

Object Storage Service

Tool Guide (obsutil) (Ankara Region)

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1 Introduction to obsutil

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

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

Table 1-1 Recommended OS versions for using obsutil

OS	Recommended Version
Windows	<ul style="list-style-type: none">• Windows 7• Windows 8• Windows 10• Windows Server 2016
Linux	<ul style="list-style-type: none">• SUSE 11• EulerOS 2• CentOS 7
macOS	macOS 10.13.4

Advantages

obsutil features the following advantages:

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

Application Scenarios

- Automated backup and archiving, for example, periodically uploading local data to OBS
- Scenarios where other tools (like OBS Browser+) cannot be used, such as 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 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: <ul style="list-style-type: none">• 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	Configure logging on your client to record bucket and object operations for statistical analysis.

Advanced bucket and object management operations are being developed continuously, and will be available in later versions of obsutil. You can use these advanced functions on OBS Console.

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 mandatory parameters of the command, for example, the bucket name during bucket creation.
- **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: 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 Downloading and Installing obsutil

Download Links

OBS Console provides you with the download links of obsutil for different operating systems.

Quick Installation

Methods of downloading obsutil vary depending on the OS type. For details, see the following:

NOTE

The following operations require that the ECS be connected to the Internet, or the obsutil installation will fail.

- **In Windows**

- a. Click the download link provided on OBS Console to download obsutil to your local PC.
- b. Decompress the downloaded package to a specified folder.
- c. Double-click **obsutil.exe** to start using obsutil.

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 for the download link provided on OBS Console to download obsutil to your local PC.

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 -xzf obsutil_linux_amd64.tar.gz
```

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

```
chmod 755 obsutil
```

 **NOTE**

You must grant the execute permission on obsutil, or error "No such file or directory" will be reported during a query of the obsutil version number.

- d. Continue to run the following command in the directory. If the version number of obsutil is returned, the installation is successful.

```
./obsutil version
```

- **In macOS**

- a. Click the download link provided on OBS Console to download obsutil to your local PC.
- b. Decompress the downloaded 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
```

3 Getting Started

3.1 Creating Access Keys (AK and SK)

When you call APIs, you need to use the AK and SK for authentication. To obtain the AK and SK, perform the following steps:

- Step 1** Log in to the console.
- Step 2** Click the login username in the upper right corner and choose **My Credentials** from the drop-down list.
- Step 3** Choose **Access Keys**.
- Step 4** Click **Create Access Key**.
- Step 5** Enter an access key description (optional) and click **OK**.
- Step 6** Enter the verification code sent to your mobile phone, virtual MFA device, or email, and click **OK**.

 **NOTE**

This step is required only when you have enabled operation protection.

- Step 7** Click **Download** to obtain the access key file.

 **NOTE**

Keep AKs and SKs properly to prevent information leakage.

----End

3.2 Performing the 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 [Downloading and Installing obsutil](#).
- You have obtained the enabled regions and endpoints of OBS. For details, see [Regions and Endpoints](#).
- You have obtained the access keys (AK and SK). For details, see [Creating Access Keys \(AK and SK\)](#).

Configuration Method

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

Use the permanent AK and SK for configuring initialization. (You do not need to enter the token, and press **Enter** to skip it.)

```
obsutil config -interactive
```

```
Please input your ak:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your sk:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your endpoint:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your token:
```

```
Config file url:
C:\Users\tools\obsutilconfig
```

```
Update config file successfully!
```

Use the temporary AK and SK and security token for configuring initialization:

```
obsutil config -interactive
```

```
Please input your ak:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your sk:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your endpoint:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your token:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

```
Config file url:
C:\Users\tools\obsutilconfig
```

```
Update config file successfully!
```

- In Linux or macOS

Use the permanent AK and SK for configuring initialization. (You do not need to enter the token, and press **Enter** to skip it.)

```
./obsutil config -interactive
```

```
Please input your ak:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your sk:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your endpoint:
xxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your token:
```

```
Config file url:
```

```
/root/.obsutilconfig
Update config file successfully!
Use the temporary AK and SK and security token for configuring initialization:
./obsutil config -interactive
Please input your ak:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your sk:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your endpoint:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your token:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Config file url:
/root/.obsutilconfig
Update config file successfully!
```

 **NOTE**

- After the preceding commands are executed, a configuration file **.obsutilconfig** will be automatically generated in the user directory (~ in Linux or macOS or C:\Users *username*> in Windows) where obsutil commands are executed. **.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.

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**, 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.

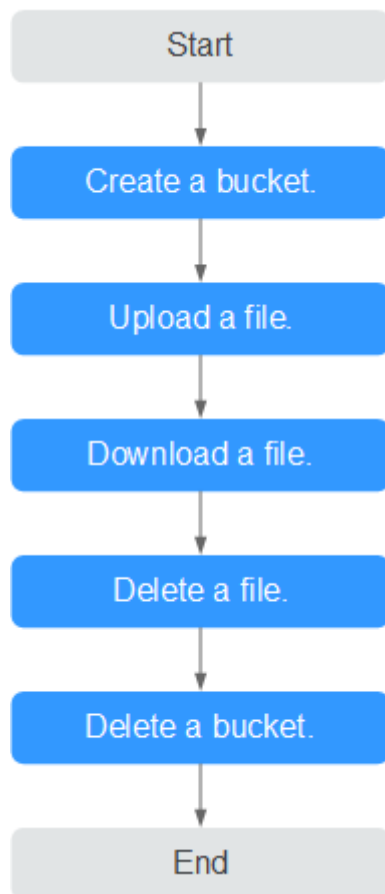
 NOTE

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 operations in OBS. For details, see [Figure 3-1](#).

Figure 3-1 Process of using obsutil



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` command to create a bucket named **bucket-test** in the region.

```
./obsutil mb obs://bucket-test  
Create bucket [bucket-test] successfully!
```

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:
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
```

 **NOTE**

To upload local folder `test` to the OBS bucket, run the following command:

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

- For details about the `cp` command, see [Uploading an Object](#).
- For more upload scenarios, see [Upload](#).

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:
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
```

 **NOTE**

To download directory `test` from the OBS bucket to the local folder `temp`, run the following command:

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

- For details about the `cp` command, see [Downloading an Object](#).
- For more download scenarios, see [Download](#).

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.

Command Line Structure

- In Windows
`obsutil mb obs://bucket [-fs] [-az=xxx] [-acl=xxx] [-location=xxx] [-config=xxx]`
- In Linux or macOS
`./obsutil mb obs://bucket [-fs] [-az=xxx] [-acl=xxx] [-location=xxx] [-config=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 and try again.], request id [04030000016757F31A0333281A6B1E92]

Parameter Description

Parameter	Optional or Mandatory	Description
bucket	Mandatory	<p>Bucket name</p> <p>NOTE A bucket name must comply with the following rules:</p> <ul style="list-style-type: none"> • 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.
fs	Optional (additional parameter)	Creates a parallel file system.
az	Optional (additional parameter)	<p>Specifies a bucket's data redundancy policy. Possible values are:</p> <ul style="list-style-type: none"> • multi-az <p>NOTE If multi-az is used, a bucket with the multi-AZ storage policy will be created. If this parameter is not specified, a bucket with the single-AZ storage policy will be created.</p>
acl	Optional (additional parameter)	<p>Access control policies that can be specified when creating a bucket. Possible values are:</p> <ul style="list-style-type: none"> • private • public-read • public-read-write <p>NOTE The preceding three values indicate private read and write, public read, and public read and write.</p>
location	Mandatory unless the region where the OBS service resides is not the default region (additional parameter)	Region where the bucket resides.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description .

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] [-du] [-limit=1] [-format=default] [-config=xxx]`
- In Linux or macOS
`./obsutil ls [-s] [-du] [-limit=1] [-format=default] [-config=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 : 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.
du	Optional (additional parameter)	Quickly returns the total size of listed objects, without displaying detailed object information. This parameter can be used together with other parameters. NOTE This parameter takes effect only on listing objects, but not on listing buckets.

Parameter	Optional or Mandatory	Description
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.
format	Optional (additional parameter)	Prints a listing result in the user-defined format. Currently, the value can only be default , indicating that the listing result is displayed in one row.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description .

 NOTE

In a bucket listing result, **BucketType** indicates the bucket type. **OBJECT** indicates an object storage bucket, while **POSIX** indicates a parallel file system.

4.3 Querying Bucket Properties

Function

You can use this command to query the basic properties of a bucket, including its region, version ID, storage usage, bucket quota, AZ, whether it supports POSIX, and the number of objects in the bucket.

Command Line Structure

- In Windows
`obsutil stat obs://bucket [-acl] [-bf=xxx] [-config=xxx]`
- In Linux or macOS
`./obsutil stat obs://bucket [-acl] [-bf=xxx] [-config=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
Location:
  your-location
ObsVersion:
  3.0
FSStatus:
  disabled
```

```
AvailableZone:
multi-az
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.
bf	Optional (additional parameter)	Display format of the used bucket capacity (in bytes) Possible values are: <ul style="list-style-type: none"> • 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 .

Response

Field	Description
Bucket	Bucket name
Location	Region where the bucket resides
ObsVersion	Version of the bucket
BucketType	Type of a bucket. OBJECT indicates a bucket for object storage. POSIX indicates a bucket used as a parallel file system.
AvailableZone	AZ where the bucket is located
ObjectNumber	Number of objects in the bucket
Size	Storage usage of the bucket, in bytes
Quota	Bucket quota. Value 0 indicates that no upper limit is set for the bucket quota.

Field	Description
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 access policies.

Command Line Structure

- In Windows
obsutil chatter obs://bucket [-acl=xxx] [-aclXml=xxx] [-config=xxx]
- In Linux or macOS
./obsutil chatter obs://bucket [-acl=xxx] [-aclXml=xxx] [-config=xxx]

Examples

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

