Object Storage Service

Tool Guide (obsutil)

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Contents

1 Introduction to obsutil

obsutil is a command line tool for accessing and managing OBS on HUAWEI CLOUD. You can use this tool to perform common configurations on OBS, such as creating buckets, uploading and downloading files/folders, and deleting files/folders. If you are familiar with command line interface (CLI), obsutil is recommended for batch processing and automated tasks.

obsutil is compatible with the Windows, Linux, and macOS operating systems (OSs). **Table 1-1** lists the recommended OS versions. To obtain the obsutil download links and methods for different OSs, refer to **Downloading obsutil**.

Table 1-1 Recommended OS versions for using obsutil

OS	Recommended Version
Windows	• Windows 7 • Windows 8 • Windows 10 • Windows Server 2016
Linux	• SUSE 11 • EulerOS 2 • CentOS 7
macOS	macOS 10.13.4

Tool Advantages

obsutil features the following advantages:

1. Simple and easy to use
2. Lightweight and installation-free
3. Compatible with Windows, Linux, and macOS operating systems
4. Diversified configurations and excellent performance

Application Scenarios

- Automated backup and archiving, for example, periodically uploading local data to OBS.
- Scenarios that cannot be implemented using other tools such as OBS Browser +, for example, synchronously uploading, downloading, and copying objects.

Functions

Table 1-2 lists obsutil functions.

Table 1-2 obsutil functions

Function	Description
Basic operations on buckets	Create buckets of different storage classes in specific regions, delete buckets, and obtain the bucket list and configuration information.
Basic operations on objects	Manage objects, including uploading, downloading, deleting, and listing objects. Supported operations are detailed as follows: • Upload one or more files or folders. • Upload large files in multiple parts. • Synchronously upload, download, and copy incremental objects. • Copy a single object or copy multiple objects in batches by object name prefix. • Move a single object or move objects in batches by object name prefix. • Resume failed upload, download, or copy tasks.
Logging	Allows you to configure logging on the client side to record operations on buckets and objects for statistics analysis later.

Advanced bucket and object management operations are being developed continuously, and will be available in later versions of obsutil. You can also go to OBS Console and explore more. For details, see **OBS Console Operation Guide**.

Command Line Structure

The obsutil command line structures are as follows:

- In Windows

  obsutil *command [parameters...] [options...]*
- In Linux or macOS

  ./obsutil *command [parameters...] [options...]*

NOTE

- **command** indicates the command to be executed, for example, **ls** or **cp**.
- **parameters** indicates the basic parameters (mandatory) of the command, for example, bucket name when creating a bucket.
- **options** indicates the additional parameters (optional) of the command. Additional parameters must be preceded with a hyphen (-) when you run the command.
- The square brackets ([]) are not part of the command. Do not enclose parameter values with them when entering a command.
- If the command contains special characters including ampersands (&), angle brackets (<) and (>), and spaces, they need to be escaped using quotation marks. Use single quotation marks for Linux or macOS and quotation marks for Windows.
- Additional parameters can be input in the **-***key***=***value* or **-***key value* format, for example, **-acl=private**, or **-acl private**. There is no difference between the two formats. Select either one as you like.
- In Windows, you can directly execute **obsutil.exe** to enter an interactive command mode. In this mode, you can input *command [parameters...] [options...]* without **obsutil** to run a command. An example is provided as follows:

```
Enter "exit" or "quit" to logout
Enter "help" or "help command" to show help docs
Input your command:
-->ls -limit=3 -s
obs://bucket-001
obs://bucket-002
obs://bucket-003
Bucket number is: 3

Input your command:
-->
```

- If you use SSH to remotely log in to the Linux or macOS for running obsutil commands, you are advised to set **TMOUT=0** to prevent the program from exiting due to the expiration of the SSH session.

2 Download and Installation

Download Links

Table 2-1 lists the download links of obsutil for different operating systems.

Table 2-1 Download links of obsutil

Operating System	Download Link	How to Use	View Help
Windows (64-bit)	obsutil_windows64 obsutil_windows64_sha256	After the download is complete, click here to see how to quickly get started with obsutil. Basic functions • Listing Buckets • Uploading an Object • Listing Objects	You can also click here to learn how to use the **help** command to get familiar with more functions of obsutil.
Linux AMD (64-bit)	obsutil_linux_amd64 obsutil_linux_amd64_sha256		
Linux ARM (64-bit)	obsutil_linux_arm64 obsutil_linux_arm64_sha256		
macOS (64-bit)	obsutil_mac64 obsutil_mac64_sha256		

NOTE

For details about the version revision records of obsutil, see ChangeLog.

Quick Installation

Methods of downloading obsutil vary according to different operating systems. obsutil is an installation-free tool and can be used after the package is downloaded and decompressed.

- **In Windows**
  a. Directly download the obsutil package to your local PC using the corresponding download link.

b. After the download completes, decompress the package to a specified folder.

c. Double-click **obsutil.exe** in the decompressed folder and then you can use the tool.

NOTE

Alternatively, you can open the CLI to go to the upper-level directory of **obsutil.exe** and run obsutil commands. The command line structures of the two modes are different. For details, see **Command Line Structure**.

- **In Linux**

a. Open the CLI and run the **wget** command to download the **obsutil** tool package.

```
wget https://obs-community-intl.obs.ap-southeast-1.myhuaweicloud.com/obsutil/current/obsutil_linux_amd64.tar.gz
```

NOTE

You can also download the obsutil package from a PC running the Windows operating system and then use a cross-platform transfer tool (such as WinSCP) to transfer the package to your host running the Linux operating system.

b. Run the following command in the directory where the tool package resides:

```
tar -xzvf obsutil_linux_amd64.tar.gz
```

c. Go to the directory where obsutil resides and run the following command to grant the execute permission to obsutil:

```
chmod 755 obsutil
```

- **macOS**

a. Directly download the obsutil package to your local PC using the corresponding download link.

b. After the download completes, decompress the package to a specified folder.

c. Open the CLI, go to the directory where obsutil resides, and run the following command to grant the execute permission to obsutil:

```
chmod 755 obsutil
```

NOTE

If you need to use obsutil on a HUAWEI CLOUD ECS, see the reference section below to configure access to OBS over intranet to save traffic costs.

- **Accessing OBS over Intranet by Using obsutil on a Linux ECS**

3 Getting Started

3.1 Preparing the Environment

To use obsutil, you need to register a cloud service account, enable OBS, and obtain the access keys (AK and SK) first.

Step 1 Register a cloud service account.

Before using OBS, ensure that you have a cloud service account.

1. Open a browser.
2. Log in to the HUAWEI CLOUD website at **huaweicloud.com/intl/en-us/**.
3. In the upper right corner of the page, click **Register**.
4. Enter the registration information and click **Register**.

Step 2 Enable OBS.

Ensure that your account balance is sufficient before using OBS.

1. Log in to OBS Console.
2. Click **Fees** in the upper right corner of the page. The **Billing Center** page is displayed.
3. Then click **Top Up**.
4. Top up the account as prompted.
5. Go back to the management console page after the recharging is successful.
6. Click **Service List** on the top menu bar. Choose **Storage** > **Object Storage Service** to log in to OBS Console.

Step 3 (Optional) Create an IAM user.

For data security, it is recommended that you do not use the account directly to access OBS. Through the Identity and Access Management (IAM) service, you can create a user who has the permission to access OBS resources and manage buckets and objects on obsutil. If you do not need to use any IAM user, skip this step.

1. On the top navigation bar of the console, choose **Service List** > **Management & Deployment** > **Identity and Access Management**.

2. On the displayed IAM console page, create a user group with OBS permissions configured.

   For details, see **Creating a User Group**. After the user group is created, locate the row that displays **Global service** > **OBS** in the **User Group Permissions**, and click **Configure Policy** in the row to set OBS permissions for the user group.

   NOTE

   For details about OBS policies, see **Permissions Management**

3. Create a user.

   For details, see **Creating a User**. When creating a user, set the **User Group** to the one created in **Step 3.2** with OBS permissions configured.

   NOTE

   If the user group is not configured with OBS permissions, you can configure fine-grain permissions on OBS Console through bucket policies or object policies. For details, see **Permission Control**.

Step 4 Obtain access keys.

OBS uses AKs and SKs in user accounts for signature verification to ensure that only authorized accounts can access specified OBS resources. Detailed explanations about AK and SK are as follows:

- Access key ID (AK): indicates the ID of the access key, which is a unique identifier used together with a secret access key to sign requests cryptographically.
- Secret access key (SK): indicates the private key used together with its associated AK to cryptographically sign requests. The AK and SK are used together to identify a request sender to prevent the request from being modified.

NOTE

A user can create a maximum of two valid access keys.

Create access keys as follows:

1. In the upper right corner of the console page, select **My Credential** under the username.
2. On the **My Credentials** page, select **Access Keys** in the navigation pane on the left.
3. On the **Access Keys** page, click **Add Access Key**.

   NOTE

   A user can create a maximum of two valid access keys.

4. In the **Add Access Key** dialog box that is displayed, enter the password and its verification code.

   NOTE

   - If you have not bound an email address or mobile number, enter only the password.
   - If you have bound an email address and a mobile number, you can select the verification by email or mobile phone.

5. Click **OK**.
6. In the **Download Access Key** dialog box that is displayed, click **OK** to save the access keys to your browser's default download path.

   NOTE

   Keep the access keys properly to prevent information leakage. If you click **Cancel** in the dialog box, the access keys will not be downloaded, and you cannot download them later. Re-create access keys if required.

7. Open the downloaded **credentials.csv** file to obtain the access keys (AK and SK).

   NOTE

   In the access key file, the value in the **Access Key ID** column is the AK, and the value in the **Secret Access Key** column is the SK.

----End

3.2 Performing Initial Configuration

Before using obsutil, you need to configure the interconnection between obsutil and OBS, including the endpoint and access keys (AK and SK) of OBS. You can use obsutil to perform operations on OBS buckets and objects only after obtaining the OBS authentication.

Prerequisites

- You have downloaded the software package of obsutil. For details, see **Download and Installation**.
- You have obtained the enabled regions and endpoints of OBS. For details, see **Regions and Endpoints**. If you want to access OBS in the AP-Hong Kong region, the actual OBS service address is: **https://obs.ap-southeast-3.myhuaweicloud.com**.
- You have obtained the access keys (AK and SK). For details about how to obtain access keys, see **Preparing the Environment**. Click **here** to open the access key management page.

Configuration Method

Method 1: Run the **config** command to initialize obsutil. For details about the **config** command, see **Updating a Configuration File**. The following is an example:

- In Windows
  ```
  obsutil config -i=ak -k=sk -e=endpoint
  ```
- In Linux or macOS
  ```
  ./obsutil config -i=ak -k=sk -e=endpoint
  ```


NOTE

- After running the preceding commands, a configuration file **.obsutilconfig** is automatically generated in the same home directory of the user who executes obsutil commands (the **~** directory in Linux or macOS, and the **C:\Users***<Username>* directory in Windows). **.obsutilconfig** contains all the configuration information of obsutil.
- For details about the parameters in the **.obsutilconfig** file, see **Parameter Description**.
- The **.obsutilconfig** file contains the AK and SK information of a user. Therefore, it is hidden by default to prevent key disclosure. To query the file, run the following command in the home directory of the user who executes obsutil commands.
  - In Windows
    ```
    dir
    ```
  - In Linux or macOS
    ```
    ls -a
    ```
    or
    ```
    ls -al
    ```
- obsutil encrypts the AK and SK in the **.obsutilconfig** file to ensure key security.
- Note: You can use the **-i**, **-k**, and **-e** options to configure user information for authentication. You can run the **history** command in the Linux OS to query the parameter values. Exercise caution when performing this operation.

Method 2: You can use **Configuring Auto Obtaining of Access Keys for obsutil** to implement initial configuration.

Checking the Connectivity

After the configuration is complete, you can check whether it is correct by running the following commands:

- In Windows
  ```
  obsutil ls -s
  ```
- In Linux or macOS
  ```
  ./obsutil ls -s
  ```

Check the configuration result based on the command output:

- If the command output contains **Bucket number is:**, the configuration is correct.
- If the command output contains **Http status [403]**, the access keys are incorrectly configured.
- If the command output contains **A connection attempt failed**, then OBS cannot be accessed. In this case, check the network condition.

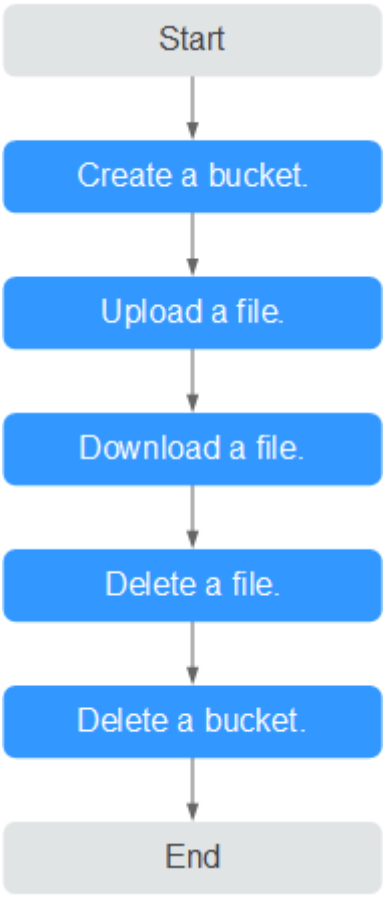
NOTE

If the command output contains **Http status [403]**, you may not have the required permissions for obtaining the bucket list. In this case, further locate the root cause based on the specific situation.

3.3 Quick Start

This section uses the Linux OS as an example to describe how to use obsutil to perform basic data operations in OBS. For details, see **Figure 3-1**.

Figure 3-1 obsutil flow for a quick start



Prerequisites

- You have obtained obsutil and completed initial configuration.
- The directory saving the tool is accessed.

Procedure

Step 1 Run the **./obsutil mb obs://bucket-test -location=cn-south-1** command to create a new bucket named **bucket-test** in the CN South-Guangzhou region.

```
./obsutil mb obs://bucket-test -location=cn-south-1

Create bucket [bucket-test] successfully!
```

NOTE

In the preceding command, parameter **location** indicates the region where a bucket is created. It is mandatory only when the endpoint set during initial configuration belongs to any other regions than the default one CN North-Beijing1 (cn-north-1). Click **here** to query currently valid regions.

Step 2 Run the **./obsutil cp /temp/test.txt obs://bucket-test/test.txt** command to upload the **test.txt** file to bucket **bucket-test**.

```
./obsutil cp /temp/test.txt obs://bucket-test/test.txt

Parallel:      5                Jobs:         5
Threshold:     52428800         PartSize:     5242880
Exclude:                        Include:
```



```
VerifyLength:  false              VerifyMd5:     false
CheckpointDir: /temp/.obsutil_checkpoint

test.txt:[============================================] 100.00% 48.47 KB/s 0s
Upload successfully, 4.44KB, /temp/test.txt --> obs://bucket-test1/test.txt
```

Step 3 Run the **./obsutil cp obs://bucket-test/test.txt /temp/test1.txt** command to download **test.txt** from bucket **bucket-test** to a local PC.

```
./obsutil cp obs://bucket-test/test.txt /temp/test1.txt

Parallel:      5                  Jobs:          5
Threshold:     52428800           PartSize:      5242880
Exclude:                          Include:
VerifyLength:  false              VerifyMd5:     false
CheckpointDir: /temp/.obsutil_checkpoint

test.txt:[============================================] 100.00% 775.52 KB/s 0s
Download successfully, 4.44KB, obs://bucket-test1/test.txt --> /temp/test1.txt
```

Step 4 Run the **./obsutil rm obs://bucket-test/test.txt -f** command to delete object **test.txt** from bucket **bucket-test**.

```
./obsutil rm obs://bucket-test/test.txt -f

Delete object [test.txt] in the bucket [bucket-test] successfully!
```

Step 5 Run the **./obsutil rm obs://bucket-test -f** command to delete bucket **bucket-test**.

```
./obsutil rm obs://bucket-test -f

Delete bucket [bucket-test] successfully!
```

----End

4 Bucket Commands

4.1 Creating a Bucket

Function

You can use this command to create a bucket. A bucket name must be unique in OBS. One account can create a maximum of 100 buckets.

NOTE

If you create a bucket and name it the same as an existing one in the same account and region, no error will be reported and status code 200 is returned. The bucket properties comply with those set in the first creation request. In other cases, creating a bucket with the same name as an existing one will receive the status code 409, indicating that the bucket already exists.

NOTICE

If the configured endpoint is a global domain name, you may need to wait several minutes before uploading objects to the created bucket. Therefore, set the endpoint to a regional domain name according to **Performing Initial Configuration** if you want to upload objects instantly to the bucket.

Command Line Structure

- In Windows
  ```
  obsutil mb obs://bucket [-acl=xxx] [-sc=xxx] [-location=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil mb obs://bucket [-acl=xxx] [-sc=xxx] [-location=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil mb obs://bucket-test** command to create a bucket. The creation is successful.


```
obsutil mb obs://bucket-test

Create bucket [bucket-test] successfully, request id [0000016979E1D2EA860BB5E80A6B8FCC]
```

- Take the Windows OS as an example. Run the **obsutil mb obs://bucket001** command to create a namesake bucket. The creation fails.

```
obsutil mb obs://bucket001

Create bucket [bucket001] failed, http status [409], error code [BucketAlreadyExists], error message [The requested bucket name is not available. The bucket namespace is shared by all users of the system. Please select a different name andtry again.], request id [04030000016757F31A0333281A6B1E92]
```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name **NOTE** A bucket name must comply with the following rules: • Contains 3 to 63 characters, including lowercase letters, digits, hyphens (-), and periods (.), and starts with a digit or letter. • Cannot be an IP address. • Cannot start or end with a hyphen (-) or period (.). • Cannot contain two consecutive periods (.), for example, **my..bucket**. • Cannot contain periods (.) and hyphens (-) adjacent to each other, for example, **my-.bucket** or **my.-bucket**.
acl	Optional (additional parameter)	Access control policies that can be specified when creating a bucket. Possible values are: • private • public-read • public-read-write **NOTE** The preceding three values indicate private read and write, public read, and public read and write.
sc	Optional (additional parameter)	Default bucket storage class that can be specified when creating a bucket. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.

Parameter	Optional or Mandatory	Description
location	Mandatory unless the region where the OBS service resides is not the default region (additional parameter)	Region where the bucket resides. **NOTE** This parameter indicates the region where a bucket will be created. It is mandatory only when the endpoint belongs to any other regions than the default one CN North-Beijing1 (cn-north-1). Click **here** to query currently valid regions.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

4.2 Listing Buckets

Function

You can use this command to obtain the bucket list. In the list, bucket names are displayed in lexicographical order.

Command Line Structure

- In Windows
  ```
  obsutil ls [-s] [-sc] [-j=1] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil ls [-s] [-sc] [-j=1] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil ls -limit=5** command to obtain the bucket list.
  ```
  obsutil ls -limit=5
  ```



```
Bucket                  CreationDate            Location        BucketType
obs://bucket001         2018-09-03T01:53:02Z    example         OBJECT

obs://bucket002         2018-11-01T01:40:01Z    example         OBJECT

obs://bucket003         2018-10-25T11:45:45Z    example         OBJECT

obs://bucket004         2018-10-26T02:33:09Z    example         OBJECT

obs://bucket005         2018-10-26T02:34:50Z    example         OBJECT

Bucket number is: 5
```

Parameter Description

Parameter	Optional or Mandatory	Description
s	Optional (additional parameter)	Displays simplified query result. **NOTE** In the simplified format, the returned result contains only the bucket name.
sc	Optional (additional parameter)	Queries the storage classes of the buckets when listing buckets.
j	Optional (additional parameter). It must be used together with **sc**.	Indicates the maximum number of concurrent tasks for querying the bucket storage class. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.
limit	Optional (additional parameter)	Maximum number of buckets that can be queried. If the value is less than 0, all buckets are listed. If it is left blank, a maximum of 1000 buckets can be listed by default.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

NOTE

In the bucket listing result, the **BucketType** field indicates the bucket type; **OBJECT** indicates the bucket for object storage.

4.3 Querying Bucket Properties

Function

You can use this command to query the basic properties of a bucket, including its default storage class, region, version ID, storage usage, bucket quota, and the number of objects in the bucket.

Command Line Structure

- In Windows
  ```
  obsutil stat obs://bucket [-acl] [-bf=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil stat obs://bucket [-acl] [-bf=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil stat obs://bucket-test** command to query the basic properties of bucket **bucket-test**.
  ```
  obsutil stat obs://bucket-test

  Bucket:
    obs://bucket-test
  StorageClass:
    standard

  ObsVersion:
    3.0
  ObjectNumber:
    8005
  Size:
    320076506
  Quota:
    0
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
acl	Optional	Queries the access control policies of the bucket while querying bucket properties.

Parameter	Optional or Mandatory	Description
bf	Optional (additional parameter)	Display format of the used bucket capacity (in bytes) Value options: • human-readable • raw **NOTE** If this parameter is not configured, the display format of the used bucket capacity (in bytes) is determined by the **humanReadableFormat** parameter in the configuration file.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Field	Description
Bucket	Bucket name
StorageClass	Default storage class of the bucket
Location	Region where the bucket resides
ObsVersion	Version of the bucket
BucketType	Type of a bucket. **OBJECT** indicates a bucket for object storage.
ObjectNumber	Number of objects in the bucket

Field	Description
Size	Storage usage of the bucket, in bytes
Quota	Bucket quota. Value **0** indicates that no upper limit is set for the bucket quota.
Acl	Access control policy of the bucket

4.4 Setting Bucket Properties

Function

You can use this command to set the properties of a bucket, such as storage classes and access policies.

Command Line Structure

- In Windows
  ```
  obsutil chattri obs://bucket [-sc=xxx] [-acl=xxx] [-aclXml=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil chattri obs://bucket [-sc=xxx] [-acl=xxx] [-aclXml=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil chattri obs://bucket-test -acl=private** command to change the access control policy of the bucket to private read and write.
  ```
  obsutil chattri obs://bucket-test -acl=private

  Set the acl of bucket [bucket-test] to [private] successfully, request id [04050000016836C5DA6FB21F14A2A0C0]
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name

Parameter	Optional or Mandatory	Description
sc	Optional (additional parameter)	Default storage class of the bucket. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
acl	Optional (additional parameter)	Access control policies that can be specified for buckets. Possible values are: • private • public-read • public-read-write **NOTE** The preceding three values indicate private read and write, public read, and public read and write.

Parameter	Optional or Mandatory	Description
aclXml	Optional (additional parameter)	Access control policy of the bucket, in XML format. <AccessControlPolicy> <Owner> <ID>*ownerid*</ID> </Owner> <AccessControlList> <Grant> <Grantee> <ID>*userid*</ID> </Grantee> <Permission>*[WRITE|WRITE_ACP|READ|READ_ACP|FULL_CONTROL]*</Permission> </Grant> <Grant> <Grantee> <Canned>Everyone</Canned> </Grantee> <Permission>*[WRITE|WRITE_ACP|READ|READ_ACP|FULL_CONTROL]*</Permission> </Grant> </AccessControlList> </AccessControlPolicy> **NOTE** • **Owner**: Optional. Specify the bucket owner's ID. • In **AccessControlList**, the **Grant** field contains the authorized users. **Grantee** specifies the IDs of authorized users. **Canned** specifies the authorized user group (currently, only **Everyone** is supported). • The following permissions can be granted: WRITE (write), WRITE_ACP (write ACL), READ (read), READ_ACP (read ACL), and FULL_CONTROL (full control). **NOTICE** Because angle brackets (<) and (>) are unavoidably included in the parameter value, you must use quotation marks to enclose them for escaping when running the command. Use single quotation marks for Linux or macOS and quotation marks for Windows.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.

Parameter	Optional or Mandatory	Description
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

NOTE

Only one from **sc**, **acl**, or **aclXml** can be set for each command.

4.5 Deleting a Bucket

Function

You can use this command to delete a bucket. The bucket to be deleted must be empty (containing no objects, historical versions, or fragments).

NOTE

To delete a non-empty bucket, run the commands in **Deleting a Multipart Upload Task** and **Deleting an Object** to clear the bucket, and then run the following command to delete the bucket.

Command Line Structure

- In Windows
```
obsutil rm obs://bucket [-f] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```
- In Linux or macOS
```
./obsutil rm obs://bucket [-f] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

Examples

- Take the Windows OS as an example. Run the **obsutil rm obs://bucket-test** command to delete bucket **bucket-test**.
```
obsutil rm obs://bucket-test

Do you want delete bucket [bucket-test] ? Please input (y/n) to confirm:
y
Delete bucket [bucket-test] successfully!
```


Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
f	Optional (additional parameter)	Runs in force mode.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

4.6 Configuring a Bucket Policy

Function

You can use this command to configure a bucket policy.

