Object Storage Service

Utilities

Utilities

ossftp

Quick installation

Introduction

The OSS FTP is a special FTP server that maps the operations on files and folders into your OSS instance upon receiving a common FTP request. This utility allows you to use the FTP protocol to manage files stored on your OSS instance.

Key features

- **Cross-Platform:** This utility can run on Windows, Linux, and Mac operating systems, either 32 or 64 bit, either on a graphic or command-line interface.
- **Free of Installation:** You can run this utility directly after extraction.
- **Free of Configuration:** You can run the utility without any further configurations.
- **Transparent:** The FTP utility was written in Python, so you can see the complete source code. We will soon make the open source available on GitHub.

Key functions

- Supports file/folder upload, download, delete, and other operations
- Supports multipart upload of large files
- Supports most FTP commands and can satisfy daily needs

Note

1. Currently, for the ease of installation and deployment, OSS FTP V1.0 does not support TLS encryption. The FTP protocol implements plaintext transmission. **To prevent password leaks, we recommend that you run the FTP server and client on the same machine** and access using 127.0.0.1:port.

2. The utility does not support rename and move operations.
3. Do not include any Chinese characters in the extract-to path of the installation package.
4. The FTP server’ s management control page may fail to be opened on early IE browsers.
5. Supported Python versions: Python 2.6 and Python 2.7

Downloads

- Windows: ossftp-1.0.2-win.zip

Now that Python 2.7 is not installed on Windows by default, it is contained in the installation package and is ready for use after extraction, without the hassle of installation and configuration.

- Linux/Mac: ossftp-1.0.2-linux-mac.zip

Because Python 2.7 or 2.6 is installed on Linux and Mac systems by default, the installation packages for Linux and Mac do not contain an executable Python program, but only relevant dependent libraries.

Running

First, extract the downloaded file. Then, select an appropriate running mode based on environmental conditions.

- Windows: Double-click start.vbs to run it.
- Linux: Start the terminal and run it.

```
$ bash start.sh
```

- Mac: Double-click start.command or run it on a terminal.

```
$ bash start.command
```

The preceding process starts an FTP server, which listens to port 2048 at 127.0.0.1 by default.
In addition, for ease of control over the status of the FTP server, the program also activates a web server, which listens to port 8192 at 127.0.0.1.
If your system has a graphic interface, the control page will be automatically opened.

> In most situations, you do not need to configure any settings before running the FTP server. If you make any configuration, remember to restart it to make the changes take effect.

Connecting to the FTP Server

We recommend using the FileZilla Client to connect to the FTP server. After download and installation, connect to the FTP server as follows:

- Host: 127.0.0.1
- Login type: normal
- User: access_key_id/bucket_name (The slash sign (/) means that both, not either items are required. For example, the user could be ‘tSxyiUM3NKswPMEp/test-hz-jh-002’.)
- Password: access_key_secret

Advanced use

Manage the ftpserver from the console page

Modify the Listener Address
If you need to access the ftpserver over a network, you must modify the listener address because the default address, 127.0.0.1, only allows local access. You can change it to an intranet IP or Internet IP.

Modify the Listening Port
Modify the ftpserver’s listening port. We suggest using a port over 1024 because ports below 1024 require administrator permissions.

Modify the Log Level
Set the ftpserver’s log level. The ftpserver’s log is output to the data/ossftp/ directory. You can view it only by pressing the Log button on the console page. The default log level is INFO and little information is printed in the log. If you need more detailed log information, you can change the level to DEBUG. If you want the log to output less information, you can set the level to WARNING or ERROR.

Set Bucket Endpoints
By default, the ftpserver will search for the bucket’s location information, so it can send subsequent requests to the corresponding region (such as oss-cn-hangzhou.aliyuncs.com or oss-cn-beijing.aliyuncs.com). The ftpserver will first try to access the OSS instance over the intranet.
If you set bucket endpoints, for example, ‘test-bucket-a.oss-cn-hangzhou.aliyuncs.com’, when you access test-bucket-a, you will go to the ‘oss-cn-hangzhou.aliyuncs.com’ domain name.

Note : The system must be restarted for modifications to take effect.

All the above modifications are actually changes to the ftp directory’ s config.json file. Thus, you can also modify this file directly.

Directly launch ftpserver (Linux/Mac)You can simply launch the ftpserver.py file in the ossftp directory to avoid web_server overhead.

```
$ python ossftp/ftpserver.py &
```

The configuration modification method is the same as above.

Possible problems

If you encounter an error when connecting to the FTP server.

There are two possible causes:

There may be an error in the entered access_key_id or access_key_secret.Solution: Enter the correct information and try again.

The used access_key information may be a RAM sub-account access_key for a sub-account without list buckets permission.

Solution: When using a sub-account, specify bucket endpoints on the console page to tell the ftpserver which endpoint should be used to access a certain bucket. Also, the sub-account must have the required permissions. For information on implementing access control by using RAM to access OSS, refer to RAM. The details about permissions are as follow:

Read-only: The OSS-FTP must have these permissions:[‘ListObjects’ , ‘GetObject’ , ‘HeadObject’].For information on creating a RAM sub-account with **Read-only** permission, refer to the graphic tutorial How to Integrate RAM for File Sharing.

If you want to allow a RAM sub-account to **upload files**, assign [‘PutObject’] permission.

If you want to allow a RAM sub-account to **delete files**, assign [‘DeleteObject’] permission.