```
obsutil chatter 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
acl	Optional (additional parameter)	<p>Access control policies that can be specified for buckets. Possible values are:</p> <ul style="list-style-type: none"> private public-read public-read-write <p>NOTE The preceding three values indicate private read and write, public read, and public read and write.</p>

Parameter	Optional or Mandatory	Description
aclXml	Optional (additional parameter)	<p>Access control policy of the bucket, in XML format.</p> <pre><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></pre> <p>NOTE</p> <ul style="list-style-type: none"> • 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). <p>NOTICE</p> <p>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.</p>
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description .

 **NOTE**

Only one from **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]`
- In Linux or macOS
`./obsutil rm obs://bucket [-f] [-config=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 .

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 remains unchanged.

Command Line Structure

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

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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-o=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.*] [-exclude=*.*] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.*] [-exclude=*.*] [-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx]
```

 NOTE

In this command, **/prefix** is the name prefix for uploading folders. For more examples, see [Upload](#).

- 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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-o=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.*] [-exclude=*.*] [-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.*] [-exclude=*.*] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx]
```

 NOTE

In this command, **/prefix** is the name prefix for uploading folders. For more examples, see [Upload](#).

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 8.46MB/8.46MB 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

Task id: 104786c8-27c2-48fc-bc6a-5886596fb0ed
OutputDir: xxxx

[=====] 100.00% tps:35.71 2.02 KB/s
7.20MB/7.20MB 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: 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 <ul style="list-style-type: none"> • 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.
folder_url	Optional for uploading multiple files/folders Mandatory for uploading a folder	Local folder path NOTE <ul style="list-style-type: none"> • 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 both be included when uploading multiple files/folders. For example, file_url1,folder_url1,file_url2,folder_url2.

Parameter	Optional or Mandatory	Description
filelist_url	Optional for uploading multiple files/folders	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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
key	Optional	<p>Indicates the object name or object name prefix specified when uploading a file, or the object name prefix specified when uploading a folder.</p> <p>The rules are as follows:</p> <ul style="list-style-type: none"> 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 (/). <p>NOTE For details about how to use this parameter, see Upload.</p>

Parameter	Optional or Mandatory	Description
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.
link	Optional (additional parameter)	<p>Uploads the actual path of the symbolic-link file/folder</p> <p>NOTICE</p> <ul style="list-style-type: none"> 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 completes, check whether the sizes of the objects in the bucket are the same as those of the local files.

Parameter	Optional or Mandatory	Description
vmd5	Optional (additional parameter)	<p>After the upload completes, check whether the MD5 values of the objects in the bucket are the same as those of the local files.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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 verification is successful, this parameter value is used for metadata x-obs-meta-md5chksum, for later MD5 verification during download or copy.
p	Optional (additional parameter)	<p>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.</p>
threshold	Optional (additional parameter)	<p>Indicates the threshold for enabling multipart upload, in bytes. The default value is the value of defaultBigfileThreshold in the configuration file.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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, 1MB indicates 1048576 bytes.
acl	Optional (additional parameter)	<p>Access control policies that can be specified when uploading files. Possible values are:</p> <ul style="list-style-type: none"> • private • public-read • public-read-write • bucket-owner-full-control <p>NOTE</p> <p>The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.</p>

Parameter	Optional or Mandatory	Description
meta	Optional (additional parameter)	<p>Indicates the standard and custom metadata that can be specified during file upload. This parameter should be configured in the following format: <i>key1:value1#key2:value2#key3:value3.</i></p> <p>NOTE</p> <ol style="list-style-type: none"> The format example above indicates that the destination objects contain three groups of custom metadata: <i>key1:value1</i>, <i>key2:value2</i>, and <i>key3:value3</i>. Standard metadata headers include Content-Type, Content-Encoding, Cache-Control, Content-Disposition, Content-Language and Expires.
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>NOTE</p> <p>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.</p>
r	<p>Mandatory for uploading a folder (additional parameter)</p> <p>Optional for uploading multiple files/folders</p>	<p>Indicates files and subfolders within the folder when uploading a folder recursively.</p>

Parameter	Optional or Mandatory	Description
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.
msm	Mandatory for uploading multiple files/folders (additional parameter)	Enables the mode for uploading multiple files/folders. Possible values are 1 and 2 . NOTE <ul style="list-style-type: none">• 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.

Parameter	Optional or Mandatory	Description
exclude	Optional for uploading a folder or multiple files/folders (additional parameter)	<p>Indicates the file matching patterns that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the file matching patterns that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTE</p> <p>Example of uploading files in a request with the include parameter contained:</p> <pre>./obsutil cp /localpath/ obs://test/ -include=/localpath/2022-12-09/* -f -r</pre> <p>This command uploads files that are under localpath and start with /localpath/2022-12-09/ to bucket test.</p> <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>Indicates that only the files whose latest access time is within the value of timeRange are uploaded.</p> <p>NOTE</p> <ul style="list-style-type: none"> This parameter must be used together with timeRange.
disableDir Object	Optional for uploading multiple folders (additional parameter)	<p>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.</p>

Parameter	Optional or Mandatory	Description
timeRange	Optional for uploading a folder or multiple files/folders (additional parameter)	<p>Indicates the time range matching pattern when uploading files. Only files whose latest modification time is within the configured time range are uploaded.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMddHHmmss</i>. Automatic formatting is supported. For example, <i>yyyMMdd</i> is equivalent to <i>yyyMMdd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE Time in the matching pattern is the UTC time.</p>
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)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

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

Field	Description
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 <ul style="list-style-type: none"> 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
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]`
- In Linux or macOS
`./obsutil stat obs://bucket/key [-acl][-bf=xxx] [-config=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.
bf	Optional (additional parameter)	Display format of the object size (in bytes). Possible values are: <ul style="list-style-type: none"> 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 .

Response

Field	Description
Key	Object name
LastModified	Latest modification time of the object
Size	Object size, in bytes

Field	Description
MD5	Real MD5 of the object NOTE You can query this value only after running the cp command and configuring the -vmd5 parameter.
ETag	ETag value of an object calculated on the server
ContentType	Content-Type of the object
Type	Object type
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.

Command Line Structure

- In Windows
 - Setting properties of a single object
obsutil chatter obs://bucket/key [-meta=aaa:bbb#ccc:ddd] [-acl=xxx] [-aclXml=xxx] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx]
 - Setting properties of objects in batches
obsutil chatter obs://bucket[/key] -r [-f] [-v] [-meta=aaa:bbb#ccc:ddd] [-acl=xxx] [-aclXml=xxx] [-o=xxx] [-j=1] [-config=xxx]
- In Linux or macOS
 - Setting properties of a single object
./obsutil chatter obs://bucket/key [-meta=aaa:bbb#ccc:ddd] [-acl=xxx] [-aclXml=xxx] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx]
 - Setting properties of objects in batches
./obsutil chatter obs://bucket[/key] -r [-f] [-v] [-meta=aaa:bbb#ccc:ddd] [-acl=xxx] [-aclXml=xxx] [-o=xxx] [-j=1] [-config=xxx]

