

# Scalable File Service

## API Reference

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|-------|------------|
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# Contents

- 1 Before You Start..... 1**
  - 1.1 Overview..... 1
  - 1.2 API Calling..... 1
  - 1.3 Endpoints..... 1
  - 1.4 Constraints..... 2
  - 1.5 Concepts..... 2
- 2 API Overview..... 4**
- 3 Calling APIs..... 7**
  - 3.1 Making an API Request..... 7
  - 3.2 Authentication..... 11
  - 3.3 Response..... 13
- 4 Calling General Purpose File System APIs..... 15**
  - 4.1 Constructing a Request..... 15
  - 4.2 Authentication..... 18
    - 4.2.1 User Signature Authentication..... 18
    - 4.2.2 Authentication of Signature in a Header..... 20
    - 4.2.3 Signature Generators..... 27
  - 4.3 Returned Values..... 28
- 5 Getting Started..... 30**
  - 5.1 Getting Started with SFS Capacity-Oriented..... 30
  - 5.2 Getting Started with SFS Turbo..... 31
  - 5.3 Getting Started with General Purpose File System..... 33
    - 5.3.1 Creating a File System..... 33
    - 5.3.2 Listing File Systems..... 35
- 6 SFS Capacity-Oriented APIs..... 39**
  - 6.1 API Version Queries..... 39
    - 6.1.1 Querying All API Versions..... 39
    - 6.1.2 Querying Details About an API Version..... 42
  - 6.2 File Systems..... 46
    - 6.2.1 Creating a Shared File System..... 46
    - 6.2.2 Querying All Shared File Systems..... 54

|                                                                                   |           |
|-----------------------------------------------------------------------------------|-----------|
| 6.2.3 Querying Details About All Shared File Systems.....                         | 58        |
| 6.2.4 Querying Details About a Shared File System.....                            | 64        |
| 6.2.5 Querying Mount Locations of a Shared File System.....                       | 69        |
| 6.2.6 Modifying a Shared File System.....                                         | 71        |
| 6.2.7 Deleting a Shared File System.....                                          | 77        |
| 6.3 File System Access Rules.....                                                 | 78        |
| 6.3.1 Adding a File System Access Rule.....                                       | 78        |
| 6.3.2 Deleting a File System Access Rule.....                                     | 82        |
| 6.3.3 Querying File System Access Rules.....                                      | 84        |
| 6.4 Quota Management.....                                                         | 87        |
| 6.5 Expansion and Shrinking.....                                                  | 90        |
| 6.5.1 Expanding a Shared File System.....                                         | 90        |
| 6.5.2 Shrinking a Shared File System.....                                         | 92        |
| 6.6 AZ.....                                                                       | 94        |
| 6.6.1 Querying Availability Zones.....                                            | 94        |
| <b>7 SFS Turbo APIs.....</b>                                                      | <b>97</b> |
| 7.1 Lifecycle Management.....                                                     | 97        |
| 7.1.1 Creating a File System.....                                                 | 97        |
| 7.1.2 Querying Details About a File System.....                                   | 108       |
| 7.1.3 Deleting a File System.....                                                 | 114       |
| 7.1.4 Listing File Systems.....                                                   | 115       |
| 7.1.5 Expanding the Capacity of a File System.....                                | 122       |
| 7.2 Connection Management.....                                                    | 126       |
| 7.2.1 Changing the Security Group Associated with a File System.....              | 126       |
| 7.3 Tag Management.....                                                           | 128       |
| 7.3.1 Adding a Tag to a File System.....                                          | 128       |
| 7.3.2 Querying All Tags of a File System.....                                     | 131       |
| 7.3.3 Deleting a Tag from a File System.....                                      | 133       |
| 7.3.4 Batch Adding Tags to a File System.....                                     | 135       |
| 7.3.5 Querying Tags of All File Systems of a Tenant.....                          | 138       |
| 7.3.6 Querying File Systems by Tag.....                                           | 140       |
| 7.4 Name Management.....                                                          | 146       |
| 7.4.1 Changing the Name of a File System.....                                     | 146       |
| 7.5 File System Management.....                                                   | 148       |
| 7.5.1 Creating an Asynchronous Task for a File System.....                        | 148       |
| 7.5.2 Listing Asynchronous Tasks of a File System.....                            | 152       |
| 7.5.3 Obtaining Details About an Asynchronous Task of a File System.....          | 157       |
| 7.5.4 Deleting an Asynchronous Task of a File System.....                         | 162       |
| 7.5.5 Obtaining IP Addresses of the Clients Who Have Mounted the File System..... | 166       |
| 7.6 Storage Interworking Management.....                                          | 169       |
| 7.6.1 Adding a Storage Backend.....                                               | 169       |
| 7.6.2 Listing Storage Backends.....                                               | 182       |

|                                                                          |            |
|--------------------------------------------------------------------------|------------|
| 7.6.3 Obtaining Details About a Storage Backend.....                     | 190        |
| 7.6.4 Removing a Storage Backend.....                                    | 197        |
| 7.6.5 Update the Attributes of a Storage Backend.....                    | 200        |
| 7.6.6 Updating the Auto Synchronization Policy of a Storage Backend..... | 208        |
| 7.6.7 Creating a Data Import or Export Task.....                         | 214        |
| 7.6.8 Querying Details About a Data Import or Export Task.....           | 222        |
| 7.6.9 Listing Data Import and Export Tasks.....                          | 226        |
| 7.6.10 Deleting a Data Import or Export Task.....                        | 230        |
| 7.6.11 Updating the Cold Data Eviction Duration of a File System.....    | 233        |
| 7.7 Directory Management.....                                            | 236        |
| 7.7.1 Creating Quota Limits for a Directory.....                         | 236        |
| 7.7.2 Updating Quota Limits of a Directory.....                          | 239        |
| 7.7.3 Querying Quota Limits of a Directory.....                          | 243        |
| 7.7.4 Removing Quota Limits from a Directory.....                        | 246        |
| 7.7.5 Creating a Directory.....                                          | 248        |
| 7.7.6 Checking Whether a Directory Exists.....                           | 251        |
| 7.7.7 Deleting a Directory.....                                          | 255        |
| 7.7.8 Querying the Usage of a Directory.....                             | 257        |
| 7.8 Permissions Management.....                                          | 261        |
| 7.8.1 Joining an AD Domain.....                                          | 261        |
| 7.8.2 Querying the AD Domain Configuration.....                          | 264        |
| 7.8.3 Modifying the AD Domain Configuration.....                         | 267        |
| 7.8.4 Leaving the AD Domain.....                                         | 271        |
| 7.8.5 Creating a Permission Rule.....                                    | 274        |
| 7.8.6 Querying Permission Rules of a File System.....                    | 279        |
| 7.8.7 Querying a Permission Rule of a File System.....                   | 282        |
| 7.8.8 Modifying a Permission Rule.....                                   | 285        |
| 7.8.9 Deleting a Permission Rule.....                                    | 289        |
| 7.8.10 Binding to an LDAP Server.....                                    | 291        |
| 7.8.11 Querying the LDAP Configuration.....                              | 295        |
| 7.8.12 Modifying the LDAP Configuration.....                             | 298        |
| 7.8.13 Deleting the LDAP Configuration.....                              | 302        |
| 7.9 Task Management.....                                                 | 304        |
| 7.9.1 Querying the Status of a Task.....                                 | 304        |
| 7.10 Tenant Quota Management.....                                        | 309        |
| 7.10.1 Querying Tenant Quotas.....                                       | 309        |
| <b>8 General Purpose File System APIs.....</b>                           | <b>313</b> |
| 8.1 File Systems.....                                                    | 313        |
| 8.1.1 Creating a File System.....                                        | 313        |
| 8.1.2 Deleting a File System.....                                        | 315        |
| 8.1.3 Listing File Systems.....                                          | 316        |
| 8.2 File System Access Rules.....                                        | 318        |

|                                                          |            |
|----------------------------------------------------------|------------|
| 8.2.1 Configuring a File System ACL.....                 | 318        |
| 8.2.2 Obtaining File System ACL Information.....         | 321        |
| 8.2.3 Deleting a File System ACL.....                    | 323        |
| 8.3 Tags.....                                            | 324        |
| 8.3.1 Batch Adding Tags to a Resource.....               | 324        |
| 8.3.2 Batch Deleting Tags from a Resource.....           | 328        |
| 8.3.3 Querying Tags of a Resource.....                   | 329        |
| 8.3.4 Querying Resources by Tag.....                     | 332        |
| 8.3.5 Querying the Number of Resources by Tag.....       | 337        |
| 8.3.6 Querying Tags in a Project.....                    | 341        |
| <b>9 Permissions Policies and Supported Actions.....</b> | <b>344</b> |
| 9.1 Introduction.....                                    | 344        |
| 9.2 Supported Actions.....                               | 345        |
| 9.2.1 SFS Capacity-Oriented File System Actions.....     | 345        |
| 9.2.2 SFS Turbo File System Actions.....                 | 350        |
| <b>10 Common Parameters.....</b>                         | <b>363</b> |
| 10.1 SFS Turbo File System Statuses.....                 | 363        |
| 10.2 SFS Turbo File System Substatuses.....              | 363        |
| <b>11 Appendix.....</b>                                  | <b>364</b> |
| 11.1 Status Codes.....                                   | 364        |
| 11.2 SFS Turbo Error Codes.....                          | 365        |
| 11.3 General Purpose File System Error Codes.....        | 370        |
| 11.4 Obtaining Access Keys (AK/SK).....                  | 377        |
| 11.5 Obtaining a Project ID.....                         | 378        |

# 1 Before You Start

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## 1.1 Overview

Welcome to *Scalable File Service API Reference*. Scalable File Service (SFS) is a network attached storage (NAS) service that provides scalable, high-performance file storage. With SFS, you can enjoy shared file access spanning multiple Elastic Cloud Servers (ECSs), Bare Metal Servers (BMSs), and containers created on Cloud Container Engine (CCE).

This document describes how to use application programming interfaces (APIs) to perform operations on SFS resources, such as creating, querying, deleting, and updating a file system. For details about all supported operations, see [API Overview](#).

If you plan to access SFS through an API, ensure that you are familiar with SFS concepts. For details, see [Service Overview](#).

## 1.2 API Calling

SFS Capacity-Oriented and SFS Turbo support Representational State Transfer (REST) APIs, allowing you to call APIs using HTTPS. For details about API calling, see [Calling APIs](#).

General Purpose File System supports Representational State Transfer (REST) APIs, allowing you to call APIs using HTTP or HTTPS. For details about API calling, see [Calling General Purpose File System APIs](#).

## 1.3 Endpoints

An endpoint is the **request address** for calling an API. Endpoints vary depending on services and regions.

For the endpoints of SFS Turbo, see [Regions and Endpoints](#).

For the endpoints of General Purpose File System, see the following table.

**Table 1-1** Regions and endpoints

| Region Name           | Region ID      | Endpoint                              | Protocol |
|-----------------------|----------------|---------------------------------------|----------|
| CN North-Beijing4     | cn-north-4     | sfs3.cn-north-4.myhuaweicloud.com     | HTTPS    |
| CN East-Shanghai1     | cn-east-3      | sfs3.cn-east-3.myhuaweicloud.com      | HTTPS    |
| CN Southwest-Guiyang1 | cn-southwest-2 | sfs3.cn-southwest-2.myhuaweicloud.com | HTTPS    |
| CN South-Guangzhou    | cn-south-1     | sfs3.cn-south-1.myhuaweicloud.com     | HTTPS    |
| CN-Hong Kong          | ap-southeast-1 | sfs3.ap-southeast-1.myhuaweicloud.com | HTTPS    |

## 1.4 Constraints

- The numbers of file systems that you can create and their capacities are determined by your quotas. To view or increase the quotas, see [Quotas](#).
- For detailed constraints, see the constraints described in specific APIs.
- General Purpose File System APIs can only be called on a private network, not a public network.

## 1.5 Concepts

- Account  
An account is created upon successful registration. The account has full access permissions for all of its cloud services and resources. It can be used to reset user passwords and grant user permissions. The account is a payment entity, which should not be used directly to perform routine management. For security purposes, create Identity and Access Management (IAM) users and grant them permissions for routine management.
- User  
An IAM user is created by an account in IAM to use cloud services. Each IAM user has its own identity credentials (password and access keys).  
API authentication requires information such as the account name, username, and password.
- Region  
Regions are divided based on geographical location and network latency. Public services, such as Elastic Cloud Server (ECS), Elastic Volume Service

(EVS), Object Storage Service (OBS), Virtual Private Cloud (VPC), Elastic IP (EIP), and Image Management Service (IMS), are shared within the same region. Regions are classified into universal regions and dedicated regions. A universal region provides universal cloud services for common tenants. A dedicated region provides specific services for specific tenants.

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

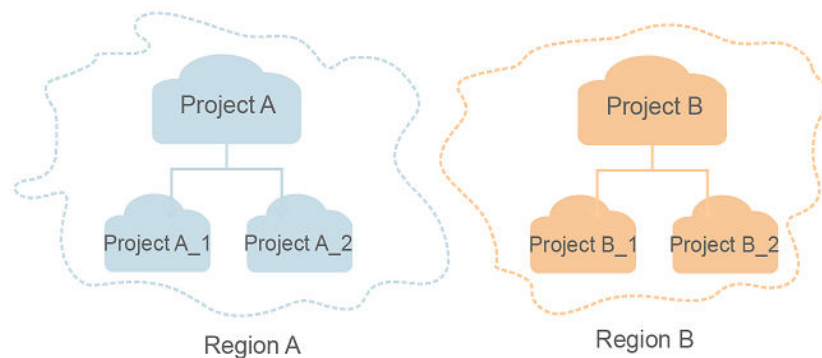
- AZ

An AZ comprises of one or more physical data centers equipped with independent ventilation, fire, water, and electricity facilities. Computing, network, storage, and other resources in an AZ are logically divided into multiple clusters. AZs within a region are interconnected using high-speed optical fibers to allow you to build cross-AZ high-availability systems.

- Project

A project corresponds to a region. Default projects are defined to group and physically isolate resources (including computing, storage, and network resources) across regions. Users can be granted permissions in a default project to access all resources under their accounts in the region associated with the project. If you need more refined access control, create subprojects under a default project and create resources in subprojects. Then you can assign users the permissions required to access only the resources in the specific subprojects.

**Figure 1-1** Project isolation model



- Enterprise project

Enterprise projects group and manage resources across regions. Resources in different enterprise projects are logically isolated. An enterprise project can contain resources of multiple regions, and resources can be added to or removed from enterprise projects.

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

# 2 API Overview

APIs provided by SFS include SFS APIs, SFS Turbo APIs, and native OpenStack APIs.

These APIs allow you to use all SFS functions.

The call frequency limit of SFS Capacity-Oriented APIs is 400 calls/minute. If you call a large number of APIs at a time, some APIs may fail to be called. You are advised to evenly arrange API calls.

Some SFS Capacity-Oriented APIs are the same as those provided by OpenStack Manila of the Mitaka version. For details about how to use them, visit the community:

<https://docs.openstack.org/api-ref/shared-file-system/>

For details about whether an SFS Capacity-Oriented API supports Enterprise Project, see [API Permissions](#).

**If the description about an API in this document differs from that in the community, the description in this document is used.**

## SFS Capacity-Oriented APIs

Table 2-1 API overview

| File System Type | Type                 | Category                 | Description                                                                                                                           |
|------------------|----------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| SFS              | Native OpenStack API | API version queries      | You can use APIs in this category to query the versions and details of all APIs.                                                      |
|                  |                      | File systems             | You can use APIs in this category to create shared file systems and obtain detailed information about them, such as the shared paths. |
|                  |                      | File system access rules | You can use APIs in this category to add, modify, and delete file system access rules, such as configuring VPC.                       |

| File System Type | Type | Category                         | Description                                                                                                                             |
|------------------|------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|                  |      | Limits management                | If the number of created shared file systems reaches the upper limit, you can increase quota by using APIs in this category.            |
|                  |      | Capacity expansion and reduction | If you want to change the capacity of a created shared file system, you can use APIs in this category to expand or reduce the capacity. |

### SFS Turbo APIs

By using the SFS Turbo APIs, you can create, delete, query SFS Turbo file systems as well as expanding the capacity of an SFS Turbo file system.

Table 2-2 API overview

| Type          | Category                        | Description                                                                                                                                                                                                                                                                                                      |
|---------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SFS Turbo API | Lifecycle management            | You can use APIs in this category to create or delete a file system, query file system details, list file systems, and expand the capacity of a file system.                                                                                                                                                     |
| SFS Turbo API | Connection management           | You can use the API in this category to change the security group of an SFS Turbo file system.                                                                                                                                                                                                                   |
| SFS Turbo API | Tag management                  | You can use APIs in this category to add a tag to or delete a tag from a file system, query tags of a file system, batch add tags to a file system, query tags of all file systems of a tenant, and query file systems by tag.                                                                                   |
| SFS Turbo API | Name management                 | You can use the API in this category to change the name of a file system.                                                                                                                                                                                                                                        |
| SFS Turbo API | File system management          | You can use APIs in this category to create an asynchronous task for a file system, list asynchronous tasks of a file system, obtain details about an asynchronous task of a file system, delete an asynchronous task of a file system, and obtain IP addresses of the clients who have mounted the file system. |
| SFS Turbo API | Storage interworking management | You can use APIs in this category to associate a directory in your SFS Turbo file system with an OBS bucket and create data import or export tasks to synchronize data.                                                                                                                                          |

| Type          | Category               | Description                                                                                                                                                                                                     |
|---------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SFS Turbo API | Directory management   | You can use APIs in this category to create, update, query, or delete quota limits of a directory, create or delete a directory, check whether a directory exists, and query the resource usage of a directory. |
| SFS Turbo API | Permissions management | You can use APIs in this category to manage the permissions of SFS Turbo file systems.                                                                                                                          |
| SFS Turbo API | Task management        | You can use the API in this category to query details about a task.                                                                                                                                             |

## General Purpose File System APIs

Table 2-3 API overview

| Type                            | Category                 | Description                                                                                 |
|---------------------------------|--------------------------|---------------------------------------------------------------------------------------------|
| General Purpose File System API | File systems             | You can use APIs in this category to create, delete, or list General Purpose File Systems.  |
| General Purpose File System API | File system access rules | You can use APIs in this category to configure, obtain, or delete file system access rules. |
| General Purpose File System API | Tags                     | You can use APIs in this category to add, delete, or query tags in batches.                 |

# 3 Calling APIs

## 3.1 Making an API Request

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

### Request URI

A request URI is in the following format:

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

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

**Table 3-1** URI parameter description

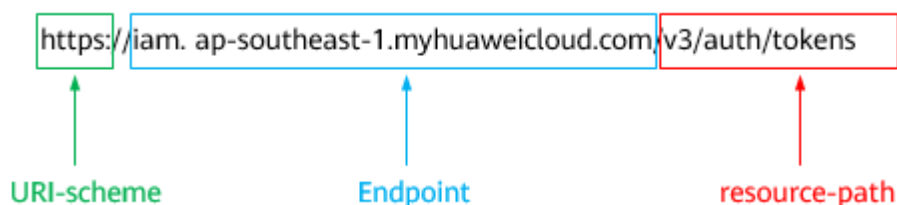
| Parameter     | Description                                                                                                                                                                                                                                                                                                     |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| URI-scheme    | Protocol used to transmit requests. All APIs use HTTPS.                                                                                                                                                                                                                                                         |
| Endpoint      | Domain name or IP address of the server bearing the REST service. The endpoint varies between services in different regions. It can be obtained from <a href="#">Regions and Endpoints</a> .<br>For example, the endpoint of IAM in region <b>CN-Hong Kong</b> is <b>iam.ap-southeast-1.myhuaweicloud.com</b> . |
| resource-path | Access path of an API for performing a specified operation. Obtain the path from the URI of an API. For example, the <b>resource-path</b> of the API used to obtain a user token is <b>/v3/auth/tokens</b> .                                                                                                    |

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

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

```
https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

**Figure 3-1** Example URI



**NOTE**

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

## Request Methods

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

**Table 3-2** HTTP methods

| Method | Description                                                                |
|--------|----------------------------------------------------------------------------|
| GET    | Requests the server to return specified resources.                         |
| PUT    | Requests the server to update specified resources.                         |
| POST   | Requests the server to add resources or perform special operations.        |
| DELETE | Requests the server to delete specified resources, for example, an object. |
| HEAD   | Same as GET except that the server must return only the response header.   |

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

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
```

## Request Header

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

Common request header fields are as follows.

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

| Parameter      | Description                                                                                                                                                                                                                                                                                                                       | Mandatory                                               | Example Value                            |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------|
| Host           | Specifies the server domain name and port number of the resources being requested. The value can be obtained from the URL of the service API. The value is in the format of <i>Hostname:Port number</i> . If the port number is not specified, the default port is used. The default port number for <b>https</b> is <b>443</b> . | No<br>This field is mandatory for AK/SK authentication. | code.test.com<br>or<br>code.test.com:443 |
| Content-Type   | Specifies the type (or format) of the message body. The default value <b>application/json</b> is recommended. Other values of this field will be provided for specific APIs if any.                                                                                                                                               | Yes                                                     | application/json                         |
| Content-Length | Specifies the length of the request body. The unit is byte.                                                                                                                                                                                                                                                                       | No                                                      | 3495                                     |

| Parameter    | Description                                                                                                                                                                                                                                                                        | Mandatory                                                                                                                                 | Example Value                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| X-Project-Id | Specifies the project ID. Obtain the project ID by following the instructions in <a href="#">Obtaining a Project ID</a> .                                                                                                                                                          | No<br>This field is mandatory for requests that use AK/SK authentication in the Dedicated Cloud (DeC) scenario or multi-project scenario. | e9993fc787d94b6c886cbaa340f9c0f4                                                         |
| X-Auth-Token | Specifies the user token.<br>It is a response to the API for <a href="#">obtaining a user token</a> (This is the only API that does not require authentication).<br>After the request is processed, the value of <b>X-Subject-Token</b> in the response header is the token value. | No<br>This field is mandatory for token authentication.                                                                                   | The following is part of an example token:<br>MIIPAgYJKoZIhvcNAQcCo...ggg1BBIINPXsidG9rZ |

 **NOTE**

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

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

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

```
POST https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens
Content-Type: application/json
```

## (Optional) Request Body

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

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

In the case of the API used to [obtain a user token](#), the request parameters and parameter description can be obtained from the API request. The following provides an example request with a body included. Replace *username*,

*domainname*, *\*\*\*\*\** (login password), and *xxxxxxxxxxxxxxxxxxxxx* (project name) with the actual values. Obtain a project name from [Regions and Endpoints](#).

#### NOTE

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

POST <https://iam.ap-southeast-1.myhuaweicloud.com/v3/auth/tokens>  
Content-Type: application/json

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

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

## 3.2 Authentication

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

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

### Token Authentication

#### NOTE

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

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

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

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

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

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

## AK/SK Authentication

### NOTE

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

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

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

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

### NOTE

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

## 3.3 Response

### Status Code

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

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

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

### Response Header

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

[Figure 3-2](#) shows the response header fields for the API used to [obtain a user token](#). The **x-subject-token** header field is the desired user token. This token can then be used to authenticate the calling of other APIs.

**Figure 3-2** Header fields of the response to the request for obtaining a user token

```
connection → keep-alive
content-type → application/json
date → Tue, 12 Feb 2019 06:52:13 GMT
server → Web Server
strict-transport-security → max-age=31536000; includeSubdomains;
transfer-encoding → chunked
via → proxy A
x-content-type-options → nosniff
x-download-options → noopen
x-frame-options → SAMEORIGIN
x-iam-trace-id → 218d45ab-d674-4995-af3a-2d0255ba41b5
x-subject-token → MIIVXQVJKoZIhvcNAQcCoIIYJCCEoCAQExDTALBglghkgBZQMEAgEwgharBgkqhkiG9w0BBwGgghacBIIWmHsidG9rZW4iOnsiZXhwaXJlc19hdCI6IjIwMTktMTNUMC
fj3KJIs6YgKnpVNRbW2eZ5eb78SZOkqJACgklqO1wi4JlGzrpd18LGXK5tdfq4lqHCYb8P4NaY0NYejcAgz/VeFYtLWT1GSO0zxKZmlQHqJ82HBqHdglZO9fuEbL5dMhdavj+33wEI
xHRCE9I87o+k9-
j+CMZSEB7bUGd5Uj6eRASXl1jipPEGA270g1FruooL6jqglFkNPQuFSOU8+uSsttVwRtNfsC+qTp22Rkd5MCqFGQ8LcuUxC3a+9CMBnOintWW7oeRUVhVpxk8pxiX1wTEboX-
RzT6MUUpvGw-oPNFYdECKnoH3HRozv0vN--n5d6Nbxg==
x-xss-protection → 1; mode=block;
```

### (Optional) Response Body

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

The following is part of the response body for the API used to [obtain a user token](#).

```
{
  "token": {
```

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

```

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

```
{
  "error_msg": "The format of message is error",
  "error_code": "AS.0001"
}
```

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

# 4 Calling General Purpose File System APIs

## 4.1 Constructing a Request

This section describes the structure of a REST API request.

### Request URI

SFS uses URI to locate specific file systems and their parameters. Use URIs when you want to operate resources.

The following provides a common URI format. The parameters in square brackets [ ] are optional.

**protocol://[filesystem.]domain[:port]/[?param]**

**Table 4-1** URI parameters

| Parameter  | Description                                                                                                                                                           | Mandatory |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| protocol   | Protocol used for sending requests, which can be either HTTP or HTTPS. HTTPS is a protocol that ensures secure access to resources. SFS supports both HTTP and HTTPS. | Yes       |
| filesystem | Resource path of a file system, identifying only one file system in SFS                                                                                               | No        |
| domain     | Domain name or IP address of the server for saving resources                                                                                                          | Yes       |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                    | Mandatory |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| port      | Port enabled for protocols used for sending requests. The value varies with software server deployment. If no port number is specified, the protocol uses the default value. Each transmission protocol has its default port number. For example, HTTP uses port number <b>80</b> and HTTPS uses port number <b>443</b> by default.<br>In SFS, HTTP port number is <b>80</b> and that of HTTPS is <b>443</b> . | No        |
| param     | A specific resource contained by a file system. Default value of this parameter indicates that the file system itself is obtained.                                                                                                                                                                                                                                                                             | No        |

**NOTICE**

All API requests except those for the file system list must contain the file system name. Based on the DNS resolution performance and reliability, SFS requires that the file system name must be placed in front of the **domain** when a request carrying a file system name is constructed to form a third-level domain name, also mentioned as virtual hosting access domain name.

## Request Method

HTTP methods, which are also called operations or actions, specify the type of operations that you are requesting.

**Table 4-2** HTTP request methods supported by SFS

| Method  | Description                                                                              |
|---------|------------------------------------------------------------------------------------------|
| GET     | Requests the server to return specific resources, for example, to list file systems.     |
| PUT     | Requests the server to update specific resources, for example, creating file systems.    |
| POST    | Requests a server to add resources or perform special operations.                        |
| DELETE  | Requests the server to delete specified resources, for example, file systems.            |
| HEAD    | Same as GET except that the server must return only the response header.                 |
| OPTIONS | Requests the server to check whether the user has the permissions to operate a resource. |

## Request Headers

Refers to optional and additional request fields, for example a field required by a specific URI or HTTP method. [Table 4-3](#) describes some common request header fields.

**Table 4-3** Common request headers

| Header         | Description                                                                                                                                                                                                                                                           | Mandatory              |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Authorization  | Signature information contained in a request message<br>Type: string<br>No default value.<br>Conditional: optional for anonymous requests and required for other requests.                                                                                            | Conditionally required |
| Content-Length | The message length (excluding headers) defined in RFC 2616<br>Type: string<br>No default value.<br>Conditional: required for PUT requests and those requests that load XML content.                                                                                   | Conditionally required |
| Content-Type   | The content type of the requested resource, for example, <b>text/plain</b><br>Type: string<br>No default value.                                                                                                                                                       | No                     |
| Date           | The time when a request is initiated, for example, <b>Wed, 27 Jun 2018 13:39:15 +0000</b> .<br>Type: string<br>No default value.<br>Conditional: optional for anonymous requests or those requests containing header <b>x-obs-date</b> , required for other requests. | Conditionally required |
| Host           | The host address, for example, <b>filesystem.sfs3.region.myhuaweicloud.com</b> .<br>Type: string<br>No default value.                                                                                                                                                 | Yes                    |

## (Optional) Request Body

A request body is generally sent in a structured format (for example, JSON or XML). It corresponds to **Content-Type** in the request header and is used to transfer content other than the request header. If the request body contains Chinese characters, these characters must be coded in UTF-8.

The request body varies according to the APIs. Certain APIs do not require the request body, such as the GET and DELETE APIs.

## Sending a Request

There are two methods to initiate requests based on the constructed request messages:

- **cURL**  
cURL is a command-line tool used to perform URL operations and transmit information. cURL acts as an HTTP client that can send HTTP requests to the server and receive response messages. cURL is applicable to API debugging. For more information about cURL, visit <https://curl.haxx.se/>. cURL cannot calculate signatures. When cURL is used, only anonymous public SFS resources can be accessed.
- **Coding**  
You can use code to make API calls, and to assemble, send, and process request messages. It can be implemented by coding.

## 4.2 Authentication

### 4.2.1 User Signature Authentication

SFS signs a request using AK/SK. When a client is sending a request to SFS, the message header must contain the SK, request time, request type, and other information of the signature.

- **AK**: access key ID, which is a unique identifier associated with a secret access key (SK). The AK and SK are used together to obtain an encrypted signature for a request. Format example: **HCY8BGCN1YM5ZWYOK1MH**
- **SK**: secret access key, which is used together with the AK to sign requests, identify a request sender, and prevent the request from being modified. Format example: **9zYwf1uabSQY0JTnFqbUqG7vcfqYBaTdXde2GUcq**

A user can obtain the AK and SK from IAM. For details, see [Obtaining Access Keys \(AK/SK\)](#).

SFS provides the signature calculation method based on the application scenario [Authentication of Signature in a Header](#).

[Table 4-4](#) shows the user signature verification process in which a signature is carried in a header. For details about the parameters and code examples of authentication of signature in a header, see [Authentication of Signature in a Header](#).

**Table 4-4** Signature calculation and verification procedure

| Procedure                |                                                               | Example                                                                                                                                                                                                              |
|--------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Signature calculation    | 1. Construct an HTTP message.                                 | PUT /HTTP/1.1<br>Host: filesystem.sfs3.region.myhuaweicloud.com<br>Date: Tue, 04 Jun 2019 06:54:59 GMT<br>Content-Type: text/plain<br>Content-Length: 5913                                                           |
|                          | 2. Calculate <b>StringToSign</b> based on the signature rule. | StringToSign = HTTP-Verb + "\n" + Content-MD5 + "\n" + Content-Type + "\n" + Date + "\n" + CanonicalizedHeaders + CanonicalizedResource                                                                              |
|                          | 3. Prepare the AK and SK.                                     | AK: *****<br>SK: *****                                                                                                                                                                                               |
|                          | 4. Calculate <b>Signature</b> .                               | Signature = Base64( HMAC-SHA1( <b>SecretAccessKeyID</b> , UTF-8-Encoding-Of( <b>StringToSign</b> ) ) )                                                                                                               |
|                          | 5. Add a signature header and send the request to SFS.        | PUT /object HTTP/1.1<br>Host: filesystem.sfs3.region.myhuaweicloud.com<br>Date: Tue, 04 Jun 2019 06:54:59 GMT<br>Content-Type: text/plain<br>Content-Length: 5913<br>Authorization: OBS <b>AccessKeyID:Signature</b> |
| Signature authentication | 6. Receive the HTTP message.                                  | PUT / HTTP/1.1<br>Host: filesystem.sfs3.region.myhuaweicloud.com<br>Date: Tue, 04 Jun 2019 06:54:59 GMT<br>Content-Type: text/plain<br>Content-Length: 5913<br>Authorization: OBS <b>AccessKeyID:Signature</b>       |
|                          | 7. Obtain the SK based on the AK in the request.              | Obtain the AK from the authorization header and obtain the SK of the user from IAM.                                                                                                                                  |
|                          | 8. Calculate <b>StringToSign</b> based on the signature rule. | StringToSign = HTTP-Verb + "\n" + Content-MD5 + "\n" + Content-Type + "\n" + Date + "\n" + CanonicalizedHeaders + CanonicalizedResource                                                                              |
|                          | 9. Calculate <b>Signature</b> .                               | Signature = Base64( HMAC-SHA1( <b>SecretAccessKeyID</b> , UTF-8-Encoding-Of( <b>StringToSign</b> ) ) )                                                                                                               |

| Procedure |                                 | Example                                                                                                                                                                                                                                                                                                 |
|-----------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | 10. Authenticate the signature. | Verify that the value of <b>Signature</b> in the authorization header is the same as the value of <b>Signature</b> calculated by the server.<br><br>If the two values are the same, the signature verification is successful.<br><br>If the two values are different, the signature verification fails. |

## 4.2.2 Authentication of Signature in a Header

For all General Purpose File System API operations, the identity authentication can be done by carrying signatures in headers.

In the header, the signature is carried in the authorization header field of the HTTP message. The format of the message header is as follows:

```
Authorization: OBS AccessKeyID:signature
```

The signature algorithm process is as follows:

1. Construct the request character string (StringToSign).
2. Perform UTF-8 encoding on the result obtained from the preceding step.
3. Use the SK to perform the HMAC-SHA1 signature calculation on the result obtained from step 2.
4. Perform Base64 encoding on the result of step 3 to obtain the signature.

The StringToSign is constructed according to the following rules. [Table 4-5](#) describes the parameters.

```
StringToSign =  
  HTTP-Verb + "\n" +  
  Content-MD5 + "\n" +  
  Content-Type + "\n" +  
  Date + "\n" +  
  CanonicalizedHeaders + CanonicalizedResource
```

**Table 4-5** Parameters required for constructing a StringToSign

| Parameter    | Description                                                                                                                                                 |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HTTP-Verb    | An HTTP request method supported by the REST API. The value can be an HTTP verb such as <b>PUT</b> , <b>GET</b> , or <b>DELETE</b> .                        |
| Content-MD5  | The base64-encoded 128-bit MD5 digest of the message according to RFC 1864. This parameter can be empty.                                                    |
| Content-Type | The message type, for example, <b>text/plain</b> .<br>If a request does not contain this header field, this parameter will be processed as an empty string. |

| Parameter            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Date                 | <p>The time when a request is initiated. This parameter uses the RFC 1123 time format. If the deviation between the time specified by this parameter and the server time is over 15 minutes, the server returns error 403.</p> <p>This parameter is an empty string when the <b>x-obs-date</b> is specified.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| CanonicalizedHeaders | <p>The SFS request header field in an HTTP request header, referring to header fields started with <b>x-obs-</b>, for example, <b>x-obs-date</b>, <b>x-obs-acl</b>, and <b>x-obs-meta-*</b>.</p> <ol style="list-style-type: none"> <li>1. All characters of keywords in a request header field must be converted to lowercase letters (content values must be case sensitive, for example, <b>x-obs-storage-class:STANDARD</b>). If a request contains multiple header fields, these fields should be organized by keyword in the alphabetical order from a to z.</li> <li>2. If multiple header fields in a request have the same prefix, combine the header fields into one. For example, <b>x-obs-meta-name:name1</b> and <b>x-obs-meta-name:name2</b> should be reorganized into <b>x-obs-meta-name:name1,name2</b>. Use comma to separate the values.</li> <li>3. Keywords in the request header field cannot contain non-ASCII or unrecognizable characters, which are also not advisable for values in the request header field. If the two types of characters are necessary, they should be encoded and decoded on the client side. Either URL encoding or Base64 encoding is acceptable, but the server does not perform decoding.</li> <li>4. Delete meaningless spaces and tabs in a header field. For example, <b>x-obs-meta-name: name</b> (with a meaningless space in the front of <b>name</b>) must be changed to <b>x-obs-meta-name:name</b>.</li> <li>5. Each header field occupies a separate line.</li> </ol> |

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CanonicalizedResource | <p>The SFS resource specified by an HTTP request. This parameter is constructed as follows:</p> <p>&lt;File system name + Object name&gt; + [Subresource 1] + [Subresource 2] + ...</p> <ol style="list-style-type: none"><li>1. File system name and object name, for example, /filesystem/object. If no object name is specified, the entire file system is listed, for example, /<b>filesystem</b>/. If file system name is not specified either, the value of this field is /.</li><li>2. If a subresource (such as <b>?sfsacl</b>) exists, the subresource must be added.</li><li>3. If there are multiple subresources, sort them in the alphabetical order from a to z, and use <b>&amp;</b> to combine the subresources.</li></ol> <p><b>NOTE</b></p> <ul style="list-style-type: none"><li>• A subresource is unique. Do not add subresources with the same keyword (for example, <b>key=value1&amp;key=value2</b>) in the same request URL. In this case, signature is computed only based on the first subresource, and only the value of the first subresource takes effect on the actual service.</li></ul> |

The following table provides some examples of generating StringToSign.

**Table 4-6** Obtaining the ACL of a file system

| Request Header                                                                                                    | StringToSign                                                                 |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| GET /?sfsacl HTTP/1.1<br>Host:<br>filesystem.sfs3.region.myhuaweicloud.com<br>Date: Sat, 12 Oct 2015 08:12:38 GMT | GET \n<br>\n<br>\n<br>Sat, 12 Oct 2015 08:12:38 GMT\n<br>/filesystem/?sfsacl |

## Content-MD5 Algorithm in Java

```
import java.security.MessageDigest;
import sun.misc.BASE64Encoder;
import java.io.UnsupportedEncodingException;
import java.security.NoSuchAlgorithmException;

public class Md5{
    public static void main(String[] args) {
        try {
            String exampleString = "blog";
            MessageDigest messageDigest = MessageDigest.getInstance("MD5");
            BASE64Encoder encoder = new BASE64Encoder();
            String contentMd5 = encoder.encode(messageDigest.digest(exampleString.getBytes("utf-8")));
            System.out.println("Content-MD5:" + contentMd5);
        } catch (NoSuchAlgorithmException | UnsupportedEncodingException e) {
            // Handle exception
        }
    }
}
```

```
    {  
        e.printStackTrace();  
    }  
}
```

The signature is generated as follows based on the StringToSign and SK. The hash-based message authentication code algorithm (HMAC algorithm) is used to generate the signature.

Signature = Base64( HMAC-SHA1( YourSecretAccessKeyID, UTF-8-Encoding-Of( StringToSign ) ) )

For example, to create a file system named **newfilesystem2** in a region, the client request format is as follows:

```
PUT / HTTP/1.1  
Host: newfilesystem2.sfs3.region.myhuaweicloud.com  
Content-Length: length  
Date: Fri, 06 Jul 2018 03:45:51 GMT  
x-obs-acl:private  
x-obs-storage-class:STANDARD  
Authorization: OBS UDSIAMSTUBTEST000254:ydH8ffpcbS6YpeOMcEZfn0wE90c=  
  
<CreateBucketConfiguration xmlns="http://obs.myhwclouds.com/doc/2015-06-30/">  
  <Location>region</Location>  
</CreateBucketConfiguration>
```

## Signature Algorithm in Java

```
import java.io.UnsupportedEncodingException;  
import java.net.URLEncoder;  
import java.security.InvalidKeyException;  
import java.security.NoSuchAlgorithmException;  
import java.util.ArrayList;  
import java.util.Arrays;  
import java.util.Base64;  
import java.util.Collections;  
import java.util.HashMap;  
import java.util.List;  
import java.util.Locale;  
import java.util.Map;  
import java.util.TreeMap;  
  
import javax.crypto.Mac;  
import javax.crypto.spec.SecretKeySpec;  
  
import org.omg.CosNaming.IstringHelper;  
  
public class SignDemo {  
  
    private static final String SIGN_SEP = "\n";  
  
    private static final String SFS_PREFIX = "x-obs-";  
  
    private static final String DEFAULT_ENCODING = "UTF-8";  
  
    private static final List<String> SUB_RESOURCES = Collections.unmodifiableList(Arrays.asList(  
        "CDNNotifyConfiguration", "acl", "append", "atname", "backtosource", "cors", "customdomain",  
        "delete",  
        "deletebucket", "directcoldaccess", "encryption", "inventory", "length", "lifecycle", "location",  
        "logging",  
        "metadata", "modify", "name", "notification", "orchestration", "partNumber", "policy", "position",  
        "quota",  
        "rename", "replication", "requestPayment", "response-cache-control", "response-content-  
disposition",  
        "response-content-encoding", "response-content-language", "response-content-type", "response-  
expires",
```

```
"restore", "select", "storageClass", "storagePolicy", "storageinfo", "tagging", "torrent", "truncate",
"uploadid", "uploads", "versionId", "versioning", "versions", "website", "x-image-process",
"x-image-save-bucket", "x-image-save-object", "x-obs-security-token"));

private String ak;

private String sk;

public String urlEncode(String input) throws UnsupportedEncodingException
{
    return URLEncoder.encode(input, DEFAULT_ENCODING)
        .replaceAll("%7E", "~") //for browser
        .replaceAll("%2F", "/")
        .replaceAll("%20", "+");
}

private String join(List<?> items, String delimiter)
{
    StringBuilder sb = new StringBuilder();
    for (int i = 0; i < items.size(); i++)
    {
        String item = items.get(i).toString();
        sb.append(item);
        if (i < items.size() - 1)
        {
            sb.append(delimiter);
        }
    }
    return sb.toString();
}

private boolean isValid(String input) {
    return input != null && !input.equals("");
}

public String hamcSha1(String input) throws NoSuchAlgorithmException, InvalidKeyException,
UnsupportedEncodingException {
    SecretKeySpec signingKey = new SecretKeySpec(this.sk.getBytes(DEFAULT_ENCODING), "HmacSHA1");
    Mac mac = Mac.getInstance("HmacSHA1");
    mac.init(signingKey);
    return Base64.getEncoder().encodeToString(mac.doFinal(input.getBytes(DEFAULT_ENCODING)));
}

private String stringToSign(String httpMethod, Map<String, String[]> headers, Map<String, String>
queries,
    String bucketName, String objectName) throws Exception{
    String contentMd5 = "";
    String contentType = "";
    String date = "";

    TreeMap<String, String> canonicalizedHeaders = new TreeMap<String, String>();

    String key;
    List<String> temp = new ArrayList<String>();
    for(Map.Entry<String, String[]> entry : headers.entrySet()) {
        key = entry.getKey();
        if(key == null || entry.getValue() == null || entry.getValue().length == 0) {
            continue;
        }

        key = key.trim().toLowerCase(Locale.ENGLISH);
        if(key.equals("content-md5")) {
            contentMd5 = entry.getValue()[0];
            continue;
        }

        if(key.equals("content-type")) {
            contentType = entry.getValue()[0];
            continue;
        }
    }
}
```

```
    }

    if(key.equals("date")) {
        date = entry.getValue()[0];
        continue;
    }

    if(key.startsWith(OBS_PREFIX)) {
        for(String value : entry.getValue()) {
            if(value != null) {
                temp.add(value.trim());
            }
        }
        canonicalizedHeaders.put(key, this.join(temp, ","));
        temp.clear();
    }
}

if(canonicalizedHeaders.containsKey("x-obs-date")) {
    date = "";
}

// handle method/content-md5/content-type/date
StringBuilder stringToSign = new StringBuilder();
stringToSign.append(httpMethod).append(SIGN_SEP)
    .append(contentMd5).append(SIGN_SEP)
    .append(contentType).append(SIGN_SEP)
    .append(date).append(SIGN_SEP);

// handle canonicalizedHeaders
for(Map.Entry<String, String> entry : canonicalizedHeaders.entrySet()) {
    stringToSign.append(entry.getKey()).append(":").append(entry.getValue()).append(SIGN_SEP);
}

// handle CanonicalizedResource
stringToSign.append("/");
if(this.isValid(bucketName)) {
    stringToSign.append(bucketName).append("/");
    if(this.isValid(objectName)) {
        stringToSign.append(this.urlEncode(objectName));
    }
}

TreeMap<String, String> canonicalizedResource = new TreeMap<String, String>();
for(Map.Entry<String, String> entry : queries.entrySet()) {
    key = entry.getKey();
    if(key == null) {
        continue;
    }

    if(SUB_RESOURCES.contains(key)) {
        canonicalizedResource.put(key, entry.getValue());
    }
}

if(canonicalizedResource.size() > 0) {
    stringToSign.append("?");
    for(Map.Entry<String, String> entry : canonicalizedResource.entrySet()) {
        stringToSign.append(entry.getKey());
        if(this.isValid(entry.getValue())) {
            stringToSign.append("=").append(entry.getValue());
        }
    }
}

// System.out.println(String.format("StringToSign:%s%s", SIGN_SEP, stringToSign.toString()));
```

```
        return stringToSign.toString();
    }

    public String headerSignature(String httpMethod, Map<String, String[]> headers, Map<String, String>
queries,
        String bucketName, String objectName) throws Exception {

        //1. stringToSign
        String stringToSign = this.stringToSign(httpMethod, headers, queries, bucketName, objectName);

        //2. signature
        return String.format("OBS %s:%s", this.ak, this.hamcSha1(stringToSign));
    }

    public String querySignature(String httpMethod, Map<String, String[]> headers, Map<String, String>
queries,
        String bucketName, String objectName, long expires) throws Exception {
        if(headers.containsKey("x-obs-date")) {
            headers.put("x-obs-date", new String[] {String.valueOf(expires)});
        }else {
            headers.put("date", new String[] {String.valueOf(expires)});
        }
        //1. stringToSign
        String stringToSign = this.stringToSign(httpMethod, headers, queries, bucketName, objectName);

        //2. signature
        return this.urlEncode(this.hamcSha1(stringToSign));
    }

    public static void main(String[] args) throws Exception {

        SignDemo demo = new SignDemo();
        demo.ak = "<your-access-key-id>";
        demo.sk = "<your-secret-key-id>";

        String bucketName = "bucket-test";
        String objectName = "hello.jpg";
        Map<String, String[]> headers = new HashMap<String, String[]>();
        headers.put("date", new String[] {"Sat, 12 Oct 2015 08:12:38 GMT"});
        headers.put("x-obs-acl", new String[] {"private"});
        Map<String, String> queries = new HashMap<String, String>();
        queries.put("acl", null);

        System.out.println(demo.headerSignature("PUT", headers, queries, bucketName, objectName));
    }
}
```

The calculation result of the signature is as follows (it varies with the execution time): YdH8ffpcbS6YpeOMcEZfn0wE90c=

## Signature Algorithm in Python

