS disk is created from an image, the __system__encrypted and __system__cmkid fields are not supported, and the newly created disk has the same encryption attribute as that of the image.

• If the EVS disk is created from a snapshot, the hw:passthrough field is not supported, and the newly created disk has the same attribute as that of the source EVS disk of the snapshot.

• If the EVS disk is created from an image, the hw:passthrough field is not supported, and the device type of newly created disk is VBD.

**Example request**

```json
{
  "volume": {
    "backup_id": null,
    "count": 1,
    "availability_zone": "az1.dc1",
    "description": "test_volume_1",
    "size": 120,
    "name": "test_volume_1",
    "volume_type": "SSD",
    "metadata": {
      "__system__encrypted": "1",
      "__system__cmkid": "cmkid1",
      "hw:passthrough": "false"
    }
}
```
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>job_id</td>
<td>string</td>
<td>Specifies the task ID. NOTE For details about how to query the task status, see 6.1 Querying Task Status.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

- Example response

```
{
    "job_id": "70a599e0-31e7-49b7-b260-868f441e862b"
}
```
or
```
{
    "error": {
        "message": "XXXX",
        "code": "XXX"
    }
}
```

Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

5.1.2 Expanding the Capacity of an EVS Disk (Deprecated)

Function

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

- If the status of the to-be-expanded disk is available, there are no restrictions.
- If the status of the to-be-expanded disk is in-use, the restrictions are as follows:
  - The shared disk cannot be expanded, that is, the value of parameter multiattach must be false.
The status of the ECS to which the disk attached must be **ACTIVE, PAUSED,** **SUSPENDED,** or **SHUTOFF.**

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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the ID of the EVS disk.</td>
</tr>
</tbody>
</table>

**Request**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-extend</td>
<td>map&lt;string, int&gt;</td>
<td>Yes</td>
<td>Specifies to expand the EVS disk capacity.</td>
</tr>
<tr>
<td>new_size</td>
<td>int</td>
<td>Yes</td>
<td>Specifies the size (GB) of the EVS disk after capacity expansion. The EVS disk size after expansion ranges from the original disk size to the maximum size (32768). <strong>NOTE</strong> If the specified parameter value is a decimal, the integral part of the value is used by default when the request is sent.</td>
</tr>
</tbody>
</table>

- **Example request**
  ```
  {
    "os-extend": {
      "new_size": 200
    }
  }
  ```

**Response**

- **Parameter description**
### Parameter Types and Descriptions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>job_id</td>
<td>string</td>
<td>Specifies the task ID. &lt;br&gt;&lt;br&gt;Note: For details about how to query the task status, see <a href="#">6.1 Querying Task Status</a>.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. &lt;br&gt;&lt;br&gt;Note: For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

**Example response**

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

Or

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

### Returned Values

- Normal
  - 200

### Error Codes

For details, see [A.1 Error Codes](#).

### 5.1.3 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 [8.1.2 Deleting an EVS Disk](#).

#### URI

- **URI format**
  
  `DELETE /v2/{project_id}/cloudvolumes/{volume_id}`

- **Parameter description**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>job_id</td>
<td>string</td>
<td>Specifies the task ID.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about how to query the task status, see 6.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Querying Task Status.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an</td>
</tr>
<tr>
<td></td>
<td></td>
<td>error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error</td>
</tr>
<tr>
<td></td>
<td></td>
<td>occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Codes.</td>
</tr>
</tbody>
</table>

- Example response

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

or

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

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see A.1 Error Codes.
5.1.4 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 8.1.3 Updating an EVS Disk.

URI

- URI format
  
  PUT /v2/{project_id}/cloudvolumes/{volume_id}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string , string&gt;</td>
<td>Yes</td>
<td>Specifies the EVS disk information to be modified.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the new name of the EVS disk. Parameters name and description cannot be null at the same time. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>No</td>
<td>Specifies the new description of the EVS disk. name and description cannot be null at the same time. The value can contain a maximum of 255 bytes.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
    "volume": [
        {
            "name": "test_volume",
            "description": "test"
        }
    ]
}
```
## Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk UUID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the EVS disk attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs. Currently, the returned parameter value is invalid.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the metadata of the EVS disk image. Currently, the returned parameter value is invalid.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs. Currently, the returned parameter value is invalid.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>shareable</td>
<td>string</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This field is no longer used. Use <code>multiattach</code>.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies the shared EVS disk information.</td>
</tr>
</tbody>
</table>

- **Parameters in the `links` field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Parameters in the `attachments` field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- **Parameters in the `metadata` field**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__encrypted   | string| Specifies the parameter that describes the encryption function in metadata. The value can be 0 or 1.  
  ● 0: indicates the disk is not encrypted.  
  ● 1: indicates the disk is encrypted.  
  ● If this parameter does not appear, the disk is not encrypted by default. |
| __system__cmkid       | string| Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.                                                                                       |
| hw:passthrough        | string| Specifies the parameter that describes the disk device type in metadata. The value can be true or false.  
  ● If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (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 is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.  
  ● If this parameter does not appear, the disk device type is VBD. |
| 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.                                                                                                                                               |
| readonly              | string| Specifies whether the disk is read-only or read-writable. The value can be True or False.  
  ● True: indicates that the disk is read-only.  
  ● False: indicates that the disk is read-writable. |
| attached_mode         | string| Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be ro or rw.  
  ● ro: indicates the disk is attached as read-only.  
  ● rw: indicates the disk is attached as read-writable. |
Example response

```json
{
    "id": "36ba39af-3579-4e6e-adfc-b764349c0f77",
    "links": [
        {
            "href": "https://volume.region.xxx.xxx-tsi.de/v2/3cfb09080bd94dd044d72ef26857bd/volumes/36ba39af-3579-4e6e-adfc-b764349c0f77",
            "rel": "self"
        },
        {
            "href": "https://volume.region.xxx.xxx-tsi.de/3cfb09080bd94dd044d72ef26857bd/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,
    "size": 10,
    "metadata": {
        "policy": "dc71a9c9-b3fa-429d-a070-037682d82d1",
        "attached_mode": "rw",
        "readonly": "false",
        "hw:passthrough": "false"
    },
    "bootable": "false",
    "availability_zone": "xxx",
    "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,
    "volume_image_metadata": null
}
```

or

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

Returned Values

- Normal
  - 200

Error Codes

For details, see [A.1 Error Codes].
5.1.5 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 8.1.4 Querying EVS Disks.

URI

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The default value is 1000.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The value can be desc (descending order) or asc (ascending order), and the default value is desc.</td>
</tr>
</tbody>
</table>
Request

None

Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk UUID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

- **Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "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": [
            ...
```
### Returned Values
- Normal
  - 200

### Error Codes
For details, see [A.1 Error Codes](#).

### 5.1.6 Querying Details About All EVS Disks (Deprecated)

#### Function
This API is used to query details about all EVS disks.

**NOTICE**

This API has been deprecated. Use another API. For details, see [8.1.5 Querying Details About All EVS Disks](#).

#### URI
- URI format
  - GET /v2/{project_id}/cloudvolumes/detail
- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>
● Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The default value is 1000.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The value can be desc (descending order) or asc (ascending order), and the default value is desc.</td>
</tr>
</tbody>
</table>

Request

None

Response

● Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk UUID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the EVS disk attachment information.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the metadata of the EVS disk image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong> For details about the <code>volume_image_metadata</code> field, see <a href="ImageManagementServiceAPIReference">Querying Image Details (Native OpenStack API)</a> in the Image Management Service API Reference.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>If</strong> metadata <strong>does not contain the</strong> <code>hw:passthrough</code> <strong>field</strong>, the disk device type is VBD.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>If</strong> metadata <strong>does not contain the</strong> <code>__system__encrypted</code> <strong>field</strong>, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>shareable</td>
<td>string</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong> This field is no longer used. Use multiattach.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see <a href="A.1%20Error%20Codes">A.1 Error Codes</a>.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies the shared EVS disk information.</td>
</tr>
</tbody>
</table>

- Parameters in the **links** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- Parameters in the **attachments** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the **metadata** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption function in <em>metadata</em>. The value can be 0 or 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 0: indicates the disk is not encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● 1: indicates the disk is encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● If this parameter does not appear, the disk is not encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in <em>metadata</em>. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in metadata. The value can be <strong>true</strong> or <strong>false</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to <strong>true</strong>, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to <strong>false</strong>, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is <strong>0</strong>, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be <strong>True</strong> or <strong>False</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>True</strong>: indicates that the disk is read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>False</strong>: indicates that the disk is read-writable.</td>
</tr>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be <strong>ro</strong> or <strong>rw</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>ro</strong>: indicates the disk is attached as read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>rw</strong>: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>

- Example response

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

- Normal
  - 200
Error Codes

For details, see A.1 Error Codes.

5.1.7 Querying EVS Disk Details by Service

Function

This API is used to query EVS disk details by service.

URI

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is 1000.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is desc (descending order).</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of disks, all disks after this offset will be queried.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>metadata</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>No</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>changes-since</td>
<td>string</td>
<td>No</td>
<td>Specifies the time when the disk was updated, for example, 2016-01-08T09:41:18. This is an extended attribute. Only administrators can set this parameter.</td>
</tr>
<tr>
<td>dedicated_storage_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the DSS storage pool. All EVS disks in the DSS storage pool can be filtered out. Only precise match is supported.</td>
</tr>
<tr>
<td>dedicated_storage_name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the DSS storage pool. All EVS disks in the DSS storage pool can be filtered out. Fuzzy match is supported.</td>
</tr>
<tr>
<td>volume_type_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk type ID.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>ids</td>
<td>list&lt;string&gt;</td>
<td>No</td>
<td>Specifies the EVS disk IDs. The parameter value is in the ids=['id1','id2',...,'idx'] format. In the response, the ids value contains valid disk IDs only. Invalid disk IDs will be ignored. Details about a maximum of 60 EVS disks can be queried. If parameters id and ids are both specified in the request, id will be ignored.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>count</td>
<td>int</td>
<td>Specifies the number of queried EVS disks.</td>
</tr>
</tbody>
</table>

- **Parameters in the volumes field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata. If metadata does not contain the hw:passthrough field, the disk device type is VBD. If metadata does not contain the __system__encrypted field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Specifies the EVS disk migration status.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Specifies the ID of the migrated EVS disk.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Specifies the disk replication extended status.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the EVS disk backup status.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable. <strong>NOTE</strong> This field is no longer used. Use <code>multiattach</code>.</td>
</tr>
<tr>
<td>multiattach</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies whether the EVS disk is created from an image. This parameter is specified when the disk is created from an image. Otherwise, it is left empty. <strong>NOTE</strong> For details about the <code>volume_image_metadata</code> field, see <strong>Querying Image Details (Native OpenStack API)</strong> in the <strong>Image Management Service API Reference</strong>.</td>
</tr>
<tr>
<td>volumes_links</td>
<td>array</td>
<td>Specifies the query position marker in the disk list. This parameter is at the same level as parameter <code>volumes</code> in the response body. 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.</td>
</tr>
<tr>
<td>dedicated_storage_id</td>
<td>string</td>
<td>Specifies the ID of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>dedicated_storage_name</td>
<td>string</td>
<td>Specifies the name of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>tags</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the tags of the EVS disk. This parameter is specified when the EVS disk has tags. Otherwise, it is left empty.</td>
</tr>
<tr>
<td>wwn</td>
<td>string</td>
<td>Specifies the unique identifier used for mounting the EVS disk.</td>
</tr>
<tr>
<td>count</td>
<td>integer</td>
<td>Specifies the number of queried EVS disks.</td>
</tr>
<tr>
<td>enterprise_project_id</td>
<td>string</td>
<td>Specifies the enterprise project ID bound to the EVS disk. Currently, the field is not supported by EVS.</td>
</tr>
</tbody>
</table>

- **Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Parameters in the attachments field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- **Parameters in the metadata field**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__encrypted   | string | Specifies the parameter that describes the encryption function in `metadata`. The value can be 0 or 1.  
|                       |        | 0: indicates the disk is not encrypted.  
|                       |        | 1: indicates the disk is encrypted.  
|                       |        | If this parameter does not appear, the disk is not encrypted by default.                                                                 |
| __system__cmkid       | string | Specifies the parameter that describes the encryption CMK ID in `metadata`. This parameter is used together with `__system__encrypted` for encryption. The length of `cmkid` is fixed at 36 bytes. |
| hw:passthrough        | string | Specifies the parameter that describes the disk device type in `metadata`. The value can be true or false.  
|                       |        | true: indicates that the disk is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.  
|                       |        | false: indicates that the disk is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.  
|                       |        | If this parameter does not appear, the disk device type is VBD.                                                                 |
| 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.          |
| readonly              | string | Specifies whether the disk is read-only or read-writable. The value can be True or False.  
|                       |        | True: indicates that the disk is read-only.  
|                       |        | False: indicates that the disk is read-writable.                                                                                           |
| attached_mode         | string | Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be ro or rw.  
|                       |        | ro: indicates the disk is attached as read-only.  
|                       |        | rw: indicates the disk is attached as read-writable.                                                                                   |
Example response
{
  "count": 1,
  "volumes": [
    {
      "attachments": [],
      "availability_zone": "xxx",
      "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": {
        "__openstack_region_name": "pod01.xxx",
        "a": "b",
        "quantityGB": "1",
        "volInfoUrl": "iaas blockstorge://172.30.64.10/FEFEEB07D3924CDEA93C612D4E16882D"
      },
      "name": "zjb_u25_test",
      "os-vol-host-attr:host": "pod01.xxx#SATA",
      "volume_image_metadata": {
        "__openstack_region_name": "pod01.xxx",
        "a": "b",
        "quantityGB": "1",
        "volInfoUrl": "iaas blockstorge://172.30.64.10/FEFEEB07D3924CDEA93C612D4E16882D"
      },
      "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",
      "service_type": "EVS",
      "dedicated_storage_id": null,
      "dedicated_storage_name": null,
      "wwn": "688860300000d136fa16f48f05992360"
    }
  ],
  "volumes_links": [
    {
      "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/volumes/detail?limit=1&marker=b104b8db-170d-441b-897a-3c8ba9c5a214",
      "rel": "next"
    }
  ]
}
In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see [A.1 Error Codes](#).

### 5.1.8 Querying Details About a Single EVS Disk

**Function**

This API is used to query details about a single EVS disk.

**URI**

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

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map</td>
<td>Specifies the queried EVS disk.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk UUID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see <strong>A.3 EVS Disk Status</strong>.</td>
</tr>
<tr>
<td>attachments</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the EVS disk attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the metadata of the EVS disk image. <strong>NOTE</strong> For details about the <code>volume_image_metadata</code> field, see <strong>Querying Image Details (Native OpenStack API)</strong> in the <strong>Image Management Service API Reference</strong>.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata. If <code>metadata</code> does not contain the <code>hw:passthrough</code> field, the disk device type is VBD.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If <code>metadata</code> does not contain the <code>.__system__encrypted</code> field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>shareable</td>
<td>boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong> This field is no longer used. Use <code>multiattach</code>.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error Codes.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies the shared EVS disk information.</td>
</tr>
<tr>
<td>service_type</td>
<td>string</td>
<td>Specifies the service type. The value can be EVS or DSS.</td>
</tr>
<tr>
<td>dedicated_storage_id</td>
<td>string</td>
<td>Specifies the ID of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>dedicated_storage_name</td>
<td>string</td>
<td>Specifies the name of the DSS storage pool accommodating the EVS disk.</td>
</tr>
<tr>
<td>tags</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the tags of the EVS disk. If the disk has tags, this field has values. Otherwise, this field is null.</td>
</tr>
<tr>
<td>wwn</td>
<td>string</td>
<td>Specifies the unique identifier used for mounting the EVS disk.</td>
</tr>
</tbody>
</table>
**Parameter** | **Type** | **Description**
---|---|---
enterprise_project_id | string | Specifies the enterprise project ID bound to the EVS disk. Currently, the field is not supported by EVS.

- **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. |
atached_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 EVS disk is attached. |
volume_id | string | Specifies the EVS 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 |
---|---|---|
__system__encrypted | string | Specifies the parameter that describes the encryption function in metadata. The value can be 0 or 1. |
| | | - 0: indicates the disk is not encrypted. |
| | | - 1: indicates the disk is encrypted. |
| | | - If this parameter does not appear, the disk is not encrypted by default. |
__system__cmkid | string | Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes. |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in <strong>metadata</strong>. The value can be <strong>true</strong> or <strong>false</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to <strong>true</strong>, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to <strong>false</strong>, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is <strong>0</strong>, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be <strong>True</strong> or <strong>False</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>True</strong>: indicates that the disk is read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>False</strong>: indicates that the disk is read-writable.</td>
</tr>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be <strong>ro</strong> or <strong>rw</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>ro</strong>: indicates the disk is attached as read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>rw</strong>: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "volume": {
        "attachments": [ ],
        "links": [ 
            {
                "href": "https://volume.az0.dc1.domainname.com/v2/40acc331ac784f34842ba4f08ff2be48/volumes/591ac654-26d8-41be77-4f90699d2d41",
                "rel": "self"
            },
            {
                "href": "https://volume.az0.dc1.domainname.com/40acc331ac784f34842ba4f08ff2be48/volumes/591ac654-26d8-41be77-4f90699d2d41",
                "rel": "bookmark"
            }
        ],
        "properties": {
            "full_clone": false,
            "readonly": false,
            "attached_mode": "ro",
            "hw:passthrough": true,
            "volume_id": "591ac654-26d8-41be77-4f90699d2d41",
            "volume_type": "v4"
        }
    }
}
```
In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

```

```

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see [A.1 Error Codes](#).
5.2 EVS Snapshot

5.2.1 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 an EVS disk, you can only roll back the snapshot to the source EVS disk. Rollback to a specified disk is not supported.
- You can roll back an EVS disk from a snapshot only when the disk is in the available or error_rollbacking state.

URI

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rollback</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the snapshot rollback information.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the UUID of the EVS disk to be rolled back.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the EVS disk to be rolled back. The value can contain a maximum of 255 bytes. <strong>NOTE</strong> Parameter name cannot be used independently. When name is going to be used, volume_id must also be specified.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
  "rollback": {
  
  ```
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rollback</td>
<td>map</td>
<td>Specifies the snapshot rollback information.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the UUID of the target EVS disk in a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>snapshot rollback.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
  "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:

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

Returned Values

- Normal
  
  202

Error Codes

For details, see A.1 Error Codes.

5.3 EVS Tag

5.3.1 Adding or Updating Tags for an EVS Resource (Deprecated)

Function

This API is used to add or update tags for an EVS resource.
NOTICE

This API has been deprecated. Use another API. For details, see 4.3.1 Batch Adding Tags for the Specified EVS Disk.

Constraints

- A tag is composed of a key-value pair.
  - Key:
    - Must be unique for each resource.
    - Can contain a maximum of 36 characters.
    - Can contain only digits, letters, hyphens (-), and underscores (_).
  - Value:
    - Can contain a maximum of 43 characters.
    - Can contain only digits, letters, hyphens (-), and underscores (_).
- A maximum of 10 tags can be created for an EVS resource.

URI

- URI format
  POST /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
<tr>
<td>resource_id</td>
<td>Yes</td>
<td>Specifies the resource ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- Description of the request header parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content-Type</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the type. The value can be application/json.</td>
</tr>
</tbody>
</table>
NOTE
If the request body contains an existing key of the EVS resource, the original tag containing this key will be overwritten. For example, "key_1":"val_1" is an existing tag of the EVS resource. If the request body contains "key_1":"val_11", the tag of key_1 for this EVS resource is "key_1":"val_11".

Response

Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>map</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

Example response

```
{
    "tags" : {
        "key_0" : "value_0",
        "key_1" : "value_1"
    }
}
```

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": "Invalid tags: Tags property value contains invalid characters.",
        "code": 400
    }
}
```

Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.
5.3.2 Batch Deleting Tags for an EVS Resource (Deprecated)

Function

This API is used to batch delete tags for an EVS resource.

This API has been deprecated. Use another API. For details, see 4.3.2 Batch Deleting Tags for the Specified EVS Disk.

Constraints

None

URI

- URI format
  POST /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}/action
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
<tr>
<td>resource_id</td>
<td>Yes</td>
<td>Specifies the resource ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-delete_tags</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- Description of the request header parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content-Type</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the type. The value can be application/json.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
  "os-delete_tags": {
```
5.3.3 Deleting Tags of an EVS Resource by Key

Function

This API is used to delete tags of an EVS resource by key.

Constraints

None

URI

- URI format
  DELETE /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}/{key}
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
<tr>
<td>resource_id</td>
<td>Yes</td>
<td>Specifies the resource ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the tag.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description
None

- Example response
  None
  or
  
  ```json
  {
    "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:

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

### Returned Values

- Normal
  
  200

### Error Codes

For details, see [A.1 Error Codes](#).

### 5.3.4 Obtaining Tags of a Specified EVS Resource (Deprecated)

#### Function

This API is used to obtain the tags of a specified EVS resource.

---

<table>
<thead>
<tr>
<th>NOTICE</th>
</tr>
</thead>
</table>
This API has been deprecated. Use another API. For details, see [4.3.3 Querying Tags of an EVS Disk](#).

#### Constraints

None

#### URI

- URI format
  
  GET /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}

- Parameter description
### Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
<tr>
<td>resource_id</td>
<td>Yes</td>
<td>Specifies the resource ID.</td>
</tr>
</tbody>
</table>

### Request

None

### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>map</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- **Example response**

  ```
  {
    "tags" : {
      "key_0" : "value_0",
      "key_1" : "value_1"
    }
  }
  ``

  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"
    }
  }
  ```

### Returned Values

- Normal
  
  200

### Error Codes

For details, see A.1 Error Codes.
5.3.5 Obtaining Tags of All EVS Resources

Function

This API is used to obtain the tags of all EVS resources.

Constraints

None

URI

- URI format
  
  ```
  GET /v2/{project_id}/os-vendor-tags/{resource_type}
  ```

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>tag_list</td>
<td>Specifies the tag information about all EVS resources.</td>
</tr>
</tbody>
</table>

- Parameters in tags field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key-value</td>
<td>String</td>
<td>Specifies the key-value pair. The key is of the String type, and the value is of the list&lt;String&gt; type.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "tags": {
    "key_0": [
      "value_0"
    ],
    "key_1": []
  }
}```
5.3.6 Querying Tags of an EVS Resource by Key (Deprecated)

**Function**

This API is used to query tags of an EVS resource by key.

---

**NOTICE**

This API has been deprecated. Use another API. For details, see 4.3.3 Querying Tags of an EVS Disk.

---

**Constraints**

None

**URI**

- URI format

  GET /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}/{key}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
<tr>
<td>resource_id</td>
<td>Yes</td>
<td>Specifies the resource ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the tag.</td>
</tr>
</tbody>
</table>

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see A.1 Error Codes.
Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tag</td>
<td>map</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "tag": {
    "key_0": "value_0"
  }
}
```

or

```json
{
  "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:

```json
{
  "itemNotFound": {
    "message": "Tags item was not found",
    "code": 404
  }
}
```

Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

5.3.7 Resetting Tags of an EVS Resource (Deprecated)

Function

This API is used to reset the tags of an EVS resource, and the existing tags will be deleted.

---

**NOTICE**

This API call exists for compatibility reasons only and has been deprecated.
Constraints

- A tag is composed of a key-value pair.
  - Key:
    - Must be unique for each resource.
    - Can contain a maximum of 36 characters.
    - Can contain only digits, letters, hyphens (-), and underscores (_).
  - Value:
    - Can contain a maximum of 43 characters.
    - Can contain only digits, letters, hyphens (-), and underscores (_).
- A maximum of 10 tags can be created for an EVS resource.

URI

- URI format
  
  PUT /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
<tr>
<td>resource_id</td>
<td>Yes</td>
<td>Specifies the resource ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- Description of the request header parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content-Type</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the type. The value can be application/json.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
  "tags": {
    "key_new": "value_new"
  }
}```
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>map</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "tags": {
    "key_new": "value_new"
  }
}
```

or

```json
{
  "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:

```json
{
  "badRequest": {
    "message": "Invalid tags: Tags property key contains invalid characters.",
    "code": 400
  }
}
```

Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

5.3.8 Updating Tags of an EVS Resource by Key (Deprecated)

Function

This API is used to update tags of an EVS resource by key.

**NOTICE**

This API has been deprecated. Use another API. For details, see 4.3.1 Batch Adding Tags for the Specified EVS Disk.

Constraints

- A tag is composed of a key-value pair.
- **Key:**
  - Must be unique for each resource.
  - Can contain a maximum of 36 characters.
  - Can contain only digits, letters, hyphens (-), and underscores (_).
- **Value:**
  - Can contain a maximum of 43 characters.
  - Can contain only digits, letters, hyphens (-), and underscores (_).

- A maximum of 10 tags can be created for an EVS resource.

**URI**

- **URI format**
  
  PUT /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}/{key}

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
<tr>
<td>resource_id</td>
<td>Yes</td>
<td>Specifies the resource ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the tag.</td>
</tr>
</tbody>
</table>

**Request**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tag</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- **Description of the request header parameter**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content-Type</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the type. The value can be application/json.</td>
</tr>
</tbody>
</table>

- **Example request**

```json
{
  "tag": {
    "key_0": "value_0"
  }
}```
### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tag</td>
<td>map</td>
<td>Specifies the key-value pair of the tag.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{  
  "tag": {  
    "key_0": "value_0"  
  }  
}
```

or

```json
{  
  "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:

```json
{  
  "badRequest": {  
    "message": "Request body and URI mismatch",  
    "code": 400  
  }  
}
```

### Returned Values

- **Normal**
  
  200

### Error Codes

For details, see [A.1 Error Codes](#).

### 5.3.9 Querying EVS Resources by Tag (Deprecated)

#### Function

This API is used to query the EVS resources by tag.

---

**NOTICE**

This API has been deprecated. Use another API. For details, see [4.3.5 Querying Details of EVS Disks by Tag](#).