Examples

- Take the Windows OS as an example, run the **obsutil chatter obs://bucket-test/key -acl=public-read** command to set the access permission to an object to public read.
obsutil chatter 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 chatter obs://bucket-test -r -f -acl=public-read** command to set the access permission to all objects in the bucket to public read.

```
obsutil chatter 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 when setting properties of an object. Optional when 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.
meta	Optional (additional parameter)	Standard or custom metadata that can be specified for destination objects in object replication. This parameter should be configured in the following format: <i>key1:value1#key2:value2#key3:value3</i> . NOTE <ol style="list-style-type: none"> This parameter takes effect only when it is used together with direct. This value indicates that the destination objects contain three groups of custom metadata: <i>key1:value1</i>, <i>key2:value2</i>, and <i>key3:value3</i>. Standard metadata headers include Content-Type, Content-Encoding, Cache-Control, Content-Disposition, Content-Language and Expires.
direct	Optional (additional parameter)	Metadata operation indicator. The value can be REPLACE_NEW or REPLACE . REPLACE_NEW : The existing metadata value is replaced with a new one, the metadata lacking a value is assigned one, and the metadata not specified keeps unchanged. REPLACE : The metadata is replaced with the header included in the current request and the metadata not specified is deleted. NOTE This parameter takes effect only when it is used together with meta .

Parameter	Optional or Mandatory	Description
acl	Optional (additional parameter)	<p>Access control policies that can be specified for objects. Possible values are:</p> <ul style="list-style-type: none"> • private • public-read • public-read-write • bucket-owner-full-control <p>NOTE The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.</p>
aclXml	Optional (additional parameter)	<p>Access control policy of the bucket, in XML format.</p> <pre data-bbox="815 786 1430 1323"> <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> </pre> <p>NOTE</p> <ul style="list-style-type: none"> • 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). <p>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.</p>

Parameter	Optional or Mandatory	Description
versionId	Optional when setting properties of an object (additional parameter)	Version ID of the object whose properties are to be set
fr	Optional when setting properties of an object (additional parameter)	Generates an operation result list when setting properties of an object.
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.

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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)	<p>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.</p> <p>NOTE The value is ensured to be greater than or equal to 1.</p>
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description .

 **NOTE**

Only one from **acl** 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] [-du] [-marker=xxx] [-versionIdMarker=xxx] [-bf=xxx] [-limit=1] [-format=default] [-config=xxx]`
- In Linux or macOS
`./obsutil ls obs://bucket[/prefix] [-s] [-d] [-v] [-du] [-marker=xxx] [-versionIdMarker=xxx] [-bf=xxx] [-limit=1] [-format=default] [-config=xxx]`

Examples

- Example 1: 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	ETag
obs://bucket-test/AUTHORS "796393c1eaf502ef56a85c2ceb640aea"	2018-11-16T02:15:49Z		33243
obs://bucket-test/CONTRIBUTING.md "12d93325ba6131f852daecd18dd65edc"	2018-11-16T02:15:49Z	1366	
obs://bucket-test/CONTRIBUTORS "b486b5003e6215c9199e86ab3ccec9fa"	2018-11-16T02:15:49Z	45710	
obs://bucket-test/LICENSE "5d4950ecb7b26d2c5e4e7b4e0dd74707"	2018-11-16T02:15:49Z	1479	
obs://bucket-test/PATENTS "3a55d95595a6f9e37dee53826b4daff2"	2018-11-16T02:15:49Z	1303	
obs://bucket-test/README.md "97351fd7946b9ea021a31a86ba2a10ab"	2018-11-16T02:15:49Z	1399	
obs://bucket-test/VERSION "43d93b553855b0e1fc67e31c28c07b65"	2018-11-16T02:15:49Z	7	
obs://bucket-test/api/README "4e9e63a87075df60cdf65c8ce9e92117"	2018-11-16T02:15:49Z	521	
obs://bucket-test/api/except.txt "8eb96de3f60447e2f09a7531c99fb3ee"	2018-11-16T02:15:49Z	20194	

Next marker is: api/except.txt

Folder number is: 1

File number is: 9

- Example 2: Take the Windows OS as an example. Run the **obsutil ls obs://bucket-test2** command to list objects in the bucket.

```
obsutil ls obs://bucket-test2
```

Object list:

key	LastModified	Size	ETag
obs://bucket-test2/123 "d41d8cd98f00b204e9800998ecf8427e"	2022-03-29T09:17:51Z		0B
obs://bucket-test2/1_2-3.txt "d41d8cd98f00b204e9800998ecf8427e"	2022-03-29T09:17:51Z		0B
obs://bucket-test2/1_2-3_33.txt "dcf204c11d791255adc63e61763c2426"	2022-03-29T09:17:51Z	200B	
obs://bucket-test2/New text file.txt "d41d8cd98f00b204e9800998ecf8427e"	2022-03-29T09:17:51Z		0B

```
"d41d8cd98f00b204e9800998ecf8427e"
```

```
Total size of bucket is: 200B  
Folder number is: 0  
File number is: 4
```

- Example 3: Take the Windows OS as an example. Run the **obsutil ls obs://bucket-test2/prefix** command to list objects whose name prefix is **prefix** in the bucket.

```
obsutil ls obs://bucket-test2/prefix
```

```
Object list:  
key                               LastModified           Size   ETag  
obs://bucket-test2/prefix         2022-03-29T09:17:51Z  0B  
"d41d8cd98f00b204e9800998ecf8427e"  
  
obs://bucket-test2/prefix2        2022-03-29T09:17:51Z  0B  
"d41d8cd98f00b204e9800998ecf8427e"
```

```
Total size of bucket is: 0B  
Folder number is: 0  
File number is: 2
```

- 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.
d	Optional (additional parameter)	Lists only objects and subdirectories in the current directory, instead of recursively listing all objects and subdirectories. In big data scenarios, parallel file systems usually have deep directory levels and each directory has a large number of files. In such case, you are advised to use this parameter to limit the scope to list. 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.

Parameter	Optional or Mandatory	Description
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: <ul style="list-style-type: none"> • 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.
du	Optional (additional parameter)	Quickly returns the total size of listed objects, without displaying detailed object information. This parameter can be used together with other parameters. NOTE If there are too many objects listed, wait for a while. CAUTION <ul style="list-style-type: none"> • This parameter is only supported by obsutil 5.4.6 and later.
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, 1,000 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
format	Optional (additional parameter)	Prints a listing result in the user-defined format. Currently, the value can only be default , indicating that the listing result is displayed in one row.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description .

Response

Field	Description
Key	Object name
LastModified	Time when the last modification was made to the object
Size	Object size
ETag	ETag of an object, which is a Base64-encoded 128-bit MD5 digest. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but this value has changed to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.

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.
- 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.
- If the source bucket is a parallel file system (supporting POSIX), the destination bucket must also be a parallel file system.

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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*xxx] [-exclude=*xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*xxx] [-exclude=*xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=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: 52428800  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.

Parameter	Optional or Mandatory	Description
key	Mandatory for copying an object. Optional for copying objects in batches.	<p>Indicates the source object name when copying an object, or the name prefix of source objects when copying objects in batches.</p> <p>The rules are as follows:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 <i>the value of dest/source object name</i>. <p>NOTE</p> <ul style="list-style-type: none"> 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.
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.

Parameter	Optional or Mandatory	Description
dryRun	Optional (additional parameter)	Conducts a dry run.
crr	Optional (additional parameter)	<p>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 be any two OBS buckets.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <p>When cross-region replication is enabled, the upload/download bandwidth, CPU, and memory resources of the host where commands are executed will be occupied, which may deteriorate the host performance.</p>
vlength	Optional (additional parameter)	<p>Verifies whether the object size in the destination bucket is the same as that in the source bucket after the copy task completes.</p> <p>NOTE</p> <p>This parameter must be used together with crr.</p>
vmd5	Optional (additional parameter)	<p>Verifies whether the MD5 value of the destination bucket is the same as that of the source bucket after the copy task completes.</p> <p>NOTE</p> <ul style="list-style-type: none"> This parameter must be used together with crr. Objects in the source bucket must contain metadata x-obs-meta-md5chksum, or MD5 verification will be skipped. <p>After the MD5 verification is successful, this parameter value is used for metadata x-obs-meta-md5chksum of the destination object, for later MD5 verification during download or copy.</p>
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.

Parameter	Optional or Mandatory	Description
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 <ul style="list-style-type: none"> 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, 1MB indicates 1048576 bytes.
versionId	Optional for copying an object (additional parameter)	Source object version ID that can be specified when copying an object
acl	Optional (additional parameter)	Access control policies for destination objects that can be specified when copying objects. Possible values are: <ul style="list-style-type: none"> 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.
meta	Optional (additional parameter)	Standard or custom metadata that can be specified for destination objects in object replication. This parameter should be configured in the following format: <i>key1:value1#key2:value2#key3:value3.</i> NOTE <ol style="list-style-type: none"> The format example above indicates that the destination objects contain three groups of custom metadata: <i>key1:value1</i>, <i>key2:value2</i>, and <i>key3:value3</i>. Standard metadata headers include Content-Type, Content-Encoding, Cache-Control, Content-Disposition, Content-Language and Expires.

Parameter	Optional or Mandatory	Description
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>NOTE</p> <p>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.</p>
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)	<p>Indicates the maximum number of concurrent tasks for copying objects in batches. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE</p> <p>The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional for copying objects in batches (additional parameter)	<p>Indicates the matching patterns of source objects that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the matching patterns of source objects that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the time range matching pattern when copying objects. Only objects whose latest modification time is within the configured time range are copied.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyyMMddHHmmss</i>. Automatic formatting is supported. For example, <i>yyyyMMdd</i> is equivalent to <i>yyyyMMdd000000</i>, and <i>yyyyMM</i> is equivalent to <i>yyyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>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 (/).</p>
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

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.
- The source objects are deleted after the move operation succeeds.
- If the source bucket is a parallel file system (supporting POSIX), the destination bucket cannot be an object storage bucket.

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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=xxx]
```

- In Linux or macOS

- Moving a single object

```
./obsutil mv obs://srcbucket/key obs://dstbucket/[dest] [-dryRun] [-u] [-p=1] [-threshold=52428800] [-versionId=xxx] [-acl=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-cpd=xxx] [-fr] [-o=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=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.
- Batch object move is not available for parallel file systems.

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
```

- 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.