```
import sys
import os
import hashlib
import hmac
import binascii
from datetime import datetime
IS_PYTHON2 = sys.version_info.major == 2 or sys.version < '3'
"""Hard-coded or plaintext SecretAccessKeyID is risky. For security purposes, encrypt your access key, store
it in the configuration file or environment variables, and decrypt it before using it. In this example,
SecretAccessKeyID is stored in the environment variables for identity authentication. Before running the
code in this example, configure environment variable SECRET_ACCESS_KEY_ID."""
yourSecretAccessKeyID = os.environ.get('SECRET_ACCESS_KEY_ID')
httpMethod = "PUT"
contentType = "application/xml"
httpMethod = "PUT"
```

```
contentType = "application/xml"
# "date" is the time when the request was actually generated
date = datetime.utcnow().strftime('%a, %d %b %Y %H:%M:%S GMT')
canonicalizedHeaders = "x-obs-acl:private\n"
CanonicalizedResource = "/newfilesystem2"
canonical_string = httpMethod + "\n" + "\n" + contentType + "\n" + date + "\n" + canonicalizedHeaders +
CanonicalizedResource
if IS_PYTHON2:
    hashed = hmac.new(yourSecretAccessKeyID, canonical_string, hashlib.sha1)
    encode_canonical = binascii.b2a_base64(hashed.digest())[:-1]
else:
    hashed = hmac.new(yourSecretAccessKeyID.encode('UTF-8'),
canonical_string.encode('UTF-8'),hashlib.sha1)
    encode_canonical = binascii.b2a_base64(hashed.digest())[:-1].decode('UTF-8')
print encode_canonical
```

The calculation result of the signature is as follows (it varies with the execution time): YdH8ffpcbS6YpeOMcEZfn0wE90c=

## Signature Algorithm in the C Programming Language

**Download** the sample code for calculating the signature in the C programming language.

1. The API for calculating the signature is contained in the **sign.h** header file.
2. The sample code for calculating the signature is contained in the **main.c** header file.

## Signature Mismatch Error Handling

During an SFS API call, if the following error is reported,

Status code: 403 Forbidden

Error code: SignatureDoesNotMatch

Error message: The request signature we calculated does not match the signature you provided. Check your key and signing method.

Contact technical support.

### 4.2.3 Signature Generators

SFS offers visualized tools for you to easily generate signatures.

**Table 4-7** Signature generators

| Calculation Method                       | How to Obtain                           |
|------------------------------------------|-----------------------------------------|
| Authenticating the signature in a header | Visit <a href="#">Generate Header</a> . |

During an SFS API call, if the following error is reported,

Status code: 403 Forbidden

Error code: SignatureDoesNotMatch

Error message: The request signature we calculated does not match the signature you provided. Check your key and signing method.

Contact technical support.

## 4.3 Returned Values

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

### Status Codes

A status code is a group of digits indicating the status of a response. It ranges from 2xx (indicating successes) to 4xx or 5xx (indicating errors). For more information, see [Status Codes](#).

### Response Headers

A response header corresponds to a request header, for example, Content-Type.

For details about common response headers, see [Table 4-8](#).

**Table 4-8** Common response headers

| Header           | Description                                                                                                                                                           |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Content-Length   | The length (in bytes) of the response body.<br>Type: string<br>Default value: none                                                                                    |
| Connection       | Indicates whether the connection to the server is a long connection or a short connection.<br>Type: string<br>Valid values: keep-alive   close<br>Default value: none |
| Date             | The time when a response is returned.<br>Type: string<br>Default value: none                                                                                          |
| x-obs-id-2       | A special symbol that helps troubleshoot faults.<br>Type: string<br>Default value: none                                                                               |
| x-obs-request-id | The unique identifier of the request. The value is generated by the SFS service and can be used for troubleshooting.<br>Type: string<br>Default value: none           |

## (Optional) Response Body

A response body contains information other than the response header. It is usually sent in a structured format (JSON or XML) defined by the response header parameter **Content-type**.

# 5 Getting Started

---

## 5.1 Getting Started with SFS Capacity-Oriented

### Scenarios

SFS provides high-performance network-attached storage (NAS) that is scalable on demand. A shared file system can be shared with multiple Elastic Cloud Servers (ECSs) and Bare Metal Servers (BMSs). If you need a fully hosted shared file storage and want to access a file system on multiple ECSs, SFS is perfect for you.

The following describes how to call the API for [Creating a Shared File System](#). For details, see [Making an API Request](#).

### Prerequisites

You need to plan the region where a file system resides and determine the endpoint for calling an API based on the region. It can be obtained from [Regions and Endpoints](#).

### Creating a Shared File System

The following is the sample code about how to create a shared file system with the simplest configurations:

```
{
  "share": {
    "description": "test description",
    "share_type": "default",
    "name": "share_London",
    "metadata": {
      "key1": "value1",
      "key2": "value2"
    },
    "share_proto": "NFS",
    "size": 10,
    "is_public": false
  }
}
```

- **description:** Specifies the description of the shared file system, which adds remarks to the shared file system.

- **share\_type**: Specifies the name of a share type. A share type is used to specify the type of the storage service to be allocated.
- **share\_proto**: Specifies the protocol types of the shared file system.
- **name**: Specifies the custom name of the shared file system. For example, **share\_London**.
- **size**: Specifies the size (in GB) of the shared file system.
- **is\_public**: Specifies the visibility level of the shared file system. If it is set to **true**, the file system can be seen publicly. If it is set to **false**, the file system can be seen privately. The default value is **false**.
- **metadata**: Specifies the metadata information of the shared file system. The value consists of one or more key-value pairs organized as a dictionary of strings.

## Creating an Encrypted Shared File System

You can also encrypt a shared file system. You only need to add parameters related to encryption of a shared file system to the metadata of the request body. The following is an example:

```
{
  "share": {
    "share_type": null,
    "name": "test",
    "snapshot_id": null,
    "description": "test description",
    "metadata": {
      "#sfs_crypt_key_id": "9130c90d-73b8-4203-b790-d49f98d503df",
      "#sfs_crypt_domain_id": "3b2d9670690444c582942801ed7d457b",
      "#sfs_crypt_alias": "sfs/default"
    },
    "share_proto": "NFS",
    "share_network_id": null,
    "size": 1,
    "is_public": false
  }
}
```

- **#sfs\_crypt\_key\_id**: Specifies the encryption key ID. If **#sfs\_crypt\_key\_id**, **#sfs\_crypt\_domain\_id**, and **#sfs\_crypt\_alias** exist at the same time, the data encryption function is enabled.
- **#sfs\_crypt\_domain\_id**: Specifies the tenant domain ID. If **#sfs\_crypt\_domain\_id**, **#sfs\_crypt\_key\_id**, and **#sfs\_crypt\_alias** exist at the same time, the data encryption function is enabled.
- **#sfs\_crypt\_alias**: Specifies the encryption key alias. If **#sfs\_crypt\_alias**, **#sfs\_crypt\_key\_id**, and **#sfs\_crypt\_domain\_id** exist at the same time, the data encryption function is enabled.

## 5.2 Getting Started with SFS Turbo

This section describes how to use APIs by calling an API to create an SFS Turbo file system.

### NOTE

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

## Involved APIs

If you use a token for authentication, you must obtain the token and add **X-Auth-Token** to the request header of the API when making a call. The following APIs are involved in the request for creating an SFS Turbo file system:

- API for obtaining tokens from IAM
- For details about how to create an SFS Turbo file system, see [Creating a File System](#).

## Procedure

**Step 1** Obtain the token by following instructions in [Authentication](#).

**Step 2** Add **X-Auth-Token** to the request header.

**Step 3** Specify the following parameters in the request body:

```
{
  "share": {
    "name": "sfs-turbo-test",
    "share_proto": "NFS",
    "share_type": "STANDARD",
    "size": 100,
    "availability_zone": "az1",
    "vpc_id": "d651ea2b-2b20-4c6d-8bbf-2adcec18dac9",
    "subnet_id": "b8884abe-f47b-4917-9f6c-f64825c365db",
    "security_group_id": "8c4ebbd0-6edf-4aae-8353-81ce6d06e1f4"
  }
}
```

**Step 4** Send the request **POST https://Endpoint of SFS Turbo/v1/{project\_id}/sfs-turbo/shares**.

**Step 5** After the request is successfully responded, the ID and name of the SFS Turbo file system are returned.

If the request fails, an error code and error information are returned. For details about the error codes, see the abnormal return values of the corresponding API.

Query SFS Turbo file system details based on the returned file system ID. For details, see [Querying Details About a File System](#).

If the returned status of the file system is **200**, the SFS Turbo file system is successfully created. For details about the return values of request exceptions, see the abnormal return values of the corresponding API. For other statuses, see [SFS Turbo File System Statuses](#).

You can query and delete an SFS Turbo file system based on the file system ID.

----End

## Configuration Example

If the token has been obtained, you can run the following **curl** command to create an SFS Turbo file system:

```
curl -k -i -X POST -H "X-Auth-Token: token_value" -H "Content-Type: application/json" -d '{"share": {"name": "sfs-turbo-test", "share_proto": "NFS", "share_type": "STANDARD", "size": 100, "availability_zone": "az1", "vpc_id": "d651ea2b-2b20-4c6d-8bbf-2adcec18dac9", "subnet_id": "b8884abe-f47b-4917-9f6c-f64825c365db", "security_group_id": "8c4ebbd0-6edf-4aae-8353-81ce6d06e1f4"}}' "https://127.0.0.1:8979/v1/xxx/bxbex5cfx41f0a08ay915fd79240d/sfs-turbo/shares"
```

## 5.3 Getting Started with General Purpose File System

### 5.3.1 Creating a File System

#### Scenarios

A file system is a container that store files in SFS. You need to create a file system before storing data in SFS.

The following describes how to call the API for [Creating a File System](#) in a region. For details, see [Calling General Purpose File System APIs](#).

#### Prerequisites

- You have obtained the AK and SK. For details, see [Obtaining Access Keys \(AK/SK\)](#).
- You have planned the region where you want to create a file system and obtained the endpoint required for API calls. For details, see [Regions and Endpoints](#).

Once a region is determined, it cannot be modified after the bucket is created.

#### Creating a File System Named filesystem001 in the a1 Region

In this example, an Apache HttpClient is used.

```
package com.sfsclient;

import java.io.*;
import java.net.HttpURLConnection;
import java.net.URL;
import java.util.List;
import java.util.Map;

public class TestMain {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console.
    public static String accessKey = System.getenv("HUAWEICLOUD_SDK_AK");
    public static String securityKey = System.getenv("HUAWEICLOUD_SDK_SK");
    public static String region = "cn-east-3"; // The region where you plan to create the file system.

    public static String endpoint = "sfs3.a1.region.com"; // The access address of General Purpose File System.

    public static String createSfsBody =
        "<CreateBucketConfiguration>\n" +
        "  <Location>" + region + "</Location>\n" +
        "</CreateBucketConfiguration>";

    public static void main(String[] str) {

        createFileSystem();

    }
    private static void createFileSystem() {
        // The file system name.
        String fileName = "example-sfs-001";

        String httpMethod = "PUT";
        String date = DateUtils.formatDate(System.currentTimeMillis());
```

```
String contentType = "application/xml";

/**Calculate the signature based on the request.**/
String contentMD5 = "";
String canonicalizedHeaders = "x-obs-bucket-type:SFS";
String canonicalizedResource = "/" + fileName;

// Content-MD5 and Content-Type fields do not contain line breaks. The data format is RFC 1123,
which is the same as the time in the request.
String stringToSign = httpMethod + "\n" +
    contentMD5 + "\n" +
    contentType + "\n" +
    date + "\n" +
    canonicalizedHeaders + "\n" + canonicalizedResource;

System.out.printf("StringToSign:\n[%s]\n\n", stringToSign);

URLConnection conn = null;

try {
    String signature = Signature.signWithHmacSha1(securityKey, stringToSign);
    String authorization= "OBS " + accessKey + ":" + signature;
    System.out.printf("authorization:%s\n\n", authorization);

    URL url = new URL("http://" + endpoint + "/" + fileName);
    conn = (URLConnection) url.openConnection();

    // Add a signature header.
    conn.setRequestMethod(httpMethod);
    conn.setRequestProperty("Date", date);
    conn.setRequestProperty("Content-Type", contentType);
    conn.setRequestProperty("x-obs-bucket-type", "SFS");
    conn.setRequestProperty("Authorization", authorization);
    conn.setDoOutput(true);

    // Add a body.
    OutputStream out = conn.getOutputStream();
    out.write(createSfsBody.getBytes());
    out.flush();
    out.close();

    String status = conn.getHeaderField(null);
    System.out.println(status);

    // Output the response message.
    Map<String, List<String>> headers = conn.getHeaderFields();
    for (Map.Entry<String, List<String>> entry : headers.entrySet()) {
        String key = entry.getKey();
        List<String> values = entry.getValue();
        if (key != null) {
            for (String value : values) {
                System.out.println(key + ": " + value);
            }
        }
    }
    // Handle the request error.
    int statusCode = conn.getResponseCode();
    if (statusCode != HttpURLConnection.HTTP_OK && statusCode !=
HttpURLConnection.HTTP_NO_CONTENT) {
        InputStream errorStream = conn.getErrorStream();
        BufferedReader reader = new BufferedReader(new InputStreamReader(errorStream));
        StringBuilder responseBody = new StringBuilder();
        String line;
        while ((line = reader.readLine()) != null) {
            responseBody.append(line);
        }
        reader.close();

        System.out.println("Error: " + responseBody);
    }
}
```

```
    }  
    } catch (IOException e) {  
        e.printStackTrace();  
    } finally {  
        if (conn != null){  
            conn.disconnect();  
        }  
    }  
}
```

The format of the **Date** header field **DateUtils** is as follows:

```
package com.sfsclient;  
  
import java.text.DateFormat;  
import java.text.SimpleDateFormat;  
import java.util.Locale;  
import java.util.TimeZone;  
  
public class DateUtils {  
  
    public static String formatDate(long time)  
    {  
        DateFormat serverDateFormat = new SimpleDateFormat("EEE, dd MMM yyyy HH:mm:ss z",  
Locale.ENGLISH);  
        serverDateFormat.setTimeZone(TimeZone.getTimeZone("GMT"));  
        return serverDateFormat.format(time);  
    }  
}
```

The method of calculating the signature character string is as follows:

```
package com.sfsclient;  
  
import javax.crypto.Mac;  
import javax.crypto.spec.SecretKeySpec;  
import java.io.UnsupportedEncodingException;  
import java.security.NoSuchAlgorithmException;  
import java.security.InvalidKeyException;  
import java.util.Base64;  
  
public class Signature {  
    public static String signWithHmacSha1(String sk, String canonicalString) throws  
UnsupportedEncodingException {  
  
        try {  
            SecretKeySpec signingKey = new SecretKeySpec(sk.getBytes("UTF-8"), "HmacSHA1");  
            Mac mac = Mac.getInstance("HmacSHA1");  
            mac.init(signingKey);  
            return Base64.getEncoder().encodeToString(mac.doFinal(canonicalString.getBytes("UTF-8")));  
        } catch (NoSuchAlgorithmException | InvalidKeyException | UnsupportedEncodingException e) {  
            e.printStackTrace();  
        }  
        return null;  
    }  
}
```

## 5.3.2 Listing File Systems

### Scenarios

If you want to view information about all file systems created by yourself, you can call the API for listing file systems.

The following describes how to call the API for [Listing File Systems](#). For details, see [Getting Started with General Purpose File System](#).

## Prerequisites

- You have obtained the AK and SK. For details, see [Obtaining Access Keys \(AK/SK\)](#).
- You have specified the region where you want to list file systems and obtained the endpoint required for API calls. For details, see [Regions and Endpoints](#).

## Listing File Systems in the a1 Region

In this example, an Apache HttpClient is used.

```
package com.sfsclient;

import java.io.*;
import java.net.HttpURLConnection;
import java.net.URL;
import java.util.List;
import java.util.Map;

public class TestMain {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console.
    public static String accessKey = "ACCESS_KEY_ID";
    public static String securityKey = "SECRET_ACCESS_KEY_ID";
    public static String endpoint = "sfs3.a1.region.com"; // The access address of General Purpose File System.

    public static void main(String[] str) {
        createFileSystem();
    }

    private static void listFileSystem() {
        String httpMethod = "GET";
        String date = DateUtils.formatDate(System.currentTimeMillis());

        /**Calculate the signature based on the request.**/
        String contentMD5 = "";
        String contentType = "";
        String canonicalizedHeaders = "x-obs-bucket-type:SFS";
        String canonicalizedResource = "/" ;

        // Content-MD5 and Content-Type fields do not contain line breaks. The data format is RFC 1123,
        which is the same as the time in the request.
        String stringToSign = httpMethod + "\n" +
            contentMD5 + "\n" +
            contentType + "\n" +
            date + "\n" +
            canonicalizedHeaders + "\n" + canonicalizedResource;

        System.out.printf("StringToSign:\n[%s]\n\n", stringToSign);

        HttpURLConnection conn = null;

        try {
            String signature = Signature.signWithHmacSha1(securityKey, stringToSign);
            String authorization= "OBS " + accessKey + ":" + signature;
            System.out.printf("authorization:%s\n\n", authorization);

            // Create an HTTP request.
            URL url = new URL("http://" + endpoint);
            conn = (HttpURLConnection) url.openConnection();
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

```
// Add a signature header.
conn.setRequestMethod(httpMethod);
conn.setRequestProperty("Date", date);
conn.setRequestProperty("Content-Type", contentType);
conn.setRequestProperty("x-obs-bucket-type", "SFS");
conn.setRequestProperty("Authorization", authorization);
conn.setDoOutput(true);

String status = conn.getHeaderField(null);
System.out.println(status);

// Output the response message.
Map<String, List<String>> headers = conn.getHeaderFields();
for (Map.Entry<String, List<String>> entry : headers.entrySet()) {
    String key = entry.getKey();
    List<String> values = entry.getValue();
    if (key != null) {
        for (String value : values) {
            System.out.println(key + ": " + value);
        }
    }
}
// Process the returned content.
int statusCode = conn.getResponseCode();
if (statusCode == HttpURLConnection.HTTP_OK) {
    InputStream responseStream = conn.getInputStream();
    BufferedReader reader = new BufferedReader(new InputStreamReader(responseStream));

    StringBuilder responseBody = new StringBuilder();
    String line;
    while ((line = reader.readLine()) != null) {
        responseBody.append(line);
    }
    reader.close();

    System.out.println("responseBody: " + responseBody);
} else {
    System.out.println("Error: " + statusCode);
}
} catch (IOException e) {
    e.printStackTrace();
} finally {
    if (conn != null) {
        conn.disconnect();
    }
}
}
```

The format of the **Date** header field **DateUtils** is as follows:

```
package com.sfsclient;

import java.text.DateFormat;
import java.text.SimpleDateFormat;
import java.util.Locale;
import java.util.TimeZone;

public class DateUtils {

    public static String formatDate(long time)
    {
        DateFormat serverDateFormat = new SimpleDateFormat("EEE, dd MMM yyyy HH:mm:ss z",
Locale.ENGLISH);
        serverDateFormat.setTimeZone(TimeZone.getTimeZone("GMT"));
        return serverDateFormat.format(time);
    }
}
```

The method of calculating the signature character string is as follows:

```
package com.sfsclient;

import javax.crypto.Mac;
import javax.crypto.spec.SecretKeySpec;
import java.io.UnsupportedEncodingException;
import java.security.NoSuchAlgorithmException;
import java.security.InvalidKeyException;
import java.util.Base64;

public class Signature {
    public static String signWithHmacSha1(String sk, String canonicalString) throws
    UnsupportedEncodingException {

        try {
            SecretKeySpec signingKey = new SecretKeySpec(sk.getBytes("UTF-8"), "HmacSHA1");
            Mac mac = Mac.getInstance("HmacSHA1");
            mac.init(signingKey);
            return Base64.getEncoder().encodeToString(mac.doFinal(canonicalString.getBytes("UTF-8")));
        } catch (NoSuchAlgorithmException | InvalidKeyException | UnsupportedEncodingException e) {
            e.printStackTrace();
        }
        return null;
    }
}
```

# 6 SFS Capacity-Oriented APIs

---

## 6.1 API Version Queries

### 6.1.1 Querying All API Versions

#### Function

This API is used to query all available versions of APIs provided by SFS.

To support function extension, SFS APIs can be distinguished by version. SFS has two types API version IDs:

Major version: Independent URL. For example: **v1** and **v2**.

Microversion: with the HTTP request header **X-Openstack-Manila-API-Version:** *Microversion ID*. For example: **X-Openstack-Manila-API-Version: 2.4**.

#### NOTE

This API does not require authentication.

#### URI

- GET /
- Parameter description

None

#### Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

#### Request

- Parameter description
- None

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

## Response

- Parameter description

| Parameter | Type             | Description                                                                      |
|-----------|------------------|----------------------------------------------------------------------------------|
| versions  | Array of objects | Lists objects of all available API versions, including <b>v1</b> and <b>v2</b> . |

- Description of the **version** field

| Parameter   | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id          | String           | Specifies the common name of the version.                                                                                                                                                                                                                                                                                                                                                                 |
| updated     | String           | Specifies the UTC time when the API is last modified. The format is YYYY-MM-DDTHH:MM:SSZ.                                                                                                                                                                                                                                                                                                                 |
| status      | String           | Specifies the API version status, including: <ul style="list-style-type: none"><li>• <b>CURRENT</b>: indicates that the current API is the preferred version.</li><li>• <b>SUPPORTED</b>: indicates that the current version is an earlier version which is still supported.</li><li>• <b>DEPRECATED</b>: indicates that the current version is a deprecated version that may be deleted later.</li></ul> |
| links       | Array of objects | Specifies the links of shared file systems. For details, see the description of the <b>links</b> field.                                                                                                                                                                                                                                                                                                   |
| media-types | Array of objects | Specifies the media types supported by the API. For details, see the description of the <b>media-types</b> field.                                                                                                                                                                                                                                                                                         |
| version     | String           | If the API in the current version supports microversions, this parameter is the latest microversion. If microversions are not supported, this parameter is an empty string.                                                                                                                                                                                                                               |
| min_version | String           | If the API in the current version supports microversions, this parameter is the earliest microversion. If microversions are not supported, this parameter is an empty string.                                                                                                                                                                                                                             |

- Description of the **links** field

| Parameter | Type   | Description                                                   |
|-----------|--------|---------------------------------------------------------------|
| href      | String | Specifies the API access path, which is used as a reference.  |
| type      | String | Specifies the type of the text returned by the reference API. |
| rel       | String | Specifies the additional description on links.                |

- Description of the **media-types** field

| Parameter | Type   | Description                    |
|-----------|--------|--------------------------------|
| base      | String | Specifies the basic text type. |
| type      | String | Specifies the text type.       |

- Example response

```
{
  "versions": [
    {
      "status": "CURRENT",
      "updated": "2015-08-27T11:33:21Z",
      "links": [
        {
          "href": "http://docs.openstack.org/",
          "type": "text/html",
          "rel": "describedby"
        },
        {
          "href": "https://sfs.region.www.t-systems.com/v2/",
          "rel": "self"
        }
      ],
      "min_version": "2.0",
      "version": "2.28",
      "media-types": [
        {
          "base": "application/json",
          "type": "application/vnd.openstack.share+json;version=1"
        }
      ],
      "id": "v2.0"
    }
  ]
}
```

## Status Codes

- Normal  
300
- Abnormal

| Status Code     | Description                               |
|-----------------|-------------------------------------------|
| 400 Bad Request | The server failed to process the request. |

| Status Code                       | Description                                                                                                                                                                 |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400 Bad Request                   | Invalid input: The post-deduction capacity must be larger than 0 and smaller than the current capacity. (Current capacity: <i>XX</i> ; post-deduction capacity: <i>XX</i> ) |
| 400 Bad Request                   | Invalid input: The post-expansion capacity must be larger than the current capacity. (Current capacity: <i>XX</i> ; post-expansion capacity: <i>XX</i> )                    |
| 401 Unauthorized                  | You must enter a username and the password to access the requested page.                                                                                                    |
| 403 Forbidden                     | Access to the requested page is forbidden.                                                                                                                                  |
| 404 Not Found                     | The requested page was not found.                                                                                                                                           |
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                                                                                                             |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                                                                                                   |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.                                                                                        |
| 408 Request Timeout               | The request timed out.                                                                                                                                                      |
| 409 Conflict                      | The request could not be processed due to a conflict.                                                                                                                       |
| 500 Internal Server Error         | The request is not completed because of a service error.                                                                                                                    |
| 501 Not Implemented               | The request is not completed because the server does not support the requested function.                                                                                    |
| 502 Bad Gateway                   | The request is not completed because the request is invalid.                                                                                                                |
| 503 Service Unavailable           | The request is not completed because the service is unavailable.                                                                                                            |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                                                                                                           |

## 6.1.2 Querying Details About an API Version

### Function

This API is used for querying details about an API version.

## URI

- GET /{api\_version}/
- Parameter description

| Parameter   | Mandatory | Type   | Description                                                      |
|-------------|-----------|--------|------------------------------------------------------------------|
| api_version | Yes       | String | Specifies the API version, which can be <b>v1</b> or <b>v2</b> . |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description  
None
- Example request  
GET https://{endpoint}/v2/

## Response

- Parameter description

| Parameter | Type   | Description                                |
|-----------|--------|--------------------------------------------|
| versions  | Object | List objects of all available API versions |

- Description of the **version** field

| Parameter | Type   | Description                                                                               |
|-----------|--------|-------------------------------------------------------------------------------------------|
| id        | String | Specifies the common name of the version.                                                 |
| updated   | String | Specifies the UTC time when the API is last modified. The format is YYYY-MM-DDTHH:MM:SSZ. |

| Parameter   | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status      | String           | Specifies the API version status, including: <ul style="list-style-type: none"><li>• <b>CURRENT</b>: indicates that the current API is the preferred version.</li><li>• <b>SUPPORTED</b>: indicates that the current version is an earlier version which is still supported.</li><li>• <b>DEPRECATED</b>: indicates that the current version is a deprecated version that may be deleted later.</li></ul> |
| links       | Array of objects | Specifies the links of shared file systems. For details, see the description of the <b>links</b> field.                                                                                                                                                                                                                                                                                                   |
| media-types | Array of objects | Specifies the media types supported by the API. For details, see the description of the <b>media-types</b> field.                                                                                                                                                                                                                                                                                         |
| version     | String           | If the API in the current version supports microversions, this parameter is the latest microversion. If microversions are not supported, this parameter is an empty string.                                                                                                                                                                                                                               |
| min_version | String           | If the API in the current version supports microversions, this parameter is the earliest microversion. If microversions are not supported, this parameter is an empty string.                                                                                                                                                                                                                             |

– Description of the **links** field

| Parameter | Type   | Description                                                   |
|-----------|--------|---------------------------------------------------------------|
| href      | String | Specifies the API access path, which is used as a reference.  |
| type      | String | Specifies the type of the text returned by the reference API. |
| rel       | String | Specifies the additional description on links.                |

– Description of the **media-types** field

| Parameter | Type   | Description                    |
|-----------|--------|--------------------------------|
| base      | String | Specifies the basic text type. |
| type      | String | Specifies the text type.       |

- Example response

```
{
  "versions": [
    {
      "status": "CURRENT",
      "updated": "2015-08-27T11:33:21Z",
      "links": [
        {
          "href": "http://docs.openstack.org/",
          "type": "text/html",
          "rel": "describedby"
        },
        {
          "href": "https://sfs.region.www.t-systems.com/v2/",
          "rel": "self"
        }
      ],
      "min_version": "2.0",
      "version": "2.28",
      "media-types": [
        {
          "base": "application/json",
          "type": "application/vnd.openstack.share+json;version=1"
        }
      ],
      "id": "v2.0"
    }
  ]
}
```

## Status Codes

- Normal  
200
- Abnormal

| Status Code            | Description                                                                                                                                                                 |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400 Bad Request        | The server failed to process the request.                                                                                                                                   |
| 400 Bad Request        | Invalid input: The post-deduction capacity must be larger than 0 and smaller than the current capacity. (Current capacity: <i>XX</i> ; post-deduction capacity: <i>XX</i> ) |
| 400 Bad Request        | Invalid input: The post-expansion capacity must be larger than the current capacity. (Current capacity: <i>XX</i> ; post-expansion capacity: <i>XX</i> )                    |
| 401 Unauthorized       | You must enter a username and the password to access the requested page.                                                                                                    |
| 403 Forbidden          | Access to the requested page is forbidden.                                                                                                                                  |
| 404 Not Found          | The requested page was not found.                                                                                                                                           |
| 405 Method Not Allowed | You are not allowed to use the method specified in the request.                                                                                                             |

| Status Code                       | Description                                                                              |
|-----------------------------------|------------------------------------------------------------------------------------------|
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.     |
| 408 Request Timeout               | The request timed out.                                                                   |
| 409 Conflict                      | The request could not be processed due to a conflict.                                    |
| 500 Internal Server Error         | The request is not completed because of a service error.                                 |
| 501 Not Implemented               | The request is not completed because the server does not support the requested function. |
| 502 Bad Gateway                   | The request is not completed because the request is invalid.                             |
| 503 Service Unavailable           | The request is not completed because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                        |

## 6.2 File Systems

### 6.2.1 Creating a Shared File System

#### Function

This API is used to create a shared file system. After the file system is created, you need to mount the file system to ECSs to achieve shared file storage. For details about mounting the file system, see [SFS Getting Started](#).

#### NOTE

This API is an asynchronous API. If the returned status code is **200**, the API request is successfully delivered and received. Later, you can query the status and path of the shared file system by referring to [Querying Details About a Shared File System](#) to identify whether the creation is complete and successful. If the status of the shared file system becomes **available** or the shared path is generated, the creation is successful.

---

#### NOTICE

After a shared file system is created successfully, it can be used only after you add share access rules by referring to [Adding a File System Access Rule](#).

---

## URI

- POST /v2/{project\_id}/shares
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description

| Parameter | Mandatory | Type   | Description                                                 |
|-----------|-----------|--------|-------------------------------------------------------------|
| share     | Yes       | Object | For details, see the description of the <b>share</b> field. |

- Description of the **share** field

| Parameter   | Mandatory | Type    | Description                                                                                                                                                                                                  |
|-------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| share_proto | Yes       | String  | Specifies the file sharing protocol. The value can be <b>NFS</b> (for Linux OS).                                                                                                                             |
| size        | Yes       | Integer | Specifies the size (GB) of the shared file system. The applied capacity of the shared file system cannot be larger than the allowed quota. To view the allowed quota, see <a href="#">Quota Management</a> . |
| name        | No        | String  | Specifies the name of the shared file system, which contains 0 to 255 characters and can contain only letters, digits, hyphens (-), and underscores (_).                                                     |
| description | No        | String  | Specifies the description of the shared file system, which contains 0 to 255 characters and can contain only letters, digits, hyphens (-), and underscores (_).                                              |

| Parameter         | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_public         | No        | Boolean | (Supported by API versions from v2.8 to v2.42). Specifies whether a file system can be publicly seen. If it is set to <b>true</b> , the file system can be seen publicly. If it is set to <b>false</b> , the file system can be seen privately. The default value is <b>false</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| availability_zone | No        | String  | Specifies the availability zone name. If this parameter is left blank, the default availability zone will be used. If the default availability zone contains no storage resources, the creation of the shared file system fails. The value contains 0 to 255 characters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| metadata          | No        | Object  | <p>Specifies the metadata information used to create the shared file system. The value consists of one or more key and value pairs organized as a dictionary of strings. For details, see the description of the <b>metadata</b> field.</p> <p><b>CAUTION</b></p> <ul style="list-style-type: none"><li>For security concerns, the API for modifying the <b>metadata</b> field is not opened yet. Therefore, ensure that the parameters and values are correct when creating a shared file system with data encryption using the <b>metadata</b> field.</li><li>Unless otherwise specified (for example, <b>#sfs_crypt_key_id</b>), the keys that comply with the following rules in the <b>metadata</b> field are for internal use of the system. Do not customize the settings to avoid internal system errors caused by conflicts with system predefined keys.<ul style="list-style-type: none"><li>Key <b>share_used</b></li><li>Keys that start with <b>#sfs</b></li></ul></li></ul> |

- Description of **metadata** fields (creating a shared file system with the encryption function)

When creating a shared file system with the encryption function, obtain the key ID, domain ID, and key alias of the encryption key using the HTTPS

request by referring to section **Querying the List of CMKs** in the *Data Encryption Workshop API Reference*. Then, in the **metadata** field, set the key-value pairs according to the following table. Ensure that the key-value pairs in the **metadata** field are correct.

To create a shared file system with the encryption function, all parameters in the following table are mandatory. If the encryption function is not needed, these parameters are optional.

| Key                  | Value Type | Mandatory | Description                                                                                                                                                                       |
|----------------------|------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #sfs_crypt_key_id    | String     | Yes       | Specifies the encryption key ID.<br>If this field, <b>#sfs_crypt_domain_id</b> , and <b>#sfs_crypt_alias</b> exist at the same time, the data encryption function is enabled.     |
| #sfs_crypt_domain_id | String     | Yes       | Specifies the tenant domain ID.<br>If this field, <b>#sfs_crypt_key_id</b> , and <b>#sfs_crypt_alias</b> exist at the same time, the data encryption function is enabled.         |
| #sfs_crypt_alias     | String     | Yes       | Specifies the encryption key alias.<br>If this field, <b>#sfs_crypt_key_id</b> , and <b>#sfs_crypt_domain_id</b> exist at the same time, the data encryption function is enabled. |

#### NOTE

- You are advised to use the default key **sfs/default** to create an encrypted shared file system. For details, see section "File System Encryption" and "Encryption" in the *Scalable File Service User Guide*.
- When you create a file system with an enterprise project ID, the following key is required in the metadata.

| Key                   | Value Type | Mandatory | Description                                                                                                                                                                                                |
|-----------------------|------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| enterprise_project_id | String     | Yes       | Specifies the enterprise project ID.<br>When the Enterprise Project function is enabled, <b>enterprise_project_id</b> is used as a key for specifying the enterprise project ID of the shared file system. |

- Example request: POST https://{endpoint}/v2/16e1ab15c35a457e9c2b2aa189f544e1/shares  
Creating a 1-GB NFS file system that can only be seen privately

```
{
  "share": {
    "name": "test",
    "description": "test description",
    "share_proto": "NFS",
    "share_network_id": null,
    "size": 1,
    "is_public": false
  }
}
```
- Example request (creating a shared file system with data encryption function): POST https://{endpoint}/v2/16e1ab15c35a457e9c2b2aa189f544e1/shares  
Creating a 1-GB, encrypted NFS file system that can only be seen privately

```
{
  "share": {
    "name": "test",
    "description": "test description",
    "metadata": {
      "#sfs_crypt_key_id": "9130c90d-73b8-4203-b790-d49f98d503df",
      "#sfs_crypt_domain_id": "3b2d9670690444c582942801ed7d457b",
      "#sfs_crypt_alias": "sfs/default"
    },
    "share_proto": "NFS",
    "share_network_id": null,
    "size": 1,
    "is_public": false
  }
}
```
- Example request (with Enterprise Project enabled): POST https://{endpoint}/v2/16e1ab15c35a457e9c2b2aa189f544e1/shares  
Creating a 1-GB NFS file system that can only be seen privately and adding it to an enterprise project

```
{
  "share": {
    "share_type": null,
    "name": "test",
    "snapshot_id": null,
    "description": "test description",
    "metadata": {
      "enterprise_project_id": "9130c90d-73b8-4203-b790-d49f98d503df"
    },
    "share_proto": "NFS",
    "share_network_id": null,
    "size": 1,
    "is_public": false
  }
}
```

## Response

- Parameter description

| Parameter | Type   | Description                                                 |
|-----------|--------|-------------------------------------------------------------|
| share     | Object | For details, see the description of the <b>share</b> field. |

- Description of the **share** field

| Parameter         | Type    | Description                                                                                                                                                                                                                                                                                       |
|-------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| links             | Array   | Specifies the links of shared file systems.                                                                                                                                                                                                                                                       |
| availability_zone | String  | Specifies the availability zone.                                                                                                                                                                                                                                                                  |
| share_server_id   | String  | Specifies the ID for managing share services.                                                                                                                                                                                                                                                     |
| id                | String  | Specifies the ID of the shared file system.                                                                                                                                                                                                                                                       |
| size              | Integer | Specifies the size (GB) of the shared file system.                                                                                                                                                                                                                                                |
| project_id        | String  | Specifies the ID of the project to which the shared file system belongs.                                                                                                                                                                                                                          |
| metadata          | Object  | Sets one or more metadata key and value pairs as a dictionary of strings. The value of the <b>share_used</b> key indicates the file system used capacity, in bytes. The value of the <b>enterprise_project_id</b> key indicates the ID of the enterprise project that the file system belongs to. |
| status            | String  | Specifies the status of the shared file system.                                                                                                                                                                                                                                                   |
| description       | String  | Describes the shared file system.                                                                                                                                                                                                                                                                 |
| host              | String  | Specifies the name of the host.                                                                                                                                                                                                                                                                   |
| name              | String  | Specifies the name of the shared file system.                                                                                                                                                                                                                                                     |
| created_at        | String  | Specifies the date and time stamp when the shared file system was created.                                                                                                                                                                                                                        |
| share_proto       | String  | Specifies the protocol for sharing file systems.                                                                                                                                                                                                                                                  |
| share_type_name   | String  | Specifies the storage service type assigned for the shared file system, such as high-performance storage (composed of SSDs) and large-capacity storage (composed of SATA disks). This field is supported by API v2.6 and later versions.                                                          |
| share_type        | String  | Specifies the ID of the file system type.                                                                                                                                                                                                                                                         |
| volume_type       | String  | Specifies the volume type. The definition of this parameter is the same as that of <b>share_type</b> .                                                                                                                                                                                            |

| Parameter        | Type    | Description                                                                                                                                                                                                                         |
|------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| export_locations | Array   | Lists the mount locations. Currently, only a single mount location is supported. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.9</b> .                 |
| export_location  | String  | Specifies the mount location. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.9</b> .                                                                    |
| is_public        | Boolean | Specifies the visibility level of the shared file system. If <b>true</b> is returned, the file system can be seen publicly. If <b>false</b> is returned, the file system can be seen privately. The default value is <b>false</b> . |

- Example response

```
{
  "share": {
    "status": "creating",
    "project_id": "16e1ab15c35a457e9c2b2aa189f544e1",
    "name": "share_London",
    "share_type": "25747776-08e5-494f-ab40-a64b9d20d8f7",
    "availability_zone": "az1.dc1",
    "created_at": "2015-09-18T10:25:24.533287",
    "export_location": null,
    "links": [
      {
        "href": "http://192.168.198.54:8786/v2/16e1ab15c35a457e9c2b2aa189f544e1/shares/011d21e2-fbc3-4e4a-9993-9ea223f73264",
        "rel": "self"
      },
      {
        "href": "http://192.168.198.54:8786/16e1ab15c35a457e9c2b2aa189f544e1/shares/011d21e2-fbc3-4e4a-9993-9ea223f73264",
        "rel": "bookmark"
      }
    ],
    "share_network_id": null,
    "export_locations": [],
    "share_proto": "NFS",
    "host": null,
    "volume_type": "default",
    "snapshot_id": null,
    "is_public": true,
    "metadata": {
      "project": "my_app",
      "aim": "doc"
    },
    "id": "011d21e2-fbc3-4e4a-9993-9ea223f73264",
    "size": 1,
    "description": "My custom share London"
  }
}
```

 **NOTE**

When the client receives the system response, the shared file system is still being created. For this reason, the shared path cannot be queried immediately. You can use the API of [Querying Mount Locations of a Shared File System](#) to query the shared path after the creation is complete.

## Status Codes

- Normal  
200
- Abnormal

| Status Code                       | Description                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------|
| 400 Bad Request                   | The server failed to process the request.                                                  |
| 401 Unauthorized                  | You must enter a username and the password to access the requested page.                   |
| 403 Forbidden                     | Access to the requested page is forbidden.                                                 |
| 404 Not Found                     | The requested page was not found.                                                          |
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                            |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                  |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.       |
| 408 Request Timeout               | The request timed out.                                                                     |
| 409 Conflict                      | The request could not be processed due to a conflict.                                      |
| 413 Quota Exceeded                | Insufficient user quota.                                                                   |
| 500 Internal Server Error         | Failed to complete the request because of an internal service error.                       |
| 501 Not Implemented               | Failed to complete the request because the server does not support the requested function. |
| 502 Bad Gateway                   | Failed to complete the request because the request is invalid.                             |
| 503 Service Unavailable           | Failed to complete the request because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                          |

## 6.2.2 Querying All Shared File Systems

### Function

This API is used to list the basic information of all shared file systems.

### URI

- GET /v2/{project\_id}/shares?  
all\_tenants={all\_tenants}&status={status}&limit={limit}&offset={offset}&sort\_key={sort\_key}&sort\_dir={sort\_dir}&project\_id={project\_id}&is\_public={is\_public}
- Parameter description

| Parameter   | Mandatory            | Type    | Description                                                                                                                                                                                                                                                                           |
|-------------|----------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes                  | String  | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                |
| all_tenants | No (query parameter) | Boolean | This parameter is available only to users with administrator permissions. Specifies whether to list shared file systems of all tenants. To list shared file systems of all tenants, set it to <b>1</b> . To list shared file systems only of the current tenant, set it to <b>0</b> . |
| project_id  | No (query parameter) | String  | This parameter is available only to users with administrator permissions. Specifies the ID of the project to which the shared file system belongs. This parameter needs to be used together with <b>all_tenants</b> .                                                                 |

| Parameter | Mandatory            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------|----------------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status    | No (query parameter) | String  | <p>Filters shared file systems by status. Possible values are:</p> <ul style="list-style-type: none"><li>• <b>creating</b>: The shared file system is being created.</li><li>• <b>error</b>: The shared file system fails to be created.</li><li>• <b>available</b>: The shared file system is available.</li><li>• <b>deleting</b>: The shared file system is being deleted.</li><li>• <b>error_deleting</b>: The shared file system fails to be deleted.</li><li>• <b>extending</b>: The shared file system is being expanded.</li><li>• <b>extending_error</b>: The shared file system fails to be expanded.</li><li>• <b>shrinking</b>: The shared file system is being shrunk.</li><li>• <b>shrinking_error</b>: The shared file system fails to be shrunk.</li><li>• <b>shrinking_possible_data_loss_error</b>: The shared file system fails to be shrunk due to data loss.</li><li>• <b>manage_starting</b>: Shared file system management starts.</li><li>• <b>manage_error</b>: The shared file system fails to be managed.</li><li>• <b>unmanage_starting</b>: Canceling shared file system management starts.</li><li>• <b>unmanage_error</b>: Failed to cancel shared file system management.</li><li>• <b>unmanaged</b>: The shared file system is not managed.</li></ul> |
| limit     | No (query parameter) | Integer | <p>Specifies the maximum number of shared file systems that can be returned. If this parameter is not specified, all the shared file systems are returned by default.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Parameter             | Mandatory            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|----------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| offset                | No (query parameter) | Integer | Specifies the offset to define the start point of shared file system listing. The value must be greater than or equal to <b>0</b> .                                                                                                                                                                                                                                                                                                                 |
| sort_key              | No (query parameter) | String  | Specifies the keyword for sorting the queried shared file systems. Possible values are <b>id</b> , <b>status</b> , <b>size</b> , <b>host</b> , <b>share_proto</b> , <b>availability_zone_id</b> , <b>user_id</b> , <b>project_id</b> , <b>created_at</b> , <b>updated_at</b> , <b>display_name</b> , <b>name</b> , <b>share_type_id</b> , <b>share_network_id</b> , and <b>snapshot_id</b> . By default, the value is sorted by <b>created_at</b> . |
| sort_dir              | No (query parameter) | String  | Specifies the direction to sort shared file systems. Possible values are <b>asc</b> (ascending) and <b>desc</b> (descending).                                                                                                                                                                                                                                                                                                                       |
| is_public             | No (query parameter) | String  | When this parameter is set to <b>true</b> , the current tenant can query all its own shared file systems and other tenants' shared file systems whose <b>is_public</b> is set to <b>true</b> . When this parameter is set to <b>false</b> , the current tenant can query only the shared file systems owned by the tenant.                                                                                                                          |
| enterprise_project_id | No (query parameter) | String  | Specifies the enterprise project to which the shared file systems are bound.<br><br>To query the current user's shared file systems binding to all enterprise projects, use the <b>all_granted_eps</b> parameter.                                                                                                                                                                                                                                   |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description  
None

- Example request  
GET https://{endpoint}/v2/16e1ab15c35a457e9c2b2aa189f544e1/shares

## Response

- Parameter description

| Parameter | Type             | Description                                                 |
|-----------|------------------|-------------------------------------------------------------|
| shares    | Array of objects | For details, see the description of the <b>share</b> field. |

- Description of the **share** field

| Parameter | Type             | Description                                                       |
|-----------|------------------|-------------------------------------------------------------------|
| id        | String           | Specifies the ID of the shared file system.                       |
| links     | Array of objects | Specifies the request link information of the shared file system. |
| name      | String           | Specifies the name of the shared file system.                     |

- Example response

```
{
  "shares": [
    {
      "id": "1390cb29-539b-4926-8953-d8d6b106071a",
      "links": [
        {
          "href": "https://192.168.196.47:8796/v2/f24555bfcf3146ca936d21bcb548687e/shares/1390cb29-539b-4926-8953-d8d6b106071a",
          "rel": "self"
        },
        {
          "href": "https://192.168.196.47:8796/f24555bfcf3146ca936d21bcb548687e/shares/1390cb29-539b-4926-8953-d8d6b106071a",
          "rel": "bookmark"
        }
      ],
      "name": null
    }
  ]
}
```

## Status Codes

- Normal  
200
- Abnormal

| Status Code     | Description                               |
|-----------------|-------------------------------------------|
| 400 Bad Request | The server failed to process the request. |

| Status Code                       | Description                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------|
| 401 Unauthorized                  | You must enter a username and the password to access the requested page.                   |
| 403 Forbidden                     | Access to the requested page is forbidden.                                                 |
| 404 Not Found                     | The requested page was not found.                                                          |
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                            |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                  |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.       |
| 408 Request Timeout               | The request timed out.                                                                     |
| 409 Conflict                      | The request could not be processed due to a conflict.                                      |
| 500 Internal Server Error         | Failed to complete the request because of an internal service error.                       |
| 501 Not Implemented               | Failed to complete the request because the server does not support the requested function. |
| 502 Bad Gateway                   | Failed to complete the request because the request is invalid.                             |
| 503 Service Unavailable           | Failed to complete the request because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                          |

## 6.2.3 Querying Details About All Shared File Systems

### Function

This API is used to query the details about all shared file systems.