#### Constraints

None
URI

- URI format
  GET /v2/{project_id}/os-vendor-tags/{resource_type}/resource_instances
  Examples:
  - https://{{evs_url}}/v2/{{project_id}}/os-vendor-tags/volumes/resource_instances?
tags={'test':['test']}
  - https://{{evs_url}}/v2/{{project_id}}/os-vendor-tags/volumes/resource_instances

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>resource_type</td>
<td>Yes</td>
<td>Specifies the resource type. The value can be volumes, snapshots, or backups.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>string</td>
<td>No</td>
<td>Specifies to query EVS resources owning the tags in the filtering tag. For example, if the filtering tag is tags={'a':['b', 'c'], 'd':['e']}, EVS resources owning tags (key is a and value is b or c) and tags (key is d and value is e) are queried.</td>
</tr>
<tr>
<td>tags_any</td>
<td>string</td>
<td>No</td>
<td>Specifies to query EVS resources owning one of the tags in the filtering tag. For example, if the filtering tag is tags_any={'a':['b', 'c'], 'd':['e']}, EVS resources owning tags (key is a and value is b or c) or tags (key is d and value is e) are queried.</td>
</tr>
<tr>
<td>not_tags</td>
<td>string</td>
<td>No</td>
<td>Specifies to query EVS resources not owning the tags in the filtering tag. For example, if the filtering tag is not_tags={'a':['b', 'c'], 'd':['e']}, EVS resources not owning tags (key is a and value is b or c) and tags (key is d and value is e) are queried.</td>
</tr>
</tbody>
</table>
### Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandate</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>not_tags_any</td>
<td>string</td>
<td>No</td>
<td>Specifies to query EVS resources not owning one of the tags in the filtering tag. For example, if the filtering tag is <code>not_tags={'a':['b', 'c'], 'd':['e']}</code>, EVS resources not owning tags (key is <code>a</code> and value is <code>b</code> or <code>c</code>) or tags (key is <code>d</code> and value is <code>e</code>) are queried.</td>
</tr>
</tbody>
</table>

### Request

None

### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>total_count</td>
<td>int</td>
<td>Specifies the number of EVS resources.</td>
</tr>
<tr>
<td>resources</td>
<td>list</td>
<td>Specifies the EVS resource lists.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "total_count": 2,
    "resources": [
        {
            "resource_name": null,
            "resource_detail": {
                "status": "available",
                "description": null,
                "availability_zone": "eu-de-01",
                "updated_at": "2017-07-26T08:14:07.857625",
                "source_volid": null,
                "snapshot_id": null,
                "id": "47cc4949-447a-43dc-b482-a1d7917fef69",
                "size": 45,
                "name": null,
                "bootable": "true",
                "created_at": "2017-07-26T08:09:39.787432",
                "multiattach": false
            },
            "tags": {
                "a": "c",
                "d": "e"
            },
            "resource_id": "47cc4949-447a-43dc-b482-a1d7917fef69"
        },
        {
            "resource_name": null,
            "resource_detail": {
                "status": "available",
                "description": null,
                "availability_zone": "eu-de-01",
                "updated_at": "2017-07-26T08:02:11.250455",
                "source_volid": null,
```
"snapshot_id": null,
"id": "588e94ef-eb2d-4895-a692-18163a7eeddc",
"size": 100,
"name": null,
"bootable": "false",
"created_at": "2017-07-26T08:00:51.563309",
"multiattach": false
},
"tags": {
  "a": "c",
  "d": "e"
},
"resource_id": "588e94ef-eb2d-4895-a692-18163a7eeddc"
}
}
}
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:

```
{
  "computeFault": {
    "message": "The server has either erred or is incapable of performing the requested operation.",
    "code": 500
  }
}
```

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see A.1 **Error Codes**.

### 5.3.10 Batch Adding Tags for the Specified EVS Disk

**Function**

This API is used to batch add tags for the specified EVS disk. TMS uses this API to batch manage tags of an EVS disk.

- When tags are being added and some tags in the request have the same tag keys, an error will be reported.
- When tags are being added and some tags in the request have the same tag keys as the tags associated with existing disks, the new tags will overwrite the existing tags.
- A maximum of 10 tags can be created for an EVS disk.

**Constraints**

None
URI

- URI format
  POST /v2/{project_id}/os-vendor-volumes/{volume_id}/tags/action

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>List&lt;resource_tag&gt;</td>
<td>Yes</td>
<td>Specifies the tag list.</td>
</tr>
<tr>
<td>action</td>
<td>String</td>
<td>Yes</td>
<td>Specifies the operation to perform. The value can be <code>create</code> or <code>delete</code>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <code>create</code>: specifies to add tags.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <code>delete</code>: specifies to delete tags.</td>
</tr>
</tbody>
</table>

- Parameters in the `tags` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>String</td>
<td>Yes</td>
<td>Tag key:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Cannot be left blank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Must be unique for each resource.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Can contain a maximum of 36 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>value</td>
<td>String</td>
<td>Yes</td>
<td>Tag value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Can contain a maximum of 43 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
</tbody>
</table>

- Example request

```json
{
    "action": "create",
    "tags": [
        {
            "key": "key1",
```
Response

None

Returned Values

- Normal
  - 204

Error Codes

For details, see A.1 Error Codes.

5.3.11 Batch Deleting Tags for the Specified EVS Disk

Function

This API is used to batch delete tags for the specified EVS disk. TMS uses this API to batch manage tags of an EVS disk.

When tags are being deleted and some tags do not exist, the operation is considered successful by default, and the tags will not be checked upon deletion.

Constraints

None

URI

- URI format
  - POST /v2/{project_id}/os-vendor-volumes/{volume_id}/tags/action

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description
### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>List&lt;resource_tag&gt;</td>
<td>Yes</td>
<td>Specifies the tag list.</td>
</tr>
</tbody>
</table>
| action    | String     | Yes       | Specifies the operation to perform. The value can be **create** or **delete**.  
- **create**: specifies to add tags.  
- **delete**: specifies to delete tags. |

#### Parameters in the **tags** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| key       | String | Yes       | Tag key:  
- Cannot be left blank.  
- Must be unique for each resource.  
- Can contain a maximum of 36 characters.  
- Can contain only digits, letters, hyphens (-), and underscores (_) |

#### Example request

```
{
  "action": "delete",
  "tags": [
    {
      "key": "key1"
    },
    {
      "key": "key2"
    }
  ]
}
```

### Response

None

### Returned Values

- Normal 204

### Error Codes

For details, see A.1 Error Codes.
5.3.12 Querying Tags of an EVS Disk

**Function**

This API is used to query the tags of the specified EVS disk. TMS may use this API to query all tags of the specified EVS disk.

**Constraints**

None

**URI**

- URI format

  GET /v2/{project_id}/os-vendor-volumes/{volume_id}/tags

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>List&lt;resource_tag&gt;</td>
<td>Specifies the tag list.</td>
</tr>
</tbody>
</table>

- Parameters in the tags field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>String</td>
<td>Tag key:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Cannot be left blank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Must be unique for each resource.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can contain a maximum of 36 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>value</td>
<td>String</td>
<td>Tag value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Can contain a maximum of 43 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
</tbody>
</table>

- Example response

```
{
  "tags": [
    {
      "value": "value1",
      "key": "key1"
    },
    {
      "value": "value2",
      "key": "key2"
    }
  ]
}
```

Returned Values
- Normal
  200

Error Codes
For details, see A.1 Error Codes.

5.3.13 Querying the Number of EVS Disks by Tag

Function
This API is used to query the number of EVS disks by tag.

Constraints
None

URI
- URI format
  POST /v2/{project_id}/os-vendor-volumes/resource_instances/action
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>
## Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>list&lt;resource_tag&gt;</td>
<td>No</td>
<td>Specifies the key-value pairs of the tag. The tags field cannot be left empty. One tag list can contain a maximum of 10 keys. Tag keys in a tag list must be unique. When multiple keys are specified in a tag list, only the EVS disks having all specified keys are queried. <strong>NOTE</strong> If multiple tag lists are specified in the request, only the EVS disks that meet the requirements of the last tag list are queried.</td>
</tr>
<tr>
<td>action</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the operation identifier. The value can be as follows: filter, count. Specifying count queries the number of EVS disks by tag.</td>
</tr>
<tr>
<td>matches</td>
<td>list&lt;match&gt;</td>
<td>No</td>
<td>Specifies the search criteria supported by the disks. The matches field cannot be left empty. Tag keys in the list must be unique.</td>
</tr>
</tbody>
</table>

- **Parameters in the tags field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>string</td>
<td>Yes</td>
<td>Tag key: Cannot be left blank. Must be unique for each resource. Can contain a maximum of 36 characters. Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>values</td>
<td>list</td>
<td>Yes</td>
<td>Tag value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Can contain a maximum of 43 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>One value list can contain a maximum of 10 values.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tag values in a value list must be unique.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If the value list is left empty, any tag value can be matched.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>When multiple values are specified in a value list and the key requirements are met, EVS disks that have any of the specified values are queried.</td>
</tr>
</tbody>
</table>

- Parameters in the **matches** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the tag key. The value is of the enumerated type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The value can be as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• resource_name: disk name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• service_type: service type.</td>
</tr>
<tr>
<td>value</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the tag value.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• It can contain up to 255 Unicode characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• An empty string specifies an exact match, and a non-empty string specifies a fuzzy query.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• If resource_name is specified for key, spaces before and after the tag value will be discarded.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• If service_type is specified for key, the value is of the enumerated type. It can be EVS or DSS and is case-insensitive.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
    "action": "count",
    "tags": [
        {
            ...
        }
    ]
}
```
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>total_count</td>
<td>int</td>
<td>Specifies the total number of EVS disks that meet the query criteria.</td>
</tr>
</tbody>
</table>

- Example response

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

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:

```
{
  "computeFault": {
    "message": "The server has either erred or is incapable of performing the requested operation.",
    "code": 500
  }
}
```

Returned Values

- Normal
  - 200

Error Codes

For details, see A.1 Error Codes.
5.3.14 Querying Details of EVS Disks by Tag

Function

This API is used to query the details of the EVS disks by tag.

Constraints

None

URI

- URI format
  POST /v2/{project_id}/os-vendor-volumes/resource_instances/action
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>tags</td>
<td>list&lt;resource_tag&gt;</td>
<td>No</td>
<td>Specifies the key-value pairs of the tag.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>One tag list can contain a maximum of 10 keys.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tag keys in a tag list must be unique.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>When multiple keys are specified in a tag list, only the EVS disks having all specified keys are queried.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If multiple tag lists are specified in the request, only the EVS disks that meet the requirements of the last tag list are queried.</td>
</tr>
<tr>
<td>limit</td>
<td>string</td>
<td>No</td>
<td>Specifies the number of query records.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The value ranges from 1 to 1000, and the default value is 1000. The number of query records in the response cannot exceed the limit value.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>---------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>offset</td>
<td>string</td>
<td>No</td>
<td>Specifies the index location. The minimum value is 0, which is also the default value. The first record in the query result is the offset+1 record that meets the query criteria.</td>
</tr>
</tbody>
</table>
| action    | string  | Yes       | Specifies the operation identifier. The value can be as follows:  
  - filter  
  - count  
  Specifying filter queries the details of EVS disks by tag. |
| matches   | list<match> | No        | Specifies the search criteria supported by disks. Tag keys in the list must be unique. |

- Parameters in the tags field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| key       | string | Yes       | Tag key:  
  - Cannot be left blank.  
  - Must be unique for each resource.  
  - Can contain a maximum of 36 characters.  
  - Can contain only digits, letters, hyphens (-), and underscores (_). |
| values    | list  | Yes       | Tag value:  
  - Can contain a maximum of 43 characters.  
  - Can contain only digits, letters, hyphens (-), and underscores (_).  
  One value list can contain a maximum of 10 values.  
  Tag values in a value list must be unique.  
  If the value list is left empty, any tag value can be matched.  
  When multiple values are specified in a value list and the key requirements are met, EVS disks that have any of the specified values are queried. |
Parameters in the matches field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the tag key. The value is of the enumerated type. The value can be as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- resource_name: disk name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- service_type: service type.</td>
</tr>
<tr>
<td>value</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the tag value.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- It can contain up to 255 Unicode characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If resource_name is specified for key, the tag value uses a fuzzy match.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If service_type is specified for key, the value is of the enumerated type. It can be EVS or DSS and is case-insensitive.</td>
</tr>
</tbody>
</table>

Example request

```json
{
  "offset": "100",
  "limit": "100",
  "action": "filter",
  "tags": [
    {
      "key": "key1",
      "values": [ "value1", "value2"
    }
  ],
  "matches": [
    {
      "key": "resource_name",
      "value": "resource1"
    },
    {
      "key": "service_type",
      "value": "EVS"
    }
  ]
}
```

Response

Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>total_count</td>
<td>int</td>
<td>Specifies the total number of EVS disks that meet the query criteria.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>resources</td>
<td>List&lt;resource&gt;</td>
<td>Specifies the list of EVS disks that meet the query criteria.</td>
</tr>
</tbody>
</table>

- Parameters in the `resources` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>resource_id</td>
<td>string</td>
<td>Specifies the disk ID.</td>
</tr>
<tr>
<td>resource_name</td>
<td>string</td>
<td>Specifies the disk name.</td>
</tr>
<tr>
<td>resource_detail</td>
<td>object</td>
<td>Specifies the disk details.</td>
</tr>
<tr>
<td>tags</td>
<td>list&lt;resource_tag&gt;</td>
<td>Specifies the tag list.</td>
</tr>
</tbody>
</table>

- Parameters in the `tags` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key</td>
<td>string</td>
<td>Tag key:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Cannot be left blank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Must be unique for each resource.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Can contain a maximum of 36 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
<tr>
<td>value</td>
<td>string</td>
<td>Tag value:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Can contain a maximum of 43 characters.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>● Can contain only digits, letters, hyphens (-), and underscores (_).</td>
</tr>
</tbody>
</table>

- Example response

```
{
  "total_count": 1,
  "resources": [
    {
      "sys_tags": [
        {
          "key": "+sys_enterprise_project_id",
          "value": "0"
        }
      ],
      "resource_name": "Test_VOLUME_20180804055602_0001",
      "resource_detail": {
        "status": "in-use",
        "migration_status": null,
        "volume_image_metadata": {} },
      "attachments": [
        {
          "server_id": "6b48e854-2a68-4ae6-b7d1-c05262d3ebfe",
          "attachment_id": "fe4589a0-916c-49ed-b518-404514926d07",
          "attached_at": "2018-08-03T21:56:24.502050",
```
"host_name": null,
"volume_id": "2f8d32db-25fe-4ce7-b235-8f62af285c31",
"device": "/dev/vda",
"id": "2f8d32db-25fe-4ce7-b235-8f62af285c31"
},

"links": [
  {
    "href": "https://172.28.11.187:8776/v2/
bf1c5745683c479689c5bbdf0b029a69/volumes/2f8d32db-25fe-4ce7-
b235-8f62af285c31",
    "rel": "self"
  },
  {
    "href": "https://172.28.11.187:8776/
bf1c5745683c479689c5bbdf0b029a69/volumes/2f8d32db-25fe-4ce7-
b235-8f62af285c31",
    "rel": "bookmark"
  }
],

"availability_zone": "kvmxen.dc1",
"os-vol-host-attr:host": "az21.dc1#SAS",
"encrypted": false,
"dedicated_storage_id": null,
"enterprise_project_id": "0",
"updated_at": "2018-08-03T21:56:24.538926",
"source_volid": null,
"os-volume-replication:extended_status": null,
"consistencygroup_id": null,
"replication_status": "disabled",
"snapshot_id": null,
"id": "2f8d32db-25fe-4ce7-b235-8f62af285c31",
"os-vol-mig-status-attr:name_id": null,
"description": null,
"user_id": "c9b85bd718a44b17adc75732c964750c",
"name": "Test_VOLUME_20180804055602_0001",
"bootable": "true",
"created_at": "2018-08-03T21:56:04.599491",
"multiattach": false,
"volume_type": "SATA",
"shareable": false,
"dedicated_storage_name": null,
"os-vol-tenant-attr:tenant_id": "bf1c5745683c479689c5bbdf0b029a69",
"service_type": "EVS",
"size": 1,
"os-vol-mig-status-attr:migstat": null,
"metadata": {
  "__openstack_region_name": "az21.dc1",
  "__system__volume_name": "Test_VOLUME_20180804055602_0001"
},

"tags": [
  {
    "key": "age",
    "value": "1001"
  },
  {
    "key": "age01",
    "value": "100101"
  }
],

"resource_id": "2f8d32db-25fe-4ce7-b235-8f62af285c31"
}
In the preceding example, `error` indicates a general error, for example, `badRequest` or `itemNotFound`. An example is provided as follows:

```
{
  "computeFault": {
    "message": "The server has either erred or is incapable of performing the requested operation.",
    "code": 500
  }
}
```

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see [A.1 Error Codes](#).

### 5.4 EVS Replication Pair (Deprecated)

#### 5.4.1 Creating an EVS Replication Pair (Deprecated)

**Function**

This API is used to create an EVS replication pair using a specified production disk and a disaster recovery (DR) disk. The production disk is in the primary AZ, and the DR disk is in the secondary AZ.

**NOTE**

This API has been deprecated. To use this function, see [Storage Disaster Recovery Service API Reference](#).

**Constraints**

- Two EVS disks used to create the EVS replication pair have been created and belong to different AZs.
- The types and capacities of the two EVS disks must be consistent.
- If the DR disk has been attached to a server, the server must be stopped.

**URI**

- URI format
  - POST /v2/[project_id]/os-vendor-replications
- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication</td>
<td>Yes</td>
<td>map&lt;string,object&gt;</td>
<td>Specifies to create the EVS replication pair.</td>
</tr>
</tbody>
</table>

- Parameters in the replication field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>No</td>
<td>string</td>
<td>Specifies the name of the EVS replication pair. The name can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>description</td>
<td>No</td>
<td>string</td>
<td>Specifies the description of the EVS replication pair. The description can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>volume_ids</td>
<td>Yes</td>
<td>list</td>
<td>Specifies the IDs of the EVS disks used to create the EVS replication pair.</td>
</tr>
<tr>
<td>priority_station</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the primary AZ of the EVS replication pair, that is, the AZ where the production disk belongs.</td>
</tr>
<tr>
<td>replication_model</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the type of the EVS replication pair. Currently, only type <strong>hypermetro</strong> is supported.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
    "replication": {
        "name": "my replication",
        "description": "my replication",
        "volume_ids": [
            "18aa67ea-c7cb-4826-800d-50e67f0de75b",
            "375d23be-3658-498f-8b50-d3b950a890ec"
        ],
        "priority_station": "az2.dc2",
        "replication_model": "hypermetro"
    }
}
```
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS replication pair information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS replication pair.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS replication pair.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS replication pair.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status of the EVS replication pair. For details, see A.5 EVS Replication Pair Status (Deprecated).</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group where the EVS replication pair belongs.</td>
</tr>
<tr>
<td>volume_ids</td>
<td>string</td>
<td>Specifies the IDs of the EVS disks used to create the EVS replication pair.</td>
</tr>
<tr>
<td>priority_station</td>
<td>string</td>
<td>Specifies the primary site of the EVS replication pair.</td>
</tr>
<tr>
<td>created_at</td>
<td>datetime</td>
<td>Specifies the creation time.</td>
</tr>
<tr>
<td>updated_at</td>
<td>datetime</td>
<td>Specifies the update time.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "replication": {
    "id": "91085433-9499-4a68-b2c6-35072467ccd2",
    "name": "my replication",
    "description": "my replication",
    "status": "creating",
    "replication_consistency_group_id": null,
    "volume_ids": "18aa67ea-c7cb-4826-800d-50e67f0de75b,
    375d23be-3658-498f-8b50-d3b950a890ec",
    "priority_station": "az2.dc2",
    "created_at": "2017-09-28T05:08:32.839953",
    "updated_at": null
  }
}
```

Returned Values

- Normal
<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>202</td>
<td>The server has accepted the request.</td>
</tr>
</tbody>
</table>

- **Abnormal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>

**5.4.2 Deleting an EVS Replication Pair (Deprecated)**

**Function**

This API is used to delete a specified EVS replication pair.

**NOTE**

This API has been deprecated. To use this function, see *Storage Disaster Recovery Service API Reference.*
**Constraints**

- The to-be-deleted EVS replication pair cannot be in any replication consistency group. Otherwise, it cannot be deleted.
- The to-be-deleted EVS replication pair must be in the **available** or **error** state.

**URI**

- **URI format**
  
  DELETE /v2/{project_id}/os-vendor-replications/{replication_id}

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_id</td>
<td>Yes</td>
<td>Specifies the ID of the EVS replication pair.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

None

**Returned Values**

- **Normal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>202</td>
<td>The server has accepted the request.</td>
</tr>
</tbody>
</table>

- **Abnormal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>Returned Value</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>

### 5.4.3 Querying All EVS Replication Pairs (Deprecated)

**Function**

This API is used to query all EVS replication pairs of the current tenant.

**NOTE**

This API has been deprecated. To use this function, see [Storage Disaster Recovery Service API Reference](#).

**Constraints**

None

**URI**

- **URI format**
  
  GET `/v2/{project_id}/os-vendor-replications`

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

- **Parameter description**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>No</td>
<td>string</td>
<td>Specifies the ID of the last EVS replication pair on the previous page, and the next EVS replication pair ID is returned.</td>
</tr>
<tr>
<td>limit</td>
<td>No</td>
<td>integer</td>
<td>Specifies the maximum number of query results that can be returned. The default value is <strong>1000</strong>.</td>
</tr>
<tr>
<td>sort_key</td>
<td>No</td>
<td>string</td>
<td>Specifies that the returned results are sorted by keyword. The default keyword is <code>created_at</code>, indicating that the EVS replication pairs are sorted by creation time.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>No</td>
<td>string</td>
<td>Specifies that the returned results are sorted by ascending or descending order. The default value is <code>desc</code>, indicating that the EVS replication pairs are sorted by descending order.</td>
</tr>
<tr>
<td>offset</td>
<td>No</td>
<td>integer</td>
<td>Specifies the offset.</td>
</tr>
<tr>
<td>changes-since</td>
<td>No</td>
<td>string</td>
<td>Specifies to query all the EVS replication pairs that have been updated from the specified time point to the current time.</td>
</tr>
<tr>
<td>name</td>
<td>No</td>
<td>string</td>
<td>Specifies the name of the EVS replication pair.</td>
</tr>
<tr>
<td>status</td>
<td>No</td>
<td>string</td>
<td>Specifies the status of the EVS replication pair.</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>No</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group where the EVS replication pair belongs.</td>
</tr>
<tr>
<td>volume_ids</td>
<td>No</td>
<td>string</td>
<td>Specifies the IDs of the EVS disks used to create the EVS replication pair.</td>
</tr>
<tr>
<td>volume_id</td>
<td>No</td>
<td>string</td>
<td>Specifies the ID of an EVS disk.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Mandatory</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------</td>
<td>------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>priority_station</td>
<td>No</td>
<td>string</td>
<td>Specifies the primary site of the EVS replication pair.</td>
</tr>
</tbody>
</table>

- Example request None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replications</td>
<td>List&lt;replication&gt;</td>
<td>Specifies the EVS replication pairs.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS replication pair.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS replication pair.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS replication pair.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status of the EVS replication pair. For details, see [A.5 EVS Replication Pair Status (Deprecated)].</td>
</tr>
<tr>
<td>replication_consistency_g</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group where the EVS replication pair belongs.</td>
</tr>
<tr>
<td>roup_id</td>
<td></td>
<td></td>
</tr>
<tr>
<td>volume_ids</td>
<td>string</td>
<td>Specifies the IDs of the EVS disks used to create the EVS replication pair.</td>
</tr>
<tr>
<td>priority_station</td>
<td>string</td>
<td>Specifies the primary site of the EVS replication pair.</td>
</tr>
<tr>
<td>created_at</td>
<td>datetime</td>
<td>Specifies the creation time.</td>
</tr>
<tr>
<td>updated_at</td>
<td>datetime</td>
<td>Specifies the update time.</td>
</tr>
<tr>
<td>replication_model</td>
<td>string</td>
<td>Specifies the replication type of the EVS replication pair.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the replication status of the EVS replication pair. For details, see [A.5 EVS Replication Pair Status (Deprecated)].</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>progress</td>
<td>string</td>
<td>Specifies the synchronization progress of the EVS replication pair. Unit: %</td>
</tr>
<tr>
<td>failure_detail</td>
<td>string</td>
<td>Specifies the returned error code if the EVS replication pair status is error. For details, see A.7 Details of EVS Replication failure_detail Values (Deprecated).</td>
</tr>
<tr>
<td>record_metadata</td>
<td>map</td>
<td>Specifies the SDR data of the EVS replication pair.</td>
</tr>
</tbody>
</table>
| fault_level     | string | Specifies the fault level of the EVS replication pair. The value can be as follows:  
|                 |        | - 0: indicates that no fault occurs.                                        |
|                 |        | - 2: indicates that the production disk does not have read/write permissions. In this case, you are advised to perform a failover. |
|                 |        | - 5: indicates that the replication link is disconnected. In this case, a failover cannot be performed. Contact technical support engineers. |

- Parameters in the `record_metadata` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the type of the EVS disks in the EVS replication pair.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies whether the EVS disks in the EVS replication pair are shared EVS disks.</td>
</tr>
<tr>
<td>volume_size</td>
<td>integer</td>
<td>Specifies the size of each EVS disk in the EVS replication pair. The unit is GB.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
    "replications": [
        {
            "status": "available",
            "replication_model": "hypermetro",
            "description": "replication",
            "record_metadata": "{ "volume_size": 5, "volume_type": "ssd",
            "multiattach": false",
            "updated_at": "2017-11-27T12:08:01.463824"
        }
    ]
}
```
"replication_status": "inactive",
"fault_level": "0",
"id": "190081db-9023-431d-a51a-197fafa3762b5",
"replication_consistency_group_id": null,
"priority_station": "az2.dc2",
"volume_ids": "288a6cac-1352-460f-9b93-bfd41979f805,905d5dee-2ce4-406b-bb8a-314b3e92643e",
"name": "replication",
"created_at": "2017-11-27T12:07:59.993903",
"progress": null
},
{
"status": "available",
"replication_model": "hypermetro",
"description": "replication",
"record_metadata": "{ "volume_size": 10, "volume_type": \"ssd \", \"multiattach\": false\},
"updated_at": "2017-11-28T06:16:30.725816",
"replication_status": "active",
"fault_level": "0",
"id": "6690b30a-b40c-4a50-bd4a-7e5c1e28b821",
"replication_consistency_group_id": "13b582ae-92e-4f7a-92b-8eb7a4ad860e",
"priority_station": "az3.dc3",
"volume_ids": "f3bd8265-130a-4917-815b-a074d6b6850,32eb83a2-dd2f-480d-4a9e-7af86df3c7c7",
"name": "replication",
"created_at": "2017-11-27T11:37:24.459062",
"progress": "100"
}
]

Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>Returned Value</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>

### 5.4.4 Querying Details About an EVS Replication Pair (Deprecated)

**Function**

This API is used to query the details about an EVS replication pair, including the name, ID, and status of the replication pair.

**NOTE**

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.

**Constraints**

None

**URI**

- **URI format**
  
  GET /v2/{project_id}/os-vendor-replications/{replication_id}

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_id</td>
<td>Yes</td>
<td>Specifies the ID of the EVS replication pair.</td>
</tr>
</tbody>
</table>
**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the details of the EVS replication pair.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS replication pair.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS replication pair.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS replication pair.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status of the EVS replication pair. For details, see [A.5 EVS Replication Pair Status (Deprecated)].</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group where the EVS replication pair belongs.</td>
</tr>
<tr>
<td>volume_ids</td>
<td>string</td>
<td>Specifies the IDs of the EVS disks used to create the EVS replication pair.</td>
</tr>
<tr>
<td>priority_station</td>
<td>string</td>
<td>Specifies the primary site of the EVS replication pair.</td>
</tr>
<tr>
<td>created_at</td>
<td>datetime</td>
<td>Specifies the creation time.</td>
</tr>
<tr>
<td>updated_at</td>
<td>datetime</td>
<td>Specifies the update time.</td>
</tr>
<tr>
<td>replication_model</td>
<td>string</td>
<td>Specifies the replication type of the EVS replication pair.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the replication status of the EVS replication pair. For details, see [A.5 EVS Replication Pair Status (Deprecated)].</td>
</tr>
<tr>
<td>progress</td>
<td>string</td>
<td>Specifies the synchronization progress of the EVS replication pair. Unit: %</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>failure_detail</td>
<td>string</td>
<td>Specifies the returned error code if the EVS replication pair status is error. For details, see A.7 Details of EVS Replication failure_detail Values (Deprecated).</td>
</tr>
<tr>
<td>record_metadata</td>
<td>map</td>
<td>Specifies the SDR data of the EVS replication pair.</td>
</tr>
</tbody>
</table>
| fault_level    | string  | Specifies the fault level of the EVS replication pair. The value can be as follows: 
  * 0: indicates that no fault occurs. 
  * 2: indicates that the production disk does not have read/write permissions. In this case, you are advised to perform a failover. 
  * 5: indicates that the replication link is disconnected. In this case, a failover cannot be performed. Contact technical support engineers. |

- **Parameters in the record_metadata field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the type of the EVS disks in the EVS replication pair.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies whether the EVS disks in the EVS replication pair are shared EVS disks.</td>
</tr>
<tr>
<td>volume_size</td>
<td>integer</td>
<td>Specifies the size of each EVS disk in the EVS replication pair. The unit is GB.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "replication": {
        "status": "available",
        "priority_station": "az2.dc2",
        "volume_ids": "a623cd91-89f9-4baf-a5aa-7774d2bfcb8b, 3e8fdded-64bb-4c60-a55e-2e4bc3d240d6",
        "record_metadata": "{\"volume_size\": 10, \"volume_type\": \"ssd\", \"multiattach\": false},
        "name": "yes",
        "created_at": "2017-09-30T10:14:32.747000",
        "updated_at": "2017-09-30T10:14:34.505912",
        "replication_consistency_group_id": null,
        "replication_status": "active",
        "fault_level": "0",
        "replication_model": "hypermetro",
    }
}
Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5 Replication Consistency Group (Deprecated)

5.5.1 Creating a Replication Consistency Group (Deprecated)

Function

This API is used to create a replication consistency group for the specified EVS replication pairs.

**NOTE**

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.

Constraints

- At least one EVS replication pair must be added when you create the replication consistency group.
- The EVS replication pairs to be added to the group must be in the available state.

URI

- URI format
  
  POST /v2/{project_id}/os-vendor-replication-consistency-groups

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication_consistency_group</td>
<td>Yes</td>
<td>map&lt;string,object&gt;</td>
<td>Specifies to create the replication consistency group.</td>
</tr>
</tbody>
</table>

  Parameters in the replication_consistency_group field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>No</td>
<td>string</td>
<td>Specifies the name of the replication consistency group. The name can contain a maximum of 255 bytes.</td>
</tr>
</tbody>
</table>
### Parameter Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>description</td>
<td>No</td>
<td>string</td>
<td>Specifies the description of the replication consistency group. The description can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>replication_ids</td>
<td>Yes</td>
<td>list</td>
<td>Specifies the IDs of the EVS replication pairs used to create the replication consistency group.</td>
</tr>
<tr>
<td>priority_station</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the current primary AZ, that is, the AZ where the production disks belong.</td>
</tr>
<tr>
<td>replication_mode</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the type of the created replication consistency group. Currently, only type <strong>hypermetro</strong> is supported.</td>
</tr>
</tbody>
</table>

**Example request**

```json
{
    "replication_consistency_group": {
        "name": "my replication consistency group",
        "description": "my replication consistency group",
        "replication_ids": [
            "18aa67ea-c7cb-4826-800d-50e67f0de75b",
            "375d23be-3658-498f-8b50-d3b950a890ec"
        ],
        "priority_station": "az2.dc2",
        "replication_model": "hypermetro"
    }
}
```

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication_consistency_group</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the replication consistency group information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the replication consistency group.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the replication consistency group.</td>
</tr>
</tbody>
</table>
### Parameter Types

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status of the replication consistency group. For details, see A.6 Replication Consistency Group Status (Deprecated).</td>
</tr>
<tr>
<td>priority_station</td>
<td>string</td>
<td>Specifies the primary site of the replication consistency group.</td>
</tr>
<tr>
<td>created_at</td>
<td>datetime</td>
<td>Specifies the creation time.</td>
</tr>
<tr>
<td>updated_at</td>
<td>datetime</td>
<td>Specifies the update time.</td>
</tr>
</tbody>
</table>

#### Example response