Parameter	Optional or Mandatory	Description
key	Mandatory for moving a single object Optional for moving objects in batches	<p>Indicates the source object name when moving a single object, or the name prefix of source objects when moving objects in batches.</p> <p>The rules are as follows:</p> <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 <i>the value of dest/source object name</i>. <p>NOTE</p> <ul style="list-style-type: none"> 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.
flat	Optional for moving objects in batches (additional parameter)	The name prefix of the parent object is excluded when moving objects in batches.

Parameter	Optional or Mandatory	Description
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 <ul style="list-style-type: none"> 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, 1MB indicates 1048576 bytes.
versionId	Optional for moving an object (additional parameter)	Source object version ID that can be specified when moving a single object NOTE Parameter versionId cannot be configured for buckets that support POSIX.
acl	Optional (additional parameter)	Access control policies for destination objects that can be specified when moving objects. Possible values are: <ul style="list-style-type: none"> 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
meta	Optional (additional parameter)	<p>Metadata of destination objects that can be specified when copying objects. The format is <i>key1:value1#key2:value2#key3:value3</i>.</p> <p>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.</p>
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>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.</p>
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)	<p>Indicates the maximum number of concurrent tasks for moving objects in batches. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional for moving objects in batches (additional parameter)	<p>Indicates the matching patterns of source objects that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the matching patterns of source objects that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the time range matching pattern when moving objects. Only objects whose latest modification time is within the configured time range are moved.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyyMMddHHmmss</i>. Automatic formatting is supported. For example, <i>yyyyMMdd</i> is equivalent to <i>yyyyMMdd000000</i>, and <i>yyyyMM</i> is equivalent to <i>yyyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>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 (/).</p>
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

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.

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]`
 - 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]`
- 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]`
 - 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]`

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 8.46MB/8.46MB 0s
Download successfully, 8.46MB, 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

Task id: 3066a4b0-4d21-4929-bb84-4829c32cbd0f
OutputDir: xxxx

[=====] 100.00% tps:17.86 155.59 KB/s
7.20MB/7.20MB 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: 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
folder_url	Mandatory for downloading objects in batches	Local folder path
bucket	Mandatory	Bucket name

Parameter	Optional or Mandatory	Description
key	<p>Mandatory for downloading an object</p> <p>Optional for downloading objects in a batch</p>	<p>Indicates the name of the object to be downloaded, or the name prefix of the objects to be downloaded in batches.</p> <p>This parameter cannot be left blank when downloading an object. The saving and naming rules are as follows:</p> <ul style="list-style-type: none"> • 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. <p>The saving rules when downloading objects in batches are as follows:</p> <ul style="list-style-type: none"> • 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. <p>NOTE</p> <ul style="list-style-type: none"> • 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)	<p>Indicates the directory for storing temporary files during multipart download. The default value is the value of defaultTempFileDir in the configuration file.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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.
vlenth	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-meta-md5chksum , or 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 <ul style="list-style-type: none"> • 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, 1MB 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 <ul style="list-style-type: none"> • This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>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.</p>
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)	<p>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.</p> <p>NOTE The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional for downloading objects in batches (additional parameter)	<p>Indicates the matching patterns of source objects that are excluded, for example, *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Specifies what formats of objects can be downloaded. If this parameter is set to *.jpg, only objects in the .jpg format can be downloaded.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the time range matching pattern when downloading objects. Only objects whose latest modification time is within the configured time range are downloaded.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> • The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMddHHmmss</i>. • Automatic formatting is supported. For example, <i>yyyMMdd</i> is equivalent to <i>yyyMMdd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. • If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE</p> <ul style="list-style-type: none"> • 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)	<p>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 (/).</p>

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

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]

- 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]
- In Linux or macOS
 - Generating the download link of a single object
./obsutil sign obs://bucket/key [-e=300] [-config=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]

Examples

- In Windows, run **obsutil sign obs://bucket-test/test.txt** to generate a single object download link:
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
- In Windows, run **obsutil sign obs://bucket-test/test/ -r** to generate object download links in batches:
obsutil sign obs://bucket-test/test/ -r
Generate download urls for objects .
Generate the download url(s) for the objects in the bucket [bucket-test] finished
Task id: af4dc692-6a88-4541-8156-ff1a889d2288

NOTE

- If there are a large number of objects, obsutil saves the object download links to a specific file. The file name is associated with the task ID. For instance, the task ID in the example above is **af4dc692-6a88-4541-8156-ff1a889d2288**, so the file name should be **sign_succeed_report_{timestamp}_af4dc692-6a88-4541-8156-ff1a889d2288.txt**.
- By default, the file is stored under folder **.obsutil_output** in your user directory. You can also use parameter **-o** to specify a new folder.

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)	<p>Indicates the matching patterns of objects that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>Indicates the matching patterns of objects that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>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.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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 <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyyMMddHHmmss</i>. • Automatic formatting is supported. For example, <i>yyyyMMdd</i> is equivalent to <i>yyyyMMdd000000</i>, and <i>yyyyMM</i> is equivalent to <i>yyyyMM01000000</i>. • If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched.
o	Optional when generating download links of objects in batches (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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 .

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.



The delete operation cannot be undone.

Important Notes

In big data scenarios, parallel file systems usually have deep directory levels and each directory has a large number of files. In such case, deleting directories from parallel file systems may fail due to timeout. To address this problem, you are advised to delete directories in either of the following ways:

1. On the Hadoop client that has OBSA, an OBS client plugin, embedded, run the **hadoop fs -rmr obs://{Name of a parallel file system}/{Directory name}** command.
2. Configure a lifecycle rule for directories so that they can be deleted in background based on the preset lifecycle rule.

Command Line Structure

- In Windows
 - Deleting a single object
`obsutil rm obs://bucket/key [-f] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx]`
 - Deleting objects in batches
`obsutil rm obs://bucket/[key] -r [-j=1] [-f] [-v] [-o=xxx] [-config=xxx]`
- In Linux or macOS
 - Deleting a single object
`./obsutil rm obs://bucket/key [-f] [-versionId=xxx] [-fr] [-o=xxx] [-config=xxx]`
 - Deleting objects in batches
`./obsutil rm obs://bucket/[key] -r [-j=1] [-f] [-v] [-o=xxx] [-config=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
- Take the Windows OS as an example. Run the **obsutil rm obs://bucket-test/key -r -f** command to delete all objects and folders prefixed with **key** in bucket **bucket-test**.
`obsutil rm obs://bucket-test/key -r -f`

```
[=====] 100.00% 21s
Succeed count is: 10 Failed count is: 0
Task id is: 79ab59ec-7e00-4f22-8c88-465faa834125
```

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. CAUTION When you batch delete objects, all objects with the specified prefix will be deleted.
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)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*xxx] [-exclude=*xxx] [-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-o=xxx] [-cpd=xxx] [-fr] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*xxx] [-exclude=*xxx] [-timeRange=time1-time2] [-at] [-mf] [-o=xxx] [-cpd=xxx] [-config=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 8.46MB/
8.46MB 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
Task id: 104786c8-27c2-48fc-bc6a-5886596fb0ed

OutputDir: xxxx
```

```
[=====] 100.00% tps:35.71 2.02 KB/s  
7.20MB/7.20MB 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: 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	<p>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.</p> <p>The rules are as follows:</p> <ul style="list-style-type: none"> • 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. 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 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. <p>NOTE</p> <ul style="list-style-type: none"> • 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)	<p>Uploads the actual path of the symbolic-link file/folder</p> <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>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.</p>
vmd5	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 verification is successful, this parameter value is used for metadata x-obs-meta-md5checksum, for later MD5 verification during download or copy.
p	Optional (additional parameter)	<p>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.</p>
threshold	Optional (additional parameter)	<p>Indicates the threshold for enabling multipart upload, in bytes. The default value is the value of defaultBigfileThreshold in the configuration file.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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, 1MB indicates 1048576 bytes.

Parameter	Optional or Mandatory	Description
acl	Optional (additional parameter)	<p>Access control policies that can be specified when synchronously uploading files. Possible values are:</p> <ul style="list-style-type: none"> • private • public-read • public-read-write • bucket-owner-full-control <p>NOTE The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.</p>
meta	Optional (additional parameter)	<p>Indicates the customized metadata that can be specified when uploading files. The format is key1:value1#key2:value2#key3:value3.</p> <p>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.</p>
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> • This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>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.</p>
j	Optional for synchronously uploading a folder (additional parameter)	<p>Indicates the maximum number of concurrent tasks for uploading a folder synchronously. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional for synchronously uploading a folder (additional parameter)	<p>Indicates the file matching patterns that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <ul style="list-style-type: none"> 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.
include	Optional for synchronously uploading a folder (additional parameter)	<p>Indicates the file matching patterns that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <ul style="list-style-type: none"> 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.