### URI

- GET /v2/{project\_id}/shares/detail?  
all\_tenants={all\_tenants}&project\_id={project\_id}&status={status}&limit={limit}  
&offset={offset}&sort\_key={sort\_key}&sort\_dir={sort\_dir}&is\_public={is\_public}  
&name={name}
- Parameter description

| Parameter   | Mandatory            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|----------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id  | Yes                  | String  | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                                |
| all_tenants | No (query parameter) | Integer | (Administrators only) Specifies whether to list shared file systems of all tenants. To list shared file systems of all tenants, set it to <b>1</b> . To list shared file systems only of the current tenant, set it to <b>0</b> .                                                                                                                                                                                     |
| project_id  | No (query parameter) | String  | Specifies the ID of the tenant who creates the shared file system. This parameter is used together with <b>all_tenants</b> .                                                                                                                                                                                                                                                                                          |
| status      | No (query parameter) | String  | Filters shared file systems by status. Possible values are <b>creating</b> , <b>error</b> , <b>available</b> , <b>deleting</b> , <b>error_deleting</b> , <b>manage_starting</b> , <b>manage_error</b> , <b>unmanage_starting</b> , <b>unmanage_error</b> , <b>unmanaged</b> , <b>extending</b> , <b>extending_error</b> , <b>shrinking</b> , <b>shrinking_error</b> , and <b>shrinking_possible_data_loss_error</b> . |
| limit       | No (query parameter) | Integer | Specifies the maximum number of shared file systems that can be returned.                                                                                                                                                                                                                                                                                                                                             |
| offset      | No (query parameter) | Integer | Specifies the offset to define the start point of shared file system listing.                                                                                                                                                                                                                                                                                                                                         |
| sort_key    | No (query parameter) | String  | Specifies the keyword for sorting the queried shared file systems. Possible values are <b>id</b> , <b>status</b> , <b>size</b> , <b>host</b> , <b>share_proto</b> , <b>availability_zone_id</b> , <b>user_id</b> , <b>project_id</b> , <b>created_at</b> , <b>updated_at</b> , <b>display_name</b> , <b>name</b> , <b>share_type_id</b> , <b>share_network_id</b> , and <b>snapshot_id</b> .                          |

| Parameter             | Mandatory            | Type   | Description                                                                                                                                                                                                                                                                                                                |
|-----------------------|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sort_dir              | No (query parameter) | String | Specifies the direction to sort shared file systems. Possible values are <b>asc</b> (ascending) and <b>desc</b> (descending).                                                                                                                                                                                              |
| is_public             | No (query parameter) | String | When this parameter is set to <b>true</b> , the current tenant can query all its own shared file systems and other tenants' shared file systems whose <b>is_public</b> is set to <b>true</b> . When this parameter is set to <b>false</b> , the current tenant can query only the shared file systems owned by the tenant. |
| enterprise_project_id | No (query parameter) | String | Specifies the enterprise project to which the shared file systems are bound.<br><br>To query the current user's shared file systems binding to all enterprise projects, use the <b>all_granted_eps</b> parameter.                                                                                                          |
| name                  | No (query parameter) | String | Specifies the field used for fuzzy filtering based on the name of a shared file system. This field is supported by API v2.36 and later versions.                                                                                                                                                                           |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description  
None
- Example request  
None

## Response

- Parameter description

| Parameter | Type             | Description                                     |
|-----------|------------------|-------------------------------------------------|
| shares    | Array of objects | Specifies the list of the <b>share</b> objects. |

- Description of the **share** field

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| links                | Array   | Specifies the links of shared file systems.                                                                                                                                                                                                                                                                                                                                                                   |
| availability_zone    | String  | Specifies the availability zone.                                                                                                                                                                                                                                                                                                                                                                              |
| share_server_id      | String  | Specifies the ID for managing share services.                                                                                                                                                                                                                                                                                                                                                                 |
| share_network_id     | String  | Specifies the ID of the share network. This parameter is reserved, because share network management is not supported currently.                                                                                                                                                                                                                                                                               |
| snapshot_id          | String  | Specifies the ID of the source snapshot that is used to create the shared file system. This parameter is reserved, because snapshots are not supported currently.                                                                                                                                                                                                                                             |
| snapshot_support     | Boolean | Specifies whether snapshots are supported. This parameter is reserved, because snapshots are not supported currently. This field is supported by API v2.2 and later versions.                                                                                                                                                                                                                                 |
| id                   | String  | Specifies the ID of the shared file system.                                                                                                                                                                                                                                                                                                                                                                   |
| size                 | Integer | Specifies the size (GB) of the shared file system.                                                                                                                                                                                                                                                                                                                                                            |
| consistency_group_id | String  | Specifies the ID of the consistency group. This parameter is reserved, because consistency groups are not supported currently. This field is supported by API versions from v2.31 to v2.42.                                                                                                                                                                                                                   |
| project_id           | String  | Specifies the ID of the project to which the shared file system belongs.                                                                                                                                                                                                                                                                                                                                      |
| metadata             | Object  | Sets one or more metadata key and value pairs as a dictionary of strings. The value of the <b>share_used</b> key indicates the file system used capacity, in bytes. The used capacity will not be displayed if less than 1 MB of the SFS Capacity-Oriented file system is used. The value of the <b>enterprise_project_id</b> key indicates the ID of the enterprise project that the file system belongs to. |
| status               | String  | Specifies the status of the shared file system.                                                                                                                                                                                                                                                                                                                                                               |

| Parameter        | Type    | Description                                                                                                                                                                                                                              |
|------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_state       | String  | Specifies the data migration status. This parameter is reserved, because data migration is not supported currently. This field is supported by API v2.5 and later versions.                                                              |
| has_replicas     | Boolean | Specifies whether replicas exist. This parameter is reserved, because replication is not supported currently. This field is supported by API versions from v2.11 to v2.42.                                                               |
| replication_type | String  | Specifies the replication type. This parameter is reserved, because replication is not supported currently. This field is supported by API versions from v2.11 to v2.42.                                                                 |
| description      | String  | Describes the shared file system.                                                                                                                                                                                                        |
| host             | String  | Specifies the name of the host.                                                                                                                                                                                                          |
| name             | String  | Specifies the name of the shared file system.                                                                                                                                                                                            |
| created_at       | String  | Specifies the date and time stamp when the shared file system was created.                                                                                                                                                               |
| share_proto      | String  | Specifies the protocol for sharing file systems.                                                                                                                                                                                         |
| share_type_name  | String  | Specifies the storage service type assigned for the shared file system, such as high-performance storage (composed of SSDs) and large-capacity storage (composed of SATA disks). This field is supported by API v2.6 and later versions. |
| share_type       | String  | Specifies the ID of the file system type.                                                                                                                                                                                                |
| volume_type      | String  | Specifies the volume type. The definition of this parameter is the same as that of <b>share_type</b> .                                                                                                                                   |
| export_locations | Array   | Lists the mount locations. Currently, only a single mount location is supported. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.9</b> .                      |
| export_location  | String  | Specifies the mount location. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.9</b> .                                                                         |

| Parameter | Type    | Description                                                                                                                                                                                                                         |
|-----------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_public | Boolean | Specifies the visibility level of the shared file system. If <b>true</b> is returned, the file system can be seen publicly. If <b>false</b> is returned, the file system can be seen privately. The default value is <b>false</b> . |

- Example response

```
{
  "shares": [
    {
      "links": [
        {
          "href": "https://192.168.170.97:8796/v2/61b01a94b84448cfac2424e46553d7e7/shares/54d0bac6-45c8-471c-bf0d-16ffd81ef88a",
          "rel": "self"
        },
        {
          "href": "https://192.168.170.97:8796/61b01a94b84448cfac2424e46553d7e7/shares/54d0bac6-45c8-471c-bf0d-16ffd81ef88a",
          "rel": "bookmark"
        }
      ],
      "export_location": "sfs.dong.com:/share-e1c2d35e",
      "availability_zone": "az1.dc1",
      "share_network_id": null,
      "snapshot_id": null,
      "id": "54d0bac6-45c8-471c-bf0d-16ffd81ef88a",
      "size": 1,
      "share_type": "default",
      "": null,
      "project_id": "da0f615c35eb4d72812d1547a77b5394",
      "metadata": {
        "share_used": "1048576000000",
      },
      "status": "available",
      "description": "test description",
      "export_locations": ["sfs.dong.com:/share-e1c2d35e"],
      "host": "DJ01@9656beb1-7ce2-4c46-9911-ecd51ab632bf#9656beb1-7ce2-4c46-9911-ecd51ab632bf",
      "is_public": false,
      "name": "cl01",
      "created_at": "2017-07-07T03:15:06.858662",
      "share_proto": "NFS",
      "volume_type": "default"
    }
  ]
}
```

## Status Codes

- Normal  
200
- Abnormal

| Status Code     | Description                               |
|-----------------|-------------------------------------------|
| 400 Bad Request | The server failed to process the request. |

| Status Code                       | Description                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------|
| 401 Unauthorized                  | You must enter a username and the password to access the requested page.                   |
| 403 Forbidden                     | Access to the requested page is forbidden.                                                 |
| 404 Not Found                     | The requested page was not found.                                                          |
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                            |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                  |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.       |
| 408 Request Timeout               | The request timed out.                                                                     |
| 409 Conflict                      | The request could not be processed due to a conflict.                                      |
| 500 Internal Server Error         | Failed to complete the request because of an internal service error.                       |
| 501 Not Implemented               | Failed to complete the request because the server does not support the requested function. |
| 502 Bad Gateway                   | Failed to complete the request because the request is invalid.                             |
| 503 Service Unavailable           | Failed to complete the request because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                          |

## 6.2.4 Querying Details About a Shared File System

### Function

This API is used to query the details about a shared file system.

### URI

- GET /v2/{project\_id}/shares/{share\_id}
- Parameter description

| Parameter | Mandatory | Type   | Description                                 |
|-----------|-----------|--------|---------------------------------------------|
| share_id  | Yes       | String | Specifies the ID of the shared file system. |

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description  
None
- Example request  
None

## Response

- Parameter description

| Parameter | Type   | Description                         |
|-----------|--------|-------------------------------------|
| share     | Object | Specifies the <b>share</b> objects. |

- Description of the **share** field

| Parameter         | Type   | Description                                                                                                                                                       |
|-------------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| links             | Array  | Specifies the links of shared file systems.                                                                                                                       |
| availability_zone | String | Specifies the availability zone.                                                                                                                                  |
| share_server_id   | String | Specifies the ID for managing share services.                                                                                                                     |
| share_network_id  | String | Specifies the ID of the share network. This parameter is reserved, because share network management is not supported currently.                                   |
| snapshot_id       | String | Specifies the ID of the source snapshot that is used to create the shared file system. This parameter is reserved, because snapshots are not supported currently. |

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| snapshot_support     | Boolean | Specifies whether snapshots are supported. This parameter is reserved, because snapshots are not supported currently. This field is supported by API v2.2 and later versions.                                                                                                                                                                                                                                 |
| id                   | String  | Specifies the ID of the shared file system.                                                                                                                                                                                                                                                                                                                                                                   |
| size                 | Integer | Specifies the size (GB) of the shared file system.                                                                                                                                                                                                                                                                                                                                                            |
| consistency_group_id | String  | Specifies the ID of the consistency group. This parameter is reserved, because consistency groups are not supported currently. This field is supported by API versions from v2.31 to v2.42.                                                                                                                                                                                                                   |
| project_id           | String  | Specifies the ID of the project to which the shared file system belongs.                                                                                                                                                                                                                                                                                                                                      |
| metadata             | Object  | Sets one or more metadata key and value pairs as a dictionary of strings. The value of the <b>share_used</b> key indicates the file system used capacity, in bytes. The used capacity will not be displayed if less than 1 MB of the SFS Capacity-Oriented file system is used. The value of the <b>enterprise_project_id</b> key indicates the ID of the enterprise project that the file system belongs to. |
| status               | String  | Specifies the status of the shared file system.                                                                                                                                                                                                                                                                                                                                                               |
| task_state           | String  | Specifies the data migration status. This parameter is reserved, because data migration is not supported currently. This field is supported by API v2.5 and later versions.                                                                                                                                                                                                                                   |
| has_replicas         | Boolean | Specifies whether replicas exist. This parameter is reserved, because replication is not supported currently. This field is supported by API versions from v2.11 to v2.42.                                                                                                                                                                                                                                    |
| replication_type     | String  | Specifies the replication type. This parameter is reserved, because replication is not supported currently. This field is supported by API versions from v2.11 to v2.42.                                                                                                                                                                                                                                      |
| description          | String  | Describes the shared file system.                                                                                                                                                                                                                                                                                                                                                                             |

| Parameter        | Type    | Description                                                                                                                                                                                                                              |
|------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| host             | String  | Specifies the name of the host.                                                                                                                                                                                                          |
| name             | String  | Specifies the name of the shared file system.                                                                                                                                                                                            |
| created_at       | String  | Specifies the date and time stamp when the shared file system was created.                                                                                                                                                               |
| share_proto      | String  | Specifies the protocol for sharing file systems.                                                                                                                                                                                         |
| share_type_name  | String  | Specifies the storage service type assigned for the shared file system, such as high-performance storage (composed of SSDs) and large-capacity storage (composed of SATA disks). This field is supported by API v2.6 and later versions. |
| share_type       | String  | Specifies the ID of the file system type.                                                                                                                                                                                                |
| volume_type      | String  | Specifies the volume type. The definition of this parameter is the same as that of <b>share_type</b> .                                                                                                                                   |
| export_locations | Array   | Lists the mount locations. Currently, only a single mount location is supported. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.9</b> .                      |
| export_location  | String  | Specifies the mount location. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.9</b> .                                                                         |
| is_public        | Boolean | Specifies the visibility level of the shared file system. If <b>true</b> is returned, the file system can be seen publicly. If <b>false</b> is returned, the file system can be seen privately. The default value is <b>false</b> .      |

- Example response

```
{
  "share": {
    "status": "available",
    "share_type_name": "sla",
    "description": "My custom share London",
    "links": [
      {
        "href": "https://192.168.196.47:8796/v2/07412155bf474db9a2f697fd978593d7/shares/f26d867f-9876-433d-8db2-25d210f29309",
        "rel": "self"
      },
      {
        "href": "https://192.168.196.47:8796/07412155bf474db9a2f697fd978593d7/shares/f26d867f-9876-433d-8db2-25d210f29309",

```

```
    "rel": "bookmark"
  }
],
"availability_zone": "az1.dc1",
"share_network_id": null,
"share_server_id": null,
"share_group_id": null,
"host": "DJ38@a4588256-3880-4136-b3c9-4c3aade8a84b#a4588256-3880-4136-
b3c9-4c3aade8a84b",
"revert_to_snapshot_support": null,
"access_rules_status": "active",
"snapshot_id": null,
"create_share_from_snapshot_support": null,
"is_public": false,
"task_state": null,
"snapshot_support": true,
"id": "f26d867f-9876-433d-8db2-25d210f29309",
"size": 1,
"source_share_group_snapshot_member_id": null,
"user_id": "daa3f8f8d7254465841da769298a76f6",
"name": "luzhongguo_1",
"share_type": "8ae4e74e-83f4-4980-8ab8-e637f9294e0b",
"has_replicas": false,
"replication_type": null,
"created_at": "2018-12-25T08:45:22.525899",
"share_proto": "NFS",
"volume_type": "sla",
"mount_snapshot_support": null,
"project_id": "07412155bf474db9a2f697fd978593d7",
"metadata": {
  "share_key": "test",
  "share_used": "1",
}
}
```

## Status Codes

- Normal  
200
- Abnormal

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

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

## 6.2.5 Querying Mount Locations of a Shared File System

### Function

This API is used to query mount locations of a shared file system.

#### NOTE

This API exists only when **X-Openstack-Manila-API-Version** in the request header is greater than or equal to 2.9. The following is an example request sent by the **curl** command: `curl -k -i -X GET https://192.168.196.47:8786/v2/13c7ff9a479c4e3599f4331d9e4a1835/shares/2a8c5470-d5d9-4fe1-b9fc-66a15a162e41/export_locations -H "X-Openstack-Manila-API-Version: 2.9" -H "X-Auth-Token: $token" -H "Accept: application/json"`

### URI

- GET /v2/{project\_id}/shares/{share\_id}/export\_locations
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| share_id   | Yes       | String | Specifies the ID of the shared file system.                                                                                            |
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description  
None
- Example request  
None

## Response

- Parameter description

| Parameter        | Type             | Description                                   |
|------------------|------------------|-----------------------------------------------|
| export_locations | Array of strings | Specifies the <b>export_location</b> objects. |

- Description of field **export\_location**

| Parameter         | Type    | Description                                                                                                                                                                                                       |
|-------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id                | String  | Specifies the ID of the mount location of the shared file system.                                                                                                                                                 |
| share_instance_id | String  | Specifies the ID of the shared file system.                                                                                                                                                                       |
| path              | String  | Specifies the path that will be used when the shared file system is mounted.                                                                                                                                      |
| is_admin_only     | Boolean | Specifies whether the shared file system is only visible to administrators and its owner. Possible values are <b>true</b> (only visible to administrators and its owner) and <b>false</b> (visible to all users). |
| preferred         | Boolean | Identifies which mount locations are most efficient and are used preferentially when multiple mount locations exist.                                                                                              |

- Example response  
NFS file system:

```
{
  "export_locations": [
    {
      "path": "NFS:sfs-nas1.dong.com:/share-236b936a",
      "id": "b03d2aac-aeed-409a-af07-5d1b9024241c",
      "preferred": false
    }
  ]
}
```

## Status Codes

- Normal  
200
- Abnormal

| Status Code      | Description                                                              |
|------------------|--------------------------------------------------------------------------|
| 400 Bad Request  | The server failed to process the request.                                |
| 401 Unauthorized | You must enter a username and the password to access the requested page. |
| 403 Forbidden    | Access to the requested page is forbidden.                               |
| 404 Not Found    | The requested page was not found.                                        |

## 6.2.6 Modifying a Shared File System

### Function

This API is used to modify the name and description of a shared file system.

### URI

- PUT /v2/{project\_id}/shares/{share\_id}
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| share_id   | Yes       | String | Specifies the ID of the shared file system.                                                                                            |
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

### Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

### Request

- Parameter description

| Parameter | Mandatory | Type   | Description                         |
|-----------|-----------|--------|-------------------------------------|
| share     | Yes       | Object | Specifies the <b>share</b> objects. |

- Description of the **share** field

| Parameter           | Mandatory | Type    | Description                                                                                                                                                                                                                                                                     |
|---------------------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| display_name        | No        | String  | Specifies the new name of the shared file system. The value consists of 0 to 255 characters.                                                                                                                                                                                    |
| display_description | No        | String  | Describes the shared file system. The value contains 0 to 255 characters.                                                                                                                                                                                                       |
| is_public           | No        | Boolean | (Supported by API v2.8 and later versions.) Specifies whether a file system can be publicly seen. If it is set to <b>true</b> , the file system can be seen publicly. If it is set to <b>false</b> , the file system can be seen privately. The default value is <b>false</b> . |

- Example request

Modifying a shared file system (with the file system name changed to **testshare** and description to **test**):

```
{
  "share": {
    "display_name": "testshare",
    "display_description": "test"
  }
}
```

## Response

- Parameter description

| Parameter | Type   | Description                         |
|-----------|--------|-------------------------------------|
| share     | Object | Specifies the <b>share</b> objects. |

- Description of the **share** field

| Parameter         | Type   | Description                                   |
|-------------------|--------|-----------------------------------------------|
| links             | Array  | Specifies the links of shared file systems.   |
| availability_zone | String | Specifies the availability zone.              |
| share_server_id   | String | Specifies the ID for managing share services. |

| Parameter            | Type    | Description                                                                                                                                                                                                                                                                                       |
|----------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| share_network_id     | String  | Specifies the ID of the share network. This parameter is reserved, because share network management is not supported currently.                                                                                                                                                                   |
| snapshot_id          | String  | Specifies the ID of the source snapshot that is used to create the shared file system. This parameter is reserved, because snapshots are not supported currently.                                                                                                                                 |
| snapshot_support     | Boolean | Specifies whether snapshots are supported. This parameter is reserved, because snapshots are not supported currently.                                                                                                                                                                             |
| id                   | String  | Specifies the ID of the shared file system.                                                                                                                                                                                                                                                       |
| size                 | Integer | Specifies the size (GB) of the shared file system.                                                                                                                                                                                                                                                |
| consistency_group_id | String  | (Supported by API versions from v2.31 to v2.42.) Specifies the ID of a consistency group. This parameter is reserved, because consistency groups are not supported currently.                                                                                                                     |
| project_id           | String  | Specifies the ID of the project to which the shared file system belongs.                                                                                                                                                                                                                          |
| metadata             | Object  | Sets one or more metadata key and value pairs as a dictionary of strings. The value of the <b>share_used</b> key indicates the file system used capacity, in bytes. The value of the <b>enterprise_project_id</b> key indicates the ID of the enterprise project that the file system belongs to. |
| status               | String  | Specifies the status of the shared file system.                                                                                                                                                                                                                                                   |
| task_state           | String  | Specifies the data migration status. This parameter is reserved, because data migration is not supported currently.                                                                                                                                                                               |
| has_replicas         | Boolean | (Supported by API versions from v2.11 to v2.42.) Specifies whether any replication exists. This parameter is reserved, because replication is not supported currently.                                                                                                                            |
| replication_type     | String  | (Supported by API versions from v2.11 to v2.42.) Specifies the replication type. This parameter is reserved, because replication is not supported currently.                                                                                                                                      |

| Parameter                             | Type    | Description                                                                                                                                                                                                                                                                         |
|---------------------------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| description                           | String  | Describes the shared file system.                                                                                                                                                                                                                                                   |
| host                                  | String  | Specifies the name of the host.                                                                                                                                                                                                                                                     |
| name                                  | String  | Specifies the name of the shared file system.                                                                                                                                                                                                                                       |
| created_at                            | String  | Specifies the date and time stamp when the shared file system was created.                                                                                                                                                                                                          |
| access_rules_status                   | String  | (Supported by API versions from v2.10 to v2.27.) Specifies the configuration status of the access rule. Possible values are <b>active</b> (effective), <b>error</b> (configuration failed), and <b>syncing</b> (configuration in progress).                                         |
| share_proto                           | String  | Specifies the protocol for sharing file systems.                                                                                                                                                                                                                                    |
| volume_type                           | String  | Specifies the volume type. The definition of this parameter is the same as that of <b>share_type</b> .                                                                                                                                                                              |
| share_type_name                       | String  | Specifies the storage service type assigned for the shared file system, such as high-performance storage (composed of SSDs) and large-capacity storage (composed of SATA disks).                                                                                                    |
| share_type                            | String  | Specifies the ID of the file system type.                                                                                                                                                                                                                                           |
| export_locations                      | Array   | Lists the mount locations. Currently, only a single mount location is supported. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.8</b> .                                                                 |
| export_location                       | String  | Specifies the mount location. This parameter exists only when <b>X-Openstack-Manila-API-Version</b> specified in the request header is smaller than <b>2.8</b> .                                                                                                                    |
| is_public                             | Boolean | (Supported by API versions from v2.8 to v2.42.) Specifies whether a file system can be publicly seen. If it is set to <b>true</b> , the file system can be seen publicly. If it is set to <b>false</b> , the file system can be seen privately. The default value is <b>false</b> . |
| source_share_group_snapshot_member_id | String  | (Supported by API v2.31 and later versions.) Specifies the ID of a consistency snapshot source. Currently, the consistency group is not supported. This field is reserved.                                                                                                          |

| Parameter                          | Type    | Description                                                                                                                                                                    |
|------------------------------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| revert_to_snapshot_support         | Boolean | (Supported by API v2.27 and later versions.) Specifies whether reversion to snapshot is supported. Currently, snapshot is not supported. This field is reserved.               |
| create_share_from_snapshot_support | Boolean | (Supported by API v2.24 and later versions.) Specifies whether creating file systems from snapshot is supported. Currently, snapshot is not supported. This field is reserved. |
| mount_snapshot_support             | Boolean | (Supported by API v2.32 and later versions.) Specifies whether snapshot mounting is supported. Currently, snapshot is not supported. This field is reserved.                   |
| user_id                            | String  | (Supported by API v2.16 and later versions.) Specifies the user ID.                                                                                                            |

- Example response

```
{
  "share": {
    "status": "available",
    "share_type_name": "sla",
    "description": "test",
    "links": [
      {
        "href": "https://192.168.196.47:8796/v2/07412155bf474db9a2f697fd978593d7/shares/f26d867f-9876-433d-8db2-25d210f29309",
        "rel": "self"
      },
      {
        "href": "https://192.168.196.47:8796/07412155bf474db9a2f697fd978593d7/shares/f26d867f-9876-433d-8db2-25d210f29309",
        "rel": "bookmark"
      }
    ],
    "availability_zone": "az1.dc1",
    "share_network_id": null,
    "share_server_id": null,
    "share_group_id": null,
    "host": "DJ38@a4588256-3880-4136-b3c9-4c3aade8a84b#a4588256-3880-4136-b3c9-4c3aade8a84b",
    "revert_to_snapshot_support": null,
    "access_rules_status": "active",
    "snapshot_id": null,
    "create_share_from_snapshot_support": null,
    "is_public": true,
    "task_state": null,
    "snapshot_support": true,
    "id": "f26d867f-9876-433d-8db2-25d210f29309",
    "size": 1,
    "source_share_group_snapshot_member_id": null,
    "user_id": "daa3f8f8d7254465841da769298a76f6",
    "name": "manila share",
    "share_type": "8ae4e74e-83f4-4980-8ab8-e637f9294e0b",
    "has_replicas": false,
    "replication_type": null,
    "created_at": "2018-12-25T08:45:22.525899",
    "share_proto": "NFS",
    "volume_type": "sla",
  }
}
```

```
"mount_snapshot_support": null,
"project_id": "07412155bf474db9a2f697fd978593d7",
"metadata": {
  "share_key": "test",
  "share_used": "1",
}
}
```

## Status Codes

- Normal  
200
- Abnormal

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

## 6.2.7 Deleting a Shared File System

### Function

This API is used to delete a shared file system.

#### NOTE

This API is an asynchronous API. If the returned status code is **202**, the API request is successfully delivered and received. Later, you can query the shared file system by referring to [Querying Details About a Shared File System](#) to identify whether the deletion is complete and successful.

### URI

- DELETE /v2/{project\_id}/shares/{share\_id}
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| share_id   | Yes       | String | Specifies the ID of the shared file system.                                                                                            |
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

### Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

### Request

- Parameter description  
None
- Example request  
None

### Response

- Example response  
None

### Status Codes

- Normal  
202
- Abnormal

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

## 6.3 File System Access Rules

### 6.3.1 Adding a File System Access Rule

#### Function

This API is used to add a file system access rule.

#### NOTE

- This API is an asynchronous API. If the returned status code is **200**, the API request is successfully delivered and received. Later, you can refer to [Querying File System Access Rules](#) to check whether the access rule is added successfully.

## URI

- POST /v2/{project\_id}/shares/{share\_id}/action?  
vpc\_ip\_base\_acl={vpc\_ip\_base\_acl}
- Parameter description

| Parameter       | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| share_id        | Yes       | String | Specifies the ID of the shared file system.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| project_id      | Yes       | String | Specifies the project ID of the operator. For how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                                                                                                                                                                                                                                                                                         |
| vpc_ip_base_acl | No        | String | <p>Specifies the identifier used with IP address-based authorization. Currently, only <b>enable</b> is available, which indicates that an access rule used with IP address-based authorization will be created.</p> <p><b>NOTICE</b></p> <p>To ensure compatibility, if this parameter is left blank or set to a value other than <b>enable</b>, you can still use this API to create an access rule used with IP address-based authorization. However, this method of creation has been discarded and will not be maintained in the future.</p> |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description

| Parameter       | Mandatory | Type   | Description                                   |
|-----------------|-----------|--------|-----------------------------------------------|
| os-allow_access | Yes       | Object | Specifies the <b>os-allow_access</b> objects. |

- Description of field **os-allow\_access**

| Parameter    | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| access_level | No        | String | Specifies the access level of the file system. Possible values are <b>ro</b> (read-only) and <b>rw</b> (read-write). The default value is <b>rw</b> (read-write).                                                                                                                                                                                                                                                 |
| access_type  | Yes       | String | <p>Specifies the storage access method.</p> <ul style="list-style-type: none"><li>If the NFS protocol is used, specify <b>cert</b>.</li><li>If multiple protocols are used, specify <b>cert</b>.</li></ul> <p>Note</p> <ol style="list-style-type: none"><li>Value <b>user</b> indicates storage access using username.</li><li>Value <b>cert</b> indicates storage access using VPC ID and IP address.</li></ol> |

- Example request (IP address-based authorization)

POST /v2/{project\_id}/shares/{share\_id}/action?vpc\_ip\_base\_acl=enable

Adding a file system access rule (value of the rule parameter

**0560a527-0e77-40a6-**

**aa3b-110beecad368#127.0.0.1#1#all\_squash,root\_squash**):

```
{
  "allow_access": {
    "access_to": "0560a527-0e77-40a6-aa3b-110beecad368#127.0.0.1#1#all_squash,root_squash",
    "access_type": "cert",
    "access_level": "rw"
  }
}
```

#### NOTICE

When creating the share access rule for an IP address-based authorization scenario.

1. The **X-Openstack-Manila-API-Version** parameter must be specified for the request header, and the value of **X-Openstack-Manila-API-Version** must be from 2.28 to 2.42.

2. The **vpc\_ip\_base\_acl** parameter must be added in the request URL and the value of **vpc\_ip\_base\_acl** must be set to **enable**. To ensure compatibility, if this parameter is left blank or set to a value other than **enable**, you can still use this API to create an access rule used with IP address-based authorization. However, this method of creation has been discarded and will not be maintained in the future.

## Response

- Parameter description

| Parameter | Type   | Description                                                                                         |
|-----------|--------|-----------------------------------------------------------------------------------------------------|
| access    | Object | Specifies the <b>access</b> objects. If the access rule is not updated, this value is <b>null</b> . |

- Description of the **access** field

| Parameter    | Type   | Description                                                                                                                                                                                                                                                                                                                                             |
|--------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| share_id     | String | Specifies the ID of the shared file system to which the access rule is added.                                                                                                                                                                                                                                                                           |
| access_type  | String | Specifies the type of the access rule.                                                                                                                                                                                                                                                                                                                  |
| access_to    | String | Specifies the object that the backend grants or denies access.                                                                                                                                                                                                                                                                                          |
| access_level | String | Specifies the level of the access rule.                                                                                                                                                                                                                                                                                                                 |
| id           | String | Specifies the ID of the access rule.                                                                                                                                                                                                                                                                                                                    |
| state        | String | Specifies the status of the access rule. If the API version is earlier than 2.28, the status of the access rule is <b>new</b> , <b>active</b> , or <b>error</b> . In versions from 2.28 to 2.42, the status of the access rule is <b>queued_to_apply</b> , <b>applying</b> , <b>active</b> , <b>error</b> , <b>queued_to_deny</b> , or <b>denying</b> . |

## Status Codes

- Normal  
200
- Abnormal

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

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

## 6.3.2 Deleting a File System Access Rule

### Function

This API is used to delete a file system access rule.

#### NOTE

This API is an asynchronous API. If the returned status code is **202**, the API request is successfully delivered and received. Later, you can refer to [Querying File System Access Rules](#) to identify whether the access rule is deleted successfully.

### URI

- POST /v2/{project\_id}/shares/{share\_id}/action
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| share_id   | Yes       | String | Specifies the ID of the shared file system.                                                                                            |
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description

| Parameter      | Mandatory | Type   | Description                                 |
|----------------|-----------|--------|---------------------------------------------|
| os-deny_access | Yes       | Object | Specifies the <b>os-deny_access</b> object. |

- Description of field **os-deny\_access**

| Parameter | Mandatory | Type   | Description                                                                                           |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------|
| access_id | Yes       | String | Specifies the ID of the access rule of the shared file system. The value contains 1 to 36 characters. |

- Example request

Deleting a file system access rule (rule ID: **418e3cf4-08c3-4ed2-a29a-ceffa346b3b8**):

```
{
  "os-deny_access": {
    "access_id": "418e3cf4-08c3-4ed2-a29a-ceffa346b3b8"
  }
}
```

## Response

- Parameter description

None

- Example response

None

## Status Codes

- Normal  
202
- Abnormal

| Status Code      | Description                                                              |
|------------------|--------------------------------------------------------------------------|
| 400 Bad Request  | The server failed to process the request.                                |
| 401 Unauthorized | You must enter a username and the password to access the requested page. |

| Status Code                       | Description                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------|
| 403 Forbidden                     | Access to the requested page is forbidden.                                                 |
| 404 Not Found                     | The requested page was not found.                                                          |
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                            |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                  |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.       |
| 408 Request Timeout               | The request timed out.                                                                     |
| 409 Conflict                      | The request could not be processed due to a conflict.                                      |
| 500 Internal Server Error         | Failed to complete the request because of an internal service error.                       |
| 501 Not Implemented               | Failed to complete the request because the server does not support the requested function. |
| 502 Bad Gateway                   | Failed to complete the request because the request is invalid.                             |
| 503 Service Unavailable           | Failed to complete the request because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                          |

### 6.3.3 Querying File System Access Rules

#### Function

This API is used to query the access rules of a shared file system.

#### URI

- POST /v2/{project\_id}/shares/{share\_id}/action
- Parameter description

| Parameter | Mandatory | Type   | Description                                 |
|-----------|-----------|--------|---------------------------------------------|
| share_id  | Yes       | String | Specifies the ID of the shared file system. |

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description

| Parameter      | Mandatory | Type   | Description                                                                                       |
|----------------|-----------|--------|---------------------------------------------------------------------------------------------------|
| os-access_list | Yes       | Object | Specifies the <b>os-access_list</b> object. To view access rules, set this value to <b>null</b> . |

- Example request

```
{
  "os-access_list": null
}
```

## Response

- Description

| Parameter   | Type             | Description             |
|-------------|------------------|-------------------------|
| access_list | Array of objects | Lists the access rules. |

- Description of field **access\_list**

| Parameter    | Type   | Description                                                    |
|--------------|--------|----------------------------------------------------------------|
| access_type  | String | Specifies the type of the access rule.                         |
| access_to    | String | Specifies the object that the backend grants or denies access. |
| access_level | String | Specifies the level of the access rule.                        |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                             |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| state     | String | Specifies the status of the access rule. If the API version is earlier than 2.28, the status of the access rule is <b>new</b> , <b>active</b> , or <b>error</b> . In versions from 2.28 to 2.42, the status of the access rule is <b>queued_to_apply</b> , <b>applying</b> , <b>active</b> , <b>error</b> , <b>queued_to_deny</b> , or <b>denying</b> . |
| id        | String | Specifies the ID of the access rule.                                                                                                                                                                                                                                                                                                                    |

- Example response

```
{
  "access_list": [
    {
      "access_level": "rw",
      "state": "active",
      "id": "85417bed-5e26-4c99-8c0c-92c95b5c640e",
      "access_type": "cert",
      "access_to": "a91556b7-c7c8-4273-915e-2729e04cdb01",
    },
    {
      "access_level": "rw",
      "state": "active",
      "id": "2ecbeb0b-b2ba-41f1-ba63-0666548925b9",
      "access_type": "cert",
      "access_to": "0560a527-0e77-40a6-aa3b-110beecad368#0.0.0.0/0#0#all_squash,root_squash",
      "created_at": "2017-07-07T03:15:06.858662",
      "updated_at": "2018-07-07T03:15:06.858662"
    },
    {
      "access_level": "rw",
      "state": "active",
      "id": "24615391-d58d-4a74-ac5a-520233c9c396",
      "access_type": "cert",
      "access_to": "0560a527-0e77-40a6-aa3b-110beecad368#192.168.196.47#1#all_squash,root_squash",
    }
  ]
}
```

## Status Codes

- Normal  
200
- Abnormal

| Status Code      | Description                                                              |
|------------------|--------------------------------------------------------------------------|
| 400 Bad Request  | The server failed to process the request.                                |
| 401 Unauthorized | You must enter a username and the password to access the requested page. |
| 403 Forbidden    | Access to the requested page is forbidden.                               |
| 404 Not Found    | The requested page was not found.                                        |

| Status Code                       | Description                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------|
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                            |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                  |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.       |
| 408 Request Timeout               | The request timed out.                                                                     |
| 409 Conflict                      | The request could not be processed due to a conflict.                                      |
| 500 Internal Server Error         | Failed to complete the request because of an internal service error.                       |
| 501 Not Implemented               | Failed to complete the request because the server does not support the requested function. |
| 502 Bad Gateway                   | Failed to complete the request because the request is invalid.                             |
| 503 Service Unavailable           | Failed to complete the request because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                          |

## 6.4 Quota Management

### Function

This API is used to query quota information.

### URI

- GET /v2/{project\_id}/os-quota-sets/{project\_id}
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                        |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | Specifies the ID of the tenant whose quotas are to be queried, updated, or deleted. This ID differs from the first project ID (the administrative tenant ID) contained in the URI. |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description  
None
- Example request  
None

## Response

- Parameter description

| Parameter | Type   | Description                             |
|-----------|--------|-----------------------------------------|
| quota_set | Object | Specifies the <b>quota_set</b> objects. |

- Description of field **quota\_set**

| Parameter          | Type    | Description                                                           |
|--------------------|---------|-----------------------------------------------------------------------|
| gigabytes          | Integer | Specifies the capacity in gigabytes allowed for each tenant.          |
| snapshots          | Integer | Specifies the number of snapshots allowed for each tenant.            |
| shares             | Integer | Specifies the number of shared file systems allowed for each tenant.  |
| snapshot_gigabytes | Integer | Specifies the snapshot capacity in gigabytes allowed for each tenant. |
| id                 | String  | Specifies the ID of the tenant for which you manage quotas.           |
| share_networks     | Integer | Specifies the number of share networks allowed for each tenant.       |

- Example response

```
{
  "quota_set": {
    "gigabytes": -1,
    "snapshots": -1,
    "snapshot_gigabytes": -1,
    "shares": -1,
    "id": "da0f615c35eb4d72812d1547a77b5394",
    "share_networks": 10
  }
}
```

## Status Codes

- Normal  
200
- Abnormal

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

## 6.5 Expansion and Shrinking

### 6.5.1 Expanding a Shared File System

#### Function

This API is used to expand the capacity of a shared file system.

#### NOTE

This API is an asynchronous API. If the returned status code is **202**, the API request is successfully delivered and received. Later, you can refer to [Querying Details About a Shared File System](#) to identify whether the shared file system is expanded successfully.

#### URI

- POST /v2/{project\_id}/shares/{share\_id}/action
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| share_id   | Yes       | String | Specifies the ID of the shared file system.                                                                                            |
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

#### Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

#### Request

- Parameter description

| Parameter | Mandatory | Type   | Description                            |
|-----------|-----------|--------|----------------------------------------|
| os-extend | Yes       | Object | Specifies the <b>os-extend</b> object. |

- Description of field **os-extend**

| Parameter | Mandatory | Type    | Description                                                |
|-----------|-----------|---------|------------------------------------------------------------|
| new_size  | Yes       | Integer | Specifies the new capacity (GB) of the shared file system. |

- Example request

Expanding the capacity of a shared file system to 2 GB:

```
{
  "os-extend": {
    "new_size": 2
  }
}
```

## Response

- Parameter description  
None
- Example response  
None

## Status Codes

- Normal  
202
- Abnormal

| Status Code            | Description                                                                                                                                                                 |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 400 Bad Request        | The server failed to process the request.                                                                                                                                   |
| 400 Bad Request        | Invalid input: The post-deduction capacity must be larger than 0 and smaller than the current capacity. (Current capacity: <i>XX</i> ; post-deduction capacity: <i>XX</i> ) |
| 400 Bad Request        | Invalid input: The post-expansion capacity must be larger than the current capacity. (Current capacity: <i>XX</i> ; post-expansion capacity: <i>XX</i> )                    |
| 401 Unauthorized       | You must enter a username and the password to access the requested page.                                                                                                    |
| 403 Forbidden          | Access to the requested page is forbidden.                                                                                                                                  |
| 404 Not Found          | The requested page was not found.                                                                                                                                           |
| 405 Method Not Allowed | You are not allowed to use the method specified in the request.                                                                                                             |
| 406 Not Acceptable     | The response generated by the server could not be accepted by the client.                                                                                                   |

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

## 6.5.2 Shrinking a Shared File System

### Function

This API is used to shrink the capacity of a shared file system.

#### NOTE

This API is an asynchronous API. If the returned status code is **202**, the API request is successfully delivered and received. Later, you can refer to [Querying Details About a Shared File System](#) to identify whether the shared file system is shrunk successfully.

### URI

- POST /v2/{project\_id}/shares/{share\_id}/action
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                            |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------|
| share_id   | Yes       | String | Specifies the ID of the shared file system.                                                                                            |
| project_id | Yes       | String | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> . |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description

| Parameter | Mandatory | Type   | Description                            |
|-----------|-----------|--------|----------------------------------------|
| os-shrink | Yes       | Object | Specifies the <b>os-shrink</b> object. |

- Description of field **os-shrink**

| Parameter | Mandatory | Type    | Description                                                |
|-----------|-----------|---------|------------------------------------------------------------|
| new_size  | Yes       | Integer | Specifies the new capacity (GB) of the shared file system. |

- Example request

Reducing the capacity of a shared file system to 1 GB:

```
{
  "os-shrink": {
    "new_size": 1
  }
}
```

## Response

- Parameter description

None

- Example response

None

## Status Codes

- Normal

202

- Abnormal

| Status Code      | Description                                                              |
|------------------|--------------------------------------------------------------------------|
| 400 Bad Request  | The server failed to process the request.                                |
| 401 Unauthorized | You must enter a username and the password to access the requested page. |
| 403 Forbidden    | Access to the requested page is forbidden.                               |
| 404 Not Found    | The requested page was not found.                                        |

| Status Code                       | Description                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------|
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                            |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                  |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.       |
| 408 Request Timeout               | The request timed out.                                                                     |
| 409 Conflict                      | The request could not be processed due to a conflict.                                      |
| 500 Internal Server Error         | Failed to complete the request because of an internal service error.                       |
| 501 Not Implemented               | Failed to complete the request because the server does not support the requested function. |
| 502 Bad Gateway                   | Failed to complete the request because the request is invalid.                             |
| 503 Service Unavailable           | Failed to complete the request because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                          |

## 6.6 AZ

### 6.6.1 Querying Availability Zones

#### Function

This API is used to list availability zones (AZs).

#### NOTE

Query the API version. For details, see [Querying All API Versions](#). If the value of **version** is less than or equal to 2.6, add the request header **X-Openstack-Manila-API-Version: *Micro version number***, for example, **X-Openstack-Manila-API-Version: 2.4**.

#### URI

- GET /v2/{project\_id}/availability-zones?share\_az={share\_az}
- Parameter description

| Parameter  | Mandatory            | Type    | Description                                                                                                                                                                                                                                             |
|------------|----------------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes                  | String  | Specifies the project ID of the operator. For details about how to obtain the project ID, see <a href="#">Obtaining a Project ID</a> .                                                                                                                  |
| share_az   | No (query parameter) | Boolean | If this parameter is set to <b>true</b> , the current tenant can query AZs where shared file systems can be created. If this parameter is set to <b>false</b> , all AZs can be queried, regardless of whether shared file systems can be created there. |

## Request Header

The operation message header is the same as that of a common request. For details, see [Table 3-3](#).

## Request

- Parameter description  
None
- Example request  
None

## Response

- Parameter description

| Parameter          | Type             | Description                |
|--------------------|------------------|----------------------------|
| availability_zones | Array of objects | List of availability zones |

- Description of field **availability\_zone**

| Parameter  | Type   | Description                               |
|------------|--------|-------------------------------------------|
| id         | String | Specifies the ID of the AZ.               |
| name       | String | Specifies the AZ name.                    |
| created_at | String | Specifies the creation time of an AZ.     |
| updated_at | String | Specifies the modification time of an AZ. |

- Example response

```
{
  "availability_zones": [
    {
      "updated_at": null,
      "created_at": "2018-07-10T19:11:49.831107",
      "id": "ddaafb71-face-4526-a637-9768d19b20f3",
      "name": "az1.dc1"
    }
  ]
}
```

## Status Codes

- Normal  
200
- Abnormal

| Status Code                       | Description                                                                              |
|-----------------------------------|------------------------------------------------------------------------------------------|
| 400 Bad Request                   | The server failed to process the request.                                                |
| 401 Unauthorized                  | You must enter a username and the password to access the requested page.                 |
| 403 Forbidden                     | Access to the requested page is forbidden.                                               |
| 404 Not Found                     | The requested page was not found.                                                        |
| 405 Method Not Allowed            | You are not allowed to use the method specified in the request.                          |
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.     |
| 408 Request Timeout               | The request timed out.                                                                   |
| 409 Conflict                      | The request could not be processed due to a conflict.                                    |
| 500 Internal Server Error         | The request is not completed because of a service error.                                 |
| 501 Not Implemented               | The request is not completed because the server does not support the requested function. |
| 502 Bad Gateway                   | The request is not completed because the request is invalid.                             |
| 503 Service Unavailable           | The request is not completed because the service is unavailable.                         |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                        |

# 7 SFS Turbo APIs

---

## 7.1 Lifecycle Management

### 7.1.1 Creating a File System

#### Function

This API is used to create a file system.

#### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

#### URI

POST /v1/{project\_id}/sfs-turbo/shares

**Table 7-1** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |

#### Request Parameters

**Table 7-2** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |

| Parameter    | Mandatory | Type   | Description    |
|--------------|-----------|--------|----------------|
| Content-Type | Yes       | String | The MIME type. |

**Table 7-3** Request body parameters

| Parameter | Mandatory | Type                           | Description                                                               |
|-----------|-----------|--------------------------------|---------------------------------------------------------------------------|
| share     | Yes       | <a href="#">Share</a> object   | The parameters for creating a file system.                                |
| bss_param | No        | <a href="#">BssInfo</a> object | This parameter is mandatory when the yearly/monthly billing mode is used. |

**Table 7-4** Share

| Parameter             | Mandatory | Type                            | Description                                                                                                                                                                                                                   |
|-----------------------|-----------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| availability_zone     | Yes       | String                          | The code of the AZ where the file system resides.                                                                                                                                                                             |
| description           | No        | String                          | The file system description. It can contain 0 to 255 characters.                                                                                                                                                              |
| enterprise_project_id | No        | String                          | The ID of the enterprise project that the file system will be added to.                                                                                                                                                       |
| metadata              | No        | <a href="#">Metadata</a> object | The file system metadata. The value consists of one or multiple key-value pairs organized as a directory of strings.                                                                                                          |
| name                  | Yes       | String                          | The file system name. The name can contain 4 to 64 characters and must start with a letter. It can contain letters (case insensitive), digits, hyphens (-), and underscores (_), and cannot contain other special characters. |
| security_group_id     | Yes       | String                          | The security group ID of a tenant in a region.                                                                                                                                                                                |

| Parameter   | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| share_proto | Yes       | String | <ul style="list-style-type: none"><li>• Network File System (NFS) is a distributed file system protocol that allows different computers and OSs to share data over a network. You are advised to use NFS file systems with Linux servers.</li><li>• Common Internet File System (CIFS) is a protocol used for network file sharing. CIFS is a dialect of the SMB protocol, meaning that it is a specific implementation or variation of the SMB protocol. CIFS is also a public or open version of the SMB protocol. It allows applications to access files on computers over the Internet and request for file services. Using CIFS, network files can be shared between Windows hosts. CIFS file systems cannot be mounted to Linux servers. You are advised to use CIFS file systems with Windows servers.</li></ul> |

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| share_type | Yes       | String | <p>The file system type. Valid values are <b>STANDARD</b> and <b>PERFORMANCE</b>. This field is not returned when the file system is being created.</p> <ul style="list-style-type: none"><li>• For a previous-generation SFS Turbo file system, specify <b>STANDARD</b> for a Standard or Standard-Enhanced file system, and <b>PERFORMANCE</b> for a Performance or Performance-Enhanced file system.</li><li>• For a 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, or 20 MB/s/TiB file system, this field is not verified. Specify either <b>STANDARD</b> or <b>PERFORMANCE</b>.</li></ul> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| size      | Yes       | Integer | <ul style="list-style-type: none"><li>For a previous-generation SFS Turbo file system, the capacity ranges from <b>500</b> to <b>32768</b>, in GiB.</li><li>For a previous-generation SFS Turbo file system with <b>expand_type="bandwidth"</b> configured under <b>metadata</b>, the capacity ranges from <b>10240</b> to <b>327680</b>, in GiB.</li><li>For a 20 MB/s/TiB file system with <b>expand_type="hpc"</b> and <b>hpc_bw="20M"</b> configured under <b>metadata</b>, the capacity ranges from *3686 to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, specify 3686 GiB for a 3.6 TiB file system, 4915 GiB for a 4.8 TiB file system, and 8601 GiB for an 8.4 TiB file system.</li><li>For a 40 MB/s/TiB file system with <b>expand_type="hpc"</b> and <b>hpc_bw="40M"</b> configured under <b>metadata</b>, the capacity ranges from *1228 to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, specify 3686 GiB for a 3.6 TiB file system, 4915 GiB for a 4.8 TiB file system, and 8601 GiB for an 8.4 TiB file system.</li><li>For a 125 MB/s/TiB file system with <b>expand_type="hpc"</b> and <b>hpc_bw="125M"</b></li></ul> |

| Parameter | Mandatory | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |      | <p>configured under <b>metadata</b>, the capacity ranges from *1228 to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, specify 3686 GiB for a 3.6 TiB file system, 4915 GiB for a 4.8 TiB file system, and 8601 GiB for an 8.4 TiB file system.</p> <ul style="list-style-type: none"> <li>For a 250 MB/s/TiB file system with <b>expand_type="hpc"</b> and <b>hpc_bw="250M"</b> configured under <b>metadata</b>, the capacity ranges from *1228 to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, specify 3686 GiB for a 3.6 TiB file system, 4915 GiB for a 4.8 TiB file system, and 8601 GiB for an 8.4 TiB file system.</li> <li>For a 500 MB/s/TiB file system with <b>expand_type="hpc"</b> and <b>hpc_bw="500M"</b> configured under <b>metadata</b>, the capacity ranges from <b>1228</b> to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, specify 3686 GiB for a 3.6 TiB file system, 4915 GiB for a 4.8 TiB file system, and 8601 GiB for an 8.4 TiB file system.</li> </ul> |

| Parameter | Mandatory | Type                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |           |                                              | <ul style="list-style-type: none"><li>For a 1,000 MB/s/TiB file system with <b>expand_type="hpc"</b> and <b>hpc_bw="1000M"</b> configured under <b>metadata</b>, the capacity ranges from <b>1228</b> to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, specify 3686 GiB for a 3.6 TiB file system, 4915 GiB for a 4.8 TiB file system, and 8601 GiB for an 8.4 TiB file system.</li></ul> |
| subnet_id | Yes       | String                                       | The subnet ID of a tenant in a VPC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| vpc_id    | Yes       | String                                       | The VPC ID of a tenant in a region.                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| backup_id | No        | String                                       | The backup ID. This parameter is mandatory if you create a file system from a backup.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| tags      | No        | Array of <a href="#">ResourceTag</a> objects | The tag list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

**Table 7-5** Metadata

| Parameter            | Mandatory | Type   | Description                                                                                   |
|----------------------|-----------|--------|-----------------------------------------------------------------------------------------------|
| crypt_key_id         | No        | String | The ID of a KMS professional key, which is used to create an encrypted file system.           |
| dedicated_flavor     | No        | String | The VM flavor, which is used to create a dedicated file system.                               |
| dedicated_storage_id | No        | String | The ID of the dedicated distributed storage, which is used to create a dedicated file system. |

| Parameter                        | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| expand_type                      | No        | String | <p>The extension type. This parameter is not returned when the file system is being created.</p> <ul style="list-style-type: none"> <li>Specify <b>bandwidth</b> when you are creating a Standard-Enhanced or Performance-Enhanced file system.</li> <li>Specify <b>hpc</b> when you are creating a 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, or 20 MB/s/TiB file system.</li> </ul> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>bandwidth</li> <li>hpc</li> </ul> |
| hpc_bw                           | No        | String | <p>The file system bandwidth. This parameter is mandatory when you are creating an SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, or 20 MB/s/TiB file system.</p> <p>Specify <b>20M</b> for a 20 MB/s/TiB file system, <b>40M</b> for a 40 MB/s/TiB file system, <b>125M</b> for a 125 MB/s/TiB file system, and <b>250M</b> for a 250 MB/s/TiB file system. Specify <b>500M</b> for a 500 MB/s/TiB file system and <b>1000M</b> for a 1,000 MB/s/TiB file system.</p>              |
| auto_create_security_group_rules | No        | String | <p>Whether to automatically create security group rules. <b>true</b> automatically creates security group rules. <b>false</b> does not automatically create security group rules. The default value is <b>true</b>.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"> <li>true</li> <li>false</li> </ul>                                                                                                                                                                                              |

**Table 7-6** ResourceTag

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_).                 |
| value     | Yes       | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

**Table 7-7** BssInfo

| Parameter     | Mandatory | Type | Description                                                                                                                                                                                         |
|---------------|-----------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| is_auto_renew | No        | Long | Whether to enable auto-renewal. <b>0</b> disables auto-renewal. <b>1</b> enables auto-renewal.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>0</b></li><li>• <b>1</b></li></ul> |
| period_num    | Yes       | Long | The yearly/monthly subscription terms.                                                                                                                                                              |

| Parameter   | Mandatory | Type | Description                                                                                                                                                                                                                         |
|-------------|-----------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| period_type | Yes       | Long | The yearly/monthly subscription type. The value can be <b>2</b> (monthly subscription) or <b>3</b> (yearly subscription).<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>2</b></li><li>• <b>3</b></li></ul>      |
| is_auto_pay | No        | Long | Whether to automatically pay for the order after it is created. <b>0</b> disables auto payment. <b>1</b> enables auto payment.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>0</b></li><li>• <b>1</b></li></ul> |

## Response Parameters

Status code: 202

**Table 7-8** Response body parameters

| Parameter | Type   | Description                                      |
|-----------|--------|--------------------------------------------------|
| id        | String | The ID of the created SFS Turbo file system.     |
| name      | String | The name of the created SFS Turbo file system.   |
| status    | String | The status of the created SFS Turbo file system. |

## Example Requests

- Previous-generation SFS Turbo file system type:

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares
```

```
{
  "share": {
    "name": "sfs-turbo-test",
    "availability_zone": "example",
    "security_group_id": "8c4ebbd0-6edf-4aae-8353-xxx",
    "share_proto": "NFS",
    "share_type": "STANDARD",
    "size": 500,
    "subnet_id": "b8884abe-f47b-4917-9f6c-xxx",
    "vpc_id": "d651ea2b-2b20-4c6d-8bbf-xxx"
  }
}
```

- Previous-generation SFS Turbo file system type in a dedicated scenario:

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares
```

```
{
  "share": {
    "name": "sfs-turbo-dedicated-test",
    "availability_zone": "example",
    "security_group_id": "8c4ebbd0-6edf-4aae-8353-xxx",
    "share_proto": "NFS",
    "share_type": "STANDARD",
    "size": 500,
    "subnet_id": "b8884abe-f47b-4917-9f6c-xxx",
    "vpc_id": "d651ea2b-2b20-4c6d-8bbf-xxx",
    "metadata": {
      "dedicated_flavor": "c6.xlarge.2",
      "dedicated_storage_id": "198f0704-xxx-4d85-xxx-c25caa4d3264"
    }
  }
}
```

- 125 MB/s/TiB:

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares
```

```
{
  "share": {
    "name": "sfs-turbo-test",
    "availability_zone": "example",
    "security_group_id": "8c4ebbd0-6edf-4aae-8353-xxx",
    "share_proto": "NFS",
    "share_type": "STANDARD",
    "size": 3686,
    "subnet_id": "b8884abe-f47b-4917-9f6c-xxx",
    "vpc_id": "d651ea2b-2b20-4c6d-8bbf-xxx",
    "metadata": {
      "expand_type": "hpc",
      "hpc_bw": "125M"
    }
  }
}
```

This example creates an SFS Turbo Standard file system in the AZ whose AZ code is **example**, with the file system name set to **sfs-turbo-test**, protocol type to NFS, capacity to 500 GB. The security group ID is **8c4ebbd0-6edf-4aae-8353-xxx**, the subnet ID is **b8884abe-f47b-4917-9f6c-xxx**, and the VPC ID is **d651ea2b-2b20-4c6d-8bbf-xxx**.

This example creates an SFS Turbo Standard file system in the AZ whose AZ code is **example**, with the file system name set to **sfs-turbo-dedicated-test**, protocol type to NFS, capacity to 500 GB. The dedicated storage pool ID is **198f0704-xxx-4d85-xxx-c25caa4d3264**, the dedicated ECS flavor is **c6.xlarge.2**, the security group ID is **8c4ebbd0-6edf-4aae-8353-xxx**, the subnet ID is **b8884abe-f47b-4917-9f6c-xxx**, and the VPC ID is **d651ea2b-2b20-4c6d-8bbf-xxx**.

This example creates a 125 MB/s/TiB file system in the AZ whose AZ code is **example**, with the file system name set to **sfs-turbo-test**, protocol type to NFS, and capacity to **3686GB**. The security group ID is **8c4ebbd0-6edf-4aae-8353-xxx**, the subnet ID is **b8884abe-f47b-4917-9f6c-xxx**, and the VPC ID is **d651ea2b-2b20-4c6d-8bbf-xxx**.

This example creates a 125 MB/s/TiB file system in the AZ whose AZ code is **example**, with secure transmission enabled, the file system name set to **sfs-turbo-test**, protocol type to NFS, and capacity to **3686GB**. The security group ID is

**8c4ebbd0-6edf-4aae-8353-xxx**, the subnet ID is **b8884abe-f47b-4917-9f6c-xxx**, and the VPC ID is **d651ea2b-2b20-4c6d-8bbf-xxx**.

This example creates a 125 MB/s/TiB for Intelligent Compute file system in the AZ whose AZ code is **example**, with the file system name set to **sfs-turbo-test**, protocol type to **NFS**, and capacity to **61440GB**. The security group ID is **8c4ebbd0-6edf-4aae-8353-xxx**, the subnet ID is **b8884abe-f47b-4917-9f6c-xxx**, and the VPC ID is **d651ea2b-2b20-4c6d-8bbf-xxx**.

This example creates an SFS Turbo file system with cross-AZ DR deployment in the AZ whose AZ code is **example**, with the file system name set to **sfs-turbo-test**, protocol type to **NFS**, and capacity to **61440GB**. The security group ID is **8c4ebbd0-6edf-4aae-8353-xxx**, the subnet ID is **b8884abe-f47b-4917-9f6c-xxx**, and the VPC ID is **d651ea2b-2b20-4c6d-8bbf-xxx**.

## Example Responses

**Status code: 202**

Successful file system creation

```
{
  "id" : "708c017c-54b5-429a-a098-7692e23fa518",
  "name" : "sfs-turbo-test",
  "status" : "100"
}
```

## Status Codes

| Status Code | Description                     |
|-------------|---------------------------------|
| 202         | Successful file system creation |

## Error Codes

See [Error Codes](#).

## 7.1.2 Querying Details About a File System

### Function

This API is used to query details about an SFS Turbo file system.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}

**Table 7-9** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-10** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-11** Response body parameters

| Parameter         | Type                                  | Description                                                                                           |
|-------------------|---------------------------------------|-------------------------------------------------------------------------------------------------------|
| action_progress   | <a href="#">ActionProgress</a> object | The file system creation progress. This field is only returned when the file system is being created. |
| version           | String                                | The file system version.                                                                              |
| avail_capacity    | String                                | The available capacity of the file system, in GB.                                                     |
| availability_zone | String                                | The code of the AZ where the file system resides.                                                     |
| az_name           | String                                | The name of the AZ where the file system resides.                                                     |
| created_at        | String                                | The time when the file system was created. UTC time, for example: 2018-11-19T04:02:03.                |
| crypt_key_id      | String                                | The ID of the encryption key. This parameter is not returned for non-encrypted file systems.          |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                         |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| expand_type       | String | The extension type.<br><b>bandwidth</b> is returned if the requested file system is an Enhanced file system.<br>For a 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, or 20 MB/s/TiB file system, <b>hpc</b> is returned.<br><br>The value can be: <ul style="list-style-type: none"><li>• bandwidth</li><li>• hpc</li></ul> |
| export_location   | String | The file system location, for example, <b>192.168.0.90:/</b> . This field is not returned when the file system is being created.                                                                                                                                                                                                                    |
| id                | String | The file system ID.                                                                                                                                                                                                                                                                                                                                 |
| name              | String | The file system name specified during creation.                                                                                                                                                                                                                                                                                                     |
| pay_model         | String | The file system billing mode. Value <b>0</b> indicates pay-per-use, and <b>1</b> indicates yearly/monthly. This field is not returned when the file system is being created.<br><br>Enumeration values: <ul style="list-style-type: none"><li>• <b>0</b></li><li>• <b>1</b></li></ul>                                                               |
| region            | String | The region where the file system resides.                                                                                                                                                                                                                                                                                                           |
| security_group_id | String | The ID of the specified security group.                                                                                                                                                                                                                                                                                                             |
| share_proto       | String | The protocol used by the SFS Turbo file system. The value can be <b>NFS</b> or <b>CIFS</b> .                                                                                                                                                                                                                                                        |
| share_type        | String | The file system performance type. Valid values are <b>STANDARD</b> and <b>PERFORMANCE</b> .                                                                                                                                                                                                                                                         |
| size              | String | The file system total capacity, in GB.                                                                                                                                                                                                                                                                                                              |

| Parameter             | Type                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status                | String                                       | The file system status. The value can be as follows: <b>100</b> (creating), <b>200</b> (available), <b>303</b> (creation failed), and <b>800</b> (frozen)<br>Enumerated values: <ul style="list-style-type: none"><li>• 100</li><li>• 200</li><li>• 303</li><li>• 800</li></ul>                                                                                                                                                                                                                                                                                                         |
| sub_status            | String                                       | The file system sub-status. This field is not returned if no modification is made to the file system.<br><b>121</b> (expanding capacity), <b>132</b> (changing security group), <b>150*</b> (adding storage backend), <b>151</b> (removing storage backend)<br><b>221</b> (expansion succeeded), <b>232</b> (security group changed), <b>250</b> (storage backend added), <b>251*</b> (storage backend removed)<br><b>321</b> (expansion failed), <b>332</b> (changing security group failed), <b>350</b> (adding storage backend failed), <b>351</b> (removing storage backend failed) |
| subnet_id             | String                                       | The ID of the specified subnet.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| vpc_id                | String                                       | The ID of the specified VPC.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| enterprise_project_id | String                                       | The ID of the enterprise project that file system is added to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| tags                  | Array of <a href="#">ResourceTag</a> objects | The tag list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| optional_endpoint     | String                                       | The alternative IP addresses that can be used for mount. This field is not returned for previous-generation file systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Parameter    | Type                                     | Description                                                                                                                                                                                                                                     |
|--------------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| hpc_bw       | String                                   | The file system bandwidth. <ul style="list-style-type: none"><li>"20M": 20 MB/s/TiB</li><li>"40M": 40 MB/s/TiB</li><li>"125M": 125 MB/s/TiB</li><li>"250M": 250 MB/s/TiB</li><li>"500M": 500 MB/s/TiB</li><li>"1000M": 1,000 MB/s/TiB</li></ul> |
| instanceId   | String                                   | The node ID of the file system type, which has no meaning. This is a reserved field.                                                                                                                                                            |
| instanceType | String                                   | The node type of the file system type, which has no meaning. This is a reserved field.                                                                                                                                                          |
| statusDetail | String                                   | The file system request ID, which has no meaning. This is a reserved field.                                                                                                                                                                     |
| features     | <a href="#">ShareInfoFeatures</a> object | The file system feature settings.                                                                                                                                                                                                               |

**Table 7-12** ActionProgress

| Parameter | Type   | Description                        |
|-----------|--------|------------------------------------|
| CREATING  | String | The file system creation progress. |

**Table 7-13** ResourceTag

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

**Table 7-14** ShareInfoFeatures

| Parameter | Type                                    | Description                              |
|-----------|-----------------------------------------|------------------------------------------|
| backup    | <a href="#">ShareInfoFeature</a> object | Whether the file system supports backup. |

**Table 7-15** ShareInfoFeature

| Parameter  | Type    | Description                                    |
|------------|---------|------------------------------------------------|
| is_support | Boolean | Whether the file system supports this feature. |
| message    | String  | The message.                                   |
| msg_code   | String  | The message code.                              |

## Example Requests

Querying the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde
```

## Example Responses

**Status code: 200**

Query response body

- Listing file systems in the project whose ID is **e1e45b08f3ea4480ab4655ef9c7160ba**

```
{  
  "id": "8fba8253-c914-439d-ae8b-d5c89d0bf5e8",  
  "name": "sfs-turbo-8468",  
}
```

```
{
  "status": "200",
  "version": "1.0.0",
  "region": "example",
  "availability_zone": "example",
  "az_name": "example",
  "created_at": "2018-11-19T04:02:03",
  "export_location": "192.168.xx.xx:/",
  "action_progress": { },
  "share_type": "STANDARD",
  "sub_status": "221",
  "vpc_id": "b24e39e1-bc0c-475b-ae0c-aef9cf240af3",
  "subnet_id": "86fc01ea-8ec8-409d-ba7a-e0ea16d4fd97",
  "security_group_id": "50586458-aec9-442c-bb13-e08ddc6f1b7a",
  "size": "600.00",
  "avail_capacity": "600.00",
  "pay_model": "0",
  "share_proto": "NFS"
}
```

## Status Codes

| Status Code | Description         |
|-------------|---------------------|
| 200         | Query response body |

## Error Codes

See [Error Codes](#).

## 7.1.3 Deleting a File System

### Function

This API is used to delete a file system.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}

**Table 7-16** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-17** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 202**

File system deletion request delivered

None

## Example Requests

Deleting the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
DELETE HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde
```

## Example Responses

None

## Status Codes

| Status Code | Description                            |
|-------------|----------------------------------------|
| 202         | File system deletion request delivered |

## Error Codes

See [Error Codes](#).

## 7.1.4 Listing File Systems

### Function

This API is used to list file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

GET /v1/{project\_id}/sfs-turbo/shares/detail

**Table 7-18** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |

**Table 7-19** Query Parameters

| Parameter | Mandatory | Type    | Description                                                                                    |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------|
| limit     | No        | Integer | The maximum number of returned file systems. If not specified, <b>1000</b> is used by default. |
| offset    | No        | Integer | The offset of the returned file systems.                                                       |

## Request Parameters

**Table 7-20** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

Status code: 200

**Table 7-21** Response body parameters

| Parameter | Type                                       | Description                           |
|-----------|--------------------------------------------|---------------------------------------|
| shares    | Array of <a href="#">ShareInfo</a> objects | The list of SFS Turbo file systems.   |
| count     | Integer                                    | The number of SFS Turbo file systems. |

**Table 7-22** ShareInfo

| Parameter         | Type                                  | Description                                                                                                                                                                                                                                                                                                                                                        |
|-------------------|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action_progress   | <a href="#">ActionProgress</a> object | The file system creation progress. This field is only returned when the file system is being created.                                                                                                                                                                                                                                                              |
| version           | String                                | The file system version.                                                                                                                                                                                                                                                                                                                                           |
| avail_capacity    | String                                | The available capacity of the file system, in GB.                                                                                                                                                                                                                                                                                                                  |
| availability_zone | String                                | The code of the AZ where the file system resides.                                                                                                                                                                                                                                                                                                                  |
| az_name           | String                                | The name of the AZ where the file system resides.                                                                                                                                                                                                                                                                                                                  |
| created_at        | String                                | The time when the file system was created. UTC time, for example: 2018-11-19T04:02:03.                                                                                                                                                                                                                                                                             |
| crypt_key_id      | String                                | The ID of the encryption key. This parameter is not returned for non-encrypted file systems.                                                                                                                                                                                                                                                                       |
| expand_type       | String                                | <p>The extension type.</p> <p><b>bandwidth</b> is returned if the requested file system is an Enhanced file system.</p> <p>For a 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, or 20 MB/s/TiB file system, <b>hpc</b> is returned.</p> <p>The value can be:</p> <ul style="list-style-type: none"><li>• bandwidth</li><li>• hpc</li></ul> |
| export_location   | String                                | The file system location, for example, <b>192.168.0.90:/</b> . This field is not returned when the file system is being created.                                                                                                                                                                                                                                   |
| id                | String                                | The file system ID.                                                                                                                                                                                                                                                                                                                                                |
| name              | String                                | The file system name specified during creation.                                                                                                                                                                                                                                                                                                                    |

| Parameter         | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pay_model         | String | The file system billing mode. Value <b>0</b> indicates pay-per-use, and <b>1</b> indicates yearly/monthly. This field is not returned when the file system is being created.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>0</b></li><li>• <b>1</b></li></ul>                                                                                                                                                                                                                                                                                                       |
| region            | String | The region where the file system resides.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| security_group_id | String | The ID of the specified security group.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| share_proto       | String | The protocol used by the SFS Turbo file system. The value can be <b>NFS</b> or <b>CIFS</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| share_type        | String | The file system performance type. Valid values are <b>STANDARD</b> and <b>PERFORMANCE</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| size              | String | The file system total capacity, in GB.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| status            | String | The file system status. The value can be as follows: <b>100</b> (creating), <b>200</b> (available), <b>303</b> (creation failed), and <b>800</b> (frozen)<br>Enumerated values: <ul style="list-style-type: none"><li>• 100</li><li>• 200</li><li>• 303</li><li>• 800</li></ul>                                                                                                                                                                                                                                                                                                         |
| sub_status        | String | The file system sub-status. This field is not returned if no modification is made to the file system.<br><b>121</b> (expanding capacity), <b>132</b> (changing security group), <b>150*</b> (adding storage backend), <b>151</b> (removing storage backend)<br><b>221</b> (expansion succeeded), <b>232</b> (security group changed), <b>250</b> (storage backend added), <b>251*</b> (storage backend removed)<br><b>321</b> (expansion failed), <b>332</b> (changing security group failed), <b>350</b> (adding storage backend failed), <b>351</b> (removing storage backend failed) |

| Parameter             | Type                                         | Description                                                                                                                                                                                                                                                 |
|-----------------------|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| subnet_id             | String                                       | The ID of the specified subnet.                                                                                                                                                                                                                             |
| vpc_id                | String                                       | The ID of the specified VPC.                                                                                                                                                                                                                                |
| enterprise_project_id | String                                       | The ID of the enterprise project that file system is added to.                                                                                                                                                                                              |
| tags                  | Array of <a href="#">ResourceTag</a> objects | The tag list.                                                                                                                                                                                                                                               |
| optional_endpoint     | String                                       | The alternative IP addresses that can be used for mount. This field is not returned for previous-generation file systems.                                                                                                                                   |
| hpc_bw                | String                                       | The file system bandwidth. <ul style="list-style-type: none"><li>• "20M": 20 MB/s/TiB</li><li>• "40M": 40 MB/s/TiB</li><li>• "125M": 125 MB/s/TiB</li><li>• "250M": 250 MB/s/TiB</li><li>• "500M": 500 MB/s/TiB</li><li>• "1000M": 1,000 MB/s/TiB</li></ul> |
| instanceId            | String                                       | The node ID of the file system type, which has no meaning. This is a reserved field.                                                                                                                                                                        |
| instanceType          | String                                       | The node type of the file system type, which has no meaning. This is a reserved field.                                                                                                                                                                      |
| statusDetail          | String                                       | The file system request ID, which has no meaning. This is a reserved field.                                                                                                                                                                                 |
| features              | <a href="#">ShareInfoFeatures</a> object     | The file system feature settings.                                                                                                                                                                                                                           |

**Table 7-23** ActionProgress

| Parameter | Type   | Description                        |
|-----------|--------|------------------------------------|
| CREATING  | String | The file system creation progress. |

**Table 7-24** ResourceTag

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_).                 |
| value     | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

**Table 7-25** ShareInfoFeatures

| Parameter | Type                                    | Description                              |
|-----------|-----------------------------------------|------------------------------------------|
| backup    | <a href="#">ShareInfoFeature</a> object | Whether the file system supports backup. |

**Table 7-26** ShareInfoFeature

| Parameter  | Type    | Description                                    |
|------------|---------|------------------------------------------------|
| is_support | Boolean | Whether the file system supports this feature. |
| message    | String  | The message.                                   |
| msg_code   | String  | The message code.                              |

## Example Requests

Listing file systems in the project whose ID is  
**e1e45b08f3ea4480ab4655ef9c7160ba**

```
GET HTTPS://{endpoint}/v1/e1e45b08f3ea4480ab4655ef9c7160ba/sfs-turbo/shares/detail
```

## Example Responses

**Status code: 200**

Success response body

- Listing file systems in the project whose ID is  
**e1e45b08f3ea4480ab4655ef9c7160ba**

```
{
  "shares" : [ {
    "id" : "8fba8253-c914-439d-ae8b-d5c89d0bf5e8",
    "name" : "sfs-turbo-8468",
    "status" : "100",
    "version" : "1.0.0",
    "region" : "example",
    "created_at" : "2018-11-19T04:02:03",
    "action_progress" : {
      "CREATING" : "22%"
    },
    "share_type" : "STANDARD",
    "sub_status" : "",
    "availability_zone" : "az1.dc1",
    "az_name" : "az1",
    "vpc_id" : "b24e39e1-bc0c-475b-ae0c-aef9cf240af3",
    "subnet_id" : "86fc01ea-8ec8-409d-ba7a-e0ea16d4fd97",
    "security_group_id" : "50586458-aec9-442c-bb13-e08ddc6f1b7a",
    "size" : "500.00",
    "pay_model" : "0",
    "avail_capacity" : "500.00",
    "share_proto" : "NFS"
  } ]
}
```

- Listing file systems in the project whose ID is  
**5694xxx8f3e0000xxxx655exxxx60b7**

```
{
  "shares" : [ {
    "id" : "65fd3d30b-7b4e-4786-9608-4324faef6646",
    "name" : "sfs-turbo-df12",
    "status" : "200",
    "version" : "1.0.0",
    "region" : "example",
    "created_at" : "2018-11-15T02:32:10",
    "export_location" : "192.168.xx.xx:/",
    "optional_endpoint" : "192.168.xx.xx 192.168.xx.xx",
    "share_type" : "HPC_PERFORMANCE_250M",
    "expand_type" : "hpc",
    "sub_status" : "",
    "availability_zone" : "az1.dc1",
    "az_name" : "az1",
    "vpc_id" : "b24e39e1-bc0c-475b-ae0c-aef9cf240af3",
    "subnet_id" : "86fc01ea-8ec8-409d-ba7a-e0ea16d4fd97",
    "security_group_id" : "50586458-aec9-442c-bb13-e08ddc6f1b7a",
    "size" : "3686.00",
    "pay_model" : "0",
    "avail_capacity" : "3686.00",
    "share_proto" : "NFS"
  } ]
}
```

## Status Codes

| Status Code | Description           |
|-------------|-----------------------|
| 200         | Success response body |

## Error Codes

See [Error Codes](#).

## 7.1.5 Expanding the Capacity of a File System

### Function

This API is used to expand the capacity of a file system.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/action

**Table 7-27** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-28** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-29** Request body parameters

| Parameter | Mandatory | Type                 | Description               |
|-----------|-----------|----------------------|---------------------------|
| extend    | Yes       | <b>Extend</b> object | The <b>extend</b> object. |

Table 7-30 Extend

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| new_size  | Yes       | Integer | <p>The new capacity of the file system, in GiB.</p> <p>For a previous-generation Standard or Performance file system, the capacity ranges from <b>500</b> to <b>32768</b> (in GiB), and the minimum expansion increment is 100 GiB.</p> <p>For a previous-generation Standard-Enhanced or Performance-Enhanced file system, the capacity ranges from <b>10240</b> to <b>327680</b> (in GiB), and the minimum expansion increment is 100 GiB.</p> <p>For a 20 MB/s/TiB file system, the capacity ranges from <b>3686</b> to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, use 4915 GiB for a 4.8 TiB file system and 8601 GiB for an 8.4 TiB file system. The minimum expansion increment is 1.2 TiB.</p> <p>For a 40 MB/s/TiB file system, the capacity ranges from <b>1228</b> to <b>1048576</b> (in GiB) and must be a multiple of 1.2 TiB. The desired capacity must be converted to GiB and rounded down to the nearest integer. For example, use 4915 GiB for a 4.8 TiB file system and 8601 GiB for an 8.4 TiB file system. The minimum expansion increment is 1.2 TiB.</p> <p>The capacity range and minimum expansion increment of 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB and 125 MB/s/TiB file systems are the same as those of 40 MB/s/TiB file systems.</p> |

| Parameter | Mandatory | Type                   | Description                                                      |
|-----------|-----------|------------------------|------------------------------------------------------------------|
| bss_param | No        | BssInfoExtended object | The billing parameter of expanding a yearly/monthly file system. |

**Table 7-31** BssInfoExtend

| Parameter   | Mandatory | Type | Description                                                                                                        |
|-------------|-----------|------|--------------------------------------------------------------------------------------------------------------------|
| is_auto_pay | No        | Long | Whether to enable auto payment.<br>Enumeration values: <ul style="list-style-type: none"><li>0</li><li>1</li></ul> |

## Response Parameters

**Status code: 202**

**Table 7-32** Response body parameters

| Parameter | Type   | Description                     |
|-----------|--------|---------------------------------|
| id        | String | The SFS Turbo file system ID.   |
| name      | String | The SFS Turbo file system name. |

## Example Requests

Expanding the capacity of a file system to 1,000 GB

```
{
  "extend" : {
    "new_size" : 1000
  }
}
```

## Example Responses

**Status code: 202**

Response body for expanding the capacity of a file system

```
{
  "id" : "67d4bd5e-7b2f-4c24-9a0b-c0038940c6f8",
  "name" : "sfs-turbo-test"
}
```

## Status Codes

| Status Code | Description                                               |
|-------------|-----------------------------------------------------------|
| 202         | Response body for expanding the capacity of a file system |

## Error Codes

See [Error Codes](#).

# 7.2 Connection Management

## 7.2.1 Changing the Security Group Associated with a File System

### Function

This API is used to change the security group associated with an SFS Turbo file system. Changing the security group is an asynchronous task. You can call the API for querying details of a file system and view the value of **sub\_status** returned to check whether the security group change is successful. If value **232** is returned, the security group has been changed.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/action

**Table 7-33** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-34** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-35** Request body parameters

| Parameter                        | Mandatory | Type                                       | Description                                                                                                                                                                                                                                                                                                                   |
|----------------------------------|-----------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| change_security_group            | Yes       | <a href="#">ChangeSecurityGroup</a> object | The <b>change_security_group</b> object.                                                                                                                                                                                                                                                                                      |
| auto_create_security_group_rules | No        | String                                     | Whether to automatically create security group rules. <b>true</b> automatically creates security group rules. <b>false</b> does not automatically create security group rules. The default value is <b>true</b> .<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>true</b></li><li>• <b>false</b></li></ul> |

**Table 7-36** ChangeSecurityGroup

| Parameter         | Mandatory | Type   | Description                       |
|-------------------|-----------|--------|-----------------------------------|
| security_group_id | Yes       | String | The ID of the new security group. |

## Response Parameters

Status code: 202

**Table 7-37** Response body parameters

| Parameter | Type   | Description                   |
|-----------|--------|-------------------------------|
| id        | String | The SFS Turbo file system ID. |

## Example Requests

Changing the security group of a file system (new security group ID **26f6b565-240e-43c3-8867-03f0bd975433**)

```
{
  "change_security_group": {
    "security_group_id": "26f6b565-240e-43c3-8867-03f0bd975433"
  }
}
```

## Example Responses

**Status code: 202**

The SFS Turbo file system ID.

```
{
  "id": "67d4bd5e-7b2f-4c24-9a0b-c0038940c6f8"
}
```

## Status Codes

| Status Code | Description                   |
|-------------|-------------------------------|
| 202         | The SFS Turbo file system ID. |

## Error Codes

See [Error Codes](#).

# 7.3 Tag Management

## 7.3.1 Adding a Tag to a File System

### Function

This API is used to add a tag to a file system.

A maximum of 20 tags can be added to a file system.

Tag keys added to the same file system must be unique.

This API is idempotent. If the file system already has the key you want to add, the tag will be updated.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

POST /v1/{project\_id}/sfs-turbo/{share\_id}/tags

**Table 7-38** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-39** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-40** Request body parameters

| Parameter | Mandatory | Type                               | Description                                |
|-----------|-----------|------------------------------------|--------------------------------------------|
| tag       | Yes       | <a href="#">ResourceTag</a> object | The <b>resource_tag</b> field description. |

**Table 7-41** ResourceTag

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | Yes       | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

## Response Parameters

**Status code: 204**

Tag adding request delivered

None

## Example Requests

Creating a file system tag, with tag value set to **key1** and tag key **value1**

```
{
  "tag" : {
    "key" : "key1",
    "value" : "value1"
  }
}
```

## Example Responses

None

## Status Codes

| Status Code | Description                  |
|-------------|------------------------------|
| 204         | Tag adding request delivered |

## Error Codes

See [Error Codes](#).

## 7.3.2 Querying All Tags of a File System

### Function

This API is used to query all tags of a file system.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/{share\_id}/tags

**Table 7-42** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-43** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

### Response Parameters

Status code: 200

**Table 7-44** Response body parameters

| Parameter | Type                                         | Description   |
|-----------|----------------------------------------------|---------------|
| tags      | Array of <a href="#">ResourceTag</a> objects | The tag list. |

Table 7-45 ResourceTag

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_).                 |
| value     | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

Example Requests

Querying tags of the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET HTTPS://{endpoint}/v1/v1/{project_id}/sfs-turbo/77ba6f4b-6365-4895-8dda-bc7142af4dde/tags
```

Example Responses

Status code: 200

Response body for query all tags of a specified file system

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

## Status Codes

| Status Code | Description                                                 |
|-------------|-------------------------------------------------------------|
| 200         | Response body for query all tags of a specified file system |

## Error Codes

See [Error Codes](#).

## 7.3.3 Deleting a Tag from a File System

### Function

This API is used to delete a tag from a file system. If the specified key is not found, error 404 will be returned.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /v1/{project\_id}/sfs-turbo/{share\_id}/tags/{key}

**Table 7-46** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | The tag key, which can contain a maximum of 128 characters. It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_).<br>When this API is called to delete a tag, if the tag key contains special characters that cannot be directly resolved by the URL, the key needs to be escaped. |

## Request Parameters

**Table 7-47** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 204**

Tag deleted

None

## Example Requests

Deleting a tag (tag key is **test**) from the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
DELETE HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/77ba6f4b-6365-4895-8dda-bc7142af4dde/tags/test
```

## Example Responses

None

## Status Codes

| Status Code | Description |
|-------------|-------------|
| 204         | Tag deleted |

## Error Codes

See [Error Codes](#).

## 7.3.4 Batch Adding Tags to a File System

### Function

This API is used to batch add tags to a file system.

A maximum of 20 tags can be added to a file system.

Tag keys added to the same file system must be unique.

This API is idempotent. If the file system already has the key you want to add, the tag will be updated.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/{share\_id}/tags/action

**Table 7-48** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-49** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |

| Parameter    | Mandatory | Type   | Description    |
|--------------|-----------|--------|----------------|
| Content-Type | Yes       | String | The MIME type. |

**Table 7-50** Request body parameters

| Parameter | Mandatory | Type                                | Description                                                                                                                                                                                                     |
|-----------|-----------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String                              | The operation identifier. The value is <b>create</b> . Use <b>create</b> if you want to batch add tags to a file system.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>create</b></li></ul> |
| tags      | Yes       | Array of <b>ResourceTag</b> objects | The list of tags.                                                                                                                                                                                               |

**Table 7-51** ResourceTag

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| value     | Yes       | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

## Response Parameters

**Status code: 204**

Batch adding tags succeeded

None

## Example Requests

Batch adding tags to a file system, with tag key of the first tag set to **key1**, tag value of the first tag **value1**, tag key of the second tag **key2**, and tag value of the second tag **value1**

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

## Example Responses

None

## Status Codes

| Status Code | Description                 |
|-------------|-----------------------------|
| 204         | Batch adding tags succeeded |

## Error Codes

See [Error Codes](#).

## 7.3.5 Querying Tags of All File Systems of a Tenant

### Function

This API is used to query the tags of all file systems of a tenant.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/tags

**Table 7-52** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |

**Table 7-53** Query Parameters

| Parameter | Mandatory | Type    | Description                                      |
|-----------|-----------|---------|--------------------------------------------------|
| limit     | No        | Integer | The maximum number of tags that can be returned. |
| offset    | No        | Integer | The tag query offset.                            |

### Request Parameters

**Table 7-54** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

### Response Parameters

**Status code: 200**

**Table 7-55** Response body parameters

| Parameter | Type                                 | Description   |
|-----------|--------------------------------------|---------------|
| tags      | Array of <a href="#">Tag</a> objects | The tag list. |

**Table 7-56** Tag

| Parameter | Type             | Description                                                                                                                                                              |
|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String           | The tag key.<br>A key can contain a maximum of 128 characters and cannot be left blank.                                                                                  |
| values    | Array of strings | The list the tag values. Each value can contain a maximum of 255 characters. An empty list for <b>values</b> indicates any value. The values are in the OR relationship. |

## Example Requests

Querying tags of all file systems in the project whose ID is **e1e45b08f3ea4480ab4655ef9c7160ba**

```
GET HTTPS://{endpoint}/v1/e1e45b08f3ea4480ab4655ef9c7160ba/sfs-turbo/tags
```

## Example Responses

**Status code: 200**

Query response body

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

## Status Codes

| Status Code | Description         |
|-------------|---------------------|
| 200         | Query response body |

## Error Codes

See [Error Codes](#).

## 7.3.6 Querying File Systems by Tag

### Function

This API is used to query file systems by tag.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/resource\_instances/action

**Table 7-57** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |

### Request Parameters

**Table 7-58** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-59** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                       |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String | The operation type of listing file systems by tag. The value can be <b>filter</b> or <b>count</b> .<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>filter</b></li><li>• <b>count</b></li></ul> |

| Parameter       | Mandatory | Type                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------|-----------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| limit           | No        | String                              | The maximum number of file systems returned.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| offset          | No        | String                              | The offset of the returned file systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| without_any_tag | No        | Boolean                             | The resources to be queried contain no tags. If this parameter is set to <b>true</b> , all resources without specified tags are queried. In this case, the <b>tags</b> field is ignored. If this parameter is set to <b>false</b> or not specified, it does not take effect, meaning that all resources are returned or resources are filtered by <b>tags</b> or <b>matches</b> .                                                                                                                                                                                                                         |
| tags            | No        | Array of <b>Tag</b> objects         | The resources to be queried contain tags specified in this field. Each resource can contain a maximum of 20 keys. Each tag key can have a maximum of 20 tag values. The tag value corresponding to each tag key can be an empty array but the structure cannot be missing. Each tag key must be unique, and tag values of the same tag must be unique. The response returns resources containing all tags in this list. Keys in this list are in the AND relationship and values in each key-value structure are in the OR relationship. If no tag filtering criteria is specified, all data is returned. |
| matches         | No        | Array of <b>ResourceTag</b> objects | The search criteria. <b>key</b> is the field to match. Only <b>resource_name</b> is supported. <b>value</b> is the matched value. If the value ends with *, prefix search will be performed. For example, if the value is sfsturbo*, all resources whose names start with <b>sfsturbo</b> will be returned.                                                                                                                                                                                                                                                                                               |

**Table 7-60** Tag

| Parameter | Mandatory | Type             | Description                                                                                                                                                              |
|-----------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String           | The tag key.<br>A key can contain a maximum of 128 characters and cannot be left blank.                                                                                  |
| values    | Yes       | Array of strings | The list the tag values. Each value can contain a maximum of 255 characters. An empty list for <b>values</b> indicates any value. The values are in the OR relationship. |

**Table 7-61** ResourceTag

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_).                 |
| value     | Yes       | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

## Response Parameters

Status code: 200

**Table 7-62** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-63** Response body parameters

| Parameter   | Type                                                     | Description                                |
|-------------|----------------------------------------------------------|--------------------------------------------|
| resources   | Array of <a href="#">ListSharesByTagResource</a> objects | The list of file systems queried by tag.   |
| total_count | Integer                                                  | The total number of file systems returned. |

**Table 7-64** ListSharesByTagResource

| Parameter       | Type                                         | Description            |
|-----------------|----------------------------------------------|------------------------|
| resource_id     | String                                       | The resource ID.       |
| resource_name   | String                                       | The resource name.     |
| resource_detail | String                                       | The resource details.  |
| tags            | Array of <a href="#">ResourceTag</a> objects | The resource tag list. |

**Table 7-65** ResourceTag

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | String | The tag key.<br>It can contain a maximum of 128 characters.<br>It cannot be left empty and cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_).                 |
| value     | String | The tag value.<br>Each tag value can contain a maximum of 255 characters and can be an empty string.<br>It cannot contain the following characters: ASCII (0-31), equal signs (=), asterisks (*), left angle brackets (<), right angle brackets (>), backslashes (\), commas (,), vertical bars ( ), and slashes (/). It can contain only letters, digits, hyphens (-), and underscores (_). |

**Status code: 400****Table 7-66** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-67** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-68** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-69** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

- Filtering file systems by file system tag

```
{
  "action": "filter",
  "limit": 10,
  "offset": 10,
  "tags": [ {
    "key": "key1",
    "values": [ "value1", "value2" ]
  }, {
    "key": "key2",
    "values": [ "value1", "value2" ]
  } ]
}
```

- Filtering file systems by file system name

```
{
  "action": "filter",
  "matches": [ {
    "key": "resource_name",
    "value": "sfsturbo*"
  } ]
}
```

## Example Responses

### Status code: 400

Error response

```
{
  "errCode": "SFS.TURBO.0001",
  "errMsg": "parameter error"
}
```

### Status code: 500

The error response.

```
{
  "errCode": "SFS.TURBO.0005",
  "errMsg": "internal server error"
}
```

## Status Codes

| Status Code | Description         |
|-------------|---------------------|
| 200         | Success             |
| 400         | Error response      |
| 500         | The error response. |

## Error Codes

See [Error Codes](#).

# 7.4 Name Management

## 7.4.1 Changing the Name of a File System

### Function

This API is used to change the name of a file system.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/action

**Table 7-70** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-71** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-72** Request body parameters

| Parameter   | Mandatory | Type                             | Description                     |
|-------------|-----------|----------------------------------|---------------------------------|
| change_name | Yes       | <a href="#">ShareName</a> object | The file system to be modified. |

**Table 7-73** ShareName

| Parameter | Mandatory | Type   | Description                                 |
|-----------|-----------|--------|---------------------------------------------|
| name      | Yes       | String | The name of the file system to be modified. |

## Response Parameters

**Status code: 204**

Successful request

None

## Example Requests

Changing the name of an SFS Turbo file system to **sfs-turbo-test1**

```
{
  "change_name": {
    "name": "sfs-turbo-test1"
  }
}
```

## Example Responses

None

## Status Codes

| Status Code | Description                     |
|-------------|---------------------------------|
| 204         | Successful request              |
| 400         | Incorrect parameter             |
| 409         | File system name already exists |
| 500         | Internal error                  |

## Error Codes

See [Error Codes](#).

# 7.5 File System Management

## 7.5.1 Creating an Asynchronous Task for a File System

### Function

This API is used to create an asynchronous task for a file system. Only tasks for querying the directory usage can be created. Such tasks are also referred to as DU tasks. The value of **feature** in the API request path is **dir-usage**.

### Constraints

This API is only supported for file systems created after August 1, 2023. If there are 10 tasks being executed, no more task can be created. You are advised not to submit five or more requests at a time, or the file system performance may be affected. It takes some time to query an oversized directory. Do not submit the request repeatedly. The value of **feature** in the API request path can only be the following:

- dir-usage

This API is only supported for the following types of file systems:

- 20 MB/s/TiB
- 40 MB/s/TiB
- 125 MB/s/TiB
- 250 MB/s/TiB
- 500 MB/s/TiB
- 1,000 MB/s/TiB

For SFS Turbo Standard, Standard-Enhanced, Performance, Performance-Enhanced file systems, use the API for querying the file system directory usage.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/{feature}/tasks

**Table 7-74** Path Parameters

| Parameter  | Mandatory | Type   | Description                                         |
|------------|-----------|--------|-----------------------------------------------------|
| project_id | Yes       | String | The project ID.                                     |
| share_id   | Yes       | String | The file system ID.                                 |
| feature    | Yes       | String | The task type, which can only be <b>dir-usage</b> . |

## Request Parameters

**Table 7-75** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| X-Auth-Token | Yes       | String | The account token.                                              |
| Content-Type | Yes       | String | The MIME type, which can be <b>application</b> or <b>json</b> . |

**Table 7-76** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                         |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path      | Yes       | String | The valid full path of a directory in the file system. The length of a single-level directory cannot exceed 255 characters, and that of a full path cannot exceed 4,096 characters. |

## Response Parameters

**Status code: 202**

**Table 7-77** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-78** Response body parameters

| Parameter | Type   | Description  |
|-----------|--------|--------------|
| task_id   | String | The task ID. |

**Status code: 400****Table 7-79** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-80** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-81** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-82** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

The following example creates a DU task for querying the directory resource usage. **path** is a valid full path of a directory in the file system. The length of a single-level directory cannot exceed 255 characters, and that of a full path cannot exceed 4,096 characters.

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir-usage/tasks
{
  "path" : "/path"
}
```

## Example Responses

### Status code: 202

Accepted

```
{
  "task_id" : "d651ea2b-2b20-4c6d-8bbf-2adcec18dac9"
}
```

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0123",
  "errMsg" : "feature invalid"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 202         | Accepted       |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.5.2 Listing Asynchronous Tasks of a File System

### Function

This API is used to list the asynchronous tasks of a file system. Only tasks for querying the directory usage can be listed. Such tasks are also referred to as DU tasks. The value of **feature** in the API request path is **dir-usage**.