Command Line Structure

- In Windows
  ```
  obsutil bucketpolicy obs://bucket -method=put -localfile=xxx [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil bucketpolicy obs://bucket -method=put -localfile=xxx [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil bucketpolicy obs://bucket -method=put -localfile=d:\temp\policy.json** command to set a bucket policy based on file **policy.json**.
  ```
  obsutil bucketpolicy obs://bucket -method=put -localfile=d:\temp\policy.json

  Put bucketPolicy succeed, requestId is [04050000016836C5DA6FB21F14A2A0C0]
  ```


Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
method	Mandatory	Specifies the method. Set this parameter to **put** when configuring a bucket policy.
localfile	Mandatory	Path of the local policy file to import
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

4.7 Obtaining a Bucket Policy

Function

You can use this command to obtain a bucket policy.

Command Line Structure

- In Windows
  ```
  obsutil bucketpolicy obs://bucket -method=get [-localfile=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil bucketpolicy obs://bucket -method=get [-localfile=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```


Examples

- Take the Windows OS as an example. Run the **obsutil bucketpolicy obs://bucket -method=get -localfile=d:\temp\policy.json** command to export the bucket policy to local file **policy.json**.

```
obsutil bucketpolicy obs://bucket -method=get -localfile=d:\temp\policy.json

Export bucketPolicy to [d:\temp\policy.json] succeed, requestId is [04050000016836C5DA6FB21F14A2A0C0]
```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
method	Mandatory	Specifies the method. Set this parameter to **gut** when obtaining a bucket policy.
localfile	Optional (additional parameter)	If this parameter is set, the policy is exported to a local file. If not set, the policy is exported in a standard manner by default.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

4.8 Deleting a Bucket Policy

Function

You can use this command to delete a bucket policy.

Command Line Structure

- In Windows
  ```
  obsutil bucketpolicy obs://bucket -method=delete [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil bucketpolicy obs://bucket -method=delete [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil bucketpolicy obs://bucket -method=delete** command to delete a bucket policy.
  ```
  obsutil bucketpolicy obs://bucket -method=delete

  Delete bucketPolicy succeed, requestId is [04050000016836C5DA6FB21F14A2A0C0]
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
method	Mandatory	Specifies the method. Set this parameter to **delete** when deleting a bucket policy.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

5 Object Commands

5.1 Creating a Folder

Function

You can use this command to create a folder in a specified bucket or local file system.

NOTICE

No error is returned if a folder with the same name as an existing one is created, and the content of the existing folder remain unchanged.

Command Line Structure

- In Windows
  - Creating a folder in a specified bucket
    ```
    obsutil mkdir obs://bucket/folder[/subfolder1/subfolder2] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Creating a folder in the local file system
    ```
    obsutil mkdir folder_url [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Creating a folder in a specified bucket
    ```
    ./obsutil mkdir obs://bucket/folder[/subfolder1/subfolder2] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Creating a folder in the local file system
    ```
    ./obsutil mkdir folder_url [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil mkdir obs://bucket-test/folder1/folder2** command to create a folder in a bucket.
  ```
  obsutil mkdir obs://bucket-test/folder1/folder2

  Create folder [obs://bucket-test/folder1/] successfully, request id [0000016979E1D23C860BB3D8E4577C5E]
  ```



```
Create folder [obs://bucket-test/folder1/folder2] successfully, request id
[0000016979E1D2B2860BB5181229C72C]
```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory when creating a folder in a specified bucket	Bucket name
folder	Mandatory when creating a folder in a specified bucket	Folder path in the bucket. This value can contain multi-level folders. Separate each level with a slash (/).
folder_url	Mandatory when creating a folder in the local file system	Folder path in the local file system. The value can be an absolute path or a relative path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

5.2 Uploading an Object

Function

You can use this command to upload one or more local files or folders to a specified path in OBS. These files can be texts, images, videos, or any other type of files.

NOTICE

Do not change the local file or folder when uploading it. Otherwise, the upload may fail or data may be inconsistent.

Restrictions

obsutil has restrictions on the size of files or folders to be uploaded. You can upload an empty file or folder of 0 bytes. You can also upload a single file or folder with a maximum size of 5 GB in normal mode or a single file with a maximum size of 48.8 TB in multipart mode.

Command Line Structure

- In Windows
  - Uploading a file
    ```
    obsutil cp file_url obs://bucket[/key] [-arcDir=xxx] [-dryRun] [-link] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=5248800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Uploading a folder
    ```
    obsutil cp folder_url obs://bucket[/key] -r [-arcDir=xxx] [-dryRun] [-link] [-f] [-flat] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Uploading multiple files/folders
    ```
    obsutil cp file1_url,folder1_url|filelist_url obs://bucket[/prefix] -msm=1 [-r] [-arcDir=xxx] [-dryRun] [-link] [-f] [-u] [-vlength] [-vmd5] [-flat] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx][-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Uploading a file
    ```
    ./obsutil cp file_url obs://bucket[/key] [-arcDir=xxx] [-dryRun] [-link] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=5248800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Uploading a folder
    ```
    ./obsutil cp folder_url obs://bucket[/key] -r [-arcDir=xxx] [-dryRun] [-link] [-f] [-flat] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Uploading multiple files/folders
    ```
    ./obsutil cp file1_url,folder1_url|filelist_url obs://bucket[/prefix] -msm=1 [-r] [-arcDir=xxx] [-dryRun] [-link] [-f] [-u] [-vlength] [-vmd5] [-flat] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx][-
    ```



```
timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

Examples

- Take the Windows OS as an example. Run the **obsutil cp d:\temp\test.txt obs://bucket-test/key** command to upload the **test.txt** file in the **temp** directory in the **D:** drive to bucket **bucket-test** and rename the file as **key**.

```
obsutil cp d:\temp\test.txt obs://bucket-test/key

Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx

[=================================================] 100.00% 1.68 MB/s 5s
Upload successfully, 8.46MB, d:\temp\test.txt --> obs://bucket-test/key
```

- Take the Windows OS as an example. Run the **obsutil cp d:\temp obs://bucket-test -f -r** command to recursively upload all files and subfolders in the **temp** directory in the **D:** drive to the **temp** folder in bucket **bucket-test**.

```
obsutil cp d:\temp obs://bucket-test -f -r

Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx

[=================================================] 100.00% 2.02 KB/s 0s
Succeed count is:   5        Failed count is:    0
Metrics [max cost:90 ms, min cost:45 ms, average cost:63.80 ms, average tps:35.71]
Task id is: 104786c8-27c2-48fc-bc6a-5886596fb0ed
```

- For more examples, see **Upload**.

Parameter Description

Parameter	Optional or Mandatory	Description
file_url	Optional for uploading multiple files/ folders Mandatory for uploading a file	Local file path **NOTE** • Do not nest paths when uploading multiple files/folders. For example, you cannot specify **/a/b/c** and **/a/b/** at the same time. • If this parameter is configured when uploading multiple files/folders, **msm** must be set to **1**. In this case, use commas (,) to separate multiple file paths, for example, **file_url1,file_url2**. • Files and folders can both be included when uploading multiple files/folders. For example, **file_url1,folder_url1,file_url2,folder_url2**.

Parameter	Optional or Mandatory	Description
folder_url	Optional for uploading multiple files/ folders Mandatory for uploading a folder	Local folder path **NOTE** • If **flat** is not configured when uploading a folder, the entire folder is uploaded. If **flat** is configured, all files in the folder are uploaded. • Do not nest paths when uploading multiple files/folders. For example, you cannot specify **/a/b/c** and **/a/b/** at the same time. • If this parameter is configured when uploading multiple files/folders, **msm** must be set to **1**. In this case, use commas (,) to separate multiple folder paths, for example, **folder_url1,folder_url2**. • Files and folders can be included when uploading multiple files/folders. For example, **file_url1,folder_url1,file_url2,folder_url2**.
filelist_url	Optional for uploading multiple files/ folders	Indicates the path of the file that contains the list of files/folders to be uploaded. If this parameter is configured, **msm** must be set to **2**. **NOTE** • The list file is in common text file formats, such as TXT and CSV. Each line in the file indicates a file or folder to be uploaded. For example: file_url1 file_url2 folder_url1 folder_url2 • Do not nest paths in the list file. For example, you cannot specify **/a/b/c** and **/a/b/** at the same time.
bucket	Mandatory	Bucket name

Parameter	Optional or Mandatory	Description
key	Optional	Indicates the object name or object name prefix specified when uploading a file, or the object name prefix specified when uploading a folder. The rules are as follows: • If this parameter is left blank when uploading a file, the file is uploaded to the root directory of the bucket and the object name is the file name. If the value ends with a slash (/), the value is used as the object name prefix when the file is uploaded, and the object name is the value plus the file name. If the value does not end with a slash (/), the file is uploaded with the value as the object name. • If this parameter is left blank when uploading a folder, the folder is uploaded to the root directory of the bucket. If the value ends with a slash (/), the value is used as the object name prefix of the folder to be uploaded. If the value does not end with a slash (/), the folder to be uploaded is prefixed with the value plus a slash (/). **NOTE** For details about how to use this parameter, see **Upload**.
fr	Optional for uploading a file (additional parameter)	Generates an operation result list when uploading a file.
flat	Optional for uploading a folder or multiple files/ folders (additional parameter)	Uploads all files in a folder but not the folder itself.
arcDir	Optional (additional parameter)	Path to which the uploaded files are archived
dryRun	Optional (additional parameter)	Conducts a dry run.

Parameter	Optional or Mandatory	Description
link	Optional (additional parameter)	Uploads the actual path of the symbolic-link file/folder **NOTICE** • If this parameter is not specified and the file to be uploaded is a symbolic-link file whose target file does not exist, the exception message "The system cannot find the file specified" will be displayed in Windows OS, while the exception message "No such file or directory" will be displayed in macOS or Linux OS. • Avoid the symbolic link loop of a folder, otherwise, the upload will exit due to panic. If you do not want the system to panic, set **panicForSymbolicLinkCircle** to **false** in the configuration file.
u	Optional (additional parameter)	Indicates incremental upload. If this parameter is set, each file can be uploaded only when it does not exist in the bucket, its size is different from the namesake one in the bucket, or it has the latest modification time.
vlength	Optional (additional parameter)	After the upload is complete, check whether the sizes of the objects in the bucket are the same as those of the local files.
vmd5	Optional (additional parameter)	After the upload completes, check whether the MD5 values of the objects in the bucket are the same as those of the local files. **NOTE** • If the size of the file or folder to be uploaded is too large, using this parameter will degrade the overall performance due to MD5 calculation. • After the MD5 value verification is successful, the parameter value is set to the object metadata **x-obs-md5chksum**, which is used for later MD5 verification during download or copy.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart upload tasks when uploading a file. The default value is the value of **defaultParallels** in the configuration file.

Parameter	Optional or Mandatory	Description
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart upload, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the file or folder to be uploaded is smaller than the threshold, upload it directly. Otherwise, a multipart upload is required. • If you upload a file or folder directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
acl	Optional (additional parameter)	Access control policies that can be specified when uploading files. Possible values are: • private • public-read • public-read-write • bucket-owner-full-control **NOTE** The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.
sc	Optional (additional parameter)	Indicates the storage classes of objects that can be specified when uploading files. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
meta	Optional (additional parameter)	Indicates the customized metadata that can be specified when uploading files. The format is **key1:value1#key2:value2#key3:value3**. **NOTE** The preceding value indicates that the objects in the bucket contain three groups of customized metadata after the file is uploaded: **key1:value1**, **key2:value2**, and **key3:value3**.

Parameter	Optional or Mandatory	Description
ps	Optional (additional parameter)	Indicates the size of each part in a multipart upload task, in bytes. The value ranges from 100 KB to 5 GB. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source file size.
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart upload and saved to the **upload** subfolder. After the upload succeeds, its part record is deleted automatically. If the upload fails or is suspended, the system attempts to resume the task according to its part record when you perform the upload the next time.
r	Mandatory for uploading a folder (additional parameter) Optional for uploading multiple files/ folders	Indicates files and subfolders within the folder when uploading a folder recursively.
f	Optional for uploading a folder or multiple files/ folders (additional parameter)	Runs in force mode.
j	Optional for uploading a folder or multiple files/ folders (additional parameter)	Indicates the maximum number of concurrent tasks for uploading a folder. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
msm	Mandatory for uploading multiple files/ folders (additional parameter)	Enables the mode for uploading multiple files/folders. Possible values are **1** and **2**. **NOTE** • If **msm** is set to **1**, the source URL indicates a list of file/folder names separated by commas. • If **msm** is set to **2**, the source URL indicates a file containing a list of file/folder names. • If the file or folder name already contains commas (,), do not set **msm** to **1**. • If parameter **r** is not set, the folders in the list will not be uploaded.
exclude	Optional for uploading a folder or multiple files/ folders (additional parameter)	Indicates the file matching patterns that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the file to be uploaded matches the value of this parameter, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute file path (including the file name and file directory). • The matching pattern takes effect only for files in the folder. • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for uploading a folder or multiple files/ folders (additional parameter)	Indicates the file matching patterns that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be uploaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is uploaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute file path (including the file name and file directory). • The matching pattern takes effect only for files in the folder. • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.
at	Optional for uploading a folder or multiple files/ folders (additional parameter)	Indicates that only the files whose latest access time is within the value of **timeRange** are uploaded. **NOTE** • This parameter must be used together with **timeRange**.
disableDirObject	Optional for uploading multiple folders (additional parameter)	Indicates the folders themselves are not uploaded as an object. Configuring this parameter can avoid uploading empty folders to a bucket. If a folder contains files, the files will be uploaded and the original path format is retained.

Parameter	Optional or Mandatory	Description
timeRange	Optional for uploading a folder or multiple files/ folders (additional parameter)	Indicates the time range matching pattern when uploading files. Only files whose latest modification time is within the configured time range are uploaded. This pattern has a lower priority than the file matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured file matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-*time2***, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*****, all files whose latest modification time is later than *time1* are matched. **NOTICE** Time in the matching pattern is the UTC time.
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on folders.

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **cp_{succeed | failed | warning}_report_***time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **cp_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Field	Description
Parallel	Parameter **-p** in the request
Jobs	Parameter **-j** in the request
Threshold	Parameter **-threshold** in the request
PartSize	Parameter **-ps** in the request
Exclude	Parameter **-exclude** in the request
Include	Parameter **-include** in the request
TimeRange	Parameter **-timeRange** in the request
VerifyLength	Parameter **-vlength** in the request
VerifyMd5	Parameter **-vmd5** in the request
CheckpointDir	Parameter **-cpd** in the request
OutputDir	Parameter **-o** in the request
ArcDir	Parameter **-arcDir** in the request
Succeed count	Number of successful tasks
Failed count	Number of failed tasks
Skip count	Number of tasks that are skipped during incremental upload, download, or copy, and synchronous upload, download, or copy. **NOTE** Skipped tasks are recorded into successful tasks.
Warning count	Number of tasks that are executed successfully but contain warnings. **NOTE** • The task for which a warning is generated may be a failure or a success, which needs to be further determined according to the corresponding result list. • The number of tasks that generate warnings is independent of the number of successful or failed tasks. The total number of tasks is the number of successful tasks plus the number of failed tasks.
Succeed bytes	Number of bytes that are successfully uploaded or downloaded.
max cost	Maximum duration of all tasks, in ms
min cost	Minimum duration of all tasks, in ms
average cost	Average duration of all tasks, in ms
average tps	The average number of tasks completed per second

Field	Description
Task id	Unique ID of an operation, which is used to search for the result list generated in a batch task

5.3 Querying Object Properties

Function

You can use this command to query the basic properties of an object.

Command Line Structure

- In Windows
  ```
  obsutil stat obs://bucket/key [-acl][-bf=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil stat obs://bucket/key [-acl][-bf=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil stat obs://bucket-test/key** command to query the basic properties of an object.
  ```
  obsutil stat obs://bucket-test/key

  Key:
    obs://bucket-test/key
  LastModified:
    2018-11-16T02:15:49Z
  Size:
    7
  ETag:
    43d93b553855b0e1fc67e31c28c07b65
  ContentType:
    text/plain
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
key	Mandatory	Object name
acl	Optional	Queries the access control policies of the object at the same time.

Parameter	Optional or Mandatory	Description
bf	Optional (additional parameter)	Display format of the object size (in bytes) Value options: • human-readable • raw **NOTE** If this parameter is not configured, the display format of the object size (in bytes) is determined by the **humanReadableFormat** parameter in the configuration file.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Field	Description
Key	Object name
LastModified	Latest modification time of the object
Size	Object size, in bytes
StorageClass	Storage class of the object
MD5	Real MD5 of the object **NOTE** You can query this value only after running the **cp** command and configuring the **-vmd5** parameter.

Field	Description
ETag	ETag value of an object calculated on the server
ContentType	Content-Type of the object
Metadata	Customized metadata of the object
Acl	Access control policy of the object

5.4 Setting Object Properties

Function

You can use this command to set properties of an object or set properties of objects in batches by a specified object name prefix.

NOTE

You can set storage classes only for buckets whose version is 3.0.

Command Line Structure

- In Windows
  - Setting properties of a single object
    ```
    obsutil chattri obs://bucket/key [-sc=xxx] [-acl=xxx] [-aclXml=xxx] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Setting properties of objects in batches
    ```
    obsutil chattri obs://bucket[/key] -r [-f] [-v] [-sc=xxx] [-acl=xxx] [-aclXml=xxx] [-o=xxx] [-j=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Setting properties of a single object
    ```
    ./obsutil chattri obs://bucket/key [-sc=xxx] [-acl=xxx] [-aclXml=xxx] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Setting properties of objects in batches
    ```
    ./obsutil chattri obs://bucket[/key] -r [-f] [-v] [-sc=xxx] [-acl=xxx] [-aclXml=xxx] [-o=xxx] [-j=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example, run the **obsutil chattri obs://bucket-test/key -acl=public-read** command to set the access permission to an object to public read.
  ```
  obsutil chattri obs://bucket-test/key -acl=public-read

  Set the acl of object [key] in the bucket [bucket-test] to [public-read] successfully, request id [04050000016836DDFA73B2B5320E2651]
  ```
- Take the Windows OS as an example, run the **obsutil chattri obs://bucket-test -r -f -acl=public-read** command to set the access permission to all objects in the bucket to public read.
  ```
  obsutil chattri obs://bucket-test -r -f -acl=public-read

  [------------------------------------------------] 100.00% tps:155.15 5/5 233ms
  Succeed count is:  5        Failed count is:  0
  ```



```
Metrics [max cost:177 ms, min cost:53 ms, average cost:102.40 ms, average tps:20.41]
Task id is: 9d7f73ff-f747-4fdd-9b2a-815ba2dc3b07
```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
key	Mandatory for setting properties of an object. Optional for setting properties of objects in batches.	Indicates the name of the object whose properties are to be set, or the name prefix of objects whose properties are to be set in batches. **NOTE** If this parameter is left blank during batch operation, properties of all objects in the bucket are set.
sc	Optional (additional parameter)	Storage classes of objects. Possible values are: • **standard**: Standard storage class, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: Infrequent Access or Warm storage class. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: Archive or Cold storage class. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data. **NOTE** For an object whose storage class is **cold**, restore the object first and then set its storage class. To restore an object, see **Restoring Objects from OBS Archive**.
acl	Optional (additional parameter)	Access control policies that can be specified for objects. Possible values are: • private • public-read • public-read-write • bucket-owner-full-control **NOTE** The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.

Parameter	Optional or Mandatory	Description
aclXml	Optional (additional parameter)	Access control policy of the bucket, in XML format. <AccessControlPolicy> <Owner> <ID>*ownerid*</ID> </Owner> <AccessControlList> <Grant> <Grantee> <ID>*userid*</ID> </Grantee> <Permission>*[WRITE|WRITE_ACP|READ|READ_ACP|FULL_CONTROL]*</Permission> </Grant> <Grant> <Grantee> <Canned>Everyone</Canned> </Grantee> <Permission>*[WRITE|WRITE_ACP|READ|READ_ACP|FULL_CONTROL]*</Permission> </Grant> </AccessControlList> </AccessControlPolicy> **NOTE** • **Owner**: Optional. Specify the object owner's ID. • In **AccessControlList**, the **Grant** field contains the authorized users. **Grantee** specifies the IDs of authorized users. **Canned** specifies the authorized user group (currently, only **Everyone** is supported). • The following permissions can be granted: WRITE (write), WRITE_ACP (write ACL), READ (read), READ_ACP (read ACL), and FULL_CONTROL (full control). **NOTICE** Because angle brackets (<) and (>) are unavoidably included in the parameter value, you must use quotation marks to enclose them for escaping when running the command. Use single quotation marks for Linux or macOS and quotation marks for Windows.
versionId	Optional for setting properties of an object (additional parameter)	Version ID of the object whose properties are to be set
fr	Optional for setting properties of an object (additional parameter)	Generates an operation result list when setting properties of an object.

Parameter	Optional or Mandatory	Description
f	Optional when setting properties of objects in batches (additional parameter)	Runs in force mode.
r	Mandatory when setting properties of objects in batches (additional parameter)	Sets properties of objects in batches based on a specified object name prefix.
v	Optional when setting properties of objects in batches (additional parameter)	Sets properties of versions of objects in batches based on a specified object name prefix.
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (including success and failure files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **chattri_{succeed | failed}_report_***time*_**TaskId.txt** By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **chattri_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
j	Optional when setting properties of objects in batches (additional parameter)	Indicates the maximum number of concurrent tasks for setting object properties in batches. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

NOTE

Only one from **acl**, **sc**, or **aclXml** can be set for each command.

Response

Refer to **Response** for uploading an object.

5.5 Listing Objects

Function

You can use this command to query objects or object versions in a bucket. All objects are listed in lexicographical order by object name and version ID.

Command Line Structure

- In Windows
  ```
  obsutil ls obs://bucket[/prefix] [-s] [-d] [-v] [-marker=xxx] [-versionIdMarker=xxx] [-bf=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil ls obs://bucket[/prefix] [-s] [-d] [-v] [-marker=xxx] [-versionIdMarker=xxx] [-bf=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```


Examples

- Take the Windows OS as an example. Run the **obsutil ls obs://bucket-test -limit=10** command to list objects in the bucket.

```
obsutil ls obs://bucket-test -limit=10

Folder list:
obs://bucket-test/api/

Object list:
key                                     LastModified              Size      StorageClass       ETag
obs://bucket-test/AUTHORS               2018-11-16T02:15:49Z      33243     standard
"796393c1eaf502ef56a85c2ceb640aea"

obs://bucket-test/CONTRIBUTING.md       2018-11-16T02:15:49Z      1366
standard          "12d93325ba6131f852daecd18dd65edc"

obs://bucket-test/CONTRIBUTORS          2018-11-16T02:15:49Z      45710
standard          "b486b5003e6215c9199e86ab3ccec9fa"

obs://bucket-test/LICENSE               2018-11-16T02:15:49Z      1479      standard
"5d4950ecb7b26d2c5e4e7b4e0dd74707"

obs://bucket-test/PATENTS               2018-11-16T02:15:49Z      1303      standard
"3a55d95595a6f9e37dee53826b4daff2"

obs://bucket-test/README.md             2018-11-16T02:15:49Z      1399      standard
"97351fd7946b9ea021a31a86ba2a10ab"

obs://bucket-test/VERSION               2018-11-16T02:15:49Z      7         standard
"43d93b553855b0e1fc67e31c28c07b65"

obs://bucket-test/api/README            2018-11-16T02:15:49Z      521       standard
"4e9e63a87075df60cdf65c8ce9e92117"

obs://bucket-test/api/except.txt        2018-11-16T02:15:49Z      20194     standard
"8eb96de3f60447e2f09a7531c99fb3ee"

Next marker is: api/except.txt
Folder number is: 1
File number is: 9
```

- For more examples, see **Listing**.

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
prefix	Optional	Prefix of an object name for listing objects **NOTE** If this parameter is left blank, all objects in the bucket are listed.
s	Optional (additional parameter)	Displays simplified query result. **NOTE** In the simplified format, the returned result contains only the object name.

Parameter	Optional or Mandatory	Description
d	Optional (additional parameter)	Lists only objects and subdirectories in the current directory, instead of recursively listing all objects and subdirectories. **NOTE** According to the naming conventions in OBS, a slash (/) is used as the directory separator.
v	Optional (additional parameter)	Lists versions of an object in a bucket. The result contains the latest version and historical versions (if any) of the object.
marker	Optional (additional parameter)	Object name to start with when listing objects in a bucket. All objects are listed in lexicographical order by object name. **NOTE** For details about how to use this parameter, see **Listing**.
versionIdMarker	Optional (additional parameter). It must be used together with the **v** and **marker** parameters.	Version ID to start with when listing versions of objects in a bucket. All versions and objects are listed in lexicographical order by object name and version ID. **NOTE** If the value of **versionIdMarker** is not a version ID specified by **marker**, **versionIdMarker** is invalid.
bf	Optional (additional parameter)	Display formats of bytes in the listing result. Possible values are: • human-readable • raw **NOTE** If this parameter is not configured, the display format of bytes in the result is determined by the **humanReadableFormat** parameter in the configuration file.
limit	Optional (additional parameter)	Maximum number of objects that can be listed. If the value is less than or equal to 0, all objects are listed. If it is left blank, 1000 objects are listed by default. **NOTE** If there are a large number of objects in a bucket, you are advised to set this parameter to limit the number of objects to be listed each time. If not all objects are listed, **marker** and **versionIdMarker** of the next request will be returned in the result, which you can use to list the remaining objects.

Parameter	Optional or Mandatory	Description
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

5.6 Copying an Object

Function

You can use this command to copy a single object or copy objects in batches by a specified object name prefix.

NOTICE

- Do not change the source objects in the OBS bucket when copying a single object or objects in batches. Otherwise, the operation may fail or data may be inconsistent.
- If the storage class of the object to be copied is **cold**, you must restore the object to be copied first. Otherwise, the copy fails.
- To copy objects, you must have the read permission on the objects to be copied and the write permission on the destination bucket.
- If the client-side cross-region replication function is not enabled, ensure that the source bucket and destination bucket are in the same region.