```json
{
"replication_consistency_group": {
    "id": "91085433-9499-4a68-b2c6-35072467ccd2",
    "name": "my replication consistency group",
    "description": "my replication consistency group",
    "status": "creating",
    "priority_station": "az2.dc2",
    "created_at": "2017-09-28T05:08:32.839953",
    "updated_at": null
}
}
```

#### Returned Values

**Normal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>202</td>
<td>The server has accepted the request.</td>
</tr>
</tbody>
</table>

**Abnormal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>Returned Value</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>

5.5.2 Deleting a Replication Consistency Group (Deprecated)

Function

This API is used to delete a replication consistency group.

**NOTE**

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.

Constraints

- All EVS replication pairs in the replication consistency group have been removed.
- The replication group status must be **available** or **error**.

URI

- URI format
  
  DELETE /v2/{project_id}/os-vendor-replication-consistency-groups/
  {replication_consistency_group_id}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>Yes</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
</tbody>
</table>
Request

None

Response

None

Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>202</td>
<td>The server has accepted the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5.3 Querying All Replication Consistency Groups (Deprecated)

Function

This API is used to query all replication consistency groups of the current tenant.

**NOTE**

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.

Constraints

None

URI

- URI format
  
  GET /v2/{project_id}/os-vendor-replication-consistency-groups

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>No</td>
<td>string</td>
<td>Specifies the ID of the last replication consistency group on the previous page. The next replication consistency group ID is returned.</td>
</tr>
<tr>
<td>limit</td>
<td>No</td>
<td>integer</td>
<td>Specifies the maximum number of query results that can be returned. The default value is 1000.</td>
</tr>
<tr>
<td>sort_key</td>
<td>No</td>
<td>string</td>
<td>Specifies that the returned results are sorted by keyword. The default keyword is created_at, indicating that the replication consistency groups are sorted by creation time.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Mandatory</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>sort_dir</td>
<td>No</td>
<td>string</td>
<td>Specifies that the returned results are sorted by ascending or descending order. The default value is <code>desc</code>, indicating that the replication consistency groups are sorted by descending order.</td>
</tr>
<tr>
<td>offset</td>
<td>No</td>
<td>integer</td>
<td>Specifies the offset.</td>
</tr>
<tr>
<td>changes-since</td>
<td>No</td>
<td>string</td>
<td>Specifies to query all the replication consistency groups that have been updated from the specified time point to the current time.</td>
</tr>
<tr>
<td>name</td>
<td>No</td>
<td>string</td>
<td>Specifies the name of the replication consistency group.</td>
</tr>
<tr>
<td>status</td>
<td>No</td>
<td>string</td>
<td>Specifies the status of the replication consistency group.</td>
</tr>
<tr>
<td>priority_station</td>
<td>No</td>
<td>string</td>
<td>Specifies the primary site of the replication consistency group.</td>
</tr>
<tr>
<td>volume_id</td>
<td>No</td>
<td>string</td>
<td>Specifies the ID of an EVS disk.</td>
</tr>
</tbody>
</table>

- **Example request**
  None

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication_consistency_groups</td>
<td>List&lt;replication_consistency_group&gt;</td>
<td>Specifies the replication consistency groups.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the replication consistency group.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the replication consistency group.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status of the replication consistency group. For details, see A.6 Replication Consistency Group Status (Deprecated).</td>
</tr>
<tr>
<td>priority_station</td>
<td>string</td>
<td>Specifies the primary site.</td>
</tr>
<tr>
<td>replication_model</td>
<td>string</td>
<td>Specifies the replication type of the replication consistency group.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the replication status of the replication consistency group. For details, see A.6 Replication Consistency Group Status (Deprecated).</td>
</tr>
<tr>
<td>replication_ids</td>
<td>list</td>
<td>Specifies the IDs of all EVS replication pairs in the replication consistency group.</td>
</tr>
<tr>
<td>created_at</td>
<td>datetime</td>
<td>Specifies the creation time.</td>
</tr>
<tr>
<td>updated_at</td>
<td>datetime</td>
<td>Specifies the latest update time.</td>
</tr>
<tr>
<td>failure_detail</td>
<td>string</td>
<td>Specifies the returned error code if the status of the replication consistency group is error. For details, see A.7 Details of EVS Replication failure_detail Values (Deprecated).</td>
</tr>
</tbody>
</table>
| fault_level       | string  | Specifies the fault level of the replication consistency group. The value can be as follows:  
- 0: indicates that no fault occurs.  
- 2: indicates that a production disk in the replication consistency group does not have read/write permissions. In this case, you are advised to perform a failover.  
- 5: indicates that the replication link is disconnected. In this case, a failover cannot be performed. Contact technical support engineers.  |

- **Example response**

```json
{
    "replication_consistency_groups": [
        {
            "status": "available",
            .......
        }
    ]
}
```
"priority_station": "az3.dc3",
"replication_ids": [
  "86080dc0-2fcf-4b85-8102-bc123eb8dcaa",
  "580b730e-3160-4382-8a4e-174515d1fa77"
],
"name": "replication consistency group",
"replication_model": "hypermetro",
"fault_level": "0",
"updated_at": "2017-11-28T07:21.904376",
"created_at": "2017-11-28T03:05:10.677939",
"replication_status": "active-stopped",
"id": "57b84092-7a75-4e22-bc2a-fab0bec547c5",
"description": "replication consistency group"
],
[
  "status": "available",
  "priority_station": "az3.dc3",
  "replication_ids": [
    "3e9ba31c-6406-4060-870e-b7736ac76836",
    "6690b30a-b40c-4a50-bd4a-7e5c1e28b821"
  ],
  "name": "replication consistency group",
  "replication_model": "hypermetro",
  "fault_level": "0",
  "updated_at": "2017-11-28T06:29:27.155762",
  "created_at": "2017-11-28T03:05:10.677939",
  "replication_status": "active",
  "id": "13b582e6-092e-4f7a-9260-8eb7a4ad860e",
  "description": "replication consistency group"
]

Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
</tbody>
</table>
### Returned Value

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>

### 5.5.4 Querying Details About a Replication Consistency Group (Deprecated)

#### Function

This API is used to query the details about a replication consistency group, including the name, ID, and status of the consistency group.

**NOTE**

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.

#### Constraints

None

#### URI

- **URI format**
  
  GET /v2/{project_id}/os-vendor-replication-consistency-groups/{replication_consistency_group_id}

- **Parameter description**
  
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>Yes</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
</tbody>
</table>

### Request

None

### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication_consistency_group</td>
<td>map&lt;string,object&gt;</td>
<td>Specifies the details of replication consistency groups.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the replication consistency group.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the replication consistency group.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status of the replication consistency group.</td>
</tr>
<tr>
<td>priority_station</td>
<td>string</td>
<td>Specifies the primary site of the replication consistency group.</td>
</tr>
<tr>
<td>replication_model</td>
<td>string</td>
<td>Specifies the replication type of the replication consistency group.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the replication status of the replication consistency group.</td>
</tr>
<tr>
<td>replication_ids</td>
<td>list</td>
<td>Specifies the IDs of all EVS replication pairs in the replication consistency group.</td>
</tr>
<tr>
<td>created_at</td>
<td>datetime</td>
<td>Specifies the creation time.</td>
</tr>
<tr>
<td>updated_at</td>
<td>datetime</td>
<td>Specifies the update time.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>failure_detail</td>
<td>string</td>
<td>Specifies the returned error code if the status of the replication consistency group is error. For details, see A.7 Details of EVS Replication failure_detail Values (Deprecated).</td>
</tr>
<tr>
<td>fault_level</td>
<td>string</td>
<td>Specifies the fault level of the replication consistency group. The value can be as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 0: indicates that no fault occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 2: indicates that a production disk in the replication consistency group does not have read/write permissions. In this case, you are advised to perform a failover.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 5: indicates that the replication link is disconnected. In this case, a failover cannot be performed. Contact technical support engineers.</td>
</tr>
</tbody>
</table>

### Example response

```json
{
  "replication_consistency_group": {
    "id": "bd35d31b-7ab9-47fc-84c6-3d326c6fa6cb",
    "name": "my replicationcg pair",
    "description": "my replicationcg pair",
    "status": "available",
    "priority_station": "az2.dc2",
    "replication_model": "hypermetro",
    "fault_level": "0",
    "replication_status": "active-stopped",
    "replication_ids": ["e5bd643b-7407-4a0e-8d9a-2a88903e8812"],
    "created_at": "2017-09-30T07:37:06.035360",
    "updated_at": null
  }
}
```

### Returned Values

- **Normal**
  
<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- **Abnormal**
  
<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>Returned Value</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>

### 5.5.5 Updating a Replication Consistency Group (Deprecated)

**Function**

This API is used to update a replication consistency group. An update includes the following operations:

- Update the name or description of the replication consistency group.
- Add EVS replication pairs to or remove EVS replication pairs from the replication consistency group.

**NOTE**

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.
Constraints

- The replication consistency group must be paused before the update.
- Data needs to be synchronized after a replication consistency group update.

URI

- URI format
  PUT /v2/{project_id}/os-vendor-replication-consistency-groups/
  {replication_consistency_group_id}
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td></td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_consistency_id</td>
<td>Yes</td>
<td></td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication_consistency_group</td>
<td>Yes</td>
<td>map&lt;string, object&gt;</td>
<td>Specifies the replication consistency group information.</td>
</tr>
</tbody>
</table>

- Parameters in the replication_consistency_group field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>No</td>
<td>string</td>
<td>Specifies the name of the replication consistency group.</td>
</tr>
<tr>
<td>description</td>
<td>No</td>
<td>string</td>
<td>Specifies the description of the replication consistency group.</td>
</tr>
<tr>
<td>replication_model</td>
<td>No</td>
<td>string</td>
<td>Specifies the type of the replication consistency group. Currently, only type hypermetro is supported.</td>
</tr>
<tr>
<td>add_replication_ids</td>
<td>No</td>
<td>list</td>
<td>Specifies the IDs of the EVS replication pairs to be added.</td>
</tr>
<tr>
<td>remove_replication_ids</td>
<td>No</td>
<td>list</td>
<td>Specifies the IDs of the EVS replication pairs to be removed.</td>
</tr>
</tbody>
</table>
Example request

```
Example request
{
   "replication_consistency_group": {
      "name": "my replication consistency group",
      "description": "my replication consistency group",
      "replication_model": "hypermetro",
      "add_replication_ids": [  
          "0fc12f4e-381d-4f4a-acb0-9890c1683afe",
          "0aee8399-4aeb-4d84-8d77-9d8a9d3d6e1a"
      ],
      "remove_replication_ids": [  
          "6b27b8b3-95d2-44e3-9cb2-f7de9e8739f2",
          "cadeda61-7817-466e-bc0c-96448c4d106e"
      ]
   }
}
```

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>replication_consistency_group</td>
<td>Yes</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the replication consistency group information.</td>
</tr>
<tr>
<td>id</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
<tr>
<td>name</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the name of the replication consistency group.</td>
</tr>
<tr>
<td>description</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the description of the replication consistency group.</td>
</tr>
<tr>
<td>status</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the status of the replication consistency group.</td>
</tr>
<tr>
<td>priority_station</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the primary site of the replication consistency group.</td>
</tr>
<tr>
<td>created_at</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the time when the replication consistency group was created.</td>
</tr>
<tr>
<td>updated_at</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the time when the replication consistency group was updated.</td>
</tr>
</tbody>
</table>

Example response

```
Example response
{
   "replication_consistency_group": {
      "id": "91085433-9499-4a68-b2c6-35072467cdd2",
      "name": "my replication consistency group",
      "}
```

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API Reference
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Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>202</td>
<td>The server has accepted the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5.6 Performing a Failover for a Replication Consistency Group (Deprecated)

Function

This API is used to perform a failover for a replication consistency group. When an exception occurs in the primary AZ, a failover can be performed to change the primary site of a replication consistency group from the primary AZ to the secondary AZ and enable DR ECSs and DR disks in the secondary AZ to provide services.

After the failover, the replication_status value of the replication consistency group is active-stopped. In this case, EVS replication is available only after the primary AZ is restored and the replication consistency group is synchronized.

**NOTE**

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.

Constraints

If a fault occurs in the physical environment of the primary AZ due to force majeure and services become unavailable, perform a failover for the replication consistency group.

URI

- **URI format**
  
  POST /v2/{project_id}/os-vendor-replication-consistency-groups/
  {replication_consistency_group_id}/action

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>Yes</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
</tbody>
</table>

Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-failover-replication-consistency-group</td>
<td>Yes</td>
<td>object</td>
<td>The parameter value is null, indicating that a replication consistency group failover will be performed.</td>
</tr>
</tbody>
</table>

**Example request**

```json
{
  "os-failover-replication-consistency-group": null
}
```
**Response**

None

**Returned Values**

- **Normal**
  
<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- **Abnormal**
  
<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
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<td>The request timed out.</td>
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<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5.7 Synchronizing a Replication Consistency Group (Deprecated)

Function

This API is used to synchronize the data between production disks and DR disks in all EVS replication pairs of a replication consistency group. After the synchronization is complete, the data in all EVS replication pairs of the replication consistency group is consistent.

**NOTE**

This API has been deprecated. To use this function, see [Storage Disaster Recovery Service API Reference](#).

Constraints

None

URI

- URI
  
  POST /v2/{project_id}/os-vendor-replication-consistency-groups/{replication_consistency_group_id}/action

  - Parameter description

    | Parameter                              | Mandatory | Description                                           |
    |----------------------------------------|-----------|-------------------------------------------------------|
    | project_id                             | Yes       | Specifies the project ID.                             |
    | replication_consistency_group_id       | Yes       | Specifies the ID of the replication consistency group.|

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-sync-replication-consistency-group</td>
<td>Yes</td>
<td>object</td>
<td>The parameter value is null, indicating that the replication consistency group will be synchronized.</td>
</tr>
</tbody>
</table>

- Example request

  ```json
  {
    "os-sync-replication-consistency-group": null
  }
  ```

Response

None
### Returned Values

- **Normal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- **Abnormal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
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<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
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<tr>
<td>500 Internal Server Error</td>
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<tr>
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<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5.8 Performing a Primary/Secondary Switchover for a Replication Consistency Group (Deprecated)

Function

This API is used to perform a primary/secondary switchover for a replication consistency group. A switchover can be performed to switch the primary and secondary AZs of a replication consistency group, which means that the original secondary AZ will be switched to function as the primary AZ, and original DR ECSs and DR disks will be enabled.

After the primary/secondary switchover, the *replication_status* value of the replication consistency group is *active*. At this time, the data between production disks and DR disks in the primary and secondary AZs is consistent in real time, and EVS replication is working normally.

**NOTE**

This API has been deprecated. To use this function, see *Storage Disaster Recovery Service API Reference*.

Constraints

The data synchronization of the replication consistency group is complete, and the replication consistency group is working normally.

URI

- **URI format**
  
  POST /v2/{project_id}/os-vendor-replication-consistency-groups/
  {replication_consistency_group_id}/action

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>Yes</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
</tbody>
</table>

Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-reverse-replication-consistency-group</td>
<td>Yes</td>
<td>object</td>
<td>The parameter value is null, indicating that a primary/secondary switchover will be performed for the replication consistency group.</td>
</tr>
</tbody>
</table>

- **Example request**
```
{
  "os-reverse-replication-consistency-group": null
}
```

Response

None

Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
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<td>407 Proxy Authentication Required</td>
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</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5.9 Pausing a Replication Consistency Group (Deprecated)

Function

This API is used to pause a replication consistency group, that is, to pause the data synchronization in all EVS replication pairs of a replication consistency group.

Before deleting or updating a replication consistency group, you need to pause the replication consistency group.

[NOTE]

This API has been deprecated. To use this function, see Storage Disaster Recovery Service API Reference.

Constraints

None

URI

- URI format
  POST /v2/{project_id}/os-vendor-replication-consistency-groups/{replication_consistency_group_id}/action

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>Yes</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-stop-replication-consistency-group</td>
<td>Yes</td>
<td>object</td>
<td>The parameter value is null, indicating that the replication consistency group will be paused.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
    "os-stop-replication-consistency-group": null
}
```

Response

None
## Returned Values

- **Normal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- **Abnormal**

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
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<tr>
<td>401 Unauthorized</td>
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<tr>
<td>403 Forbidden</td>
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<td>404 Not Found</td>
<td>The requested page was not found.</td>
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<tr>
<td>405 Method Not Allowed</td>
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<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
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<tr>
<td>407 Proxy Authentication Required</td>
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<td>The request cannot be processed due to a conflict.</td>
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<tr>
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<tr>
<td>502 Bad Gateway</td>
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</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5.10 Reprotecting a Replication Consistency Group (Deprecated)

Function

This API is used to reprotect a replication consistency group. After resources in a faulty AZ have been restored and functioned as DR resources, a reprotector can be performed to synchronize data in all EVS replication pairs of a replication consistency group.

A reprotector can only be performed after the resources in the faulty primary AZ have been restored and can be used to synchronize data in all EVS replication pairs of a replication consistency group.

**NOTE**

This API has been deprecated. To use this function, see [Storage Disaster Recovery Service API Reference](#).

Constraints

- The replication consistency group failover is complete.
- The resources in the faulty AZ have been restored.
- The replication consistency group status is **failovered**.

URI

- **URI format**
  `POST /v2/{project_id}/os-vendor-replication-consistency-groups/{replication_consistency_group_id}/action`
- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>replication_consistency_group_id</td>
<td>Yes</td>
<td>Specifies the ID of the replication consistency group.</td>
</tr>
</tbody>
</table>

Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-reprotect-replication-consistency-group</td>
<td>Yes</td>
<td>object</td>
<td>The parameter value is null, indicating that the replication consistency group will be reprotected.</td>
</tr>
</tbody>
</table>

- **Example request**

```json
{
    "os-reprotect-replication-consistency-group": null
}
```
Response

None

Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
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<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
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</tr>
<tr>
<td>404 Not Found</td>
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<tr>
<td>502 Bad Gateway</td>
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</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
5.5.11 Expanding EVS Disks in a Replication Consistency Group (Deprecated)

Function

This API is used to expand the EVS disks in one or multiple EVS replication pairs. In such an expansion operation, two EVS disks in one EVS replication pair are expanded together.

**Note**

The `status` and `replication_status` values of the replication consistency group remain unchanged before and after capacity expansion. When 200 is returned, the capacity expansion is complete.

If the expansion fails, contact technical support engineers to locate and rectify the fault. After the fault is rectified, expand the disks again.

If the capacities of multiple EVS replication pairs in a protection group are expanded, an error indicating incorrect capacity will occur after the capacity expansion.

This API has been deprecated. To use this function, see *Storage Disaster Recovery Service API Reference*.

Constraints

- The `status` value of the replication consistency group must be `available`.
- The `replication_status` value of the replication consistency group cannot be `error`.

URI

- URI
  
  POST /v2/{project_id}/os-vendor-replication-consistency-groups/{replication_consistency_group_id}/action

  - Parameter description

    | Parameter                              | Mandatory | Type                        | Description                                                                 |
    |----------------------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------|
    | project_id                             | Yes       |                             | Specifies the project ID.                                                   |
    | replication_consistency_group_id       | Yes       |                             | Specifies the ID of the replication consistency group.                      |

Request

- Parameter description

    | Parameter                              | Mandatory | Type                        | Description                                                                 |
    |----------------------------------------|-----------|-----------------------------|-----------------------------------------------------------------------------|
    | os-extend-replication-volumes          | Yes       | map<string, list>          | Specifies the EVS disk expansion operation.                                 |
    | replications                           | Yes       | list                        | Specifies the expansion information of one or multiple EVS replication pairs. |
Parameters in the replications field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>Yes</td>
<td>string</td>
<td>Specifies the IDs of EVS replication pairs.</td>
</tr>
<tr>
<td>new_size</td>
<td>Yes</td>
<td>integer</td>
<td>Specifies the disk capacity after expansion in the EVS replication pair. The unit is GB.</td>
</tr>
</tbody>
</table>

Example request

```json
{
  "os-extend-replication-volumes": {
    "replications": [
      { "id": "25132c7a-bf71-4d18-8a2e-1ad11416c057", "new_size": 10 },
      { "id": "6a61d65c-269e-4592-8a89-95742b075b1a", "new_size": 20 }
    ]
  }
}
```

Response

None

Returned Values

- Normal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>The server has processed the request.</td>
</tr>
</tbody>
</table>

- Abnormal

<table>
<thead>
<tr>
<th>Returned Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400 Bad Request</td>
<td>The server failed to process the request.</td>
</tr>
<tr>
<td>401 Unauthorized</td>
<td>You must enter the username and password to access the requested page.</td>
</tr>
<tr>
<td>403 Forbidden</td>
<td>You are forbidden to access the requested page.</td>
</tr>
<tr>
<td>404 Not Found</td>
<td>The requested page was not found.</td>
</tr>
<tr>
<td>405 Method Not Allowed</td>
<td>You are not allowed to use the method specified in the request.</td>
</tr>
<tr>
<td>406 Not Acceptable</td>
<td>The response generated by the server cannot be accepted by the client.</td>
</tr>
<tr>
<td>407 Proxy Authentication Required</td>
<td>You must use the proxy server for authentication. Then, the request can be processed.</td>
</tr>
<tr>
<td>Returned Value</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>408 Request Timeout</td>
<td>The request timed out.</td>
</tr>
<tr>
<td>409 Conflict</td>
<td>The request cannot be processed due to a conflict.</td>
</tr>
<tr>
<td>500 Internal Server Error</td>
<td>Failed to complete the request because of an internal service error.</td>
</tr>
<tr>
<td>501 Not Implemented</td>
<td>Failed to complete the request because the server does not support the requested function.</td>
</tr>
<tr>
<td>502 Bad Gateway</td>
<td>Failed to complete the request because the server has received an invalid response.</td>
</tr>
<tr>
<td>503 Service Unavailable</td>
<td>Failed to complete the request because the service is unavailable.</td>
</tr>
<tr>
<td>504 Gateway Timeout</td>
<td>A gateway timeout error occurs.</td>
</tr>
</tbody>
</table>
6.1 Querying Task Status

Function

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

URI

- URI format
  GET /v1/{project_id}/jobs/{job_id}
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>job_id</td>
<td>Yes</td>
<td>Specifies the task ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the task status.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>SUCCESS</strong>: The task is successfully executed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>RUNNING</strong>: The task is in progress.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>FAIL</strong>: The task fails.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>INIT</strong>: The task is being initialized.</td>
</tr>
<tr>
<td>entities</td>
<td>map&lt;string, object&gt;</td>
<td>Specifies the response to the task. The contents for each type are different.</td>
</tr>
<tr>
<td>job_id</td>
<td>string</td>
<td>Specifies the task ID.</td>
</tr>
<tr>
<td>job_type</td>
<td>string</td>
<td>Specifies the task type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>createVolume</strong>: creates an EVS disk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>batchCreateVolume</strong>: batch creates EVS disks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>deleteVolume</strong>: deletes an EVS disk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>extendVolume</strong>: expands the EVS disk capacity.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>bulkDeleteVolume</strong>: batch deletes EVS disks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• <strong>deleteSingleVolume</strong>: deletes EVS disks one by one during a batch deletion.</td>
</tr>
<tr>
<td>begin_time</td>
<td>string</td>
<td>Specifies the time when the task was started.</td>
</tr>
<tr>
<td>end_time</td>
<td>string</td>
<td>Specifies the time when the task finished.</td>
</tr>
<tr>
<td>error_code</td>
<td>string</td>
<td>Specifies the returned error code when the task execution fails.</td>
</tr>
<tr>
<td>fail_reason</td>
<td>string</td>
<td>Specifies the cause of the task execution failure.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
<tr>
<td>sub_jobs</td>
<td>list</td>
<td>Specifies the execution information of a sub-task.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When no sub-task exists, the value of this parameter is left blank.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The structure of each sub-task is similar to that of the parent task.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
    "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": "2016-02-04T01:43:37.445Z",
    "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": "2016-02-04T01:44:02.239Z",
  "error_code": null,
  "fail_reason": null
  }
],
"status": "SUCCESS",
"entities": {
  "volume_id": "549095-4937-4849-8e4c-52aa027d64f7",
  "job_id": "21917a8d52a19b040152a9f2f2f60042",
  "job_type": "createVolume",
  "begin_time": "2016-02-04T01:43:37.462Z",
  "end_time": "2016-02-04T01:44:02.239Z",
  "error_code": null,
  "fail_reason": null
}

or

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

Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.
7 OpenStack Cinder API v3

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 /v3/{project_id}/volumes
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the EVS disk to be created.</td>
</tr>
</tbody>
</table>
| 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 8.1.17 Querying Information About All AZs. |
| source_volid    | string                | No        | Specifies the ID of the source EVS disk. If this parameter is specified, a new EVS disk is cloned from the source EVS disk. Currently, this function is not supported. |
| description     | string                | No        | Specifies the EVS disk description. The value can contain a maximum of 255 bytes. |
| snapshot_id     | string                | No        | Specifies the ID of a snapshot. If this parameter is specified, the EVS disk is created from the snapshot. |
| size            | int                   | Yes       | Specifies the EVS disk size, in GB. **●** If the EVS disk is created using an image, the disk size must be greater than or equal to the image size. **●** If the EVS disk is created from a snapshot, the disk size must be greater than or equal to the snapshot size. |
| name            | string                | No        | Specifies the EVS disk name. The value can contain a maximum of 255 bytes. |
| imageRef        | string                | No        | Specifies the ID of an image. If this parameter is specified, the EVS disk is created from an image. **NOTE**
<p>|                 |                       |           | BMS system disks cannot be created from BMS images.                         |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_type</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk type. Currently, the value can be <strong>SSD</strong>, <strong>SAS</strong>, <strong>SATA</strong>, <strong>co-p1</strong>, or <strong>uh-l1</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>SSD</strong>: specifies the ultra-high I/O disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>SAS</strong>: specifies the high I/O disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>SATA</strong>: specifies the common I/O disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>co-p1</strong>: specifies the high I/O (performance-optimized I) disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>uh-l1</strong>: specifies the ultra-high I/O (latency-optimized) disk type.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EVS disks of the <strong>co-p1</strong> and <strong>uh-l1</strong> types are used exclusively for HPC ECSs and SAP HANA ECSs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If the specified EVS disk type is not available in the AZ, the disk will fail to create.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If the EVS disk is created from a snapshot, the <strong>volume_type</strong> field must be the same as that of the snapshot’s source disk.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>No</td>
<td>Specifies the EVS disk metadata. The length of the key or value in the metadata cannot exceed 255 bytes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>For details about <strong>metadata</strong>, see the <strong>Parameters in the metadata field</strong> table.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The table lists some fields. You can also specify other fields based on the disk creation requirements.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Parameter values under <strong>metadata</strong> cannot be <strong>null</strong>.</td>
</tr>
<tr>
<td>source_replica</td>
<td>string</td>
<td>No</td>
<td>If this parameter is specified, the disk is created from a disk clone. Currently, this function is not supported.</td>
</tr>
<tr>
<td>consistencygroupl_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the consistency group. If this parameter is specified, the disk belongs to this consistency group. Currently, this function is not supported.</td>
</tr>
</tbody>
</table>

Elastic Volume Service
API Reference

2019-02-15
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| shareable | string  | No        | Specifies whether the EVS disk is shareable. The value can be **true** (sharable) or **false** (not sharable). This is an extended attribute.  
**NOTE**  
This field is no longer used. Use **multiattach**. |
| multiattach | boolean | No        | Specifies a shared disk. The default value is **false**. |

**NOTE**

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

- Parameters in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__ encrypted | string  | No        | Specifies the parameter that describes the encryption function in metadata. The value can be 0 (encryption function disabled) or 1 (encryption function enabled).  
If this parameter does not exist, the disk will not be encrypted by default. |
| __system__ cmkid | string  | No        | Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__ encrypted for encryption.  
The length of cmkid is fixed at 36 bytes.  
**NOTE**  
For details about how to obtain the CMK ID, see section Querying the List of CMKs in the Key Management Service API Reference. |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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 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 EVS 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 EVS disk is created from a snapshot, the _system_encrypted and _system_cmkid fields are not supported, and the newly created disk has the same encryption attribute as that of the source EVS disk of the snapshot.
- If the EVS disk is created from an image, the _system_encrypted and _system_cmkid fields are not supported, and the newly created disk has the same encryption attribute as that of the image.
- If the EVS disk is created from a snapshot, the hw:passthrough field is not supported, and the newly created disk has the same attribute as that of the source EVS disk of the snapshot.
- If the EVS disk is created from an image, the hw:passthrough field is not supported, and the device type of newly created disk is VBD.

**Example request**

```json
{
  "volume": {
    "name": "openapi_vol01",
    "imageRef": "027cf713-45a6-45f0-ac1b-0ccc57ac12e2",
    "availability_zone": "xxx",
    "description": "create for api test",
    "volume_type": "SATA",
    "metadata": {
      "volume_owner": "openapi"
    },
    "consistencygroup_id": null,
    "source_volid": null,
    "snapshot_id": null,
    "multiattach": false,
    "source_replica": null,
    "size": 40
  }
}```
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the created EVS disk.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>array</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>encrypted</td>
<td>boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the disk replication status.</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source disk ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the metadata.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "volume": {
        "attachments": [ ],
        "availability_zone": "xxx",
        "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

```json
{
    "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:

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

**Returned Values**

- Normal
Error Codes

For details, see A.1 Error Codes.

7.1.2 Deleting an EVS Disk

Function

This API is used to delete an EVS disk.

URI

- URI format
  DELETE /v3/{project_id}/volumes/{volume_id}
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cascade</td>
<td>boolean</td>
<td>No</td>
<td>Specifies to delete all snapshots associated with the disk. The default value is false.</td>
</tr>
</tbody>
</table>

Request

- Request example (In this example, the snapshots associated with the disk are deleted together with the EVS disk.)