Parameter	Optional or Mandatory	Description
at	Optional for synchronously uploading a folder (additional parameter)	<p>Indicates that when synchronously uploading a folder, only the files whose latest access time is within the value of timeRange are uploaded.</p> <p>NOTE</p> <ul style="list-style-type: none"> This parameter must be used together with timeRange.
disableDirObject	Optional for synchronously uploading folders (additional parameter)	<p>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.</p>
timeRange	Optional for synchronously uploading a folder (additional parameter)	<p>Indicates the time range matching pattern when synchronously uploading files. Only files whose latest modification time is within the configured time range are uploaded.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMdHHmmss</i>. Automatic formatting is supported. For example, <i>yyyMMd</i> is equivalent to <i>yyyMMd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE Time in the matching pattern is the UTC time.</p>
mf	Optional (additional parameter)	<p>Indicates that the name matching pattern (include or exclude) and the time matching pattern (timeRange) also take effect on folders.</p>

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

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.
- 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.
- If the source bucket is a parallel file system (supporting POSIX), the destination bucket cannot be an object storage bucket.

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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-config=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.
key	Optional	Name prefix of source objects The rules are as follows: <ul style="list-style-type: none">• 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 <ul style="list-style-type: none">• 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.

Parameter	Optional or Mandatory	Description
crr	Optional (additional parameter)	<p>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 be any two OBS buckets.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <p>When cross-region replication is enabled, the upload/download bandwidth, CPU, and memory resources of the host where commands are executed will be occupied, which may deteriorate the host performance.</p>
vlength	Optional (additional parameter)	<p>Verifies whether the object size in the destination bucket is the same as that in the source bucket after the copy task completes.</p> <p>NOTE</p> <p>This parameter must be used together with crr.</p>
vmd5	Optional (additional parameter)	<p>Verifies whether the MD5 value of the destination bucket is the same as that of the source bucket after the copy task completes.</p> <p>NOTE</p> <ul style="list-style-type: none"> This parameter must be used together with crr. Objects in the source bucket must contain metadata x-obs-meta-md5chksum, or MD5 verification will be skipped. After the MD5 verification is successful, this parameter value is used for metadata x-obs-meta-md5chksum of the destination object, for later MD5 verification during download or copy.
p	Optional (additional parameter)	<p>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.</p>

Parameter	Optional or Mandatory	Description
threshold	Optional (additional parameter)	<p>Indicates the threshold for enabling multipart copy, in bytes. The default value is the value of defaultBigfileThreshold in the configuration file.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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, 1MB indicates 1048576 bytes.
acl	Optional (additional parameter)	<p>Access control policies for destination objects that can be specified when copying objects. Possible values are:</p> <ul style="list-style-type: none"> • private • public-read • public-read-write • bucket-owner-full-control <p>NOTE The preceding four values indicate private read and write, public read, public read and write, and bucket owner full control.</p>
meta	Optional (additional parameter)	<p>Metadata of destination objects that can be specified when copying objects. This parameter should be configured in the following format: <i>key1:value1#key2:value2#key3:value3.</i></p> <p>NOTE The format example above indicates that the destination objects contain three groups of custom metadata: <i>key1:value1</i>, <i>key2:value2</i>, and <i>key3:value3</i>.</p>
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> • This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>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.</p>
j	Optional for copying objects in batches (additional parameter)	<p>Indicates the maximum number of concurrent tasks for copying objects synchronously. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional for copying objects in batches (additional parameter)	<p>Indicates the matching patterns of source objects that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the matching patterns of source objects that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the time range matching pattern when synchronously copying objects. Only objects whose latest modification time is within the configured time range are copied.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMddHHmmss</i>. Automatic formatting is supported. For example, <i>yyyMMdd</i> is equivalent to <i>yyyMMdd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>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 (/).</p>

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

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.
- 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]
```
- 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]
```

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

Task id: 3066a4b0-4d21-4929-bb84-4829c32cbd0f
OutputDir: xxxx

[=====] 100.00% tps:17.86 155.59 KB/s
7.20MB/7.20MB 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: 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

Parameter	Optional or Mandatory	Description
key	Optional	<p>Indicates the name prefix of objects to be synchronously downloaded.</p> <p>The rules are as follows:</p> <ul style="list-style-type: none"> • 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. <p>NOTE</p> <ul style="list-style-type: none"> • 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)	<p>Indicates the directory for storing temporary files during synchronous download. The default value is the value of defaultTempFileDir in the configuration file.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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-meta-md5chksum , or 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 <ul style="list-style-type: none"> • 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, 1MB 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 <ul style="list-style-type: none"> • This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>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.</p>
j	Optional for downloading objects in batches (additional parameter)	<p>Indicates the maximum number of concurrent tasks for downloading objects synchronously. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional for downloading objects in batches (additional parameter)	<p>Indicates the matching patterns of source objects that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>Indicates the matching patterns of source objects that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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. <p>NOTICE</p> <ul style="list-style-type: none"> • 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)	<p>Indicates the time range matching pattern when synchronously downloading objects. Only objects whose latest modification time is within the configured time range are downloaded.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> • The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMddHHmmss</i>. • Automatic formatting is supported. For example, <i>yyyMMdd</i> is equivalent to <i>yyyMMdd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. • If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE</p> <ul style="list-style-type: none"> • 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)	<p>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 (/).</p>

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

Response

Refer to [Response](#) for uploading an object.

5.14 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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx]
- In Linux or macOS

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

Task id: a628d6da-c562-4a1f-b687-4fa125de0dc3
OutputDir: xxxx

[=====] 100.00% tps:35.71 2.02 KB/s
7.20MB/7.20MB 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: 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 <ul style="list-style-type: none"> You can obtain the task ID after an upload task is complete, or query it based on the name of the result list. A task ID is the 36 characters, excluding the suffix .txt. 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.

Parameter	Optional or Mandatory	Description
vlength	Optional (additional parameter)	After the upload completes, 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 <ul style="list-style-type: none"> 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 verification is successful, this parameter value is used for metadata x-obs-meta-md5chksum, 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 <ul style="list-style-type: none"> 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, 1MB indicates 1048576 bytes.
acl	Optional (additional parameter)	Access control policies that can be specified when uploading files. Possible values are: <ul style="list-style-type: none"> 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
meta	Optional (additional parameter)	<p>Indicates the customized metadata that can be specified when uploading files. The format is key1:value1#key2:value2#key3:value3.</p> <p>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.</p>
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>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.</p>
f	Optional (additional parameter)	Runs in force mode.
j	Optional (additional parameter)	<p>Maximum number of concurrent tasks for uploading a folder. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional (additional parameter)	<p>Indicates the file matching patterns that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the file matching patterns that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>Indicates that when resuming a failed upload task, only the files whose latest access time is within the value of timeRange are uploaded.</p> <p>NOTE</p> <ul style="list-style-type: none"> This parameter must be used together with timeRange.

Parameter	Optional or Mandatory	Description
timeRange	Optional (additional parameter)	<p>Indicates the time range matching pattern when uploading files. Only files whose latest modification time is within the configured time range are uploaded.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMddHHmmss</i>. Automatic formatting is supported. For example, <i>yyyMMdd</i> is equivalent to <i>yyyMMdd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE Time in the matching pattern is the UTC time.</p>
mf	Optional (additional parameter)	<p>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 (/).</p>

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

Response

Refer to [Response](#) for uploading an object.