Command Line Structure

- In Windows
  - Copying a single object
    ```
    obsutil cp obs://srcbucket/key obs://dstbucket/[dest] [-dryRun][-u] [-crr] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-versionId=xxx] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Copying objects in batches
    ```
    obsutil cp obs://srcbucket[/key] obs://dstbucket[/dest] -r [-dryRun][-f] [-flat] [-u] [-crr] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Copying a single object
    ```
    ./obsutil cp obs://srcbucket/key obs://dstbucket/[dest] [-dryRun] [-u] [-crr] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-versionId=xxx] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Copying objects in batches
    ```
    ./obsutil cp obs://srcbucket[/key] obs://dstbucket[/dest] -r [-dryRun] [-f] [-flat] [-u] [-crr] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

NOTE

- The source path and destination path cannot be the same.
- The source path and destination path cannot be partly overlapped either. If the source path overlaps with the prefix of the destination path, recursive replication applies. If the destination path overlaps with the prefix of the source path, the replication may overwrite objects in the source path.

Examples

- Take the Windows OS as an example. Run the **obsutil cp obs://bucket-test/key obs://bucket-test2** command to copy a single object.
  ```
  obsutil cp obs://bucket-test/key obs://bucket-test2

  Parallel:      3                 Jobs:          3
  Threshold:     524288000         PartSize:      5242880
  Exclude:                         Include:
  VerifyLength:  false             VerifyMd5:     false
  CheckpointDir: xxxx

  [=====================================================] 100.00% 6/s 0s
  Copy successfully, 19B, obs://bucket-test/key --> obs://bucket-test2/key
  ext.txt
  ```
- Take the Windows OS as an example. Run the **obsutil cp obs://bucket-test/temp/ obs://bucket-test2 -f -r** command to copy objects in batches.
  ```
  obsutil cp obs://bucket-test/temp/ obs://bucket-test2 -r -f

  Parallel:      3                 Jobs:          3
  Threshold:     524288000         PartSize:      5242880
  Exclude:                         Include:
  VerifyLength:  false             VerifyMd5:     false
  CheckpointDir: xxxx
  OutputDir: xxxx


  [=========================================================] 100.00% 10/s 0s
  Succeed count is:  5        Failed count is:  0
  Metrics [max cost:298 ms, min cost:192 ms, average cost:238.00 ms, average tps:9.71]
  Task id is: 0476929d-9d23-4dc5-b2f8-0a0493f027c5
  ```


- For more examples, see **Copy**.

Parameter Description

Parameter	Optional or Mandatory	Description
srcbucket	Mandatory	Source bucket name
dstbucket	Mandatory	Destination bucket name
dest	Optional	Indicates the destination object name when copying an object, or the name prefix of destination objects when copying objects in batches.
key	Mandatory for copying an object. Optional for copying objects in batches.	Indicates the source object name when copying an object, or the name prefix of source objects when copying objects in batches. The rules are as follows: • This parameter cannot be left blank when copying an object. If **dest** is left blank, the source object is copied to the root directory of the destination bucket. If the value of **dest** ends with a slash (/), the destination object name is the value of **dest** plus the source object name. Otherwise, the destination object name is the value of **dest**. • If this parameter is left blank when copying objects in batches, all objects in the source bucket are copied. If not, objects whose name prefix is the set value in the source bucket are copied. The rules for confirming the name of the destination object are as follows: – If the value of **dest** ends with a slash (/), the destination object name is the value of **dest** plus the source object name. – If the value of **dest** does not end with a slash (/), the destination object name is *the value of **dest**/source object name*. **NOTE** • If this parameter is configured but the **flat** parameter is not when copying objects in batches, the name of the source object contains the name prefix of the parent object. If **flat** is configured, then the name of the source object does not contain the name prefix of the parent object. • For details about how to use this parameter, see **Copy**.

Parameter	Optional or Mandatory	Description
fr	Optional for copying an object (additional parameter)	Generates an operation result list when copying an object.
flat	Optional for copying objects in batches (additional parameter)	The name prefix of the parent object is excluded when copying objects in batches.
dryRun	Optional (additional parameter)	Conducts a dry run.
crr	Optional (additional parameter)	Enables the client-side cross-region replication function. In this mode, data is directly copied to the destination bucket from the source bucket through data stream. The buckets can by any two OBS buckets. **NOTE** • If this parameter is configured, ensure that the configuration of client-side cross-region replication is updated in the configuration file. For details, see **Updating a Configuration File**. • The configurations of the source bucket and destination bucket are respectively **akCrr/skCrr/tokenCrr/endpointCrr** and **ak/sk/token/endpoint** in the configuration file. **NOTICE** After this function is enabled, both upload and download bandwidth are occupied.
vlength	Optional (additional parameter)	Verifies whether the object size in the destination bucket is the same as that in the source bucket after the copy task completes. **NOTE** This parameter must be used together with **crr**.

Parameter	Optional or Mandatory	Description
vmd5	Optional (additional parameter)	Verifies whether the MD5 value of the destination bucket is the same as that of the source bucket after the copy task completes. **NOTE** • This parameter must be used together with **crr**. • Objects in the source bucket must contain metadata **x-obs-md5chksum**. Otherwise, MD5 verification will be skipped. After the MD5 value verification is successful, the parameter value is set to the destination object metadata **x-obs-md5chksum**, which is used for later MD5 verification during download or copy.
u	Optional (additional parameter)	Indicates incremental copy. If this parameter is set, each object can be copied only when it does not exist in the destination bucket, its size is different from the namesake one in the destination bucket, or it has the latest modification time.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart copy tasks when copying an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart copy, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be copied is smaller than the threshold, copy the object directly. If not, a multipart copy is required. • If you copy an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
versionId	Optional for copying an object (additional parameter)	Source object version ID that can be specified when copying an object

Parameter	Optional or Mandatory	Description
acl	Optional (additional parameter)	Access control policies for destination objects that can be specified when copying objects. Possible values are: • private • public-read • public-read-write • bucket-owner-full-control **NOTE** The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.
sc	Optional (additional parameter)	Storage classes of the destination objects that can be specified when copying objects. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
meta	Optional (additional parameter)	Metadata of destination objects that can be specified when copying objects. The format is *key1*:*value1*#*key2*:*value2*#*key3*:*value3*. **NOTE** The preceding value indicates that the destination objects in the bucket contain three groups of customized metadata after objects are copied: **key1:value1**, **key2:value2**, and **key3:value3**.
ps	Optional (additional parameter)	Indicates the size of each part in a multipart copy task, in bytes. The value ranges from 100 KB to 5 GB. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.

Parameter	Optional or Mandatory	Description
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart copy and saved to the **copy** subfolder. After the copy succeeds, its part record is deleted automatically. If the copy fails or is suspended, the system attempts to resume the task according to its part record when you perform the copy the next time.
r	Mandatory for copying objects in batches (additional parameter)	Copies objects in batches based on a specified name prefix of objects in the source bucket.
f	Optional for copying objects in batches (additional parameter)	Runs in force mode.
j	Optional for copying objects in batches (additional parameter)	Indicates the maximum number of concurrent tasks for copying objects in batches. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional for copying objects in batches (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be copied matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for copying objects in batches (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be copied does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is copied. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional for copying objects in batches (additional parameter)	Indicates the time range matching pattern when copying objects. Only objects whose latest modification time is within the configured time range are copied. This pattern has a lower priority than the object matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-***time2*, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **cp_{succeed | failed | warning}_report_***time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **cp_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.

Parameter	Optional or Mandatory	Description
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.7 Moving an Object

Function

You can use this command to move a single object or move objects in batches by a specified object name prefix.

NOTICE

- Do not change the source objects in the OBS bucket when moving objects. Otherwise, the operation may fail or data may be inconsistent.
- If the storage class of the object to be moved is **cold**, you must restore the object first. Otherwise, the moving fails.
- The source objects are deleted after the move operation succeeds.

Command Line Structure

- In Windows

  - Moving a single object
    ```
    obsutil mv obs://srcbucket/key obs://dstbucket/[dest] [-dryRun] [-u] [-p=1] [-threshold=52428800] [-versionId=xxx] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Moving objects in batches
    ```
    obsutil mv obs://srcbucket[/key] obs://dstbucket[/dest] -r [-dryRun] [-f] [-flat] [-u] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

- In Linux OS or macOS
  - Moving a single object
    ```
    ./obsutil mv obs://srcbucket/key obs://dstbucket/[dest] [-dryRun] [-u] [-p=1] [-threshold=52428800] [-versionId=xxx] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Moving objects in batches
    ```
    ./obsutil mv obs://srcbucket[/key] obs://dstbucket[/dest] -r [-dryRun] [-f] [-flat] [-u] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

NOTE

- The source path and destination path cannot be the same.
- The source and destination paths cannot be nested when moving objects in batches.

Examples

- Take the Windows OS as an example. Run the **obsutil mv obs://bucket-test/key obs://bucket-test2** command to move a single object.

```
obsutil mv obs://bucket-test/key obs://bucket-test2

Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx

[=====================================================] 100.00% 6/s 0s
Move successfully, 19B, obs://bucket-test/key --> obs://bucket-test2/key
ext.txt
```

- Take the Windows OS as an example. Run the **obsutil mv obs://bucket-test/temp/ obs://bucket-test2 -f -r** command to move objects in batches.

```
obsutil mv obs://bucket-test/temp/ obs://bucket-test2 -f -r

Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx


[============================================================] 100.00% 10/s 0s
Succeed count is:  5        Failed count is:  0
Metrics [max cost:298 ms, min cost:192 ms, average cost:238.00 ms, average tps:9.71]
Task id is: 0476929d-9d23-4dc5-b2f8-0a0493f027c5
```


Parameter Description

Parameter	Optional or Mandatory	Description
srcbucket	Mandatory	Source bucket name
dstbucket	Mandatory	Destination bucket name
dest	Optional	Indicates the destination object name when moving a single object, or the name prefix of destination objects when moving objects in batches.
key	Mandatory for moving a single object Optional for moving objects in batches	Indicates the source object name when moving a single object, or the name prefix of source objects when moving objects in batches. The rules are as follows: • This parameter cannot be left blank when moving a single object. If **dest** is left blank, the source object is moved to the root directory of the destination bucket. If the value of **dest** ends with a slash (/), the destination object name is the value of **dest** plus the source object name. Otherwise, the destination object name is the value of **dest**. • If this parameter is left blank when moving objects in batches, all objects in the source bucket are moved. If not, objects whose name prefix is the set value in the source bucket are moved. The rules for confirming the name of the destination object are as follows: – If the value of **dest** ends with a slash (/), the destination object name is the value of **dest** plus the source object name. – If the value of **dest** does not end with a slash (/), the destination object name is *the value of **dest**/source object name*. **NOTE** • If this parameter is configured but parameter **flat** is not when moving objects in batches, the name of the source object contains the name prefix of the parent object. If **flat** is configured, then the name of the source object does not contain the name prefix of the parent object. • For details about how to use this parameter, see **Command Line Structure**.
fr	Optional for moving an object (additional parameter)	Generates an operation result list when moving an object.

Parameter	Optional or Mandatory	Description
flat	Optional for moving objects in batches (additional parameter)	The name prefix of the parent object is excluded when moving objects in batches.
dryRun	Optional (additional parameter)	Conducts a dry run.
u	Optional (additional parameter)	Indicates incremental move. If this parameter is set, each object can be moved only when it does not exist in the destination bucket, its size is different from the namesake one in the destination bucket, or it has the latest modification time. **NOTE** If the size and modification time of the destination object are the same as those of the source object, the source object is directly deleted instead of being moved.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart move tasks when moving an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart move, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be moved is smaller than the threshold, move the object directly. If not, a multipart move is required. • If you move an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
versionId	Optional for moving an object (additional parameter)	Source object version ID that can be specified when moving a single object

Parameter	Optional or Mandatory	Description
acl	Optional (additional parameter)	Access control policies for destination objects that can be specified when moving objects. Possible values are: • private • public-read • public-read-write • bucket-owner-full-control **NOTE** The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.
sc	Optional (additional parameter)	Storage classes of the destination objects that can be specified when moving objects. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
meta	Optional (additional parameter)	Metadata of destination objects that can be specified when copying objects. The format is *key1*:*value1*#*key2*:*value2*#*key3*:*value3*. **NOTE** The preceding value indicates that the destination objects in the bucket contain three groups of customized metadata after objects are copied: **key1:value1**, **key2:value2**, and **key3:value3**.
ps	Optional (additional parameter)	Indicates the size of each part in a multipart move task, in bytes. The value ranges from 100 KB to 5 GB. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.

Parameter	Optional or Mandatory	Description
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart move and saved to the **copy** subfolder. After the move succeeds, its part record is deleted automatically. If the move fails or is suspended, the system attempts to resume the task according to its part record when you perform the move the next time.
r	Mandatory for moving objects in batches (additional parameter)	Moves objects in batches based on a specified name prefix of objects in the source bucket.
f	Optional for moving objects in batches (additional parameter)	Runs in force mode.
j	Optional for moving objects in batches (additional parameter)	Indicates the maximum number of concurrent tasks for moving objects in batches. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional for moving objects in batches (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be moved matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for moving objects in batches (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be moved does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is moved. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional for moving objects in batches (additional parameter)	Indicates the time range matching pattern when moving objects. Only objects whose latest modification time is within the configured time range are moved. This pattern has a lower priority than the object matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-***time2*, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **mv_{succeed | failed | warning}_report**_*time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **mv_failed_report**_*time*_**TaskId.txt** in the result list folder and the **log files** in the log path.

Parameter	Optional or Mandatory	Description
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.8 Downloading an Object

Function

You can use this command to download an object or download objects in batches by object name prefix to your local PC.

NOTICE

- Do not change the source objects in the OBS bucket when downloading a single object or objects in batches. Otherwise, the download may fail or data may be inconsistent.
- If the storage class of the object to be copied is **cold**, you must restore the object to be downloaded first. Otherwise, the download fails.

Command Line Structure

- In Windows

  - Downloading a single object
    ```
    obsutil cp obs://bucket/key file_or_folder_url [-tempFileDir=xxx] [-dryRun] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-versionId=xxx] [-ps=auto] [-cpd=xxx][-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Downloading objects in batches
    ```
    obsutil cp obs://bucket[/key] folder_url -r [-tempFileDir=xxx] [-dryRun] [-f] [-flat] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

- In Linux or macOS
  - Downloading a single object
    ```
    ./obsutil cp obs://bucket/key file_or_folder_url [-tempFileDir=xxx] [-dryRun] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-versionId=xxx] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Downloading objects in batches
    ```
    ./obsutil cp obs://bucket[/key] folder_url -r [-tempFileDir=xxx] [-dryRun] [-f] [-flat] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil cp obs://bucket-test/key d:\temp\test.txt** command to download a single object.
  ```
  obsutil cp obs://bucket-test/key d:\temp\test.txt

  Parallel:      3                Jobs:          3
  Threshold:     524288000        PartSize:      5242880
  Exclude:                        Include:
  VerifyLength:  false            VerifyMd5:     false
  CheckpointDir: xxxx

  [========================================] 100.00% 4.86 KB/s 0s
  Download successfully, 19B, obs://bucket-test/key --> d:\temp\test.txt
  ```
- Take the Windows OS as an example. Run the **obsutil cp obs://bucket-test/temp d:\ -f -r** command to download objects in batches.
  ```
  obsutil cp obs://bucket-test/temp d:\ -f -r

  Parallel:      3                Jobs:          3
  Threshold:     524288000        PartSize:      5242880
  Exclude:                        Include:
  VerifyLength:  false            VerifyMd5:     false
  CheckpointDir: xxxx
  OutputDir: xxxx

  [==================================================] 100.00% 155.59 KB/s 0s
  Succeed count is:  6        Failed count is:  0
  Metrics [max cost:153 ms, min cost:129 ms, average cost:92.00 ms, average tps:17.86]
  Task id is: 3066a4b0-4d21-4929-bb84-4829c32cbd0f
  ```
- For more examples, see **Download**.

Parameter Description

Parameter	Optional or Mandatory	Description
file_or_folder_url	Mandatory for downloading an object	Local file/folder path

Parameter	Optional or Mandatory	Description
folder_url	Mandatory for downloading objects in batches	Local folder path
bucket	Mandatory	Bucket name

Parameter	Optional or Mandatory	Description
key	Mandatory for downloading an object Optional for downloading objects in a batch	Indicates the name of the object to be downloaded, or the name prefix of the objects to be downloaded in batches. This parameter cannot be left blank when downloading an object. The saving and naming rules are as follows: • If this parameter specifies a file or folder path that does not exist, the tool checks whether the value ends with a slash (/) or backslash (\). If yes, a folder is created based on the path, and the object is downloaded to this newly created directory. • If this parameter specifies a file or folder path that does not exist and the value does not end with a slash (/) or backslash (\), the object is downloaded to your local PC with the value of **key** as the file name. • If this parameter specifies an existing file, the object is downloaded to your local PC overwriting the existing file, with the value of **key** as the file name. • If this parameter specifies an existing folder, the object is downloaded to the directory specified by **file_or_folder_url** with the object name as the file name. The saving rules when downloading objects in batches are as follows: • If this parameter is left blank, all objects in the bucket are downloaded to the directory specified by **folder_url**. • If this parameter is configured, objects whose name prefix is the configured value in the bucket are downloaded to the directory specified by **folder_url**. **NOTE** • If this parameter is configured but the **flat** parameter is not configured when downloading objects in a batch, the name of the downloaded file contains the name prefix of the parent object. If **flat** is configured, then the name of the downloaded file does not contain the name prefix of the parent object. • For details about how to use this parameter, see **Download**.

Parameter	Optional or Mandatory	Description
fr	Optional for downloading an object (additional parameter)	Generates an operation result list when downloading an object.
flat	Optional for downloading objects in batches (additional parameter)	The name prefix of the parent object is excluded when downloading objects in batches.
tempFileDir	Optional (additional parameter)	Indicates the directory for storing temporary files during multipart download. The default value is the value of **defaultTempFileDir** in the configuration file. **NOTE** • If this parameter is left blank and the **defaultTempFileDir** parameter in the configuration file is also left blank, temporary files generated during multipart download are saved in the directory where to-be-downloaded files are located and end with the suffix of **.obs.temp**. • Temporary files generated during multipart download are stored in this directory. Therefore, ensure that the user who executes obsutil has the write permission on the path. • The available space of the partition where the path is located must be greater than the size of the objects to be downloaded.
dryRun	Optional (additional parameter)	Conducts a dry run.
u	Optional (additional parameter)	Indicates incremental download. If this parameter is set, each object can be downloaded only when it does not exist in the local path, its size is different from the namesake one in the local path, or it has the latest modification time.
vlength	Optional (additional parameter)	Checks whether the sizes of the local files are the same as those of the objects in the bucket after the download is complete.

Parameter	Optional or Mandatory	Description
vmd5	Optional (additional parameter)	Checks whether MD5 values of the local files are the same as those of the objects in the bucket after the download is complete. **NOTE** Objects in the bucket must contain metadata **x-obs-md5chksum**. Otherwise, MD5 verification will be skipped.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart download tasks when downloading an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart download, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be downloaded is smaller than the threshold, download the object directly. If not, a multipart download is required. • If you download an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
versionId	Optional for downloading an object (additional parameter)	Source object version ID that can be specified when downloading an object
ps	Optional (additional parameter)	Indicates the size of each part in a multipart download task, in bytes. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.

Parameter	Optional or Mandatory	Description
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart download and saved to the **down** subfolder. After the download succeeds, its part record is deleted automatically. If the download fails or is suspended, the system attempts to resume the task according to its part record when you perform the download the next time.
r	Mandatory for downloading objects in batches (additional parameter)	Copies objects in batches based on a specified object name prefix.
f	Optional for downloading objects in batches (additional parameter)	Runs in force mode.
j	Optional for downloading objects in batches (additional parameter)	Indicates the maximum number of concurrent tasks for downloading objects in a batch. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional for downloading objects in batches (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be downloaded matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for downloading objects in batches (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be downloaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is downloaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional for downloading objects in batches (additional parameter)	Indicates the time range matching pattern when downloading objects. Only objects whose latest modification time is within the configured time range are downloaded. This pattern has a lower priority than the object matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-***time2***, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-***, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **cp_{succeed | failed | warning}_report_***time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **cp_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.9 Generating the Download Link of an Object

Function

You can use this command to generate the download link of a specified object in a bucket or generate the download links of objects in a bucket in batches by object name prefix.

Command Line Structure

- In Windows
  - Generating the download link of a single object
    ```
    obsutil sign obs://bucket/key [-e=300] [-config=xxx] [-endpoint=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Generating the download links of objects in batches by object name prefix
    ```
    obsutil sign obs://bucket[/key] -r [-e=300] [-timeRange=time1-time2] [-include=*.xxx] [-exclude=*.xxx] [-o=xxx] [-config=xxx] [-endpoint=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Generating the download link of a single object
    ```
    ./obsutil sign obs://bucket/key [-e=300] [-config=xxx] [-endpoint=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Generating the download links of objects in batches by object name prefix
    ```
    ./obsutil sign obs://bucket[/key] -r [-e=300] [-timeRange=time1-time2] [-include=*.xxx] [-exclude=*.xxx] [-o=xxx] [-config=xxx] [-endpoint=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil sign obs://bucket-test/test.txt** command to generate the download link of a single object.
  ```
  obsutil sign obs://bucket-test/test.txt

  Download url of [obs://bucket-test/test.txt] is:
    http://your-endpoint/bucket-test/test.txt?AccessKeyId=xxxx&Expires=1552548758&Signature=xxxx
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
key	Optional	Object name used for generating the download link of a single object, or object name prefix used for generating download links of objects in batches
e	Optional (additional parameter)	Validity period of the generated download links of objects, in seconds. Minimum value: 60s. Default value: 300s

Parameter	Optional or Mandatory	Description
r	Mandatory when generating download links of objects in batches (additional parameter)	Generates the download links of objects in batches by a specified object name prefix.
exclude	Optional when generating download links of objects in batches (additional parameter)	Indicates the matching patterns of objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be downloaded matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional when generating download links of objects in batches (additional parameter)	Indicates the matching patterns of objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be downloaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is downloaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional (additional parameter)	Indicates the time range matching pattern when generating download links of objects. Only the download links of objects whose latest modification time is within the configured time range are generated. This pattern has a lower priority than the object matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/). • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-***time2*, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched.
o	Optional when generating download links of objects in batches (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success and failure files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **sign_{succeed | failed}_report**_*time*_**TaskId.txt** By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
endpoint	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.

Parameter	Optional or Mandatory	Description
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

5.10 Deleting an Object

Function

- You can use this command to delete a specified object.
- You can also use this command to delete objects in batches based on a specified object name prefix.

Command Line Structure

- In Windows
  - Deleting a single object
    ```
    obsutil rm obs://bucket/key [-f] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Deleting objects in batches
    ```
    obsutil rm obs://bucket/[key] -r [-j=1] [-f] [-v] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Deleting a single object
    ```
    ./obsutil rm obs://bucket/key [-f] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Deleting objects in batches
    ```
    ./obsutil rm obs://bucket/[key] -r [-j=1] [-f] [-v] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil rm obs://bucket-test/key -f** command to delete a single object named **key** in bucket **bucket-test**.
  ```
  obsutil rm obs://bucket-test/key -f

  Delete object [key] in the bucket [bucket-test] successfully!
  ```
- Take the Windows OS as an example. Run the **obsutil rm obs://bucket-test -r -f** command to delete all objects in bucket **bucket-test**.
  ```
  obsutil rm obs://bucket-test -r -f

  [=============================================] 100.00% 21s
  ```



```
Succeed count is:  1313     Failed count is:  0
Task id is: 95936984-f81a-441a-bba0-1fd8254d9241
```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
key	Mandatory for deleting a single object. Optional for deleting objects in batches.	Indicates the name of the object to be deleted, or the name prefix of the objects to be deleted in batches. **NOTE** If this parameter is left blank when deleting objects in batches, all objects in the bucket are deleted.
fr	Optional for deleting a single object (additional parameter)	Generates an operation result list when deleting an object.
f	Optional (additional parameter)	Runs in force mode.
versionId	Optional for deleting a single object (additional parameter)	Version ID of the object to be deleted.
r	Mandatory for deleting objects in batches (additional parameter)	Deletes objects in batches based on a specified object name prefix.
j	Optional for deleting objects in batches (additional parameter)	Indicates the maximum number of concurrent tasks for deleting objects in batches. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.
v	Optional for deleting objects in batches (additional parameter)	Deletes versions of an object and the delete markers in batches based on a specified object name prefix.

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success and failure files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **rm_{succeed | failed}_report**_*time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **rm_failed_report**_*time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.11 Synchronously Uploading Incremental Objects

Function

This function synchronizes all content in the local source path to the specified target bucket on OBS, ensuring that the content is consistent between the local path and the target bucket. Incremental synchronization has the following meanings: 1) Increment: Compare the source file with the target object and upload only the source file that has changes. 2) Synchronization: After the command is executed, ensure that the local source path is a subset of the target bucket specified by OBS. That is, any file in the local source path has its corresponding object in the target bucket on OBS.

NOTICE

- Do not change the local file or folder during synchronization. Otherwise, the synchronization may fail or data may be inconsistent.
- Each file can be synchronously uploaded only when it does not exist in the bucket, its size is different from the namesake one in the bucket, or it has the latest modification time.

Command Line Structure

- In Windows
  - Uploading a file synchronously
    ```
    obsutil sync file_url obs://bucket[/key] [-arcDir=xxx] [-dryRun] [-link] [-vlength] [-vmd5] [-p=1] [-threshold=5248800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Uploading a folder synchronously
    ```
    obsutil sync folder_url obs://bucket[/key] [-arcDir=xxx] [-dryRun] [-link] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Uploading a file synchronously
    ```
    ./obsutil sync file_url obs://bucket[/key] [-arcDir=xxx] [-dryRun] [-link] [-vlength] [-vmd5] [-p=1] [-threshold=5248800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Uploading a folder synchronously
    ```
    ./obsutil sync folder_url obs://bucket[/key] [-arcDir=xxx] [-dryRun] [-link] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil sync d:\temp\test.txt obs://bucket-test/key** command to synchronously upload a file.
  ```
  obsutil sync d:\temp\test.txt obs://bucket-test/key

  Parallel:       3                 Jobs:         3
  Threshold:      524288000         PartSize:     5242880
  ```



```
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx

[=================================================] 100.00% 1.68 MB/s 5s
Upload successfully, 8.46MB, d:\temp\test.txt --> obs://bucket-test/key
```

- Take the Windows OS as an example. Run the **obsutil sync d:\temp obs://bucket-test/temp** command to synchronously upload a folder.