### Constraints

This API is only supported for file systems created after August 1, 2023. The obtained data may not be the latest as there is a 5-minute delay between the frontend and background. The value of **feature** in the API request path can only be the following:

- dir-usage

This API is only supported for the following types of file systems:

- 20 MB/s/TiB
- 40 MB/s/TiB
- 125 MB/s/TiB
- 250 MB/s/TiB
- 500 MB/s/TiB
- 1,000 MB/s/TiB

For SFS Turbo Standard, Standard-Enhanced, Performance, Performance-Enhanced file systems, use the API for querying the file system directory usage.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/{feature}/tasks

**Table 7-83** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                              |
|------------|-----------|--------|--------------------------------------------------------------------------|
| project_id | Yes       | String | The project ID.                                                          |
| share_id   | Yes       | String | The file system ID.                                                      |
| feature    | Yes       | String | The task type. For example, the value for DU tasks is <b>dir-usage</b> . |

**Table 7-84** Query Parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                          |
|-----------|-----------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| marker    | No        | String  | The marker. It is the task ID of the last record returned on the previous page and is used as the start of the next query. For example, if the marker is <b>d651ea2b-2b20-4c6d-8bbf-2adcec18dac9</b> and the limit is <b>100</b> , up to 100 records that meet the query criteria after <b>d651ea2b-2b20-4c6d-8bbf-2adcec18dac9</b> can be returned. |
| limit     | No        | Integer | The limit. The value must be a positive integer. The default value is <b>20</b> and the maximum value is <b>100</b> .                                                                                                                                                                                                                                |

## Request Parameters

**Table 7-85** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| X-Auth-Token | Yes       | String | The account token.                                              |
| Content-Type | Yes       | String | The MIME type, which can be <b>application</b> or <b>json</b> . |

## Response Parameters

Status code: 200

**Table 7-86** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-87** Response body parameters

| Parameter | Type                                           | Description    |
|-----------|------------------------------------------------|----------------|
| tasks     | Array of <a href="#">OneFsTaskResp</a> objects | The task list. |

**Table 7-88** OneFsTaskResp

| Parameter  | Type                            | Description                                                                                                                                                                                                         |
|------------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_id    | String                          | The task ID.                                                                                                                                                                                                        |
| status     | String                          | The task status, which can be <b>SUCCESS</b> , <b>DOING</b> , or <b>FAIL</b> .<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>SUCCESS</b></li><li>• <b>DOING</b></li><li>• <b>FAIL</b></li></ul> |
| dir_usage  | <a href="#">FsDuInfo</a> object | The resource usages of a directory (subdirectories included).                                                                                                                                                       |
| begin_time | String                          | The task start time in UTC format, for example, <b>2006-01-02 15:04:05</b> .                                                                                                                                        |
| end_time   | String                          | The task end time in UTC format, for example, <b>2006-01-02 15:04:06</b> .                                                                                                                                          |

**Table 7-89** FsDuInfo

| Parameter     | Type                               | Description                                            |
|---------------|------------------------------------|--------------------------------------------------------|
| path          | String                             | The valid full path of a directory in the file system. |
| used_capacity | Long                               | The used capacity, in bytes.                           |
| file_count    | <a href="#">FsFileCount</a> object | The total number of files in this directory.           |
| message       | String                             | The error message.                                     |

**Table 7-90** FsFileCount

| Parameter | Type | Description                |
|-----------|------|----------------------------|
| dir       | Long | The number of directories. |

| Parameter | Type | Description                      |
|-----------|------|----------------------------------|
| regular   | Long | The number of regular files.     |
| pipe      | Long | The number of pipe files.        |
| char      | Long | The number of character devices. |
| block     | Long | The number of block devices.     |
| socket    | Long | The number of sockets.           |
| symlink   | Long | The number of symbolic links.    |

**Status code: 400****Table 7-91** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-92** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 404****Table 7-93** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-94** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-95** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-96** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Listing 50 DU tasks starting from the task whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

GET [HTTPS://{endpoint}/v1/{project\\_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/fs/dir-usage/tasks?marker=11abef677ac40f46644d1d5cfc2424a4&limit=50](https://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/fs/dir-usage/tasks?marker=11abef677ac40f46644d1d5cfc2424a4&limit=50)

## Example Responses

### Status code: 200

Success

```
{
  "tasks": [ {
    "task_id": "2b31ed520xxxxxxebdb6e57xxxxxxx",
    "status": "SUCCESS",
    "dir_usage": {
      "path": "/path",
      "used_capacity": 0,
      "file_count": {
        "dir": 0,
        "regular": 0,
        "pipe": 0,
        "char": 0,
        "block": 0,
        "socket": 0,
        "symlink": 0
      },
      "message": ""
    },
    "begin_time": "2023-03-01 11:46:01",
    "end_time": "2023-03-01 11:46:01"
  } ]
}
```

### Status code: 400

Error response

```
{
  "errCode": "SFS.TURBO.0123",
  "errMsg": "feature invalid"
}
```

**Status code: 404**

Error response

```
{
  "errCode" : "SFS.TURBO.0124",
  "errMsg" : "task_id not found"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

**Status Codes**

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 400         | Error response |
| 404         | Error response |
| 500         | Error response |

**Error Codes**See [Error Codes](#).**7.5.3 Obtaining Details About an Asynchronous Task of a File System****Function**

This API is used to obtain details about an asynchronous task of a file system. Only tasks for querying the directory usage can be queried. Such tasks are also referred to as DU tasks. The value of **feature** in the API request path is **dir-usage**.

**Constraints**

This API is only supported for file systems created after August 1, 2023. The obtained data may not be the latest as there is a 5-minute delay between the frontend and background. The value of **feature** in the API request path can only be the following:

- dir-usage

This API is only supported for the following types of file systems:

- 20 MB/s/TiB

- 40 MB/s/TiB
- 125 MB/s/TiB
- 250 MB/s/TiB
- 500 MB/s/TiB
- 1,000 MB/s/TiB

For SFS Turbo Standard, Standard-Enhanced, Performance, Performance-Enhanced file systems, use the API for querying the file system directory usage.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/{feature}/tasks/{task\_id}

**Table 7-97** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                              |
|------------|-----------|--------|--------------------------------------------------------------------------|
| project_id | Yes       | String | The project ID.                                                          |
| share_id   | Yes       | String | The file system ID.                                                      |
| feature    | Yes       | String | The task type. For example, the value for DU tasks is <b>dir-usage</b> . |
| task_id    | Yes       | String | The task ID.                                                             |

## Request Parameters

**Table 7-98** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| X-Auth-Token | Yes       | String | The account token.                                              |
| Content-Type | Yes       | String | The MIME type, which can be <b>application</b> or <b>json</b> . |

## Response Parameters

**Status code: 200**

**Table 7-99** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-100** Response body parameters

| Parameter  | Type                    | Description                                                                                                                                                                                                         |
|------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_id    | String                  | The task ID.                                                                                                                                                                                                        |
| status     | String                  | The task status, which can be <b>SUCCESS</b> , <b>DOING</b> , or <b>FAIL</b> .<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>SUCCESS</b></li><li>• <b>DOING</b></li><li>• <b>FAIL</b></li></ul> |
| dir_usage  | <b>FsDulInfo</b> object | The resource usages of a directory (subdirectories included).                                                                                                                                                       |
| begin_time | String                  | The task start time in UTC format, for example, <b>2006-01-02 15:04:05</b> .                                                                                                                                        |
| end_time   | String                  | The task end time in UTC format, for example, <b>2006-01-02 15:04:06</b> .                                                                                                                                          |

**Table 7-101** FsDulInfo

| Parameter     | Type                      | Description                                            |
|---------------|---------------------------|--------------------------------------------------------|
| path          | String                    | The valid full path of a directory in the file system. |
| used_capacity | Long                      | The used capacity, in bytes.                           |
| file_count    | <b>FsFileCount</b> object | The total number of files in this directory.           |
| message       | String                    | The error message.                                     |

**Table 7-102** FsFileCount

| Parameter | Type | Description                  |
|-----------|------|------------------------------|
| dir       | Long | The number of directories.   |
| regular   | Long | The number of regular files. |

| Parameter | Type | Description                      |
|-----------|------|----------------------------------|
| pipe      | Long | The number of pipe files.        |
| char      | Long | The number of character devices. |
| block     | Long | The number of block devices.     |
| socket    | Long | The number of sockets.           |
| symlink   | Long | The number of symbolic links.    |

**Status code: 400****Table 7-103** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-104** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 404****Table 7-105** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-106** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-107** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-108** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Obtaining details of the task whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **630509b1-ded4-476e-8d06-dbbc3dc23900**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/630509b1-ded4-476e-8d06-dbbc3dc23900/fs/dir-usage/tasks/11abef677ac40f46644d1d5cfc2424a4
```

## Example Responses

### Status code: 200

Success

```
{
  "task_id" : "2b31ed520xxxxxxebdb6e57xxxxxxx",
  "status" : "SUCCESS",
  "dir_usage" : {
    "path" : "/path",
    "used_capacity" : 0,
    "file_count" : {
      "dir" : 0,
      "regular" : 0,
      "pipe" : 0,
      "char" : 0,
      "block" : 0,
      "socket" : 0,
      "symlink" : 0
    },
    "message" : ""
  },
  "begin_time" : "2023-03-01 11:46:01",
  "end_time" : "2023-03-01 11:46:01"
}
```

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0123",
  "errMsg" : "feature invalid"
}
```

### Status code: 404

Error response

```
{
  "errCode" : "SFS.TURBO.0124",
  "errMsg" : "task_id not found"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 400         | Error response |
| 404         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.5.4 Deleting an Asynchronous Task of a File System

### Function

This API is used to delete an asynchronous task. If the task is being executed, the task will be cancelled and then deleted. Only tasks for querying the directory usage can be deleted. Such tasks are also referred to as DU tasks. The value of **feature** in the API request path is **dir-usage**.

### Constraints

This API is only supported for file systems created after August 1, 2023. The value of **feature** in the API request path can only be the following:

- dir-usage

This API is only supported for the following types of file systems:

- 20 MB/s/TiB
- 40 MB/s/TiB
- 125 MB/s/TiB
- 250 MB/s/TiB

- 500 MB/s/TiB
- 1,000 MB/s/TiB

For SFS Turbo Standard, Standard-Enhanced, Performance, Performance-Enhanced file systems, use the API for querying the file system directory usage.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/{feature}/tasks/{task\_id}

**Table 7-109** Path Parameters

| Parameter  | Mandatory | Type   | Description                                                              |
|------------|-----------|--------|--------------------------------------------------------------------------|
| project_id | Yes       | String | The project ID.                                                          |
| share_id   | Yes       | String | The file system ID.                                                      |
| feature    | Yes       | String | The task type. For example, the value for DU tasks is <b>dir-usage</b> . |
| task_id    | Yes       | String | The task ID.                                                             |

## Request Parameters

**Table 7-110** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| X-Auth-Token | Yes       | String | The account token.                                              |
| Content-Type | Yes       | String | The MIME type, which can be <b>application</b> or <b>json</b> . |

## Response Parameters

**Status code: 202**

**Table 7-111** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Status code: 400****Table 7-112** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-113** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 404****Table 7-114** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-115** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-116** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-117** Response body parameters

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| errCode   | String | The error code. |

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errMsg    | String | The error message. |

## Example Requests

Deleting the task whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
DELETE HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/fs/
dir-usage/tasks/11abef677ac40f46644d1d5cfc2424a4
```

## Example Responses

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0123",
  "errMsg" : "feature invalid"
}
```

### Status code: 404

Error response

```
{
  "errCode" : "SFS.TURBO.0124",
  "errMsg" : "task_id not found"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 202         | Accepted       |
| 400         | Error response |
| 404         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.5.5 Obtaining IP Addresses of the Clients Who Have Mounted the File System

### Function

This API is used to obtain the IP addresses of the clients who have mounted the file system.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/action

**Table 7-118** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-119** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-120** Request body parameters

| Parameter      | Mandatory | Type                                | Description                                                            |
|----------------|-----------|-------------------------------------|------------------------------------------------------------------------|
| get_client_ips | Yes       | <a href="#">ClientIpInfo</a> object | Obtaining IP addresses of the clients who have mounted the file system |

**Table 7-121** ClientIpInfo

| Parameter | Mandatory | Type   | Description                                                       |
|-----------|-----------|--------|-------------------------------------------------------------------|
| ips       | No        | String | The IP addresses of the clients who have mounted the file system. |

## Response Parameters

**Status code: 200**

**Table 7-122** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-123** Response body parameters

| Parameter | Type             | Description                                                       |
|-----------|------------------|-------------------------------------------------------------------|
| id        | String           | The file system ID.                                               |
| ips       | Array of strings | The IP addresses of the clients who have mounted the file system. |

**Status code: 400**

**Table 7-124** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-125** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-126** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-127** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

None

## Example Responses

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "parameter error"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6 Storage Interworking Management

### 7.6.1 Adding a Storage Backend

#### Function

This API is used to add a storage backend for an SFS Turbo file system.

#### Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- Request body parameter **file\_system\_path** must be the name of a directory that cannot be found in the file system root directory.
- When adding OBS resources as storage backends, you can only add OBS buckets. OBS parallel file systems cannot be added.
- Adding OBS storage backends depends on the OBS service, so you need to obtain the OBS Administrator permissions.
- This API is only supported for NFS file systems.

#### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

#### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/targets

**Table 7-128** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

#### Request Parameters

**Table 7-129** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |

| Parameter    | Mandatory | Type   | Description    |
|--------------|-----------|--------|----------------|
| Content-Type | Yes       | String | The MIME type. |

**Table 7-130** Request body parameters

| Parameter        | Mandatory | Type                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------|-----------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_system_path | Yes       | String                                   | The name of the interworking directory. SFS Turbo will create a subdirectory with this name in the file system root directory and associate this subdirectory with the storage backend. It must be a directory whose name cannot be found in the file system root directory. The restrictions are as follows: <ul style="list-style-type: none"><li>• Only letters, digits, underscores (_), hyphens (-), and periods (.) are allowed.</li><li>• Its length cannot exceed 63 characters, and its name cannot be a period (.) or two periods (..).</li><li>• It cannot contain slashes (/), and cannot be the name of a multi-level directory.</li></ul> |
| obs              | Yes       | <a href="#">ObsDataRepository</a> object | The OBS storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

**Table 7-131** ObsDataRepository

| Parameter | Mandatory | Type                                           | Description                                             |
|-----------|-----------|------------------------------------------------|---------------------------------------------------------|
| bucket    | Yes       | String                                         | The OBS bucket name.                                    |
| endpoint  | Yes       | String                                         | The OBS bucket endpoint.                                |
| policy    | No        | <a href="#">ObsDataRepositoryPolicy</a> object | The auto synchronization policy of the storage backend. |

| Parameter  | Mandatory | Type                                       | Description                                                                                                                                                                                             |
|------------|-----------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes | No        | <a href="#">ObsTargetAttributes</a> object | The attributes of the storage backend. This parameter is not supported for file systems that are created on or before June 30, 2024 and have not been upgraded. Submit a service ticket if you need it. |

**Table 7-132** ObsDataRepositoryPolicy

| Parameter          | Mandatory | Type                                    | Description                                                                                                                                      |
|--------------------|-----------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_export_policy | No        | <a href="#">AutoExportPolicy</a> object | The auto export policy of the storage backend. If enabled, all updates made on the file system will be automatically exported to the OBS bucket. |

**Table 7-133** AutoExportPolicy

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events    | No        | Array of strings | <p>The type of data automatically exported to the OBS bucket.</p> <ul style="list-style-type: none"><li>• <b>NEW</b>: Files created and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>CHANGED</b>: Files previously imported from the OBS bucket and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>DELETED</b>: Files deleted from the SFS Turbo interworking directory. Deletions will be automatically synchronized to the OBS bucket, and only such files that were previously exported to the bucket will be deleted.</li></ul> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>NEW</b></li><li>• <b>CHANGED</b></li><li>• <b>DELETED</b></li></ul> |
| prefix    | No        | String           | The prefix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| suffix    | No        | String           | The suffix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Table 7-134 ObsTargetAttributes

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_mode | No        | Integer | <p>The permissions on the imported file. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the file owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the file belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The file owner is specified by UID, and the user group to which the file belongs is specified by GID. Users who are not the file owner and not in the user group to which the file belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the file owner has the read, write, and execute permissions on the file, the second digit 5 indicates that the user group to which the file belongs has the read and execute permissions on the file, and the third digit 0 indicates that other users have no permission on the file.</p> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dir_mode  | No        | Integer | <p>The permissions on the imported directory. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 0 indicates that other users have no permission on the directory.</p> |
| uid       | No        | Integer | <p>The ID of the user who owns the imported object. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter | Mandatory | Type    | Description                                                                                                                                                        |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| gid       | No        | Integer | The ID of the user group to which the imported object belongs. The default value is <b>0</b> . The value ranges from <b>0</b> to <b>4294967294</b> ( $2^{32}-2$ ). |

## Response Parameters

Status code: 202

Table 7-135 Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

Table 7-136 Response body parameters

| Parameter        | Type                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| target_id        | String                                       | The storage backend ID.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| creation_time    | String                                       | The time when the storage backend was added.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| failure_details  | <a href="#">FailureDetailsMessage</a> object | The association error information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| file_system_path | String                                       | The interworking directory name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| lifecycle        | String                                       | <p>The association status.</p> <p><b>CREATING</b> means that the storage backend is being created. You can call the API for querying details of a storage backend to query the status in polling mode.</p> <p><b>AVAILABLE</b> means that the storage backend is added successfully.</p> <p><b>MISCONFIGURED</b> means that the storage backend fails to be added.</p> <p><b>DELETING</b> is currently not supported.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>CREATING</b></li><li>• <b>AVAILABLE</b></li><li>• <b>MISCONFIGURED</b></li><li>• <b>DELETING</b></li></ul> |

| Parameter | Type                                     | Description              |
|-----------|------------------------------------------|--------------------------|
| obs       | <a href="#">ObsDataRepository</a> object | The OBS storage backend. |

**Table 7-137** FailureDetailsMessage

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| message   | String | The error message. |

**Table 7-138** ObsDataRepository

| Parameter  | Type                                           | Description                                                                                                                                                                                             |
|------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| bucket     | String                                         | The OBS bucket name.                                                                                                                                                                                    |
| endpoint   | String                                         | The OBS bucket endpoint.                                                                                                                                                                                |
| policy     | <a href="#">ObsDataRepositoryPolicy</a> object | The auto synchronization policy of the storage backend.                                                                                                                                                 |
| attributes | <a href="#">ObsTargetAttributes</a> object     | The attributes of the storage backend. This parameter is not supported for file systems that are created on or before June 30, 2024 and have not been upgraded. Submit a service ticket if you need it. |

**Table 7-139** ObsDataRepositoryPolicy

| Parameter          | Type                                    | Description                                                                                                                                      |
|--------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_export_policy | <a href="#">AutoExportPolicy</a> object | The auto export policy of the storage backend. If enabled, all updates made on the file system will be automatically exported to the OBS bucket. |

**Table 7-140** AutoExportPolicy

| Parameter | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events    | Array of strings | <p>The type of data automatically exported to the OBS bucket.</p> <ul style="list-style-type: none"><li>• <b>NEW</b>: Files created and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>CHANGED</b>: Files previously imported from the OBS bucket and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>DELETED</b>: Files deleted from the SFS Turbo interworking directory. Deletions will be automatically synchronized to the OBS bucket, and only such files that were previously exported to the bucket will be deleted.</li></ul> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>NEW</b></li><li>• <b>CHANGED</b></li><li>• <b>DELETED</b></li></ul> |
| prefix    | String           | The prefix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| suffix    | String           | The suffix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Table 7-141** ObsTargetAttributes

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_mode | Integer | <p>The permissions on the imported file.<br/>Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the file owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the file belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The file owner is specified by UID, and the user group to which the file belongs is specified by GID. Users who are not the file owner and not in the user group to which the file belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the file owner has the read, write, and execute permissions on the file, the second digit 5 indicates that the user group to which the file belongs has the read and execute permissions on the file, and the third digit 0 indicates that other users have no permission on the file.</p> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dir_mode  | Integer | <p>The permissions on the imported directory. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 0 indicates that other users have no permission on the directory.</p> |
| uid       | Integer | <p>The ID of the user who owns the imported object. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| gid       | Integer | <p>The ID of the user group to which the imported object belongs. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Status code: 400**

**Table 7-142** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-143** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

- This example adds a storage backend for the file system whose ID is **630509b1-ded4-476e-8d06-dbbc3dc23900**. The OBS bucket name is **myBucket**, the OBS bucket endpoint is **obs.region.example.com**, and the name of the interworking directory is **sfsturboDirName**.

POST HTTPS://{endpoint}/v1/{project\_id}/sfs-turbo/shares/630509b1-ded4-476e-8d06-dbbc3dc23900/targets

```
{
  "file_system_path" : "sfsturboDirName",
  "obs" : {
    "bucket" : "myBucket",
    "endpoint" : "obs.region.example.com"
  }
}
```

- This example adds a storage backend for the file system whose ID is **630509b1-ded4-476e-8d06-dbbc3dc23900**. The OBS bucket name is **myBucket**, the OBS bucket endpoint is **obs.region.example.com**, and the name of the interworking directory is **sfsturboDirName**. The permissions of imported files are set to **750**, and the permissions of imported directories are set to **640**.

POST HTTPS://{endpoint}/v1/{project\_id}/sfs-turbo/shares/630509b1-ded4-476e-8d06-dbbc3dc23900/targets

```
{
  "file_system_path" : "sfsturboDirName",
  "obs" : {
    "bucket" : "myBucket",
    "endpoint" : "obs.region.example.com",
    "attributes" : {
      "file_mode" : 750,
      "dir_mode" : 640
    }
  }
}
```

- This example adds a storage backend for the file system whose ID is **630509b1-ded4-476e-8d06-dbbc3dc23900**. The OBS bucket name is

**myBucket**, the OBS bucket endpoint is **obs.region.example.com**, and the name of the interworking directory is **sfsturboDirName**. The permissions of imported files are set to **750**, the permissions of imported directories are set to **640**, and both the UIDs and GIDs of the imported files and directories are set to **0**.

POST HTTPS://{endpoint}/v1/{project\_id}/sfs-turbo/shares/630509b1-ded4-476e-8d06-dbbc3dc23900/targets

```
{
  "file_system_path" : "sfsturboDirName",
  "obs" : {
    "bucket" : "myBucket",
    "endpoint" : "obs.region.example.com",
    "attributes" : {
      "file_mode" : 750,
      "dir_mode" : 640,
      "uid" : 0,
      "gid" : 0
    }
  }
}
```

- This example adds a storage backend for the file system whose ID is **630509b1-ded4-476e-8d06-dbbc3dc23900**. The OBS bucket name is **myBucket**, the OBS bucket endpoint is **obs.region.example.com**, and the name of the interworking directory is **sfsturboDirName**. The data types of the auto export policy are set to **NEW**, **CHANGED**, and **DELETED**.

POST HTTPS://{endpoint}/v1/{project\_id}/sfs-turbo/shares/630509b1-ded4-476e-8d06-dbbc3dc23900/targets

```
{
  "file_system_path" : "sfsturboDirName",
  "obs" : {
    "bucket" : "myBucket",
    "endpoint" : "obs.region.example.com",
    "policy" : {
      "auto_export_policy" : {
        "events" : [ "NEW", "CHANGED", "DELETED" ]
      }
    }
  }
}
```

## Example Responses

**Status code: 202**

Task delivered

```
{
  "target_id" : "00000334-xxxx-402d-a5d4-bxxxxx87b939",
  "creation_time" : "2023-11-19T04:02:03",
  "file_system_path" : "sfsturboDirName",
  "lifecycle" : "CREATING",
  "obs" : {
    "bucket" : "myBucket",
    "endpoint" : "obs.region.example.com"
  }
}
```

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
}
```

```
"errMsg" : "request path/body parameters invalid"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 202         | Task delivered |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.2 Listing Storage Backends

### Function

This API is used to list storage backends.

### Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/targets

**Table 7-144** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

**Table 7-145** Query Parameters

| Parameter | Mandatory | Type    | Description                                                  |
|-----------|-----------|---------|--------------------------------------------------------------|
| limit     | No        | Integer | The maximum number of storage backends that can be returned. |
| marker    | No        | String  | The query offset.                                            |

## Request Parameters

**Table 7-146** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-147** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-148** Response body parameters

| Parameter | Type    | Description                     |
|-----------|---------|---------------------------------|
| count     | Integer | The number of storage backends. |

| Parameter | Type                                                               | Description                   |
|-----------|--------------------------------------------------------------------|-------------------------------|
| targets   | Array of <a href="#">ShowBackendTargetInfoResponseBody</a> objects | The list of storage backends. |

**Table 7-149** ShowBackendTargetInfoResponseBody

| Parameter        | Type                                         | Description                                                                                                                                                                                                                  |
|------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| target_id        | String                                       | The storage backend ID.                                                                                                                                                                                                      |
| creation_time    | String                                       | The time when the storage backend was added.                                                                                                                                                                                 |
| file_system_path | String                                       | The interworking directory name.                                                                                                                                                                                             |
| failure_details  | <a href="#">FailureDetailsMessage</a> object | The association error information.                                                                                                                                                                                           |
| lifecycle        | String                                       | The association status.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>CREATING</b></li><li>• <b>AVAILABLE</b></li><li>• <b>MISCONFIGURED</b></li><li>• <b>DELETING</b></li><li>• <b>FAILED</b></li></ul> |
| obs              | <a href="#">ObsDataRepository</a> object     | The OBS storage backend.                                                                                                                                                                                                     |

**Table 7-150** FailureDetailsMessage

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| message   | String | The error message. |

**Table 7-151** ObsDataRepository

| Parameter | Type                                           | Description                                             |
|-----------|------------------------------------------------|---------------------------------------------------------|
| bucket    | String                                         | The OBS bucket name.                                    |
| endpoint  | String                                         | The OBS bucket endpoint.                                |
| policy    | <a href="#">ObsDataRepositoryPolicy</a> object | The auto synchronization policy of the storage backend. |

| Parameter  | Type                                       | Description                                                                                                                                                                                             |
|------------|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| attributes | <a href="#">ObsTargetAttributes</a> object | The attributes of the storage backend. This parameter is not supported for file systems that are created on or before June 30, 2024 and have not been upgraded. Submit a service ticket if you need it. |

**Table 7-152** ObsDataRepositoryPolicy

| Parameter          | Type                                    | Description                                                                                                                                      |
|--------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_export_policy | <a href="#">AutoExportPolicy</a> object | The auto export policy of the storage backend. If enabled, all updates made on the file system will be automatically exported to the OBS bucket. |

**Table 7-153** AutoExportPolicy

| Parameter | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events    | Array of strings | <p>The type of data automatically exported to the OBS bucket.</p> <ul style="list-style-type: none"><li>• <b>NEW</b>: Files created and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>CHANGED</b>: Files previously imported from the OBS bucket and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>DELETED</b>: Files deleted from the SFS Turbo interworking directory. Deletions will be automatically synchronized to the OBS bucket, and only such files that were previously exported to the bucket will be deleted.</li></ul> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>NEW</b></li><li>• <b>CHANGED</b></li><li>• <b>DELETED</b></li></ul> |
| prefix    | String           | The prefix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| suffix    | String           | The suffix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Table 7-154 ObsTargetAttributes

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_mode | Integer | <p>The permissions on the imported file.<br/>Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the file owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the file belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The file owner is specified by UID, and the user group to which the file belongs is specified by GID. Users who are not the file owner and not in the user group to which the file belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the file owner has the read, write, and execute permissions on the file, the second digit 5 indicates that the user group to which the file belongs has the read and execute permissions on the file, and the third digit 0 indicates that other users have no permission on the file.</p> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dir_mode  | Integer | <p>The permissions on the imported directory. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 0 indicates that other users have no permission on the directory.</p> |
| uid       | Integer | <p>The ID of the user who owns the imported object. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| gid       | Integer | <p>The ID of the user group to which the imported object belongs. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Status code: 404**

**Table 7-155** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-156** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Listing 10 storage backends starting from the one whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **630509b1-ded4-476e-8d06-dbbc3dc23900**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/630509b1-ded4-476e-8d06-dbbc3dc23900/targets?marker=11abef677ac40f46644d1d5cfc2424a4&limit=10
```

## Example Responses

**Status code: 200**

Task delivered

```
{
  "count" : 1,
  "targets" : [ {
    "target_id" : "00000334-xxxx-402d-a5d4-bxxxxx87b939",
    "creation_time" : "2023-10-10T12:02:03",
    "file_system_path" : "sfsturboDirName",
    "obs" : {
      "bucket" : "myBucket",
      "endpoint" : "obs.region.example.com"
    }
  } ]
}
```

**Status code: 404**

Error response

```
{
  "errCode" : "SFS.TURBO.0002",
  "errMsg" : "share not exist"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Task delivered |
| 404         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.3 Obtaining Details About a Storage Backend

### Function

This API is used to obtain details about a storage backend.

### Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/targets/{target\_id}

**Table 7-157** Path Parameters

| Parameter  | Mandatory | Type   | Description             |
|------------|-----------|--------|-------------------------|
| project_id | Yes       | String | The project ID.         |
| share_id   | Yes       | String | The file system ID.     |
| target_id  | Yes       | String | The storage backend ID. |

## Request Parameters

**Table 7-158** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200****Table 7-159** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-160** Response body parameters

| Parameter        | Type                                         | Description                                                                                                                                                                                                                  |
|------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| target_id        | String                                       | The storage backend ID.                                                                                                                                                                                                      |
| creation_time    | String                                       | The time when the storage backend was added.                                                                                                                                                                                 |
| file_system_path | String                                       | The interworking directory name.                                                                                                                                                                                             |
| failure_details  | <a href="#">FailureDetailsMessage</a> object | The association error information.                                                                                                                                                                                           |
| lifecycle        | String                                       | The association status.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>CREATING</b></li><li>• <b>AVAILABLE</b></li><li>• <b>MISCONFIGURED</b></li><li>• <b>DELETING</b></li><li>• <b>FAILED</b></li></ul> |
| obs              | <a href="#">ObsDataRepository</a> object     | The OBS storage backend.                                                                                                                                                                                                     |

**Table 7-161** FailureDetailsMessage

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| message   | String | The error message. |

**Table 7-162** ObsDataRepository

| Parameter  | Type                                           | Description                                                                                                                                                                                             |
|------------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| bucket     | String                                         | The OBS bucket name.                                                                                                                                                                                    |
| endpoint   | String                                         | The OBS bucket endpoint.                                                                                                                                                                                |
| policy     | <a href="#">ObsDataRepositoryPolicy</a> object | The auto synchronization policy of the storage backend.                                                                                                                                                 |
| attributes | <a href="#">ObsTargetAttributes</a> object     | The attributes of the storage backend. This parameter is not supported for file systems that are created on or before June 30, 2024 and have not been upgraded. Submit a service ticket if you need it. |

**Table 7-163** ObsDataRepositoryPolicy

| Parameter          | Type                                    | Description                                                                                                                                      |
|--------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_export_policy | <a href="#">AutoExportPolicy</a> object | The auto export policy of the storage backend. If enabled, all updates made on the file system will be automatically exported to the OBS bucket. |

**Table 7-164** AutoExportPolicy

| Parameter | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events    | Array of strings | <p>The type of data automatically exported to the OBS bucket.</p> <ul style="list-style-type: none"><li>• <b>NEW</b>: Files created and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>CHANGED</b>: Files previously imported from the OBS bucket and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>DELETED</b>: Files deleted from the SFS Turbo interworking directory. Deletions will be automatically synchronized to the OBS bucket, and only such files that were previously exported to the bucket will be deleted.</li></ul> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>NEW</b></li><li>• <b>CHANGED</b></li><li>• <b>DELETED</b></li></ul> |
| prefix    | String           | The prefix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| suffix    | String           | The suffix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

Table 7-165 ObsTargetAttributes

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_mode | Integer | <p>The permissions on the imported file.<br/>Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the file owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the file belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The file owner is specified by UID, and the user group to which the file belongs is specified by GID. Users who are not the file owner and not in the user group to which the file belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the file owner has the read, write, and execute permissions on the file, the second digit 5 indicates that the user group to which the file belongs has the read and execute permissions on the file, and the third digit 0 indicates that other users have no permission on the file.</p> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dir_mode  | Integer | <p>The permissions on the imported directory. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 0 indicates that other users have no permission on the directory.</p> |
| uid       | Integer | <p>The ID of the user who owns the imported object. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| gid       | Integer | <p>The ID of the user group to which the imported object belongs. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Status code: 404**

**Table 7-166** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-167** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Obtaining details about the storage backend whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/targets/11abef677ac40f46644d1d5cfc2424a4
```

## Example Responses

**Status code: 200**

Task delivered

```
{
  "target_id" : "00000334-xxxx-402d-a5d4-bxxxxx87b939",
  "creation_time" : "2023-10-10T12:02:03",
  "file_system_path" : "sfsturboDirName",
  "lifecycle" : "CREATING",
  "obs" : {
    "bucket" : "myBucket",
    "endpoint" : "obs.region.example.com"
  }
}
```

**Status code: 404**

Error response

```
{
  "errCode" : "SFS.TURBO.0126",
  "errMsg" : "target not found, not bound yet"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
}
```

```
"errMsg" : "internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Task delivered |
| 404         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.4 Removing a Storage Backend

### Function

This API is used to remove a storage backend.

### Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}/targets/{target\_id}

**Table 7-168** Path Parameters

| Parameter  | Mandatory | Type   | Description             |
|------------|-----------|--------|-------------------------|
| project_id | Yes       | String | The project ID.         |
| share_id   | Yes       | String | The file system ID.     |
| target_id  | Yes       | String | The storage backend ID. |

**Table 7-169** Query Parameters

| Parameter                  | Mandatory | Type    | Description                                                                                                                                                        |
|----------------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| delete_data_in_file_system | No        | Boolean | Whether to delete the corresponding interworking directory and data files in that directory. The default value is <b>false</b> . Deleted data cannot be recovered. |

## Request Parameters

**Table 7-170** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

Status code: 202

**Table 7-171** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-172** Response body parameters

| Parameter                  | Type    | Description                                                                                                                                                                                    |
|----------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| target_id                  | String  | The storage backend ID.                                                                                                                                                                        |
| delete_data_in_file_system | Boolean | Whether to delete the corresponding interworking directory and data files in that directory.                                                                                                   |
| lifecycle                  | String  | The association status. Only <b>DELETING</b> and <b>FAILED</b> are supported.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>DELETING</b></li><li>• <b>FAILED</b></li></ul> |

**Status code: 404****Table 7-173** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-174** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Deleting the storage backend whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
DELETE HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/
targets/11abef677ac40f46644d1d5cfc2424a4
```

## Example Responses

**Status code: 202**

Task delivered

```
{
  "target_id" : "00000334-xxxx-402d-a5d4-bxxxxx87b939",
  "delete_data_in_file_system" : false,
  "life_cycle" : "DELETING"
}
```

**Status code: 404**

Error response

```
{
  "errCode" : "SFS.TURBO.0126",
  "errMsg" : "target not found, not bound yet"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 202         | Task delivered |
| 404         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.5 Update the Attributes of a Storage Backend

### Function

This API is used to update the attributes of a storage backend.

### Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

PUT /v1/{project\_id}/sfs-turbo/shares/{share\_id}/targets/{target\_id}/attributes

**Table 7-175** Path Parameters

| Parameter  | Mandatory | Type   | Description             |
|------------|-----------|--------|-------------------------|
| project_id | Yes       | String | The project ID.         |
| share_id   | Yes       | String | The file system ID.     |
| target_id  | Yes       | String | The storage backend ID. |

## Request Parameters

**Table 7-176** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-177** Request body parameters

| Parameter  | Mandatory | Type                                       | Description                            |
|------------|-----------|--------------------------------------------|----------------------------------------|
| attributes | Yes       | <a href="#">ObsTargetAttributes</a> object | The attributes of the storage backend. |

**Table 7-178** ObsTargetAttributes

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_mode | No        | Integer | <p>The permissions on the imported file. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the file owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the file belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The file owner is specified by UID, and the user group to which the file belongs is specified by GID. Users who are not the file owner and not in the user group to which the file belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the file owner has the read, write, and execute permissions on the file, the second digit 5 indicates that the user group to which the file belongs has the read and execute permissions on the file, and the third digit 0 indicates that other users have no permission on the file.</p> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dir_mode  | No        | Integer | <p>The permissions on the imported directory. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 0 indicates that other users have no permission on the directory.</p> |
| uid       | No        | Integer | <p>The ID of the user who owns the imported object. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter | Mandatory | Type    | Description                                                                                                                                                        |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| gid       | No        | Integer | The ID of the user group to which the imported object belongs. The default value is <b>0</b> . The value ranges from <b>0</b> to <b>4294967294</b> ( $2^{32}-2$ ). |

## Response Parameters

Status code: 200

Table 7-179 Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

Table 7-180 Response body parameters

| Parameter  | Type                                       | Description                            |
|------------|--------------------------------------------|----------------------------------------|
| target_id  | String                                     | The storage backend ID.                |
| attributes | <a href="#">ObsTargetAttributes</a> object | The attributes of the storage backend. |

**Table 7-181** ObsTargetAttributes

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_mode | Integer | <p>The permissions on the imported file.<br/>Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the file owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the file belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The file owner is specified by UID, and the user group to which the file belongs is specified by GID. Users who are not the file owner and not in the user group to which the file belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the file owner has the read, write, and execute permissions on the file, the second digit 5 indicates that the user group to which the file belongs has the read and execute permissions on the file, and the third digit 0 indicates that other users have no permission on the file.</p> |

| Parameter | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dir_mode  | Integer | <p>The permissions on the imported directory. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 0 indicates that other users have no permission on the directory.</p> |
| uid       | Integer | <p>The ID of the user who owns the imported object. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| gid       | Integer | <p>The ID of the user group to which the imported object belongs. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Status code: 404**

**Table 7-182** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-183** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Updating the attributes of the storage backend whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

PUT HTTPS://{endpoint}/v1/{project\_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/targets/11abef677ac40f46644d1d5cfc2424a4/attributes

```
{
  "attributes": {
    "file_mode": 750,
    "dir_mode": 640,
    "uid": 0,
    "gid": 0
  }
}
```

## Example Responses

**Status code: 200**

Success

```
{
  "target_id": "00000334-xxxx-402d-a5d4-bxxxxx87b939",
  "attributes": {
    "file_mode": 750,
    "dir_mode": 640,
    "uid": 0,
    "gid": 0
  }
}
```

**Status code: 404**

Error response

```
{
  "errCode": "SFS.TURBO.0126",
}
```

```
"errMsg" : "target not found, not bound yet"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 404         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.6 Updating the Auto Synchronization Policy of a Storage Backend

### Function

This API is used to update the auto synchronization policy of a storage backend.

### Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

PUT /v1/{project\_id}/sfs-turbo/shares/{share\_id}/targets/{target\_id}/policy

**Table 7-184** Path Parameters

| Parameter  | Mandatory | Type   | Description             |
|------------|-----------|--------|-------------------------|
| project_id | Yes       | String | The project ID.         |
| share_id   | Yes       | String | The file system ID.     |
| target_id  | Yes       | String | The storage backend ID. |

## Request Parameters

**Table 7-185** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-186** Request body parameters

| Parameter | Mandatory | Type                                           | Description                                             |
|-----------|-----------|------------------------------------------------|---------------------------------------------------------|
| policy    | Yes       | <a href="#">ObsDataRepositoryPolicy</a> object | The auto synchronization policy of the storage backend. |

**Table 7-187** ObsDataRepositoryPolicy

| Parameter          | Mandatory | Type                                    | Description                                                                                                                                      |
|--------------------|-----------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_export_policy | No        | <a href="#">AutoExportPolicy</a> object | The auto export policy of the storage backend. If enabled, all updates made on the file system will be automatically exported to the OBS bucket. |

**Table 7-188** AutoExportPolicy

| Parameter | Mandatory | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events    | No        | Array of strings | <p>The type of data automatically exported to the OBS bucket.</p> <ul style="list-style-type: none"><li>• <b>NEW</b>: Files created and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>CHANGED</b>: Files previously imported from the OBS bucket and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>DELETED</b>: Files deleted from the SFS Turbo interworking directory. Deletions will be automatically synchronized to the OBS bucket, and only such files that were previously exported to the bucket will be deleted.</li></ul> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>NEW</b></li><li>• <b>CHANGED</b></li><li>• <b>DELETED</b></li></ul> |
| prefix    | No        | String           | The prefix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| suffix    | No        | String           | The suffix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Response Parameters

Status code: 200

**Table 7-189** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-190** Response body parameters

| Parameter | Type                                           | Description                                             |
|-----------|------------------------------------------------|---------------------------------------------------------|
| target_id | String                                         | The storage backend ID.                                 |
| policy    | <a href="#">ObsDataRepositoryPolicy</a> object | The auto synchronization policy of the storage backend. |

**Table 7-191** ObsDataRepositoryPolicy

| Parameter          | Type                                    | Description                                                                                                                                      |
|--------------------|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| auto_export_policy | <a href="#">AutoExportPolicy</a> object | The auto export policy of the storage backend. If enabled, all updates made on the file system will be automatically exported to the OBS bucket. |

**Table 7-192** AutoExportPolicy

| Parameter | Type             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| events    | Array of strings | <p>The type of data automatically exported to the OBS bucket.</p> <ul style="list-style-type: none"><li>• <b>NEW</b>: Files created and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>CHANGED</b>: Files previously imported from the OBS bucket and then modified in the SFS Turbo interworking directory. Any data or metadata modifications made will be automatically synchronized to the OBS bucket.</li><li>• <b>DELETED</b>: Files deleted from the SFS Turbo interworking directory. Deletions will be automatically synchronized to the OBS bucket, and only such files that were previously exported to the bucket will be deleted.</li></ul> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>NEW</b></li><li>• <b>CHANGED</b></li><li>• <b>DELETED</b></li></ul> |
| prefix    | String           | The prefix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| suffix    | String           | The suffix to be matched in the storage backend.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

**Status code: 404****Table 7-193** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-194** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-195** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-196** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Updating the auto synchronization policy of the storage backend whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
PUT HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/targets/11abef677ac40f46644d1d5cfc2424a4/policy
```

```
{
  "policy" : {
    "auto_export_policy" : {
      "events" : [ "NEW", "CHANGED", "DELETED" ]
    }
  }
}
```

## Example Responses

**Status code: 200**

Success

```
{
  "target_id" : "xxxxxx-xxx-xxxx-xxxxxxx",
  "policy" : {
    "auto_export_policy" : {
      "events" : [ "NEW", "CHANGED", "DELETED" ]
    }
  }
}
```

**Status code: 404**

Error response

```
{
  "errCode": "SFS.TURBO.0126",
  "errMsg": "target not found, not bound yet"
}
```

**Status code: 500**

Error response

```
{
  "errCode": "SFS.TURBO.0005",
  "errMsg": "internal server error"
}
```

**Status Codes**

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 404         | Error response |
| 500         | Error response |

**Error Codes**See [Error Codes](#).

## 7.6.7 Creating a Data Import or Export Task

**Function**

This API is used to create a data import or export task.

**Constraints**

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

**Authorization Information**

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

**URI**

POST /v1/{project\_id}/sfs-turbo/{share\_id}/hpc-cache/task

Table 7-197 Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

Request Parameters

Table 7-198 Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-199** Request body parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type       | Yes       | String | <p>The task type, which can be <b>import</b> (additional metadata import), <b>import_metadata</b> (quick import), <b>preload</b> (data preload), or <b>export</b> (export).</p> <p><b>import</b>: Object metadata, including the name, size, and last modification time, as well as the additional metadata like uid, gid, and mode previously exported from SFS Turbo, will all be imported.</p> <p><b>import_metadata</b>: Only the object metadata, including the name, size, and last modification time will be imported. After the import, SFS Turbo will, by default, generate the additional metadata.</p> <p><b>preload</b>: Both the metadata and data will be imported. The metadata includes only the object metadata. Additional metadata like uid, gid, and mode will not be imported.</p> <p><b>export</b>: SFS Turbo will export to the OBS bucket the files created in the interworking directory as well as the data previously imported from OBS and then modified in SFS Turbo.</p> <p>Enumeration values:</p> <ul style="list-style-type: none"><li>• <b>import</b></li><li>• <b>preload</b></li><li>• <b>export</b></li><li>• <b>import_metadata</b></li></ul> |
| src_target | Yes       | String | The interworking directory name.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Parameter   | Mandatory | Type                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-----------|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| src_prefix  | No        | String                            | <p>The source path prefix specified in a data import or export task. Do not include the OBS bucket name for an import task, and do not include the name of the interworking directory for an export task.</p> <p>If <b>import</b>, <b>import_metadata</b>, or <b>preload</b> is specified for <b>type</b>, specify a relative path prefix in the OBS bucket.</p> <p>If <b>export</b> is specified for <b>type</b>, specify a relative path prefix under <code>file_system_path</code> in the file system.</p> <p>If this parameter is not specified, a data import task will import all objects from the OBS bucket, and a data export task will export all files in the interworking directory to the bucket. The restrictions are as follows:</p> <ul style="list-style-type: none"><li>• It can contain 1 to 1,024 characters.</li><li>• It cannot contain the following characters: <code>.*? "&lt;&gt; </code></li><li>• It cannot start or end with a period (<code>.</code>).</li></ul> |
| dest_target | Yes       | String                            | Keep it the same as <b>src_target</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| dest_prefix | No        | String                            | Keep it the same as <b>src_prefix</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| attributes  | No        | <b>ObsTargetAttributes</b> object | The attributes of the storage backend. This parameter is not supported for file systems that are created on or before June 30, 2024 and have not been upgraded. Submit a service ticket if you need it.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

**Table 7-200** ObsTargetAttributes

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| file_mode | No        | Integer | <p>The permissions on the imported file. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the file owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the file belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The file owner is specified by UID, and the user group to which the file belongs is specified by GID. Users who are not the file owner and not in the user group to which the file belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the file owner has the read, write, and execute permissions on the file, the second digit 5 indicates that the user group to which the file belongs has the read and execute permissions on the file, and the third digit 0 indicates that other users have no permission on the file.</p> |

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dir_mode  | No        | Integer | <p>The permissions on the imported directory. Value range: <b>0</b> to <b>777</b></p> <p>The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b>. The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b>. The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b>. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users.</p> <p>Values 4, 2, and 1 indicate the read, write, and execute permissions respectively. The total value between 1 and 7 represents the access permissions. For example, the first digit 7 in 750 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 0 indicates that other users have no permission on the directory.</p> |
| uid       | No        | Integer | <p>The ID of the user who owns the imported object. The default value is <b>0</b>. The value ranges from <b>0</b> to <b>4294967294</b> (<math>2^{32}-2</math>).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| Parameter | Mandatory | Type    | Description                                                                                                                                                        |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| gid       | No        | Integer | The ID of the user group to which the imported object belongs. The default value is <b>0</b> . The value ranges from <b>0</b> to <b>4294967294</b> ( $2^{32}-2$ ). |

## Response Parameters

**Status code: 202**

**Table 7-201** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-202** Response body parameters

| Parameter | Type   | Description  |
|-----------|--------|--------------|
| task_id   | String | The task ID. |

**Status code: 400**

**Table 7-203** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-204** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-205** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-206** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

- Creating a data import task (with the task type set to **import\_metadata**, the interworking directory name set to **sfs-link-directory**, and the prefix of the source path in the OBS bucket set to **input/datasets/**)

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/{share_id}/hpc-cache/task
```

```
{
  "type": "import_metadata",
  "src_target": "sfs-link-directory",
  "src_prefix": "input/datasets/",
  "dest_target": "sfs-link-directory",
  "dest_prefix": "input/datasets/"
}
```