5.15 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] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=xxx]
- In Linux or macOS

```
./obsutil cp -recover=xxx [-dryRun] [-f] [-u] [-crr] [-vlength] [-vmd5] [-j=1] [-p=1] [-threshold=52428800] [-acl=xxx] [-meta=aaa:bbb#ccc:ddd] [-ps=auto] [-include=*.xxx] [-exclude=*.xxx] [-timeRange=time1-time2] [-mf] [-o=xxx] [-cpd=xxx] [-clear] [-config=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)	<p>ID of the copy task to be resumed.</p> <p>NOTE</p> <ul style="list-style-type: none"> You can obtain the task ID after a copy task is complete, or query it based on the name of the result list. A task ID is the 36 characters, excluding the suffix .txt. 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.

Parameter	Optional or Mandatory	Description
crr	Optional (additional parameter)	<p>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 be any two OBS buckets.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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. <p>NOTICE</p> <p>When cross-region replication is enabled, the upload/download bandwidth, CPU, and memory resources of the host where commands are executed will be occupied, which may deteriorate the host performance.</p>
vlength	Optional (additional parameter)	<p>Verifies whether the object size in the destination bucket is the same as that in the source bucket after the copy task completes.</p> <p>NOTE</p> <p>This parameter must be used together with crr.</p>
vmd5	Optional (additional parameter)	<p>Verifies whether the MD5 value of the destination bucket is the same as that of the source bucket after the copy task completes.</p> <p>NOTE</p> <ul style="list-style-type: none"> This parameter must be used together with crr. Objects in the source bucket must contain metadata x-obs-meta-md5chksum, or MD5 verification will be skipped. After the MD5 verification is successful, this parameter value is used for metadata x-obs-meta-md5chksum of the destination object, for later MD5 verification during download or copy.

Parameter	Optional or Mandatory	Description
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 <ul style="list-style-type: none"> 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, 1MB indicates 1048576 bytes.
acl	Optional (additional parameter)	Access control policies for destination objects that can be specified when copying objects. Possible values are: <ul style="list-style-type: none"> private public-read public-read-write NOTE The preceding three values indicate private read and write, public read, and public read and write.
meta	Optional (additional parameter)	Metadata of destination objects that can be specified when copying objects. This parameter should be configured in the following format: <i>key1:value1#key2:value2#key3:value3</i> . NOTE The format example above indicates that the destination objects contain three groups of custom metadata: <i>key1:value1</i> , <i>key2:value2</i> , and <i>key3:value3</i> .

Parameter	Optional or Mandatory	Description
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>NOTE</p> <p>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.</p>
f	Optional (additional parameter)	Runs in force mode.
j	Optional (additional parameter)	<p>Indicates the maximum number of concurrent tasks for copying objects in batches. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE</p> <p>The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional (additional parameter)	<p>Indicates the matching patterns of source objects that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the matching patterns of source objects that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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. <p>NOTICE</p> <ul style="list-style-type: none"> • 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)	<p>Indicates the time range matching pattern when copying objects. Only objects whose latest modification time is within the configured time range are copied.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMddHHmmss</i>. Automatic formatting is supported. For example, <i>yyyMMdd</i> is equivalent to <i>yyyMMdd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>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 (/).</p>

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

Response

Refer to [Response](#) for uploading an object.

5.16 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]

- 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]

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: 52428800  PartSize: 5242880
Exclude:           Include:
VerifyLength: false  VerifyMd5: false
CheckpointDir: xxxx

Task id: 19ad99ce-434e-41b2-9c8d-3af5b42eb65a
OutputDir: xxxx

[=====] 100.00% tps: 17.86 155.59 KB/s
7.20MB/7.20MB 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: 19ad99ce-434e-41b2-9c8d-3af5b42eb65a
```

Parameter Description

Parameter	Optional or Mandatory	Description
recover	Mandatory (additional parameter)	<p>ID of the download task to be resumed</p> <p>NOTE</p> <ul style="list-style-type: none"> • You can obtain the task ID after a download task is complete, or query it based on the name of the result list. A task ID is the 36 characters, excluding the suffix .txt. • 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)	<p>Indicates the directory for storing temporary files during download. The default value is the value of defaultTempFileDir in the configuration file.</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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.

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-meta-md5chksum , or 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 <ul style="list-style-type: none"> • 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, 1MB indicates 1048576 bytes.

Parameter	Optional or Mandatory	Description
ps	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> This value can contain a capacity unit. For example, 1MB 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)	<p>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.</p> <p>NOTE</p> <p>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.</p>
f	Optional (additional parameter)	Runs in force mode.
j	Optional (additional parameter)	<p>Indicates the maximum number of concurrent tasks for downloading objects in batches. The default value is the value of defaultJobs in the configuration file.</p> <p>NOTE</p> <p>The value is ensured to be greater than or equal to 1.</p>

Parameter	Optional or Mandatory	Description
exclude	Optional (additional parameter)	<p>Indicates the matching patterns of source objects that are excluded, for example: *.txt.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the matching patterns of source objects that are included, for example: *.jpg.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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. <p>NOTICE</p> <ul style="list-style-type: none">• 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)	<p>Indicates the time range matching pattern when downloading objects. Only objects whose latest modification time is within the configured time range are downloaded.</p> <p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> The matching time range is represented in <i>time1-time2</i>, where <i>time1</i> must be earlier than or the same as <i>time2</i>. The time format is <i>yyyMMddHHmmss</i>. Automatic formatting is supported. For example, <i>yyyMMdd</i> is equivalent to <i>yyyMMdd000000</i>, and <i>yyyMM</i> is equivalent to <i>yyyMM01000000</i>. If this parameter is set to <i>*-time2</i>, all files whose latest modification time is earlier than <i>time2</i> are matched. If it is set to <i>time1-*</i>, all files whose latest modification time is later than <i>time1</i> are matched. <p>NOTICE</p> <ul style="list-style-type: none"> 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)	<p>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 (/).</p>

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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 .

Response

Refer to [Response](#) for uploading an object.

5.17 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] [-format=default] [-config=xxx]

- In Linux or macOS
./obsutil ls obs://bucket[/prefix] [-s] [-d] -m [-a] [-uploadIdMarker=xxx] [-marker=xxx] [-limit=1] [-format=default] [-config=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
UploadId
obs://bucket-test/aaa             2018-11-27T03:49:07Z
standard                          000001675348ED21860C3F61EF955BD3

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

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

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

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

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

Parameter	Optional or Mandatory	Description
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.
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.
format	Optional (additional parameter)	Prints a listing result in the user-defined format. Currently, the value can only be default , indicating that the listing result is displayed in one row.
config	Optional (additional parameter)	User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description .

5.18 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]`
 - Deleting multipart upload tasks in batches
`obsutil abort obs://bucket[/key] -r [-f] [-o=xxx] [-j=1] [-config=xxx]`
- In Linux or macOS
 - Deleting a single multipart upload task
`./obsutil abort obs://bucket/key -u=xxx [-f] [-fr] [-o=xxx] [-config=xxx]`
 - Deleting multipart upload tasks in batches
`./obsutil abort obs://bucket[/key] -r [-f] [-o=xxx] [-j=1] [-config=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

Parameter	Optional or Mandatory	Description
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 .
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.

Parameter	Optional or Mandatory	Description
o	Optional (additional parameter)	<p>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.</p> <p>NOTE</p> <ul style="list-style-type: none">• 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)	<p>User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description.</p>

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 items in the `.obsutilconfig` file, including the endpoint, AK, SK, and token.

For details about the parameters in the `.obsutilconfig` file, see [Parameter Description](#).

Command Line Structure

- In Windows
`obsutil config -interactive [-crr] [-config=xxx]`
- In Linux or macOS
`./obsutil config -interactive [-crr] [-config=xxx]`

Examples

- Take Windows as an example. Run the `obsutil config -interactive` command to update the access keys and OBS endpoint in the default configuration file.
`obsutil config -interactive`
Please input your ak:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your sk:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your endpoint:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Please input your token:
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Config file url:
C:\Users\tools\.obsutilconfig
Update config file successfully!
- Take Linux as an example. Run the `./obsutil config -interactive` command to update the access keys and OBS endpoint in the default configuration file.
`./obsutil config -interactive`
Please input your ak:

```

XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Please input your sk:
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Please input your endpoint:
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Please input your token:
XXXXXXXXXXXXXXXXXXXXXXXXXXXX
Config file url:
/root/.obsutilconfig
Update config file successfully!
    
```

Parameter Description

Parameter	Optional or Mandatory	Description
interactive	Optional (additional parameter)	Updates configurations in interactive mode.
crr	Optional (additional parameter)	<p>Updates the configurations for client-side cross-region replication in the configuration file.</p> <p>NOTE</p> <p>If this parameter is not configured, the fields updated are endpoint, ak, sk, and token in the configuration file respectively.</p> <p>If this parameter is configured, the fields updated in the configuration file are changed to endpointCrr, akCrr, skCrr, and tokenCrr respectively.</p>
config	Optional (additional parameter)	<p>User-defined configuration file for executing a command. For details about parameters that can be configured, see Parameter Description.</p> <p>If this parameter is configured and a path is specified, parameters in the user-defined configuration file can be updated. If this parameter is not configured, parameters in the default configuration file are updated.</p>

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]
- In Linux or macOS
./obsutil clear [checkpoint_dir] [-u] [-d] [-c] [-config=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 .

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 [-fs] [-az=xxx] [-acl=xxx] [-location=xxx] [-config=xxx]
```

```
Options:  
-fs  
create a bucket that supports POSIX  
  
-az=xxx  
the AZ of the bucket, possible values are [multi-az]  
  
-acl=xxx  
the ACL of the bucket, possible values are [private|public-read|public-read-write]  
  
-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	<p>Currently, the help documents of the following commands are available:</p> <ul style="list-style-type: none"> • 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 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]
 - Archiving to a specified bucket
obsutil archive obs://bucket[/key] [-config=xxx]
- In Linux or macOS
 - Archiving to a local PC
obsutil archive [file_or_folder_url] [-config=xxx]
 - Archiving to a specified bucket
obsutil archive obs://bucket[/key] [-config=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	<p>Indicates the path to which log files are archived. The rules are as follows:</p> <ul style="list-style-type: none"> • 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. <p>NOTE All archive files are .zip files.</p>
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: <ul style="list-style-type: none"> 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 .