```
obsutil sync d:\temp obs://bucket-test/temp

Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx

[=================================================] 100.00% 2.02 KB/s 0s
Succeed count is:  5        Failed count is:    0
Metrics [max cost:90 ms, min cost:45 ms, average cost:63.80 ms, average tps:35.71]
Task id is: 104786c8-27c2-48fc-bc6a-5886596fb0ed
```

- For more examples, see **Synchronous Upload**.

Parameter Description

Parameter	Optional or Mandatory	Description
file_url	Mandatory for uploading a file synchronously	Local file path
folder_url	Mandatory for uploading a folder synchronously	Local folder path
bucket	Mandatory	Bucket name

Parameter	Optional or Mandatory	Description
key	Optional	Indicates the object name or object name prefix specified when uploading a file synchronously, or the object name prefix specified when uploading a folder synchronously. The rules are as follows: • If this parameter is left blank when synchronously uploading a file, the file is uploaded to the root directory of the bucket and the object name is the file name. If the value ends with a slash (/), the value is used as the object name prefix when the file is uploaded, and the object name is the value plus the file name. Otherwise, the file is uploaded with the value as the object name. • If this parameter is left blank when synchronously uploading a folder, all objects in the root directory of the bucket are the same as the files in the local folder. If this parameter is configured, objects whose name prefix is the configured value are the same as the files in the local folder. **NOTE** • If the value of this parameter does not end with a slash (/) when synchronously uploading a folder, the obsutil tool automatically adds a slash (/) at the end of the configured value as the object name prefix. • For details about how to use this parameter, see **Synchronous Upload**.
fr	Optional for synchronously uploading a file (additional parameter)	Generates an operation result list when synchronously uploading a file.
arcDir	Optional (additional parameter)	Path to which the synchronously uploaded files are archived
dryRun	Optional (additional parameter)	Conducts a dry run.

Parameter	Optional or Mandatory	Description
link	Optional (additional parameter)	Uploads the actual path of the symbolic-link file/ folder **NOTICE** • If this parameter is not specified and the file to be uploaded is a symbolic-link file whose target file does not exist, the exception message "The system cannot find the file specified" will be displayed in Windows OS, while the exception message "No such file or directory" will be displayed in macOS or Linux OS. • Avoid the symbolic link loop of a folder, otherwise, the upload will exit due to panic. If you do not want the system to panic, set **panicForSymbolicLinkCircle** to **false** in the configuration file.
vlength	Optional (additional parameter)	After the synchronous upload is complete, check whether the sizes of the objects in the bucket are the same as those of the local files.
vmd5	Optional (additional parameter)	After the synchronous upload is complete, check whether the MD5 values of the objects in the bucket are the same as those of the local files. **NOTE** • If the size of the file or folder to be uploaded is too large, using this parameter will degrade the overall performance due to MD5 calculation. • After the MD5 value verification is successful, the parameter value is set to the object metadata **x-obs-md5chksum**, which is used for later MD5 verification during download or copy.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart upload tasks when uploading a file. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart upload, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the file or folder to be uploaded is smaller than the threshold, upload it directly. Otherwise, a multipart upload is required. • If you upload a file or folder directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.

Parameter	Optional or Mandatory	Description
acl	Optional (additional parameter)	Access control policies that can be specified when synchronously uploading files. Possible values are: • private • public-read • public-read-write • bucket-owner-full-control **NOTE** The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.
sc	Optional (additional parameter)	Indicates the storage classes of objects that can be specified when synchronously uploading files. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
meta	Optional (additional parameter)	Indicates the customized metadata that can be specified when uploading files. The format is **key1:value1#key2:value2#key3:value3**. **NOTE** The preceding value indicates that the object in the bucket contains three groups of customized metadata after the file is uploaded: **key1:value1**, **key2:value2**, and **key3:value3**.
ps	Optional (additional parameter)	Indicates the size of each part in a multipart upload task, in bytes. The value ranges from 100 KB to 5 GB. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source file size.

Parameter	Optional or Mandatory	Description
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart upload and saved to the **upload** subfolder. After the upload succeeds, its part record is deleted automatically. If the upload fails or is suspended, the system attempts to resume the task according to its part record when you perform the upload the next time.
j	Optional for synchronously uploading a folder (additional parameter)	Indicates the maximum number of concurrent tasks for uploading a folder synchronously. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.
exclude	Optional for synchronously uploading a folder (additional parameter)	Indicates the file matching patterns that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the file to be uploaded matches the value of this parameter, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute file path (including the file name and file directory). • The matching pattern takes effect only for files in the folder. • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for synchronously uploading a folder (additional parameter)	Indicates the file matching patterns that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be uploaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is uploaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute file path (including the file name and file directory). • The matching pattern takes effect only for files in the folder. • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.
at	Optional for synchronously uploading a folder (additional parameter)	Indicates that when synchronously uploading a folder, only the files whose latest access time is within the value of **timeRange** are uploaded. **NOTE** • This parameter must be used together with **timeRange**.
disableDirObject	Optional for synchronously uploading folders (additional parameter)	Indicates the folders themselves are not uploaded as an object. Configuring this parameter can avoid uploading empty folders to a bucket. If a folder contains files, the files will be uploaded and the original path format is retained.

Parameter	Optional or Mandatory	Description
timeRange	Optional for synchronously uploading a folder (additional parameter)	Indicates the time range matching pattern when synchronously uploading files. Only files whose latest modification time is within the configured time range are uploaded. This pattern has a lower priority than the file matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured file matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-***time2*, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched. **NOTICE** Time in the matching pattern is the UTC time.
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on folders.
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **sync_{succeed | failed | warning}_report_***time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **sync_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.

Parameter	Optional or Mandatory	Description
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

Response

Refer to **Response** for uploading an object.

5.12 Synchronously Copying Incremental Objects

Function

This function synchronizes all objects in the specified path in the source bucket with objects in the specified path in the destination bucket to keep data consistency. Incremental synchronization has the following meanings: 1) Increment: Compare the source object with the target object and copy only the source object that has changes. 2) Synchronization: After the command is executed, ensure that the specified path of the source bucket is a subset of the target bucket. That is, any object in the specified path of the source bucket has its corresponding object in the target bucket.

NOTICE

- Do not change the source objects in the OBS bucket during synchronization. Otherwise, the synchronization may fail or data may be inconsistent.
- If the storage class of the object to be copied is **cold**, you must restore the object to be copied first. Otherwise, the copy fails.
- To copy objects, you must have the read permission on the objects to be copied and the write permission on the destination bucket.
- If the client-side cross-region replication function is not enabled, ensure that the source bucket and destination bucket are in the same region.
- Each object can be synchronously copied only when it does not exist in the destination bucket, its size is different from the namesake one in the destination bucket, or it has the latest modification time.

Command Line Structure

- In Windows

```
obsutil sync obs://srcbucket[/key] obs://dstbucket[/dest] [-dryRun] [-crr] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

- In Linux or macOS

```
./obsutil sync obs://srcbucket[/key] obs://dstbucket[/dest] [-dryRun] [-crr] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

NOTE

The source path and destination path cannot be the same or nested when synchronously copying objects.

Examples

- Take the Windows OS as an example. Run the **obsutil sync obs://bucket-test/temp/ obs://bucket-test2 /temp/** command to synchronously copy objects.

```
obsutil sync obs://bucket-test/temp/ obs://bucket-test2/temp

Parallel:      3                 Jobs:          3
Threshold:     524288000         PartSize:      5242880
Exclude:                         Include:
VerifyLength:  false             VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx


[============================================================] 100.00% 10/s 0s
Succeed count is:   5        Failed count is:    0
Metrics [max cost:298 ms, min cost:192 ms, average cost:238.00 ms, average tps:9.71]
Task id is: 0476929d-9d23-4dc5-b2f8-0a0493f027c5
```

- For more examples, see **Synchronous Copy**.

Parameter Description

Parameter	Optional or Mandatory	Description
srcbucket	Mandatory	Source bucket name
dstbucket	Mandatory	Destination bucket name
dest	Optional	Name prefix of destination objects. **NOTE** If the value of this parameter does not end with a slash (/), the obsutil tool automatically adds a slash (/) at the end of the configured value as the name prefix of destination objects.

Parameter	Optional or Mandatory	Description
key	Optional	Name prefix of source objects The rules are as follows: • If this parameter is left blank, objects whose name prefix is the value of **dest** in the destination bucket are the same as all objects in the source bucket. • If this parameter is configured, objects whose name prefix is the value of **dest** in the destination bucket are the same as objects whose name prefix is this configured value in the source bucket. **NOTE** • If the value of this parameter does not end with a slash (/), the obsutil tool automatically adds a slash (/) at the end of the configured value as the name prefix of source objects. • For details about how to use this parameter, see **Synchronous Copy**.
dryRun	Optional (additional parameter)	Conducts a dry run.
crr	Optional (additional parameter)	Enables the client-side cross-region replication function. In this mode, data is directly copied to the destination bucket from the source bucket through data stream. The buckets can by any two OBS buckets. **NOTE** • If this parameter is configured, ensure that the configuration of client-side cross-region replication is updated in the configuration file. For details, see **Updating a Configuration File**. • The configurations of the source bucket and destination bucket are respectively **akCrr/skCrr/tokenCrr/endpointCrr** and **ak/sk/token/endpoint** in the configuration file. **NOTICE** After this function is enabled, both upload and download bandwidth are occupied.
vlength	Optional (additional parameter)	Verifies whether the object size in the destination bucket is the same as that in the source bucket after the copy task completes. **NOTE** This parameter must be used together with **crr**.

Parameter	Optional or Mandatory	Description
vmd5	Optional (additional parameter)	Verifies whether the MD5 value of the destination bucket is the same as that of the source bucket after the copy task completes. **NOTE** • This parameter must be used together with **crr**. • Objects in the source bucket must contain metadata **x-obs-md5chksum**. Otherwise, MD5 verification will be skipped. After the MD5 value verification is successful, the parameter value is set to the destination object metadata **x-obs-md5chksum**, which is used for later MD5 verification during download or copy.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart copy tasks when copying an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart copy, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be copied is smaller than the threshold, copy the object directly. If not, a multipart copy is required. • If you copy an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
acl	Optional (additional parameter)	Access control policies for destination objects that can be specified when copying objects. Possible values are: • private • public-read • public-read-write • bucket-owner-full-control **NOTE** The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.

Parameter	Optional or Mandatory	Description
sc	Optional (additional parameter)	Storage classes of the destination objects that can be specified when copying objects. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
meta	Optional (additional parameter)	Metadata of destination objects that can be specified when copying objects. The format is *key1*:*value1*#*key2*:*value2*#*key3*:*value3*. **NOTE** The preceding value indicates that the destination objects in the bucket contain three groups of customized metadata after objects are copied: **key1:value1**, **key2:value2**, and **key3:value3**.
ps	Optional (additional parameter)	Indicates the size of each part in a multipart copy task, in bytes. The value ranges from 100 KB to 5 GB. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.

Parameter	Optional or Mandatory	Description
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart copy and saved to the **copy** subfolder. After the copy succeeds, its part record is deleted automatically. If the copy fails or is suspended, the system attempts to resume the task according to its part record when you perform the copy the next time.
j	Optional for copying objects in batches (additional parameter)	Indicates the maximum number of concurrent tasks for copying objects synchronously. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional for copying objects in batches (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent * and **\?** to represent **?**. • If the name of the object to be copied matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for copying objects in batches (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be copied does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is copied. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional (additional parameter)	Indicates the time range matching pattern when synchronously copying objects. Only objects whose latest modification time is within the configured time range are copied. This pattern has a lower priority than the object matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-*time2***, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*****, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **sync_{succeed | failed | warning}_report_***time*_**TaskId.txt** By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **sync_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

Response

Refer to **Response** for uploading an object.

5.13 Synchronously Downloading Incremental Objects

Function

This function synchronizes all content in the specified path of the source bucket to the target bucket on OBS, ensuring that the content is consistent between the specified path of the source bucket and the target bucket. Incremental synchronization has the following meanings: 1) Increment: Compare the source object with the target file and download only the source object that has changes. 2) Synchronization: After the command is executed, ensure that the specified path of the source bucket is a subset of the local target path. That is, any object in the specified path of the source bucket has its corresponding file in the local target path.

NOTICE

- Do not change the source objects in the OBS bucket during synchronization. Otherwise, the synchronization may fail or data may be inconsistent.
- If the storage class of the object to be copied is **cold**, you must restore the object to be downloaded first. Otherwise, the download fails.
- Each object can be synchronously downloaded only when it does not exist in the local path, its size is different from the namesake one in the local path, or it has the latest modification time.

Command Line Structure

- In Windows

```
obsutil sync obs://bucket[/key] folder_url [-tempFileDir=xxx] [-dryRun] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

- In Linux or macOS

```
./obsutil sync obs://bucket[/key] folder_url [-tempFileDir=xxx] [-dryRun] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

Examples

- Take the Windows OS as an example. Run the **obsutil sync obs://bucket-test/temp d:\ temp** command to download objects synchronously.

```
obsutil sync obs://bucket-test/temp d:\temp

Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx

[=====================================================] 100.00% 155.59 KB/s 0s
Succeed count is:   6        Failed count is:    0
Metrics [max cost:153 ms, min cost:129 ms, average cost:92.00 ms, average tps:17.86]
Task id is: 3066a4b0-4d21-4929-bb84-4829c32cbd0f
```


- For more examples, see **Synchronous Download**.

Parameter Description

Parameter	Optional or Mandatory	Description
folder_url	Mandatory	Local folder path
bucket	Mandatory	Bucket name
key	Optional	Indicates the name prefix of objects to be synchronously downloaded. The rules are as follows: • If this parameter is left blank, all files in the folder specified by **folder_url** are the same as all objects in the bucket. • If this parameter is configured, all files in the folder specified by **folder_url** are the same as the objects whose name prefix is the configured value in the bucket. **NOTE** • If the value of this parameter does not end with a slash (/), the obsutil tool automatically adds a slash (/) at the end of the configured value as the object name prefix. • For details about how to use this parameter, see **Synchronous Download**.
tempFileDir	Optional (additional parameter)	Indicates the directory for storing temporary files during synchronous download. The default value is the value of **defaultTempFileDir** in the configuration file. **NOTE** • Temporary files generated during multipart download are stored in this directory. Therefore, ensure that the user who executes obsutil has the write permission on the path. • The available space of the partition where the path is located must be greater than the size of the objects to be downloaded.
dryRun	Optional (additional parameter)	Conducts a dry run.
vlength	Optional (additional parameter)	Checks whether the sizes of the local files are the same as those of the objects in the bucket after the download is complete.

Parameter	Optional or Mandatory	Description
vmd5	Optional (additional parameter)	Checks whether MD5 values of the local files are the same as those of the objects in the bucket after the download is complete. **NOTE** Objects in the bucket must contain metadata **x-obs-md5chksum**. Otherwise, MD5 verification will be skipped.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart download tasks when downloading an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart download, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be downloaded is smaller than the threshold, download the object directly. If not, a multipart download is required. • If you download an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
ps	Optional (additional parameter)	Indicates the size of each part in a multipart download task, in bytes. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.

Parameter	Optional or Mandatory	Description
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart download and saved to the **down** subfolder. After the download succeeds, its part record is deleted automatically. If the download fails or is suspended, the system attempts to resume the task according to its part record when you perform the download the next time.
j	Optional for downloading objects in batches (additional parameter)	Indicates the maximum number of concurrent tasks for downloading objects synchronously. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional for downloading objects in batches (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be downloaded matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for downloading objects in batches (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be downloaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is downloaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional (additional parameter)	Indicates the time range matching pattern when synchronously downloading objects. Only objects whose latest modification time is within the configured time range are downloaded. This pattern has a lower priority than the object matching patterns (**exclude**/ **include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-*time2***, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **sync_{succeed | failed | warning}_report_***time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **sync_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

Response

Refer to **Response** for uploading an object.

5.14 Restoring Objects from OBS Archive

Function

You can use this command to restore a specified object whose storage class is **cold** or restore objects in batches by object name prefix.

NOTE

- Object content cannot be read during restoration.
- After an object is restored, the time it requires before the object can be downloaded depends on the OBS server.

Command Line Structure

- In Windows
  - Restoring an object
    ```
    obsutil restore obs://bucket/key [-d=1] [-t=xxx] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-token=xxx]
    ```
  - Restoring objects in batches
    ```
    obsutil restore obs://bucket[/key] -r [-f] [-v] [-d=1] [-t=xxx] [-o=xxx] [-j=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-token=xxx]
    ```
- In Linux or macOS
  - Restoring an object
    ```
    ./obsutil restore obs://bucket/key [-d=1] [-t=xxx] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-token=xxx]
    ```
  - Restoring objects in batches
    ```
    ./obsutil restore obs://bucket[/key] -r [-f] [-v] [-d=1] [-t=xxx] [-o=xxx] [-j=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-token=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil restore obs://bucket-test/key** command to restore a single object whose storage class is **cold**.
  ```
  obsutil restore obs://bucket-test/key

  Start to restore object [key] in the bucket [bucket-test] successfully!
  ```
- Take the Windows OS as an example. Run the **obsutil restore obs://bucket-test -r -f** command to restore objects whose storage class is **cold** in the bucket in batches.
  ```
  obsutil restore obs://bucket-test -r -f

  [=============================================] 100.00% 3s
  Succeed count is:  12      Failed count is:  0
  Metrics [max cost:264 ms, min cost:54 ms, average cost:119.33 ms, average tps:19.70]
  Task id is: 96f104ee-d0bf-40ff-95dd-31dec0d8f4f4
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name

Parameter	Optional or Mandatory	Description
key	Mandatory for restoring a single object whose storage class is **cold** Optional for batch restoring objects whose storage class is **cold**	Indicates the name of the object to be restored or the name prefix of the objects to be restored in batches. **NOTE** If this parameter is left blank when batch restoring objects, all objects whose storage class is **cold** in the bucket are restored.
d	Optional (additional parameter)	Storage duration after objects whose storage class is **cold** are restored, in days. The value ranges from 1 to 30. The default value is 1.
t	Optional (additional parameter)	Options for restoring objects. Possible values are: • standard • expedited **NOTE** • The preceding two values indicate standard restoration (3–5 hours) and quick restoration (1–5 minutes). • If this parameter is not set, expedited restoration is used by default.
versionId	Optional for restoring a single object whose storage class is **cold** (additional parameter)	Version ID of the to-be-restored object whose storage class is **cold**
fr	Optional for restoring a single object whose storage class is **cold** (additional parameter)	Generates an operation result list when restoring a single object whose storage class is **cold**.
f	Optional for batch restoring objects whose storage class is **cold** (additional parameter)	Runs in force mode.

Parameter	Optional or Mandatory	Description
r	Mandatory for batch restoring objects whose storage class is **cold** (additional parameter)	Restores objects whose storage class is **cold** in batches by object name prefix.
v	Optional for batch restoring objects whose storage class is **cold** (additional parameter)	Restores versions of objects whose storage class is **cold** in batches by object name prefix.
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success and failure files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **restore_{succeed | failed}_report_***time*_**TaskId.txt** By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file.
j	Optional for batch restoring objects whose storage class is **cold** (additional parameter)	Maximum number of concurrent tasks for batch restoring objects whose storage class is **cold**. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.

Parameter	Optional or Mandatory	Description
k	Optional (additional parameter)	Specifies the user's SK.
token	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.15 Resuming a Failed Upload Task

Function

You can use this command to resume a failed upload task based on the task ID.

Command Line Structure

- In Windows

```
obsutil cp -recover=xxx [-arcDir=xxx] [-dryRun] [-f] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

- In Linux or macOS

```
./obsutil cp -recover=xxx [-arcDir=xxx] [-dryRun] [-f] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

Examples

- Take the Windows OS as an example. Run the **obsutil cp -recover 104786c8-27c2-48fc-bc6a-5886596fb0ed -f** command to resume the failed upload task.

```
obsutil cp -recover 104786c8-27c2-48fc-bc6a-5886596fb0ed -f

Parallel:      3                 Jobs:          3
Threshold:     524288000         PartSize:      5242880
Exclude:                         Include:
VerifyLength:  false             VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx

[=============================================================] 100.00% 2.02 KB/s 0s
Succeed count is:   5        Failed count is:    0
Metrics [max cost:90 ms, min cost:45 ms, average cost:63.80 ms, average tps:35.71]
Task id is: a628d6da-c562-4a1f-b687-4fa125de0dc3
```


Parameter Description

Parameter	Optional or Mandatory	Description
recover	Mandatory (additional parameter)	ID of the upload task to be resumed **NOTE** • You can obtain the task ID after an upload task is complete, or query it based on the file name of the operation result list, which is the 36 characters excluding the suffix **.txt** in the file name. • You can locate the upload task to be resumed in the directory where the result lists reside. For details about the directory of the result lists, see additional parameter **o**.
arcDir	Optional (additional parameter)	Path to which the uploaded files are archived
dryRun	Optional (additional parameter)	Conducts a dry run.
u	Optional (additional parameter)	Indicates incremental upload. If this parameter is set, each file can be uploaded only when it does not exist in the bucket, its size is different from the namesake one in the bucket, or it has the latest modification time.
vlength	Optional (additional parameter)	After the upload is complete, check whether the sizes of the objects in the bucket are the same as those of the local files.
vmd5	Optional (additional parameter)	After the upload completes, check whether the MD5 values of the objects in the bucket are the same as those of the local files. **NOTE** • If the size of the file or folder to be uploaded is too large, using this parameter will degrade the overall performance due to MD5 calculation. • After the MD5 value verification is successful, the parameter value is set to the object metadata **x-obs-md5chksum**, which is used for later MD5 verification during download or copy.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart upload tasks when uploading a file. The default value is the value of **defaultParallels** in the configuration file.

Parameter	Optional or Mandatory	Description
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart upload, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the file or folder to be uploaded is smaller than the threshold, upload it directly. Otherwise, a multipart upload is required. • If you upload a file or folder directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
acl	Optional (additional parameter)	Access control policies that can be specified when uploading files. Possible values are: • private • public-read • public-read-write **NOTE** The preceding three values indicate private read and write, public read, and public read and write.
sc	Optional (additional parameter)	Indicates the storage classes of objects that can be specified when uploading files. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
meta	Optional (additional parameter)	Indicates the customized metadata that can be specified when uploading files. The format is **key1:value1#key2:value2#key3:value3**. **NOTE** The preceding value indicates that the object in the bucket contains three groups of customized metadata after the file is uploaded: **key1:value1**, **key2:value2**, and **key3:value3**.

Parameter	Optional or Mandatory	Description
ps	Optional (additional parameter)	Indicates the size of each part in a multipart upload task, in bytes. The value ranges from 100 KB to 5 GB. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source file size.
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart upload and saved to the **upload** subfolder. After the upload succeeds, its part record is deleted automatically. If the upload fails or is suspended, the system attempts to resume the task according to its part record when you perform the upload the next time.
f	Optional (additional parameter)	Runs in force mode.
j	Optional (additional parameter)	Maximum number of concurrent tasks for uploading a folder. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional (additional parameter)	Indicates the file matching patterns that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any characters, and question mark (?) represents only one character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the file to be uploaded matches the value of this parameter, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute file path (including the file name and file directory). • The matching pattern applies only to files in a folder. • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional (additional parameter)	Indicates the file matching patterns that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ****** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be uploaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is uploaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute file path (including the file name and file directory). • The matching pattern applies only to files in a folder. • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.
at	Optional (additional parameter)	Indicates that when resuming a failed upload task, only the files whose latest access time is within the value of **timeRange** are uploaded. **NOTE** • This parameter must be used together with **timeRange**.

Parameter	Optional or Mandatory	Description
timeRange	Optional (additional parameter)	Indicates the time range matching pattern when uploading files. Only files whose latest modification time is within the configured time range are uploaded. This pattern has a lower priority than the file matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured file matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-*time2***, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*****, all files whose latest modification time is later than *time1* are matched. **NOTICE** Time in the matching pattern is the UTC time.
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **cp_{succeed | failed | warning}_report_***time*_**TaskId.txt** By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **cp_failed_report_***time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
clear	Optional (additional parameter)	Deletes the failure result files after the upload task is resumed.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.16 Resuming a Failed Copy Task

Function

You can use this command to resume a failed copy task based on the task ID.