- Creating a data import task (with the task type set to **import\_metadata**, the interworking directory name set to **sfs-link-directory**, the prefix of the source path in the OBS bucket set to **input/datasets/**, the permissions of the imported files set to **640**, and the permissions of the imported directories set to **750**)

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/{share_id}/hpc-cache/task
```

```
{
  "type": "import_metadata",
  "src_target": "sfs-link-directory",
  "src_prefix": "input/datasets/",
  "dest_target": "sfs-link-directory",
  "dest_prefix": "input/datasets/",
  "attributes": {
    "file_mode": 640,
    "dir_mode": 750
  }
}
```

- Creating a data import task (with the task type set to **preload**, the interworking directory name set to **sfs-link-directory**, the prefix of the source path in the OBS bucket set to **input/datasets/**, the permissions of the imported files set to **640**, the permissions of the imported directories set to **750**, and the UID and GID both set to **0**)

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/{share_id}/hpc-cache/task
```

```
{
  "type": "preload",
  "src_target": "sfs-link-directory",
}
```

```
"src_prefix" : "input/datasets/",
"dest_target" : "sfs-link-directory",
"dest_prefix" : "input/datasets/",
"attributes" : {
  "file_mode" : 640,
  "dir_mode" : 750,
  "uid" : 0,
  "gid" : 0
}
```

## Example Responses

### Status code: 202

Task delivered

```
{
  "task_id" : "7bd2a9b6-xxxx-4605-xxxx-512d636001b0"
}
```

### Status code: 400

Client error

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "parameter error"
}
```

### Status code: 500

Internal error

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 202         | Task delivered |
| 400         | Client error   |
| 500         | Internal error |

## Error Codes

See [Error Codes](#).

## 7.6.8 Querying Details About a Data Import or Export Task

### Function

This API is used to query details about a data import or export task.

## Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

GET /v1/{project\_id}/sfs-turbo/{share\_id}/hpc-cache/task/{task\_id}

**Table 7-207** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |
| task_id    | Yes       | String | The task ID.        |

## Request Parameters

**Table 7-208** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-209** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-210** Response body parameters

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                           |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_id     | String | The task ID.                                                                                                                                                                                                                                                                                                                                          |
| type        | String | The task type. The value can be <b>import</b> (additional metadata import), <b>import_metadata</b> (quick import), <b>preload</b> (data preload), or <b>export</b> (export).<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>import</b></li><li>• <b>preload</b></li><li>• <b>export</b></li><li>• <b>import_metadata</b></li></ul> |
| status      | String | The task status.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>SUCCESS</b></li><li>• <b>DOING</b></li><li>• <b>FAIL</b></li><li>• <b>DELETING</b></li></ul>                                                                                                                                                                       |
| src_target  | String | The interworking directory name.                                                                                                                                                                                                                                                                                                                      |
| src_prefix  | String | The source path prefix specified in a data import or export task.                                                                                                                                                                                                                                                                                     |
| dest_target | String | Keep it the same as <b>src_target</b> .                                                                                                                                                                                                                                                                                                               |
| dest_prefix | String | Keep it the same as <b>src_prefix</b> .                                                                                                                                                                                                                                                                                                               |
| start_time  | String | The task start time.                                                                                                                                                                                                                                                                                                                                  |
| end_time    | String | The task end time.                                                                                                                                                                                                                                                                                                                                    |
| message     | String | The task execution result.                                                                                                                                                                                                                                                                                                                            |

**Status code: 400****Table 7-211** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-212** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-213** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-214** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Query details about a task whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
"GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/77ba6f4b-6365-4895-8dda-bc7142af4dde/hpc-cache/task/11abef677ac40f46644d1d5cfc2424a4"
```

## Example Responses

**Status code: 200**

Success

```
{
  "task_id" : "7bd2a9b6-xxxx-4605-xxxx-512d636001b0",
  "type" : "import_metadata",
  "status" : "DOING",
  "src_target" : "sfs-link-directory",
  "src_prefix" : "input/datasets/",
  "dest_target" : "sfs-link-directory",
  "dest_prefix" : "input/datasets/",
  "message" : "",
  "start_time" : "2023-09-02T15:04:05",
  "end_time" : ""
}
```

**Status code: 400**

Error response

```
{
  "errCode": "SFS.TURBO.0001",
  "errMsg": "parameter error"
}
```

**Status code: 500**

Error response

```
{
  "errCode": "SFS.TURBO.0005",
  "errMsg": "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.9 Listing Data Import and Export Tasks

### Function

This API is used to list data import and export tasks.

### Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/{share\_id}/hpc-cache/tasks

**Table 7-215** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

**Table 7-216** Query Parameters

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                        |
|------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type       | No        | String | The task type. The value can be <b>import</b> (additional metadata import), <b>import_metadata</b> (quick import), <b>preload</b> (data preload), or <b>export</b> (export). Enumeration values: <ul style="list-style-type: none"><li>• <b>import</b></li><li>• <b>preload</b></li><li>• <b>export</b></li><li>• <b>import_metadata</b></li></ul> |
| status     | No        | String | The task status.                                                                                                                                                                                                                                                                                                                                   |
| offset     | No        | Long   | The offset. The default value is <b>0</b> .                                                                                                                                                                                                                                                                                                        |
| limit      | No        | Long   | The limit. The default value is <b>1000</b> .                                                                                                                                                                                                                                                                                                      |
| start_time | No        | String | start_time                                                                                                                                                                                                                                                                                                                                         |
| end_time   | No        | String | end_time                                                                                                                                                                                                                                                                                                                                           |

## Request Parameters

**Table 7-217** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-218** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-219** Response body parameters

| Parameter | Type                                                     | Description        |
|-----------|----------------------------------------------------------|--------------------|
| tasks     | Array of <a href="#">OneHpcCacheTaskInfoResp</a> objects | The task details.  |
| count     | Long                                                     | The task quantity. |

**Table 7-220** OneHpcCacheTaskInfoResp

| Parameter   | Type   | Description                                                                                                                                                                                                                                                                                                                                           |
|-------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| task_id     | String | The task ID.                                                                                                                                                                                                                                                                                                                                          |
| type        | String | The task type. The value can be <b>import</b> (additional metadata import), <b>import_metadata</b> (quick import), <b>preload</b> (data preload), or <b>export</b> (export).<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>import</b></li><li>• <b>preload</b></li><li>• <b>export</b></li><li>• <b>import_metadata</b></li></ul> |
| status      | String | The task status.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>SUCCESS</b></li><li>• <b>DOING</b></li><li>• <b>FAIL</b></li><li>• <b>DELETING</b></li></ul>                                                                                                                                                                       |
| src_target  | String | The interworking directory name.                                                                                                                                                                                                                                                                                                                      |
| src_prefix  | String | The source path prefix specified in a data import or export task.                                                                                                                                                                                                                                                                                     |
| dest_target | String | Keep it the same as <b>src_target</b> .                                                                                                                                                                                                                                                                                                               |
| dest_prefix | String | Keep it the same as <b>src_prefix</b> .                                                                                                                                                                                                                                                                                                               |

| Parameter  | Type   | Description                |
|------------|--------|----------------------------|
| start_time | String | The task start time.       |
| end_time   | String | The task end time.         |
| message    | String | The task execution result. |

**Status code: 400****Table 7-221** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-222** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-223** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-224** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Listing data import and export tasks for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET /v1/{project_id}/sfs-turbo/77ba6f4b-6365-4895-8dda-bc7142af4dde/hpc-cache/tasks
```

## Example Responses

### Status code: 200

Success

```
{
  "tasks": [ {
    "task_id": "7bd2a9b6-xxxx-4605-xxxx-512d636001b0",
    "type": "import",
    "status": "DOING",
    "src_target": "sfs-link-directory",
    "src_prefix": "input/datasets/",
    "dest_target": "sfs-link-directory",
    "dest_prefix": "input/datasets/",
    "message": "",
    "start_time": "2023-09-02T15:04:05",
    "end_time": ""
  } ],
  "count": 1
}
```

### Status code: 400

Error response

```
{
  "errCode": "SFS.TURBO.0001",
  "errMsg": "parameter error"
}
```

### Status code: 500

Error response

```
{
  "errCode": "SFS.TURBO.0005",
  "errMsg": "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.10 Deleting a Data Import or Export Task

### Function

This API is used to delete a data import or export task.

## Constraints

This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.

- This API is only supported for NFS file systems.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

DELETE /v1/{project\_id}/sfs-turbo/{share\_id}/hpc-cache/task/{task\_id}

**Table 7-225** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |
| task_id    | Yes       | String | The task ID.        |

## Request Parameters

**Table 7-226** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 202**

**Table 7-227** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Status code: 400**

**Table 7-228** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-229** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-230** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-231** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Deleting a task whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
"DELETE HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/77ba6f4b-6365-4895-8dda-bc7142af4dde/hpc-cache/task/11abef677ac40f46644d1d5cfc2424a4"
```

## Example Responses

**Status code: 400**

Error response

```
{
  "errCode": "SFS.TURBO.0001",
  "errMsg": "parameter error"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 202         | Success        |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.6.11 Updating the Cold Data Eviction Duration of a File System

### Function

This API is used to update the cold data eviction duration of a file system.

### Constraints

- This API only supports file systems that have storage backends added. This API is only supported for SFS Turbo 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.
- This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

PUT /v1/{project\_id}/sfs-turbo/shares/{share\_id}

**Table 7-232** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |

| Parameter | Mandatory | Type   | Description         |
|-----------|-----------|--------|---------------------|
| share_id  | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-233** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-234** Request body parameters

| Parameter | Mandatory | Type    | Description                                                                                                                            |
|-----------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------|
| action    | Yes       | String  | The operation type. Only <b>config_gc_time</b> is supported currently.                                                                 |
| gc_time   | Yes       | Integer | The cold data eviction duration. The unit is hour. The value ranges from <b>1</b> to <b>100000000</b> . The default value is 60 hours. |

## Response Parameters

**Status code: 200**

**Table 7-235** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-236** Response body parameters

| Parameter | Type    | Description                                         |
|-----------|---------|-----------------------------------------------------|
| gc_time   | Integer | The cold data eviction duration of the file system. |

**Status code: 404****Table 7-237** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-238** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Updating the cold data eviction duration of a file system

```
{
  "action" : "config_gc_time",
  "gc_time" : 5
}
```

## Example Responses

**Status code: 200**

Task delivered

```
{
  "gc_time" : 10
}
```

**Status code: 404**

Error response

```
{
  "errCode" : "SFS.TURBO.0002",
  "errMsg" : "share not exist"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Task delivered |
| 404         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

# 7.7 Directory Management

## 7.7.1 Creating Quota Limits for a Directory

### Function

This API is used to create quota limits for a directory.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir-quota

**Table 7-239** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-240** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-241** Request body parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                            |
|-----------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path      | Yes       | String  | The valid full path of an existing directory.                                                                                                                                                          |
| capacity  | No        | Integer | The capacity limit of the directory, in MB. If it is not specified, default value <b>0</b> will be used, and data cannot be written to the directory. Use <b>capacity</b> or <b>quota</b> , or both.   |
| inode     | No        | Integer | The quantity limit of the directory's inodes. If it is not specified, default value <b>0</b> will be used, and data cannot be written to the directory. Use <b>capacity</b> or <b>quota</b> , or both. |

## Response Parameters

**Status code: 200**

**Table 7-242** Response body parameters

| Parameter | Type    | Description                                    |
|-----------|---------|------------------------------------------------|
| path      | String  | The valid full path of an existing directory.  |
| capacity  | Integer | The directory capacity limit, in MB.           |
| inode     | Integer | The quantity limit of inodes of the directory. |

| Parameter     | Type    | Description                                                                                                                                                                      |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| used_capacity | Integer | The used capacity of the directory, in MB. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.  |
| used_inode    | Integer | The number of inodes used in the directory. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems. |

**Status code: 400**

**Table 7-243** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-244** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Configuring quota limits for the **/data/test** directory, with the capacity limit set to **1024** MB and quantity limit of inodes set to **100000**.

```
{
  "path" : "/data/test",
  "capacity" : 1024,
  "inode" : 100000
}
```

## Example Responses

**Status code: 200**

Directory quota limits configured

```
{
  "path" : "/data/test",
  "capacity" : 1024,
  "inode" : 100000
}
```

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0102",
  "errMsg" : "Path is not directory"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description                       |
|-------------|-----------------------------------|
| 200         | Directory quota limits configured |
| 400         | Error response                    |
| 500         | Error response                    |

## Error Codes

See [Error Codes](#).

## 7.7.2 Updating Quota Limits of a Directory

### Function

This API is used to update quota limits of a directory.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

PUT /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir-quota

**Table 7-245** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-246** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-247** Request body parameters

| Parameter | Mandatory | Type    | Description                                                                                                                                                                                                                 |
|-----------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path      | Yes       | String  | The valid full path of an existing directory.                                                                                                                                                                               |
| capacity  | No        | Integer | The capacity limit of the directory, in MB. If it is not specified, default value <b>0</b> will be used. If it is set to <b>0</b> , data cannot be written to the directory. Use <b>capacity</b> or <b>quota</b> , or both. |
| inode     | No        | Integer | The quantity limit of inodes. If it is not specified, default value <b>0</b> will be used. If it is set to <b>0</b> , data cannot be written to the directory. Use <b>capacity</b> or <b>quota</b> , or both.               |

## Response Parameters

**Status code: 200**

**Table 7-248** Response body parameters

| Parameter     | Type    | Description                                                                                                                                                                      |
|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path          | String  | The valid full path of an existing directory.                                                                                                                                    |
| capacity      | Integer | The directory capacity limit, in MB.                                                                                                                                             |
| inode         | Integer | The quantity limit of inodes of the directory.                                                                                                                                   |
| used_capacity | Integer | The used capacity of the directory, in MB. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.  |
| used_inode    | Integer | The number of inodes used in the directory. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems. |

**Status code: 400****Table 7-249** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 403****Table 7-250** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-251** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Updating quota limits of the **/data/test** directory, with the capacity limit set to **1024** MB and quantity limit of inodes set to **100000**.

```
{
  "path" : "/data/test",
  "capacity" : 1024,
  "inode" : 100000
}
```

## Example Responses

### Status code: 200

Directory quota limits updated

```
{
  "path" : "/data/test",
  "capacity" : 1024,
  "inode" : 100000
}
```

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0102",
  "errMsg" : "Path is not directory"
}
```

### Status code: 403

Error response

```
{
  "errCode" : "SFS.TURBO.0113",
  "errMsg" : "dir not create quota"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description                    |
|-------------|--------------------------------|
| 200         | Directory quota limits updated |
| 400         | Error response                 |
| 403         | Error response                 |
| 500         | Error response                 |

## Error Codes

See [Error Codes](#).

### 7.7.3 Querying Quota Limits of a Directory

#### Function

This API is used to query quota limits of a directory. The **used\_capacity** and **used\_inode** values obtained may not be the latest.

#### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

#### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir-quota

**Table 7-252** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

**Table 7-253** Query Parameters

| Parameter | Mandatory | Type   | Description                                   |
|-----------|-----------|--------|-----------------------------------------------|
| path      | Yes       | String | The valid full path of an existing directory. |

## Request Parameters

**Table 7-254** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200****Table 7-255** Response body parameters

| Parameter     | Type    | Description                                                                                                                                                                                                               |
|---------------|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path          | String  | The valid full path of an existing directory.                                                                                                                                                                             |
| capacity      | Integer | The directory capacity limit, in MB.                                                                                                                                                                                      |
| inode         | Integer | The quantity limit of inodes of the directory.                                                                                                                                                                            |
| used_capacity | Integer | The used capacity of the directory, in MB. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems. The returned data may not be the latest.  |
| used_inode    | Integer | The number of inodes used in the directory. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems. The returned data may not be the latest. |

**Status code: 400****Table 7-256** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-257** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Example Requests**

Querying the quota limits of the directory **/data/test** in the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4ddw**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4ddw/fs/dir-quota?path=/data/test
```

**Example Responses****Status code: 200**

Directory quota limits queried

```
{
  "path" : "/data/test",
  "capacity" : 1024,
  "inode" : 100000
}
```

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0102",
  "errMsg" : "Path is not directory"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

**Status Codes**

| Status Code | Description                    |
|-------------|--------------------------------|
| 200         | Directory quota limits queried |
| 400         | Error response                 |
| 500         | Error response                 |

## Error Codes

See [Error Codes](#).

## 7.7.4 Removing Quota Limits from a Directory

### Function

This API is used to remove the quota limits from a directory.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir-quota

**Table 7-258** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-259** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-260** Request body parameters

| Parameter | Mandatory | Type   | Description                                   |
|-----------|-----------|--------|-----------------------------------------------|
| path      | Yes       | String | The valid full path of an existing directory. |

### Response Parameters

Status code: 204

Directory quota limits deleted

**Status code: 400**

**Table 7-261** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-262** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Removing the quota limits of the directory **/data/test** in the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4ddw**

```
DELETE HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4ddw/fs/
dir-quota

{
  "path" : "/data/test"
}
```

## Example Responses

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0102",
  "errMsg" : "Path is not directory"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description                    |
|-------------|--------------------------------|
| 204         | Directory quota limits deleted |
| 400         | Error response                 |
| 500         | Error response                 |

## Error Codes

See [Error Codes](#).

## 7.7.5 Creating a Directory

### Function

This API is used to create a directory.

### Constraints

If you call this API to create a directory in an SMB file system, permissions on the created directory will be initialized with the everyone permission (full control permission). The owner user ID, owner group ID, and directory permissions you specified will not be applied.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir

**Table 7-263** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-264** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-265** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| path      | Yes       | String | The valid full path of an existing directory.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| mode      | No        | Long   | The directory permissions, which range from <b>0</b> to <b>777*</b> . The default value is <b>755</b> . The first digit indicates the permissions of the directory owner, and its value ranges from <b>0</b> to <b>7</b> . The second digit indicates the permissions of the user group to which the directory belongs, and its value ranges from <b>0</b> to <b>7</b> . The third digit indicates the permissions of other users, and its value ranges from <b>0</b> to <b>7</b> . The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users. For example, in 755, the first digit 7 indicates that the directory owner has the read, write, and execute permissions on the directory, the second digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the third digit 5 indicates that other users have the read and execute permissions on the directory. |

| Parameter | Mandatory | Type | Description                                                                                                                                                  |
|-----------|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| uid       | No        | Long | The ID of the directory owner. The default value is <b>0</b> . The value ranges from <b>0</b> to <b>4294967294</b> ( $2^{32}-2$ ).                           |
| gid       | No        | Long | The ID of the user group to which the directory belongs. The default value is <b>0</b> . The value ranges from <b>0</b> to <b>4294967294</b> ( $2^{32}-2$ ). |

## Response Parameters

**Status code: 204**

Directory created

**Status code: 400**

**Table 7-266** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 409**

**Table 7-267** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-268** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Creating a directory whose full path is **/date/test**

```
{
  "path" : "/date/test"
}
```

## Example Responses

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0122",
  "errMsg" : "invalid mode"
}
```

**Status code: 409**

Conflict directory

```
{
  "errCode" : "SFS.TURBO.0114",
  "errMsg" : "path already exist"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description        |
|-------------|--------------------|
| 204         | Directory created  |
| 400         | Error response     |
| 409         | Conflict directory |
| 500         | Error response     |

## Error Codes

See [Error Codes](#).

## 7.7.6 Checking Whether a Directory Exists

### Function

This API is used to check whether a directory exists.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir

**Table 7-269** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

**Table 7-270** Query Parameters

| Parameter | Mandatory | Type   | Description                                   |
|-----------|-----------|--------|-----------------------------------------------|
| path      | Yes       | String | The full path of the directory to be queried. |

## Request Parameters

**Table 7-271** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-272** Response body parameters

| Parameter | Type   | Description                     |
|-----------|--------|---------------------------------|
| path      | String | The full path of the directory. |

| Parameter | Type | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| mode      | Long | The permissions of the directory. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems. The third digit indicates the permissions of the directory owner, the fourth digit indicates the permissions of the user group to which the directory belongs, and the fifth digit indicates the permissions of other users. The directory owner is specified by UID, and the user group to which the directory belongs is specified by GID. Users who are not the directory owner and not in the user group to which the directory belongs are other users. For example, in 40755, the third digit 7 indicates that the directory owner has the read, write, and execute permissions on the directory, the fourth digit 5 indicates that the user group to which the directory belongs has the read and execute permissions on the directory, and the fifth digit 5 indicates that other users have the read and execute permissions on the directory. |
| uid       | Long | The ID of the user who owns the directory. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| gid       | Long | The ID of the user group to which the directory belongs. This field is returned only for 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Status code: 400****Table 7-273** Response body parameters

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| errCode   | String | The error code. |

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errMsg    | String | The error message. |

**Status code: 404**

**Table 7-274** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-275** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Checking whether the **/date/test** directory exists in the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir?path=/date/test
```

## Example Responses

**Status code: 200**

Directory query result

```
{
  "path" : "/date/test"
}
```

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0100",
  "errMsg" : "invalid path"
}
```

**Status code: 404**

Directory not found

```
{
  "errCode" : "SFS.TURBO.0101",
  "errMsg" : "path not exist"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description            |
|-------------|------------------------|
| 200         | Directory query result |
| 400         | Error response         |
| 404         | Directory not found    |
| 500         | Error response         |

## Error Codes

See [Error Codes](#).

## 7.7.7 Deleting a Directory

### Function

This API is used to delete a directory.

### Constraints

This API is only supported for file systems created after June 1, 2023.

Deleting a directory from a file system is a risky operation. Once deleted, the directory cannot be recovered. Ensure that the directory you specify is one you want to delete.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir

**Table 7-276** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-277** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-278** Request body parameters

| Parameter | Mandatory | Type   | Description                                   |
|-----------|-----------|--------|-----------------------------------------------|
| path      | Yes       | String | The valid full path of an existing directory. |

## Response Parameters

**Status code: 202**

Deletion request accepted

**Status code: 400**

**Table 7-279** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-280** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Deleting the `/test` directory

```
{  
  "path" : "/test"  
}
```

## Example Responses

**Status code: 500**

Error response

```
{  
  "errCode" : "SFS.TURBO.0005",  
  "errMsg" : "Internal server error"  
}
```

## Status Codes

| Status Code | Description               |
|-------------|---------------------------|
| 202         | Deletion request accepted |
| 400         | Error response            |
| 500         | Error response            |

## Error Codes

See [Error Codes](#).

## 7.7.8 Querying the Usage of a Directory

### Function

This API is used to query the usages of a directory (including usages of subdirectories). The obtained data may not be the latest as there is a 5-minute delay between the frontend and background.

### Constraints

This API is only supported for file systems created after August 1, 2023. This API is only supported for previous-generation SFS Turbo file systems, including Standard-

Enhanced, Performance-Enhanced, Standard and Performance. For 1,000 MB/s/TiB, 500 MB/s/TiB, 250 MB/s/TiB, 125 MB/s/TiB, 40 MB/s/TiB, and 20 MB/s/TiB file systems, use the API for creating asynchronous tasks. You are advised not to submit five or more requests at a time, or the file system performance may be affected. It takes some time to query an oversized directory. Do not submit the request repeatedly.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/dir-usage

**Table 7-281** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

**Table 7-282** Query Parameters

| Parameter | Mandatory | Type   | Description                                            |
|-----------|-----------|--------|--------------------------------------------------------|
| path      | Yes       | String | The valid full path of a directory in the file system. |

## Request Parameters

**Table 7-283** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| X-Auth-Token | Yes       | String | The account token.                                              |
| Content-Type | Yes       | String | The MIME type, which can be <b>application</b> or <b>json</b> . |

## Response Parameters

**Status code: 200**

**Table 7-284** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-285** Response body parameters

| Parameter | Type                              | Description              |
|-----------|-----------------------------------|--------------------------|
| dir_usage | <a href="#">FsDirUasge</a> object | The message description. |

**Table 7-286** FsDirUasge

| Parameter     | Type | Description                  |
|---------------|------|------------------------------|
| used_capacity | Long | The used capacity, in bytes. |

**Status code: 400****Table 7-287** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-288** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-289** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-290** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Querying the directory usage of a Standard file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/fs/dir-usage
```

## Example Responses

### Status code: 200

The directory resource usage.

```
{
  "dir_usage": {
    "used_capacity": 1024000
  }
}
```

### Status code: 400

Error response

```
{
  "errCode": "SFS.TURBO.0102",
  "errMsg": "Path is not directory"
}
```

### Status code: 500

Error response

```
{
  "errCode": "SFS.TURBO.0005",
  "errMsg": "Internal server error"
}
```

## Status Codes

| Status Code | Description                   |
|-------------|-------------------------------|
| 200         | The directory resource usage. |
| 400         | Error response                |
| 500         | Error response                |

## Error Codes

See [Error Codes](#).

# 7.8 Permissions Management

## 7.8.1 Joining an AD Domain

### Function

This API is used to add a file system to an AD domain. Active Directory Domain Services (AD DS) is a directory service that provides unified identity and permissions management through domain networks. By adding an SFS Turbo file system to an AD domain, you can easily authenticate and manage user identities and control file permissions in that domain.

### Constraints

This API is only supported for SMB file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/active-directory-domain

**Table 7-291** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-292** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-293** Request body parameters

| Parameter              | Mandatory | Type             | Description                                                                                                                                                                                                                                                  |
|------------------------|-----------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| service_account        | Yes       | String           | The service account, which is specified when the domain server is created.<br><b>administrator</b> is used normally.                                                                                                                                         |
| password               | Yes       | String           | The password of the service account.                                                                                                                                                                                                                         |
| domain_name            | Yes       | String           | The domain name of the domain controller. It is specified when the domain server is created.                                                                                                                                                                 |
| system_name            | Yes       | String           | The name of the file system in the AD domain.                                                                                                                                                                                                                |
| overwrite_same_account | No        | Boolean          | If the option is enabled and the domain controller already has the file system name you specified, the information you specified will overwrite the existing information in the domain controller.                                                           |
| dns_server             | Yes       | Array of strings | The IP address of the DNS server. It is used to resolve the AD domain name.                                                                                                                                                                                  |
| organization_unit      | No        | String           | A group of domain objects, such as users, computers, and printers. If you add the file system to an organizational unit (OU), it will become a member of that OU. If this parameter is left blank, the file system will be added to the <b>computers</b> OU. |
| vpc_id                 | No        | String           | The VPC ID.                                                                                                                                                                                                                                                  |

## Response Parameters

Status code: 202

**Table 7-294** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-295** Response body parameters

| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| job_id    | String | The ID of the asynchronous task for joining the AD domain. |

**Status code: 400****Table 7-296** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-297** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-298** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-299** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Joining an AD domain

```
POST HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/{share_id}/fs/active-directory-domain
{
  "service_account" : "administrator",
  "password" : "pwdxxxxx",
  "domain_name" : "SFSTURBO.COM",
  "system_name" : "sfs",
  "dns_server" : "100.xxx.xxx"
}
```

## Example Responses

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "parameter domain_name is required and cannot be empty"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description            |
|-------------|------------------------|
| 202         | Join request delivered |
| 400         | Error response         |
| 500         | Error response         |

## Error Codes

See [Error Codes](#).

## 7.8.2 Querying the AD Domain Configuration

### Function

This API is used to query the AD domain configuration. AD DS is a directory service that provides unified identity and permissions management through domain networks. By adding an SFS Turbo file system to an AD domain, you can easily authenticate and manage user identities and control file permissions in that domain.

## Constraints

This API is only supported for SMB file systems.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/active-directory-domain

**Table 7-300** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-301** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-302** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-303** Response body parameters

| Parameter         | Type             | Description                                                                                                                                                                                                                            |
|-------------------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| domain_name       | String           | The domain name of the domain controller. It is specified when the domain server is created.                                                                                                                                           |
| system_name       | String           | The name of the file system in the AD domain.                                                                                                                                                                                          |
| dns_server        | Array of strings | The IP address of the DNS server. It is used to resolve the AD domain name.                                                                                                                                                            |
| organization_unit | String           | A group of domain objects, such as users, computers, and printers. If you add the file system to an OU, it will become a member of that OU. If this parameter is left blank, the file system will be added to the <b>computers</b> OU. |
| vpc_id            | String           | The VPC ID.                                                                                                                                                                                                                            |
| status            | String           | The current status of the AD domain.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>JOINING</b></li><li>• <b>AVAILABLE</b></li><li>• <b>EXITING</b></li><li>• <b>FAILED</b></li></ul>                               |

**Status code: 500****Table 7-304** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-305** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

None

## Example Responses

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description      |
|-------------|------------------|
| 200         | Successful query |
| 500         | Error response   |

## Error Codes

See [Error Codes](#).

## 7.8.3 Modifying the AD Domain Configuration

### Function

This API is used to modify the AD domain configuration. AD DS is a directory service that provides unified identity and permissions management through domain networks. By adding an SFS Turbo file system to an AD domain, you can easily authenticate and manage user identities and control file permissions in that domain.

### Constraints

This API is only supported for SMB file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

PUT /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/active-directory-domain

**Table 7-306** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-307** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-308** Request body parameters

| Parameter              | Mandatory | Type             | Description                                                                                                                                                                                        |
|------------------------|-----------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| service_account        | Yes       | String           | The service account, which is specified when the domain server is created.<br><b>administrator</b> is used normally.                                                                               |
| password               | Yes       | String           | The password of the service account.                                                                                                                                                               |
| domain_name            | Yes       | String           | The domain name of the domain controller. It is specified when the domain server is created.                                                                                                       |
| system_name            | Yes       | String           | The name of the file system in the AD domain.                                                                                                                                                      |
| overwrite_same_account | No        | Boolean          | If the option is enabled and the domain controller already has the file system name you specified, the information you specified will overwrite the existing information in the domain controller. |
| dns_server             | Yes       | Array of strings | The IP address of the DNS server. It is used to resolve the AD domain name.                                                                                                                        |

| Parameter         | Mandatory | Type   | Description                                                                                                                                                                                                                            |
|-------------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| organization_unit | No        | String | A group of domain objects, such as users, computers, and printers. If you add the file system to an OU, it will become a member of that OU. If this parameter is left blank, the file system will be added to the <b>computers</b> OU. |
| vpc_id            | No        | String | The VPC ID.                                                                                                                                                                                                                            |

## Response Parameters

**Status code: 202**

**Table 7-309** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-310** Response body parameters

| Parameter | Type   | Description                                                  |
|-----------|--------|--------------------------------------------------------------|
| job_id    | String | The ID of the asynchronous task for modifying the AD domain. |

**Status code: 400**

**Table 7-311** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-312** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-313** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-314** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Example Requests**

```
PUT HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/{share_id}/fs/active-directory-domain
{
  "service_account" : "administrator",
  "password" : "pwdxxxxx",
  "domain_name" : "SFS TURBO.COM",
  "system_name" : "sfs",
  "dns_server" : "100.xxx:xxx"
}
```

**Example Responses****Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "Incorrect account or password."
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

**Status Codes**

| Status Code | Description                    |
|-------------|--------------------------------|
| 202         | Modification request delivered |
| 400         | Error response                 |

| Status Code | Description    |
|-------------|----------------|
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.8.4 Leaving the AD Domain

### Function

This API is used to remove a file system from an AD domain. AD DS is a directory service that provides unified identity and permissions management through domain networks. By adding an SFS Turbo file system to an AD domain, you can easily authenticate and manage user identities and control file permissions in that domain.

### Constraints

This API is only supported for SMB file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/active-directory-domain

**Table 7-315** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-316** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |

| Parameter    | Mandatory | Type   | Description    |
|--------------|-----------|--------|----------------|
| Content-Type | Yes       | String | The MIME type. |

**Table 7-317** Request body parameters

| Parameter       | Mandatory | Type   | Description                                                                                                          |
|-----------------|-----------|--------|----------------------------------------------------------------------------------------------------------------------|
| service_account | Yes       | String | The service account, which is specified when the domain server is created.<br><b>administrator</b> is used normally. |
| password        | Yes       | String | The password of the service account.                                                                                 |

## Response Parameters

**Status code: 202**

**Table 7-318** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-319** Response body parameters

| Parameter | Type   | Description                                                |
|-----------|--------|------------------------------------------------------------|
| job_id    | String | The ID of the asynchronous task for leaving the AD domain. |

**Status code: 400**

**Table 7-320** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-321** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-322** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-323** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

None

## Example Responses

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "Invalid rule id"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description                 |
|-------------|-----------------------------|
| 202         | AD domain left successfully |
| 400         | Error response              |
| 500         | Error response              |

## Error Codes

See [Error Codes](#).

## 7.8.5 Creating a Permission Rule

### Function

This API is used to create a permission rule.

### Constraints

A maximum of 64 permission rules can be added for a file system.

This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/perm-rules

**Table 7-324** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-325** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-326** Request body parameters

| Parameter | Mandatory | Type                                                    | Description                                                                 |
|-----------|-----------|---------------------------------------------------------|-----------------------------------------------------------------------------|
| rules     | Yes       | Array of <a href="#">OnePermRuleRequestInfo</a> objects | The permission rule details. You can add a maximum of five rules at a time. |

**Table 7-327** OnePermRuleRequestInfo

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ip_cidr   | Yes       | String | The IP address or IP address range of the object to be authorized. Once configured, this parameter cannot be modified.                                                                                                                                       |
| rw_type   | Yes       | String | The read/write permission of the object to be authorized. <ul style="list-style-type: none"><li>• <b>rw</b>: read and write permission, which is the default option</li><li>• <b>ro</b>: read-only permission</li><li>• <b>none</b>: no permission</li></ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_type | Yes       | String | <p>The file system access permission granted to the user of the object to be authorized. The value can be:</p> <ul style="list-style-type: none"><li>• <b>no_root_squash</b>: allows any user including root on the client to access the file system as who they are, instead of mapping them to another user.</li><li>• <b>root_squash</b>: allows root on the client to access the file system as <b>nfsnobody</b>. Client access using a non-root user will be retained as who they are, instead of being mapped to another user.</li><li>• <b>all_squash</b>: allows any user on the client to access the file system as <b>nfsnobody</b>.</li></ul> |

## Response Parameters

Status code: 200

**Table 7-328** Response body parameters

| Parameter | Type                                                     | Description                      |
|-----------|----------------------------------------------------------|----------------------------------|
| rules     | Array of <a href="#">OnePermRuleResponseInfo</a> objects | The permission rule information. |

**Table 7-329** OnePermRuleResponseInfo

| Parameter | Type   | Description                                                  |
|-----------|--------|--------------------------------------------------------------|
| id        | String | The permission rule ID.                                      |
| ip_cidr   | String | The IP address or IP address range of the authorized object. |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rw_type   | String | The read/write permission of the authorized object. <ul style="list-style-type: none"><li>• <b>rw</b>: read and write permission, which is the default option</li><li>• <b>ro</b>: read-only permission</li><li>• <b>none</b>: no permission</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                   |
| user_type | String | The file system access permission granted to the user of the authorized object. The value can be: <ul style="list-style-type: none"><li>• <b>no_root_squash</b> (default value): allows any user including root on the client to access the file system as who they are, instead of mapping them to another user.</li><li>• <b>root_squash</b>: allows root on the client to access the file system as <b>nfsnobody</b> and allows a non-root user on the client to access as who they are, instead of being mapped to another user.</li><li>• <b>all_squash</b>: allows any user on the client to access the file system as <b>nfsnobody</b>.</li></ul> |

**Status code: 400****Table 7-330** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-331** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

- Request example for creating permission rules

```
{
  "rules": [ {
    "ip_cidr": "192.168.xx.xx/16",
    "rw_type": "rw",
    "user_type": "no_root_squash"
  }, {
    "ip_cidr": "192.32.xx.xx/16",
    "rw_type": "rw",
    "user_type": "no_root_squash"
  } ]
}
```

## Example Responses

### Status code: 200

Successful creation

- Response example for creating permission rules

```
{
  "rules": [ {
    "id": "1131ed520xxxxxebedb6e57xxxxxxx",
    "ip_cidr": "192.32.0.0/16",
    "rw_type": "rw",
    "user_type": "no_root_squash"
  }, {
    "id": "1131ed520xxxxxebedb6e57xxxxxxx",
    "ip_cidr": "192.32.0.1",
    "rw_type": "rw",
    "user_type": "no_root_squash"
  } ]
}
```

### Status code: 400

Error response

```
{
  "errCode": "SFS.TURBO.0001",
  "errMsg": "Rules not allowed empty"
}
```

### Status code: 500

Error response

```
{
  "errCode": "SFS.TURBO.0005",
  "errMsg": "Internal server error"
}
```

## Status Codes

| Status Code | Description         |
|-------------|---------------------|
| 200         | Successful creation |
| 400         | Error response      |
| 500         | Error response      |

## Error Codes

See [Error Codes](#).

## 7.8.6 Querying Permission Rules of a File System

### Function

This API is used to query permission rules of a file system.

### Constraints

A maximum of 64 permission rules can be added for a file system.

This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/perm-rules

**Table 7-332** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

**Table 7-333** Query Parameters

| Parameter | Mandatory | Type | Description                                                  |
|-----------|-----------|------|--------------------------------------------------------------|
| limit     | No        | Long | The maximum number of permission rules that can be returned. |
| offset    | No        | Long | The offset of the returned permission rules.                 |

## Request Parameters

**Table 7-334** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-335** Response body parameters

| Parameter | Type                                                     | Description                 |
|-----------|----------------------------------------------------------|-----------------------------|
| rules     | Array of <a href="#">OnePermRuleResponseInfo</a> objects | The permission information. |

**Table 7-336** OnePermRuleResponseInfo

| Parameter | Type   | Description                                                                                                                                                                                                                                            |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | The permission rule ID.                                                                                                                                                                                                                                |
| ip_cidr   | String | The IP address or IP address range of the authorized object.                                                                                                                                                                                           |
| rw_type   | String | The read/write permission of the authorized object. <ul style="list-style-type: none"><li>• <b>rw</b>: read and write permission, which is the default option</li><li>• <b>ro</b>: read-only permission</li><li>• <b>none</b>: no permission</li></ul> |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_type | String | The file system access permission granted to the user of the authorized object. The value can be: <ul style="list-style-type: none"><li>• <b>no_root_squash</b> (default value): allows any user including root on the client to access the file system as who they are, instead of mapping them to another user.</li><li>• <b>root_squash</b>: allows root on the client to access the file system as <b>nfsnobody</b> and allows a non-root user on the client to access as who they are, instead of being mapped to another user.</li><li>• <b>all_squash</b>: allows any user on the client to access the file system as <b>nfsnobody</b>.</li></ul> |

**Status code: 500**

**Table 7-337** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Querying the permission rules of the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/fs/perm-rules
```

## Example Responses

**Status code: 200**

Successful query

- Response example of querying the permission rules of a file system

```
{
  "rules": [ {
    "id": "1131ed520xxxxxbedb6e57xxxxxxx",
    "ip_cidr": "192.168.xx.xx/16",
    "rw_type": "rw",
    "user_type": "no_root_squash"
  }, {
```

```
"id" : "1231ed520xxxxxebedb6e57xxxxxxx",  
"ip_cidr" : "192.32.xx.xx/16",  
"rw_type" : "rw",  
"user_type" : "no_root_squash"  
}]  
}
```

**Status code: 500**

Error response

```
{  
  "errCode" : "SFS.TURBO.0005",  
  "errMsg" : "Internal server error"  
}
```

## Status Codes

| Status Code | Description      |
|-------------|------------------|
| 200         | Successful query |
| 500         | Error response   |

## Error Codes

See [Error Codes](#).

## 7.8.7 Querying a Permission Rule of a File System

### Function

This API is used to query a permission rule of a file system.

### Constraints

This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/perm-rules/{rule\_id}

**Table 7-338** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |

| Parameter | Mandatory | Type   | Description             |
|-----------|-----------|--------|-------------------------|
| share_id  | Yes       | String | The file system ID.     |
| rule_id   | Yes       | String | The permission rule ID. |

## Request Parameters

**Table 7-339** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-340** Response body parameters

| Parameter | Type   | Description                                                                                                                                                                                                                                            |
|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | The permission rule ID.                                                                                                                                                                                                                                |
| ip_cidr   | String | The IP address or IP address range of the authorized object.                                                                                                                                                                                           |
| rw_type   | String | The read/write permission of the authorized object. <ul style="list-style-type: none"><li>• <b>rw</b>: read and write permission, which is the default option</li><li>• <b>ro</b>: read-only permission</li><li>• <b>none</b>: no permission</li></ul> |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_type | String | The file system access permission granted to the user of the authorized object. The value can be: <ul style="list-style-type: none"><li>• <b>no_root_squash</b> (default value): allows any user including root on the client to access the file system as who they are, instead of mapping them to another user.</li><li>• <b>root_squash</b>: allows root on the client to access the file system as <b>nfsnobody</b> and allows a non-root user on the client to access as who they are, instead of being mapped to another user.</li><li>• <b>all_squash</b>: allows any user on the client to access the file system as <b>nfsnobody</b>.</li></ul> |

**Status code: 400**

**Table 7-341** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-342** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Querying details about the permission rule whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
GET HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/fs/perm-rules/11abef677ac40f46644d1d5cfc2424a4
```

## Example Responses

### Status code: 200

Successful query

- Response example of querying a specific permission rule of a file system

```
{
  "id" : "1131ed520xxxxxebedb6e57xxxxxxx",
  "ip_cidr" : "192.168.xx.xx/16",
  "rw_type" : "rw",
  "user_type" : "no_root_squash"
}
```

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "Invalid rule id"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description      |
|-------------|------------------|
| 200         | Successful query |
| 400         | Error response   |
| 500         | Error response   |

## Error Codes

See [Error Codes](#).

## 7.8.8 Modifying a Permission Rule

### Function

This API is used to modify a permission rule.

### Constraints

This API is only supported for NFS file systems.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

PUT /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/perm-rules/{rule\_id}

**Table 7-343** Path Parameters

| Parameter  | Mandatory | Type   | Description             |
|------------|-----------|--------|-------------------------|
| project_id | Yes       | String | The project ID.         |
| share_id   | Yes       | String | The file system ID.     |
| rule_id    | Yes       | String | The permission rule ID. |

## Request Parameters

**Table 7-344** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-345** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                  |
|-----------|-----------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rw_type   | No        | String | The read/write permission of the object to be authorized. <ul style="list-style-type: none"><li>• <b>rw</b>: read and write permission, which is the default option</li><li>• <b>ro</b>: read-only permission</li><li>• <b>none</b>: no permission</li></ul> |

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_type | No        | String | <p>The file system access permission granted to the user of the object to be authorized. The value can be:</p> <ul style="list-style-type: none"><li>• <b>no_root_squash</b> (default value): allows any user including root on the client to access the file system as who they are, instead of mapping them to another user.</li><li>• <b>root_squash</b>: allows root on the client to access the file system as <b>nfsnobody</b> and allows a non-root user on the client to access as who they are, instead of being mapped to another user.</li><li>• <b>all_squash</b>: allows any user on the client to access the file system as <b>nfsnobody</b>.</li></ul> |

## Response Parameters

Status code: 200

**Table 7-346** Response body parameters

| Parameter | Type   | Description                                                                                                                                                                                                                                                   |
|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| id        | String | The permission rule ID.                                                                                                                                                                                                                                       |
| ip_cidr   | String | The IP address or IP address range of the authorized object.                                                                                                                                                                                                  |
| rw_type   | String | <p>The read/write permission of the authorized object.</p> <ul style="list-style-type: none"><li>• <b>rw</b>: read and write permission, which is the default option</li><li>• <b>ro</b>: read-only permission</li><li>• <b>none</b>: no permission</li></ul> |

| Parameter | Type   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| user_type | String | <p>The file system access permission granted to the user of the authorized object. The value can be:</p> <ul style="list-style-type: none"><li>• <b>no_root_squash</b> (default value): allows any user including root on the client to access the file system as who they are, instead of mapping them to another user.</li><li>• <b>root_squash</b>: allows root on the client to access the file system as <b>nfsnobody</b> and allows a non-root user on the client to access as who they are, instead of being mapped to another user.</li><li>• <b>all_squash</b>: allows any user on the client to access the file system as <b>nfsnobody</b>.</li></ul> |

**Status code: 400****Table 7-347** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-348** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Example Requests**

```
{  
  "rw_type": "rw",  
  "user_type": "no_root_squash"  
}
```

## Example Responses

### Status code: 200

Success

```
{
  "id" : "1131ed520xxxxxbedb6e57xxxxxxx",
  "ip_cidr" : "192.32.0.0/16",
  "rw_type" : "rw",
  "user_type" : "no_root_squash"
}
```

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "Invalid rule id"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.8.9 Deleting a Permission Rule

### Function

This API is used to delete a permission rule.

### Constraints

This API is only supported for NFS file systems.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/perm-rules/{rule\_id}

**Table 7-349** Path Parameters

| Parameter  | Mandatory | Type   | Description             |
|------------|-----------|--------|-------------------------|
| project_id | Yes       | String | The project ID.         |
| share_id   | Yes       | String | The file system ID.     |
| rule_id    | Yes       | String | The permission rule ID. |

## Request Parameters

**Table 7-350** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 204**

Successful deletion

**Status code: 400**

**Table 7-351** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500**

**Table 7-352** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Deleting the permission rule whose ID is **11abef677ac40f46644d1d5cfc2424a4** for the file system whose ID is **77ba6f4b-6365-4895-8dda-bc7142af4dde**

```
DELETE HTTPS://{endpoint}/v1/{project_id}/sfs-turbo/shares/77ba6f4b-6365-4895-8dda-bc7142af4dde/fs/perm-rules/11abef677ac40f46644d1d5cfc2424a4
```

## Example Responses

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description         |
|-------------|---------------------|
| 204         | Successful deletion |
| 400         | Error response      |
| 500         | Error response      |

## Error Codes

See [Error Codes](#).

## 7.8.10 Binding to an LDAP Server

### Function

This API is used to bind to an LDAP server.

### Constraints

**base\_dn** and **url** cannot be left empty. This API is only supported for NFS file systems.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

POST /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/ldap

**Table 7-353** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-354** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

**Table 7-355** Request body parameters

| Parameter | Mandatory | Type   | Description                                                                                                                                                                        |
|-----------|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| url       | Yes       | String | The URL of the LDAP server. The format is <i>ldap://{ip_address}:{port_number}</i> or <i>ldaps://{ip_address}:{port_number}</i> , for example, <b>ldap://192.168.xx.xx:60000</b> . |
| base_dn   | Yes       | String | The base DN.                                                                                                                                                                       |
| user_dn   | No        | String | The bind DN.                                                                                                                                                                       |
| password  | No        | String | The LDAP authentication password.                                                                                                                                                  |

| Parameter        | Mandatory | Type    | Description                                                                                                                                                                                |
|------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| vpc_id           | No        | String  | The ID of the VPC that the specified LDAP server can connect to. This parameter is only required when the SFS Turbo file system is used across VPCs.                                       |
| filter_condition | No        | String  | The search filters. This is a reserved field and is not supported currently.                                                                                                               |
| backup_url       | No        | String  | The URL of the standby LDAP server. The format is <i>ldap://{ip_address}:{port_number}</i> or <i>ldaps://{ip_address}:{port_number}</i> , for example, <b>ldap://192.168.xx.xx:60000</b> . |
| schema           | No        | String  | The LDAP schema. If not specified, <b>RFC2307</b> will be used.                                                                                                                            |
| search_timeout   | No        | Integer | The LDAP search timeout interval, in seconds. If not specified, 3 seconds will be used.                                                                                                    |

## Response Parameters

**Status code: 200**

**Table 7-356** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-357** Response body parameters

| Parameter | Type   | Description                                                                                                                        |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| jobId     | String | The ID of an asynchronous LDAP task. You can query the task execution status by calling the API for querying details about a task. |

**Status code: 400**

**Table 7-358** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-359** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-360** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-361** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

Creating and binding to an LDAP server

```
{
  "url" : "ldap://192.168.xx.xx:60000",
  "base_dn" : "dc=example,dc=com",
  "user_dn" : "cn=admin,dc=example,dc=com",
  "password" : "pwdxxxxx",
  "backup_url" : "ldap://192.168.xx.xx:60000",
  "schema" : "RFC2307",
  "search_timeout" : 10
}
```

## Example Responses

**Status code: 200**

Request accepted

```
{
  "jobId" : "72362dxxxxa04d419dbd5e6d9fe5xxxx"
}
```

**Status code: 400**

Client error

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "Invalid rule id"
}
```

**Status code: 500**

Internal error

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description      |
|-------------|------------------|
| 200         | Request accepted |
| 400         | Client error     |
| 500         | Internal error   |

## Error Codes

See [Error Codes](#).