6.6 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-42a1-9f76-03f7bd3eae4.txt  2019-05-27 14:30:19.91126 +0800
CST   59104460-d10e-42a1-9f76-03f7bd3eae4
Get 2 last modified failed report files.
```

Parameter Description

Parameter	Optional or Mandatory	Description
failed	Mandatory	<p>This command is used to list the last-modified failure result files generated by the cp or sync commands in a specified folder.</p> <p>NOTE</p> <ul style="list-style-type: none">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)	<p>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.</p>
o	Optional (additional parameter)	<p>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.</p>

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, transferred
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 is 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, transferred 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 **test.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 **test** 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, the name of the result list file for successfully uploading a folder is **cp_succeed_report_20190417021908_fbbc83e3-98ac-4d19-b23a-64023b1e0c34.txt**, among which, **fbbc83e3-98ac-4d19-b23a-64023b1e0c34** indicates the task ID.

 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.
- To prevent the batch operation efficiency from being reduced by too many result lists, you are advised to periodically archive and back up the result lists in **.obsutil_output** to another folder.

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	<ul style="list-style-type: none"> 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. <p>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.</p>
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	<ul style="list-style-type: none"> 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 is not supported.
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 [-fs] [-az=xxx] [-acl=xxx] [-location=xxx] [-config=xxx]

Options:
-fs
    create a bucket that supports POSIX

-az=xxx
    the AZ of the bucket, possible values are [multi-az]

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

-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_crontab.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_crontab.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

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

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** is 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 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.
defaultPartSize	Size of each part, in bytes. The default value is auto . NOTE <ul style="list-style-type: none"> 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:

$$\text{defaultParallels} = \text{Min}(\text{Number of CPUs} \times 2, \text{Object size/defaultPartSize} \times 1.5)$$

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:

$$p = \text{Min}(\text{Number of CPUs} \times 2, \text{Object size/ps} \times 1.5)$$

For batch upload and download tasks, adjust the maximum number of concurrent tasks in a multipart upload, indicated by the parameter **defaultJobs (-j)**, for better performance.

If you have a large number of **small files** (each is usually several MB) to be uploaded or downloaded, set **defaultJobs (-j)** to a larger value for better performance. In this case, adjusting **defaultParallels (-p)** and **defaultPartSize (-ps)** may be ineffective.

If you want to upload or download **large files**, set **defaultParallels (-p)** and **defaultPartSize (-ps)** to a larger value for better performance. However, if there

are too many concurrent tasks (calculated from **defaultJobs** x **defaultParallels**), the upload and download performance may deteriorate because of resource switchover and preemption between threads, and some tasks may fail due to network fluctuations.

 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.
- If a batch task fails due to timeout, EOF, and other common network issues, retry the task through an incremental operation (specifically, configuring parameter -u in the cp command). You can also restore the failed task (by configuring parameter -recover in the cp command) based on the generated task ID.

9.5 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:

Method 1

Set **defaultBigfileThreshold** in the configuration file. For details, see [Parameter Description](#).

Method 2

Set **threshold**, a command-level parameter, when you run commands for [object uploads](#), [object downloads](#), [object copy](#), [synchronous uploads of incremental objects](#), [synchronous downloads of incremental objects](#), and [synchronous copy of incremental objects](#).

Example: **obsutil cp d:\temp\test.txt obs://bucket-test/key -threshold=52428800**

In this command:

- **obsutil cp d:\temp\test.txt obs://bucket-test/key** uploads file **test.txt** in the **temp** directory under D drive to bucket **bucket-test** and renames the file **key**.
- **-threshold=52428800** starts a multipart upload when the threshold 50 MB is reached.

The following example is based on a Windows OS:

```
obsutil cp d:\temp\test.txt obs://bucket-test/key -threshold=52428800
```

```
Parallel: 3          Jobs: 3  
Threshold: 50.00MB   PartSize: auto  
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
```

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.

9.6 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.

9.7 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.

9.8 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.

- In Windows

```
obsutil config -interactive -crr
```
- In Linux

```
./obsutil config -interactive -crr
```

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

- In Windows

```
obsutil config -interactive
```
- In Linux

```
./obsutil config -interactive
```

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.

- In Windows

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

```
./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](#).
- The configurations of the source bucket and destination bucket are respectively **akCrr/skCrr/tokenCrr/endpointCrr** and **ak/sk/token/endpoint** in the configuration file.
- The preceding procedure is also applicable to the situation when the source and destination buckets belong to the same account.

 CAUTION

When the `-crr` parameter is used, the source object's standard metadata, including **Cache-Control**, **Expires**, **Content-Encoding**, **Content-Disposition**, **Content-Type**, and **Content-Language**, will not be copied.

9.9 Limiting the Upload and Download Rate for obsutil

obsutil allows you to configure the `rateLimitThreshold` parameter in the `.obsutilconfig` file to limit the upload and download rate. For detailed parameter description, see [Parameter Description](#). If you do not configure this parameter, the upload and download rate will not be limited, but depend on the user's network bandwidth and the number of concurrent tasks. For details about the optimization, see [Fine-Tuning obsutil Performance](#).

 NOTE

Parameter `rateLimitThreshold` limits the global rate of obsutil tasks. This means that if you upload and download files in batches using the `cp` and `sync` commands, the actual upper rate is the one specified by `rateLimitThreshold`, not by the value obtained as follows:
Number of concurrent tasks x Value of `rateLimitThreshold`.

10 FAQs

10.1 After Some Files Are Deleted in My Local Directory, Can obsutil Synchronously Delete Them from the Bucket?

No. obsutil allows you to upload your local directory to an OBS bucket. After the synchronization, if you delete some files in the local directory and then perform an incremental upload, obsutil only checks whether there are incremental files that need to be uploaded. obsutil cannot detect the deleted files, so these files will not be deleted in the bucket.

NOTE

If new files are added to your local directory during an upload, the number of objects uploaded by obsutil may be inconsistent with that in the local directory. To keep the files same in both places, run the incremental upload command after the upload is complete.

10.2 Can I Use obsutil to Directly Save a Listing Result to a Local File?

obsutil does not allow you to directly save a listing result to a local file, but you can redirect a listing result in standard output to a specified local file by relying on the redirection supported by OS.

- In Windows, run the following redirection command in the CLI:

```
obsutil ls obs://bucketName -format=default -limit=0 > D:/result.txt
```

- In Linux or macOS, run the following command:

```
./obsutil ls obs://bucketName -format=default -limit=0 > /root/result.txt
```

NOTE

In Windows, you need to perform the redirection operation in the CLI to redirect the output to a local file. Do not run the redirection command in the obsutil executable file because obsutil does not support redirection.

10.3 Why Is the Size of Objects Queried by obsutil Inconsistent with That on OBS Console?

When you use obsutil to list all objects in a bucket, the listing result contains the total size of the objects. If the total size is different from that on OBS Console or OBS Browser+, go through the following list to locate the fault:

1. To query the number of objects in a bucket and the space occupied by the objects, both OBS Browser+ and OBS Console call the API for obtaining information about used space in a bucket. The results obtained by them correspond to the output by calling the **stat** command in obsutil. On OBS Browser+ and OBS Console, the bucket storage statistics are measured in the backend and are not real time. Therefore, you are advised to use obsutil to query the storage usage.
2. Check whether there are object fragments in the bucket on OBS Browser+ and OBS Console by referring to [Listing Multipart Upload Tasks](#). OBS bucket storage statistics cover the size of both objects and object fragments in a bucket, but obsutil list only the objects in a bucket.

10.4 How Can I Find Out Why Some Tasks in a Batch Task Failed?

After a batch task is completed, there will be result telling you how many tasks succeeded or failed. To find out why those tasks failed, you can check their result list or obsutil log file.

After a batch task is executed, its task ID will be generated. You can query the list of failed tasks in the **.obsutil_output** directory based on the task ID. The list is named in the **cp_{failed}_report_Time_TaskId.txt** format and contains detailed error information about each failed task. In addition, you can view the obsutil log file to query the error records during obsutil running. You are advised to set the log level to **DEBUG** for fault locating. For details about the log configuration and log path, see [Log Files](#).

10.5 How Can I Locate and Rectify I/O Timeout and EOF Errors?

I/O timeout and EOF errors usually occur when requests fail due to network fluctuations. Go through the following list to locate the cause.

1. Ping the bucket domain name (*bucketName.endpoint*) to check the network connection between your local PC and the bucket. If the network connection is abnormal, resolve the network issue first.
2. If these errors are prone to occur and the bucket domain name can be pinged, use HTTP for the endpoint and capture network packets. Based on the packets captured, check whether packet loss occurs on the actual network link and resolve the errors accordingly.

Solutions:

1. If the network connection is abnormal, resolve the local network problem first. If you need to configure a proxy, see [Configuring an HTTP Proxy for obsutil](#).
2. If these errors occur occasionally, retry the command of your operation. During upload, download, or replication operations, specify the **-u** parameter in the **cp** command to perform an incremental upload. In this way, you do not need to retry the tasks that have been successfully completed in a batch task.
3. If the network condition is poor, you can decrease the values of **defaultParallels (-p)** and **defaultJobs (-j)** to reduce the number of concurrent upload, download, or replication tasks, to make errors less likely occur.