Command Line Structure

- In Windows

```
obsutil cp -recover=xxx [-dryRun] [-f] [-u] [-crr] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

- In Linux or macOS

```
./obsutil cp -recover=xxx [-dryRun] [-f] [-u] [-crr] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-sc=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

Examples

- Take the Windows OS as an example. Run the **obsutil cp -recover=0476929d-9d23-4dc5-b2f8-0a0493f027c5 -f** command to copy objects in batches.

```
obsutil cp -recover=0476929d-9d23-4dc5-b2f8-0a0493f027c5 -f

Parallel:      3                 Jobs:          3
Threshold:     524288000         PartSize:      5242880
Exclude:                         Include:
VerifyLength:  false             VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx


[============================================================] 100.00% 10/s 0s
Succeed count is:   1        Failed count is:    0
Metrics [max cost:298 ms, min cost:192 ms, average cost:238.00 ms, average tps:9.71]
Task id is: f4c4f2b6-6e54-4dff-96b8-52e8c8c9a4b0
```


Parameter Description

Parameter	Optional or Mandatory	Description
recover	Mandatory (additional parameter)	ID of the copy task to be resumed. **NOTE** • You can obtain the task ID after a copy task is complete, or query it based on the file name of the operation result list, which is the 36 characters excluding the suffix **.txt** in the file name. • You can locate the copy task to be resumed in the directory where the result lists reside. For details about the directory of the result lists, see additional parameter **o**.
dryRun	Optional (additional parameter)	Conducts a dry run.
crr	Optional (additional parameter)	Enables the client-side cross-region replication function. In this mode, data is directly copied to the destination bucket from the source bucket through data stream. The buckets can by any two OBS buckets. **NOTE** • If this parameter is configured, ensure that the configuration of client-side cross-region replication is updated in the configuration file. For details, see **Updating a Configuration File**. • The configurations of the source bucket and destination bucket are respectively **akCrr/skCrr/tokenCrr/endpointCrr** and **ak/sk/token/endpoint** in the configuration file. **NOTICE** After this function is enabled, both upload and download bandwidth are occupied.
vlength	Optional (additional parameter)	Verifies whether the object size in the destination bucket is the same as that in the source bucket after the copy task completes. **NOTE** This parameter must be used together with **crr**.

Parameter	Optional or Mandatory	Description
vmd5	Optional (additional parameter)	Verifies whether the MD5 value of the destination bucket is the same as that of the source bucket after the copy task completes. **NOTE** • This parameter must be used together with **crr**. • Objects in the source bucket must contain metadata **x-obs-md5chksum**. Otherwise, MD5 verification will be skipped. After the MD5 value verification is successful, the parameter value is set to the destination object metadata **x-obs-md5chksum**, which is used for later MD5 verification during download or copy.
u	Optional (additional parameter)	Indicates incremental copy. If this parameter is set, each object can be copied only when it does not exist in the destination bucket, its size is different from the namesake one in the destination bucket, or it has the latest modification time.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart copy tasks when copying an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart copy, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be copied is smaller than the threshold, copy the object directly. If not, a multipart copy is required. • If you copy an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.

Parameter	Optional or Mandatory	Description
acl	Optional (additional parameter)	Access control policies for destination objects that can be specified when copying objects. Possible values are: • private • public-read • public-read-write **NOTE** The preceding three values indicate private read and write, public read, and public read and write.
sc	Optional (additional parameter)	Storage classes of the destination objects that can be specified when copying objects. Possible values are: • **standard**: OBS Standard, which features low access latency and high throughput, and is applicable to storing frequently accessed data (multiple accesses per month) or data that is smaller than 1 MB • **warm**: OBS Infrequent Access. It is applicable to storing infrequently accessed (less than 12 times a year) data that requires quick response. • **cold**: OBS Archive. It is secure, durable, and inexpensive, and applicable to archiving rarely-accessed (once a year) data.
meta	Optional (additional parameter)	Metadata of destination objects that can be specified when copying objects. The format is *key1*:*value1*#*key2*:*value2*#*key3*:*value3*. **NOTE** The preceding value indicates that the destination objects in the bucket contain three groups of customized metadata after objects are copied: **key1:value1**, **key2:value2**, and **key3:value3**.

Parameter	Optional or Mandatory	Description
ps	Optional (additional parameter)	Indicates the size of each part in a multipart copy task, in bytes. The value ranges from 100 KB to 5 GB. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart copy and saved to the **copy** subfolder. After the copy succeeds, its part record is deleted automatically. If the copy fails or is suspended, the system attempts to resume the task according to its part record when you perform the copy the next time.
f	Optional (additional parameter)	Runs in force mode.
j	Optional (additional parameter)	Indicates the maximum number of concurrent tasks for copying objects in batches. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be copied matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be copied does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is copied. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional (additional parameter)	Indicates the time range matching pattern when copying objects. Only objects whose latest modification time is within the configured time range are copied. This pattern has a lower priority than the object matching patterns (**exclude**/ **include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-*time2***, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **cp_{succeed | failed | warning}_report**_*time*_**TaskId.txt** By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **cp_failed_report**_*time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
clear	Optional (additional parameter)	Deletes the failure result files after the copy task is resumed.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.17 Resuming a Failed Download Task

Function

You can use this command to resume a failed download task based on the task ID.

Command Line Structure

- In Windows

```
obsutil cp -recover=xxx [-dryRun] [-tempFileDir=xxx] [-f] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

- In Linux or macOS

```
./obsutil cp -recover=xxx [-dryRun] [-tempFileDir=xxx] [-f] [-u] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

Examples

- Take the Windows OS as an example. Run the **obsutil cp -recover=3066a4b0-4d21-4929-bb84-4829c32cbd0f d:\ -f -r** command to download objects in batches.

```
obsutil cp -recover=3066a4b0-4d21-4929-bb84-4829c32cbd0f -f -r

Parallel:      3                 Jobs:          3
Threshold:     524288000         PartSize:      5242880
Exclude:                         Include:
VerifyLength:  false             VerifyMd5:     false
CheckpointDir: xxxx
OutputDir: xxxx

[=====================================================] 100.00% 155.59 KB/s 0s
Succeed count is:   1        Failed count is:    0
Metrics [max cost:153 ms, min cost:129 ms, average cost:92.00 ms, average tps:17.86]
Task id is: 19ad99ce-434e-41b2-9c8d-3af5b42eb65a
```


Parameter Description

Parameter	Optional or Mandatory	Description
recover	Mandatory (additional parameter)	ID of the download task to be resumed **NOTE** • You can obtain the task ID after a download task is complete, or query it based on the file name of the operation result list, which is the 36 characters excluding the suffix **.txt** in the file name. • You can locate the download task to be resumed in the directory where the result lists reside. For details about the directory of the result lists, see additional parameter **o**.
tempFileDir	Optional (additional parameter)	Indicates the directory for storing temporary files during download. The default value is the value of **defaultTempFileDir** in the configuration file. **NOTE** • Temporary files generated during multipart download are stored in this directory. Therefore, ensure that the user who executes obsutil has the write permission on the path. • The available space of the partition where the path is located must be greater than the size of the objects to be downloaded.
dryRun	Optional (additional parameter)	Conducts a dry run.
u	Optional (additional parameter)	Indicates incremental download. If this parameter is set, each object can be downloaded only when it does not exist in the local path, its size is different from the namesake one in the local path, or it has the latest modification time.
vlength	Optional (additional parameter)	Checks whether the sizes of the local files are the same as those of the objects in the bucket after the download is complete.
vmd5	Optional (additional parameter)	Checks whether MD5 values of the local files are the same as those of the objects in the bucket after the download is complete. **NOTE** Objects in the bucket must contain metadata **x-obs-md5chksum**. Otherwise, MD5 verification will be skipped.

Parameter	Optional or Mandatory	Description
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart download tasks when downloading an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart download, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be downloaded is smaller than the threshold, download the object directly. If not, a multipart download is required. • If you download an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
ps	Optional (additional parameter)	Indicates the size of each part in a multipart download task, in bytes. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart download and saved to the **down** subfolder. After the download succeeds, its part record is deleted automatically. If the download fails or is suspended, the system attempts to resume the task according to its part record when you perform the download the next time.
f	Optional (additional parameter)	Runs in force mode.

Parameter	Optional or Mandatory	Description
j	Optional (additional parameter)	Indicates the maximum number of concurrent tasks for downloading objects in batches. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.
exclude	Optional (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be downloaded matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be downloaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is downloaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional (additional parameter)	Indicates the time range matching pattern when downloading objects. Only objects whose latest modification time is within the configured time range are downloaded. This pattern has a lower priority than the object matching patterns (**exclude**/ **include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-***time2*, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **cp_{succeed | failed | warning}_report**_*time*_**TaskId.txt** By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list **cp_failed_report**_*time*_**TaskId.txt** in the result list folder and the **log files** in the log path.
clear	Optional (additional parameter)	Deletes the failure result files after the download task is resumed.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.18 Listing Multipart Upload Tasks

Function

You can use this command to query multipart upload tasks in a bucket.

Command Line Structure

- In Windows
  ```
  obsutil ls obs://bucket[/prefix] [-s] [-d] -m [-a] [-uploadIdMarker=xxx] [-marker=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil ls obs://bucket[/prefix] [-s] [-d] -m [-a] [-uploadIdMarker=xxx] [-marker=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil ls obs://bucket-test -m -limit=10** command to query the multipart upload tasks in the bucket.
  ```
  obsutil ls obs://bucket-test -m -limit=10

  Listing multipart uploads.

  Upload list:
  Key                                   Initiated
  StorageClass       UploadId
  obs://bucket-test/aaa                 2018-11-27T03:49:07Z
  standard           000001675348ED21860C3F61EF955BD3

  obs://bucket-test/dir1/10GB.txt       2018-11-07T06:58:09Z
  standard           00000166ECF6CF7C860D1DBAF3F76013

  obs://bucket-test/dir1/1GB.txt        2018-11-07T06:58:09Z
  standard           00000166ECF6CF6F860B7FBE95D01B03

  obs://bucket-test/dir1/50GB.txt       2018-11-07T06:58:09Z
  standard           00000166ECF6CF86860D1DC2C8E8F66B

  obs://bucket-test/dir1/5GB.txt        2018-11-07T06:58:09Z
  standard           00000166ECF6CF75860CDA7780CB52C3

  obs://bucket-test/test11/20GB.txt     2018-11-27T08:21:26Z
  standard           0000016754423D24860CA8A4D06C2054

  Folder number is: 0
  Upload number is: 6
  ```
- For more examples, see **Listing Multipart Upload Tasks**.

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
prefix	Optional	Object name prefix for listing multipart uploads **NOTE** If this parameter is left blank, all multipart upload tasks in the bucket are listed.
s	Optional (additional parameter)	Displays simplified query result. **NOTE** In the simplified format, the returned result contains only the object name and upload ID of the multipart upload.
d	Optional (additional parameter)	Lists only the multipart upload tasks and sub-directories in the current directory are listed, instead of recursively listing all the multipart upload tasks and sub-directories.
m	Mandatory (additional parameter)	Lists multipart upload tasks in the bucket.
a	Optional (additional parameter)	Lists the objects and the multipart upload tasks in the bucket.
marker	Optional (additional parameter)	Indicates the upload ID after which the multipart upload listing begins. All returned multipart upload tasks are listed in lexicographical order by object name involved in the tasks. **NOTE** For details about how to use this parameter, see **Listing Multipart Upload Tasks**.
uploadIdMarker	Optional (additional parameter)	Indicates the upload ID after which the multipart upload listing begins. This parameter must be used together with **marker**. All returned multipart upload tasks are listed in lexicographical order by object name and upload ID involved in the tasks.

Parameter	Optional or Mandatory	Description
limit	Optional (additional parameter)	Maximum number of objects that can be listed. If the value is less than or equal to **0**, all objects are listed. **NOTE** If there are a large number of multipart upload tasks in a bucket, you are advised to set this parameter to limit the number of multipart upload tasks each time. If not all tasks are listed, **marker** and **uploadIdMarker** of the next request will be returned in the result, which you can use to list the remaining tasks.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

5.19 Deleting a Multipart Upload Task

Function

- You can use this command to delete a multipart upload task in a specified bucket by using the multipart upload ID.
- You can also use this command to delete multipart upload tasks in batches based on a specified object name prefix.

Command Line Structure

- In Windows

  - Deleting a single multipart upload task
    ```
    obsutil abort obs://bucket/key -u=xxx [-f] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Deleting multipart upload tasks in batches
    ```
    obsutil abort obs://bucket[/key] -r [-f] [-o=xxx] [-j=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Deleting a single multipart upload task
    ```
    ./obsutil abort obs://bucket/key -u=xxx [-f] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Deleting multipart upload tasks in batches
    ```
    ./obsutil abort obs://bucket[/key] -r [-f] [-o=xxx] [-j=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil abort obs://bucket-test/key -u=xxx -f** command to delete a single multipart upload task.
  ```
  obsutil abort obs://bucket-test/key -u=xxx -f

  Abort multipart upload [key] in the bucket [bucket-test] successfully!
  ```
- Take the Windows OS as an example. Run the **obsutil abort obs://bucket-test -r -f** command to delete all multipart upload tasks in the bucket in batches.
  ```
  obsutil abort obs://bucket-test -r -f

  Listing multipart uploads to abort...
  Aborting progress:[============================================================] 100.00% 3s
  Succeed count is:  12        Failed count is:  0
  Metrics [max cost:264 ms, min cost:54 ms, average cost:119.33 ms, average tps:19.70]
  Task id is: 0b34b1fa-b015-4313-a216-0fd5b4fffa1c
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Bucket name
key	Mandatory for deleting a multipart upload task. Optional for deleting multipart upload tasks in batches.	Indicates the object name involved in a multipart upload task to be deleted, or the name prefix of the objects involved in multipart upload tasks to be deleted in batches. **NOTE** If this parameter is left blank when deleting multipart upload tasks in batches, all multipart upload tasks in the bucket are deleted.
u	Mandatory for deleting a single multipart upload task (additional parameter)	ID of the multipart upload task to be deleted **NOTE** You can obtain the value of this parameter from **Listing Multipart Upload Tasks**.

Parameter	Optional or Mandatory	Description
fr	Optional for deleting a single multipart upload task (additional parameter)	Generates an operation result list when deleting a multipart upload task.
f	Optional (additional parameter)	Runs in force mode.
r	Mandatory for deleting multipart upload tasks (additional parameter)	Deletes multipart upload tasks in batches based on a specified object name prefix.
j	Optional for deleting multipart upload tasks (additional parameter)	Indicates the maximum number of concurrent tasks for deleting multipart uploads in batches. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success and failure files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **abort_{succeed | failed}_report_***time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.

Parameter	Optional or Mandatory	Description
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Refer to **Response** for uploading an object.

5.20 Creating an Authorization Code for Directory Sharing

Function

You can use this command to specify the bucket name, object name prefix, and access code to create an authorization code for directory sharing.

Command Line Structure

- In Windows
```
obsutil create-share obs://bucket[/prefix] [-ac=xxx] [-vp=xxx] [-dst=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```
- In Linux OS or macOS
```
./obsutil create-share obs://bucket[/prefix] [-ac=xxx] [-vp=xxx] [-dst=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

Examples

- In Windows, you can run the **obsutil create-share obs://bucket/test/ -ac=123456 -vp=1m** command to create an authorization code that is valid within one month.
```
obsutil create-share obs://bucket/test/ -ac=123456 -vp=1m

Authorization Code:
token=xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Access Code:
123456

Valid Until:
Sat, 26 Oct 2019 11:28:10 GMT +8000
```

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	Name of a bucket
prefix	Optional	Prefix of an object name. If this parameter is specified, objects starting with this prefix are shared. If this parameter is left blank, all objects in the bucket are shared. **NOTE** It is recommended that the value end with a slash (/).
ac	Optional (additional parameter)	Access code. **NOTE** • If no access code is passed using this parameter, obsutil tool prompts you to enter the access code in interactive mode. • An access code is a six-digit string.
vp	Optional (additional parameter)	Validity period of an authorization code. The default value is one day, indicating that the generated authorization code is valid for only one day. **NOTE** • This parameter supports different time units, including: **m** (month), **w** (week), **d** (day), **h** (hour), **min** (minute), and **s** (second). For example, **1d** indicates that the authorization code is valid within one day, **2w** indicates that the code is valid within two weeks, and **3h** indicates that the code is valid within three hours. • The default time unit is **s** (second), for example, **3600** indicates that the authorization code is valid within 3600 seconds.
dst	Optional (additional parameter)	Path for storing the generated authorization code.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.

Parameter	Optional or Mandatory	Description
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.
payer	Optional (additional parameter)	Specifies that requester-pays is enabled on a bucket.

Response

Field	Description
Authorization Code	Code for authorization
Access Code	Access code
Valid Until	Expiration time

5.21 Listing Objects by Using an Authorization Code

Function

You can use this command to query objects in a bucket with an authorization code. The returned list of objects are sorted in the lexicographical order.

Command Line Structure

- In Windows
  - Enter an authorization code directly.
    ```
    obsutil share-ls authorization_code [-ac=xxx] [-prefix=xxx] [-s] [-d] [-marker=xxx] [-bf=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Use the file path to pass an authorization code.
    ```
    obsutil share-ls file://authorization_code_file_url [-ac=xxx] [-prefix=xxx] [-s] [-d] [-marker=xxx] [-bf=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux OS or macOS
  - Enter an authorization code directly.
    ```
    ./obsutil share-ls authorization_code [-ac=xxx] [-prefix=xxx] [-s] [-d] [-marker=xxx] [-bf=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Use the file path to pass an authorization code.
    ```
    ./obsutil share-ls file://authorization_code_file_url [-ac=xxx] [-prefix=xxx] [-s] [-d] [-marker=xxx] [-bf=xxx] [-limit=1] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```


Examples

- In Windows, you can run the **obsutil share-ls xxx -ac=123456 -limit=1** command to query objects in a bucket using an authorization code.

```
obsutil share-ls xxx -ac=123456 -limit=1

Object list:
key                                 LastModified              Size      StorageClass      ETag
obs://bucket-test/test/test.tar.gz  2019-07-11T14:50:59Z      48.92KB   standard
"1dd27294ad2f152b43cd111e9fe3990f"

Total size of prefix [test/] is: 48.92KB
Folder number is: 0
Object number is: 1
The authorized prefix is [test/]
```

Parameter Description

Parameter	Optional or Mandatory	Description
authorization_code or file://authorization_code_file_url	Mandatory	Code for authorization **NOTE** If the authorization code starts with **file://**, the authorization code is obtained from a local file.
ac	Optional (additional parameter)	Access code **NOTE** • If no access code is specified using this parameter, obsutil tool prompts you to enter the access code in interactive mode. • An access code is a six-digit string.
prefix	Optional (additional parameter)	Object name prefix specified for listing objects using an authorization code. **NOTE** • If this parameter is specified, objects starting with this prefix are listed. • If this parameter is left blank, all objects in the authorized path are shared.
s	Optional (additional parameter)	Displays simplified query result. **NOTE** In the simplified format, the returned result contains only the object name.
d	Optional (additional parameter)	Lists only objects and subdirectories in the current directory, instead of recursively listing all objects and subdirectories. **NOTE** According to the naming conventions in OBS, a slash (/) is used as the directory separator.

Parameter	Optional or Mandatory	Description
marker	Optional (additional parameter)	Object name to start with when listing objects in a bucket using an authorization code. All objects are listed in lexicographical order by object name.
bf	Optional (additional parameter)	Display formats of bytes in the listing result. Possible values are: • human-readable • raw **NOTE** If this parameter is not configured, the display format of bytes in the result is determined by the **humanReadableFormat** parameter in the configuration file.
limit	Optional (additional parameter)	Maximum number of objects that can be listed. If the value is less than or equal to 0, all objects are listed. If it is left blank, 1000 objects are listed by default. **NOTE** If there are a large number of objects in a bucket, you are advised to set this parameter to limit the number of objects to be listed each time. If not all objects are listed, **marker** of the next request will be returned in the result, which you can use to list the remaining objects.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

5.22 Downloading Objects by Using an Authorization Code

Function

You can use this command to download an object or download objects in a batch by object name prefix to your local PC.

NOTICE

Do not change the source objects in the OBS bucket when downloading a single object or objects in batches. Otherwise, the download may fail or data may be inconsistent.

Command Line Structure

- In Windows
  - Enter the authorization code to download a single object.
    ```
    obsutil share-cp authorization_code file_or_folder_url -key=xxx [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-ps=auto] [-cpd=xxx][-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Use the file path to transfer the authorization code and download a single object.
    ```
    obsutil share-cp file://authorization_code_file_url file_or_folder_url -key=xxx [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Enter the authorization code to download objects in a batch.
    ```
    obsutil share-cp authorization_code folder_url -r [-key=xxx] [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-f] [-u] [-vlength] [-vmd5] [-flat] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Use the file path to transfer the authorization code and download objects in a batch.
    ```
    obsutil share-cp file://authorization_code_file_url folder_url -r [-key=xxx] [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-f] [-u] [-vlength] [-vmd5] [-flat] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux OS or macOS
  - Enter the authorization code to download a single object.
    ```
    ./obsutil share-cp authorization_code file_or_folder_url -key=xxx [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-ps=auto] [-cpd=xxx][-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Use the file path to transfer the authorization code and download a single object.
    ```
    ./obsutil share-cp file://authorization_code_file_url file_or_folder_url -key=xxx [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-u] [-vlength] [-vmd5] [-p=1] [-threshold=52428800] [-ps=auto] [-cpd=xxx][-fr] [-o=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Enter the authorization code to download objects in a batch.
    ```
    ./obsutil share-cp authorization_code folder_url -r [-key=xxx] [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-f] [-u] [-vlength] [-vmd5] [-flat] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```


  - Use the file path to transfer the authorization code and download objects in a batch.

    ```
    ./obsutil share-cp file://authorization_code_file_url folder_url -r [-key=xxx] [-ac=xxx] [-dryRun] [-tempFileDir=xxx] [-f] [-u] [-vlength] [-vmd5] [-flat] [-j=1] [-p=1] [-threshold=52428800] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- In Windows, you can run the **obsutil share-cp xxx d:\temp\test.txt -ac=123456 -key=src/test.txt** command to download a single object.

  ```
  obsutil share-cp  xxx  d:\temp\test.txt -ac=123456 -key=test/test.txt

  Parallel:      3                 Jobs:          3
  Threshold:     524288000         PartSize:      auto
  VerifyLength:  false             VerifyMd5:     false
  CheckpointDir: xxxx
  TempFileDir: xxxx

  [=========================================] 100.00% 4.86 KB/s 0s
  Download successfully, 19B, n/a, https://endpoint:443/test/test.txt --> d:\temp\test.txt
  The authorized prefix is [test/]
  ```