  DELETE /v2/{project_id}/volumes/{volume_id}?cascade=true

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>
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"
    }
}
```

Returned Values

- Normal
  202

Error Codes

For details, see [A.1 Error Codes](#).

### 7.1.3 Updating an EVS Disk

**Function**

This API is used to update the EVS disk information.

**URI**

- URI format
  
  ```
  PUT /v3/{project_id}/volumes/{volume_id}
  ```

**Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies the EVS disk information to be updated.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk description. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>No</td>
<td>Specifies the EVS disk metadata. The length of the key or value in the metadata cannot exceed 255 bytes.</td>
</tr>
<tr>
<td>display_name</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>display_description</td>
<td>string</td>
<td>No</td>
<td>Specifies also the EVS 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.</td>
</tr>
</tbody>
</table>

Example request

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

Response

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk information after update.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the URI of the disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A. 3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the disk description.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the disk type.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the disk replication status.</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>source_volume</td>
<td>string</td>
<td>Specifies the source disk ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the metadata.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the disk size.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>multiattach</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
</tbody>
</table>

- Parameters in the **links** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- Parameters in the **attachments** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the **metadata** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption function in <strong>metadata</strong>. The value can be 0 or 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0: indicates the disk is not encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1: indicates the disk is encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter does not appear, the disk is not encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in <strong>metadata</strong>. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in <strong>metadata</strong>. The value can be true or false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to false, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
</tbody>
</table>
## Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| readonly        | string | Specifies whether the disk is read-only or read-writable. The value can be *True* or *False*.  
- *True*: indicates that the disk is read-only.  
- *False*: indicates that the disk is read-writable. |
| attached_mode   | string | Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be *ro* or *rw*.  
- *ro*: indicates the disk is attached as read-only.  
- *rw*: indicates the disk is attached as read-writable. |

### Example response

```json
{
    "volume": {
        "attachments": [],
        "availability_zone": "xxx",
        "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

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

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

**Returned Values**

- Normal
  
  200

**Error Codes**

For details, see A.1 Error Codes.

### 7.1.4 Querying EVS Disks

**Function**

This API is used to query EVS disks.

**URI**

- URI format
  
  GET /v3/{project_id}/volumes

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandator</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>----------</td>
<td>----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is 1000. 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&amp;limit=50: Queries the 51 - 100 disks.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is desc (descending order).</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of disks, all disks after this offset will be queried.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>metadata</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>changes-since</td>
<td>string</td>
<td>No</td>
<td>Specifies the time when the disk was updated, for example, 2016-01-08T09:41:18. This is an extended attribute. Only administrators can set this parameter.</td>
</tr>
<tr>
<td>bootable</td>
<td>boolean</td>
<td>No</td>
<td>Specifies whether the query result contains system disks. The values are as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- True, true, and 1: The query result contains system disks only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- False, false, and 0: The query result does not contain system disks.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter is supported when the request version is 3.2 or later.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandator</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------</td>
<td>----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>migration_status</td>
<td>string</td>
<td>No</td>
<td>Specifies the migration status. The value can be <strong>starting</strong>, <strong>migrating</strong>, <strong>success</strong>, or <strong>error</strong>.</td>
</tr>
<tr>
<td>name~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk name. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>status~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk status. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>availability_zone~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by AZ. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>migration_status~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by migration status. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>with_count</td>
<td>boolean</td>
<td>No</td>
<td>Specifies to return parameter <strong>counts</strong> in the response. This parameter indicates the number of disks queried. This parameter is in the <strong>with_count=true</strong> format and is supported when the request version is 3.45 or later. This parameter can be used together with parameters <strong>marker</strong>, <strong>limit</strong>, <strong>sort_key</strong>, <strong>sort_dir</strong>, or <strong>offset</strong> in the table. It cannot be used with other filter parameters.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the URI of the disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>volumes_links</td>
<td>list</td>
<td>Specifies the query position marker in the disk list. This parameter is at the same level as parameter volumes in the response body. 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.</td>
</tr>
<tr>
<td>count</td>
<td>map</td>
<td>Specifies the number of records returned in this query.</td>
</tr>
</tbody>
</table>

- **Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
  "count": 3,
  "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-abbff64b206e",
      "links": [
        {
          "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/volumes/2bce4552-9a7d-48fa-8484-abbff64b206e",
          "rel": "self"
        },
        {
          "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60bf2f/volumes/2bce4552-9a7d-48fa-8484-abbff64b206e",
          "rel": "bookmark"
        }
      ],
      "name": "zjb_u25_test"
    },
    {
      "id": "2bce4552-9a7d-48fa-8484-abbff64b206e",
      "links": [
        {
          "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/volumes/2bce4552-9a7d-48fa-8484-abbff64b206e",
          "rel": "self"
        },
        {
          "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60bf2f/volumes/2bce4552-9a7d-48fa-8484-abbff64b206e",
          "rel": "bookmark"
        }
      ],
      "name": "zjb_u25_test"
    }
  ]
}```
In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

### Returned Values

- Normal
  - 200

### Error Codes

For details, see [A.1 Error Codes](#).

## 7.1.5 Querying Details About All EVS Disks

### Function

This API is used to query details about all EVS disks.

### URI

- URI format
GET /v3/{project_id}/volumes/detail

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. 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&amp;limit=50: Queries the 51 ~ 100 disks.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is desc (descending order).</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of disks, all disks after this offset will be queried.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>metadata</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------</td>
<td>-----------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>changes-since</td>
<td>string</td>
<td>No</td>
<td>Specifies the time when the disk was updated, for example, 2016-01-08T09:41:18. Only administrators can set this parameter.</td>
</tr>
<tr>
<td>glance_meta_data</td>
<td>map&lt;string,string&gt;</td>
<td>No</td>
<td>Specifies the filtered query of the image metadata in the {key:value} format. This parameter is supported when the request version is 3.4 or later.</td>
</tr>
<tr>
<td>bootable</td>
<td>boolean</td>
<td>No</td>
<td>Specifies whether the query result contains system disks. The values are as follows:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>True</strong>, <strong>true</strong>, and 1: The query result contains system disks only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>False</strong>, <strong>false</strong>, and 0: The query result does not contain system disks.</td>
</tr>
<tr>
<td>migration_status</td>
<td>string</td>
<td>No</td>
<td>Specifies the migration status. The value can be <strong>starting</strong>, <strong>migrating</strong>, <strong>success</strong>, or <strong>error</strong>.</td>
</tr>
<tr>
<td>name~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk name. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>status~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk status. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>availability_zone~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by AZ. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>migration_status~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by migration status. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>with_count</td>
<td>boolean</td>
<td>No</td>
<td>Specifies to return parameter counts in the response. This parameter indicates the number of disks queried. This parameter is in the with_count=true format and is supported when the request version is 3.45 or later. This parameter can be used together with parameters marker, limit, sort_key, sort_dir, or offset in the table. It cannot be used with other filter parameters.</td>
</tr>
</tbody>
</table>
Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata. If <code>metadata</code> does not contain the <code>hw:passthrough</code> field, the disk device type is VBD. If <code>metadata</code> does not contain the <code>_system__encrypted</code> field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Specifies the EVS disk migration status.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Specifies the ID of the migrated EVS disk.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Specifies the disk replication extended status.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the EVS disk backup status.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable. <strong>NOTE</strong> This field is no longer used. Use <code>multiattach</code>.</td>
</tr>
<tr>
<td>multiattach</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies whether the EVS disk is created from an image. This parameter is specified when the disk is created from an image. Otherwise, it is left empty. <strong>NOTE</strong> For details about the <code>volume_image_metadata</code> field, see Querying Image Details (Native OpenStack API) in the Image Management Service API Reference.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>volumes_links</td>
<td>array</td>
<td>Specifies the query position marker in the disk list. This parameter is at the same level as parameter volumes in the response body. 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.</td>
</tr>
<tr>
<td>count</td>
<td>map</td>
<td>Specifies the number of records returned in this query.</td>
</tr>
</tbody>
</table>

- Parameters in the links field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- Parameters in the attachments field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__encrypted | string | Specifies the parameter that describes the encryption function in metadata. The value can be 0 or 1.  
|             |       | - 0: indicates the disk is not encrypted.              
|             |       | - 1: indicates the disk is encrypted.                 
<p>|             |       | - If this parameter does not appear, the disk is not encrypted by default.                                                              |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in metadata. The value can be true or false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to false, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be True or False.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• True: indicates that the disk is read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• False: indicates that the disk is read-writable.</td>
</tr>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be ro or rw.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ro: indicates the disk is attached as read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• rw: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>

Example response
```json
{
  "count": 1,
  "volumes": [
    {
      "attachments": [],
      "availability_zone": "xxx",
      "bootable": "false",
      "consistencygroup_id": null,
      "encrypted": true,
      "id": "09f581d7-8db9-452a-bda6-8e8cbfda7d5f",
      "snapshot_id": null,
      "size": 100,
      "status": "available",
      "volume_type": "standard",
      "attachments": []
    }
  ]
}
```
"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/dd14c6ac581f40059e27f5320b60b2f/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214",
    "rel": "self"
  },
  {
    "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60b2f/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214",
    "rel": "bookmark"
  }
],
"metadata": {
  "__openstack_region_name": "pod01.xxx",
  "a": "b",
  "quantityGB": "1",
  "volInfoUrl": "iaas blockstorage://172.30.64.10/0/FEFEEB073924CDEA93C612D4E16882D"
},
"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": "dd14c6ac581f40059e27f5320b60b2f",
"os-volume-replication:driver_data": null,
"replication_status": "disabled",
"multiattach": false,
"size": 1,
"snapshot_id": null,
"source_volume_id": 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/dd14c6ac581f40059e27f5320b60b2f/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"
  }
}
Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

7.1.6 Querying Details About a Single EVS Disk

Function

This API is used to query details about a single EVS disk.

URI

- URI format
  
  ```
  GET /v3/{project_id}/volumes/{volume_id}
  ```

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map</td>
<td>Specifies the queried EVS disk.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk UUID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the EVS disk attachment information.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the metadata of the EVS disk image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the <code>volume_image_metadata</code> field, see <a href="https://docs.openstack.org/api-ref/image-management-service-api-v2.html">Querying Image Details (Native OpenStack API)</a>, see <a href="https://docs.openstack.org/api-ref/image-management-service-api-v2.html">Querying Image Details (Native OpenStack API)</a> in the Image Management Service API Reference.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>If</strong> <code>metadata</code> does not contain the <code>hw:passsthrough</code> field, the disk device type is VBD.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>If</strong> <code>metadata</code> does not contain the <code>__system__encrypted</code> field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>shareable</td>
<td>boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>This field is no longer used. Use <code>multiattach</code>.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies the shared EVS disk information.</td>
</tr>
</tbody>
</table>

- **Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Parameters in the attachments field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>-------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the `metadata` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption function in <code>metadata</code>. The value can be 0 or 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0: indicates the disk is not encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1: indicates the disk is encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter does not appear, the disk is not encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in <code>metadata</code>. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in <code>metadata</code>. The value can be true or false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to false, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be True or False.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- True: indicates that the disk is read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- False: indicates that the disk is read-writable.</td>
</tr>
</tbody>
</table>
### Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be ro or rw.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>ro</strong>: indicates the disk is attached as read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>rw</strong>: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>

#### Example response

```json
{
  "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": "az1.dc1",
    "os-vol-host-attr:host": "az1.dc1#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": {
      "__openstack_region_name": "az1.dc1",
      "quantityGB": "40"
    },
    "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

```json
{
  "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:

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

### Returned Values
- Normal
  - 200

### Error Codes
For details, see A.1 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 /v3/{project_id}/types

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td></td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_types</td>
<td>list</td>
<td>Specifies the list of queried EVS disk types.</td>
</tr>
<tr>
<td>extra_specs</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the specifications of the EVS disk type.</td>
</tr>
<tr>
<td>volume_backend_name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>availability-zone</td>
<td>string</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS disk type.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the code, see the following returned values.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS disk type.</td>
</tr>
<tr>
<td>qos_specs_id</td>
<td>string</td>
<td>Specifies the Quality of Service (QoS) ID of the EVS disk type.</td>
</tr>
<tr>
<td>is_public</td>
<td>boolean</td>
<td>Specifies whether the EVS disk type is public.</td>
</tr>
</tbody>
</table>

**Example response**

```json
{
   "volume_types": [
   {
       "extra_specs": {
           "volume_backend_name": "SAS",
           "availability-zone": "az1.dc1"
       },
       "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": "az1.dc1"
       },
       "name": "SATA",
       "qos_specs_id": "585f29d6-7147-42e7-bf8-ca214f640f6f",
       "is_public": true,
       "id": "ea6e3c13-aac5-46e0-h280-745ed272e662",
       "description": null
   },
   {
       "extra_specs": {
           "volume_backend_name": "SSD",
           "availability-zone": "az1.dc1"
       },
       "name": "SSD",
       "qos_specs_id": "39b0c29a-308b-4f86-b478-5d3d02a43837",
       "is_public": true,
       "id": "6f2dee9e-82f0-4be3-ad89-bae605a3d24f",
       "description": null
   }
   ]
}
```

or
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"
    }
}
```

### Returned Values
- Normal
- 200

### Error Codes
For details, see A.1 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 /v3/{project_id}/types/{type_id}
- **Parameter description**
  
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>type_id</td>
<td>Yes</td>
<td>Specifies the ID of the disk type.</td>
</tr>
</tbody>
</table>

#### Request
None

#### Response
- **Parameter description**
  
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_type</td>
<td>map</td>
<td>Specifies the queried EVS disk type.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>extra_specs</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the specifications of the EVS disk type.</td>
</tr>
<tr>
<td>volume_backend_name</td>
<td>string</td>
<td>Specifies the backend EVS disk type of Cinder.</td>
</tr>
<tr>
<td>availability-zone</td>
<td>string</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS disk type.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS disk type.</td>
</tr>
<tr>
<td>qos_specs_id</td>
<td>string</td>
<td>Specifies the QoS ID of the EVS disk type.</td>
</tr>
<tr>
<td>is_public</td>
<td>boolean</td>
<td>Specifies whether the EVS disk type is public.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
</tbody>
</table>

- **Example response**

```
{
  "volume_type": {
    "extra_specs": {
      "volume_backend_name": "SATA",
      "availability-zone": "az1.dci"
    },
    "name": "SATA",
    "qos_specs_id": null,
    "is_public": true,
    "id": "ea6e3c13-aac5-46e0-b280-745ed27e662",
    "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"
  }
}
```
Returned Values

- Normal
  200

Error Codes

For details, see A.1 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 /v3/{project_id}/os-quota-sets/{project_id}?usage=True
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>quota_set</td>
<td>map</td>
<td>Specifies the queried quotas.</td>
</tr>
<tr>
<td>volumes</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of EVS disks. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>snapshots</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of snapshots. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>gigabytes</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the total size (GB) of EVS disks and snapshots allowed by the quota. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>volumes_TYP</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of EVS disks reserved for a specified volume type. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>snapshots_TYP</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of snapshots reserved for a specified volume type. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>gigabytes_TYP</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the size (GB) reserved for a specified volume type. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the tenant ID.</td>
</tr>
<tr>
<td>backups</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of backups. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>backup_gigabytes</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the backup size (GB). This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
</tbody>
</table>

**NOTE**

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

- **Example response**

```json
{
  "quota_set": {
    "gigabytes_SAS": {
      "reserved": 0,
      "limit": -1,
      "in_use": 21
    },
    "volumes_SATA": {
      "reserved": 0,
      "limit": -1,
      "in_use": 8
    },
    "gigabytes": {
      "reserved": 0,
      "limit": 42790,
      "in_use": 2792
    },
    "backup_gigabytes": {
      "reserved": 0,
      "limit": 5120,
      "in_use": 51
    }
  }
}```
In the preceding example, `error` indicates a general error, for example, `badrequest` or `itemNotFound`. An example is provided as follows:

```json
{
  "badrequest": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```
Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

7.1.10 Adding Metadata of an EVS Disk

Function

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

URI

- URI format
  POST /v3/{project_id}/volumes/{volume_id}/metadata
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the metadata that requires the update.</td>
</tr>
</tbody>
</table>

- Parameter in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>

- Example request

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk metadata, which is made up of key-value pairs.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
  "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:

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

Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

7.1.11 Querying Metadata of an EVS Disk

Function

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

URI

- URI format
  GET /v3/{project_id}/volumes/{volume_id}/metadata
- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk metadata, which is made up of key-value pairs.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
    "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:

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

**Returned Values**

- Normal
  - 200
Error Codes

For details, see A.1 Error Codes.

7.1.12 Updating Metadata of an EVS Disk

Function

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

URI

- URI format
  
  PUT /v3/{project_id}/volumes/{volume_id}/metadata

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the metadata that requires the update.</td>
</tr>
</tbody>
</table>

- Parameter in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>

- Example request

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

Response

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata, which is made up of key-value pairs.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "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:

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

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see [A.1 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 /v3/{project_id}/volumes/{volume_id}/metadata/{key}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>
Parameter | Mandatory | Description
--- | --- | ---
key | Yes | Specifies the key of the metadata to be queried.

### Request
None

### Response
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the piece of the disk metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
  "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:

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

### Returned Values
- Normal
  - 200

### Error Codes
For details, see **A.1 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 /v3/{project_id}/volumes/{volume_id}/metadata/{key}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the update.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the piece of metadata that requires the update.</td>
</tr>
</tbody>
</table>

- Parameter in the meta field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the piece of metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- Example request

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

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the piece of the disk metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- Example response

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

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

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

Returned Values

- Normal
  - 200

Error Codes

For details, see A.1 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 /v3/{project_id}/volumes/{volume_id}/metadata/{key}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the deletion.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

- **Example response**

  None or

  ```json
  {  
    "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:

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

**Returned Values**

- Normal
  
  200

**Error Codes**

For details, see A.1 Error Codes.

## 7.1.16 Querying API Extensions

**Function**

This API is used to query API extensions.

**URI**

- URI format
  
  GET /v3/{project_id}/extensions

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>
Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>extensions</td>
<td>array</td>
<td>Specifies the list of API extensions.</td>
</tr>
</tbody>
</table>

- Parameters in the `extensions` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>updated</td>
<td>string</td>
<td>Specifies the last update time.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the link for the disk transfer.</td>
</tr>
<tr>
<td>alias</td>
<td>string</td>
<td>Specifies the alias of the extension.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the disk transfer.</td>
</tr>
</tbody>
</table>

- 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": "Exposé 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": [],
"description": "Volume management support."
]
"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"
}
}

**Returned Values**

- Normal
  
  200

**Error Codes**

For details, see [A.1 Error Codes](#).

### 7.1.17 Querying Information About All AZs

**Function**

This API is used to query information about all AZs.

**URI**

- URI format
  
  GET /v3/{project_id}/os-availability-zone

- Parameter description
### Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>availabilityZon</td>
<td>list</td>
<td>Specifies the queried AZs.</td>
</tr>
<tr>
<td>zoneState</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the AZ status.</td>
</tr>
<tr>
<td>zoneName</td>
<td>string</td>
<td>Specifies the AZ name.</td>
</tr>
<tr>
<td>available</td>
<td>boolean</td>
<td>Specifies whether the AZ is available. The value can be <strong>true</strong> (available) or <strong>false</strong> (unavailable).</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
</tbody>
</table>

#### Example response

```json
{
  "availabilityZoneInfo": [
    {
      "zoneState": {
        "available": true
      },
      "zoneName": "az1.dc1"
    }
  ]
}
```

or

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

### Returned Values

- Normal
- 200
7.1.18 Querying Summary Information of EVS Disks

Function

This API is used to query the summary information of EVS disks, including the disk quantity, total capacity, and metadata information.

**NOTE**

The request version must be 3.12 or later.

**URI**

- **URI format**
  
  GET /v3/{project_id}/volumes/summary

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume-summary</td>
<td>map</td>
<td>Specifies the summary of all the queried EVS disks.</td>
</tr>
<tr>
<td>total_size</td>
<td>int</td>
<td>Specifies the total disk capacity.</td>
</tr>
<tr>
<td>total_count</td>
<td>int</td>
<td>Specifies the disk quantity.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the disk metadata information. This parameter is supported when the request version is 3.36 or later.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
  "volume-summary": {
    "total_size": 83,
    "total_count": 8,
    "metadata": {
      "__openstack_region_name": [
        "az1.dc1"
      ],
      "__openstack_region_availability": [
        "az1.dc1"
      ]
    }
  }
}
```
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"
  }
}
```

### Returned Values
- Normal
  - 200

### Error Codes
For details, see [A.1 Error Codes](#).

## 7.2 EVS Disk Actions

### 7.2.1 Expanding the Capacity of an EVS Disk

#### Function

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

- If the status of the to-be-expanded disk is **available**, there are no restrictions.
- If the status of the to-be-expanded disk is **in-use**, the restrictions are as follows:
  - The shared disk cannot be expanded, that is, the value of parameter **multiattach** must be **false**.
  - The status of the ECS to which the disk attached must be **ACTIVE**, **PAUSED** **SUSPENDED**, or **SHUTOFF**.

#### URI

- **URI format**
  ```
  POST /v3/{project_id}/volumes/{volume_id}/action
  ```
- **Parameter description**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the ID of the EVS disk.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-extend</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies to expand the EVS disk capacity.</td>
</tr>
</tbody>
</table>

- Parameter in the `os-extend` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>new_size</td>
<td>int</td>
<td>Yes</td>
<td>Specifies the disk capacity after expansion. The disk capacity after expansion must be greater than that before expansion.</td>
</tr>
</tbody>
</table>

- Example request

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

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- Example response

None or

```json
{
    "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"
  }
}
```

**Returned Values**

- Normal
  202

**Error Codes**

For details, see A.1 Error Codes.

### 7.2.2 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 /v3/{project_id}/volumes/{volume_id}/action

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-reserve</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies to reserve the EVS disk. Defining a value for this parameter is not mandatory, and you are advised to leave it blank.</td>
</tr>
</tbody>
</table>

- **Example request**

```
{
    "os-reserve": { }
}
```

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- **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"
    }
}
```

- **Returned Values**

- Normal
  - 202

- **Error Codes**

  For details, see [A.1 Error Codes](#).
7.2.3 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 /v3/{project_id}/volumes/{volume_id}/action
  ```

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-unreserve</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies to cancel the EVS disk reservation. Defining a value for this parameter is not mandatory, and you are advised to leave it blank.</td>
</tr>
</tbody>
</table>

  ```
  {  
    "os-unreserve": {  
  }
  }
  ```

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- **Example response**
  
  None
  
  or
  
  ```json
  { 
    "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:
  
  ```json
  { 
    "itemNotFound": {
      "message": "XXXX",
      "code": "XXX"
    }
  }
  ```

- **Returned Values**
  
  - Normal
    
    202

- **Error Codes**

  For details, see [A.1 Error Codes](#).

### 7.2.4 Setting Bootable Flag for an EVS Disk

**Function**

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

**Constraints**

Even if data disks have called this API to set the bootable flag, such data disks still cannot be used as system disks for ECSs.

**URI**

- **URI format**
  
  `POST /v3/{project_id}/volumes/{volume_id}/action`
  
- **Parameter description**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

### Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-set_bootable</td>
<td>map&lt;string, Boolean&gt;</td>
<td>Yes</td>
<td>Specifies to set the bootable flag for the disk.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bootable</td>
<td>Boolean</td>
<td>Yes</td>
<td>Specifies whether to set the bootable flag for the disk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• <strong>false</strong>: Does not set the flag.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• <strong>true</strong>: Sets the flag.</td>
</tr>
</tbody>
</table>

- **Example request**

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

### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- **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:

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

### Returned Values
- Normal
  - 200

### Error Codes
For details, see A.1 Error Codes.

### 7.2.5 Setting Read-Only Attribute for an EVS Disk

#### Function
This API is used to set the read-only attribute for the EVS disk.

#### URI
- URI format
  - POST /v3/{project_id}/volumes/{volume_id}/action
- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

#### Request
- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-update_readonly_flag</td>
<td>map&lt;string, Boolean&gt;</td>
<td>Yes</td>
<td>Specifies to set the read-only attribute for the disk.</td>
</tr>
</tbody>
</table>

- Parameter in the **os-update_readonly_flag** field
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>readonly</td>
<td>Boolean</td>
<td>Yes</td>
<td>Specifies the read-only flag.</td>
</tr>
</tbody>
</table>
- Example request

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

### Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- Example response

None or

```json
{
  "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:

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

### Returned Values

- Normal
  - 202

### Error Codes

For details, see [A.1 Error Codes](#).

#### 7.2.6 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.
Constraints

If the target disk is in the **in-use** state, stop the server where the disk has been attached before calling this API. If the target disk is a shared EVS disk, stop all servers where the shared disk has been attached before calling this API.

URI

- **URI format**
  
  POST /v3/{project_id}/volumes/{volume_id}/action

- **Parameter description**
  
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-volume_upload_image</td>
<td>map&lt;string, map&gt;</td>
<td>Yes</td>
<td>Specifies to export the EVS disk data as an image.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>disk_format</td>
<td>string</td>
<td>No</td>
<td>Specifies the format of the exported image. The default value is <strong>vhd</strong>.</td>
</tr>
<tr>
<td>image_name</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the name of the exported image.</td>
</tr>
<tr>
<td>force</td>
<td>Boolean</td>
<td>No</td>
<td>Specifies whether to forcibly export the image. The default value is <strong>false</strong>.</td>
</tr>
</tbody>
</table>

  - **When** 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.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>container_format</td>
<td>string</td>
<td>No</td>
<td>Specifies the container type of the exported image. The default value is <em>bare</em>.</td>
</tr>
<tr>
<td>__os_type</td>
<td>string</td>
<td>No</td>
<td>Specifies the OS type of the exported image. Currently, only <em>windows</em> and <em>linux</em> are supported. The default value is <em>linux</em>. <strong>NOTE</strong>&lt;br&gt;• There are two underscores (<em>) in front of <em>os</em> and one underscore (</em>) after <em>os</em>.&lt;br&gt;• This parameter setting takes effect only when the __os_type field is not included in volume_image_metadata and the disk status is available.&lt;br&gt;• If this parameter is not specified, default value <em>linux</em> is used as the OS type of the image.</td>
</tr>
</tbody>
</table>

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

### Response
- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status after the image is exported. The normal value is <em>uploading</em>.</td>
</tr>
<tr>
<td>image_id</td>
<td>string</td>
<td>Specifies the ID of the exported image.</td>
</tr>
<tr>
<td>image_name</td>
<td>string</td>
<td>Specifies the name of the exported image.</td>
</tr>
<tr>
<td>volume_type</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the information of the EVS disk type.</td>
</tr>
<tr>
<td>container_format</td>
<td>string</td>
<td>Specifies the container type of the exported image.</td>
</tr>
<tr>
<td>size</td>
<td>Integer</td>
<td>Specifies the EVS disk capacity.</td>
</tr>
<tr>
<td>disk_format</td>
<td>string</td>
<td>Specifies the format of the exported image.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>display_description</td>
<td>string</td>
<td>Specifies the disk description.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
</tbody>
</table>

- **Parameters in the volume_type field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the disk type.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>deleted</td>
<td>Boolean</td>
<td>Specifies whether to delete the EVS disk type.</td>
</tr>
<tr>
<td>is_public</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk type is public.</td>
</tr>
<tr>
<td>extra_spec</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the specifications of the EVS disk type.</td>
</tr>
<tr>
<td>description</td>
<td>Integer</td>
<td>Specifies the description of the EVS disk type.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk type was created.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk type was updated.</td>
</tr>
<tr>
<td>deleted_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk type was deleted.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "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": "kvmxen.dcl"
            },
            "is_public": true,
            "deleted_at": null,
            "id": "8247b6ed-37f0-4c48-bf1-e0027fb332bc",
            "name": "SATA"
        },
        "container_format": "bare",
        "disk_format": "vhd",
    }
}```
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"
  }
}
```

## Returned Values

- Normal
  - 202

## Error Codes

For details, see A.1 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 /v3/{project_id}/snapshots

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the snapshot to be created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the UUID of the source EVS disk.</td>
</tr>
<tr>
<td>force</td>
<td>boolean</td>
<td>No</td>
<td>Specifies the flag for forcibly creating a snapshot. The default value is <code>false</code>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If this parameter is set to <code>false</code> and the disk is in the <code>attaching</code> state, the snapshot cannot be forcibly created.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If this parameter is set to <code>true</code> and the disk is in the <code>attaching</code> state, the snapshot can be forcibly created.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>No</td>
<td>Specifies the metadata of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>No</td>
<td>Specifies the description of the EVS snapshot. The value can be <code>null</code>. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the EVS snapshot. The value can contain a maximum of 255 bytes.</td>
</tr>
</tbody>
</table>

**NOTE**
When creating a backup for an EVS disk through Volume Backup Service (VBS), 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**

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

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see A.4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the snapshot was updated.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "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",
        "user_id": "48d70679b8644035846b2cb5363c256",
        "updated_at": "2013-02-25T03:56:53.081642"
    }
}
```

or

```json
{
    "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:

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

**Returned Values**

- Normal
202

**Error Codes**

For details, see [A.1 Error Codes](#).

### 7.3.2 Deleting an EVS Snapshot

**Function**

This API is used to delete an EVS snapshot.

**Constraints**

- A snapshot with name prefix `autobk_snapshot_` cannot be deleted.
- A snapshot can be deleted only when it is in the **available** or **error** state.

**URI**

- URI format
  
  `DELETE /v3/{project_id}/snapshots/{snapshot_id}`

- Parameter description
  
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description
  
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
</tbody>
</table>
  | code      | string | Specifies the returned error code when an error occurs.  
  |           |        | For details about the error code, see [A.1 Error Codes](#). |

- Example response
  
  None or
In the preceding example, *error* indicates a general error, for example, *badRequest* or *itemNotFound*. An example is provided as follows:

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

**Returned Values**

- Normal
  - 202

**Error Codes**

For details, see [A.1 Error Codes](#).

### 7.3.3 Updating an EVS Snapshot

#### Function

This API is used to update an EVS snapshot.

#### URI

- URI format
  
  ```
  PUT /v3/{project_id}/snapshots/{snapshot_id}
  ```

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

#### Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the snapshot information to be updated.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>-----------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>No</td>
<td>Specifies the name of the EVS snapshot. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>When creating a backup for an EVS disk through Volume Backup Service (VBS), a snapshot will be created and named with prefix <code>autobk_snapshot_</code>. The EVS console has imposed operation restrictions on snapshots with prefix <code>autobk_snapshot_</code>. Therefore, you are advised not to use <code>autobk_snapshot_</code> as the name prefix for the snapshots you created. Otherwise, the snapshots cannot be used normally.</td>
</tr>
<tr>
<td>description</td>
<td>String</td>
<td>No</td>
<td>Specifies the description of the EVS snapshot. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>display_name</td>
<td>String</td>
<td>No</td>
<td>Specifies also the disk name. You can specify either parameter <code>name</code> or <code>display_name</code>. If both parameters are specified, the <code>name</code> value is used. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>display_description</td>
<td>String</td>
<td>No</td>
<td>Specifies also the description of the EVS snapshot. You can specify either parameter <code>description</code> or <code>display_description</code>. The value can contain a maximum of 255 bytes.</td>
</tr>
</tbody>
</table>

- **Example request**

```json
{
    "snapshot": {
        "name": "name_xx3",
        "description": "hello"
    }
}
```

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see <a href="#">A.4 EVS Snapshot Status</a>.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
</tbody>
</table>
### Parameter | Type | Description
--- | --- | ---
description | string | Specifies the description of the EVS snapshot.
created_at | string | Specifies the time when the EVS snapshot was created.
metadata | map | Specifies the metadata of the EVS snapshot.
volume_id | string | Specifies the ID of the disk to which the snapshot belongs.
size | int | Specifies the size of the EVS snapshot.
updated_at | string | Specifies the time when the EVS snapshot was updated.

- **Example response**

```json
{
    "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": "f9faf7df-fdcd-4093-9ef3-5cba06eef995",
        "name": "snap-001",
        "updated_at": "2013-02-25T03:56:53.081642"
    }
}
```

or

```json
{
    "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:

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

### Returned Values
- Normal
  - 200

### Error Codes

For details, see **A.1 Error Codes**.
7.3.4 Querying EVS Snapshots

Function

This API is used to query the EVS snapshots.