## 7.8.11 Querying the LDAP Configuration

### Function

This API is used to query the LDAP configuration.

### Constraints

This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/ldap

**Table 7-362** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

## Request Parameters

**Table 7-363** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-364** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-365** Response body parameters

| Parameter        | Type   | Description                                                                  |
|------------------|--------|------------------------------------------------------------------------------|
| url              | String | The URL of the LDAP server.                                                  |
| base_dn          | String | The base DN.                                                                 |
| user_dn          | String | The bind DN.                                                                 |
| filter_condition | String | The search filters. This is a reserved field and is not supported currently. |
| vpc_id           | String | This is a reserved field and is not supported currently.                     |
| backup_url       | String | The URL of the standby LDAP server.                                          |
| schema           | String | The LDAP schema. If not specified, <b>RFC2307</b> will be used.              |

| Parameter      | Type    | Description                                                                             |
|----------------|---------|-----------------------------------------------------------------------------------------|
| search_timeout | Integer | The LDAP search timeout interval, in seconds. If not specified, 3 seconds will be used. |

**Status code: 500**

**Table 7-366** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-367** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

None

## Example Responses

**Status code: 200**

Successful query

- Querying the LDAP configuration

```
{
  "url" : "ldap://192.168.xx.xx:60000",
  "base_dn" : "dc=example,dc=com",
  "user_dn" : "cn=admin,dc=example,dc=com",
  "vpc_id" : "15e1a488-0ee5-4742-8fb7-168100000000",
  "backup_url" : "ldap://192.168.xx.xx:60000",
  "schema" : "RFC2307",
  "search_timeout" : 20
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description      |
|-------------|------------------|
| 200         | Successful query |
| 500         | Error response   |

## Error Codes

See [Error Codes](#).

## 7.8.12 Modifying the LDAP Configuration

### Function

This API is used to modify the LDAP configuration.

### Constraints

This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

PUT /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/ldap

**Table 7-368** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-369** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |

| Parameter    | Mandatory | Type   | Description    |
|--------------|-----------|--------|----------------|
| Content-Type | Yes       | String | The MIME type. |

**Table 7-370** Request body parameters

| Parameter        | Mandatory | Type    | Description                                                                                                                                                                                |
|------------------|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| url              | No        | String  | The URL of the LDAP server. The format is <i>ldap://{ip_address}:{port_number}</i> or <i>ldaps://{ip_address}:{port_number}</i> , for example, <b>ldap://192.168.xx.xx:60000</b> .         |
| base_dn          | No        | String  | The base DN.                                                                                                                                                                               |
| user_dn          | No        | String  | The bind DN.                                                                                                                                                                               |
| password         | No        | String  | The LDAP authentication password.                                                                                                                                                          |
| vpc_id           | No        | String  | The VPC ID.                                                                                                                                                                                |
| filter_condition | No        | String  | The search filters. This is a reserved field and is not supported currently.                                                                                                               |
| backup_url       | No        | String  | The URL of the standby LDAP server. The format is <i>ldap://{ip_address}:{port_number}</i> or <i>ldaps://{ip_address}:{port_number}</i> , for example, <b>ldap://192.168.xx.xx:60000</b> . |
| schema           | No        | String  | The LDAP schema. If not specified, <b>RFC2307</b> will be used.                                                                                                                            |
| search_timeout   | No        | Integer | The LDAP search timeout interval, in seconds. If not specified, 3 seconds will be used.                                                                                                    |

## Response Parameters

**Status code: 200**

**Table 7-371** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-372** Response body parameters

| Parameter | Type   | Description                                                                                                                        |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| jobId     | String | The ID of an asynchronous LDAP task. You can query the task execution status by calling the API for querying details about a task. |

**Status code: 400****Table 7-373** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-374** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-375** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-376** Response body parameters

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| errCode   | String | The error code. |

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errMsg    | String | The error message. |

## Example Requests

```
{
  "url" : "ldap://192.168.xx.xx:60000",
  "base_dn" : "dc=example,dc=com",
  "user_dn" : "cn=admin,dc=example,dc=com",
  "password" : "pwdxxxxxx",
  "vpc_id" : "26f6b565-xxxx-XXXX-xxxx-03f0bd975433",
  "backup_url" : "ldap://192.168.xx.xx:60000",
  "schema" : "RFC2307",
  "search_timeout" : 10
}
```

## Example Responses

### Status code: 200

Updating

```
{
  "jobId" : "72362dxxxxa04d419dbd5e6d9fe5xxxx"
}
```

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "Invalid rule id"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Updating       |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.8.13 Deleting the LDAP Configuration

### Function

This API is used to delete the LDAP configuration.

### Constraints

This API is only supported for NFS file systems.

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /v1/{project\_id}/sfs-turbo/shares/{share\_id}/fs/ldap

**Table 7-377** Path Parameters

| Parameter  | Mandatory | Type   | Description         |
|------------|-----------|--------|---------------------|
| project_id | Yes       | String | The project ID.     |
| share_id   | Yes       | String | The file system ID. |

### Request Parameters

**Table 7-378** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

### Response Parameters

**Status code: 200**

**Table 7-379** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-380** Response body parameters

| Parameter | Type   | Description                                                                                                                        |
|-----------|--------|------------------------------------------------------------------------------------------------------------------------------------|
| jobId     | String | The ID of an asynchronous LDAP task. You can query the task execution status by calling the API for querying details about a task. |

**Status code: 400****Table 7-381** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-382** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-383** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-384** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

None

## Example Responses

### Status code: 200

Deleting

```
{
  "jobId" : "72362dxxxxa04d419dbd5e6d9fe5xxx"
}
```

### Status code: 400

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "Invalid rule id"
}
```

### Status code: 500

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

## Status Codes

| Status Code | Description    |
|-------------|----------------|
| 200         | Deleting       |
| 400         | Error response |
| 500         | Error response |

## Error Codes

See [Error Codes](#).

## 7.9 Task Management

### 7.9.1 Querying the Status of a Task

#### Function

This API is used to query the execution status of the SFS Turbo asynchronous API. For example, you can query the task execution status using the **jobId** returned after you call the API for binding to an LDAP server.

## Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

## URI

GET /v1/{project\_id}/sfs-turbo/jobs/{job\_id}

**Table 7-385** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |
| job_id     | Yes       | String | job ID          |

## Request Parameters

**Table 7-386** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

## Response Parameters

**Status code: 200**

**Table 7-387** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-388** Response body parameters

| Parameter   | Type                                             | Description                                                                                                                                                                                                                                                           |
|-------------|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| status      | String                                           | The task status, which can be <b>success</b> , <b>running</b> , <b>failed</b> , or <b>waiting</b> .<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>success</b></li><li>• <b>failed</b></li><li>• <b>waiting</b></li><li>• <b>running</b></li></ul> |
| job_id      | String                                           | The task ID.                                                                                                                                                                                                                                                          |
| job_type    | String                                           | The task type.                                                                                                                                                                                                                                                        |
| begin_time  | String                                           | The task start time in UTC format, for example, <b>2016-01-02 15:04:05</b> .                                                                                                                                                                                          |
| end_time    | String                                           | The task end time in UTC format, for example, <b>2016-01-02 15:04:05</b> .                                                                                                                                                                                            |
| error_code  | String                                           | The error code returned if the task execution fails.                                                                                                                                                                                                                  |
| fail_reason | String                                           | The cause of the task execution failure.                                                                                                                                                                                                                              |
| sub_jobs    | Array of <a href="#">GetSubJobDetail</a> objects | The subtask list.                                                                                                                                                                                                                                                     |

**Table 7-389** GetSubJobDetail

| Parameter   | Type   | Description                                                                                                |
|-------------|--------|------------------------------------------------------------------------------------------------------------|
| status      | String | The subtask status. The value can be <b>success</b> , <b>running</b> , <b>failed</b> , or <b>waiting</b> . |
| job_id      | String | The subtask ID.                                                                                            |
| job_type    | String | The subtask type.                                                                                          |
| begin_time  | String | The subtask start time in UTC format, for example, <b>2016-01-02 15:04:05</b> .                            |
| end_time    | String | The subtask end time in UTC format, for example, <b>2016-01-02 15:04:05</b> .                              |
| error_code  | String | The error code returned if the subtask execution fails.                                                    |
| fail_reason | String | The cause of the subtask execution failure.                                                                |

**Status code: 400****Table 7-390** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-391** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 404****Table 7-392** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-393** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-394** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-395** Response body parameters

| Parameter | Type   | Description     |
|-----------|--------|-----------------|
| errCode   | String | The error code. |

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errMsg    | String | The error message. |

Example Requests

None

Example Responses

Status code: 200

Response body parameter

```
{
  "job_id" : "26f6b565-xxxx-XXXX-xxxx-03f0bd975433",
  "status" : "success",
  "job_type" : "bind_ldap",
  "begin_time" : "2023-07-26 09:33:58",
  "end_time" : "2023-07-26 09:33:58"
}
```

Status code: 400

Client error

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "parameter error"
}
```

Status code: 404

Resource not found

```
{
  "errCode" : "SFS.TURBO.0001",
  "errMsg" : "parameter error"
}
```

Status code: 500

Internal error

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

Status Codes

| Status Code | Description             |
|-------------|-------------------------|
| 200         | Response body parameter |
| 400         | Client error            |
| 404         | Resource not found      |

| Status Code | Description    |
|-------------|----------------|
| 500         | Internal error |

## Error Codes

See [Error Codes](#).

# Tenant Quota Management

## 7.10.1 Querying Tenant Quotas

### Function

Querying tenant quotas

### Authorization Information

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. For details about the required permissions, see [Permissions Policies and Supported Actions](#).

### URI

GET /v1/{project\_id}/sfs-turbo/quotas

**Table 7-396** Path Parameters

| Parameter  | Mandatory | Type   | Description     |
|------------|-----------|--------|-----------------|
| project_id | Yes       | String | The project ID. |

### Request Parameters

**Table 7-397** Request header parameters

| Parameter    | Mandatory | Type   | Description        |
|--------------|-----------|--------|--------------------|
| X-Auth-Token | Yes       | String | The account token. |
| Content-Type | Yes       | String | The MIME type.     |

### Response Parameters

Status code: 200

**Table 7-398** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-399** Response body parameters

| Parameter | Type                                     | Description            |
|-----------|------------------------------------------|------------------------|
| quotas    | <a href="#">ShowQuotaResource</a> object | Querying tenant quotas |

**Table 7-400** ShowQuotaResource

| Parameter | Type                                           | Description                |
|-----------|------------------------------------------------|----------------------------|
| resources | Array of <a href="#">QuotaResource</a> objects | The tenant resource quota. |

**Table 7-401** QuotaResource

| Parameter | Type    | Description                                                                                                                                                                                                                                            |
|-----------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type      | String  | The tenant's resource type. <b>shares</b> indicates the file system quantity, and <b>capacity</b> indicates the file system capacity.<br>Enumeration values: <ul style="list-style-type: none"><li>• <b>shares</b></li><li>• <b>capacity</b></li></ul> |
| used      | Integer | The used quota.                                                                                                                                                                                                                                        |
| quota     | Integer | The total quota.                                                                                                                                                                                                                                       |
| unit      | String  | The quota unit.                                                                                                                                                                                                                                        |

**Status code: 400****Table 7-402** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-403** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

**Status code: 500****Table 7-404** Response header parameters

| Parameter    | Type   | Description     |
|--------------|--------|-----------------|
| X-request-id | String | The request ID. |

**Table 7-405** Response body parameters

| Parameter | Type   | Description        |
|-----------|--------|--------------------|
| errCode   | String | The error code.    |
| errMsg    | String | The error message. |

## Example Requests

None

## Example Responses

**Status code: 200**

Success

```
{
  "quotas" : {
    "resources" : [ {
      "type" : "shares",
      "used" : 5,
      "quota" : 400
    }, {
      "type" : "capacity",
      "used" : 0,
      "quota" : 20,
      "unit" : "GB"
    } ]
  }
}
```

**Status code: 400**

Error response

```
{
  "errCode" : "SFS.TURBO.0001",
```

```
"errMsg" : "parameter error"
}
```

**Status code: 500**

Error response

```
{
  "errCode" : "SFS.TURBO.0005",
  "errMsg" : "Internal server error"
}
```

**Status Codes**

| Status Code | Description    |
|-------------|----------------|
| 200         | Success        |
| 400         | Error response |
| 500         | Error response |

**Error Codes**See [Error Codes](#).

# 8 General Purpose File System APIs

## 8.1 File Systems

### 8.1.1 Creating a File System

#### Function

This API is used to create a file system.

#### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

#### URI

PUT /

#### Request Parameters

**Table 8-1** Request header parameters

| Parameter           | Mandatory | Type   | Description                                          |
|---------------------|-----------|--------|------------------------------------------------------|
| Authorization       | Yes       | String | The signature information.                           |
| Date                | Yes       | String | The request time.                                    |
| x-obs-az-redundancy | No        | String | The AZ redundancy, single-AZ or multi-AZ.            |
| x-obs-bucket-type   | Yes       | String | The header used to specify the file system creation. |

| Parameter  | Mandatory | Type   | Description                |
|------------|-----------|--------|----------------------------|
| Host       | Yes       | String | The host address.          |
| x-obs-epid | No        | String | The enterprise project ID. |

**Table 8-2** Request body parameter

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| Location  | No        | String | The region. |

## Response Parameters

This response uses common headers. For details, see [Table 4-8](#).

## (Optional) Response Body

A response body contains information other than the response header. It is usually sent in a structured format (JSON or XML) defined by the response header parameter **Content-type**.

## Example Request

Creating a file system in example (with the host address **Host: example-sfs-01.sfs3.example.region.com:443** and enterprise project ID 0):

```
PUT / HTTP/1.1
Host: example-sfs-01.sfs3.example.region.com:443
Date: Wed, 07 Jun 2023 02:38:09 GMT
x-obs-bucket-type: SFS
Authorization: OBS FNEX1B77SXDB3TFMSZZ:0Xsnu4hJVOI7VWH0wIQczVN+rbg=
Content-Length: 85
x-obs-epid: 0

<CreateBucketConfiguration>
  <Location>example</Location>
</CreateBucketConfiguration>
```

## Example Response

```
HTTP/1.1 200 OK
Server: OBS
X-Obs-Request-Id: 0000018893B8058EC0470388BE6EDE88
Location: /example-sfs-01
X-Obs-Id-2: 32AAAQAAEAABSAAGAAEAABAAAQAAEAABCTRa4voOUvr50ncznQT/hligMxL4so2z
Date: Wed, 07 Jun 2023 02:38:11 GMT
Content-Length: 0
```

## Status Codes

| Status Code | Description                 |
|-------------|-----------------------------|
| 200         | The file system is created. |

## Error Codes

See [General Purpose File System Error Codes](#).

## 8.1.2 Deleting a File System

### Function

This API is used to delete a file system.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /

### Request Parameters

**Table 8-3** Request header parameters

| Parameter     | Mandatory | Type   | Description                 |
|---------------|-----------|--------|-----------------------------|
| Authorization | Yes       | String | The signature header field. |
| Date          | Yes       | String | The request time.           |
| Host          | Yes       | String | The host address.           |

### Response Parameters

This response uses common headers. For details, see [Table 4-8](#).

### Example Request

```
DELETE / HTTP/1.1
User-Agent: curl/7.29.0
Accept: */*
Date: WED, 01 Jul 2015 02:31:25 GMT
Authorization: OBS H4IPJX0TQTHTHEBQQCEC;jZiAT8Vx4azWEvPRMWi0X5BpJMA=
```

## Example Response

```
HTTP/1.1 204 No Content
Server: OBS
X-Obs-Request-Id: 0000018893B8081DC047305E783867DD
X-Obs-Id-2: 32AAQAAEAABSkAgAAEAABAAQAAEAABCT5UWgsaro3EEEnOsNEzf8w8dnydR+Eak
Date: WED, 01 Jul 2015 02:31:25 GMT
```

## Status Codes

| Status Code | Description                 |
|-------------|-----------------------------|
| 204         | The file system is deleted. |

## Error Codes

See [General Purpose File System Error Codes](#).

## 8.1.3 Listing File Systems

### Function

This API is used to list file systems.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

### URI

GET /

### Request Parameters

**Table 8-4** Request header parameters

| Parameter         | Mandatory | Type   | Description                                                      |
|-------------------|-----------|--------|------------------------------------------------------------------|
| x-obs-bucket-type | Yes       | String | This header field is used to specify the content to be obtained. |
| Authorization     | Yes       | String | The signature information.                                       |
| Date              | Yes       | String | The request time.                                                |
| Host              | Yes       | String | The host address.                                                |

## Response Parameters

Status code: 200

**Table 8-5** Response body parameters

| Parameter | Type                           | Description                                                 |
|-----------|--------------------------------|-------------------------------------------------------------|
| Owner     | <a href="#">Owner</a> object   | The file system owner information, including the tenant ID. |
| Buckets   | <a href="#">Buckets</a> object | The list of file systems owned by the user.                 |

**Table 8-6** Owner

| Parameter | Type   | Description                           |
|-----------|--------|---------------------------------------|
| ID        | String | The domain ID (account ID) of a user. |

**Table 8-7** Buckets

| Parameter | Type                          | Description                           |
|-----------|-------------------------------|---------------------------------------|
| Bucket    | <a href="#">Bucket</a> object | The detailed file system information. |

**Table 8-8** Bucket

| Parameter    | Type   | Description                              |
|--------------|--------|------------------------------------------|
| Name         | String | The name of a file system.               |
| CreationDate | String | The time when a file system was created. |
| Location     | String | The location of a file system.           |

## Example Request

```
GET / HTTP/1.1 Date: date
x-obs-bucket-type: SFS
Authorization: authorization
```

## Example Response

```
HTTP/1.1 200 OK
Server: OBS
X-Obs-Request-Id: 0000018893B8126DC048B06DD3816BD4
X-Obs-Id-2: 32AAQAAEAABAAAQAAEAABAAAQAAEAABCTMZ3Thi7lcDxuGWu9Qtp9PJbYXa7lb
Date: Wed, 07 Jun 2023 02:38:14 GMT
Content-Type: application/xml
Content-Length: 377
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ListAllMyBucketsResult xmlns="http://obs.myhwclouds.com/doc/2015-06-30/">
  <Owner>
    <ID>783fc6652cf246c096ea836694f71855</ID>
  </Owner>
  <Buckets>
    <Bucket>
      <Name>examplebucket01</Name>
      <CreationDate>2018-06-21T09:15:01.032Z</CreationDate>

      <Location>example-region-1</Location>
      <BucketType>SFS</BucketType>
    </Bucket>
    <Bucket>
      <Name>examplebucket02</Name>
      <CreationDate>2018-06-22T03:56:33.700Z</CreationDate>

      <Location>example-region-2</Location>
      <BucketType>SFS</BucketType>
    </Bucket>
  </Buckets>
</ListAllMyBucketsResult>
```

## Status Codes

| Status Code | Description                    |
|-------------|--------------------------------|
| 200         | The file systems are obtained. |

## Error Codes

See [General Purpose File System Error Codes](#).

# 8.2 File System Access Rules

## 8.2.1 Configuring a File System ACL

### Function

This API is used to configure a file system ACL.

#### NOTE

After an ACL is configured, the configuration takes about 30 seconds to take effect.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

## URI

PUT /

**Table 8-9** Query parameter

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| sfsacl    | Yes       | String | /           |

## Request Parameters

**Table 8-10** Request header parameters

| Parameter     | Mandatory | Type   | Description                |
|---------------|-----------|--------|----------------------------|
| Date          | Yes       | String | The request time.          |
| Authorization | Yes       | String | The signature information. |
| Host          | Yes       | String | The host address.          |

**Table 8-11** Request body parameter

| Parameter | Mandatory | Type                                       | Description           |
|-----------|-----------|--------------------------------------------|-----------------------|
| Statement | No        | Array of <a href="#">Statement</a> objects | Unique identification |

**Table 8-12** Statement

| Parameter | Mandatory | Type   | Description                                                                                                                                                           |
|-----------|-----------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sid       | No        | String | The statement ID.                                                                                                                                                     |
| Action    | Yes       | String | The allowed statement action.<br>Enumerated values: <ul style="list-style-type: none"><li>• <b>FullControl</b>: read/write</li><li>• <b>Read</b>: read-only</li></ul> |
| Effect    | Yes       | String | The effect specifying that the statement permission is <b>Allow</b> .<br>Enumerated value: <ul style="list-style-type: none"><li>• <b>Allow</b></li></ul>             |

| Parameter | Mandatory | Type             | Description                                    |
|-----------|-----------|------------------|------------------------------------------------|
| Condition | Yes       | Condition object | The conditions for a statement to take effect. |

Table 8-13 Condition

| Parameter   | Mandatory | Type             | Description                                                                            |
|-------------|-----------|------------------|----------------------------------------------------------------------------------------|
| SourceVpc   | Yes       | String           | A specified VPC ID.                                                                    |
| VpcSourceIp | No        | Array of strings | A specified IP address or IP address range. This parameter is currently not supported. |

Response Parameters

This response uses common headers. For details, see Table 4-8.

Example Request

Configuring a file system ACL (granting the read/write permissions for IP addresses **127.0.0.1/24** and **192.168.1.85/24** in VPC **241dbf6b-dc5d-41b2-9108-ca5e56b48386**):

```
PUT /?sfsacl HTTP/1.1
Host: examplefilesystem.sfs3.example.region.com
Date: WED, 01 Jul 2015 02:32:25 GMT
Authorization: OBS H4IPJX0TQTHTHEBQQCEC:jZiAT8Vx4azWEvPRMWi0X5BpJMA=

{
  "Statement": [{
    "Sid": "Stmt1375240018061",
    "Action": "FullControl",
    "Effect": "Allow",
    "Condition": {
      "SourceVpc": "241dbf6b-dc5d-41b2-9108-ca5e56b48386",
      "VpcSourceIp": ["127.0.0.1/24", "192.168.1.85/24"]
    }
  }]
}
```

Example Response

```
HTTP/1.1 204 OK
Server: OBS
X-Obs-Request-Id: 0000018893B8073AC04721AA7EE3408B
X-Obs-Id-2: 32AAAQAAEAABSAAGAAEAABAAAQAAEAABCS5QDe0QLbFNz6FXoKuXHzD2wS0eJQaj
Date: Wed, 07 Jun 2023 02:38:11 GMT
```

## Status Codes

| Status Code | Description                        |
|-------------|------------------------------------|
| 204         | The file system ACL is configured. |

## Error Codes

See [General Purpose File System Error Codes](#).

## 8.2.2 Obtaining File System ACL Information

### Function

This API is used to obtain the ACL information of a file system.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

### URI

GET /

**Table 8-14** Query parameter

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| sfsacl    | Yes       | String | /           |

### Request Parameters

**Table 8-15** Request header parameters

| Parameter     | Mandatory | Type   | Description                |
|---------------|-----------|--------|----------------------------|
| Date          | Yes       | String | The request time.          |
| Authorization | Yes       | String | The signature information. |
| Host          | Yes       | String | The host address.          |

### Response Parameters

**Status code: 200**

**Table 8-16** Response body parameter

| Parameter | Type                                       | Description           |
|-----------|--------------------------------------------|-----------------------|
| Statement | Array of <a href="#">Statement</a> objects | Unique identification |

**Table 8-17** Statement

| Parameter | Type                             | Description                                                                                                                                                           |
|-----------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sid       | String                           | The statement ID.                                                                                                                                                     |
| Action    | String                           | The allowed statement action.<br>Enumerated values: <ul style="list-style-type: none"><li>• <b>FullControl</b>: read/write</li><li>• <b>Read</b>: read-only</li></ul> |
| Effect    | String                           | The effect specifying that the statement permission is <b>Allow</b> .<br>Enumerated value: <ul style="list-style-type: none"><li>• <b>Allow</b></li></ul>             |
| Condition | <a href="#">Condition</a> object | The conditions for a statement to take effect.                                                                                                                        |

**Table 8-18** Condition

| Parameter   | Type             | Description                                                                            |
|-------------|------------------|----------------------------------------------------------------------------------------|
| SourceVpc   | String           | A specified VPC ID.                                                                    |
| VpcSourceIp | Array of strings | A specified IP address or IP address range. This parameter is currently not supported. |

## Example Request

```
GET /?sfsacl HTTP/1.1
Host: example-sfs-01.sfs3.example.region.com:443
Date: Wed, 07 Jun 2023 03:31:46 GMT
Authorization: OBS FNEX1B77SXDIB3TFMSZZ:eUqPIHnPDWGDTlgyLmsALA86wys=
```

## Example Response

```
HTTP/1.1 200 OK
Server: OBS
Content-Type: application/json
Content-Length: 131
Date: Wed, 07 Jun 2023 03:31:59 GMT
X-Obs-Request-Id: 0000018893E94B65C046B527778F8F14
X-Obs-Id-2: 32AAQAEEAABAAAQAAEAABAAAQAAEAABCS2lEdSHcA04319WknB1DD5BdBKuGr1
```

```
{
  "Statement": [
    {
      "Condition": {
        "SourceVpc": "f85adabc-a387-4d1d-94cf-65ef9034f752"
      },
      "Action": "FullControl",
      "Effect": "Allow",
      "Sid": ""
    }
  ]
}
```

## Status Codes

| Status Code | Description                      |
|-------------|----------------------------------|
| 200         | The file system ACL is obtained. |

## Error Codes

See [General Purpose File System Error Codes](#).

## 8.2.3 Deleting a File System ACL

### Function

This API is used to delete a file system ACL.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

### URI

DELETE /

**Table 8-19** Query parameter

| Parameter | Mandatory | Type   | Description |
|-----------|-----------|--------|-------------|
| sfsacl    | Yes       | String | /           |

## Request Parameters

**Table 8-20** Request header parameters

| Parameter     | Mandatory | Type   | Description                |
|---------------|-----------|--------|----------------------------|
| Date          | Yes       | String | The request time.          |
| Authorization | Yes       | String | The signature information. |
| Host          | Yes       | String | The host address.          |

## Response Parameters

This response uses common headers. For details, see [Table 4-8](#).

### Example Request

```
DELETE /?sfsacl HTTP/1.1
Host: examplefilesystem.sfs3.example.region.com
Date: WED, 01 Jul 2015 02:36:06 GMT
Authorization: OBS H4IPJX0TQTHTHEBQQCEC:jZiAT8Vx4azWEvPRMWi0X5BpJMA=
```

### Example Response

```
HTTP/1.1 204 No Content
Server: OBS
X-Obs-Id-2: 32AAQAEEAABSAAGAAEAABAAQAEEAABCSj4dxiqb1Lw50CTjVQeV3ebh3QQ6PAj
X-Obs-Request-Id: 0000018893B807D5C0472A6161D87032
Date: WED, 01 Jul 2015 02:36:06 GMT
```

## Status Codes

| Status Code | Description                     |
|-------------|---------------------------------|
| 204         | The file system ACL is deleted. |

## Error Codes

See [General Purpose File System Error Codes](#).

## 8.3 Tags

### 8.3.1 Batch Adding Tags to a Resource

#### Function

This API is used to batch add tags for a general purpose file system. You can add up to 20 tags to a resource.

## Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

## URI

- POST /v3/sfs/tms/{project\_id}/file-systems/{resource\_id}/tags/create
- Parameter description

| Parameter   | Mandatory | Type   | Description                                                               |
|-------------|-----------|--------|---------------------------------------------------------------------------|
| project_id  | Yes       | String | The project ID. For details, see <a href="#">Obtaining a Project ID</a> . |
| resource_id | Yes       | String | The resource ID, which is the name of a general purpose file system.      |

## Request Parameters

**Table 8-21** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| Content-type | Yes       | String | The MIME type of the request body.<br>Example: application/json |
| X-Auth-Token | No        | String | The user token.                                                 |

**Table 8-22** Request body parameters

| Parameter | Mandatory | Type                                 | Description                                                                                                                                                                                         |
|-----------|-----------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tags      | No        | List< <a href="#">resource_tag</a> > | The tag list. For details, see <a href="#">Table 8-23</a> .<br>This parameter is mandatory for common tenants.<br>Use either <b>tags</b> or <b>sys_tags</b> if you have the op_service permissions. |

| Parameter | Mandatory | Type                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|-----------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sys_tags  | No        | List< <a href="#">resource_tag</a> > | <p>The system tag list. This parameter is available only to the op_service permissions.</p> <p>Use either <b>tags</b> or <b>sys_tags</b> if you have the op_service permissions.</p> <p>Only one <b>resource_tag</b> structure is used in TMS calls currently.</p> <p>The key is fixed at <b>_sys_enterprise_project_id</b>.</p> <p>The value can be <b>UUID</b> or <b>0</b>. <b>0</b> indicates the default enterprise project.</p> <p>System tags can only be added.</p> <p>For details, see <a href="#">Table 8-23</a>.</p> |

**Table 8-23** resource\_tag

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                             |
|-----------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | The tag key. A tag key can contain a maximum of 128 characters. It can contain letters, digits, and spaces representable in UTF-8 and special characters ( <code>_</code> , <code>:=+-@</code> ). It cannot start or end with a space and cannot be left empty. Tag keys starting with <b>_sys_</b> are system tags, and you cannot start a tag key with <b>_sys_</b> . |
| value     | No        | String | The tag value. A tag value can contain a maximum of 255 characters. It can contain letters, digits, and spaces representable in UTF-8 and special characters ( <code>_</code> , <code>:=+-@</code> ) and can be left empty. It cannot start or end with a space.                                                                                                        |

## Response Parameters

None

## Example Request

Batch adding tags to a general purpose file system whose name is **bucketName** with the project ID **c80a2157ba1d46c0825265947342077c**:

POST https://{endpoint}/v3/sfs/tms/c80a2157ba1d46c0825265947342077c/file-systems/bucketName/tags/create

Request body example:

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

## Example Response

None

## Status Codes

- Normal

| Status Code | Description              |
|-------------|--------------------------|
| 204         | Resource tags are added. |

- Abnormal

| Status Code | Description            |
|-------------|------------------------|
| 400         | Invalid tag parameter. |
| 401         | Certification failed.  |
| 403         | Authentication failed. |
| 404         | Resource not found.    |
| 500         | System error.          |

## 8.3.2 Batch Deleting Tags from a Resource

### Function

This API is used to batch delete tags from a specified resource. System tags cannot be deleted. If any tag to be deleted is not found, a successful result is returned.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

### URI

- POST /v3/sfs/tms/{project\_id}/file-systems/{resource\_id}/tags/delete
- Parameter description

| Parameter   | Mandatory | Type   | Description                                                               |
|-------------|-----------|--------|---------------------------------------------------------------------------|
| project_id  | Yes       | String | The project ID. For details, see <a href="#">Obtaining a Project ID</a> . |
| resource_id | Yes       | String | The resource ID, which is the name of a general purpose file system.      |

### Request Parameters

**Table 8-24** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| Content-type | Yes       | String | The MIME type of the request body.<br>Example: application/json |
| X-Auth-Token | No        | String | The user token.                                                 |

**Table 8-25** Request body parameters

| Parameter | Mandatory | Type                                 | Description                                                 |
|-----------|-----------|--------------------------------------|-------------------------------------------------------------|
| tags      | Yes       | List< <a href="#">resource_tag</a> > | The tag list. For details, see <a href="#">Table 8-23</a> . |

### Response Parameters

None

## Example Request

Batch deleting tags from a general purpose file system whose name is **bucketName** with the project ID **c80a2157ba1d46c0825265947342077c**:

```
POST https://{endpoint}/v3/sfs/tms/c80a2157ba1d46c0825265947342077c/file-systems/bucketName/tags/delete
```

Request body example:

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

## Example Response

None

## Status Codes

- Normal

| Status Code | Description                |
|-------------|----------------------------|
| 204         | Resource tags are deleted. |

- Abnormal

| Status Code | Description            |
|-------------|------------------------|
| 400         | Invalid tag parameter. |
| 401         | Certification failed.  |
| 403         | Authentication failed. |
| 404         | Resource not found.    |
| 500         | System error.          |

## 8.3.3 Querying Tags of a Resource

### Function

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

## Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

## URI

- GET /v3/sfs/tms/{project\_id}/file-systems/{resource\_id}/tags
- Parameter description

| Parameter   | Mandatory | Type   | Description                                                               |
|-------------|-----------|--------|---------------------------------------------------------------------------|
| project_id  | Yes       | String | The project ID. For details, see <a href="#">Obtaining a Project ID</a> . |
| resource_id | Yes       | String | The resource ID, which is the name of a general purpose file system.      |

## Request Parameters

Table 8-26 Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| Content-type | Yes       | String | The MIME type of the request body.<br>Example: application/json |
| X-Auth-Token | No        | String | The user token.                                                 |

## Response Parameters

Table 8-27 Response body parameters

| Parameter | Mandatory | Type                                 | Description                                                 |
|-----------|-----------|--------------------------------------|-------------------------------------------------------------|
| tags      | No        | List< <a href="#">resource_tag</a> > | The tag list. For details, see <a href="#">Table 8-23</a> . |

| Parameter | Mandatory | Type                                 | Description                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sys_tags  | No        | List< <a href="#">resource_tag</a> > | <p>The system tag list. This parameter is only available to users with the <b>op_service</b> permission.</p> <p>This field contains only one <b>resource_tag</b> structure currently.</p> <p>The key is fixed at <b>_sys_enterprise_project_id</b>.</p> <p>The value is the ID of an enterprise project. Value <b>0</b> indicates the default enterprise project.</p> <p>For details, see <a href="#">Table 8-23</a>.</p> |

## Example Request

Querying tags of a general purpose file system whose name is **bucketName** with the project ID **c80a2157ba1d46c0825265947342077c**:

```
GET https://{endpoint}/v3/sfs/tms/c80a2157ba1d46c0825265947342077c/file-systems/bucketName/tags
```

## Example Response

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

## Status Codes

- Normal

| Status Code | Description            |
|-------------|------------------------|
| 200         | Resource tags queried. |

- Abnormal

| Status Code | Description            |
|-------------|------------------------|
| 400         | Invalid tag parameter. |
| 401         | Certification failed.  |
| 403         | Authentication failed. |
| 404         | Resource not found.    |
| 500         | System error.          |

## 8.3.4 Querying Resources by Tag

### Function

This API is used to list resources by tag. Resources are sorted by the time when they are created, in descending order.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

### URI

- POST /v3/sfs/tms/{project\_id}/file-systems/resource-instances/filter
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                                                                                                                                                                                   |
|------------|-----------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| project_id | Yes       | String | The project ID. For details, see <a href="#">Obtaining a Project ID</a> .                                                                                                                                                     |
| limit      | No        | Int    | The number of records to be queried. The value ranges from <b>1</b> to <b>1000</b> , and the default value is <b>1000</b> .                                                                                                   |
| offset     | No        | Int    | The index location. The query starts from the next data record indexed by this parameter. The default value is <b>0</b> , indicating that the query starts from the first data record. The value cannot be a negative number. |

## Request Parameters

**Table 8-28** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| Content-type | Yes       | String | The MIME type of the request body.<br>Example: application/json |
| X-Auth-Token | No        | String | The user token.                                                 |

**Table 8-29** Request body parameters

| Parameter       | Mandatory | Type      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------|-----------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| without_any_tag | No        | boolean   | Excludes any of the specified tags. If this parameter is set to <b>true</b> , all resources without tags are queried. In this case, the <b>tags</b> field is ignored. If this parameter is set to <b>false</b> or not specified, it does not take effect, which means that all resources are returned or resources are filtered by <b>tags</b> or <b>matches</b> .                                                                                                                                                                                               |
| tags            | No        | List<tag> | Includes specified tags. A maximum of 20 tags can be specified. Tag keys must be unique. Each tag key can have a maximum of 20 tag values. A tag value can be empty but the structure cannot be missing. Tag values of the same key must be unique.<br><br>The response returns resources containing all tags in this list. Keys in this list are in an AND relationship while values in each key-value structure is in an OR relationship. If this parameter is not specified, all resources will be returned.<br>For details, see <a href="#">Table 8-30</a> . |

| Parameter | Mandatory | Type        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|-----------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sys_tags  | No        | List<tag>   | <p>Contains system tags. This parameter is only available to users with the <b>op_service</b> permission.</p> <p>This parameter cannot be used with filtering criteria <b>without_any_tag</b> and <b>tags</b> at the same time.</p> <p>This field contains only one <b>tag</b> structure currently.</p> <p>The key is fixed at <b>_sys_enterprise_project_id</b>.</p> <p>The value is the ID of an enterprise project.</p> <p>The key contains only one value. Value <b>0</b> indicates the default enterprise project.</p> <p>For details, see <a href="#">Table 8-30</a>.</p> |
| matches   | No        | List<match> | <p>The fields to be matched. The key in <b>match</b> is a dictionary value fixed at <b>resource_name</b>, meaning that the prefix search is performed based on the value of the key. It will be extended later.</p> <p>For details, see <a href="#">Table 8-31</a>.</p>                                                                                                                                                                                                                                                                                                         |

**Table 8-30** tag

| Parameter | Mandatory | Type   | Description                                                                                                                                                                                                                                                                                                                                                               |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | <p>The tag key. A tag key can contain a maximum of 128 characters. It can contain letters, digits, and spaces representable in UTF-8 and special characters (<code>_</code>, <code>:=+@</code>). It cannot start or end with a space and cannot be left empty. Tag keys starting with <b>_sys_</b> are system tags, and you cannot start a tag key with <b>_sys_</b>.</p> |

| Parameter | Mandatory | Type         | Description                                                                                                                                                                                              |
|-----------|-----------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| values    | Yes       | List<String> | The tag value list. A value can be an empty array but cannot be left blank. If the list specified by <b>values</b> is empty arrays, any tag value can be queried. The values are in the OR relationship. |

**Table 8-31** match

| Parameter | Mandatory | Type   | Description                                                                                                   |
|-----------|-----------|--------|---------------------------------------------------------------------------------------------------------------|
| key       | Yes       | String | The key. The key is fixed at <b>resource_name</b> currently. Other <b>key</b> values will be available later. |
| value     | Yes       | String | The value. Each tag value can contain a maximum of 255 Unicode characters. The character set is not verified. |

## Response Parameters

**Table 8-32** Response body parameters

| Parameter   | Mandatory | Type                             | Description                                                      |
|-------------|-----------|----------------------------------|------------------------------------------------------------------|
| resources   | Yes       | List< <a href="#">resource</a> > | The resource list. For details, see <a href="#">Table 8-33</a> . |
| total_count | Yes       | Integer                          | The total number of records.                                     |

**Table 8-33** resource

| Parameter       | Mandatory | Type   | Description                                                                                                   |
|-----------------|-----------|--------|---------------------------------------------------------------------------------------------------------------|
| resource_id     | Yes       | String | The resource ID.                                                                                              |
| resource_detail | Yes       | Object | The resource details. This value is left empty by default. The value is a resource object used for extension. |

| Parameter     | Mandatory | Type                                 | Description                                                                                                                                                                                                                                                                                                                                                                      |
|---------------|-----------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tags          | Yes       | List< <a href="#">resource_tag</a> > | The tag list. If there is no tag, an empty array is used by default.<br>For details, see <a href="#">Table 8-23</a> .                                                                                                                                                                                                                                                            |
| sys_tags      | No        | List< <a href="#">resource_tag</a> > | This parameter is only available to users with the <b>op_service</b> permission.<br>This field contains only one <b>resource_tag</b> structure currently.<br>The key is fixed at <b>_sys_enterprise_project_id</b> .<br>The value is the ID of the enterprise project. Value <b>0</b> indicates the default enterprise project.<br>For details, see <a href="#">Table 8-23</a> . |
| resource_name | Yes       | String                               | The resource name. This parameter is an empty string if there is no resource name.                                                                                                                                                                                                                                                                                               |

## Example Request

Listing resources (with the project ID set to **\*\*c80a2157ba1d46c0825265947342077c\*\***, offset to **\*\*0\*\***, and limit to **\*\*10\*\***):

```
POST https://{endpoint}/v3/sfs/tms/c80a2157ba1d46c0825265947342077c/file-systems/resource-instances/  
filter?limit=10&offset=0
```

Request body example:

```
{  
  "tags": [  
    {  
      "key": "key1",  
      "values": [  
        "value1",  
        "value2"  
      ]  
    },  
    {  
      "key": "key2",  
      "values": [  
        "value1",  
        "value2"  
      ]  
    }  
  ],  
  "matches": [  
    {  
      "key": "resource_name",  
      "value": "resource1"  
    }  
  ]  
}
```

```
    ],  
    "without_any_tag": "false"  
  }  
}
```

## Example Response

```
{  
  "resources": [  
    {  
      "resource_detail": "",  
      "resource_id": "resouce1",  
      "resource_name": "resouce1",  
      "tags": [  
        {  
          "key": "key1",  
          "value": "value1"  
        }  
      ],  
      "sys_tags": []  
    }  
  ],  
  "total_count": 1  
}
```

## Status Codes

- Normal

| Status Code | Description       |
|-------------|-------------------|
| 200         | Resources listed. |

- Abnormal

| Status Code | Description            |
|-------------|------------------------|
| 400         | Invalid tag parameter. |
| 401         | Certification failed.  |
| 403         | Authentication failed. |
| 404         | Resource not found.    |
| 500         | System error.          |

## 8.3.5 Querying the Number of Resources by Tag

### Function

This API is used to query the number of resources.

## Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

## URI

- POST /v3/sfs/tms/{project\_id}/file-systems/resource-instances/count
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                               |
|------------|-----------|--------|---------------------------------------------------------------------------|
| project_id | Yes       | String | The project ID. For details, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 8-34** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| Content-type | Yes       | String | The MIME type of the request body.<br>Example: application/json |
| X-Auth-Token | No        | String | The user token.                                                 |

**Table 8-35** Request body parameters

| Parameter       | Mandatory | Type    | Description                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| without_any_tag | No        | boolean | Excludes resources with any of the specified tags. If this parameter is set to <b>true</b> , all resources without tags are queried. In this case, the <b>tags</b> field is ignored. If this parameter is set to <b>false</b> or not specified, it does not take effect, which means that all resources are returned or resources are filtered by <b>tags</b> or <b>matches</b> . |

| Parameter | Mandatory | Type        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------|-----------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| tags      | No        | List<tag>   | <p>The resources to be queried contain tags listed in <b>tags</b>. Each resource to be queried can contain a maximum of 20 tag keys, and each key can have a maximum of 20 values. The tag value of a tag key can be an empty array but the structure cannot be missing. Each tag key must be unique, and the tag values of a key must also be unique. The response returns resources containing all tags in this list. Keys in this list are in an AND relationship while values in each key-value structure is in an OR relationship. If this parameter is not specified, all resources will be returned. For details, see <a href="#">Table 8-30</a>.</p> |
| sys_tags  | No        | List<tag>   | <p>Contains system tags. This parameter is only available to users with the <b>op_service</b> permission.</p> <p>This parameter cannot be used with filtering criteria <b>without_any_tag</b> and <b>tags</b> at the same time.</p> <p>This field contains only one <b>tag</b> structure currently.</p> <p>The key is fixed at <b>_sys_enterprise_project_id</b>.</p> <p>The value is the ID of an enterprise project.</p> <p>The key contains only one value. Value <b>0</b> indicates the default enterprise project. For details, see <a href="#">Table 8-30</a>.</p>                                                                                     |
| matches   | No        | List<match> | <p>The fields to be matched. The key in <b>match</b> is a dictionary value fixed at <b>resource_name</b>, meaning that the prefix search is performed based on the value of the key. It will be extended later. For details, see <a href="#">Table 8-31</a>.</p>                                                                                                                                                                                                                                                                                                                                                                                             |

## Response Parameters

**Table 8-36** Response body parameter

| Parameter   | Mandatory | Type    | Description                  |
|-------------|-----------|---------|------------------------------|
| total_count | Yes       | Integer | The total number of records. |

## Example Request

Querying the number of resources using project ID  
\*\*c80a2157ba1d46c0825265947342077c\*\*:

POST https://{endpoint}/v3/sfs/tms/c80a2157ba1d46c0825265947342077c/file-systems/resource-instances/  
count

Request body example:

```
{
  "tags": [
    {
      "key": "key1",
      "values": [
        "value1",
        "value2"
      ]
    },
    {
      "key": "key2",
      "values": [
        "value1",
        "value2"
      ]
    }
  ],
  "matches": [
    {
      "key": "resource_name",
      "value": "resource1"
    }
  ],
  "without_any_tag": "true"
}
```

## Example Response

```
{
  "total_count": 1
}
```

## Status Codes

- Normal

| Status Code | Description                  |
|-------------|------------------------------|
| 200         | Number of resources queried. |

- Abnormal

| Status Code | Description            |
|-------------|------------------------|
| 400         | Invalid tag parameter. |
| 401         | Certification failed.  |
| 403         | Authentication failed. |
| 404         | Resource not found.    |
| 500         | System error.          |

## 8.3.6 Querying Tags in a Project

### Function

This API is used to query tags of all resources owned by a tenant in a specified project.

### Authorization

Each account has all of the permissions required to call all APIs, but IAM users must have the required permissions specifically assigned. For the specific permissions required, see [Permissions Policies and Supported Actions](#).

### URI

- GET /v3/sfs/tms/{project\_id}/file-systems/tags
- Parameter description

| Parameter  | Mandatory | Type   | Description                                                               |
|------------|-----------|--------|---------------------------------------------------------------------------|
| project_id | Yes       | String | The project ID. For details, see <a href="#">Obtaining a Project ID</a> . |

## Request Parameters

**Table 8-37** Request header parameters

| Parameter    | Mandatory | Type   | Description                                                     |
|--------------|-----------|--------|-----------------------------------------------------------------|
| Content-type | Yes       | String | The MIME type of the request body.<br>Example: application/json |
| X-Auth-Token | No        | String | The user token.                                                 |

## Response Parameters

**Table 8-38** Response body parameter

| Parameter | Mandatory | Type                        | Description                                                 |
|-----------|-----------|-----------------------------|-------------------------------------------------------------|
| tags      | Yes       | List< <a href="#">tag</a> > | The tag list. For details, see <a href="#">Table 8-30</a> . |

## Example Request

Querying tags using project ID **\*\*c80a2157ba1d46c0825265947342077c\*\***:

```
GET https://{endpoint}/v3/sfs/tms/c80a2157ba1d46c0825265947342077c/file-systems/tags
```

## Example Response

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

## Status Codes

- Normal

| Status Code | Description                       |
|-------------|-----------------------------------|
| 200         | Resource tags queried by project. |

- Abnormal

| Status Code | Description            |
|-------------|------------------------|
| 400         | Invalid tag parameter. |
| 401         | Certification failed.  |
| 403         | Authentication failed. |
| 404         | Resource not found.    |
| 500         | System error.          |

# 9 Permissions Policies and Supported Actions

---

## 9.1 Introduction

This section describes fine-grained permissions management for your SFS resources. If your Huawei Cloud account does not need individual IAM users, then you may skip over this section.

By default, new IAM users do not have permissions assigned. You need to add a user to one or more groups, and attach permissions policies or roles to these groups. Users inherit permissions from the groups to which they are added and can perform specified operations on cloud services based on the permissions.

You can grant users permissions by using roles and policies. Roles are a type of coarse-grained authorization mechanism that defines permissions related to user responsibilities. Policies define API-based permissions for operations on specific resources under certain conditions, allowing for more fine-grained, secure access control of cloud resources.

### NOTE

- Policy-based authorization is useful if you want to allow or deny the access to an API.

Each account has all the permissions required to call all APIs, but IAM users must be assigned the required permissions. The permissions required for calling an API are determined by the actions supported by the API. Only users who have been granted permissions allowing the actions can call the API successfully. For example, if an IAM user wants to query ECSs using an API, the user must have been granted permissions that allow the **ecs:servers:list** action.

## Supported Actions

SFS provides system-defined policies that can be directly used in IAM. You can also create custom policies and use them to supplement system-defined policies, implementing more refined access control. Operations supported by policies are specific to APIs. The following are common concepts related to policies:

- **Permissions:** Statements in a policy that allow or deny certain operations.
- **APIs:** REST APIs that can be called by a user who has been granted specific permissions.
- **Actions:** Specific operations that are allowed or denied.
- **Related actions:** Actions on which a specific action depends to take effect. When assigning permissions for the action to a user, you also need to assign permissions for the related actions.
- **IAM projects/Enterprise projects:** Authorization scope of a custom policy. A custom policy can be applied to IAM projects or enterprise projects or both. Policies that contain actions for both IAM and enterprise projects can be used and applied for both IAM and Enterprise Management. Policies that only contain actions for IAM projects can be used and applied to IAM only. For details about the differences between IAM and enterprise projects, see [Differences Between IAM and Enterprise Management](#).
-  **NOTE**  
The check mark (✓) and cross symbol (x) indicate that an action takes effect or does not take effect for the corresponding type of projects.

SFS supports the following actions that can be defined in custom policies:

- **Shared File Systems**, including actions supported by all SFS file system APIs, such as the APIs for creating file systems, querying file system lists, querying details about a single file system, modifying file systems, and deleting file systems.
- **Capacity Expansion or Reduction**, including actions supported by the SFS file system expanding and shrinking APIs, such as the APIs for expanding or shrinking a shared file system.
- **SFS Turbo File System Actions**, including actions supported by all SFS Turbo file system APIs, such as the APIs for creating file systems, querying file system lists, querying details about a single file system, and deleting file systems.

## 9.2 Supported Actions

### 9.2.1 SFS Capacity-Oriented File System Actions

#### API Version Query

| Permissio<br>n                                                  | API   | Action | IAM<br>Project<br>(Project) | Enterprise Project<br>(Enterprise Project) |
|-----------------------------------------------------------------|-------|--------|-----------------------------|--------------------------------------------|
| Querying<br>the API<br>Version<br>(Native<br>OpenStac<br>k API) | GET / | -      | ×                           | ×                                          |

| Permission                                      | API                 | Action | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-------------------------------------------------|---------------------|--------|-----------------------|-----------------------------------------|
| Querying the API Version (Native OpenStack API) | GET /{api_version}/ | -      | ×                     | ×                                       |

## Shared File Systems

| Permission                                                            | API                                    | Action                        | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-----------------------------------------------------------------------|----------------------------------------|-------------------------------|-----------------------|-----------------------------------------|
| Creating a Shared File System (Native OpenStack API)                  | POST /v2/{project_id}/shares           | sfs:shares:createShare        | √                     | √                                       |
| Querying All Shared File Systems (Native OpenStack API)               | GET /v2/{project_id}/shares            | sfs:shares:getShare           | √                     | √                                       |
| Querying Details About All Shared File Systems (Native OpenStack API) | GET /v2/{project_id}/shares/detail     | sfs:shares:getAllSharesDetail | √                     | √                                       |
| Querying Details About a Shared File System (Native OpenStack API)    | GET /v2/{project_id}/shares/{share_id} | sfs:shares:getShareDetail     | √                     | √                                       |

| Permission                                                              | API                                                     | Action                             | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------|-----------------------|-----------------------------------------|
| Querying Mount Locations of a Shared File System (Native OpenStack API) | GET /v2/{project_id}/shares/{share_id}/export_locations | sfs:shares:getShareExportLocations | √                     | √                                       |
| Modifying a Shared File System (Native OpenStack API)                   | PUT /v2/{project_id}/shares/{share_id}                  | sfs:shares:updateShare             | √                     | √                                       |
| Deleting a Shared File System (Native OpenStack API)                    | DELETE /v2/{project_id}/shares/{share_id}               | sfs:shares:deleteShare             | √                     | √                                       |

## Share Access Rules

| Permission                                       | API                                            | Action                 | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|--------------------------------------------------|------------------------------------------------|------------------------|-----------------------|-----------------------------------------|
| Adding Share Access Rules (Native OpenStack API) | POST /v2/{project_id}/shares/{share_id}/action | sfs:shares:ShareAction | √                     | √                                       |

| Permission                                         | API                                            | Action                 | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|----------------------------------------------------|------------------------------------------------|------------------------|-----------------------|-----------------------------------------|
| Deleting Share Access Rules (Native OpenStack API) | POST /v2/{project_id}/shares/{share_id}/action | sfs:shares:ShareAction | √                     | √                                       |
| Querying Share Access Rules (Native OpenStack API) | POST /v2/{project_id}/shares/{share_id}/action | sfs:shares:ShareAction | √                     | √                                       |

## Quota Management

| Permission                                       | API                                             | Action                    | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|--------------------------------------------------|-------------------------------------------------|---------------------------|-----------------------|-----------------------------------------|
| Querying the Tenant Quota (Native OpenStack API) | GET /v2/{project_id}/os-quota-sets/{project_id} | sfs:quotas:getOSQuotaSets | √                     | ×                                       |

## Capacity Expansion or Reduction

| Permission                                            | API                                            | Action                  | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-------------------------------------------------------|------------------------------------------------|-------------------------|-----------------------|-----------------------------------------|
| Expanding a Shared File System (Native OpenStack API) | POST /v2/{project_id}/shares/{share_id}/action | sfs:shares:Share Action | √                     | √                                       |
| Shrinking a Shared File System (Native OpenStack API) | POST /v2/{project_id}/shares/{share_id}/action | sfs:shares:Share Action | √                     | √                                       |

## AZ

| Permission                          | API                                                         | Action                                     | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-------------------------------------|-------------------------------------------------------------|--------------------------------------------|-----------------------|-----------------------------------------|
| Querying AZs (Native OpenStack API) | GET /v2/{project_id}/availability-zones?share_az={share_az} | sfs:availabilityZones:getAvailabilityZones | √                     | ×                                       |

## 9.2.2 SFS Turbo File System Actions

### Lifecycle Management

| Permission             | API                                    | Action                      | Dependencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|------------------------|----------------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|
| Creating a File System | POST /v1/{project_id}/sfs-turbo/shares | sfsturbo:shares:createShare | <ul style="list-style-type: none"><li>• Creating an SFS Turbo file system requires VPC-related permissions, including the permissions for verifying VPCs, subnets, and security groups, creating virtual IP addresses and ports, and creating security group rules.<ul style="list-style-type: none"><li>– "vpc:*:*"</li></ul></li><li>• Creating an encrypted SFS Turbo file system requires the KMS Administrator permissions.</li><li>• Creating an SFS Turbo file system that uses DSS<ul style="list-style-type: none"><li>– "dss:*:get",</li><li>– "dss:*:list",</li><li>– "dss:*:count"</li></ul></li></ul> | √                     | √                                       |

| Permission                              | API                                                      | Action                       | Dependencies                                                                                                                                                                                                                                                                                                                                                                                                                                          | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-----------------------------------------|----------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|
| Querying Details About a File System    | GET /v1/{project_id}/sfs-turbo/shares/{share_id}         | sfsturbo:shares:getShare     | -                                                                                                                                                                                                                                                                                                                                                                                                                                                     | √                     | √                                       |
| Deleting a File System                  | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}      | sfsturbo:shares:deleteShare  | <ul style="list-style-type: none"><li>Deleting an SFS Turbo file system requires VPC-related permissions, including the permissions for deleting virtual IP addresses and ports and deleting security group rules.<ul style="list-style-type: none"><li>"vpc:*:*"</li></ul></li><li>Deleting an SFS Turbo file system that uses DSS<ul style="list-style-type: none"><li>"dss:*:get",</li><li>"dss:*:list",</li><li>"dss:*:count"</li></ul></li></ul> | √                     | √                                       |
| Listing File Systems                    | GET /v1/{project_id}/sfs-turbo/shares/detail             | sfsturbo:shares:getAllShares | -                                                                                                                                                                                                                                                                                                                                                                                                                                                     | √                     | √                                       |
| Expanding the Capacity of a File System | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/action | sfsturbo:shares:shareAction  | -                                                                                                                                                                                                                                                                                                                                                                                                                                                     | √                     | √                                       |

## Connection Management

| Permission                                                | API                                                      | Action                       | Dependencies                                                                                                                    | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-----------------------------------------------------------|----------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------|
| Changing the Security Group Associated with a File System | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/action | sfsturbo:share:s:shareAction | Changing a security group <ul style="list-style-type: none"><li>vpc:securityGroups:*</li><li>vpc:securityGroupRules:*</li></ul> | √                     | √                                       |

## Tag Management

| Permission                         | API                                                     | Action                       | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|------------------------------------|---------------------------------------------------------|------------------------------|--------------|-----------------------|-----------------------------------------|
| Adding a Tag to a File System      | POST /v1/{project_id}/sfs-turbo/{share_id}/tags         | sfsturbo:share:s:addTag      | -            | √                     | √                                       |
| Querying Tags of a File System     | GET /v1/{project_id}/sfs-turbo/{share_id}/tags          | sfsturbo:share:s:getTag      | -            | √                     | √                                       |
| Deleting a Tag from a File System  | DELETE /v1/{project_id}/sfs-turbo/{share_id}/tags/{key} | sfsturbo:share:s:deleteTag   | -            | √                     | √                                       |
| Batch Adding Tags to a File System | POST /v1/{project_id}/sfs-turbo/{share_id}/tags/action  | sfsturbo:share:s:batchResTag | -            | √                     | √                                       |

| Permission                                    | API                                                       | Action                    | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-----------------------------------------------|-----------------------------------------------------------|---------------------------|--------------|-----------------------|-----------------------------------------|
| Querying Tags of All File Systems of a Tenant | GET /v1/{project_id}/sfs-turbo/tags                       | sfsturbo:shares:getAllTag | -            | √                     | √                                       |
| Querying File Systems by Tag                  | POST /v1/{project_id}/sfs-turbo/resource_instances/action | sfsturbo:shares:getAllTag | -            | √                     | √                                       |

## Name Management

| Permission                         | API                                                      | Action                      | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|------------------------------------|----------------------------------------------------------|-----------------------------|--------------|-----------------------|-----------------------------------------|
| Changing the Name of a File System | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/action | sfsturbo:shares:shareAction | -            | √                     | √                                       |

## File System Management

| Permission                                      | API                                                                  | Action                            | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-------------------------------------------------|----------------------------------------------------------------------|-----------------------------------|--------------|-----------------------|-----------------------------------------|
| Creating an Asynchronous Task for a File System | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/{feature}/tasks | sfsturbo:shares:createFsAsyncTask | -            | √                     | √                                       |

| Permission                                                             | API                                                                              | Action                            | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------|--------------|-----------------------|-----------------------------------------|
| Listing Asynchronous Tasks of a File System                            | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/{feature}/tasks              | sfsturbo:shares:listFsAsyncTasks  | -            | √                     | √                                       |
| Obtaining Details About an Asynchronous Task of a File System          | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/{feature}/tasks/{task_id}    | sfsturbo:shares:showFsAsyncTask   | -            | √                     | √                                       |
| Deleting an Asynchronous Task of a File System                         | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/{feature}/tasks/{task_id} | sfsturbo:shares:deleteFsAsyncTask | -            | √                     | √                                       |
| Obtaining IP Addresses of the Clients Who Have Mounted the File System | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/action                         | sfsturbo:shares:shareAction       | -            | √                     | √                                       |

## Storage Interworking Management

| Permission                                   | API                                                                             | Action                                    | Dependencies                                     | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|----------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------|-----------------------|-----------------------------------------|
| Adding a Storage Backend                     | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/targets                       | sfsturbo:shares:createBackendTarget       | You must have the OBS Administrator permissions. | √                     | √                                       |
| Listing Storage Backends                     | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/targets                        | sfsturbo:shares:listBackendTargets        | -                                                | √                     | √                                       |
| Querying Details of a Storage Backend        | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/targets/{target_id}            | sfsturbo:shares:showBackendTargetInfo     | -                                                | √                     | √                                       |
| Removing a Storage Backend                   | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}/targets/{target_id}         | sfsturbo:shares:deleteBackendTarget       | -                                                | √                     | √                                       |
| Updating the Attributes of a Storage Backend | PUT /v1/{project_id}/sfs-turbo/shares/{share_id}/targets/{target_id}/attributes | sfsturbo:shares:updateObsTargetAttributes | -                                                | √                     | √                                       |

| Permission                                                    | API                                                                         | Action                                    | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|---------------------------------------------------------------|-----------------------------------------------------------------------------|-------------------------------------------|--------------|-----------------------|-----------------------------------------|
| Updating the Auto Synchronization Policy of a Storage Backend | PUT /v1/{project_id}/sfs-turbo/shares/{share_id}/targets/{target_id}/policy | sfsturbo:shares:updateObsTargetPolicy     | -            | √                     | √                                       |
| Creating a Data Import or Export Task                         | POST /v1/{project_id}/sfs-turbo/{share_id}/hpc-cache/task                   | sfsturbo:shares:createDataRepositoryTask  | -            | √                     | √                                       |
| Querying Details About a Data Import or Export Task           | GET /v1/{project_id}/sfs-turbo/{share_id}/hpc-cache/task/{task_id}          | sfsturbo:shares:getDataRepositoryTask     | -            | √                     | √                                       |
| Listing Data Import and Export Tasks                          | GET /v1/{project_id}/sfs-turbo/{share_id}/hpc-cache/tasks                   | sfsturbo:shares:getAllDataRepositoryTasks | -            | √                     | √                                       |
| Deleting a Data Import or Export Task                         | DELETE /v1/{project_id}/sfs-turbo/{share_id}/hpc-cache/task/{task_id}       | sfsturbo:shares:deleteDataRepositoryTask  | -            | √                     | √                                       |
| Updating a File System                                        | PUT /v1/{project_id}/sfs-turbo/shares/{share_id}                            | sfsturbo:shares:updateHpcShare            | -            | √                     | √                                       |

## Directory Management

| Permission                             | API                                                              | Action                             | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|----------------------------------------|------------------------------------------------------------------|------------------------------------|--------------|-----------------------|-----------------------------------------|
| Creating Quota Limits for a Directory  | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir-quota   | sfsturbo:share s:createFsDir Quota | -            | √                     | √                                       |
| Updating Quota Limits of a Directory   | PUT /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir-quota    | sfsturbo:share s:updateFsDir Quota | -            | √                     | √                                       |
| Querying Quota Limits of a Directory   | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir-quota    | sfsturbo:share s:showFsDirQuota    | -            | √                     | √                                       |
| Removing Quota Limits from a Directory | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir-quota | sfsturbo:share s:deleteFsDir Quota | -            | √                     | √                                       |
| Creating a Directory                   | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir         | sfsturbo:share s:createFsDir       | -            | √                     | √                                       |
| Checking Whether a Directory Exists    | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir          | sfsturbo:share s:showFsDir         | -            | √                     | √                                       |

| Permission                        | API                                                           | Action                         | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-----------------------------------|---------------------------------------------------------------|--------------------------------|--------------|-----------------------|-----------------------------------------|
| Deleting a Directory              | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir    | sfsturbo:shares:deleteFsDir    | -            | √                     | √                                       |
| Querying the Usage of a Directory | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/dir-usage | sfsturbo:shares:showFsDirQuota | -            | √                     | √                                       |

## Permissions Management

| Permission                           | API                                                                          | Action                                    | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|--------------------------------------|------------------------------------------------------------------------------|-------------------------------------------|--------------|-----------------------|-----------------------------------------|
| Joining an AD Domain                 | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/active-directory-domain | sfsturbo:shares:addActiveDirectoryDomain  | -            | √                     | √                                       |
| Querying the AD Domain Configuration | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/active-directory-domain  | sfsturbo:shares:showActiveDirectoryDomain | -            | √                     | √                                       |

| Permission                                  | API                                                                            | Action                                     | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|---------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------|--------------|-----------------------|-----------------------------------------|
| Modifying the AD Domain Configuration       | PUT /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/active-directory-domain    | sfsturbo:share:updateActiveDirectoryDomain | -            | √                     | √                                       |
| Leaving an AD Domain                        | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/active-directory-domain | sfsturbo:share:deleteActiveDirectoryDomain | -            | √                     | √                                       |
| Creating a Permission Rule                  | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/perm-rules                | sfsturbo:share:createPermRule              | -            | √                     | √                                       |
| Querying Permission Rules of a File System  | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/perm-rules                 | sfsturbo:share:listPermRules               | -            | √                     | √                                       |
| Querying a Permission Rule of a File System | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/perm-rules/{rule_id}       | sfsturbo:share:showPermRule                | -            | √                     | √                                       |

| Permission                       | API                                                                         | Action                        | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|----------------------------------|-----------------------------------------------------------------------------|-------------------------------|--------------|-----------------------|-----------------------------------------|
| Modifying a Permission Rule      | PUT /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/perm-rules/{rule_id}    | sfsturbo:share:updatePermRule | -            | √                     | √                                       |
| Deleting a Permission Rule       | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/perm-rules/{rule_id} | sfsturbo:share:deletePermRule | -            | √                     | √                                       |
| Binding to an LDAP Server        | POST /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/ldap                   | sfsturbo:share:createLdap     | -            | √                     | √                                       |
| Querying the LDAP Configuration  | GET /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/ldap                    | sfsturbo:share:showLdap       | -            | √                     | √                                       |
| Modifying the LDAP Configuration | PUT /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/ldap                    | sfsturbo:share:updateLdap     | -            | √                     | √                                       |
| Deleting the LDAP Configuration  | DELETE /v1/{project_id}/sfs-turbo/shares/{share_id}/fs/ldap                 | sfsturbo:share:deleteLdap     | -            | √                     | √                                       |

## Task Management

| Permission                    | API                                          | Action                  | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-------------------------------|----------------------------------------------|-------------------------|--------------|-----------------------|-----------------------------------------|
| Querying Details About a Task | GET /v1/{project_id}/sfs-turbo/jobs/{job_id} | sfsturbo:share:s:getJob | -            | √                     | √                                       |

## Operations Management

| Permission                                                                    | API                                                                  | Action                            | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------|--------------|-----------------------|-----------------------------------------|
| Changing the Billing Mode of a File System from Pay-per-Use to Yearly/Monthly | POST /v2/{project_id}/sfs-turbo/shares/{share_id}/change-charge-mode | sfsturbo:share:s:changeChargeMode | -            | √                     | √                                       |

## File System Type and Quota Query

| Permission                            | API                                        | Action                      | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|---------------------------------------|--------------------------------------------|-----------------------------|--------------|-----------------------|-----------------------------------------|
| Querying File System Types and Quotas | GET /v1/{project_id}/sfs-turbo/share-types | sfsturbo:share:s:getFlavors | -            | √                     | √                                       |

## Console Reference

| Permission                         | API               | Action                          | Dependencies | IAM Project (Project) | Enterprise Project (Enterprise Project) |
|------------------------------------|-------------------|---------------------------------|--------------|-----------------------|-----------------------------------------|
| Querying SFS Turbo Quotas          | Console reference | sfsturbo:share:s:getQuota       | -            | √                     | √                                       |
| Obtaining the AZ Information       | Console reference | sfsturbo:share:s:getAZInfo      | -            | √                     | √                                       |
| Obtaining SFS Turbo Specifications | Console reference | sfsturbo:share:s:getFlavors     | -            | √                     | √                                       |
| Checking the Name of a File System | Console reference | sfsturbo:share:s:checkShareName | -            | √                     | √                                       |

# 10 Common Parameters

## 10.1 SFS Turbo File System Statuses

- SFS Turbo file system status elements

| Returned Value | Description                                                                                |
|----------------|--------------------------------------------------------------------------------------------|
| 100            | CREATING: The file system is being created.                                                |
| 200            | ACTIVE: The file system is active. An SFS Turbo file system can be mounted in this status. |
| 300            | FAILED: The job failed.                                                                    |
| 303            | CREATE_FAILED: The cluster failed to be created.                                           |
| 400            | DELETED: The cluster has been deleted.                                                     |
| 800            | FROZEN: The cluster has been frozen.                                                       |

## 10.2 SFS Turbo File System Substatuses

- SFS Turbo file system substatus elements

| Returned Value | Description                                  |
|----------------|----------------------------------------------|
| 121            | Expanding the capacity online.               |
| 221            | Online capacity expansion succeeded.         |
| 321            | Failed to perform online capacity expansion. |

# 11 Appendix

## 11.1 Status Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

- Normal

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

- Abnormal

| Returned Value         | Description                                                              |
|------------------------|--------------------------------------------------------------------------|
| 400 Bad Request        | The server failed to process the request.                                |
| 401 Unauthorized       | You must enter a username and the password to access the requested page. |
| 403 Forbidden          | Access to the requested page is forbidden.                               |
| 404 Not Found          | The requested page was not found.                                        |
| 405 Method Not Allowed | You are not allowed to use the method specified in the request.          |

| Returned Value                    | Description                                                                                           |
|-----------------------------------|-------------------------------------------------------------------------------------------------------|
| 406 Not Acceptable                | The response generated by the server could not be accepted by the client.                             |
| 407 Proxy Authentication Required | You must use the proxy server for authentication. Then the request can be processed.                  |
| 408 Request Timeout               | The request timed out.                                                                                |
| 409 Conflict                      | The request could not be processed due to a conflict.                                                 |
| 500 Internal Server Error         | The request is not completed because of a service error.                                              |
| 501 Not Implemented               | The request is not completed because the server does not support the requested function.              |
| 502 Bad Gateway                   | The request is not completed because the server receives an invalid response from an upstream server. |
| 503 Service Unavailable           | The request is not completed because the service is unavailable.                                      |
| 504 Gateway Timeout               | A gateway timeout error occurred.                                                                     |

## 11.2 SFS Turbo Error Codes

If an error code starting with **APIGW** is returned after you call an API, rectify the fault by referring to the instructions provided in [API Gateway Error Codes](#).

| Status Code | Error Code     | Error Message     | Description                                                                    | Solution                            |
|-------------|----------------|-------------------|--------------------------------------------------------------------------------|-------------------------------------|
| 400/404     | SFS.TURBO.0001 | Parameter error   | Invalid parameters.                                                            | Use valid parameters and try again. |
| 400/404     | SFS.TURBO.0002 | Cluster not found | The requested object is not found or you do not have permissions to access it. | Use valid parameters and try again. |
| 400         | SFS.TURBO.0003 | Invalid name      | Invalid name.                                                                  | Use valid parameters and try again. |

| Status Code | Error Code     | Error Message                        | Description                                                        | Solution                                             |
|-------------|----------------|--------------------------------------|--------------------------------------------------------------------|------------------------------------------------------|
| 400         | SFS.TURBO.0004 | Invalid vpc                          | Invalid VPC.                                                       | Use valid parameters and try again.                  |
| 400/500     | SFS.TURBO.0005 | Internal server error                | Internal error.                                                    | Contact technical support.                           |
| 400         | SFS.TURBO.0006 | Invalid subnet                       | Invalid subnet.                                                    | Use valid parameters and try again.                  |
| 400         | SFS.TURBO.0007 | Invalid share type                   | Invalid file system type.                                          | Use valid parameters and try again.                  |
| 400         | SFS.TURBO.0008 | Invalid size                         | Unsupported file system size.                                      | Use valid parameters and try again.                  |
| 409         | SFS.TURBO.0009 | Name has existed                     | File system name already exists.                                   | Use valid parameters and try again.                  |
| 400         | SFS.TURBO.0010 | Quota exceeds                        | Insufficient quota.                                                | Submit a service order to increase quota.            |
| 400/403     | SFS.TURBO.0011 | Cluster is doing something           | Another operation is being performed on the file system.           | Wait until that operation is complete and try again. |
| 400         | SFS.TURBO.0012 | Operation is not allowed             | A yearly/monthly file system cannot be resized or deleted via API. | Manage yearly/monthly file systems on the console.   |
| 400         | SFS.TURBO.0015 | do not have the operation permission | Insufficient permissions.                                          | Apply for the required permissions.                  |

| Status Code | Error Code     | Error Message                         | Description                                                                         | Solution                                                                   |
|-------------|----------------|---------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| 400         | SFS.TURBO.0016 | Res tag count already reach max value | The maximum number of tags has been reached for the resource.                       | Delete unnecessary tags.                                                   |
| 400         | SFS.TURBO.0017 | Invalid tag key param                 | The length of the resource tag key is invalid.                                      | Use valid parameters and try again.                                        |
| 400         | SFS.TURBO.0018 | Invalid tag value param               | The length of the resource tag value is invalid.                                    | Use valid parameters and try again.                                        |
| 404         | SFS.TURBO.0019 | Invalid Job Id                        | Invalid job ID.                                                                     | Use a valid job ID.                                                        |
| 400         | SFS.TURBO.0020 | Invalid flavor                        | Invalid flavor.                                                                     | Use a valid flavor.                                                        |
| 400         | SFS.TURBO.0021 | file system not match                 | Unmatched type. The background disk type is not supported by this file system type. | Ensure that the background disk type is supported by the file system type. |
| 400         | SFS.TURBO.0022 | backup name already exists            | The backup name already exists.                                                     | Change the backup name.                                                    |
| 400         | SFS.TURBO.0023 | Invalid flavor ref                    | Invalid specification code.                                                         | Use a valid specification code.                                            |
| 400         | SFS.TURBO.0024 | Operation is not allowed              | Unsupported operation.                                                              | Contact technical support.                                                 |
| 400         | SFS.TURBO.0025 | Invalid tag key param                 | The resource tag key contains invalid characters.                                   | Use valid parameters and try again.                                        |

| Status Code | Error Code     | Error Message                             | Description                                           | Solution                                                     |
|-------------|----------------|-------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------|
| 400         | SFS.TURBO.0026 | Invalid tag value param                   | The resource tag value contains invalid characters.   | Use valid parameters and try again.                          |
| 400         | SFS.TURBO.0027 | Invalid security group                    | Invalid security group.                               | Use valid parameters and try again.                          |
| 400         | SFS.TURBO.0028 | Invalid crypt key                         | Invalid KMS key.                                      | Use valid parameters and try again.                          |
| 400         | SFS.TURBO.0029 | Subnet has not enough ips                 | Insufficient IP addresses in the subnet.              | Use valid parameters and try again.                          |
| 400         | SFS.TURBO.0030 | Ecs resource not enough                   | The ECS specification is sold out in the selected AZ. | Change the AZ and try again.                                 |
| 400         | SFS.TURBO.0031 | cache type not exist                      | The cache type is not found.                          | Use a valid cache type.                                      |
| 400         | SFS.TURBO.0032 | EVS Resource Not Enough                   | Insufficient EVS resources.                           | Enlarge EVS resources.                                       |
| 500         | SFS.TURBO.0033 | Get Client Ips Error                      | Failed to obtain client IP addresses.                 | Try again. If the fault persists, contact technical support. |
| 400         | SFS.TURBO.0034 | dedicated storage resource not enough     | Insufficient resources in the dedicated storage pool. | Expand the storage pool.                                     |
| 400         | SFS.TURBO.0035 | The current type does not support backup. | Unsupported type for backup.                          | Unsupported type for backup.                                 |

| Status Code | Error Code     | Error Message                                       | Description                                          | Solution                                                     |
|-------------|----------------|-----------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------|
| 500         | SFS.TURBO.0036 | Failed to obtain the used capacity of the directory | Failed to obtain the used capacity of the directory. | Try again. If the fault persists, contact technical support. |
| 400         | SFS.TURBO.0037 | Operation conflict, client retry                    | Operation conflict.                                  | Try again with valid operations.                             |
| 400         | SFS.TURBO.0038 | unknown error                                       | Unknown error.                                       | Contact technical support.                                   |
| 400         | SFS.TURBO.0039 | The VIP quota is insufficient                       | Insufficient virtual IP address quota.               | Apply for a higher quota.                                    |
| 400         | SFS.TURBO.0040 | Insufficient Security Group Quota                   | Insufficient security group quota.                   | Apply for a higher quota.                                    |
| 400         | SFS.TURBO.0041 | Operation is not allowed                            | File system version too early.                       | Contact technical support.                                   |
| 404         | SFS.TURBO.0042 | Invalid NIC ID                                      | The specified NIC ID is not found or is empty.       | Use valid parameters and try again.                          |
| 400         | SFS.TURBO.0100 | Invalid file system path                            | Invalid file system path.                            | Use a valid file system path.                                |
| 404         | SFS.TURBO.0101 | The file system path does not exist                 | The file system path is not found.                   | Select a valid file system path.                             |
| 400         | SFS.TURBO.0102 | The file system path is not a directory             | The file system path is not a directory.             | Select a valid file system path.                             |
| 400         | SFS.TURBO.0103 | The file system is being processed                  | The file system is being processed.                  | Wait until the processing is complete.                       |

| Status Code | Error Code     | Error Message                                    | Description                                              | Solution                                                     |
|-------------|----------------|--------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------|
| 500         | SFS.TURBO.0104 | Failed to import or export OBS data              | Failed to import or export OBS data.                     | Try again. If the fault persists, contact technical support. |
| 500         | SFS.TURBO.0105 | Failed to obtain OBS import and export task data | Failed to obtain the OBS import and export data.         | Try again. If the fault persists, contact technical support. |
| 400         | SFS.TURBO.0106 | The OBS task does not exist                      | The OBS task is not found.                               | Select an existing OBS task or create an OBS task.           |
| 400         | SFS.TURBO.0107 | OBS protocol error                               | Backend parameter <b>type</b> is incorrectly configured. | Contact technical support.                                   |
| 400         | SFS.TURBO.0108 | The OBS endpoint name is incorrect               | Incorrect OBS domain name.                               | Contact technical support.                                   |
| 400         | SFS.TURBO.0109 | The OBS bucket name is incorrect                 | Incorrect OBS bucket name.                               | Use the correct OBS bucket name.                             |
| 400         | SFS.TURBO.0110 | OBS agent error                                  | The import or export task failed.                        | Contact technical support.                                   |
| 400         | SFS.TURBO.0111 | The OBS configuration list is empty              | The OBS configuration list is empty.                     | Use valid OBS configuration information.                     |

## 11.3 General Purpose File System Error Codes

If an API calling fails, no result data is returned. You can locate the cause of the error according to the error code of each API. If an API calling fails, HTTP status code 3xx, 4xx or 5xx is returned. The response body contains the specific error code and information. If you are unable to identify the cause of an error, contact

customer service and provide the error code so that we can help you solve the problem as soon as possible.

### Error Response Syntax

When an error occurs, the response header information contains:

- Content-Type: application/xml
- HTTP error status code 3xx, 4xx, or 5xx

The response body also contains information about the error. The following is an error response example that shows common elements in the Representational State Transfer (REST) error response body.

```
<?xml version="1.0" encoding="UTF-8"?>
<Error>
<Code>NoSuchKey</Code>
<Message>The resource you requested does not exist</Message>
<Resource>/example-filessystem/object</Resource>
<RequestId>001B21A61C6C0000013402C4616D5285</RequestId>
<HostId>RkRCRDJENDc5MzdGQkQ4OUY3MTI4NTQ3NDk2Mjg0M0FB
QUFBQUFBYmJiYmJiYmJD</HostId>
</Error>
```

**Table 11-1** describes the meaning of each element.

**Table 11-1** Error response elements

| Element   | Description                                                                                                                              |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------|
| Error     | Root element that describes the error in an XML response body                                                                            |
| Code      | HTTP return code that corresponds to the error in the XML response body. For details about error codes, see <a href="#">Table 11-2</a> . |
| Message   | Error details in the XML response body. For details about error messages, see <a href="#">Table 11-2</a> .                               |
| RequestId | ID of the request whose error response is returned. The ID is used for locating the error.                                               |
| HostId    | ID of the server that returns an error response                                                                                          |
| Resource  | File system or object related to an error.                                                                                               |

 **NOTE**

Some error responses contain more detailed information. It is recommended that all error information be logged for easier rectification of errors.

### Description

If SFS encounters an error when processing a request, a response containing the error code and description will be returned. [Table 11-2](#) shows the General Purpose File System error codes.

**Table 11-2** Error codes

| Status Code           | Error Code                         | Error Message                                                                                                          | Solution                                                                                                                           |
|-----------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 301 Moved Permanently | PermanentRedirect                  | The requested file system can be accessed only through the specified address. Send subsequent requests to the address. | Send the request to the returned redirection address.                                                                              |
| 301 Moved Permanently | WebsiteRedirect                    | The website request lacks <b>bucketName</b> .                                                                          | Put the file system name in the request and try again.                                                                             |
| 307 Moved Temporarily | TemporaryRedirect                  | Temporary redirection. If the DNS is updated, the request is redirected to the file system.                            | The system automatically redirects the request or sends the request to the redirection address.                                    |
| 400 Bad Request       | BadDigest                          | The object content MD5 value specified by the client is inconsistent with that received by the system.                 | Check whether the MD5 value carried in the header is the same as that calculated by the message body.                              |
| 400 Bad Request       | BadDomainName                      | The domain name is invalid.                                                                                            | Use a valid domain name.                                                                                                           |
| 400 Bad Request       | BadRequest                         | Invalid request parameters.                                                                                            | Modify the parameters according to the error details in the message body.                                                          |
| 400 Bad Request       | IllegalLocationConstraintException | A request without <b>Location</b> is sent for creating a file system in a non-default region.                          | Send the file system creation request to the default region, or send the request with the <b>Location</b> of a non-default region. |
| 400 Bad Request       | InvalidArgument                    | Invalid parameter.                                                                                                     | Modify the parameter according to the error details in the message body.                                                           |
| 400 Bad Request       | InvalidBucket                      | The file system to be accessed does not exist.                                                                         | Try again with another file system name.                                                                                           |

| Status Code     | Error Code                | Error Message                                                                                        | Solution                                                                                                    |
|-----------------|---------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 400 Bad Request | InvalidBucketName         | The file system name in the request is too long or contains special characters that are not allowed. | Try again with another file system name.                                                                    |
| 400 Bad Request | InvalidLocationConstraint | The specified <b>Location</b> in the file system creation request is invalid or does not exist.      | Correct the <b>Location</b> in the file system creation request.                                            |
| 400 Bad Request | InvalidPolicyDocument     | The content of the form does not meet the conditions specified in the policy document.               | Modify the policy in the constructed form according to the error details in the message body and try again. |
| 400 Bad Request | InvalidRedirectLocation   | Invalid redirect location.                                                                           | Specifies the correct IP address.                                                                           |
| 400 Bad Request | InvalidRequest            | Invalid request.                                                                                     | Modify the parameter according to the error details in the message body.                                    |
| 400 Bad Request | InvalidRequestBody        | The request body is invalid. The request requires a message body but no message body is uploaded.    | Upload the message body in the correct format.                                                              |
| 400 Bad Request | KeyTooLongError           | The provided key is too long.                                                                        | Use a shorter key.                                                                                          |
| 400 Bad Request | MalformedACLError         | The provided XML file is in an incorrect format or does not meet format requirements.                | Use the correct XML format to retry.                                                                        |
| 400 Bad Request | MalformedError            | The XML format in the request is incorrect.                                                          | Use the correct XML format to retry.                                                                        |
| 400 Bad Request | MalformedLoggingStatus    | The XML format of <b>Logging</b> is incorrect.                                                       | Use the correct XML format to retry.                                                                        |
| 400 Bad Request | MalformedQuotaError       | The Quota XML format is incorrect.                                                                   | Use the correct XML format to retry.                                                                        |
| 400 Bad Request | MalformedXML              | An XML file of a configuration item is in incorrect format.                                          | Use the correct XML format to retry.                                                                        |

| Status Code     | Error Code              | Error Message                                                                                                                                                   | Solution                                                             |
|-----------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 400 Bad Request | MetadataTooLarge        | The size of the metadata header has exceeded the upper limit.                                                                                                   | Reduce the size of the metadata header.                              |
| 400 Bad Request | MissingRegion           | No region contained in the request and no default region defined in the system.                                                                                 | Carry the region information in the request.                         |
| 400 Bad Request | MissingRequestBodyError | This error code is returned after you send an empty XML file.                                                                                                   | Provide the correct XML file.                                        |
| 400 Bad Request | MissingRequiredHeader   | Required headers are missing in the request.                                                                                                                    | Provide required headers.                                            |
| 400 Bad Request | MissingSecurityHeader   | A required header is not provided.                                                                                                                              | Provide required headers.                                            |
| 400 Bad Request | TooManyBuckets          | You have attempted to create more file systems than allowed.                                                                                                    | Delete some file systems and try again.                              |
| 400 Bad Request | TooManyWrongSignature   | The request is rejected due to high-frequency errors.                                                                                                           | Replace the Access Key and try again.                                |
| 400 Bad Request | UnexpectedContent       | The request requires a message body which is not carried by the client, or the request does not require a message body but the client carries the message body. | Try again according to the instruction.                              |
| 400 Bad Request | ContentSHA256Mismatch   | The object's SHA-256 value calculated by the client is different from that calculated by the server.                                                            | Check whether the SHA-256 value calculated by the client is correct. |
| 403 Forbidden   | AccessDenied            | Access denied, because the request does not carry a date header or the header format is incorrect.                                                              | Provide a correct date header in the request.                        |
| 403 Forbidden   | DeregisterUser          | The user has been deregistered.                                                                                                                                 | Top up or register a new account.                                    |

| Status Code      | Error Code                    | Error Message                                                                                                                                                                                                                                                                                                               | Solution                                                                                                                                                              |
|------------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 403<br>Forbidden | InArrearOrInsufficientBalance | The subscriber owes fees or the account balance is insufficient, and the subscriber does not have the permission to perform an operation.                                                                                                                                                                                   | Top up.                                                                                                                                                               |
| 403<br>Forbidden | InvalidAccessKeyId            | The access key ID provided by the customer does not exist in the system.                                                                                                                                                                                                                                                    | Provide correct access key Id.                                                                                                                                        |
| 403<br>Forbidden | RequestTimeTooSkewed          | There was a large time offset between the OBS server time and the time when the client initiated a request.<br><br>For security purposes, OBS verifies the time offset between the client and server. If the offset is longer than 15 minutes, the OBS server will reject your requests and this error message is reported. | Check whether there is a large time offset between the client time and server time. If there is, adjust the client time based on your local time (UTC) and try again. |
| 403<br>Forbidden | SignatureDoesNotMatch         | The provided signature does not match the signature calculated by the system.                                                                                                                                                                                                                                               | Check your secret access key and signature algorithm. For details, <a href="#">Why Don't the Signatures Match?</a>                                                    |
| 403<br>Forbidden | VirtualHostDomainRequired     | Virtual hosting access domain name is not used.                                                                                                                                                                                                                                                                             | Use the virtual hosting access domain name. For details, see <a href="#">Constructing a Request</a> .                                                                 |
| 403<br>Forbidden | Unauthorized                  | The user has not been authenticated in real name.                                                                                                                                                                                                                                                                           | Authenticate the user's real name and try again.                                                                                                                      |
| 403<br>Forbidden | RequestPayerDenied            | This is a requester-pays file system.                                                                                                                                                                                                                                                                                       | Carry the header <b>x-obs-request-payer: requester</b> in the access request.                                                                                         |

| Status Code             | Error Code                   | Error Message                                                                                                                            | Solution                                                               |
|-------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 404 Not Found           | NoSuchBucket                 | The specified file system does not exist.                                                                                                | Create a file system and perform the operation again.                  |
| 404 Not Found           | NoSuchLifecycleConfiguration | The requested lifecycle rule does not exist.                                                                                             | Configure a lifecycle rule first.                                      |
| 405 Method Not Allowed  | MethodNotAllowed             | The specified method is not allowed against the requested resource.<br><br>The message "Specified method is not supported." is returned. | The method is not allowed.                                             |
| 408 Request Timeout     | RequestTimeout               | The socket connection to the server has no read or write operations within the timeout period.                                           | Check the network and try again, or contact technical support.         |
| 409 Conflict            | BucketAlreadyExists          | The requested file system name already exists. The file system namespace is shared by all users.                                         | Try again with another file system name.                               |
| 409 Conflict            | BucketAlreadyOwnedByYou      | Your previous request for creating the named file system succeeded and you already own it.                                               | No further action is required.                                         |
| 409 Conflict            | BucketNotEmpty               | The file system you tried to delete is not empty.                                                                                        | Delete the objects in the file system and then delete the file system. |
| 409 Conflict            | ServiceNotSupported          | The request method is not supported by the server.                                                                                       | Not supported by the server. Contact technical support.                |
| 411 Length Required     | MissingContentLength         | The HTTP header Content-Length is not provided.                                                                                          | Provide the Content-Length header.                                     |
| 412 Precondition Failed | PreconditionFailed           | At least one of the specified preconditions is not met.                                                                                  | Modify according to the condition prompt in the returned message body. |

| Status Code               | Error Code            | Error Message                                        | Solution                                            |
|---------------------------|-----------------------|------------------------------------------------------|-----------------------------------------------------|
| 500 Internal Server Error | InternalError         | An internal error occurs. Retry later.               | Contact technical support.                          |
| 501 Not Implemented       | ServiceNotImplemented | The request method is not implemented by the server. | Not supported currently. Contact technical support. |
| 503 Service Unavailable   | ServiceUnavailable    | The server is overloaded or has internal errors.     | Try later or contact technical support.             |
| 503 Service Unavailable   | SlowDown              | Too frequent requests.                               | Reduce your request frequency.                      |

## 11.4 Obtaining Access Keys (AK/SK)

### NOTE

To access SFS using access keys as an IAM user, the programmatic access must be enabled. For details, see [Viewing or Modifying IAM User Information](#).

When calling an API, you need to use the AK/SK to verify the signature. To obtain the AK/SK, perform the following steps:

- Step 1** Log in to the console.
- Step 2** Hover the cursor on the username in the upper right corner and select **My Credentials** from the drop-down list.
- Step 3** On the **My Credentials** page, click **Manage Access Keys**.
- Step 4** In the navigation pane, select **Access Keys**.
- Step 5** Click **Add Access Key**. The **Add Access Key** dialog box is displayed.
- Step 6** Enter the password for login.
- Step 7** Enter the authentication code received in your email or mobile phone.

### NOTE

For users created through IAM, if no email address or mobile number is specified during user creation, only the login password needs to be authenticated.

- Step 8** Click **OK** to download the access key file.

### NOTE

Keep the AK/SK file properly to prevent information leakage.

----End

## 11.5 Obtaining a Project ID

### Scenarios

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

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

### Obtain the Project ID by Calling an API

You can obtain a project ID by calling the API used to [query projects based on specified criteria](#).

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

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

```
{
  "projects": [
    {
      "domain_id": "65382450e8f64ac0870cd180d14e684b",
      "is_domain": false,
      "parent_id": "65382450e8f64ac0870cd180d14e684b",
      "name": "project_name",
      "description": "",
      "links": {
        "next": null,
        "previous": null,
        "self": "https://www.example.com/v3/projects/a4a5d4098fb4474fa22cd05f897d6b99"
      },
      "id": "a4a5d4098fb4474fa22cd05f897d6b99",
      "enabled": true
    }
  ],
  "links": {
    "next": null,
    "previous": null,
    "self": "https://www.example.com/v3/projects"
  }
}
```

### Obtain the Project ID from the Console

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

1. Log in to the management console.
2. Click the username and select **My Credentials** from the drop-down list.  
On the **API Credentials** page, view the project ID in the project list.

Figure 11-1 Viewing the project ID