- In Windows, you can run the **obsutil share-cp xxx d:\temp -ac=123456 -f -r** command to download objects in a batch.

  ```
  obsutil share-cp xxx d:\temp -ac=123456 -f -r

  Parallel:      3                 Jobs:          3
  Threshold:     524288000         PartSize:      5242880
  VerifyLength:  false             VerifyMd5:     false
  CheckpointDir: xxxx
  OutputDir: xxxx
  TempFileDir: xxxx

  [=====================================================] 100.00% 155.59 KB/s 0s
  Succeed count is:  6        Failed count is:   0
  Metrics [max cost:153 ms, min cost:129 ms, average cost:92.00 ms, average tps:17.86]
  Task id is: 1a50b1dd-3f92-42ae-a974-ff8fe514c2c2
  The authorized prefix is [test/]
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
authorization_code or file://authorization_code_file_url	Mandatory	Code for authorization **NOTE** If the authorization code starts with **file://**, the authorization code is obtained from a local file.
file_or_folder_url	Mandatory for downloading an object	Local file/folder path
folder_url	Mandatory for downloading objects in a batch	Local folder path

Parameter	Optional or Mandatory	Description
key	Mandatory for downloading an object (additional parameter) Optional for downloading objects in a batch	Indicates the name of the object to be downloaded, or the name prefix of the objects to be downloaded in batches. This parameter cannot be left blank when downloading an object. The saving and naming rules are as follows: ● If this parameter specifies a file or folder path that does not exist, the tool checks whether the value ends with a slash (/) or backslash (\). If yes, a folder is created based on the path, and the object is downloaded to this newly created directory. ● If this parameter specifies a file or folder path that does not exist and the value does not end with a slash (/) or backslash (\), the object is downloaded to your local PC with the value of the parameter as the file name. ● If this parameter specifies an existing file, the object is downloaded to your local PC overwriting the existing file, with the value of the parameter as the file name. ● If this parameter specifies an existing folder, the object is downloaded to the directory specified by **file_or_folder_url** with the object name as the file name. The saving rules when downloading objects in a batch are as follows: ● If this parameter is left blank, all objects in the authorized path specified in the authorization code are downloaded to the folder specified by **folder_url**. ● If this parameter is configured, objects whose name prefix is the configured value in the bucket are downloaded to the directory specified by **folder_url**. **NOTE** ● If this parameter is specified, objects starting with this prefix are listed. ● If this parameter is configured but the **flat** parameter is not configured when downloading objects in a batch, the name of the downloaded file contains the name prefix of the parent object. If **flat** is configured, then the name of the downloaded file does not contain the name prefix of the parent object.

Parameter	Optional or Mandatory	Description
		NOTICE During batch download, if the **flat** option is selected and the object name prefix is empty or does not end with a slash (/) during authorization code creation, the downloaded object list may be empty.
ac	Optional (additional parameter)	Access code **NOTE** • If no access code is specified using this parameter, obsutil tool prompts you to enter the access code in interactive mode. • An access code is a six-digit string.
r	Mandatory for downloading objects in batches (additional parameter)	Copies objects in batches based on a specified object name prefix.
fr	Optional for downloading an object (additional parameter)	Generates an operation result list when downloading an object.
flat	Optional for downloading objects in batches (additional parameter)	The name prefix of the parent object is excluded when downloading objects in a batch.
tempFileDir	Optional (additional parameter)	Indicates the directory for storing temporary files during multipart download. The default value is the value of **defaultTempFileDir** in the configuration file. **NOTE** • If this parameter is left blank and the **defaultTempFileDir** parameter in the configuration file is also left blank, temporary files generated during multipart download are saved in the directory where to-be-download files are located and end with the suffix of **.obs.temp**. • Temporary files generated during multipart download are stored in this directory. Therefore, ensure that the user who executes obsutil has the write permission of the path. • The available space of the partition where the path is located must be greater than the size of the objects to be downloaded.

Parameter	Optional or Mandatory	Description
dryRun	Optional (additional parameter)	Conducts a dry run.
u	Optional (additional parameter)	Indicates incremental download. If this parameter is set, each object can be downloaded only when it does not exist in the local path, its size is different from the namesake one in the local path, or it has the latest modification time.
vlength	Optional (additional parameter)	Checks whether the sizes of the local files are the same as those of the objects in the bucket after the download is complete.
vmd5	Optional (additional parameter)	Checks whether MD5 values of the local files are the same as those of the objects in the bucket after the download is complete. **NOTE** Objects in the bucket must contain metadata **x-obs-md5chksum**. Otherwise, MD5 verification will be skipped.
p	Optional (additional parameter)	Indicates the maximum number of concurrent multipart download tasks when downloading an object. The default value is the value of **defaultParallels** in the configuration file.
threshold	Optional (additional parameter)	Indicates the threshold for enabling multipart download, in bytes. The default value is the value of **defaultBigfileThreshold** in the configuration file. **NOTE** • If the size of the object to be downloaded is smaller than the threshold, download the object directly. If not, a multipart download is required. • If you download an object directly, no part record is generated, and resumable transmission is not supported. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.
ps	Optional (additional parameter)	Indicates the size of each part in a multipart download task, in bytes. The default value is the value of **defaultPartSize** in the configuration file. **NOTE** • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • The parameter can be set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.

Parameter	Optional or Mandatory	Description
cpd	Optional (additional parameter)	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** A part record is generated during a multipart download and saved to the **down** subfolder. After the download succeeds, its part record is deleted automatically. If the download fails or is suspended, the system attempts to resume the task according to its part record when you perform the download the next time.
f	Optional for downloading objects in a batch (additional parameter)	Runs in force mode.
j	Optional for downloading objects in a batch (additional parameter)	Indicates the maximum number of concurrent tasks for downloading objects in a batch. The default value is the value of **defaultJobs** in the configuration file. **NOTE** The value is ensured to be greater than or equal to 1.

Parameter	Optional or Mandatory	Description
exclude	Optional for downloading objects in a batch (additional parameter)	Indicates the matching patterns of source objects that are excluded, for example: ***.txt**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. For instance, **abc*.txt** indicates any file whose name starts with **abc** and ends with **.txt**. • You can use ***** to represent ***** and **\?** to represent **?**. • If the name of the object to be downloaded matches the value of this parameter, the object is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **exclude** parameters can be specified, for example, **-exclude=*.xxx -exclude=*.xxx**.

Parameter	Optional or Mandatory	Description
include	Optional for downloading objects in a batch (additional parameter)	Indicates the matching patterns of source objects that are included, for example: ***.jpg**. **NOTE** • The asterisk (*) represents any group of characters, and the question mark (?) represents any single character. • You can use ***** to represent ***** and **\?** to represent **?**. • Only after identifying that the name of the file to be downloaded does not match the value of **exclude**, the system checks whether the file name matches the value of this parameter. If yes, the file is downloaded. If not, the file is skipped. **NOTICE** • You are advised to use quotation marks for the matching pattern to prevent special characters from being escaped by the OS and leading to unexpected results. Use single quotation marks for Linux or macOS and quotation marks for Windows. • The matching pattern applies to the absolute path of an object, including the object name prefix and object name starting from the root directory. For example, if the path of an object in the bucket is **obs://bucket/src1/src2/test.txt**, then the absolute path of the object is **src1/src2/test.txt**. • This matching pattern applies only to objects whose names do not end with a slash (/). • Multiple **include** parameters can be specified, for example, **-include=*.xxx -include=*.xxx**.

Parameter	Optional or Mandatory	Description
timeRange	Optional for downloading objects in a batch (additional parameter)	Indicates the time range matching pattern when downloading objects. Only objects whose latest modification time is within the configured time range are downloaded. This pattern has a lower priority than the object matching patterns (**exclude**/**include**). That is, the time range matching pattern is executed after the configured object matching patterns. **NOTE** • The matching time range is represented in *time1*-*time2*, where *time1* must be earlier than or the same as *time2*. The time format is *yyyyMMddHHmmss*. • Automatic formatting is supported. For example, yyyyMMdd is equivalent to yyyyMMdd000000, and yyyyMM is equivalent to yyyyMM01000000. • If this parameter is set to ***-***time2*, all files whose latest modification time is earlier than *time2* are matched. If it is set to *time1*-*, all files whose latest modification time is later than *time1* are matched. **NOTICE** • Time in the matching pattern is the UTC time. • This matching pattern applies only to objects whose names do not end with a slash (/).
mf	Optional (additional parameter)	Indicates that the name matching pattern (**include** or **exclude**) and the time matching pattern (**timeRange**) also take effect on objects whose names end with a slash (/).

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Indicates the folder where operation result lists reside. After the command is executed, result lists (possibly including success, failure, and warning files) are generated in the folder. The default value is **.obsutil_output**, the subfolder in the home directory of the user who executes obsutil commands. **NOTE** • The naming rule for result lists is as follows: **share-cp_{succeed | failed | warning}_report**_*time*_**TaskId.txt** • By default, the maximum size of a single result list is 30 MB and the maximum number of result lists that can be retained is 1024. You can set the maximum size and number by configuring **recordMaxLogSize** and **recordBackups** in the configuration file. • If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list in the result list folder and the **log files** in the log path.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

Response

Refer to **Response** for uploading an object.

6 Auxiliary Commands

6.1 Updating a Configuration File

Function

You can use this command to update some configurations in the **.obsutilconfig** configuration file.

Command Line Structure

- In Windows
  - Updating configurations in interactive mode
    ```
    obsutil config [-interactive] [-crr] [-config=xxx]
    ```
  - Directly updating configurations
    ```
    obsutil config [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx] [-crr] [-config=xxx]
    ```
- In Linux or macOS
  - Updating configurations in interactive mode
    ```
    ./obsutil config [-interactive] [-crr] [-config=xxx]
    ```
  - Directly updating configurations
    ```
    ./obsutil config [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx] [-crr] [-config=xxx]
    ```

NOTE

- Note: You can use the **-i**, **-k**, and **-e** options to configure user information for authentication. You can run the **history** command in the Linux or other OS to query the parameter values. Exercise caution when performing this operation.

Examples

- Take the Windows OS as an example. Run the **obsutil config -interactive** command to set the access keys and endpoint of OBS.
  ```
  obsutil config -interactive

  Please input your ak:
  xxxxxxxxxxxxxxxxxxxxxxxx
  Please input your sk:
  xxxxxxxxxxxxxxxxxxxxxxxx
  Please input your endpoint:
  xxxxxxxxxxxxxxxxxxxxxxxx
  ```



```
Please input your token:
xxxxxxxxxxxxxxxxxxxxxxxx
Config file url:
  C:\Users\tools\.obsutilconfig

Update config file successfully!
```

Parameter Description

Parameter	Optional or Mandatory	Description
interactive	Optional (additional parameter)	Updates configurations in interactive mode. **NOTICE** You are advised to configure AK and SK in interactive mode for security purpose.
e	Optional (additional parameter)	**endpoint** or **endpointCrr** in the configuration file
i	Optional (additional parameter)	**ak** or **akCrr** in the configuration file
k	Optional (additional parameter)	**sk** or **skCrr** in the configuration file
t	Optional (additional parameter)	**token** or **tokenCrr** in the configuration file
crr	Optional (additional parameter)	Updates the configurations related to client-side cross-region replication in the configuration file. **NOTE** If this parameter is set, upgraded fields in the configuration file corresponding to parameters **e**, **i**, **k**, and **t** are respectively changed to **endpointCrr**, **akCrr**, **skCrr**, and **tokenCrr**.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.

6.2 Deleting Part Records

Function

You can use this command to delete part records from a specified directory.

Command Line Structure

- In Windows

```
obsutil clear [checkpoint_dir] [-u] [-d] [-c] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
```

- In Linux or macOS
  ```
  ./obsutil clear [checkpoint_dir] [-u] [-d] [-c] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil clear -u** command to delete the part records of multipart upload tasks in the default directory.
  ```
  obsutil clear -u

  Clear checkpoint files for uploading in folder [xxxxx]
  [=============================================================] 100.00% 0s
  Succeed files is:  1        Failed files is:  0
  ```

Parameter Description

Parameter	Optional or Mandatory	Description
checkpoint_dir	Optional	Indicates the folder where the part records reside. The default value is **.obsutil_checkpoint**, the same subfolder where obsutil commands reside.
u	Optional (additional parameter)	Deletes the part records of all multipart upload tasks. **NOTE** At the same time, the system attempts to delete the multipart upload tasks in the part records.
d	Optional (additional parameter)	Deletes the part records of all multipart download tasks. **NOTE** At the same time, the system attempts to delete the fragments in the part records.
c	Optional (additional parameter)	Deletes the part records of all multipart copy tasks. **NOTE** At the same time, the system attempts to delete the multipart copy tasks in the part records.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.

Parameter	Optional or Mandatory	Description
t	Optional (additional parameter)	Specifies the user's security token.

NOTE

You must configure at least one among the **u**, **d** and **c** parameters.

6.3 Viewing Command Help Information

Function

You can use this command to view the commands supported by obsutil or view the help information of a specific command.

Command Line Structure

- In Windows
  ```
  obsutil help [command]
  ```
- In Linux or macOS
  ```
  ./obsutil help [command]
  ```

Examples

- Take the Windows OS as an example. Run the **obsutil help mb** command to view the help information about the command for creating a bucket.
  ```
  obsutil help mb

  Summary:
  create a bucket with the specified parameters

  Syntax:
    obsutil mb obs://bucket [-acl=xxx] [-sc=xxx] [-location=xxx] [-config=xxx]

  Options:
    -acl=xxx
      the ACL of the bucket, possible values are [private|public-read|public-read-write]

    -sc=xxx
      the default storage class of the bucket, possible values are: [standard|warm|cold]

    -location=xxx
      the region where the bucket is located

    -config=xxx
      the path to the custom config file when running this command
  ```


Parameter Description

Parameter	Optional or Mandatory	Description
command	Optional	Currently, the help documents of the following commands are available: • For **abort**, see **Deleting a Multipart Upload Task**. • For **chattri**, see **Setting Object Properties**. • For **cp**, see **Uploading an Object**, **Copying an Object**, and **Downloading an Object**. • For **ls**, see **Listing Buckets**, **Listing Objects**, and **Listing Multipart Upload Tasks**. • For **mb**, see **Creating a Bucket**. • For **mkdir**, see **Creating a Folder**. • For **mv**, see **Moving an Object**. • For **restore**, see **Restoring Objects from OBS Archive**. • For **rm**, see **Deleting a Bucket** and **Deleting an Object**. • For **sign**, see **Generating the Download Link of an Object**. • For **stat**, see **Querying Bucket Properties** and **Querying Object Properties**. • For **sync**, see **Synchronously Uploading Incremental Objects**, **Synchronously Copying Incremental Objects**, and **Synchronously Downloading Incremental Objects**. • For **archive**, see **Archiving Log Files**. • For **clear**, see **Deleting Part Records**. • For **config**, see **Updating a Configuration File**. • For **help**, see **Viewing Command Help Information**. • For **version**, see **Querying the Version Number**.

6.4 Querying the Version Number

Function

You can use this command to query the current version of obsutil.

Command Line Structure

- In Windows
  ```
  obsutil version
  ```
- In Linux or macOS
  ```
  ./obsutil version
  ```

Running Example

Take the Windows OS as an example.

```
obsutil version

obsutil version:5.1.9, obssdk version:2.2.12
operating system:windows, arch:amd64
```

6.5 Archiving Log Files

Function

You can use this command to archive log files to a local PC or to a specified bucket.

Command Line Structure

- In Windows
  - Archiving to a local PC
    ```
    obsutil archive [file_or_folder_url] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Archiving to a specified bucket
    ```
    obsutil archive obs://bucket[/key] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
- In Linux or macOS
  - Archiving to a local PC
    ```
    obsutil archive [file_or_folder_url] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```
  - Archiving to a specified bucket
    ```
    obsutil archive obs://bucket[/key] [-config=xxx] [-e=xxx] [-i=xxx] [-k=xxx] [-t=xxx]
    ```

Examples

- Take the Windows OS as an example. Run the **obsutil archive** command to archive log files to the same directory where the tool is executed.
  ```
  obsutil archive

  [------------------------------------------------------------] 100.00% 15/15 35ms
  Succeed to archive log files to [D:\obsutil\obsutil_log.zip]
  ```


Parameter Description

Parameter	Optional or Mandatory	Description
file_or_folder_url	Optional	Indicates the path to which log files are archived. The rules are as follows: • If this parameter is left blank, log files are archived to the same directory where obsutil commands reside with **obsutil_log.zip** as the archive file name. • If this parameter specifies a file or folder path that does not exist, the tool checks whether the value ends with a slash (/) or backslash (\). If yes, a folder is created based on the path, and log files are archived to the newly created directory with **obsutil_log.zip** as the archive file name. • If this parameter specifies a file or folder path that does not exist and the value does not end with a slash (/) or backslash (\), log files are archived to a local PC with the value as the archive file name. • If this parameter specifies an existing .zip file, then log files are archived to a local PC overwriting the existing file, with the value as the archive file name. • If this parameter specifies an existing folder, then log files are archived to the specified directory with **obsutil_log.zip** as the archive file name. **NOTE** All archive files are .zip files.
bucket	Mandatory for archiving log files to a specified bucket	Bucket name

Parameter	Optional or Mandatory	Description
key	Optional for archiving log files to a specified bucket	Indicates the object name or object name prefix when archiving log files to a specified bucket. The rules are as follows: • If this parameter is left blank, log files are archived to the root directory of the bucket with **obsutil_log.zip** as the object name. • If the value ends with a slash (/), the value is used as the object name prefix when archiving log files, and the object name is the value plus **obsutil_log.zip**. Otherwise, log files are archived with the value as the object name.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see **Parameter Description**.
e	Optional (additional parameter)	Specifies the endpoint.
i	Optional (additional parameter)	Specifies the user's AK.
k	Optional (additional parameter)	Specifies the user's SK.
t	Optional (additional parameter)	Specifies the user's security token.

6.6 Checking and Updating the Version

Function

Check and upgrade obsutil to a new version.

Command Line Structure

- In Windows
```
obsutil update [-f] [-retrytimes=xxx]
```
- In Linux or macOS
```
./obsutil update [-f] [-retrytimes=xxx]
```


Examples

The following example is based on a Windows OS:

```
obsutil update

Current version is: 5.1.14, the latest version is: 5.1.15
Do you want update obsutil ? Please input (y/n) to confirm:
```

6.7 Listing Failure Result Files

Function

This command is used to list the last-modified failure result files generated by the **cp** or **sync** commands in a specified folder.

Command Line Structure

- In Windows
  ```
  obsutil ls -failed [-limit=1000] [-o=xxx]
  ```
- In Linux or macOS
  ```
  ./obsutil ls -failed [-limit=1000] [-o=xxx]
  ```

Examples

The following example is based on a Windows OS:

```
obsutil ls -failed

FileName                                                    ModTime
TaskId
cp_failed_report_xxx_ccb9f044-7768-4948-ae6d-4628ae9659a5.txt       2019-05-26 19:33:13.516813 +0800
CST     ccb9f044-7768-4948-ae6d-4628ae9659a5

sync_failed_report_xxx_59104460-d10e-42a1-9f76-03f7bd3eaeb4.txt     2019-05-27 14:30:19.91126 +0800
CST     59104460-d10e-42a1-9f76-03f7bd3eaeb4

Get 2 last modified failed report files.
```

Parameter Description

Parameter	Optional or Mandatory	Description
failed	Mandatory	This command is used to list the last-modified failure result files generated by the **cp** or **sync** commands in a specified folder. **NOTE** • This command does not support recursive scanning of all files in a specified folder. It can only list failure result files in the root directory of a specified path.
limit	Optional (additional parameter)	Maximum number of objects that can be queried. If the value is less than or equal to 0, all objects are listed. If it is left blank, 1000 objects are listed by default.

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	Specifies the folder where the result files are located. If this parameter is not specified, the **.obsutil_output** subfolder in the user directory for running obsutil commands is used by default.

7 Common Examples

7.1 Upload

All commands in this section use the Linux operating system as an example to describe how to upload files.

Assume that a local folder is in the following structure:

```
└── src1
    ├── src2
    │   ├── test1.txt
    │   └── test2.txt
    ├── src3
    └── test3.txt
```

Based on the preceding folder structure, different upload scenarios require different commands.

- To upload the **test3.txt** file in the local **src1** folder to the root directory of bucket **bucket-test**, the command is as follows:
  ```
  ./obsutil cp /src1/test3.txt  obs://bucket-test
  ```
  After the upload completes, the following object is generated in the bucket:
  ```
  ./obs://bucket-test/test3.txt
  ```
- To upload the **test3.txt** file in the local **src1** folder to the root directory of bucket **bucket-test** and rename it to **aaa.txt**, the command is as follows:
  ```
  ./obsutil cp /src1/test3.txt  obs://bucket-test/aaa.txt
  ```
  After the upload completes, the following object is generated in the bucket:
  ```
  ./obs://bucket-test/aaa.txt
  ```
- To upload the **test3.txt** file in the local **src1** folder to the **src** folder in bucket **bucket-test**, the command is as follows:
  ```
  ./obsutil cp /src1/test3.txt  obs://bucket-test/src/
  ```
  After the upload completes, the following object is generated in the bucket:
  ```
  ./obs://bucket-test/src/test3.txt
  ```
- To recursively upload the entire local **src2** folder to the root directory of bucket **bucket-test** in force mode, the command is as follows:
  ```
  ./obsutil cp /src1/src2  obs://bucket-test -r -f
  ```
  After the upload completes, the following objects are generated in the bucket:


```
obs://bucket-test/src2/
obs://bucket-test/src2/test1.txt
obs://bucket-test/src2/test2.txt
```

- To recursively upload the entire local **src1** folder to the **src** folder in bucket **bucket-test** in force mode, the command is as follows:

```
./obsutil cp /src1  obs://bucket-test/src -r -f
```

After the upload completes, the following objects are generated in the bucket:

```
obs://bucket-test/src/src1/
obs://bucket-test/src/src1/src2/
obs://bucket-test/src/src1/src2/test1.txt
obs://bucket-test/src/src1/src2/test2.txt
obs://bucket-test/src/src1/src3/
obs://bucket-test/src/src1/test3.txt
```

- To recursively upload the all files and subfolders in the local **src1** folder to the **src** folder in bucket **bucket-test** in force mode, the command is as follows:

```
./obsutil cp /src1  obs://bucket-test/src -r -f -flat
```

After the upload completes, the following objects are generated in the bucket:

```
obs://bucket-test/src/
obs://bucket-test/src/src2/
obs://bucket-test/src/src2/test1.txt
obs://bucket-test/src/src2/test2.txt
obs://bucket-test/src/src3/
obs://bucket-test/src/test3.txt
```

- To upload the **file1** file to the **bucket-test** bucket, and resume the upload if the upload fails, run the following commands:

```
./obsutil cp /file1  obs://bucket-test/file -f
```

The upload fails. The command output is as follows:

```
./obsutil cp /file1 obs://bucket-test/file -f

Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx

[================================_________________] 66.08% ?/s 3.35GB/4.88GB ?
```

Run the preceding command again to resume the upload. The command output is as follows:

```
obsutil cp /file1 obs://bucket-test/file -f
Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
CheckpointDir: xxxx

[==================================================] 100% 307.42MB/s 4.88GB/4.88GB
5.308s
Upload successfully, 4.88GB, n/a, /file1 --> obs://bucket-test/file, cost [6325], status [200], request id
[xxxxx]
```

- To incrementally upload all files from the local **src1** folder to the **src** directory of bucket **bucket-test**, the command is as follows:

```
./obsutil cp /src1  obs://bucket-test/src -f -r -u
```

Four objects are successfully uploaded, one of which is a new object. The command output contains **Skip count**.

```
./obsutil cp /src1 obs://bucket-test/src -f -r -u
Parallel:      3                Jobs:          3
Threshold:     524288000        PartSize:      5242880
Exclude:                        Include:
VerifyLength:  false            VerifyMd5:     false
```



```
CheckpointDir: xxxx

[=================================================] 100% tps:0.00 ?/s 2.09KB/2.09KB
5ms
Succeed count is:  4        Failed count is:   0        Skip count is:     3
Succeed bytes is:  2.09KB
Metrics [max cost:6 ms, min cost:6 ms, average cost:1.50 ms, average tps:52.63, uploaded size :2.09KB]
```

- Run the following command to exclude the **src2** folder (including all files and folders contained) when uploading the **src1** folder:

```
./obsutil cp /src1  obs://bucket-test/src -exclude '"*src1/src2*"' -f -r -mf
```

Five objects are successfully uploaded, and the upload information contains **exclude** and the specific content.

```
./obsutil cp /src1  obs://bucket-test/src -exclude '"*src1/src2*"' -f -r -mf

Parallel:      5                 Jobs:          5
Threshold:     50.00MB           PartSize:      auto
VerifyLength:  false             VerifyMd5:     false
Exclude:       *src1/src2*
Include:
CheckpointDir: xxxx
OutputDir: xxxx

[=================================================] 100.00% tps:35.82 ?/s 5/5 2.39KB/
2.39KB 340ms
Succeed count is:  3        Failed count is:   0
Succeed bytes is:  2.39KB
Metrics [max cost:338 ms, min cost:91 ms, average cost:240.40 ms, average tps:14.62, transfered size:
2.39KB]
```

After the upload completes, the following objects are generated in the bucket:

```
obs://bucket-test/src/src1/
obs://bucket-test/src/src1/src3/
obs://bucket-test/src/src1/test3.txt
```

NOTE

Resumable upload is available only for large files. Specifically, the file size is greater than 5 GB or the file size is greater than the threshold (50 MB by default).

7.2 Synchronous Upload

All commands in this section use the Linux operating system as an example to describe how to perform synchronous upload operations.

Assume that a local folder is in the following structure:

```
└── src1
    ├── src2
    │   ├── test1.txt
    │   └── test2.txt
    ├── src3
    └── test3.txt
```

Assume that bucket **bucket-test** contains the following objects:

```
obs://bucket-test/src1/
obs://bucket-test/src1/src2/
obs://bucket-test/src1/src2/test1.txt
obs://bucket-test/src1/src3/
```

Based on the structure of the preceding local folder and objects in the bucket, different synchronous upload scenarios require different commands.

- To synchronize the **test3.txt** file in the local **src1** folder to the root directory of bucket **bucket-test**, the command is as follows:
  ```
  ./obsutil sync /src1/test3.txt  obs://bucket-test
  ```
  After the synchronization is successful, the **test3.txt** file is directly uploaded to the bucket because there is no **test3.txt** in bucket **bucket-test**. Then, objects in the bucket are as follows:
  ```
  obs://bucket-test/test3.txt
  obs://bucket-test/src1/
  obs://bucket-test/src1/src2/
  obs://bucket-test/src1/src2/test1.txt
  obs://bucket-test/src1/src3/
  ```
- To synchronize all files and subfolders in the local **src1** folder to the **src** folder in bucket **bucket-test**, the command is as follows:
  ```
  ./obsutil sync /src1  obs://bucket-test/src1
  ```
  After the synchronization, the objects in the bucket are as follows:
  ```
  obs://bucket-test/src1/
  obs://bucket-test/src1/test3.txt
  obs://bucket-test/src1/src2/
  obs://bucket-test/src1/src2/test1.txt
  obs://bucket-test/src1/src2/test2.txt
  obs://bucket-test/src1/src3/
  ```

7.3 Download

All commands in this section use the Linux operating system as an example to describe how to download files.

Assume that bucket **bucket-test** contains the following objects:

```
obs://bucket-test/test1.txt
obs://bucket-test/test2.txt
obs://bucket-test/test3.txt
obs://bucket-test/test4.txt
obs://bucket-test/test5.txt
obs://bucket-test/test6.txt
obs://bucket-test/src1/
obs://bucket-test/src1/test7.txt
obs://bucket-test/src2/
obs://bucket-test/src2/test8.txt
obs://bucket-test/src2/src3/
obs://bucket-test/src2/src3/test9.txt
```

Based on the structure of objects in the bucket, different download scenarios require different commands.