URI

- **URI format**
  
  GET /v3/{project_id}/snapshots

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- **Request filter parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is 1000.</td>
</tr>
</tbody>
</table>

  **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.

Examples:

- GET /v2/xxx/snapshots?offset=50&limit=50: Queries the 51 – 100 snapshots.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the EVS snapshot. This parameter does not support fuzzy search. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is <code>desc</code> (descending order).</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the snapshot status. For details, see A.4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the snapshot's source disk.</td>
</tr>
<tr>
<td>name~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk name. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>status~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk status. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>volume_id~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by the ID of the disk that corresponds to the snapshot. This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>Specifies the sorting query by name (sort_key=name). This parameter is supported when the request version is 3.30 or later. The default sorting order is the descending order.</td>
</tr>
<tr>
<td>with_count</td>
<td>boolean</td>
<td>No</td>
<td>Specifies to return parameter <code>counts</code> in the response. This parameter indicates the number of snapshots queried. This parameter is in the <code>with_count=true</code> format and is supported when the request version is 3.45 or later. This parameter can be used together with parameters <code>marker</code>, <code>limit</code>, <code>sort_key</code>, <code>sort_dir</code>, or <code>offset</code> in the table. It cannot be used with other filter parameters.</td>
</tr>
</tbody>
</table>

- **Example request**
  None

**Response**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshots_links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the query position marker in the snapshot list. This parameter is at the same level as parameter <code>snapshots</code> in the response body. This parameter is returned only when parameter <code>limit</code> is specified in the request, and this parameter indicates that only some snapshots are returned in this query.</td>
</tr>
<tr>
<td>snapshots</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see A. 4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot. If <code>metadata</code> contains the <strong>system</strong> enableActive field, the snapshot is automatically created during the backup of a server.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the snapshot was updated.</td>
</tr>
<tr>
<td>count</td>
<td>map</td>
<td>Specifies the number of records returned in this query.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "count": 4,
  "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-ff0ff0c12c209",
      "updated_at": null
    },
    {
      "created_at": "2016-02-16T16:54:19.475397",
      "description": null,
```
In the preceding example, `error` indicates a general error, for example, `badRequest` or `itemNotFound`. An example is provided as follows:

```
{}
```

**Returned Values**

- Normal 200

**Error Codes**

For details, see A.1 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 /v3/{project_id}/snapshots/detail
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong>&lt;br&gt;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.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is 1000. 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:&lt;br&gt;GET /v2/xxx/snapshots/detail?limit=50 Queries the 1 – 50 snapshots.&lt;br&gt;GET /v2/xxx/snapshots/detail?offset=50&amp;limit=50: Queries the 51 – 100 snapshots.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the EVS snapshot. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is desc (descending order).</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the snapshot status. For details, see A.4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the snapshot's source disk.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>No</td>
<td>Specifies the metadata filtered query in the {'key':value'} format.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter is supported when the request version is 3.22 or later.</td>
</tr>
<tr>
<td>name~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>status~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by disk status.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>volume_id~</td>
<td>string</td>
<td>No</td>
<td>Specifies the fuzzy search by the ID of the disk that corresponds to the snapshot.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter is supported when the request version is 3.31 or later.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>Specifies the sorting query by name (sort_key=name).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter is supported when the request version is 3.30 or later.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The default sorting order is the descending order.</td>
</tr>
<tr>
<td>with_count</td>
<td>boolean</td>
<td>No</td>
<td>Specifies to return parameter counts in the response.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter indicates the number of snapshots queried.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter is in the with_count=true format and is supported when the request version is 3.45 or later.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>This parameter can be used together with parameters marker, limit, sort_key, sort_dir, or offset in the table. It cannot be used with other filter parameters.</td>
</tr>
</tbody>
</table>

- Example request
  None

**Response**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshots_links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>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.</td>
</tr>
<tr>
<td>snapshots</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see A.4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>update_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was updated.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata contains the __system__enableActive field, the snapshot is automatically created during the backup of a server.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:project_id</td>
<td>string</td>
<td>Specifies the tenant ID.</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:progress</td>
<td>string</td>
<td>Specifies the snapshot creation progress.</td>
</tr>
<tr>
<td>user_id</td>
<td>String</td>
<td>Reserved</td>
</tr>
<tr>
<td>count</td>
<td>map</td>
<td>Specifies the number of records returned in this query.</td>
</tr>
</tbody>
</table>

**Example response**
```
{
  "count": 2,
  "snapshots": [
```
In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see **A.1 Error Codes**.

### 7.3.6 Querying Details About an EVS Snapshot

**Function**

This API is used to query details about an EVS snapshot.
Elastic Volume Service
API Reference

7 OpenStack Cinder API v3

URI

- URI format

GET /v3/{project_id}/snapshots/{snapshot_id}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see A. 4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>update_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was updated.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot. If metadata contains the <strong>system</strong> enableActive field, the snapshot is automatically created during the backup of a server.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:project_id</td>
<td>string</td>
<td>Specifies the tenant ID.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:progress</td>
<td>string</td>
<td>Specifies the snapshot creation progress.</td>
</tr>
<tr>
<td>user_id</td>
<td>String</td>
<td>Reserved</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
"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,
"user_id": "48d70679b8644035846b2cb53633c256",
"id": "2bb856e1-b3d8-4432-a858-09e4ce939389",
"name": "snap-001",
"updated_at": null
}
}
```

or

```json
{
"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:

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

**Returned Values**

- Normal
  - Normal
  - 200

**Error Codes**

For details, see [A.1 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 /v3/{project_id}/snapshots/{snapshot_id}/metadata

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies the metadata information to be added.</td>
</tr>
</tbody>
</table>

- Parameter in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>

- Example request

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

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the disk snapshot metadata, which is made up of key-value pairs.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
    "metadata": []
}
```
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"
  }
}
```

Returned Values

- Normal
  200

Error Codes

For details, see A.1 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 /v3/{project_id}/snapshots/{snapshot_id}/metadata

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the disk 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.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
  "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:

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

**Returned Values**

- Normal
  200

**Error Codes**

For details, see A.1 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 /v3/{project_id}/snapshots/{snapshot_id}/metadata/{key}`

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the update.</td>
</tr>
</tbody>
</table>

**Request**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the piece of metadata that requires the update.</td>
</tr>
</tbody>
</table>

- **Parameter in the metadata field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the piece of metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- **Example request**

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

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the piece of the disk snapshot metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- **Example response**

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

or

```json
{
  "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:

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

### Returned Values

- Normal

200

### Error Codes

For details, see [A.1 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 /v3/{project_id}/snapshots/{snapshot_id}/metadata
  ```

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

#### Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td><code>map&lt;string,string&gt;</code></td>
<td>Yes</td>
<td>Specifies the metadata that requires the update.</td>
</tr>
</tbody>
</table>

- **Parameter in the **metadata** field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>
Example request

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

Response

Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies the disk snapshot metadata, which is made up of key-value pairs.</td>
</tr>
</tbody>
</table>

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"
  }
}
```

Returned Values

- Normal
  - 200

Error Codes

For details, see A.1 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 /v3/{project_id}/snapshots/{snapshot_id}/metadata/{key}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata to be queried.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the piece of the disk snapshot metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- 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"
}
```

Returned Values

- Normal
  
  200
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 /v3/{project_id}/snapshots/{snapshot_id}/metadata/{key}

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the deletion.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

- **Example response**

  None
  
  or

  ```json
  {  
    "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:

  ```json
  {  
    "itemNotFound": {  
  ```
7.4 EVS Disk Transfer

7.4.1 Creating an EVS Disk Transfer

Function

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

During an EVS disk transfer, the disk status changes as follows: 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.

URI

- URI format
  POST /v3/{project_id}/os-volume-transfer

Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Constraints

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

- Encrypted EVS disks cannot be transferred.
- 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.
- EVS disks in EVS replication pairs cannot be transferred.

**NOTE**

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies to create the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Parameters in the `transfer` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>No</td>
<td>Specifies the name of the EVS disk transfer. Excluding the start and end</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>spaces, the name can contain 1 to 255 bytes.</td>
</tr>
</tbody>
</table>

- Example request

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

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td>map&lt;string, object&gt;</td>
<td>Specifies the EVS disk transfer information.</td>
</tr>
<tr>
<td>auth_key</td>
<td>String</td>
<td>Specifies the authentication key of the EVS disk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>transfer.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt;Dict&gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>created_at</td>
<td>String</td>
<td>Specifies the time when the EVS disk transfer was</td>
</tr>
<tr>
<td></td>
<td></td>
<td>created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "transfer": {
    "id": "1a7059f5-8ed7-45b7-8d05-2811e5d09f24",
    "created_at": "2015-02-25T03:56:53.081642",
    "name": "first volume"
  }
}
```
Returned Values

- Normal
  202

Error Codes

For details, see A.1 Error Codes.

7.4.2 Accepting an EVS Disk Transfer

Function

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

URI

- URI format
  POST /v3/{project_id}/os-volume-transfer/{transfer_id}/accept
- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>transfer_id</td>
<td>Yes</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
</tbody>
</table>

Constraints

- Encrypted EVS disks cannot be transferred.
- 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.
- EVS disks in EVS replication pairs cannot be transferred.

**NOTE**

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>accept</td>
<td><code>map&lt;string, string&gt;</code></td>
<td>Yes</td>
<td>Specifies to accept the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Parameter in the `accept` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>auth_key</td>
<td>String</td>
<td>Yes</td>
<td>Specifies the authentication key of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example request

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

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td><code>map&lt;string, object&gt;</code></td>
<td>Specifies the EVS disk transfer information.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt; Dict &gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "transfer": {
    "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
    "name": "first volume transfer",
    "volume_id": "894623a6-e901-4312-aa06-4275e6321cce",
    "links": [ {
      "href": "https://localhost/v3/firstproject/os-volume-transfer/1",
      "rel": "self" },
      { "href": "https://localhost/firstproject/os-volume-transfer/1",
      "rel": "bookmark" }
  }
```
### Returned Values

- Normal
  - 202

### Error Codes

For details, see [A.1 Error Codes](#).

### 7.4.3 Deleting an EVS Disk Transfer

#### Function

When an EVS disk transfer is not accepted, you can delete this transfer. Accepted EVS disk transfers cannot be deleted.

#### URI

- **URI format**
  
  DELETE /v3/{project_id}/os-volume-transfer/{transfer_id}

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>transfer_id</td>
<td>Yes</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
</tbody>
</table>

#### Request

None

#### Response

None

#### Returned Values

- Normal
  - 202

#### Error Codes

For details, see [A.1 Error Codes](#).
7.4.4 Querying Details of an EVS Disk Transfer

**Function**

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

**URI**

- URI format
  
  GET /v3/{project_id}/os-volume-transfer/{transfer_id}

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specified the project ID.</td>
</tr>
<tr>
<td>transfer_id</td>
<td>Yes</td>
<td>Specified the EVS disk transfer ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td>map&lt;string, object&gt;</td>
<td>Specifies the details of the EVS disk transfer.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt; Dict &gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>created_at</td>
<td>String</td>
<td>Specifies the time when the EVS disk transfer was created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "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/v3/firstproject/os-volume-transfer/1",
        "rel": "self"
      },
    ]
  }
}
7.4.5 Querying All EVS Disk Transfers

Function

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

URI

- URI format
  GET /v3/{project_id}/os-volume-transfer

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The value must be an integer greater than 0.</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>than the number of the total EVS disk transfers, the parameter queries all</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>EVS disk transfers after the offset.</td>
</tr>
</tbody>
</table>

Request

None
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfers</td>
<td>List&lt;Transfer&gt;</td>
<td>Specifies the summary of the EVS disk transfers.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt;Dict&gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
    "transfers": [
        {
            "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
            "name": "first volume transfer",
            "volume_id": "894623a6-e901-4312-aa06-4275e6321c3e",
            "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"
                }
            ]
        }
    ]
}
```

Returned Values

- Normal
  200
**Error Codes**

For details, see A.1 Error Codes.

### 7.4.6 Querying Details of All EVS Disk Transfers

**Function**

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

**URI**

- **URI format**
  
  GET /v3/{project_id}/os-volume-transfer/detail

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- **Request filter parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0.</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of the total EVS disk transfers, the parameter queries all EVS disk transfers after the offset.</td>
</tr>
</tbody>
</table>

**Request**

None

**Parameter description**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfers</td>
<td>List&lt;Transfer&gt;</td>
<td>Specifies the details of the EVS disk transfers.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt; Dict &gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>created_at</td>
<td>String</td>
<td>Specifies the time when the EVS disk transfer was created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- **Example response**

```
{
  "transfers": [
    {
      "id": "cac5c677-73a9-4288-bb9c-b2ebf6b547377",
      "created_at": "2015-02-25T03:56:53.081642",
      "name": "first volume transfer",
      "volume_id": "894623a6-e901-4312-aa06-4275e6321c68",
      "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"
        }
      ]
    }
  ]
}
```

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see A.1 Error Codes.
8 OpenStack Cinder API v2

8.1 EVS Disk

8.1.1 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the EVS disk to be created.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the AZ where you want to create the disk. If the AZ does not exist, the disk will fail to create. <strong>NOTE</strong> For details about how to obtain the AZ, see 8.1.17 Querying Information About All AZs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the source EVS disk. If this parameter is specified, a new EVS disk is cloned from the source EVS disk. Currently, this function is not supported.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk description. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of a snapshot. If this parameter is specified, the EVS disk is created from the snapshot.</td>
</tr>
</tbody>
</table>
| size          | int            | Yes       | Specifies the EVS disk size, in GB.  
  - If the EVS disk is created using an image, the disk size must be greater than or equal to the image size.  
  - If the EVS disk is created from a snapshot, the disk size must be greater than or equal to the snapshot size. |
<p>| name          | string         | No        | Specifies the EVS disk name. The value can contain a maximum of 255 bytes. |
| imageRef      | string         | No        | Specifies the ID of an image. If this parameter is specified, the EVS disk is created from an image. <strong>NOTE</strong> BMS system disks cannot be created from BMS images. |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| volume_type     | string       | No        | Specifies the EVS disk type. Currently, the value can be **SSD, SAS, SATA, co-p1, or uh-l1**.  
  - **SSD**: specifies the ultra-high I/O disk type.  
  - **SAS**: specifies the high I/O disk type.  
  - **SATA**: specifies the common I/O disk type.  
  - **co-p1**: specifies the high I/O (performance-optimized I) disk type.  
  - **uh-l1**: specifies the ultra-high I/O (latency-optimized) disk type.  
  EVS disks of the **co-p1** and **uh-l1** types are used exclusively for HPC ECSs and SAP HANA ECSs.  
  If the specified EVS disk type is not available in the AZ, the disk will fail to create.  
  **NOTE**  
  - If the EVS disk is created from a snapshot, the volume_type field must be the same as that of the snapshot’s source disk. |
| metadata        | map<string, string> | No        | Specifies the EVS disk metadata. The length of the key or value in the metadata cannot exceed 255 bytes.  
  For details about metadata, see the **Parameters in the metadata field** table.  
  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. |
<p>| source_replica  | string       | No        | If this parameter is specified, the disk is created from a disk clone. Currently, this function is not supported. |
| consistencygrou pid | string | No        | Specifies the ID of the consistency group. If this parameter is specified, the disk belongs to this consistency group. Currently, this function is not supported. |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| shareable    | string   | No        | Specifies whether the EVS disk is shareable. The value can be true (shareable) or false (not shareable). This is an extended attribute.  
  **NOTE**  
  This field is no longer used. Use multiattach. |
| multiattach  | boolean  | No        | Specifies a shared disk. The default value is false. |

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

- Parameters in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__encrypted | string | No        | Specifies the parameter that describes the encryption function in metadata.  
  The value can be 0 (encryption function disabled) or 1 (encryption function enabled).  
  If this parameter does not exist, the disk will not be encrypted by default. |

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| __system__cmkid | string  | No        | Specifies the parameter that describes the encryption CMK ID in metadata.  
  This parameter is used together with __system__encrypted for encryption.  
  The length of cmkid is fixed at 36 bytes.  
  **NOTE**  
  For details about how to obtain the CMK ID, see section Querying the List of CMKs in the Key Management Service API Reference. |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| 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 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 EVS 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 EVS disk is created from a snapshot, the __system__encrypted and __system__cmkid fields are not supported, and the newly created disk has the same encryption attribute as that of the source EVS disk of the snapshot.
- If the EVS disk is created from an image, the __system__encrypted and __system__cmkid fields are not supported, and the newly created disk has the same encryption attribute as that of the image.
- If the EVS disk is created from a snapshot, the hw:passthrough field is not supported, and the newly created disk has the same attribute as that of the source EVS disk of the snapshot.
- If the EVS disk is created from an image, the hw:passthrough field is not supported, and the device type of newly created disk is VBD.

**Example request**
```json
{
  "volume": {
    "name": "openapi_vol01",
    "imageRef": "027cf713-45a6-45f0-ac1b-0ccc57ac12e2",
    "availability_zone": "xxx",
    "description": "create for api test",
    "volume_type": "SATA",
    "metadata": {
      "volume_owner": "openapi",
    },
    "consistencygroup_id": null,
    "source_volume": null,
    "snapshot_id": null,
    "multiattach": false,
    "source_replica": null,
    "size": 40
  }
}
```
### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the created EVS disk.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>array</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A. 3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>encrypted</td>
<td>boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the disk replication status.</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source disk ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the metadata.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>multiattach</td>
<td>boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "volume": {
        "attachments": [],
        "availability_zone": "xxx",
        "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/v2/5dd0b0056f3d47b6a4b44121667d35621a/volumes/8dd7c486-8e9f-49fe-
                 bceb-26aa7e312b66",
                "rel": "self"
            },
            {
                "href": "https://volume.localdomain.com:8776/5dd0b0056f3d47b6a4b44121667d35621a/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

```json
{
    "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:

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

**Returned Values**

- **Normal**
8.1.2 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

- **Request filter parameters**

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>cascade</td>
<td>boolean</td>
<td>No</td>
<td>Specifies to delete all snapshots associated with the EVS disk. The default value is false.</td>
</tr>
</tbody>
</table>

Request

- **Request example** (In this example, the snapshots associated with the disk are deleted together with the EVS disk.)

  DELETE /v2/{project_id}/volumes/{volume_id}?cascade=true

Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>
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"
  }
}

Returned Values

- Normal
  202

Error Codes

For details, see A.1 Error Codes.

8.1.3 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the EVS disk information to be updated.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk description. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>No</td>
<td>Specifies the EVS disk metadata. The length of the key or value in the metadata cannot exceed 255 bytes.</td>
</tr>
<tr>
<td>display_name</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>display_description</td>
<td>string</td>
<td>No</td>
<td>Specifies also the EVS 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.</td>
</tr>
</tbody>
</table>

- **Example request**

```json
{
    "volume": [
        {
            "name": "test_volume",
            "description": "test"
        }
    ]
}
```

- **Response**

  - Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk information after update.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
</tbody>
</table>
## Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the disk description.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the disk type.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the disk replication status.</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source disk ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the metadata.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the disk size.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>multiattach</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
</tbody>
</table>

- **Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Parameters in the attachments field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the **metadata** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption function in <strong>metadata</strong>. The value can be 0 or 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 0: indicates the disk is not encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* 1: indicates the disk is encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* If this parameter does not appear, the disk is not encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in <strong>metadata</strong>. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in <strong>metadata</strong>. The value can be true or false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* If this parameter is set to false, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| readonly      | string  | Specifies whether the disk is read-only or read-writable. The value can be True or False.  

  - True: indicates that the disk is read-only.  
  - False: indicates that the disk is read-writable.   |
| attached_mode | string  | Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be ro or rw.  

  - ro: indicates the disk is attached as read-only.  
  - rw: indicates the disk is attached as read-writable.   |

**Example response**

```json
{
  "volume": {
    "attachments": [],
    "availability_zone": "xxx",
    "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

```json
{
  "error": {
    "Elastic Volume Service API Reference
    8 OpenStack Cinder API v2
    2019-02-15
  271
```
In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

### Returned Values

- Normal
- 200

### Error Codes

For details, see **A.1 Error Codes**.

### 8.1.4 Querying EVS Disks

#### Function

This API is used to query EVS disks.

#### URI

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>-----------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is <strong>1000</strong>. If the tenant has more than 50 disks in total, you are advised to use this parameter and set its value to <strong>50</strong> 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&amp;limit=50: Queries the 51 – 100 disks.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>Specifies the keyword based on which the returned results are sorted. The value can be <strong>id</strong>, <strong>status</strong>, <strong>size</strong>, or <strong>created_at</strong>, and the default value is <strong>created_at</strong>.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is <strong>desc</strong> (descending order).</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of disks, all disks after this offset will be queried.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see <a href="#">A.3 EVS Disk Status</a>.</td>
</tr>
<tr>
<td>metadata</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>changes-since</td>
<td>string</td>
<td>No</td>
<td>Specifies the time when the disk was updated, for example, 2016-01-08T09:41:18. This is an extended attribute. Only administrators can set this parameter.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>volumes_links</td>
<td>list</td>
<td>Specifies the query position marker in the disk list. This parameter is at the same level as parameter volumes in the response body. 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.</td>
</tr>
</tbody>
</table>

**Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

**Example response**

```json
{
  "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-abbbf66b206e",
      "links": [
        {
          "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f40059e27f5320b60bf2f/volumes/2bce4552-9a7d-48fa-8484-abbbf66b206e",
          "rel": "self"
        },
        {
          "href": "https://volume.localdomain.com:8776/dd14c6ac581f40059e27f5320b60bf2f/volumes/2bce4552-9a7d-48fa-8484-"
In the preceding example, `error` indicates a general error, for example, `badRequest` or `itemNotFound`. An example is provided as follows:

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

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

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

### Returned Values

- Normal
  - 200

### Error Codes

For details, see [A.1 Error Codes](#).
8.1.5 Querying Details About All EVS Disks

Function

This API is used to query details about all EVS disks.

URI

- URI format

  GET /v2/{project_id}/volumes/detail

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>marker</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the last record on the previous page. The returned value is the value of the item after this one.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk name. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. 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:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GET /v2/xxx/volumes/detail?limit=50: Queries the 1 to 50 disks. GET /v2/xxx/volumes/detail?offset=50&amp;limit=50: Queries the 51 to 100 disks.</td>
</tr>
<tr>
<td>sort_key</td>
<td>string</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>sort_dir</td>
<td>string</td>
<td>No</td>
<td>Specifies the result sorting order. The default value is desc (descending order).</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of disks, all disks after this offset will be queried.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>metadata</td>
<td>string</td>
<td>No</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td>availability_z</td>
<td>string</td>
<td>No</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>one</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>changes-since</td>
<td>string</td>
<td>No</td>
<td>Specifies the time when the disk was updated, for example, 2016-01-08T09:41:18. Only administrators can set this parameter.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volumes</td>
<td>list</td>
<td>Specifies the list of queried EVS disks.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>availability_z</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>one</td>
<td></td>
<td></td>
</tr>
<tr>
<td>os-vol-host-</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>attr:host</td>
<td></td>
<td></td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------</td>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata does not contain the hw:passthrough field, the disk device type is VBD.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata does not contain the _system__encrypted field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Specifies the EVS disk migration status.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Specifies the ID of the migrated EVS disk.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Specifies the disk replication extended status.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Specifies the EVS disk backup status.</td>
</tr>
<tr>
<td>user_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Specifies the ID of the consistency group accommodating the EVS disk.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
<tr>
<td>shareable</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>multiattach</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| volume_image_metadata     | map<string,string>       | Specifies whether the EVS disk is created from an image. This parameter is specified when the disk is created from an image. Otherwise, it is left empty.  
**NOTE**  
For details about the `volume_image_metadata` field, see [Querying Image Details (Native OpenStack API)](image_management_service_api_reference) in the Image Management Service API Reference. |
| volumes_links             | array                     | Specifies the query position marker in the disk list. This parameter is at the same level as parameter `volumes` in the response body. 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. |

- **Parameters in the `links` field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Parameters in the `attachments` field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- **Parameters in the `metadata` field**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption function in metadata. The value can be 0 or 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0: indicates the disk is not encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1: indicates the disk is encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter does not appear, the disk is not encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in metadata. The value can be true or false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to false, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be True or False.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- True: indicates that the disk is read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- False: indicates that the disk is read-writable.</td>
</tr>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be ro or rw.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- ro: indicates the disk is attached as read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- rw: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>
Example response

```json
{
  "volumes": [
    {
      "attachments": [],
      "availability_zone": "xxx",
      "bootable": "false",
      "consistencygroup_id": null,
      "created_at": "2016-05-25T02:10:856332",
      "description": null,
      "encrypted": "false",
      "id": "b104b8db-170d-441b-897a-3c8ba9c5a214",
      "links": [
        {
          "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f0059e27f5320b60bf2f/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214",
          "rel": "self"
        },
        {
          "href": "https://volume.localdomain.com:8776/dd14c6ac581f0059e27f5320b60bf2f/volumes/b104b8db-170d-441b-897a-3c8ba9c5a214",
          "rel": "bookmark"
        }
      ],
      "metadata": {
        "__openstack_region_name": "pod01.xxx",
        "a": "b",
        "quantityGB": "1",
        "volInfoUrl": "iaas blockstorage://172.30.64.10/0/FEFEEB07D3924CDEA93C612D4E16882D"
      },
      "name": "zjb_u25_test",
      "os-vol-host-attr:host": "pod01.xxx#SATA",
      "volume_image_metadata": [],
      "os-vol-mig-status-attr:name_id": null,
      "os-vol-tenant-attr:tenant_id": "dd14c6ac581f0059e27f5320b60bf2f",
      "os-volume-replication:extended_status": null,
      "replication_status": "disabled",
      "multiattach": false,
      "size": 1,
      "snapshot_id": null,
      "source_volid": null,
      "status": "available",
      "updated_at": "2016-05-25T02:10:856332",
      "user_id": "b0524e8342084ef5b74f158e78fc3049",
      "volume_type": "SATA"
    }
  ],
  "volumes_links": [
    {
      "href": "https://volume.localdomain.com:8776/v2/dd14c6ac581f0059e27f5320b60bf2f/volumes/detail?limit=1&marker=b104b8db-170d-441b-897a-3c8ba9c5a214",
      "rel": "next"
    }
  ]
}
```

or

```json
{
  "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:

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

### Returned Values

- Normal
  - 200

### Error Codes

For details, see A.1 Error Codes.

### 8.1.6 Querying Details About a Single EVS Disk

#### Function

This API is used to query details about a single EVS disk.

#### URI

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

#### Request

None

#### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map</td>
<td>Specifies the queried EVS disk.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk UUID.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the URI of the EVS disk.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see A.3 EVS Disk Status.</td>
</tr>
<tr>
<td>attachments</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the EVS disk attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the EVS disk description.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the metadata of the EVS disk image.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>NOTE</strong> For details about the volume_image_metadata field, see Querying Image Details (Native OpenStack API) in the Image Management Service API Reference.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the EVS disk type.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the EVS disk size.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata does not contain the hw:passthrough field, the disk device type is VBD.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata does not contain the _system__encrypted field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
</tbody>
</table>
### Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>replication_status</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>consistencygroup_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Reserved</td>
</tr>
</tbody>
</table>
| shareable                                      | boolean | Specifies whether the EVS disk is shareable. 

**NOTE**

This field is no longer used. Use **multiattach**.

| user_id                                        | string  | Reserved                                                                    |
| message                                        | string  | Specifies the returned error message when an error occurs.                 |
| code                                           | string  | Specifies the returned error code when an error occurs. 

For details about the error code, see **A.1 Error Codes**.

| multiattach                                    | boolean | Specifies the shared EVS disk information.                                 |

- **Parameters in the links field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>href</td>
<td>string</td>
<td>Specifies the corresponding shortcut link.</td>
</tr>
<tr>
<td>rel</td>
<td>string</td>
<td>Specifies the shortcut link marker name.</td>
</tr>
</tbody>
</table>

- **Parameters in the attachments field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- Parameters in the **metadata** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption function in <strong>metadata</strong>. The value can be 0 or 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 0: indicates the disk is not encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 1: indicates the disk is encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter does not appear, the disk is not encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in <strong>metadata</strong>. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in <strong>metadata</strong>. The value can be true or false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter is set to false, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| readonly        | string  | Specifies whether the disk is read-only or read-writable. The value can be **True** or **False**.  
  - **True**: indicates that the disk is read-only.  
  - **False**: indicates that the disk is read-writable. |
| attached_mode   | string  | Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be **ro** or **rw**.  
  - **ro**: indicates the disk is attached as read-only.  
  - **rw**: indicates the disk is attached as read-writable. |

- **Example response**

```json
{
  "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": "az1.dc1",
    "os-vol-host-attr:host": "az1.dc1#SSD",
    "encrypted": false,
    "multiattach": true,
    "updated_at": "2016-02-03T02:19:29.895237",
    "replication_status": "disabled",
    "snapshot_id": null,
    "size": 40,
    "user_id": "fd03ee73295e45478d88e15263d2ee4e",
    "os-vol-tenant-attr:tenant_id": "40acc331ac784f34842ba4f08ff2be48",
    "volume_image_metadata": null,
    "os-vol-mig-status-attr:migstat": null,
    "metadata": {
      "__openstack_region_name": "az1.dc1",
      "quantityGB": "40"
    },
    "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",
  }
}```
In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

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

**Returned Values**

- Normal
  
  200

**Error Codes**

For details, see [A.1 Error Codes](#).