10.6 Why Is a Question Mark Displayed in the Batch Task Progress Bar?

When a batch upload or download task is being executed, if there are a large number of objects involved, obsutil needs to traverse all objects to collect the total number and size of objects in the task. During this collection process, a question mark (?) is displayed in the progress bar. After the information is collected, corresponding task details will be displayed in the progress bar.

10.7 Can Multiple config Files Be Placed in One Directory?

No. obsutil allows you to configure multiple **config** files, but they cannot be stored in the same directory due to encryption requirements. If multiple **config** files are required, initialize them to put them in different directories.

10.8 Can obsutil List Objects with Special Characters in Their Names?

No. You can use OBS SDKs to list such objects.

A Parameter Description

You can set obsutil parameters in the `.obsutilconfig` file.

Configuration file format:

```
endpoint=<value>
ak=<value>
sk=<value>
token=<value>
endpointCrr=<value>
akCrr=<value>
skCrr=<value>
tokenCrr=<value>
connectTimeout=<value>
socketTimeout=<value>
maxRetryCount=<value>
maxConnections=<value>
defaultBigfileThreshold=<value>
defaultPartSize=<value>
defaultParallels=<value>
defaultJobs=<value>
defaultJobsCacheCount=<value>
rateLimitThreshold=<value>
sdkLogBackups=<value>
sdkLogLevel=<value>
sdkLogPath=<value>
sdkMaxLogSize=<value>
utilLogBackups=<value>
utilLogLevel=<value>
utilLogPath=<value>
utilMaxLogSize=<value>
writeBufferIoSize=<value>
readBufferIoSize=<value>
recordMaxLogSize=<value>
recordBackups=<value>
humanReadableFormat=<value>
showProgressBar=<value>
showStartTime=<value>
helpLanguage=<value>
defaultTempFileDir=<value>
checkSourceChange=<value>
skipCheckEmptyFolder=<value>
fsyncForDownload=<value>
memoryEconomicalScanForUpload=<value>
forceOverwriteForDownload=<value>
panicForSymbolicLinkCircle=<value>
fastFailThreshold=<value>
abortHttpStatusForResumableTasks=<value>
showBytesForCopy=<value>
```

```
proxyUrl=<value>
faultTolerantMode=<value>
```

Table A-1 describes the parameters.

Table A-1 obsutil configuration 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. NOTE <ul style="list-style-type: none"> Obtain information about the regions and endpoints from the enterprise administrator. If the configured endpoint does not contain any protocol, the HTTPS protocol is used by default. 	N/A
ak	Mandatory	Access key ID. NOTE <ul style="list-style-type: none"> To obtain the AK, see Creating Access Keys (AK and SK). After you run obsutil for the first time, the tool encrypts the AK to ensure the key security. 	N/A
sk	Mandatory	Secret access key. NOTE <ul style="list-style-type: none"> To obtain the SK, see Creating Access Keys (AK and SK). After you run obsutil for the first time, the tool encrypts the SK to ensure the key security. 	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

Parameter	Optional or Mandatory	Description	Recommended Value
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, for example, https://your-endpoint:80 . NOTE <ul style="list-style-type: none"> Obtain information about the regions and endpoints from the enterprise administrator. 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
tokenCrr	Optional	Security token used by the source bucket when the client-side cross-region replication is used. If this parameter is left blank, no security token is set. This parameter is mandatory when temporary access keys are used for access.	N/A
connectTimeout	Optional	Timeout interval for establishing an HTTP/HTTPS connection, in seconds. The default value is 30 .	[5, 120]
socketTimeout	Optional	Timeout interval for reading and writing data, in seconds. The default value is 310 .	[5, 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.	[0, 5]
maxConnections	Optional	Maximum number of HTTP connections that can be accessed. The default value is 1000 .	N/A
defaultBigfileThreshold	Optional	Threshold for triggering a multipart upload, in bytes. If the size of a file to be uploaded, downloaded, or copied is greater than the specified threshold, the file will be uploaded, downloaded, or copied using a multipart upload. The default value is 50MB . NOTE This parameter value can contain a unit, for example, 1MB (indicating 1048576 bytes).	Greater than 5MB
defaultPartSize	Optional	Size of each part, in bytes. The default value is auto . NOTE <ul style="list-style-type: none"> For a multipart upload and copy, the value ranges from 100KB to 5GB. For multipart download, the value is unrestricted. This parameter value can contain a unit, for example, 1MB (indicating 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]

Parameter	Optional or Mandatory	Description	Recommended Value
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 .
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 deleting objects in batches.	[1, 50]
defaultJobsCache-Count	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	Traffic control threshold of an upload or a download request, in bytes per second. The default value is 0 , indicating that traffic is not limited. The minimum value is 10KB . NOTE This parameter value can contain a unit, for example, 1MB (indicating 1048576 bytes).	Greater than 100KB
sdkLogBackups	Optional	Maximum number of SDK log files that can be retained. The default value is 10 .	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
sdkLogLevel	Optional	<p>SDK log level. Possible values are:</p> <ul style="list-style-type: none"> • DEBUG • INFO • WARN • ERROR <p>The default value is WARN.</p>	N/A
sdkLogPath	Optional	<p>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).</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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. <p>NOTICE</p> <p>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.</p>	N/A
sdkMaxLogSize	Optional	<p>Size of an SDK log file, in bytes. The default value is 30MB.</p> <p>NOTE</p> <p>This parameter value can contain a unit, for example, 1MB (indicating 1048576 bytes).</p>	[10MB, 100MB]

Parameter	Optional or Mandatory	Description	Recommended Value
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: <ul style="list-style-type: none"> • DEBUG • INFO • WARN • ERROR The default value is INFO .	N/A
utilLogPath	Optional	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). <p>NOTE</p> <ul style="list-style-type: none"> • 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. <p>NOTICE</p> 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

Parameter	Optional or Mandatory	Description	Recommended Value
utilMaxLogSize	Optional	Size of an obsutil log file, in bytes. The default value is 30MB . NOTE This parameter value can contain a unit, for example, 1MB (indicating 1048576 bytes).	[10MB, 100MB]
writeBufferIoSize	Optional	Size of the cache for downloading data, in bytes. The default value is 65536 . NOTE <ul style="list-style-type: none"> 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 parameter value can contain a unit, for example, 1MB (indicating 1048576 bytes). 	N/A
readBufferIoSize	Optional	Size of the cache for uploading data, in bytes. The default value is 8192 . NOTE <ul style="list-style-type: none"> 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 parameter value can contain a unit, for example, 1MB (indicating 1048576 bytes). 	[4096, 65536]
recordMaxLogSize	Optional	Size of a result list containing success, failure, or warning lists in a batch task, in bytes. The default value is 30MB . NOTE This parameter value can contain a unit, for example, 1MB (indicating 1048576 bytes).	[5MB, 100MB]

Parameter	Optional or Mandatory	Description	Recommended Value
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
helpLanguage	Optional	Language of the help documents. Options are as follows: <ul style="list-style-type: none"> • Chinese • English The default value is English .	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
defaultTempFile-Dir	Optional	<p>Indicates the directory for storing temporary files during download.</p> <p>The default value is the .obsutil_tempfile subfolder in the user directory (HOME in Linux or macOS and C:\Users\<Username> in Windows).</p> <p>NOTE</p> <ul style="list-style-type: none"> • 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	<p>Indicates whether to check the change of source files or objects during upload/download/copy. The value true indicates that the function is enabled.</p>	N/A
skipCheckEmptyFolder	Optional	<p>Indicates whether to skip checking empty folders on the OBS server during download. true indicates to skip the check. The default value is false.</p> <p>NOTICE</p> <p>If this parameter is set to true, the directory structure downloaded to your local PC may be different from that in OBS.</p>	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
fsyncForDownload	Optional	<p>Indicates whether to forcibly synchronize memory data to disks during download. The value true indicates to enable forcible synchronization. The default value is false.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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
memoryEconomicScanForUpload	Optional	<p>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.</p>	N/A
forceOverwriteForDownload	Optional	<p>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.</p>	N/A
panicForSymbolicLinkCircle	Optional	<p>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.</p>	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
fastFailThreshold	Optional	<p>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.</p> <p>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.</p>	N/A
abortHttpStatus-ForResumableTasks	Optional	<p>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 value is 401,403,404,405,409.</p> <p>NOTE</p> <ul style="list-style-type: none"> 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
showBytesForCopy	Optional	<p>Indicates whether the progress bar displays the rate in bytes when objects are copied between buckets. The default value is false.</p>	N/A

Parameter	Optional or Mandatory	Description	Recommended Value
proxyUrl	Optional	<p>HTTP proxy example: http://username:password@your-proxy:8080</p> <p>NOTE</p> <ul style="list-style-type: none"> • HTTP proxy format: http://[Username.Password@]Proxy server address.Port number. The <i>Username</i> and <i>Password</i> 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. 	N/A
faultTolerantMode	Optional	Indicates whether to ignore the panic caused by read operations. Default value false indicates that the panic is not ignored.	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 **writeBufferIoSize** can contain a unit, for example, **1MB** (indicating 1048576 bytes).

B Change History

Released On	Description
2024-04-15	This is the first official release.