- To download the **test1.txt** file from bucket **bucket-test** to the local **src1** folder, the command is as follows:
  ```
  ./obsutil cp obs://bucket-test/test1.txt  /src1
  ```
  After the download is complete, the following file is generated on the local PC:
  ```
  └── src1
      └── test1.txt
  ```
- Run the following command to download the **test1.txt** file to your local PC. If there is no **test.txt** on the local PC, the **test1.txt** file is directly downloaded and you can rename it to **test.txt**. If **test.txt** already exists, **test1.txt** is downloaded and overwrites the original local **test.txt** file after renaming.
  ```
  ./obsutil cp obs://bucket-test/test1.txt  /test.txt
  ```
  After the download is complete, the following file generated on the local PC:


```
└── test.txt
```

- To recursively download the entire **src2** folder from bucket **bucket-test** to the local **src1** folder in force mode, the command is as follows:

```
./obsutil cp obs://bucket-test/src2  /src1 -r -f
```

After the download is complete, the following files are generated on the local PC:

```
└── src1
    └── src2
        ├── src3
        │   └── test9.txt
        └── test8.txt
```

- To recursively download all files and subfolders in the **src2** folder from bucket **bucket-test** to the local **src1** folder in force mode, the command is as follows:

```
./obsutil cp obs://bucket-test/src2  /src1 -r -f -flat
```

After the download is complete, the following files are generated on the local PC:

```
└── src1
    ├── src3
    │   └── test9.txt
    └── test8.txt
```

- To recursively download the all objects in bucket **bucket-test** to the local **src0** folder in force mode, the command is as follows:

```
./obsutil cp obs://bucket-test  /src0 -r -f
```

After the download is complete, the following files are generated on the local PC:

```
└── src0
    ├── test1.txt
    ├── test2.txt
    ├── test3.txt
    ├── test4.txt
    ├── test5.txt
    ├── test6.txt
    ├── src1
    │   └── test7.txt
    └── src2
        ├── src3
        │   └── test9.txt
        └── test8.txt
```

- Run the following command to exclude the **src2** folder (including all files and folders contained) when downloading the **src1** folder from the **bucket-test** bucket:

```
./obsutil cp obs://bucket-test/src1/ src1 -exclude "*src1/src2*" -r -f -mf
```

Four objects are successfully downloaded, and the download information contains **exclude** and the specific content.

```
./obsutil cp obs://bucket-test/src1/ src1 -exclude "*src1/src2*" -r -f -mf

Parallel:      5                 Jobs:         5
Threshold:     50.00MB           PartSize:     auto
VerifyLength:  false             VerifyMd5:    false
Exclude:       *src1/src2*
Include:
CheckpointDir: xxxx
OutputDir: xxxx
TempFileDir: xxxx

[==================================================] 100.00% tps:87.78 ?/s 4/4 2.39KB/
2.39KB 223ms
Succeed count is:  4        Failed count is:    0
Succeed bytes is:  2.39KB
```



```
Metrics [max cost:147 ms, min cost:77 ms, average cost:56.00 ms, average tps:8.85, transfered size: 2.39KB]
```

After the download is complete, the following files are generated on the local PC:

```
└── src1
    ├── src3
    │   └── test9.txt
    └── test7.txt
```

7.4 Synchronous Download

All commands in this section use the Linux operating system as an example to describe how to perform synchronous download operations.

Assume that bucket **bucket-test** contains the following objects:

```
obs://bucket-test/src1/
obs://bucket-test/src1/test3.txt
obs://bucket-test/src1/src2/
obs://bucket-test/src1/src2/test1.txt
obs://bucket-test/src1/src2/test2.txt
obs://bucket-test/src1/src3/
```

Assume that a local folder is in the following structure:

```
└── src1
    └── test3.txt
```

Based on the structure of the preceding local folder and objects in the bucket, different synchronous download scenarios require different commands.

- To synchronize all files and subfolders in the **src1** folder in bucket **bucket-test** to the local **src1** folder, the command is as follows:

  ```
  ./obsutil sync obs://bucket-test/src1  /src1
  ```

  After the synchronization is successful, the following files are generated in the local **src1** folder:

  ```
  └── src1
      ├── src2
      │   ├── test1.txt
      │   └── test2.txt
      ├── src3
      └── test3.txt
  ```

7.5 Copy

All commands in this section use the Linux operating system as an example to describe how to copy files.

Assume that bucket **bucket-src** contains the following objects:

```
obs://bucket-src/test1.txt
obs://bucket-src/test2.txt
obs://bucket-src/test3.txt
obs://bucket-src/test4.txt
obs://bucket-src/test5.txt
obs://bucket-src/test6.txt
obs://bucket-src/src1/
obs://bucket-src/src1/test7.txt
obs://bucket-src/src2/
obs://bucket-src/src2/test8.txt
```



```
obs://bucket-src/src2/src3/
obs://bucket-src/src2/src3/test9.txt
```

Based on the structure of objects in the bucket, different copy scenarios require different commands.

- To copy the **test1.txt** file from bucket **bucket-src** to bucket **bucket-dest**, the command is as follows:
  ```
  ./obsutil cp obs://bucket-src/test1.txt  obs://bucket-dest
  ```
  After the copy is complete, the following object is generated in bucket **bucket-dest**:
  ```
  obs://bucket-dest/test1.txt
  ```
- To copy the content of the **test1.txt** file in bucket **bucket-src** to the **text.txt** file in bucket **bucket-dest**, the command is as follows:
  ```
  ./obsutil cp obs://bucket-src/test1.txt  obs://bucket-dest/test.txt
  ```
  After the copy is complete, the following object is generated in bucket **bucket-dest**:
  ```
  obs://bucket-dest/test.txt
  ```
- To copy the **test1.txt** file in bucket **bucket-src** to the **text** folder in bucket **bucket-dest**, the command is as follows:
  ```
  ./obsutil cp obs://bucket-src/test1.txt  obs://bucket-dest/test/
  ```
  After the copy is complete, the following object is generated in bucket **bucket-dest**:
  ```
  obs://bucket-dest/test/test1.txt
  ```
- Run the following command to recursively copy the entire **src2** folder in bucket **bucket-src** to bucket **bucket-dest** in force mode:
  ```
  ./obsutil cp obs://bucket-src/src2  obs://bucket-dest -r -f
  ```
  After the copy is complete, the following objects are generated in bucket **bucket-dest**:
  ```
  obs://bucket-dest/src2/
  obs://bucket-dest/src2/test8.txt
  obs://bucket-dest/src2/src3/
  obs://bucket-dest/src2/src3/test9.txt
  ```
- To recursively copy all files and subfolders in the **src2** folder in bucket **bucket-src** to bucket **bucket-dest** in force mode, the command is as follows:
  ```
  ./obsutil cp obs://bucket-src/src2  obs://bucket-dest -r -f -flat
  ```
  After the copy is complete, the following objects are generated in bucket **bucket-dest**:
  ```
  obs://bucket-dest/test8.txt
  obs://bucket-dest/src3/
  obs://bucket-dest/src3/test9.txt
  ```

7.6 Synchronous Copy

All commands in this section use the Linux operating system as an example to describe how to perform synchronous copy operations.

Assume that the source bucket **bucket-src** contains the following objects:

```
obs://bucket-src/src1/
obs://bucket-src/src1/test3.txt
obs://bucket-src/src1/src2/
obs://bucket-src/src1/src2/test1.txt
obs://bucket-src/src1/src2/test2.txt
obs://bucket-src/src1/src3/
```


Assume that the destination bucket **bucket-dest** contains the following objects:

```
obs://bucket-dest/src1/
obs://bucket-dest/src1/test3.txt
```

Based on the structure of objects in the bucket, different synchronous copy scenarios require different commands.

- To synchronize all files and subfolders in the **src1** folder in bucket **bucket-src** to the **src1** folder in bucket **bucket-dest**, the command is as follows:

  ```
  ./obsutil sync obs://bucket-src/src1  obs://bucket-dest/src1
  ```

  After the synchronous copy is complete, the objects in the destination bucket **bucket-dest** are as follows:

  ```
  obs://bucket-dest/src1/
  obs://bucket-dest/src1/test3.txt
  obs://bucket-dest/src1/src2/
  obs://bucket-dest/src1/src2/test1.txt
  obs://bucket-dest/src1/src2/test2.txt
  obs://bucket-dest/src1/src3/
  ```

7.7 Listing

All commands in this section use the Linux operating system as an example to describe how to list files.

Assume that bucket **bucket-test** contains the following objects:

```
obs://bucket-test/test1.txt
obs://bucket-test/test2.txt
obs://bucket-test/test3.txt
obs://bucket-test/test4.txt
obs://bucket-test/test5.txt
obs://bucket-test/test6.txt
obs://bucket-test/src1/
obs://bucket-test/src1/test7.txt
obs://bucket-test/src2/
obs://bucket-test/src2/test8.txt
```

Based on the structure of objects in the bucket, different object listing scenarios require different commands.

- To list three objects in bucket **bucket-test**, the command is as follows:

  ```
  ./obsutil ls obs://bucket-test -limit=3
  ```

  The returned result is listed in lexicographical order by object name and version ID as follows:

  ```
  obs://bucket-test/test1.txt
  obs://bucket-test/test2.txt
  obs://bucket-test/test3.txt
  ```

- To list three objects following **test3.txt** in bucket **bucket-test**, the command is as follows:

  ```
  ./obsutil ls obs://bucket-test -limit=3 -marker=test3.txt
  ```

  The returned result is listed in lexicographical order by object name and version ID as follows:

  ```
  obs://bucket-test/test4.txt
  obs://bucket-test/test5.txt
  obs://bucket-test/test6.txt
  ```

- To list the files and subdirectories in the root directory of bucket **bucket-test** in non-recursive mode, that is, files in the subdirectories are not listed, the command is as follows:


```
./obsutil ls obs://bucket-test -d
```

The returned result is listed in lexicographical order by object name and version ID as follows:

```
obs://bucket-test/test1.txt
obs://bucket-test/test2.txt
obs://bucket-test/test3.txt
obs://bucket-test/test4.txt
obs://bucket-test/test5.txt
obs://bucket-test/test6.txt
obs://bucket-test/src1/
obs://bucket-test/src2/
```

7.8 Listing Multipart Upload Tasks

All commands in this section use the Linux operating system as an example to describe how to list multipart upload tasks.

Assume that bucket **bucket-test** contains the following multipart upload tasks:

```
obs://bucket-test/task1.txt uploadid1
obs://bucket-test/task1.txt uploadid2
obs://bucket-test/task2.txt uploadid3
obs://bucket-test/task3.txt uploadid4
obs://bucket-test/src1/
obs://bucket-test/src1/task4.txt uploadid5
obs://bucket-test/src2/
obs://bucket-test/src2/task5.txt uploadid6
```

- Run the following command to list three multipart upload tasks in bucket **bucket-test**:

  ```
  ./obsutil ls obs://bucket-test -m -limit=3
  ```

  The returned result is listed in lexicographical order by object name as follows:

  ```
  obs://bucket-test/task1.txt uploadid1
  obs://bucket-test/task1.txt uploadid2
  obs://bucket-test/task2.txt uploadid3
  ```

- To list the rest multipart upload tasks following **uploadid1**, the command is as follows:

  ```
  ./obsutil ls obs://bucket-test -m -limit=3 -marker=task1.txt -uploadIdMarker=uploadid1
  ```

  The returned result is listed in lexicographical order by object name and upload ID as follows:

  ```
  obs://bucket-test/task1.txt uploadid2
  obs://bucket-test/task2.txt uploadid3
  obs://bucket-test/task3.txt uploadid4
  ```

7.9 Deleting All Multipart Upload Tasks in a Bucket

All commands in this section use the Linux operating system as an example to describe how to delete all multipart upload tasks in a bucket.

If a bucket has many fragments to be cleared, run the following command to delete all fragments of multipart upload tasks in the bucket at a time:

```
./obsutil abort obs://bucket-test -r -f
```


8 Fault Locating

8.1 Overview

obsutil provides multiple methods for users to locate and analyze faults. **Table 8-1** details the methods. Generally, you need to combine these methods for a precise fault locating.

Table 8-1 Fault locating methods

Method	Description
Log Files	obsutil log files include tool logs and SDK logs. The tool logs record the success information and exceptions generated during obsutil running. The SDK logs record the success information and exceptions generated during requesting for OBS.
Result Lists	Result lists are generated after batch tasks complete and may include success, failure, and warning files.
Return Codes	obsutil yields different return codes based on different execution results. You can analyze and troubleshoot faults according to these return codes.

8.2 Log Files

Configuring Log Files

obsutil log files include tool logs and SDK logs. You can add the following parameters to the **.obsutilconfig** file to enable the two logging functions.

- Tool logging (records the log information generated during obsutil running): configure **utilLogPath**, **utilLogBackups**, **utilLogLevel**, and **utilMaxLogSize**.

- SDK logging (records the log information generated when using obsutil to call OBS server-side APIs): configure **sdkLogPath**, **sdkLogBackups**, **sdkLogLevel**, and **sdkMaxLogSize**.

NOTE

- For details about the parameter description, see **Parameter Description**.
- **utilLogPath** and **sdkLogPath** indicate the absolute paths of the log files, not the folders that store the log files.
- If **utilLogPath** and **sdkLogPath** are not specified, tool logging and SDK logging are not enabled, and therefore no log file is generated during obsutil running.
- Log files that are rolled over are named as follows: *filename***.log.***number*

NOTICE

If multiple obsutil processes are running at the same time, log files may fail to be written concurrently or may be lost. In this case, add parameter **-config** when running commands to configure an independent configuration file for each process. Make sure that **utilLogPath** and **sdkLogPath** are set to different paths for each process.

Collecting Log Files

You can collect logs in either of the following methods:

Method 1: Use auxiliary commands by referring to **Archiving Log Files**.

Method 2: Locate the paths specified by **utilLogPath** and **sdkLogPath** in the configuration file, and then search for the log files in the corresponding paths in the local file system.

8.3 Result Lists

Configuring Result Lists

Result lists are generated when batch tasks complete. By default, they are saved to the subfolder **.obsutil_output** in the home directory of the user who executes obsutil commands. You can specify another folder to save them by setting the additional parameter **-o** when executing a command.

Viewing Result Lists

Result lists are classified into success, failure, and warning lists. The naming rule is as follows: *Operation* **_{succeed | failed | warning}_report_** *Time* **_TaskId.txt**. For example, after a folder is successfully uploaded, the result list is named as follows: **cp_succeed_report_20190417021908_fbbc83e3-98ac-4d19-b23a-64023b1e0c34.txt**.

NOTE

- If the number of successes, failures, or warnings is zero, the corresponding result list is not generated.
- The task ID of a result list is unique for each operation.
- The maximum size of a result list is 30 MB and the maximum number of lists that can be retained is 1024.
- If there are multiple folders and files and you need to confirm the detailed error information about a failed task, refer to the failure list in the result list folder and the **log files** in the log path.

8.4 Return Codes

If obsutil is invoked by processes, the command output cannot be viewed in real time. obsutil generates different return codes based on different execution results. **Table 8-2** describes the return codes. You can use either the following methods to obtain the return code of the latest execution result and then analyze and rectify the fault based on it:

- In the macOS or Linux OS, run the following command to obtain the return code of the latest execution result:
  ```
  echo $?
  ```
- In the Windows OS, run the following command to obtain the return code of the latest execution result:
  ```
  echo %errorlevel%
  ```

Table 8-2 Return codes

Return Code	Meaning	Example Scenario
0	Execution succeeded.	An object is successfully uploaded.
1	The file does not exist.	The entered file path does not exist for uploading a file by running the **cp** command.
2	The task does not exist.	The specified task ID does not exist for resuming a failed upload task by running the **cp** command.

Return Code	Meaning	Example Scenario
3	Parameter error	• At least one entered additional parameters is not supported for uploading a file by running the **cp** command. • The entered value of **cloud_url** is invalid for downloading a file by running the **cp** command. **NOTE** **cloud_url** indicates the bucket path or object path. Set **cloud_url** in the format of **obs://***bucketname* when downloading all objects in a bucket. Set **cloud_url** in the format of **obs://***bucketname*/*key* when downloading a specified object in a bucket.
4	Bucket status error	The specified destination bucket does not exist for uploading a folder by running the **cp** command.
5	Initialization error during command execution	• An error occurs when loading the configuration file. • Parameter **-o** is configured when running the **cp** command to upload a folder, but the folder specified by **-o** for saving the result lists fails to be created.
6	Execution error.	When you run the **ls** command to query the bucket list, the query fails because the network times out.
7	The operation is not supported.	Running the **chattri** command to change object properties when the bucket version is not 3.0.
8	A batch task succeeded partially.	Some objects fail to be downloaded during a batch download by running the **cp** command.
9	Interruption error	Users press **Ctrl** + **C** to interrupt the command execution.
-1	Unknown error	-

9 Best Practices

9.1 Using the obsutil help Command to Search for Functions

obsutil provides **help** commands for viewing the help documents of each command. To query the help document of the bucket creation command, perform the following steps:

Step 1 Run the **obsutil help** command to query the list of all supported commands.

Step 2 Find the abbreviation of the command to be viewed based on the document description in the command list. For example, the abbreviation of the command for creating a bucket is **mb**.

Step 3 Run the **obsutil help mb** command to view the usage and detailed functions of the **mb** command, illustrated as follows:

```
Summary:
create a bucket with the specified parameters

Syntax:
 obsutil mb obs://bucket [-acl=xxx] [-sc=xxx] [-location=xxx] [-config=xxx]

Options:
 -acl=xxx
   the ACL of the bucket, possible values are [private|public-read|public-read-write]

 -sc=xxx
   the default storage class of the bucket, possible values are: [standard|warm|cold]

 -location=xxx
   the region where the bucket is located

 -config=xxx
   the path to the custom config file when running this command
```

Step 4 Run the **obsutil mb obs://bucket-test -location xxx** command to create a bucket named **bucket-test** in the *xxx* region.

----End

NOTE

- For more information about the **help** command, see **Viewing Command Help Information**.
- You can set the **helpLanguage** parameter in the configuration file to configure the language type of the **help** command. For example, **helpLanguage=Chinese** indicates that the language type of the help command is Chinese.
- The supported languages are Chinese and English. The default language is English.

9.2 Configuring Scheduled Tasks Using the Crontab Command

Scenario

Go to the **/root** directory at 21:30 every day and upload the **/src/src1** folder to bucket **obs://bucket-test** in the incremental mode.

Prerequisites

You have properly enabled the scheduled crond service in the Linux OS.

NOTE

Run the **service crond status** command to check whether the service is enabled.

Procedure

Step 1 Run the **crontab -e** command to open the configuration file for setting a scheduled task.

Step 2 Enter the Insert mode to edit the configuration file.

```
30 21 * * * cd /root && nohup ./obsutil cp /src/src1 obs://bucket-test -r -f -u &>obsutil_crond.log &
```

NOTE

Assume that the obsutil tool is in the **/root** directory. The preceding configuration is described as follows: Go to the **/root** directory at 21:30 every day, upload the **/src/src1** folder to bucket **obs://bucket-test** in incremental mode, and redirect the command output to the **obsutil_crond.log** file in the **/root** directory.

Step 3 Press **Esc** to exit the Insert mode. Then input **:wq** and press **Enter** to save the configuration and exit.

Step 4 Run the **crontab -l** command to check whether the scheduled task is configured successfully.

----End

FAQs

1. How do I determine whether a scheduled task is being executed?
   - Run the **tail /var/log/cron** command to view the latest scheduled task execution records.

- Run the **ps -ef | grep obsutil** command to check whether obsutil is being executed.

2. How do I forcibly stop an ongoing scheduled task?
   a. Run the **ps -ef | grep obsutil** command to check the process of obsutil.
   b. Run the **kill -9** *PID* command to forcibly stop the process, where *PID* indicates the queried process ID.

9.3 Setting obsutil Commands as Built-in Commands

Scenario

Because obsutil is external software, you need to access the directory where obsutil resides before running obsutil commands, which is not convenient.

An OS provides built-in commands so that the command-dependent directories are loaded to the memory when the system is started. In this way, you can run the commands in any directory, which improves the tool's usability.

This section introduces how to set obsutil commands as built-in commands in different OSs.

Setting obsutil Commands as Built-in Commands in Windows

Option 1: Automatic configuration by running a script (recommended)

Step 1 Go to the directory where the obsutil tool is located.

Step 2 Ensure that **setup.bat** and **obsutil.exe** are in the same directory. Double-click the **setup.bat** file.

Step 3 Check whether the configuration is successful: Run the **obsutil help** command in the CLI. If the help information is displayed, the configuration is successful.

NOTE

If the message **'obsutil' is not recognized as an internal or external command, either an operable program or batch file** is displayed after you run the **obsutil help** command when the automatic configuration completes, the configuration fails. In this case, manual configuration is required.

----End

Option 2: Manual configuration

Step 1 In the CLI, run the **echo %PATH%** command to query all the paths configured in the current system. Then select one as the operation path.

Step 2 Run the **mklink** *PATH*/**obsutil.exe** *OBSUTIL_PATH* command to set obsutil commands as built-in commands in the system.

NOTE

PATH indicates the operation path selected in step 1. *OBSUTIL_PATH* indicates the absolute path of **obsutil.exe**.

Step 3 Check whether the configuration is successful: Run the **obsutil help** command in the CLI. If the help information is displayed, the configuration is successful.

----End

Setting obsutil Commands as Built-in Commands in Linux or macOS

Option 1: Automatic configuration by running a script (recommended)

Step 1 Run the script with the path of obsutil as the parameter. Assume that obsutil is stored in the **/home/user1** directory. Run the following command:

```
source setup.sh /home/user1/obsutil
```

NOTE

- You must execute the script as user **root**.
- The script parameter is the relative or absolute path of obsutil.
- You must run the **source setup.sh** or **. setup.sh** command to execute the script.

Step 2 Check whether the configuration is successful: Run the **obsutil help** command in any directory. If the help information is displayed, the configuration is successful.

NOTE

If the message **-bash: obsutil: command not found** is displayed after you run the **obsutil help** command when the automatic configuration completes, log in to the Linux or macOS CLI again. If the problem persists, manual configuration is required.

----End

Option 2: Manual configuration

Step 1 Run the following command to create a directory for the obsutil tool:

```
mkdir /obsutil
```

NOTE

- Skip this step if the directory already exists.
- You must run the command as user **root**.

Step 2 Run the following command to grant the **755** permission for the tool's directory:

```
chmod 755 /obsutil
```

NOTE

- Skip this step if the permission for the directory is **drwxr-xr-x**.
- You must run the command as user **root**.

Step 3 Copy the obsutil tool to the directory created in step 1 and change its permission to **711**. Assume that the original path of the tool is **/home/test/obsutil**. Run the following command:

```
cp /home/test/obsutil /obsutil
chmod 711 /obsutil/obsutil
```

Step 4 Run the **vi /etc/profile** command, type **I** to enter the Insert mode to edit the file. Add **export PATH=$PATH:/obsutil** at the end of the file. Then press **ESC** to exit the editing mode, and then type **:wq!** and press **Enter** to save the file and exit.

NOTE

Skip this step if the new line already exists in the **/etc/profile** file.

Step 5 Run the **echo $PATH** command to query the current environment variables. If **:/obsutil** in included in the query result, indicating that the **/obsutil** environment variable already exists, go to the next step. Otherwise, run the **source /etc/profile** command.

Step 6 Check whether the configuration is successful: Run the **obsutil help** command in any directory. If the help information is displayed, the configuration is successful.

----End

FAQs

1. How do I locate the obsutil configuration file after setting obsutil commands to built-in commands?

   The **.obsutilconfig** file in the same directory where obsutil commands reside is the configuration file of the obsutil tool. You can also run the **obsutil config** command to obtain the configuration file path. An example is provided as follows:

   ```
   obsutil config
   Config file url:
     D:\tools\.obsutilconfig
   ```

2. How do I delete obsutil commands after setting them as built-in commands?
   - In Windows:
     i. Run the **where obsutil** command to locate the path of obsutil commands.
     ```
     where obsutil
     E:\tools\bin\obsutil.exe
     ```
     ii. Run the **del** *PATH* command to delete obsutil commands.
     ```
     del E:\tools\bin\obsutil.exe
     ```

     NOTE

     Replace *PATH* with the path of obsutil commands. **E:\tools\bin\obsutil.exe** is used in the preceding example.
   - In Linux or macOS:
     i. Run the **which obsutil** command to locate the path of obsutil commands.
     ```
     which obsutil
     /obsutil/obsutil
     ```
     ii. Run the **rm -rf** *PATH* command to delete obsutil commands.
     ```
     rm -rf /obsutil/obsutil
     ```

     NOTE

     Replace *PATH* with the path of obsutil commands. **/obsutil/obsutil** is used in the preceding example.

     iii. Restore the system environment variable: Delete the path of obsutil that is set in the **/etc/profile** file.

NOTE

If the **/etc/profile** file contains line **export PATH=$PATH:/obsutil**, delete the line. Or if the file contains line **export PATH=$PATH:/test/bin:/obsutil:/test1**, delete **:/obsutil** from the line.

3. What should I do if the execution of built-in obsutil commands fails in Linux or macOS?
   - If the message **Permission denied** is displayed after executing **obsutil help**, run the **chmod 755** *OBSUTIL_PATH* command (replace *OBSUTIL_PATH* with the path of obsutil) to add an execute permission for the obsutil tool.
   - If the message **command not found** is displayed, log in again.
   - If the message **Cannot create parent folder for xx/.obsutilconfig, xx Permission denied** is displayed, check whether the home directory of the user exists.

   NOTICE

   In the Ubuntu OS, if you run the **useradd** command to add a user, the home directory of the user is not created by default. You need to create it manually. Therefore, you are advised to run the **adduser** command to add a user.

4. What can I do if no log file is generated after running built-in obsutil commands in Linux or macOS?

   If you have properly configured **sdkLogPath** and **utilLogPath** in the configuration file, but still no log file is generated after command execution, then check whether the user who runs the command has the read and write permissions on **sdkLogPath** and **utilLogPath**.

9.4 Configuring Auto Obtaining of Access Keys for obsutil

Feature Description

In addition to obtaining the access keys from the **.obsutilconfig** configuration file, obsutil has the feature of obtaining the access keys in the chain mode. After this feature is enabled, obsutil attempts to obtain access keys from the configuration file, environment variables, and then the ECS in sequence.

NOTE

If your obsutil runs on an ECS that is bound with an agency, you can use this feature to implement auto obtaining of access keys.

Configuration Method

Set **autoChooseSecurityProvider** in the configuration file to **true**. If you want to obtain access keys from environment variables, set **OBS_ACCESS_KEY_ID** to **ak**,

OBS_SECRET_ACCESS_KEY to **sk**, and **OBS_SECURITY_TOKEN** to **token** (or left it empty). Alternatively, bind the ECS to an agency, so that obsutil automatically obtains access keys from the ECS.