**8.1.7 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_types</td>
<td>list</td>
<td>Specifies the list of queried EVS disk types.</td>
</tr>
<tr>
<td>extra_specs</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the specifications of the EVS disk type.</td>
</tr>
<tr>
<td>volume_backend_name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>availability-zone</td>
<td>string</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS disk type.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS disk type.</td>
</tr>
<tr>
<td>qos_specs_id</td>
<td>string</td>
<td>Specifies the Quality of Service (QoS) ID of the EVS disk type.</td>
</tr>
<tr>
<td>is_public</td>
<td>boolean</td>
<td>Specifies whether the EVS disk type is public.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
  "volume_types": [
    {
      "extra_specs": {
        "volume_backend_name": "SAS",
        "availability-zone": "az1.dc1",
      },
      "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": "az1.dc1",
      },
      "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": "az1.dc1",
      },
      "name": "SSD",
      "id": "ea6e3c13-aac5-46e0-b280-745ed272e662",
      "description": null
    }
  ]
}
```
In the preceding example, `error` indicates a general error, for example, `badrequest` or `itemNotFound`. An example is provided as follows:

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

Returned Values

- Normal
  - 200

Error Codes

For details, see A.1 Error Codes.

8.1.8 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>type_id</td>
<td>Yes</td>
<td>Specifies the ID of the disk type.</td>
</tr>
</tbody>
</table>

Request

None
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_type</td>
<td>map</td>
<td>Specifies the queried EVS disk type.</td>
</tr>
<tr>
<td>extra_specs</td>
<td>map&lt;string,</td>
<td>Specifies the specifications of the EVS disk type.</td>
</tr>
<tr>
<td></td>
<td>string&gt;</td>
<td></td>
</tr>
<tr>
<td>volume_backend_name</td>
<td>string</td>
<td>Specifies the backend EVS disk type of Cinder.</td>
</tr>
<tr>
<td>availability-zone</td>
<td>string</td>
<td>Specifies the AZ.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS disk type.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS disk type.</td>
</tr>
<tr>
<td>qos_specs_id</td>
<td>string</td>
<td>Specifies the QoS ID of the EVS disk type.</td>
</tr>
<tr>
<td>is_public</td>
<td>boolean</td>
<td>Specifies whether the EVS disk type is public.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "volume_type": {
    "extra_specs": {
      "volume_backend_name": "SATA",
      "availability-zone": "az1.dc1"
    },
    "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:

```json
{
  "badrequest": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```
Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

8.1.9 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/{project_id}?usage=True

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>quota_set</td>
<td>map</td>
<td>Specifies the queried quotas.</td>
</tr>
<tr>
<td>volumes</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of EVS disks. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>snapshots</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of snapshots. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>gigabytes</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the total size (GB) of EVS disks and snapshots allowed by the quota. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>volumes_TYP</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of EVS disks reserved for a specified volume type. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>snapshots_TYP</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of snapshots reserved for a specified volume type. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>gigabytes_TYP</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the size (GB) reserved for a specified volume type. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the tenant ID.</td>
</tr>
<tr>
<td>backups</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the number of backups. This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>backup_gigabytes</td>
<td>map&lt;string, int&gt;</td>
<td>Specifies the backup size (GB). This parameter is made up of key-value pairs which include reserved, limit, and in_use.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
</tbody>
</table>

**NOTE**

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

- Example response

```json
{
    "quota_set": {
        "gigabytes_SAS": {
            "reserved": 0,
            "limit": -1,
            "in_use": 21
        },
        "volumes_SATA": {
            "reserved": 0,
            "limit": -1,
            "in_use": 8
        },
        "gigabytes": {
            "reserved": 0,
            "limit": 42790,
            "in_use": 2792
        },
        "backup_gigabytes": {
            "reserved": 0,
            "limit": 5120,
            "in_use": 51
        }
    }
}
```
In the preceding example, **error** indicates a general error, for example, **badrequest** or **itemNotFound**. An example is provided as follows:

```json
{
  "error": {
    "message": "XXXX",
    "code": "XXX"
  }
}
```
8.1.10 Adding Metadata of an EVS Disk

Function

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

URI

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the metadata that requires the update.</td>
</tr>
</tbody>
</table>

- Parameter in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>

- Example request

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata, which is made up of key-value pairs.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
  "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:

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

Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

8.1.11 Querying Metadata of an EVS Disk

Function

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

URI

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

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk metadata, which is made up of key-value pairs.</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
  "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:

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

**Returned Values**

- Normal
  - 200
Error Codes

For details, see A.1 Error Codes.

8.1.12 Updating Metadata of an EVS Disk

Function

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

URI

- URI format
  
  PUT /v2/{project_id}/volumes/{volume_id}/metadata

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the metadata that requires the update.</td>
</tr>
</tbody>
</table>

- Parameter in the metadata field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>

- Example request

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

Response

- Parameter description
### Parameter Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk metadata, which is made up of key-value pairs.</td>
</tr>
</tbody>
</table>

- **Example response**

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

  or

  ```json
  {
    "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:

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

### Returned Values

- Normal
  - 200

### Error Codes

For details, see [A.1 Error Codes](#).

### 8.1.13 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-----------</td>
<td>-------------</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata to be queried.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the piece of the disk metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- Example response

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

or

```json
{
    "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:

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

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see A.1 Error Codes.

8.1.14 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the update.</td>
</tr>
</tbody>
</table>

Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the piece of metadata that requires the update.</td>
</tr>
</tbody>
</table>

- **Parameter in the meta field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the piece of metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- **Example request**
  
  ```
  {
    "meta": {
      "key1": "value1"
    }
  }
  ```

Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the piece of the disk metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- **Example response**
  
  ```
  {
    "meta": {
      "key1": "value1"
    }
  }
  ```

  or
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"
   }
}
```

### Returned Values
- Normal
  - 200

### Error Codes
For details, see [A.1 Error Codes](#).

### 8.1.15 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**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the deletion.</td>
</tr>
</tbody>
</table>

#### Request
None

#### Response
- **Parameter description**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

- **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"
  }
  
  ```

**Returned Values**

- Normal
- 200

**Error Codes**

For details, see A.1 Error Codes.

**8.1.16 Querying API Extensions**

**Function**

This API is used to query API extensions.

**URI**

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>
Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>extensions</td>
<td>array</td>
<td>Specifies the list of API extensions.</td>
</tr>
</tbody>
</table>

- Parameters in the `extensions` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>updated</td>
<td>string</td>
<td>Specifies the last update time.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description.</td>
</tr>
<tr>
<td>links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>Specifies the link for the disk transfer.</td>
</tr>
<tr>
<td>alias</td>
<td>string</td>
<td>Specifies the alias of the extension.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "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",
      "description": "Types management support."
    }
  ]
}``
"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": [ ],
  "description": "Volume manage support."
}]}
"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"
  }
}
```

## Returned Values

- Normal
- 200

## Error Codes

For details, see A.1 Error Codes.

### 8.1.17 Querying Information About All AZs

**Function**

This API is used to query information about all AZs.

**URI**

- **URI format**

  GET /v2/{project_id}/os-availability-zone

- **Parameter description**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>availabilityZoneInfo</td>
<td>list</td>
<td>Specifies the queried AZs.</td>
</tr>
<tr>
<td>zoneState</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the AZ status.</td>
</tr>
<tr>
<td>zoneName</td>
<td>string</td>
<td>Specifies the AZ name.</td>
</tr>
<tr>
<td>available</td>
<td>boolean</td>
<td>Specifies whether the AZ is available. The value can be <strong>true</strong> (available) or <strong>false</strong> (unavailable).</td>
</tr>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the code, see the following returned values.</td>
</tr>
</tbody>
</table>

- Example response

```
{
    "availabilityZoneInfo": [
        {
            "zoneState": {
                "available": true
            },
            "zoneName": "az1.dc1"
        }
    ]
}
```

or

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

**Returned Values**

- Normal
  - 200
8.2 EVS Disk Actions

8.2.1 Expanding the Capacity of an EVS Disk

Function

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

- If the status of the to-be-expanded disk is available, there are no restrictions.
- If the status of the to-be-expanded disk is in-use, the restrictions are as follows:
  - The shared disk cannot be expanded, that is, the value of parameter multiattach must be false.
  - The status of the ECS to which the disk attached must be ACTIVE, PAUSED, SUSPENDED, or SHUTOFF.

URI

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the ID of the EVS disk.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-extend</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies to expand the EVS disk capacity.</td>
</tr>
</tbody>
</table>

- Parameter in the os-extend field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>new_size</td>
<td>int</td>
<td>Yes</td>
<td>Specifies the disk capacity after expansion. The disk capacity after expansion must be greater than that before expansion.</td>
</tr>
</tbody>
</table>
• Example request

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

**Response**

• Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

• Example response

None or

```json
{
  "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:

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

**Returned Values**

• Normal
  202

**Error Codes**

For details, see A.1 Error Codes.

### 8.2.2 Attaching an EVS Disk (Deprecated)

**Function**

This API is only used to change the EVS disk status from available to in-use.
This API call exists for compatibility reasons only and is not meant to be used.

**Constraints**

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

**URI**

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

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-attach</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies to attach the disk.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>instance_uuid</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the UUID of the host to be attached to.</td>
</tr>
<tr>
<td>mountpoint</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the host to be attached to. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>mode</td>
<td>string</td>
<td>No</td>
<td>Specifies the attachment mode. The value can be rw (read/write) or ro (read-only).</td>
</tr>
</tbody>
</table>

- **Example request**

  ```json
  {
    "os-attach": {
      "instance_uuid": "95D9EF50-507D-11E5-B970-0800200C9A66",
      "mountpoint": "/dev/vdc"
  }
  ```
### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- **Example response**

  None  
  or  

  ```json
  {  
    "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:

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

### Returned Values

- **Normal**
  202

### Error Codes

For details, see [A.1 Error Codes](#).

### 8.2.3 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 an EVS disk. If you need to detach an EVS disk, call the Detach Volume API of ECS.

URI

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-detach</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies to detach the disk.</td>
</tr>
</tbody>
</table>

- Parameter in the os-detach field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the attachment ID. If the disk has only one mount point, this parameter is optional. If it has multiple mount points, the parameter is optional.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
  "os-detach": {
    "attachment_id": "d8777f54-84cf-4809-a679-468ffed56cf1"
  }
}
```

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- Example response
  - None
  - or

```json
{  
  "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:

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

**Returned Values**
- Normal
  - 202

**Error Codes**

For details, see [A.1 Error Codes](#).

### 8.2.4 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
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

### Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-reserve</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies to reserve the EVS disk. Defining a value for this parameter is</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>not mandatory, and you are advised to leave it blank.</td>
</tr>
</tbody>
</table>

- **Example request**

```
{
    "os-reserve": {}  
}
```

### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

- **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"
    }
}
```
8.2.5 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-unreserve</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies to cancel the EVS disk reservation. Defining a value for this parameter is not mandatory, and you are advised to leave it blank.</td>
</tr>
</tbody>
</table>

- Example request

```json
{
  "os-unreserve": {}
}
```

**Response**

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- **Example response**

  None

  or

  ```json
  "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:

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

**Returned Values**

- Normal

  202

**Error Codes**

For details, see [A.1 Error Codes](#).

### 8.2.6 Setting Bootable Flag for an EVS Disk

**Function**

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

**Constraints**

Even if data disks have called this API to set the bootable flag, such data disks still cannot be used as system disks for ECSs.

**URI**

- URI format

  ```
  POST /v2/{project_id}/volumes/{volume_id}/action
  ```
**Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

**Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-set_bootable</td>
<td>map&lt;string, Boolean&gt;</td>
<td>Yes</td>
<td>Specifies to set the bootable flag for the disk.</td>
</tr>
</tbody>
</table>

**Parameter in the os-set_bootable field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bootable</td>
<td>Boolean</td>
<td>Yes</td>
<td>Specifies whether to set the bootable flag for the disk.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>false</strong>: Does not set the flag.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- <strong>true</strong>: Sets the flag.</td>
</tr>
</tbody>
</table>

**Example request**

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

**Response**

**Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>

**Example response**

None

or

```json
{  
  "error": {
    
```
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"
  }
}
```

**Returned Values**

- Normal
  - 200

**Error Codes**

For details, see [A.1 Error Codes](#).

### 8.2.7 Setting Read-Only Attribute for an EVS Disk

**Function**

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

**URI**

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-update_readon</td>
<td>map&lt;string, Boolean&gt;</td>
<td>Yes</td>
<td>Specifies to set the read-only attribute for the disk.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>readonly</td>
<td>Boolean</td>
<td>Yes</td>
<td>Specifies the read-only flag.</td>
</tr>
</tbody>
</table>

- **Example request**

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

### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For details about the error code, see <a href="#">A.1 Error Codes</a>.</td>
</tr>
</tbody>
</table>

- **Example response**

None

or

```json
{
  "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:

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

### Returned Values

- **Normal**

202

### Error Codes

For details, see [A.1 Error Codes](#).
8.2.8 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.

Constraints

If the target disk is in the *in-use* state, stop the server where the disk has been attached before calling this API. If the target disk is a shared EVS disk, stop all servers where the shared disk has been attached before calling this API.

URI

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-volume_upload_image</td>
<td>map&lt;strin&lt;map&gt;</td>
<td>Yes</td>
<td>Specifies to export the EVS disk data as an image.</td>
</tr>
</tbody>
</table>

- Parameters in the *os-volume_upload_image* field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>disk_format</td>
<td>string</td>
<td>No</td>
<td>Specifies the format of the exported image. The default value is <em>vhd</em>.</td>
</tr>
<tr>
<td>image_name</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the name of the exported image.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>force</td>
<td>Boolean</td>
<td>No</td>
<td>Specifies whether to forcibly export the image. The default value is false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- When force is set to false and the disk is in the in-use state, the image cannot be forcibly exported.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If force is set to true and the disk is in the in-use state, the image can be forcibly exported.</td>
</tr>
<tr>
<td>container_format</td>
<td>string</td>
<td>No</td>
<td>Specifies the container type of the exported image. The default value is bare.</td>
</tr>
<tr>
<td>__os_type</td>
<td>string</td>
<td>No</td>
<td>Specifies the OS type of the exported image. Currently, only windows and linux are supported. The default value is linux.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>NOTE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- There are two underscores (<em>) in front of os and one underscore (</em>) after os.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- This parameter setting takes effect only when the __os_type field is not included in volume_image_metadata and the disk status is available.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If this parameter is not specified, default value linux is used as the OS type of the image.</td>
</tr>
</tbody>
</table>

- Example request

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

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the status after the image is exported. The normal value is uploading.</td>
</tr>
<tr>
<td>image_id</td>
<td>string</td>
<td>Specifies the ID of the exported image.</td>
</tr>
</tbody>
</table>

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API Reference
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<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>image_name</td>
<td>string</td>
<td>Specifies the name of the exported image.</td>
</tr>
<tr>
<td>volume_type</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the information of the EVS disk type.</td>
</tr>
<tr>
<td>container_format</td>
<td>string</td>
<td>Specifies the container type of the exported image.</td>
</tr>
<tr>
<td>size</td>
<td>Integer</td>
<td>Specifies the EVS disk capacity.</td>
</tr>
<tr>
<td>disk_format</td>
<td>string</td>
<td>Specifies the format of the exported image.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>display_description</td>
<td>string</td>
<td>Specifies the disk description.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk information was updated.</td>
</tr>
</tbody>
</table>

- Parameters in the **volume_type** field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the disk type.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS disk type.</td>
</tr>
<tr>
<td>deleted</td>
<td>Boolean</td>
<td>Specifies whether to delete the EVS disk type.</td>
</tr>
<tr>
<td>is_public</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk type is public.</td>
</tr>
<tr>
<td>extra_spec</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the specifications of the EVS disk type.</td>
</tr>
<tr>
<td>description</td>
<td>Integer</td>
<td>Specifies the description of the EVS disk type.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk type was created.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk type was updated.</td>
</tr>
<tr>
<td>deleted_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk type was deleted.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "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,
```
or

```json
{
  "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:

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

### Returned Values

- Normal
  - 202

### Error Codes

For details, see [A.1 Error Codes](#).

### 8.3 EVS Snapshot

#### 8.3.1 Creating an EVS Snapshot

**Function**

This API is used to create an EVS snapshot.

**URI**

- **URI format**
  
  POST /v2/{project_id}/snapshots

- **Parameter description**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the snapshot to be created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Yes</td>
<td>Specifies the UUID of the source EVS disk.</td>
</tr>
<tr>
<td>force</td>
<td>boolean</td>
<td>No</td>
<td>Specifies the flag for forcibly creating a snapshot. The default value is <strong>false</strong>.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If this parameter is set to <strong>false</strong> and the disk is in the <strong>attaching</strong> state, the snapshot cannot be forcibly created.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- If this parameter is set to <strong>true</strong> and the disk is in the <strong>attaching</strong> state, the snapshot can be forcibly created.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>No</td>
<td>Specifies the metadata of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>No</td>
<td>Specifies the description of the EVS snapshot. The value can be <strong>null</strong>. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the EVS snapshot. The value can contain a maximum of 255 bytes.</td>
</tr>
</tbody>
</table>

**NOTE**

When creating a backup for an EVS disk through Volume Backup Service (VBS), 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

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

### Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see <a href="#">A.4 EVS Snapshot Status</a>.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the snapshot was updated.</td>
</tr>
</tbody>
</table>

### Example response

```json
{
    "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

```json
{
    "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:

```json
{
    "itemNotFound": {
        "message": "XXXX",
        "code": "XXX"
    }
}
```
Returned Values

- Normal
  202

Error Codes

For details, see A.1 Error Codes.

8.3.2 Deleting an EVS Snapshot

Function

This API is used to delete an EVS snapshot.

Constraints

- A snapshot with name prefix autobk_snapshot cannot be deleted.
- 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
<tr>
<td>code</td>
<td>string</td>
<td>Specifies the returned error code when an error occurs. For details about the error code, see A.1 Error Codes.</td>
</tr>
</tbody>
</table>
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"
  }
}
```

Returned Values

- Normal
  202

Error Codes

For details, see A.1 Error Codes.

8.3.3 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

Request

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Yes</td>
<td>Specifies the snapshot information to be updated.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>No</td>
<td>Specifies the name of the EVS snapshot. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>NOTE</strong> When creating a backup for an EVS disk through Volume Backup Service (VBS), a snapshot will be created and named with prefix <code>autobk_snapshot_</code>. The EVS console has imposed operation restrictions on snapshots with prefix <code>autobk_snapshot_</code>. Therefore, you are advised not to use <code>autobk_snapshot_</code> as the name prefix for the snapshots you created. Otherwise, the snapshots cannot be used normally.</td>
</tr>
<tr>
<td>description</td>
<td>String</td>
<td>No</td>
<td>Specifies the description of the EVS snapshot. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>display_name</td>
<td>String</td>
<td>No</td>
<td>Specifies also the disk name. You can specify either parameter <code>name</code> or <code>display_name</code>. If both parameters are specified, the <code>name</code> value is used. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>display_description</td>
<td>String</td>
<td>No</td>
<td>Specifies also the description of the EVS snapshot. You can specify either parameter <code>description</code> or <code>display_description</code>. The value can contain a maximum of 255 bytes.</td>
</tr>
</tbody>
</table>

**Example request**

```json
{
    "snapshot": {
        "name": "name_xx3",
        "description": "hello"
    }
}
```

**Response**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see A.4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the ID of the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>updated_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was updated.</td>
</tr>
</tbody>
</table>

- **Example response**

  ```json
  { 
  "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": "f9faf7df-fdcl-4093-9ef3-5cbde6ef995",
    "name": "snap-001",
    "updated_at": "2013-02-25T03:56:53.081642"
  }
  }
  
  or

  ```json
  { 
  "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:

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

- **Returned Values**
  - Normal
    - 200
8.3.4 Querying EVS Snapshots

**Function**

This API is used to query the EVS snapshots.

**URI**

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Request**

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
</table>
| offset    | int  | 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 | int | No | Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is 1000.  
  
  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. |
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>string</td>
<td>No</td>
<td>Specifies the name of the EVS snapshot. This parameter does not support fuzzy search. The value can contain a maximum of 255 bytes.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>No</td>
<td>Specifies the snapshot status. For details, see A.4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>No</td>
<td>Specifies the ID of the snapshot's source disk.</td>
</tr>
</tbody>
</table>

- Example request
  None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshots_links</td>
<td>list&lt;map&lt;string,string&gt;&gt;</td>
<td>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.</td>
</tr>
<tr>
<td>snapshots</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see A.4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot. If metadata contains the __system_enableActive field, the snapshot is automatically created during the backup of a server.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
</tbody>
</table>
### Example response

```json
{
  "snapshots": [
    {
      "created_at": "2016-02-16T16:54:14.981520",
      "description": null,
      "id": "b836da3d-4e10-4e4a-a34c-8f6b0460a583",
      "metadata": {},
      "name": "test01",
      "size": 1,
      "status": "available",
      "volume_id": "ba5730ea-8621-4ae8-b702-ff0ffcc12c209",
      "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-ff0ffcc12c209",
      "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-ff0ffcc12c209",
      "updated_at": null
    },
    {
      "created_at": "2016-02-16T16:54:29.766740",
      "description": null,
      "id": "4c29796a-8cf4-4482-9a4c-a665de9a91240",
      "metadata": {},
      "name": "test04",
      "size": 1,
      "status": "available",
      "volume_id": "ba5730ea-8621-4ae8-b702-ff0ffcc12c209",
      "updated_at": null
    }
  ],
  "snapshots_links": null
}
```

or

```json
{
  "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:
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Returned Values

- Normal
  200

Error Codes

For details, see A.1 Error Codes.

8.3.5 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Request

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>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.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Mandatory</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>----------</td>
<td>-----------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| limit        | int      | No        | Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0. The default value is **1000**. 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 name of the EVS snapshot. The value can contain a maximum of 255 bytes. |
| status       | string   | No        | Specifies the snapshot status. For details, see [A.4 EVS Snapshot Status](#). |
| volume_id    | string   | No        | Specifies the ID of the snapshot's source disk. |

- Example request

  None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshots_links</td>
<td>list&lt;map&lt;string, string&gt;&gt;</td>
<td>Specifies the query position marker in the snapshot list. This parameter is at the same level as parameter <strong>snapshots</strong> in the response body. This parameter is returned only when parameter <strong>limit</strong> is specified in the request, and this parameter indicates that only some snapshots are returned in this query.</td>
</tr>
<tr>
<td>snapshots</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see <a href="#">A.4 EVS Snapshot Status</a>.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>update_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was updated.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot. If metadata contains the __system_enableActive field, the snapshot is automatically created during the backup of a server.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:project_id</td>
<td>string</td>
<td>Specifies the tenant ID.</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:progress</td>
<td>string</td>
<td>Specifies the snapshot creation progress.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
  "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": "2013-06-19T07:15:29.000000",
      "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
    }
  ]
}
```
In the preceding example, **error** indicates a general error, for example, **badRequest** or **itemNotFound**. An example is provided as follows:

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

### Returned Values
- Normal
  - 200

### Error Codes
For details, see [A.1 Error Codes](#).

### 8.3.6 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

#### Request
None

#### Response
- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snapshot</td>
<td>map</td>
<td>Specifies the snapshot information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the EVS snapshot.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the snapshot status. For details, see 4 EVS Snapshot Status.</td>
</tr>
<tr>
<td>name</td>
<td>string</td>
<td>Specifies the name of the EVS snapshot.</td>
</tr>
<tr>
<td>description</td>
<td>string</td>
<td>Specifies the description of the EVS snapshot.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was created.</td>
</tr>
<tr>
<td>update_at</td>
<td>string</td>
<td>Specifies the time when the EVS snapshot was updated.</td>
</tr>
<tr>
<td>metadata</td>
<td>map</td>
<td>Specifies the metadata of the EVS snapshot.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If metadata contains the __system__enableActive field, the snapshot is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>automatically created during the backup of a server.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the disk to which the snapshot belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the size of the EVS snapshot.</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:project_id</td>
<td>string</td>
<td>Specifies the tenant ID.</td>
</tr>
<tr>
<td>os-extended-snapshot-attributes:progress</td>
<td>string</td>
<td>Specifies the snapshot creation progress.</td>
</tr>
</tbody>
</table>

- **Example response**

```json
{
    "snapshot": {
        "status": "available",
        "os-extended-snapshot-attributes:progress": "100%",
        "description": "daily backup",
        "created_at": "2013-02-25T04:13:17.000000",
        "updated_at": null
    }
}
```

or

```json
{
    "snapshot": {
        "status": "available",
        "os-extended-snapshot-attributes:progress": "100%",
        "description": "daily backup",
        "created_at": "2013-02-25T04:13:17.000000",
        "volume_id": "5aa119a8-d25b-45a7-8d1b-88el27885635",
        "os-extended-snapshot-attributes:project_id": "0c2eba2c5af04d3e9e9d0d410b371fd6e",
        "size": 1,
        "id": "2bb856e1-b3d8-4432-a858-09edc939389",
        "name": "snap-001",
        "update_at": null
    }
}
```
In the preceding example, `error` indicates a general error, for example, `badRequest` or `itemNotFound`. An example is provided as follows:

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

### Returned Values

- Normal
  200

### Error Codes

For details, see A.1 Error Codes.

### 8.3.7 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

#### Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies the metadata information to be added.</td>
</tr>
</tbody>
</table>

- Parameter in the `metadata` field
### Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>

- **Example request**

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

- **Response**

  - **Example response**

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

  or

  ```json
  {
  "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:

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

### Returned Values

- Normal
  - 200

### Error Codes

For details, see **A.1 Error Codes**.
8.3.8 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

**Request**

None

**Response**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the disk snapshot metadata, which is made up of key-value pairs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If <code>metadata</code> contains the <code>__system__enableActive</code> field, the snapshot is</td>
</tr>
<tr>
<td></td>
<td></td>
<td>automatically created during the backup of a server.</td>
</tr>
</tbody>
</table>

- Example response

  ```json
  {
    "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:

  ```json
  {
    "badRequest": {
  ```
8.3.9 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the update.</td>
</tr>
</tbody>
</table>

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string,string&gt;</td>
<td>Yes</td>
<td>Specifies the piece of metadata that requires the update.</td>
</tr>
</tbody>
</table>

  - Parameter in the metadata field

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

- Example request
### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the piece of the disk snapshot metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>

- **Example response**

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

or

```json
{
  "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:

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

### Returned Values

- Normal

  200

### Error Codes

For details, see [A.1 Error Codes](#).

### 8.3.10 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
</tbody>
</table>

**Request**

Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies the metadata that requires the update.</td>
</tr>
</tbody>
</table>

Parameter in the `metadata` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>key_val</td>
<td>string</td>
<td>No</td>
<td>Specifies the metadata information, which is made up of one or multiple key-value pairs.</td>
</tr>
</tbody>
</table>

Example request

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

**Response**

Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>metadata</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies the disk snapshot metadata, which is made up of key-value pairs.</td>
</tr>
</tbody>
</table>

Example response

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

or

```json
{
    "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:

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

### Returned Values

- Normal
  - 200

### Error Codes

For details, see [A.1 Error Codes](#).