Process of Searching for Access Keys

1. obsutil searches for access keys in the configuration file (**ak**, **sk**, and **token**). If access keys are not empty, the search ends. If access keys are empty, the process moves on to step 2.
2. obsutil searches for access keys from the system environment variables (**OBS_ACCESS_KEY_ID**, **OBS_SECRET_ACCESS_KEY**, and **OBS_SECURITY_TOKEN**). If access keys are not empty, the search ends. If access keys are empty, the process moves on to step 3.
3. Then obsutil searches for access keys of the agency bound to the ECS. If access keys are not empty, the search ends. If access keys are still empty, you can only access OBS as an anonymous user.

NOTE

- The "access keys are not empty" means both AK and SK are not empty, but the token can be empty.
- In the environment variables, the value of **OBS_ACCESS_KEY_ID** is the AK, that of **OBS_SECRET_ACCESS_KEY** is the SK, and that of **OBS_SECURITY_TOKEN** corresponds to the token.
- If the cross-region replication mode is enabled, **OBS_ACCESS_KEY_ID_CRR** corresponds to **akCrr**, **OBS_SECRET_ACCESS_KEY_CRR** corresponds to **skCrr**, and **OBS_SECURITY_TOKEN_CRR** corresponds to **tokenCrr**.
- The prerequisite for querying the access keys from an ECS is that obsutil is running on an ECS that is bound to an agency.
- After the mechanism for automatic obtaining of access keys is enabled, you still need to specify the endpoint.

9.5 Fine-Tuning obsutil Performance

By default, obsutil uploads, downloads, and copies files or objects whose size is greater than 50 MB in multiple parts. Table 9-1 details related parameters in the **.obsutilconfig** file.

Table 9-1 Multipart-related parameters

Parameter	Description
defaultBigfileThreshold	Indicates the threshold for triggering multipart tasks, in bytes. If the size of a file to be uploaded, downloaded, or copied is greater than the threshold, the file is uploaded, downloaded, or copied in multiple parts. The default value is 50 MB.

Parameter	Description
defaultPartSize	Size of each part, in bytes. The default value is **auto**. **NOTE** • For multipart upload and copy, the value ranges from 100 KB to 5 GB. • For multipart download, the value is unrestricted.
defaultParallels	Maximum number of concurrent tasks in the multipart mode. The default value is 5.

Generally, multipart tasks not only speed up transmission but also allow you to resume failed tasks. By default, the part size of a multipart task can be automatically adjusted by the obsutil in the **auto** mode. In practice, however, to further improve the upload and download performance, you can adjust the part size according to the file size and the network conditions, to obtain the maximum transmission efficiency and ensure the successful completion of a transmission task.

Adjust the number of concurrent tasks in the multipart mode according to the following formula:

defaultParallels = Min(Number of CPUs x 2, Object size/defaultPartSize x 1.5)

In the upload, download, and copy commands, parameters **-p** and **-ps** are used to modify the number of concurrent tasks in the multipart mode and part size respectively, and then deliver the multipart task based on the parameter values configured in the command. The default values in the configuration file are used if you do not set them in a command.

Adjust the number of concurrent tasks in the multipart mode according to the following formula:

p = Min(Number of CPUs x 2, Object size/ps x 1.5)

NOTE

- Resources of a running host are limited. Therefore, if the number of concurrent tasks in the multipart mode is set too large, the performance of obsutil upload, download, or copy may deteriorate due to resource switchover and preemption between threads. In this case, you need to adjust the values of **defaultParallels** (**-p**) and **defaultPartSize** (**-ps**) based on the actual file size and network status. To perform a pressure test, lower the two values at first, and then gradually increase them to determine the optimal values.
- If the values of **defaultParallels** (**-p**) and **defaultPartSize** (**-ps**) are too large, an EOF error may occur due to network instability. In this case, set the two parameters to smaller values.
- If a batch operation is performed, the destination object size can be set to the average size of the objects to be operated.

9.6 Using obsutil for Resumable Data Transfer

obsutil supports resumable data transfer (upload, download, and copy) for large files by using the multipart algorithms for upload, download, and copy. You can

set the threshold size for starting a multipart upload, download, or copy task based on your actual requirements to resume the upload, download, or copy task if the task fails or is interrupted. You can specify the threshold size for starting a multipart task in either of the following ways:

1. Specify the **defaultBigfileThreshold** parameter in the configuration file.
2. When running commands for upload, download, copy, incremental synchronization upload, incremental synchronization download, or incremental synchronization copy, you can specify the **threshold** parameter at the command level.

NOTE

- Priority: Command level parameter **threshold** has higher priority than the **defaultBigfileThreshold** in the configuration file.
- The threshold size of a multipart task applies to single files or objects. When the size of a file or object is greater than the threshold value, the multipart algorithm is applied to the file or object.
- The multipart algorithm and resumable data transfer are forcibly bound together. That is, once the multipart algorithm is used, the resumable data transfer is enabled for the task.

9.7 Using obsutil to Upload a Symbolic Link

obsutil supports the upload of the real path to which the symbolic link points when a file or folder is uploaded. You can specify the command-level parameter **link** to implement this function when running commands for upload or incremental synchronization upload.

NOTE

- obsutil can identify symbolic links pointing to folders. If a symbolic link points to a folder, obsutil recursively scans the contents in the folder.
- Avoid the symbolic link loop of a folder, otherwise, the upload will exit due to panic. If you do not want the system to panic, set **panicForSymbolicLinkCircle** to **false** in the configuration file.
- The symbolic link and the shortcut on the Windows OS are two different types. obsutil cannot identify the shortcut on the Windows OS.

9.8 Configuring an HTTP Proxy for obsutil

You can configure an HTTP proxy in either of the following ways:

Method 1: Set the **proxyUrl** parameter in the **.obsutilconfig** file. Example: **proxyUrl=http://username:password@your-proxy:8080**;

Method 2: Use the system environment variable **HTTPS_PROXY** or **HTTP_PROXY**. Example: **HTTPS_PROXY=http://username:password@your-proxy:8080**.

NOTE

- HTTP proxy format: **http://[*Username*:*Password*@]*Proxy server address*:*Port number***. The *Username* and *Password* are optional.
- The **proxyUrl** parameter and system environment variables are in the following priority order: **proxyUrl** > **HTTPS_PROXY** > **HTTP_PROXY**.
- The user name and password cannot contain colons (:) and at signs (@), which will result in parsing errors.

9.9 Using obsutil to Share Directories

The directory sharing function allows the owner of a bucket to share directories in a bucket or the entire bucket with other users by using the authorization code and access code. If you have the valid authorization code and access code of a shared folder, you can use OBS tools (OBS Browser and obsutil) to access the folder, list objects, and download objects. Alternatively, you can directly enter the authorization code in the address box of a web browser to list and download objects.

obsutil provides three commands to implement directory sharing. The procedure is as follows:

Step 1 Run the **obsutil create-share** command to create an authorization code for sharing a directory. For example, you can run the following command to share the **test** directory in the bucket named **bucket** with the access code set to **123456** and the validity period set to **10** days:

```
obsutil create-share obs://bucket/test/ -ac=123456 -vp=10d
```

NOTE

- When creating an authorization code, you are advised to end the name of the directory to be shared always with a slash (/). If no directory name is specified in the command (for example, only **obs://bucket** is specified in the command), the entire bucket is shared.
- If you do not use the **ac** option to set the access code, obsutil will prompt you to enter the access code. The access code must be a six-digit string.
- For details about this command, see **Creating an Authorization Code for Directory Sharing**.

Step 2 Run the **obsutil share-ls** command to list objects in the bucket. For example, to list the first 100 objects in the **test** directory in the bucket using the authorization code, run the following command:

```
obsutil share-ls file://d:/authorizationCode.txt -ac=123456 -prefix=test/ -limit=100
```

NOTE

- If the value of **prefix** is not specified, all objects in the authorized path are listed by default. If you do not want to list all objects, set **prefix** to a subset of the authorized path in the authorization code.
- For details about this command, see **Listing Objects by Using an Authorization Code**.

Step 3 Run the **obsutil share-cp** command to download objects from the bucket. For example, if you want to download all objects in the **sub** subdirectory of the **test** directory, run the following command:

```
obsutil share-cp file://d:/authorizationCode.txt ./ -ac=123456 -key=test/sub/ -r -f
```


NOTE

For details about this command, see **Downloading Objects by Using an Authorization Code**.

----End

NOTE

- You can also create an authorization code on OBS Console or OBS Browser, and then use obsutil to list and download objects.
- You can use obsutil to create an authorization code and enter the authorization code in the address box of a web browser to list and download objects, or use the authorization code to log in to OBS Browser to list and download objects.

9.10 Using obsutil to Replicate Data Across Regions on the Client Side

obsutil client supports cross-region replication. You can directly replicate data from a source bucket to the destination bucket through data streams. The source bucket and destination bucket can be any two OBS buckets. Objects can be replicated between buckets in different regions under the same account or across accounts. The following procedure describes how to replicated data between buckets across accounts and regions:

Step 1 Run the **obsutil config** command to configure the AK, SK, and endpoint of the source bucket account.

```
obsutil config -i=src_ak -k=src_sk -e=src_endpoint -crr
```

Step 2 Run the **obsutil config** command to configure the AK, SK, and endpoint of the destination bucket account.

```
obsutil config -i=dst_ak -k=dst_sk -e=dst_endpoint
```

Step 3 Run the **cp** command to specify that cross-region replication method is used to copy objects from the source bucket to the destination bucket.

```
obsutil cp obs://src-bucket obs://dst-bucket -f -r -crr
```

----End

NOTE

- To use the cross-region replication function, you need to specify the **-crr** parameter. If this parameter is specified, update the configuration of the client-side cross-region replication in the configuration file. For details, see **Updating a Configuration File**.
- In the configuration file, **akCrr/skCrr/tokenCrr/endpointCrr** indicates the source bucket information, and **ak/sk/token/endpoint** indicates the destination bucket information.
- The preceding procedure is also applicable to the situation when the source and destination buckets belong to the same account.

A Parameter Description

You can use the **.obsutilconfig** file to configure the parameters of obsutil. The following table lists detailed information about the parameters.

Table A-1 obsutil parameters

Parameter	Optional or Mandatory	Description	Recommended Value
endpoint	Mandatory	Endpoint for accessing OBS, which can contain the protocol type, domain name, and port number (optional), for example, **https://your-endpoint:80**. For security purposes, you are advised to use HTTPS. If you want to access OBS in the AP-Hong Kong region, the actual OBS service address is: **https://obs.ap-southeast-3.myhuaweicloud.com**. **NOTE** • You can click **here** to view the endpoints and regions enabled for OBS. • If the configured endpoint does not contain any protocol, the HTTPS protocol is used by default.	N/A
ak	Mandatory	Access key ID **NOTE** • Click **here** to open the access key management page. • After you run obsutil for the first time, the tool encrypts the AK to ensure the key security.	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
sk	Mandatory	Secret access key **NOTE** • Click **here** to open the access key management page. • After you run obsutil for the first time, the tool encrypts the SK to ensure the key security.	N/A
endpointCrr	Optional	Endpoint for accessing OBS in the region where the source bucket resides when the client-side cross-region replication function is enabled, which can contain the protocol type, domain name, and port number. Example: **http://your-endpoint:80** **NOTE** • You can click **here** to view the endpoints and regions enabled for OBS. • If the configured endpoint does not contain any protocol, the HTTPS protocol is used by default.	N/A
akCrr	Optional	AK for the source bucket when the client-side cross-region replication function is enabled	N/A
skCrr	Optional	SK for the source bucket when the client-side cross-region replication function is enabled	N/A
token	Optional	Security token. If this parameter is empty, the security token is not set. When temporary AK and SK are used to access OBS, the token must be carried.	N/A
connectTimeout	Optional	Timeout interval for establishing an HTTP/HTTPS connection, in seconds. The default value is 30.	The recommended value ranges from 5 to 120.
socketTimeout	Optional	Timeout interval for reading and writing data, in seconds. The default value is 310.	The recommended value ranges from 5 to 600.

Parameter	Optional or Mandatory	Description	Recommended Value
maxRetryCount	Optional	Maximum number of retry attempts. The default value is 3. **NOTE** When an OBS request completes but HTTP status code 408 or 5XX is returned, or when a timeout error occurs in an OBS request, the request is retried.	The recommended value ranges from 0 to 5.
maxConnections	Optional	Maximum number of HTTP connections that can be accessed. The default value is 1000.	N/A
defaultBigfileThreshold	Optional	Indicates the threshold for triggering multipart tasks, in bytes. If the size of a file to be uploaded, downloaded, or copied is greater than the threshold, the file is uploaded, downloaded, or copied in multiple parts. The default value is 50 MB. **NOTE** This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.	It is recommended that the value be greater than 5 MB.
defaultPartSize	Optional	Size of each part, in bytes. The default value is **auto**. **NOTE** • For multipart upload and copy, the value ranges from 100 KB to 5 GB. • For multipart download, the value is unrestricted. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes. • If this parameter is set to **auto**. In this case, obsutil automatically sets the part size for each multipart task based on the source object size.	[9MB, 100MB]
defaultParallels	Optional	Maximum number of concurrent tasks in the multipart mode. The default value is 5.	Set this parameter according to **Fine-Tuning obsutil Performance**.

Parameter	Optional or Mandatory	Description	Recommended Value
defaultJobs	Optional	Maximum number of concurrent tasks in batches. The default value is 5. **NOTE** Batch tasks include uploading, downloading, and copying folders, as well as restoring and deleting objects in batches.	[1, 50]
defaultJobsCacheCount	Optional	Cache size of a batch task queue, indicating the maximum number of tasks that can be cached. The default value is 1000000. **NOTE** More cached tasks consume more memory resources. Therefore, you are advised to adjust the value of this parameter based on site requirements.	Default value
rateLimitThreshold	Optional	Indicates the traffic control threshold of an upload or download request, in bytes. The default value is 0, indicating that traffic is not limited. The minimum value is 10 KB. **NOTE** This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.	It is recommended that the value be greater than 100 KB.
sdkLogBackups	Optional	Maximum number of SDK log files that can be retained. The default value is 10.	N/A
sdkLogLevel	Optional	SDK log level. Possible values are: • DEBUG • INFO • WARN • ERROR The default value is **WARN**.	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
sdkLogPath	Optional	Indicates the absolute path of SDK logs. The value must be a file path. The default value is the path of the **obssdk.log** file in the subfolder **obsutil_log** of the user's home directory (**HOME** in Linux or macOS and **C:\Users**<*Username*> in Windows). **NOTE** • If this parameter is left blank, no SDK log is generated. • The path must be a file path and cannot be a folder path. • After the SDK log function is enabled, all logs of requests to OBS are saved in the SDK log file for problem analysis and location. • Ensure that the user who runs the command has the read and write permissions on the path. **NOTICE** If multiple obsutil processes are running at the same time, log files may fail to be written concurrently or may be lost. In this case, add parameter **-config** when running commands to configure an independent configuration file for each process.	N/A
sdkMaxLogSize	Optional	Size of an SDK log file, in bytes. The default value is 30 MB. **NOTE** This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.	The recommended value ranges from 10 MB to 100 MB.
utilLogBackups	Optional	Maximum number of obsutil log files that can be retained. The default value is 10.	N/A
utilLogLevel	Optional	obsutil log level. Possible values are: • DEBUG • INFO • WARN • ERROR The default value is **INFO**.	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
utilLogPath	Optional	Indicates the absolute path of obsutil logs. The value must be a file path. The default value is the path of the **obsutil.log** file in the subfolder **.obsutil_log** of the user's home directory (**HOME** in Linux or macOS and **C:\Users**<*Username*> in Windows). **NOTE** ● If this parameter is left blank, no obsutil log is generated. ● The path must be a file path and cannot be a folder path. ● After the obsutil log function is enabled, all logs generated during commands executing are saved in the obsutil log file for problem analysis and location. ● Ensure that the user who runs the command has the read and write permissions on the path. **NOTICE** If multiple obsutil processes are running at the same time, log files may fail to be written concurrently. In this case, add parameter **-config** when running commands to configure an independent configuration file for each process.	N/A
utilMaxLogSize	Optional	Size of an obsutil log file, in bytes. The default value is 30 MB. **NOTE** This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.	The recommended value ranges from 10 MB to 100 MB.
writeBufferIoSize	Optional	Size of the cache for downloading data, in bytes. The default value is 65536. **NOTE** ● Set this parameter based on site requirements. If the size of the file to be downloaded is large, set this parameter to a large value. ● This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
readBufferIoSize	Optional	Size of the cache for uploading data, in bytes. The default value is 8192. **NOTE** • Set this parameter based on site requirements. If a large number of small files are uploaded, set this parameter to a small value. If large files are uploaded, set this parameter to a large value. • This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.	The recommended value ranges from 4096 to 65536.
recordMaxLogSize	Optional	Size of a result list containing success, failure, or warning lists in a batch task, in bytes. The default value is 30 MB. **NOTE** This value can contain a capacity unit. For example, **1 MB** indicates 1048576 bytes.	The recommended value ranges from 5 MB to 100 MB.
recordBackups	Optional	Maximum number of result lists of successful or failed batch tasks that can be retained. The default value is 1024.	N/A
humanReadableFormat	Optional	Indicates whether to convert the number of bytes in the object listing result and result list content to the human-readable format. The default value is **true**.	N/A
showProgressBar	Optional	Indicates whether to display the progress bar on the console. The value **true** indicates that the progress bar is displayed. The default value is **true**.	N/A
showStartTime	Optional	Indicates whether to display the start time on the console. The value **true** indicates that start time is displayed. The default value is **true**.	N/A
colorfulProgress	Optional	Indicates whether to enable the progress bar with colors. The value **true** indicates that the bar is enabled.	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
helpLanguage	Optional	Language of the help documents. Options are as follows: • Chinese • English The default value is **English**.	N/A
defaultTempFileDir	Optional	Indicates the directory for storing temporary files during download. The default value is the **.obsutil_tempfile** subfolder in the user directory (**HOME** in Linux or macOS and **C:\Users\<*Username*>** in Windows). **NOTE** • Temporary files generated during multipart download are stored in this directory. Therefore, ensure that the user who executes obsutil has the write permission on the path. • The available space of the partition where the path is located must be greater than the size of the objects to be downloaded.	N/A
checkSourceChange	Optional	Indicates whether to check the change of source files or objects during upload/download/copy. The value **true** indicates that the function is enabled.	N/A
skipCheckEmptyFolder	Optional	Indicates whether to skip checking empty folders on the OBS server during download. **true** indicates to skip the check. The default value is **false**. **NOTICE** If this parameter is set to **true**, the directory structure downloaded to your local PC may be different from that in OBS.	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
fsyncForDownload	Optional	Indicates whether to forcibly synchronize memory data to disks during download. The value **true** indicates to enable forcible synchronization. The default value is **false**. **NOTE** • Set this parameter to **true** for scenarios that require high data reliability. • If this parameter is set to **true**, the download performance will be deteriorated. Therefore, exercise caution when using this parameter.	N/A
memoryEconomicalScanForUpload	Optional	Indicates whether to use the scanning mode that occupies less memory space when uploading a folder. The value **true** indicates using this method. The default value is **true**.	N/A
forceOverwriteForDownload	Optional	Indicates to forcibly overwrite the local executable file (even if the local executable file is running) when downloading objects to the Linux OS or macOS. The value **true** means to overwrite, and the default value is **true**.	N/A
panicForSymbolicLinkCircle	Optional	Indicates the processing method after a symbolic link loop is detected during upload. The value **false** indicates that errors are only recorded. The value **true** indicates that panic is triggered. The default value is **false**.	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
autoChooseSecurityProvider	Optional	Indicates whether to automatically obtain the access keys from the configuration file, environment variables, and ECS APIs in sequence. The default value is **false**. **NOTE** For details about this parameter, see **Fine-Tuning obsutil Performance**.	N/A
fastFailThreshold	Optional	Threshold for fast failure upon 4XX errors of batch tasks. When the number of 4XX errors exceeds the threshold, the fast failure process is triggered. All tasks that are not executed or being scanned are suspended. The default value is **5**. **NOTE** The fast failure mechanism is to avoid excessive traffic generated during batch task execution. To start a fast failure as soon as possible, set this parameter to **0** or **-1**, indicating that the fast failure process starts immediately whenever a 4XX error occurs.	N/A
abortHttpStatusForResumableTasks	Optional	HTTP status codes for fast interruption of multipart upload, download, and copy tasks. If a sub-task of a multipart task receives an HTTP code that falls into this range, the multipart task is immediately interrupted. The default values are 401, 403, 404, 405, and 409. **NOTE** • Multiple HTTP status codes can be carried and separated by commas (,). For example: 401,403,404; • The status code must be a 4XX HTTP status code. Other status codes are ignored.	Default value

Parameter	Optional or Mandatory	Description	Recommended Value
showBytesForCopy	Optional	Indicates whether the progress bar displays the rate in bytes when objects are copied between buckets. The default value is **false**.	N/A
proxyUrl	Optional	HTTP proxy example: **http://username:password@your-proxy:8080** **NOTE** The user name and password cannot contain colons (:) and at signs (@), which will result in parsing errors.	N/A

NOTE

- Set parameters with **N/A** as the recommended value based on your needs.
- You are advised to specify **sdkLogPath** and **utilLogPath** to enable SDK logging and obsutil logging.
- The values of **defaultBigfileThreshold**, **defaultPartSize**, **rateLimitThreshold**, **sdkMaxLogSize**, **utilMaxLogSize**, **recordMaxLogSize**, **readBufferIoSize**, and **writeBufferIoSizecan** can contain a capacity unit. For example, 1 MB indicates 1048576 bytes.

B Change History

Release Date	What's New
2021-03-22	This is the sixteenth official release. This issue incorporates the following change: • Optimized descriptions about the result list files.
2020-12-31	This is the fifteenth official release. This issue incorporates the following changes: • In the "Best Practices" section, added the topic "Using obsutil to Replicate Data Across Regions on the Client Side".
2020-09-30	This is the fourteenth official release. This issue incorporates the following change: • Added the **-bf** parameter in the stat command to specify the format in which the used bucket capacity and object size (in bytes) are displayed.
2020-02-20	This is the thirteenth official release. This issue incorporates the following change: • Added **-i**, **-k**, **-e**, and **-t** user identity information options to the **cp** and **rm** commands. Added the **-i**, **-k**, **-endpoint**, and **-t** options to the **sign** command. Added the **-i**, **-k**, **-e**, and **-token** options to the **restore** command.
2020-02-04	This is the twelfth official release. This issue incorporates the following change: • Added examples of excluding specified folders from an upload or download task.

Release Date	What's New
2019-12-10	This is the eleventh official release. This issue incorporates the following change: ● Added the **at** option for uploading and synchronizing files.
2019-11-19	This is the tenth official release. This issue incorporates the following changes: ● Optimized the display structure of commands. ● Changed the title of section "Downloading obsutil" to "Download and Installation". ● Added examples of resumable upload and incremental upload to the section "Upload Examples". ● Added a note for creating a folder with the same name as an existing one in the section "Create a Folder".
2019-10-30	This is the ninth official release. This issue incorporates the following changes: ● Added topic "Using obsutil to Share Directories" to the section "Best Practices". ● Added topic "Creating an Authorization Code for Directory Sharing" to the section "Object Commands". ● Added topic "Listing Objects by Using an Authorization Code" to the section "Object Commands". ● Added topic "Downloading Objects by Using an Authorization Code" to the section "Object Commands".
2019-10-15	This issue is the eighth official release. This issue incorporates the following changes: ● Added topic "Using the obsutil help Command to Search for Functions" to the section "Best Practices". ● Added topic "Configuring Auto Obtaining of Access Keys for obsutil" to the section "Best Practices". ● Updated the download table in the section about downloading obsutil.
2019-08-15	This is the seventh official release. This issue incorporates the following changes: ● Updated the **defaultParallels** algorithm in the section of "Best Practices". ● Updated the description of the connectivity check in the initial configuration. ● Added the topic "Configuring an HTTP Proxy for obsutil" to the section "Best Practices".

Release Date	What's New
2019-07-17	This is the sixth official release. This issue incorporates the following changes: ● Added the download address of the Linux (Arm 64-bit) to the section "Downloading obsutil". ● Added configuration parameters for new features to the section "Parameter Description". ● Added the topic "Using obsutil for Resumable Data Transfer" to the section "Best Practices". ● Added the topic "Using obsutil to Upload a Symbolic Link" to the section "Best Practices".
2019-05-20	This is the fifth official release. This issue incorporates the following changes: ● obsutil now supports uploading multiple files/folders in batches. ● obsutil now supports using user-defined configuration file when executing a command. ● obsutil now supports client-side cross-region replication. ● obsutil now supports moving objects. ● Added section "Fault Locating."
2019-03-30	This is the fourth official release. This issue incorporates the following changes: ● Added the function of creating folders. ● Added the function of generating download links of objects. ● obsutil now supports filtering based on the configured time range when uploading, downloading, or copying files or objects. ● Added section "Fine-Tuning obsutil Performance."
2019-03-01	This is the third official release. This issue incorporates the following changes: ● obsutil now supports specifying an AZ when creating a bucket. ● obsutil now supports configuring access control policies for buckets or objects in XML format. ● obsutil now supports querying access control policies of buckets or objects. ● Optimized the description of certain commands.

Release Date	What's New
2019-01-31	This is the second official release. This issue incorporates the following changes: ● Added the function of setting object properties. ● Added the functions of synchronously uploading, downloading, and copying objects. ● Added the function of archiving log files. ● Optimized the description of certain commands. ● Added section "Setting obsutil Commands to Built-in Commands."
2019-01-04	This is the first official release.