### 8.3.11 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata to be queried.</td>
</tr>
</tbody>
</table>

#### Request

None

#### Response

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>meta</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the piece of the disk snapshot metadata, which is made up of a key-value pair.</td>
</tr>
</tbody>
</table>
8.3.12 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>Yes</td>
<td>Specifies the snapshot ID.</td>
</tr>
<tr>
<td>key</td>
<td>Yes</td>
<td>Specifies the key of the metadata that requires the deletion.</td>
</tr>
</tbody>
</table>

Request

None

Returned Values

- Normal

  200

Error Codes

For details, see A.1 Error Codes.
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>message</td>
<td>string</td>
<td>Specifies the returned error message when an error occurs.</td>
</tr>
</tbody>
</table>
| code      | string | Specifies the returned error code when an error occurs.  
For details about the error code, see [A.1 Error Codes](#). |

- Example response

None  
or

```json
{   "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:

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

Returned Values

- Normal  
  200

Error Codes

For details, see [A.1 Error Codes](#).

8.4 EVS Disk Transfer

8.4.1 Creating an EVS Disk Transfer

Function

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

During an EVS disk transfer, the disk status changes as follows: 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.
URI

- **URI format**
  
  POST /v2/{project_id}/os-volume-transfer

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

Constraints

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

- Encrypted EVS disks cannot be transferred.
- 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.
- EVS disks in EVS replication pairs cannot be transferred.

**NOTE**

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

Request

- **Parameter description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies to create the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- **Parameters in the `transfer` field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>No</td>
<td>Specifies the name of the EVS disk transfer. Excluding the start and end spaces, the name can contain 1 to 255 bytes.</td>
</tr>
</tbody>
</table>

- **Example request**

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td>map&lt;string, object&gt;</td>
<td>Specifies the EVS disk transfer information.</td>
</tr>
<tr>
<td>auth_key</td>
<td>String</td>
<td>Specifies the authentication key of the EVS disk transfer.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt; Dict &gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>created_at</td>
<td>String</td>
<td>Specifies the time when the EVS disk transfer was created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "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"
      }
    ]
  }
}
```

Returned Values

- Normal
  202

Error Codes

For details, see [A.1 Error Codes](#).
8.4.2 Accepting an EVS Disk Transfer

Function

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

URI

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>transfer_id</td>
<td>Yes</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
</tbody>
</table>

Constraints

- Encrypted EVS disks cannot be transferred.
- 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.
- EVS disks in EVS replication pairs cannot be transferred.

**NOTE**

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

Request

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>accept</td>
<td>map&lt;string, string&gt;</td>
<td>Yes</td>
<td>Specifies to accept the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Parameter in the `accept` field

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>auth_key</td>
<td>String</td>
<td>Yes</td>
<td>Specifies the authentication key of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example request

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td><code>map&lt;string, object&gt;</code></td>
<td>Specifies the EVS disk transfer information.</td>
</tr>
<tr>
<td>volume_id</td>
<td><code>String</code></td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td><code>String</code></td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td><code>String</code></td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
<tr>
<td>links</td>
<td><code>List&lt; Dict &gt;</code></td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

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

Returned Values

- Normal
  202

Error Codes

For details, see A.1 Error Codes.

8.4.3 Deleting an EVS Disk Transfer

Function

When an EVS disk transfer is not accepted, you can delete this transfer. Accepted EVS disk transfers cannot be deleted.
8.4.4 Querying Details of an EVS Disk Transfer

Function

This API is used to query the details of an EVS 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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>transfer_id</td>
<td>Yes</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
</tbody>
</table>

Request

None

Response

None

Returned Values

- Normal
  202

Error Codes

For details, see A.1 Error Codes.
Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfer</td>
<td>map&lt;string, object&gt;</td>
<td>Specifies the details of the EVS disk transfer.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt; Dict &gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>created_at</td>
<td>String</td>
<td>Specifies the time when the EVS disk transfer was created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
    "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"
            }
        ]
    }
}
```

Returned Values

- Normal

200

Error Codes

For details, see A.1 Error Codes.

8.4.5 Querying All EVS Disk Transfers

Function

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

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

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

- Request filter parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0.</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of the total EVS disk transfers, the parameter queries all EVS disk transfers after the offset.</td>
</tr>
</tbody>
</table>

Request

None

Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfers</td>
<td>List&lt;Transfer&gt;</td>
<td>Specifies the summary of the EVS disk transfers.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt;Dict&gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

  ```json
  {
    "transfers": [
      {
        "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
        "name": "first volume transfer",
        "volume_id": "894623a6-e901-4312-aa06-4275e6321cce",
        "links": [  
          
        ]
      }
    ]
  }```
8.4.6 Querying Details of All EVS Disk Transfers

**Function**

This API is used to query the details of all EVS 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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
</tbody>
</table>

**Returned Values**

- Normal 200

**Error Codes**

For details, see A.1 Error Codes.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>limit</td>
<td>int</td>
<td>No</td>
<td>Specifies the maximum number of query results that can be returned. The value must be an integer greater than 0.</td>
</tr>
<tr>
<td>offset</td>
<td>int</td>
<td>No</td>
<td>Specifies the offset. If the value is an integer greater than 0 but less than the number of the total EVS disk transfers, the parameter queries all EVS disk transfers after the offset.</td>
</tr>
</tbody>
</table>

**Request**

None

**Parameter description**

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>transfers</td>
<td>List&lt;Transfer&gt;</td>
<td>Specifies the details of the EVS disk transfers.</td>
</tr>
<tr>
<td>links</td>
<td>List&lt;Dict&gt;</td>
<td>Specifies the links of the EVS disk transfer.</td>
</tr>
<tr>
<td>created_at</td>
<td>String</td>
<td>Specifies the time when the EVS disk transfer was created.</td>
</tr>
<tr>
<td>volume_id</td>
<td>String</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>id</td>
<td>String</td>
<td>Specifies the EVS disk transfer ID.</td>
</tr>
<tr>
<td>name</td>
<td>String</td>
<td>Specifies the name of the EVS disk transfer.</td>
</tr>
</tbody>
</table>

- Example response

```json
{
  "transfers": [
    {
      "id": "cac5c677-73a9-4288-bb9c-b2ebfb547377",
      "created_at": "2015-02-25T03:56:53.081642",
      "name": "first volume transfer",
      "volume_id": "894633a6-e901-4312-aa06-4275e6321ccc",
      "links": [
        {
          "href": "https://localhost/v2/firstproject/os-volume-transfer/1",
          "rel": "self"
        },
        {
          "href": "https://localhost/firstproject/os-volume-transfer/1",
          "rel": "bookmark"
        }
      ]
    }
  ]
}```
Returned Values

- Normal

200

Error Codes

For details, see A.1 Error Codes.
9 OpenStack Cinder API v1 (Deprecated)

9.1 EVS Disk

9.1.1 Querying Details About a Single EVS Disk (Deprecated)

Function

This API is used to query details about a single EVS disk.

NOTICE

This API has been deprecated. Use another API. For details, see 7.1.6 Querying Details About a Single EVS Disk.

URI

- URI format
  GET /v1/{project_id}/volumes/{volume_id}

- Parameter description
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Mandatory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>project_id</td>
<td>Yes</td>
<td>Specifies the project ID.</td>
</tr>
<tr>
<td>volume_id</td>
<td>Yes</td>
<td>Specifies the EVS disk ID.</td>
</tr>
</tbody>
</table>

Request

None
## Response

- Parameter description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume</td>
<td>map&lt;string, string&gt;</td>
<td>Specifies the EVS disk information.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>display_name</td>
<td>string</td>
<td>Specifies the EVS disk name.</td>
</tr>
<tr>
<td>status</td>
<td>string</td>
<td>Specifies the EVS disk status. For details, see <a href="#">A.3 EVS Disk Status</a>.</td>
</tr>
<tr>
<td>attachments</td>
<td>Array</td>
<td>Specifies the attachment information.</td>
</tr>
<tr>
<td>availability_zone</td>
<td>string</td>
<td>Specifies the AZ to which the EVS disk belongs.</td>
</tr>
<tr>
<td>os-vol-host-attr:host</td>
<td>string</td>
<td>Specifies the host to which the EVS disk belongs.</td>
</tr>
<tr>
<td>source_volid</td>
<td>string</td>
<td>Specifies the source EVS disk ID. If the disk is created from a source EVS disk, this parameter has a value.</td>
</tr>
<tr>
<td>snapshot_id</td>
<td>string</td>
<td>Specifies the snapshot ID. If the disk is created from a snapshot, this parameter has a value.</td>
</tr>
<tr>
<td>display_description</td>
<td>string</td>
<td>Specifies the disk description.</td>
</tr>
<tr>
<td>created_at</td>
<td>string</td>
<td>Specifies the time when the EVS disk was created.</td>
</tr>
<tr>
<td>volume_type</td>
<td>string</td>
<td>Specifies the disk type.</td>
</tr>
<tr>
<td>os-vol-tenant-attr:tenant_id</td>
<td>string</td>
<td>Specifies the ID of the tenant to which the EVS disk belongs.</td>
</tr>
<tr>
<td>size</td>
<td>int</td>
<td>Specifies the disk size.</td>
</tr>
<tr>
<td>metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies the EVS disk metadata. If <code>metadata</code> does not contain the <code>hw:passthrough</code> field, the disk device type is VBD. If <code>metadata</code> does not contain the <code>__system__encrypted</code> field, the disk is not encrypted.</td>
</tr>
<tr>
<td>os-vol-mig-status-attr:migstat</td>
<td>string</td>
<td>Specifies the EVS disk migration status.</td>
</tr>
</tbody>
</table>
### Parameter Types

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>os-vol-mig-status-attr:name_id</td>
<td>string</td>
<td>Specifies the ID of the migrated EVS disk.</td>
</tr>
<tr>
<td>os-volume-replication:extended_status</td>
<td>string</td>
<td>Specifies the disk replication status.</td>
</tr>
<tr>
<td>encrypted</td>
<td>Boolean</td>
<td>Specifies whether the disk is encrypted.</td>
</tr>
<tr>
<td>bootable</td>
<td>string</td>
<td>Specifies whether the EVS disk is bootable.</td>
</tr>
<tr>
<td>shareable</td>
<td>string</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>multiattach</td>
<td>Boolean</td>
<td>Specifies whether the EVS disk is shareable.</td>
</tr>
<tr>
<td>volume_image_metadata</td>
<td>map&lt;string,string&gt;</td>
<td>Specifies whether the EVS disk is created from an image. This parameter is specified when the disk is created from an image. Otherwise, it is left empty. NOTE For details about the <code>volume_image_metadata</code> field, see Querying Image Details (Native OpenStack API) in the Image Management Service API Reference.</td>
</tr>
</tbody>
</table>

- **Parameters in the attachments field**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>server_id</td>
<td>string</td>
<td>Specifies the ID of the server to which the disk is attached.</td>
</tr>
<tr>
<td>attachment_id</td>
<td>string</td>
<td>Specifies the ID of the attachment information.</td>
</tr>
<tr>
<td>attached_at</td>
<td>string</td>
<td>Specifies the time when the disk was attached.</td>
</tr>
<tr>
<td>host_name</td>
<td>string</td>
<td>Specifies the name of the physical host accommodating the server to which the EVS disk is attached.</td>
</tr>
<tr>
<td>volume_id</td>
<td>string</td>
<td>Specifies the EVS disk ID.</td>
</tr>
<tr>
<td>device</td>
<td>string</td>
<td>Specifies the device name.</td>
</tr>
<tr>
<td>id</td>
<td>string</td>
<td>Specifies the ID of the attached resource.</td>
</tr>
</tbody>
</table>

- **Parameters in the metadata field**
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>__system__encrypted</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption function in metadata. The value can be 0 or 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 0: indicates the disk is not encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• 1: indicates the disk is encrypted.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter does not appear, the disk is not encrypted by default.</td>
</tr>
<tr>
<td>__system__cmkid</td>
<td>string</td>
<td>Specifies the parameter that describes the encryption CMK ID in metadata. This parameter is used together with __system__encrypted for encryption. The length of cmkid is fixed at 36 bytes.</td>
</tr>
<tr>
<td>hw:passthrough</td>
<td>string</td>
<td>Specifies the parameter that describes the disk device type in metadata. The value can be true or false.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to true, the disk device type is SCSI, that is, Small Computer System Interface (SCSI), which allows ECS OSs to directly access the underlying storage media and supports SCSI reservation commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter is set to false, the disk device type is VBD (the default type), that is, Virtual Block Device (VBD), which supports only simple SCSI read/write commands.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• If this parameter does not appear, the disk device type is VBD.</td>
</tr>
<tr>
<td>full_clone</td>
<td>string</td>
<td>Specifies the clone method. When the disk is created from a snapshot, the parameter value is 0, indicating the linked cloning method.</td>
</tr>
<tr>
<td>readonly</td>
<td>string</td>
<td>Specifies whether the disk is read-only or read-writable. The value can be True or False.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• True: indicates that the disk is read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• False: indicates that the disk is read-writable.</td>
</tr>
<tr>
<td>attached_mode</td>
<td>string</td>
<td>Specifies whether the disk is attached as read-only or read-writable. This parameter appears only when the disk has been attached to a server. The value can be ro or rw.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ro: indicates the disk is attached as read-only.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• rw: indicates the disk is attached as read-writable.</td>
</tr>
</tbody>
</table>
Example response

```
{
"volume": {
  "attachments": [],
  "availability_zone": "nova",
  "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"
}
}
```

Returned Values

- Normal
  - 200

Error Codes

For details, see A.1 Error Codes.
## A.1 Error Codes

<table>
<thead>
<tr>
<th>HTTP Status Code</th>
<th>Error Code</th>
<th>Description</th>
<th>Error Message</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>EVS.0001</td>
<td>Incorrect tenant ID in the URI.</td>
<td>invalid tenant id!</td>
<td>Use the correct tenant ID.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.0002</td>
<td>Header parameters in the HTTP request are incorrect.</td>
<td>invalid token!</td>
<td>Use the correct token.</td>
</tr>
<tr>
<td>403</td>
<td>EVS.0003</td>
<td>The token used is incorrect.</td>
<td>invalid token roles!</td>
<td>The account permission set is empty. Add the required permissions to this account.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1002</td>
<td>Incorrect disk ID.</td>
<td>invalid volume name!</td>
<td>Enter the disk ID in the correct format.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1012</td>
<td>You do not have the rights to access the disk.</td>
<td>temporary volume!</td>
<td>Do not perform operations for a temporary disk as it does not allow any operation.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
<tr>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>403</td>
<td>EVS.1027</td>
<td>You do not have the rights to perform the operation.</td>
<td>user role is not allowed for this action!</td>
<td>Check whether the account has relevant permissions, or the account is in arrears, does not pass real-name authentication, or has violations.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1033</td>
<td>Failed to query the tenant quota.</td>
<td>query quota failed!</td>
<td>Check whether the tenant quota is configured.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1034</td>
<td>Insufficient disk quantity quota assigned to the tenant.</td>
<td>volume count exceeded volume count quota!</td>
<td>Apply for a higher disk quantity quota.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1042</td>
<td>Insufficient disk capacity quota assigned to the tenant.</td>
<td>volume gigabytes exceeded volume gigabytes quota!</td>
<td>Apply for a higher disk capacity quota.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2001</td>
<td>Failed to submit the task.</td>
<td>submit job failed!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2002</td>
<td>The system is currently unavailable.</td>
<td>internal error!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2005</td>
<td>A connection exception occurs.</td>
<td>client exception!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2007</td>
<td>Updating the metadata of the disk timed out.</td>
<td>update volume timeout!</td>
<td>Try again later or contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2010</td>
<td>Failed to obtain the token for the tenant.</td>
<td>exchange token failed!</td>
<td>Check the user permissions.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2011</td>
<td>Deleting order information from the disk metadata timed out.</td>
<td>delete orderId and productId timeout!</td>
<td>Try again later or contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2013</td>
<td>Failed to elevate the permissions.</td>
<td>assume role error!</td>
<td>Check whether the administrator account is used to elevate permissions and whether the account is locked.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------</td>
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<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2023</td>
<td>Network connection timed out.</td>
<td>ConnectException happened!</td>
<td>Try again. If the retry fails, check the network status. If the network status is normal, contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2029</td>
<td>Incorrect subtask quantity.</td>
<td>The size of joldList and resultList are mismatched!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2030</td>
<td>Failed to submit the subtask again.</td>
<td>query context based on parent jobId exception!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2031</td>
<td>Failed to query the context.</td>
<td>result queried from context is null!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2032</td>
<td>Failed to query the disk quantity quota assigned to the tenant.</td>
<td>some volume count quota usage params are null!</td>
<td>Try again later or contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2033</td>
<td>Failed to query the disk capacity quota assigned to the tenant.</td>
<td>some volume gigabytes quota usage params are null!</td>
<td>Try again later or contact technical support.</td>
</tr>
<tr>
<td>400</td>
<td>Common. 0011</td>
<td>Incorrect tenant ID.</td>
<td>query job fail.</td>
<td>Use the correct tenant ID and ensure that the tenant has desired permissions.</td>
</tr>
<tr>
<td>400</td>
<td>Common. 0011</td>
<td>jobId is empty.</td>
<td>No jobs found.</td>
<td>Enter the correct jobId value.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
<td>------------------------------------------</td>
<td>--------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>400</td>
<td>Common. 0011</td>
<td>Failed to query JobVO using <strong>jobId</strong>.</td>
<td>query job fail.</td>
<td>Check whether the <strong>jobId</strong> value is correct. If the <strong>jobId</strong> value is correct, check whether the request is delivered to the target EVS service node. If the request has been delivered, contact technical support to locate the fault. If the request has not been delivered, contact technical support to deliver the request to the target EVS service node.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1005</td>
<td>The size of the metadata set in the request to create the disk exceeds the upper limit.</td>
<td>size of metadata is too large!</td>
<td>Check whether the metadata is too large. The metadata size must be smaller than 1048576 bytes.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1006</td>
<td>The ID of the backup used to create the disk is incorrect.</td>
<td>invalid backup id!</td>
<td>Enter the correct backup ID.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1007</td>
<td>Parameters <strong>name</strong> and <strong>description</strong> are incorrect.</td>
<td>volume name and description can not both be empty!</td>
<td>Enter the correct disk name and description.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1008</td>
<td>The format of the request to create the disk is incorrect.</td>
<td>null createVolumeReq !</td>
<td>Use the correct request format.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1009</td>
<td>The body of the request to create the disk is incorrect.</td>
<td>invalid volumeForCreate!</td>
<td>Check the body of the request used to create the disk.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1010</td>
<td>Parameter <strong>size</strong> set in the request to create the disk is invalid.</td>
<td>invalid volume size!</td>
<td>Enter a valid <strong>size</strong> value.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1020</td>
<td>The disk type set in the request to create the disk is incorrect.</td>
<td>invalid volume type!</td>
<td>Enter a valid disk type.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------</td>
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<td>------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>400</td>
<td>EVS.1021</td>
<td>The disk quantity set in the request to batch create disks is incorrect.</td>
<td>the quantity of volume is invalid!</td>
<td>Enter a valid disk quantity.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1022</td>
<td>Parameter size set in the request to create the disk using a backup is incorrect.</td>
<td>the size param is less than backup size!</td>
<td>Ensure that the entered disk size is larger than the backup size.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1036</td>
<td>Parameter availability_zone set in the request to create the disk is incorrect.</td>
<td>invalid availability zone!</td>
<td>Enter the correct AZ.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1044</td>
<td>The backup cannot be used to create a disk.</td>
<td>backup status must be available when create a volume from it!</td>
<td>The backup is unavailable.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1045</td>
<td>Failed to query the backup details.</td>
<td>backupDetail returned by FSP is null!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1049</td>
<td>The backup used to create the disk is in the incorrect AZ.</td>
<td>available-zone is not equal to backup available-zone!</td>
<td>The backup and the disk to be created must in the same AZ.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2024</td>
<td>The status of the created disk is error.</td>
<td>volume is error!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2025</td>
<td>The status of the created disk is error_restoring.</td>
<td>volume is error_restoring!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1061</td>
<td>The tag quantity of this EVS disk exceeds the upper limit.</td>
<td>The Volume Tags is Exceed Max Limit Num.</td>
<td>Ensure that the tag quantity of the disk is within the upper limit.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1062</td>
<td>Invalid tag.</td>
<td>invalid tag!</td>
<td>Check the formats of the tag key and tag value and ensure that the formats are correct.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
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</tr>
<tr>
<td>400</td>
<td>EVS.1011</td>
<td>The format of the request to expand the disk capacity is incorrect.</td>
<td>null extendVolumeReq!</td>
<td>Use the correct request format.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1015</td>
<td>The new size of the disk is incorrect.</td>
<td>new volume Size must be greater than old Size!</td>
<td>Ensure that the new disk capacity is larger than the original disk capacity.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1048</td>
<td>Failed to expand the disk capacity because the disk status is incorrect.</td>
<td>volume status must be available when extend volume!</td>
<td>Ensure that the disk status meets the expansion requirements.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2026</td>
<td>Failed to expand the disk capacity because the disk is in the error_extending state.</td>
<td>volume is error_extending!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1046</td>
<td>Failed to delete the disk because the disk status is incorrect.</td>
<td>volume status must be available, error, error_extending, error_restoring, error_rollbacking when delete volume!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1047</td>
<td>Failed to delete the snapshot because the snapshot status is incorrect.</td>
<td>snapshot status must be available or error when delete snapshot!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2019</td>
<td>Failed to delete the snapshot because the snapshot is in the error_deleting status.</td>
<td>snapshot is error_deleting!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.2020</td>
<td>Failed to delete the disk because the disk is in the error_deleting status.</td>
<td>volume is error_deleting!</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
<tr>
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</tr>
<tr>
<td>400</td>
<td>EVS.1001</td>
<td>The name and description formats set in the request to update the disk are incorrect.</td>
<td>null volume!</td>
<td>Enter the disk name and description in the correct format.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1003</td>
<td>Incorrect disk name format.</td>
<td>invalid volume id!</td>
<td>Enter the disk name in the correct format.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1004</td>
<td>Incorrect disk description format.</td>
<td>invalid volume description!</td>
<td>Enter the disk description in the correct format.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1018</td>
<td>Type conversion error. The parameter type is unexpected.</td>
<td>Type conversion error , parameter type is unexpected</td>
<td>Check whether the input parameters are correct. For details about the parameter requirements, see the Elastic Volume Service API Reference.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1023</td>
<td>Parameter limit in the URL for querying the disk is incorrect.</td>
<td>invalid filter limit!</td>
<td>Enter a value larger than 0 for parameter limit.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1024</td>
<td>Parameter marker in the URL for querying the disk is incorrect.</td>
<td>invalid filter marker!</td>
<td>Ensure that the marker value is in the UUID format.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1040</td>
<td>Parameter sort_dir in the URL for querying the disk is incorrect.</td>
<td>invalid sort_dir!</td>
<td>Ensure that the sort_dir value is desc or asc.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.1041</td>
<td>Parameter availability-zone in the URL for querying the disk is incorrect.</td>
<td>invalid filter availability-zone!</td>
<td>Check whether the AZ set in the request is valid.</td>
</tr>
<tr>
<td>403</td>
<td>EVS.2056</td>
<td>Fine-grained PDP authentication failed.</td>
<td>action in pdp check deny!</td>
<td>Check whether the account has relevant permissions, or the account is in arrears, does not pass real-name authentication, or has violations.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
<tr>
<td>------------------</td>
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</tr>
<tr>
<td>400</td>
<td>EVS.2055</td>
<td>KMS access rights have not been granted to EVS.</td>
<td>can not create encrypt volume because hasn't xrole.</td>
<td>Before you use the disk encryption function, KMS access rights need to be granted to EVS. Grant the KMS access rights to EVS on the management console. After the rights have been granted, EVS can obtain KMS keys to encrypt or decrypt EVS disks. For details about how to grant the KMS access rights, see <strong>EVS Disk Encryption</strong> in the <em>Elastic Volume Service User Guide</em>.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>Incorrect request body parameter and format.</td>
<td>Malformed request body.</td>
<td>Check whether the parameters and format of the request body are correct.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>Incorrect request URL parameter and format.</td>
<td>Malformed request url.</td>
<td>Check whether the parameters and format of the request URL are correct.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>Request body and URI mismatch.</td>
<td>Request body and URI mismatch.</td>
<td>Check whether the request body and URI belong to the same API.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>The image is unavailable.</td>
<td>Invalid imageRef provided.</td>
<td>Select another image.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>The disk status is incorrect.</td>
<td>Must specify a valid status.</td>
<td>Specify a disk that is in the correct state.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>The value of parameter <em>offset</em> must be set to <em>int</em>.</td>
<td><em>offset</em> param must be an integer.</td>
<td>Set the value of parameter <em>offset</em> to <em>int</em>.</td>
</tr>
<tr>
<td>HTTP Status Code</td>
<td>Error Code</td>
<td>Description</td>
<td>Error Message</td>
<td>Solution</td>
</tr>
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</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>The value of parameter limit must be set to int.</td>
<td>limit param must be an integer.</td>
<td>Set the value of parameter limit to int.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.5400</td>
<td>The value of parameter limit must be a positive number.</td>
<td>limit param must be positive.</td>
<td>Set the value of parameter limit to a positive number.</td>
</tr>
<tr>
<td>400</td>
<td>EVS.2072</td>
<td>Disks of the ultra-high I/O type in AZ1 are sold out.</td>
<td>Volume type [SSD] in availability zone [AZ1] is sold out!</td>
<td>Select another disk type or contact technical support.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>401</td>
<td>EVS.5401</td>
<td>This operation is unauthorized.</td>
<td>Authentication required.</td>
<td>Call the API after authorization.</td>
</tr>
<tr>
<td>403</td>
<td>EVS.5403</td>
<td>Insufficient permission.</td>
<td>Policy check failed.</td>
<td>Add the permission and try again.</td>
</tr>
<tr>
<td>403</td>
<td>EVS.5403</td>
<td>No operation permission.</td>
<td>metadata can not be operated.</td>
<td>Modifying parameter metadata is forbidden.</td>
</tr>
<tr>
<td>404</td>
<td>EVS.5404</td>
<td>Resources, such as the disk, snapshot, and backup, do not exist.</td>
<td>Resource(Volume, Snapshot, Backup .etc) could not be found.</td>
<td>Check whether the resources are available.</td>
</tr>
<tr>
<td>413</td>
<td>EVS.5413</td>
<td>Insufficient disk quotas.</td>
<td>Insufficient volume quota.</td>
<td>Check whether the disk capacity and quantity quotas are sufficient.</td>
</tr>
<tr>
<td>500</td>
<td>EVS.5500</td>
<td>Internal server error.</td>
<td>Internal server error.</td>
<td>Try again later or contact technical support.</td>
</tr>
<tr>
<td>503</td>
<td>EVS.5503</td>
<td>The service is unavailable.</td>
<td>Service unavailable.</td>
<td>Try again later or contact technical support.</td>
</tr>
</tbody>
</table>
### A.2 HTTP Status Codes

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

### A.3 EVS Disk Status

<table>
<thead>
<tr>
<th>EVS Disk Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>creating</td>
<td>The EVS disk is being created.</td>
</tr>
<tr>
<td>available</td>
<td>The EVS disk has not been attached to any server and can be attached.</td>
</tr>
<tr>
<td>in-use</td>
<td>The EVS disk is attached to a server and is in use.</td>
</tr>
<tr>
<td>error</td>
<td>An error occurs when you try to create an EVS disk.</td>
</tr>
<tr>
<td>attaching</td>
<td>The EVS disk is being attached.</td>
</tr>
<tr>
<td>detaching</td>
<td>The EVS disk is being detached.</td>
</tr>
<tr>
<td>restoring-backup</td>
<td>The EVS disk is being restored from a backup.</td>
</tr>
<tr>
<td>EVS Disk Status</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>backing-up</td>
<td>The EVS disk is being created from a backup.</td>
</tr>
<tr>
<td>error_restoring</td>
<td>An error occurs when you try to restore the EVS disk from a backup.</td>
</tr>
<tr>
<td>uploading</td>
<td>Data on the EVS disk is being uploaded to an image. This status occurs when you create an image from a server.</td>
</tr>
<tr>
<td>downloading</td>
<td>Data is being downloaded from an image to the EVS disk. This status occurs when you create a server.</td>
</tr>
<tr>
<td>extending</td>
<td>The capacity of the EVS disk is being expanded.</td>
</tr>
<tr>
<td>error_extending</td>
<td>An error occurs when you try to expand the capacity of the EVS disk.</td>
</tr>
<tr>
<td>deleting</td>
<td>The EVS disk is being deleted.</td>
</tr>
<tr>
<td>error_deleting</td>
<td>An error occurs when you try to delete the EVS disk.</td>
</tr>
</tbody>
</table>
| 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

<table>
<thead>
<tr>
<th>EVS Snapshot Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>creating</td>
<td>The EVS snapshot is being created.</td>
</tr>
<tr>
<td>available</td>
<td>The EVS snapshot is successfully created.</td>
</tr>
<tr>
<td>error</td>
<td>An error occurs when you try to create an EVS snapshot.</td>
</tr>
<tr>
<td>deleting</td>
<td>The EVS snapshot is being deleted.</td>
</tr>
<tr>
<td>error_deleting</td>
<td>An error occurs when you try to delete an EVS snapshot.</td>
</tr>
</tbody>
</table>
### EVS Snapshot Status

<table>
<thead>
<tr>
<th>Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rollbacking</td>
<td>The EVS snapshot is rolling back data.</td>
</tr>
<tr>
<td></td>
<td><strong>NOTE</strong></td>
</tr>
<tr>
<td></td>
<td>- When you roll back a snapshot to an EVS disk, you can only roll back the</td>
</tr>
<tr>
<td></td>
<td>snapshot to the source EVS disk. Rollback to a specified disk is not possible.</td>
</tr>
<tr>
<td></td>
<td>- You can roll back an EVS disk from a snapshot only when the disk is in the</td>
</tr>
<tr>
<td></td>
<td>available or error_rollbacking state.</td>
</tr>
<tr>
<td>backing-up</td>
<td>The EVS snapshot is being created from a backup via a native OpenStack API.</td>
</tr>
<tr>
<td></td>
<td>The system is automatically creating the EVS snapshot when an EVS disk is</td>
</tr>
<tr>
<td></td>
<td>created from a backup via a VBS API.</td>
</tr>
</tbody>
</table>

### A.5 EVS Replication Pair Status (Deprecated)

<table>
<thead>
<tr>
<th>EVS Replication Pair Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>creating</td>
<td>The EVS replication pair is being created.</td>
</tr>
<tr>
<td>available</td>
<td>The EVS replication pair is successfully created and is available for use.</td>
</tr>
<tr>
<td>error</td>
<td>An error occurs when you try to create an EVS replication pair.</td>
</tr>
<tr>
<td>deleting</td>
<td>The EVS replication pair is being deleted.</td>
</tr>
<tr>
<td>error_deleting</td>
<td>An error occurs when you try to delete an EVS replication pair.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EVS Replication Pair Replication Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>active</td>
<td>The replication status of the EVS replication pair is normal, and the data in</td>
</tr>
<tr>
<td></td>
<td>the production disk is consistent with the data in the DR disk.</td>
</tr>
<tr>
<td>active-stopped</td>
<td>The replication status of the EVS replication pair is paused, and the data in</td>
</tr>
<tr>
<td></td>
<td>the production disk is consistent with the data in the DR disk.</td>
</tr>
<tr>
<td>copying</td>
<td>The data in the two disks of the EVS replication pair is being synchronized.</td>
</tr>
</tbody>
</table>
## EVS Replication Pair Replication Status

<table>
<thead>
<tr>
<th>Replication Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>inactive</td>
<td>The replication status of the EVS replication pair is paused, or the data replication is interrupted. Data in the two disks is inconsistent and needs to be synchronized.</td>
</tr>
<tr>
<td>error</td>
<td>The replication status of the EVS replication pair becomes abnormal.</td>
</tr>
</tbody>
</table>

## A.6 Replication Consistency Group Status (Deprecated)

<table>
<thead>
<tr>
<th>Replication Consistency Group Status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>creating</td>
<td>The replication consistency group is being created.</td>
</tr>
<tr>
<td>available</td>
<td>The replication consistency group is successfully created and is available for use.</td>
</tr>
<tr>
<td>error</td>
<td>An error occurs when you try to create a replication consistency group.</td>
</tr>
<tr>
<td>deleting</td>
<td>The replication consistency group is being deleted.</td>
</tr>
<tr>
<td>updating</td>
<td>The replication consistency group is being updated. The update includes adding EVS replication pairs to and deleting EVS replication pairs from the replication consistency group.</td>
</tr>
<tr>
<td>reversing</td>
<td>The replication consistency group is being migrated as planned.</td>
</tr>
<tr>
<td>error_reversing</td>
<td>An error occurs during a planned migration of the replication consistency group.</td>
</tr>
<tr>
<td>failovering</td>
<td>The failover of the replication consistency group is in progress.</td>
</tr>
<tr>
<td>failovered</td>
<td>The replication consistency group failover is successful.</td>
</tr>
<tr>
<td>error_failovering</td>
<td>An error occurs during a failover of the replication consistency group.</td>
</tr>
<tr>
<td>error_deleting</td>
<td>An error occurs during the deletion of the replication consistency group.</td>
</tr>
<tr>
<td>Replication Consistency Group Replication Status</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>active</td>
<td>The replication status of the replication consistency group is normal, and the data in production disks is consistent with the data in DR disks.</td>
</tr>
<tr>
<td>active-stopped</td>
<td>The replication status of the replication consistency group is paused, and the data between production disks and DR disks within the group is inconsistent.</td>
</tr>
<tr>
<td>copying</td>
<td>The data of the replication consistency group is being synchronized.</td>
</tr>
<tr>
<td>inactive</td>
<td>The replication status of the replication consistency group is paused. The data between production disks and DR disks within the group is inconsistent and needs to be synchronized.</td>
</tr>
<tr>
<td>error</td>
<td>The replication status of the replication consistency group becomes abnormal.</td>
</tr>
</tbody>
</table>

### A.7 Details of EVS Replication failure_detail Values (Deprecated)

#### EVS Replication Pair

<table>
<thead>
<tr>
<th>failure_detail Value</th>
<th>Description</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>37100041</td>
<td>Failed to create the EVS replication pair because the production disk capacity is inconsistent with the DR disk capacity.</td>
<td>The production disk capacity is inconsistent with the DR disk capacity.</td>
<td>Ensure that the capacities of the production and DR disks are consistent before you create the EVS replication pair.</td>
</tr>
<tr>
<td>37100043</td>
<td>The operation fails because messages failed to be sent to the peer AZ.</td>
<td>A communication error occurred.</td>
<td>Contact technical support to check whether the link status is normal.</td>
</tr>
<tr>
<td>37100044</td>
<td>Failed to create the EVS replication pair because the specified production disk is a lazyloading EVS disk.</td>
<td>Lazyloading EVS disks cannot be used as member disks of EVS replication pairs.</td>
<td>Wait until the lazyloading process is complete and try again. If the fault persists, contact technical support.</td>
</tr>
<tr>
<td>failure_detail Value</td>
<td>Description</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>37100045</td>
<td>Failed to create the EVS replication pair because the specified DR disk is a lazyloading EVS disk.</td>
<td>Lazyloading EVS disks cannot be used as member disks of EVS replication pairs.</td>
<td>Wait until the lazyloading process is complete and try again. If the fault persists, contact technical support.</td>
</tr>
<tr>
<td>37100048</td>
<td>Failed to create the EVS replication pair because the specified production disk does not exist.</td>
<td>The specified production disk does not exist.</td>
<td>Specify an existing production disk.</td>
</tr>
<tr>
<td>37100050</td>
<td>Failed to create the EVS replication pair because the specified DR disk does not exist.</td>
<td>The specified DR disk does not exist.</td>
<td>Specify an existing DR disk.</td>
</tr>
<tr>
<td>37100053</td>
<td>Failed to create the EVS replication pair because the specified production disk has been used in another EVS replication pair.</td>
<td>The specified production disk is the member disk in another EVS replication pair.</td>
<td>Specify a production disk that has not been used by another EVS replication pair.</td>
</tr>
<tr>
<td>37100054</td>
<td>Failed to create the EVS replication pair because the specified DR disk has been used in another EVS replication pair.</td>
<td>The specified DR disk is the member disk in another EVS replication pair.</td>
<td>Specify a DR disk that has not been used by another EVS replication pair.</td>
</tr>
<tr>
<td>37100058</td>
<td>Failed to create the EVS replication pair because the DR disk has been attached to a server and the server is in the Running state.</td>
<td>The specified DR disk has been attached to a server and the server is in the Running state.</td>
<td>Stop the server, or specify a DR disk that has not been attached to any server.</td>
</tr>
<tr>
<td>37100177</td>
<td>Failed to create the EVS replication pair because the storage pool status of the primary AZ is abnormal.</td>
<td>The storage pool status of the primary AZ is abnormal.</td>
<td>Create the EVS replication pair when the storage pool status is normal. If the fault persists, contact technical support.</td>
</tr>
<tr>
<td>failure_detail Value</td>
<td>Description</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>37100178</td>
<td>Failed to create the EVS replication pair because the storage pool status of the secondary AZ is abnormal.</td>
<td>The storage pool status of the secondary AZ is abnormal.</td>
<td>Create the EVS replication pair when the storage pool status is normal. If the fault persists, contact technical support.</td>
</tr>
<tr>
<td>37000212</td>
<td>System internal processing failure.</td>
<td>An internal system error occurred.</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>37000216</td>
<td>The system is busy. Try again later.</td>
<td>The system is busy. Try again later.</td>
<td>Try again later. If the fault persists, contact technical support.</td>
</tr>
</tbody>
</table>

### Replication Consistency Group

**Table A-2 Details of the failure_detail values for replication consistency groups**

<table>
<thead>
<tr>
<th>failure_detail Value</th>
<th>Description</th>
<th>Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>37100017</td>
<td>Failed to create the replication consistency group because the number of replication consistency groups in the primary AZ has reached the upper limit.</td>
<td>The number of replication consistency groups in the primary AZ has reached the upper limit.</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>37100043</td>
<td>The operation fails because messages failed to be sent to the peer AZ.</td>
<td>The communication between the primary AZ and secondary AZ fails.</td>
<td>Contact technical support to check whether the link status is normal.</td>
</tr>
<tr>
<td>37100159</td>
<td>Failed to create the replication consistency group because the number of replication consistency groups in the secondary AZ has reached the upper limit.</td>
<td>The number of replication consistency groups in the secondary AZ has reached the upper limit.</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>37000212</td>
<td>System internal processing failure.</td>
<td>An internal system error occurred.</td>
<td>Contact technical support.</td>
</tr>
<tr>
<td>failure_detail</td>
<td>Description</td>
<td>Cause</td>
<td>Solution</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>37000216</td>
<td>The system is busy. Try again later.</td>
<td>The system is busy. Try again later.</td>
<td>Try again later. If the fault persists, contact technical support.</td>
</tr>
</tbody>
</table>

### A.8 API Permissions

#### EVS Disk

<table>
<thead>
<tr>
<th>API</th>
<th>API Function</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST /v2/{project_id}/cloudvolumes</td>
<td>Create EVS disks.</td>
<td>evs:volumes:create</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes</td>
<td>Create EVS disks (OpenStack Cinder API).</td>
<td>evs:volumes:create, evs:volumes:get</td>
</tr>
<tr>
<td>POST /v2/{project_id}/cloudvolumes/{volume_id}/action</td>
<td>Expand the capacity of an EVS disk.</td>
<td>evs:volumes:extend</td>
</tr>
<tr>
<td>GET /v2/{project_id}/cloudvolumes</td>
<td>Query EVS disks.</td>
<td>evs:volumes:list</td>
</tr>
<tr>
<td>GET /v2/{project_id}/volumes</td>
<td>Query EVS disks (OpenStack Cinder API).</td>
<td>evs:volumes:list</td>
</tr>
<tr>
<td>GET /v2/{project_id}/cloudvolumes/detail</td>
<td>Query details of all EVS disks.</td>
<td>evs:volumes:list</td>
</tr>
<tr>
<td>GET /v2/{project_id}/os-vendor-volumes/detail</td>
<td>Query EVS disk details by service.</td>
<td>evs:volumes:list</td>
</tr>
<tr>
<td>API</td>
<td>API Function</td>
<td>Permissions</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>GET /v2/{project_id}/volumes/detail</td>
<td>Query details of all EVS disks (OpenStack Cinder API).</td>
<td>evs:volumes:list</td>
</tr>
<tr>
<td>GET /v2/{project_id}/os-vendor-volumes/{volume_id}</td>
<td>Query details of an EVS disk.</td>
<td>evs:volumes:get</td>
</tr>
<tr>
<td>GET /v2/{project_id}/volumes/{volume_id}</td>
<td>Query details of an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:get</td>
</tr>
<tr>
<td>DELETE /v2/{project_id}/cloudvolumes/{volume_id}</td>
<td>Delete an EVS disk.</td>
<td>evs:volumes:delete</td>
</tr>
<tr>
<td>DELETE /v2/{project_id}/volumes/{volume_id}</td>
<td>Delete an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:delete evs:volumes:get</td>
</tr>
<tr>
<td>PUT /v2/{project_id}/cloudvolumes/{volume_id}</td>
<td>Update EVS disk information.</td>
<td>evs:volumes:update</td>
</tr>
<tr>
<td>PUT /v2/{project_id}/volumes/{volume_id}</td>
<td>Update EVS disk information (OpenStack Cinder API).</td>
<td>evs:volumes:update evs:volumes:get</td>
</tr>
<tr>
<td>PUT /v2/{project_id}/volumes/{volume_id}/metadata/{key}</td>
<td>Update a piece of EVS disk metadata (OpenStack Cinder API).</td>
<td>evs:volumes:update evs:volumes:get</td>
</tr>
<tr>
<td>PUT /v2/{project_id}/volumes/{volume_id}/metadata</td>
<td>Update the metadata of an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:update evs:volumes:get</td>
</tr>
<tr>
<td>GET /v2/{project_id}/volumes/{volume_id}/metadata/{key}</td>
<td>Query a piece of EVS disk metadata (OpenStack Cinder API).</td>
<td>evs:volumes:get</td>
</tr>
<tr>
<td>DELETE /v2/{project_id}/volumes/{volume_id}/metadata/{key}</td>
<td>Delete a piece of EVS disk metadata (OpenStack Cinder API).</td>
<td>evs:volumes:delete evs:volumes:get</td>
</tr>
<tr>
<td>GET /v2/{project_id}/volumes/{volume_id}/metadata</td>
<td>Query the metadata of an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:get</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/metadata</td>
<td>Add the metadata of an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:update evs:volumes:get</td>
</tr>
<tr>
<td>GET /v2/{project_id}/types</td>
<td>Query EVS disk types (OpenStack Cinder API).</td>
<td>evs:types:get</td>
</tr>
<tr>
<td>GET /v2/{project_id}/types/{type_id}</td>
<td>Query details of an EVS disk type (OpenStack Cinder API).</td>
<td>evs:types:get</td>
</tr>
</tbody>
</table>
### API

<table>
<thead>
<tr>
<th>API</th>
<th>API Function</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET /v2/{project_id}/os-quota-sets/{project_id}</td>
<td>Query tenant quotas (OpenStack Cinder API).</td>
<td>evs:quotas:get</td>
</tr>
<tr>
<td>GET /v2/{project_id}/extensions</td>
<td>Query API extensions (OpenStack Cinder API).</td>
<td>None</td>
</tr>
<tr>
<td>GET /v2/{project_id}/os-availability-zone</td>
<td>Query information of all AZs (OpenStack Cinder API).</td>
<td>None</td>
</tr>
<tr>
<td>GET /</td>
<td>Query API versions (OpenStack Cinder API).</td>
<td>None</td>
</tr>
<tr>
<td>GET /v2 or GET /v2/</td>
<td>Query v2 API versions (OpenStack Cinder API).</td>
<td>None</td>
</tr>
</tbody>
</table>

### EVS Disk Actions

<table>
<thead>
<tr>
<th>API</th>
<th>API Function</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/action action=&quot;os-extend&quot;</td>
<td>Expand the capacity of an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:extend evs:volumes:get</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/action action=&quot;os-volume_upload_image&quot;</td>
<td>Export the EVS disk data as an image (OpenStack Cinder API).</td>
<td>evs:volumes:uploadImage</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/action action=&quot;os-attach&quot;</td>
<td>Attach an EVS disk (deprecated).</td>
<td>evs:volumes:attach evs:volumes:get</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/action action=&quot;os-detach&quot;</td>
<td>Detach an EVS disk (deprecated).</td>
<td>evs:volumes:detach evs:volumes:get</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/action action=&quot;os-reserve&quot;</td>
<td>Reserve an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:attach</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/action action=&quot;os-unreserve&quot;</td>
<td>Cancel reservation of an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:attach</td>
</tr>
<tr>
<td>POST /v2/{project_id}/volumes/{volume_id}/action action=&quot;os-set_bootable&quot;</td>
<td>Set the bootable flag for an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:update</td>
</tr>
<tr>
<td>API</td>
<td>API Function</td>
<td>Permissions</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>POST <code>/v2/{project_id}/volumes/{volume_id}/action</code> action=&quot;os-update_readonly_flag&quot;</td>
<td>Set the read-only attribute for an EVS disk (OpenStack Cinder API).</td>
<td>evs:volumes:update</td>
</tr>
</tbody>
</table>

### EVS Snapshot

<table>
<thead>
<tr>
<th>API</th>
<th>API Function</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST <code>/v2/{project_id}/snapshots</code></td>
<td>Create an EVS snapshot (OpenStack Cinder API).</td>
<td>evs:vlons:delete evs:volumes:get</td>
</tr>
<tr>
<td>GET <code>/v2/{project_id}/snapshots</code></td>
<td>Query EVS snapshots (OpenStack Cinder API).</td>
<td>evs:vlons:list</td>
</tr>
<tr>
<td>GET <code>/v2/{project_id}/snapshots/detail</code></td>
<td>Query details of EVS snapshots (OpenStack Cinder API).</td>
<td>evs:vlons:list</td>
</tr>
<tr>
<td>PUT <code>/v2/{project_id}/snapshots/{snapshot_id}</code></td>
<td>Update an EVS snapshot (OpenStack Cinder API).</td>
<td>evs:vlons:update evs:vlons:get</td>
</tr>
<tr>
<td>DELETE <code>/v2/{project_id}/snapshots/{snapshot_id}</code></td>
<td>Delete an EVS snapshot (OpenStack Cinder API).</td>
<td>evs:vlons:delete evs:vlons:get evs:volumes:get</td>
</tr>
</tbody>
</table>

### EVS Tag

<table>
<thead>
<tr>
<th>API</th>
<th>API Function</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>GET <code>/v2/{project_id}/os-vendor-tags/{resource_type}</code></td>
<td>Obtain all EVS tags of a tenant.</td>
<td>● EVS disk: evs:volumeTags:list ● Backup: evs:backupTags:list ● Snapshot: evs:snapshotTags:list</td>
</tr>
<tr>
<td>API</td>
<td>API Function</td>
<td>Permissions</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| POST /v2/{project_id}/os-vendor-tags/{resource_type}/ {resource_id} | Add or update tags for an EVS resource (deprecated). | ● EVS disk: evs:volumeTags:create  
● Backup: evs:backupTags:create  
● Snapshot: evs:snapshotTags:create |
| GET /v2/{project_id}/os-vendor-tags/{resource_type}/ {resource_id} | Obtain the tags of a specified EVS resource (deprecated). | ● EVS disk: evs:volumeTags:getById  
● Backup: evs:backupTags:getById  
● Snapshot: evs:snapshotTags:getById |
| PUT /v2/{project_id}/os-vendor-tags/{resource_type}/ {resource_id} | Reset the tags of an EVS resource (deprecated). | ● EVS disk: evs:volumeTags:update  
● Backup: evs:backupTags:update  
● Snapshot: evs:snapshotTags:update |
| POST /v2/{project_id}/os-vendor-tags/{resource_type}/ {resource_id}/action | Batch delete the tags for an EVS resource (deprecated). | ● EVS disk: evs:volumeTags:delete  
evs:volumeTags:getById  
● Backup: evs:backupTags:delete  
evs:backupTags:getById  
● Snapshot: evs:snapshotTags:delete  
evs:snapshotTags:getById |
| DELETE /v2/{project_id}/os-vendor-tags/{resource_type}/ {resource_id}/{key} | Delete the tags of an EVS resource by key (deprecated). | ● EVS disk: evs:volumeTags:getById  
evs:volumeTags:delete  
● Backup: evs:backupTags:getById  
evs:backupTags:delete  
● Snapshot: evs:snapshotTags:getById  
evs:snapshotTags:delete |
<table>
<thead>
<tr>
<th>API</th>
<th>API Function</th>
<th>Permissions</th>
</tr>
</thead>
</table>
| PUT /v2/{project_id}/os-vendor-tags/{resource_type}/{resource_id}/{key} | Update the tags of an EVS resource by key (deprecated). | ● EVS disk: evs:volumeTags:update  
● Backup: evs:backupTags:update  
● Snapshot: evs:snapshotTags:update |
| POST /v2/{project_id}/os-vendor-volumes/{volume_id}/tags/action | Batch delete the tags for a specified EVS disk. | evs:volumeTags:delete |
| GET /v2/{project_id}/os-vendor-volumes/{volume_id}/tags | Query the tags of an EVS disk. | evs:volumeTags:getById |
| POST /v2/{project_id}/os-vendor-volumes/{volume_id}/tags/action | Batch add tags for a specified EVS disk. | evs:volumeTags:create |
| POST /v2/{project_id}/os-vendor-volumes/resource_instances/action | Query details of EVS disks by tag. | evs:volumeTags:get |

### EVS Disk Transfer

<table>
<thead>
<tr>
<th>API</th>
<th>API Function</th>
<th>Permissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST /v2/{project_id}/os-volume-transfer</td>
<td>Create an EVS disk transfer.</td>
<td>evs:transfers:create</td>
</tr>
<tr>
<td>GET /v2/{project_id}/os-volume-transfer</td>
<td>Query all EVS disk transfers of a tenant.</td>
<td>evs:transfers:list</td>
</tr>
<tr>
<td>GET /v2/{project_id}/os-volume-transfer/detail</td>
<td>Query details of all EVS disk transfers of a tenant.</td>
<td>evs:transfers:list</td>
</tr>
<tr>
<td>GET /v2/{project_id}/os-volume-transfer/{transfer_id}</td>
<td>Query details of an EVS disk transfer.</td>
<td>evs:transfers:get</td>
</tr>
<tr>
<td>POST /v2/{project_id}/os-volume-transfer/{transfer_id}/accept</td>
<td>Accept an EVS disk transfer.</td>
<td>evs:transfers:accept</td>
</tr>
<tr>
<td>DELETE /v2/{project_id}/os-volume-transfer/{transfer_id}</td>
<td>Delete an EVS disk transfer.</td>
<td>evs:transfers:delete</td>
</tr>
</tbody>
</table>
### Change History

<table>
<thead>
<tr>
<th>Released On</th>
<th>What's New</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-02-15</td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>• Deprecated EVS replication APIs.</td>
</tr>
<tr>
<td>2018-11-30</td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>• Changes relate to the Queens upgrade are listed as follows:</td>
</tr>
<tr>
<td></td>
<td>- Modified descriptions of the request filter parameters, such as name and with_count in 7.1.4 Querying EVS Disks.</td>
</tr>
<tr>
<td></td>
<td>- Modified descriptions of the request filter parameters, such as name and with_count in 7.1.5 Querying Details About All EVS Disks.</td>
</tr>
<tr>
<td></td>
<td>- Modified descriptions of the request filter parameters, such as name and with_count in 7.3.4 Querying EVS Snapshots.</td>
</tr>
<tr>
<td></td>
<td>- Modified descriptions of the request filter parameters, such as name and with_count in 7.3.5 Querying Details About EVS Snapshots.</td>
</tr>
<tr>
<td>Released On</td>
<td>What's New</td>
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<tr>
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<td>------------</td>
</tr>
<tr>
<td>2018-09-30</td>
<td>Added the following content:</td>
</tr>
<tr>
<td></td>
<td>● Changes relate to the Queens upgrade are listed as follows:</td>
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<td></td>
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<tr>
<td>2018-07-10</td>
<td>Added the following content:</td>
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<tr>
<td></td>
<td>● A.8 API Permissions</td>
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<tr>
<td>2018-05-30</td>
<td>Added the following content:</td>
</tr>
<tr>
<td></td>
<td>● 4.1.4 Querying Loading Progress of a Lazyloading EVS Disk</td>
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<tr>
<td></td>
<td>Modified the following content:</td>
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<tr>
<td></td>
<td>● Modified the constraints of tag keys and tag values.</td>
</tr>
<tr>
<td>2018-03-30</td>
<td>Added the following content:</td>
</tr>
<tr>
<td></td>
<td>● Added support for v3 APIs.</td>
</tr>
<tr>
<td></td>
<td>● Added sections Querying EVS Disk Details by Service and Querying Details About a Single EVS Disk.</td>
</tr>
<tr>
<td></td>
<td>● Added sections Querying the Number of EVS Disks by Tag and Querying Details of EVS Disks by Tag.</td>
</tr>
<tr>
<td></td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>● Modified the constraints of tag keys and tag values.</td>
</tr>
<tr>
<td>2018-03-15</td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>● Modified the constraints in 5.5.11 Expanding EVS Disks in a Replication Consistency Group (Deprecated).</td>
</tr>
<tr>
<td></td>
<td>● Provided an address for downloading the sample code in section Sample Code.</td>
</tr>
<tr>
<td>2018-02-23</td>
<td>Added the following content:</td>
</tr>
<tr>
<td></td>
<td>● Added constraints in 5.5.11 Expanding EVS Disks in a Replication Consistency Group (Deprecated).</td>
</tr>
<tr>
<td>Released On</td>
<td>What's New</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
</tr>
</tbody>
</table>
| 2018-02-08  | Modified the following content:  
|             | • Modified the reviewed issues in previous version. |
| 2018-01-31  | Added the following content:  
|             | • Added section **Exporting EVS Disk Data as an Image**.  
|             | Modified the following content:  
|             | • Modified the reviewed EVS replication issues.  
|             | • Modified the reviewed EVS disk transfer issues. |
| 2018-01-25  | Added the following content:  
|             | • 5.5.11 **Expanding EVS Disks in a Replication Consistency Group (Deprecated)**  
|             | • A.7 **Details of EVS Replication failure_detail Values (Deprecated)**  
|             | • Adds the descriptions of the `record_metadata` parameter. |
| 2018-01-19  | Added the following content:  
|             | • Added chapter **EVS Disk Transfer**. |
| 2017-12-01  | Modified the following content:  
|             | • Modified the reviewed EVS replication issues. |
| 2017-11-30  | Modified the following content:  
|             | • Modified the reviewed EVS replication issues. |
| 2017-10-30  | Added the following content:  
|             | • Added support for EVS replication APIs. |
| 2017-10-19  | Modified the following content:  
|             | • Deprecated the APIs in sections **Attaching an EVS Disk (Native OpenStack API)** and **Detaching an EVS Disk (Native OpenStack API)**. |
| 2017-09-30  | Added the following content:  
|             | • Added constraints on the expansion of **In-use** EVS disks. |
| 2017-08-18  | Modified the following content:  
|             | • Changed the format of example requests and responses. |
| 2017-07-30  | Added the following content:  
|             | • Added support for TMS APIs.  
|             | • Added support for the `co-p1` and `uh-l1` EVS disk types. |
| 2017-06-30  | Modified the following content:  
<p>|             | • Modified the description about fields <strong>availability_zone</strong>, <strong>name</strong>, and <strong>volume_type</strong> of the API used for creating EVS disks. |</p>
<table>
<thead>
<tr>
<th>Released On</th>
<th>What's New</th>
</tr>
</thead>
</table>
| 2017-06-05  | Added the following content:  
- Added the description that the __system__encrypted, __system__cmkid, and hw:passthrough fields are not supported if the EVS disk is created from a snapshot or an image.  
- Added the descriptions for the backup_id, source_volid, snapshot_id, and imageRef fields.  
- Added the description for the volume_type field used when EVS disks are created from snapshots. |
| 2017-06-01  | Added the following content:  
- Added the description that if the EVS disk is created from a snapshot or an image, the disk inherits the attributes from the source EVS disk of the snapshot or inherits the attributes from the image.  
Modified the following content:  
- Modified parameter rollback to be mandatory. |
| 2017-05-30  | Added the following content:  
- Added support for some native OpenStack APIs. |
| 2017-05-20  | Added the following content:  
- Added the description about restrictions of parameter name for the EVS snapshot. |
| 2017-05-10  | Added the following content:  
- Added parameter snapshot_id in section Creating an EVS Disk. |
| 2017-03-30  | Added the following content:  
- Added chapter EVS Snapshot.  
- Added sections EVS Disk Status and EVS Snapshot Status.  
- Added the shared disk feature and added the parameter description for the multiattach parameter.  
- Added the SCSI feature and added the parameter description for the hw:passthrough parameter. |
| 2017-02-22  | Added the following content:  
- Added sections Querying EVS Disk Types (Native OpenStack API) and Querying Details About an EVS Disk Type (Native OpenStack API).  
- Added support for the encryption function and added metadata parameter descriptions in section Creating an EVS Disk. |
| 2016-11-24  | Modified the following content:  
- Modified the operation for generating the AK and SK. |
<table>
<thead>
<tr>
<th>Released On</th>
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<tbody>
<tr>
<td>2016-09-30</td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>- Added a line for Workspace in the table of section <strong>Regions and Endpoints</strong>.</td>
</tr>
<tr>
<td>2016-08-25</td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Updating EVS Information</strong>.</td>
</tr>
<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Querying Details About All EVS Disks</strong>.</td>
</tr>
<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Querying Details About a Single EVS Disk</strong>.</td>
</tr>
<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Querying Task Information</strong>.</td>
</tr>
<tr>
<td>2016-07-30</td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>- Modified the parameter description for <strong>volume_type</strong> in section <strong>Creating an EVS Disk</strong>.</td>
</tr>
<tr>
<td>2016-07-15</td>
<td>Added the following content:</td>
</tr>
<tr>
<td></td>
<td>- Added the parameter description for shared disks in section <strong>Creating an EVS Disk</strong>.</td>
</tr>
<tr>
<td>2016-06-16</td>
<td>Modified the following content:</td>
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<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Updating EVS Information</strong>.</td>
</tr>
<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Querying Details About All EVS Disks</strong>.</td>
</tr>
<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Querying Details About a Single EVS Disk</strong>.</td>
</tr>
<tr>
<td>2016-06-02</td>
<td>Modified the following content:</td>
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<tr>
<td></td>
<td>- Modified the parameter description in section <strong>Creating an EVS Disk</strong>.</td>
</tr>
<tr>
<td>2016-04-14</td>
<td>Modified the following content:</td>
</tr>
<tr>
<td></td>
<td>- Modified the URL parameter description.</td>
</tr>
<tr>
<td></td>
<td>- Modified the procedure for making API calls for token authentication.</td>
</tr>
<tr>
<td></td>
<td>- Added the Identity and Access Management (IAM) service in section <strong>Regions and Endpoints</strong>.</td>
</tr>
<tr>
<td>2016-03-09</td>
<td>This issue is the first official release.</td>
</tr>
</tbody>
</table>