If you are running the FTP server on Linux, you may encounter the following error when using FileZilla to connect to the server:

501 can't decode path (server filesystem encoding is ANSI_X3.4-1968)

This is usually generated when errors occur in local Chinese code. Input the following command in the terminal where you want to run start.sh. Then, restart the program.

```
$ export LC_ALL=en_US.UTF-8; export LANG="en_US.UTF-8"; locale
```

How to store remote attachments to your OSS instance with Discuz

Preface

The website remote attachment function refers to directly storing uploaded attachments to a remote storage server, which is usually a remote FTP server, over the FTP.

Currently, Discuz forums, PHPWind forums, and WordPress websites support the remote attachment function.

This document instructs you on storing remote attachments from a Discuz-based forum.

Preparation

Apply for an OSS account and create a **public-read** bucket. You must set the permission to public-read because it must allow anonymous access.

Procedures

Here the Discuz version we use is **Discuz! X3.1** and the detailed configuration process is shown below.

Log on to the Discuz website and go to the management interface. Click **Global** and then **Upload Settings**.

Select **Remote Attachments** and configure the function.

Set “Enable remote attachment” to **Yes**.

Set “Enable SSL connection” to “**No** “.

Set the “FTP Server Address”, that is, the address that runs the OSS-FTP. Generally, this is “**127.0.0.1** “.

Set “FTP service port No.” to the default “**2048** “.

Set “FTP Account” in the format of **AccessKeyID/BucketName**, where “**/** “ does not mean “**or** “.

Set “FTP Password” to **AccessKeySecret**.

Set “Passive Mode Connection” to the default “**Yes** “.

Set “Remote Attachment Directory” to “**.** “, that is, to create a directory for upload under the root directory of the bucket.

Set “Remote URL” to http://BucketName.Endpoint.

Here, we will test the bucket test-hz-jh-002 from the Hangzhou region. Therefore, we enter http://test-hz-jh-002.oss-cn-hangzhou.aliyuncs.com, **where the BucketName must match the endpoint**.

Set the timeout time to 0, that is, to use the default setting of the service.

After the configuration is complete, click “Test Remote Attachment”. If the test is successful, an information box will be displayed.

- Verification

Ok, now let’s publish a post on the forum to test the function. On any board, create a post and upload an image as attachment in the post.

Right-click the image and select “Open image in new tab”.

In the browser, you can see the image URL is http://test-hz-jh-002.oss-cn-hangzhou.aliyuncs.com/forum/201512/18/171012mzvkku2z3na2w2wa.png. This indicates that the image has been uploaded to test-hz-jh-002 in the OSS.

How to store remote attachments to your OSS instance with PHPWind

Preface

The website remote attachment function refers to directly storing uploaded attachments to a remote storage server, which is usually a remote FTP server, over the FTP.

Currently, Discuz forums, PHPWind forums, and WordPress websites support the remote attachment function.

This document instructs you on storing remote attachments from a PHPWind-based forum.

Preparation

Apply for an OSS account and create a **public-read** bucket. You must set the permission to public-read because it must allow anonymous access.

Procedures

The PHPWind we use is **PHPWind 8.7** and the configuration process is as follows.

Log on to the website.

Go to the management interface and select **Global** -> **Upload Settings** -> **Remote Attachments**.

Configure the function.

i. Set “**Enable FTP uploads** “ to “**Yes** “.
ii. Set “**Website Attachment Address** “ to “http://bucket-name.endpoint “. Here, we will test the bucket test-hz-jh-002 from the Hangzhou region. Therefore, we enter http://test-hz-jh-002.oss-cn-hangzhou.aliyuncs.com, **where the BucketName must match the endpoint**.
iii. Set the FTP server address, that is, the address that runs the OSS-FTP. Generally, this is **127.0.0.1**.
iv. Set “FTP service port No.” to the default “**2048** “.

v. Set “Remote attachment directory” to “**.** “, that is, to create a directory for upload under the root directory of the bucket.

vi. Set “FTP Account” in the format of **AccessKeyID/BucketName**, where “**/** “ does not mean “**or** “.

vii. Set “FTP Password” to **AccessKeySecret**. To obtain the AccessKeyID and AccessKeySecret, you can log on to the Alibaba Cloud console and go to Access Key Management.

viii. Set the FTP timeout time. If you set it to “10”, a timeout response is sent if a request does not receive a response within 10 seconds.

Verification

PHPWind does not allow users to directly test the function by clicking a test button. Therefore, we must publish a post with an image to verify the function.

Right-click the image and select “Open image in new tab”. The image is displayed in a new tab.

The image URL indicates that the image has been uploaded to bucket test-hz-jh-002 in the OSS.

How to store remote attachments to your OSS instance with WordPress

Preface

The website remote attachment function refers to directly storing uploaded attachments to a remote storage server, which is usually a remote FTP server, over the FTP.

Currently, Discuz forums, PHPWind forums, and WordPress websites support the remote attachment function.

This document instructs you on storing remote attachments from a WordPress-based forum.

Preparation

Apply for an OSS account and create a **public-read** bucket. You must set the permission to public-read because it must allow anonymous access.

Procedures

WordPress does not have inherent support for this function, but implements remote attachment using a third-party plug-in. The WordPress we use is WordPress **4.3.1** and the plug-in is **Hacklog Remote Attachment**. The specific configuration process is as follows:

1. Log on to the WordPress website and select “Install Plug-in”. Search for the keyword “FTP” and choose to install **Hacklog Remote Attachment**.

   Configuration.

   i. Set the FTP server address, that is, the address that runs the OSS-FTP. Generally, this is **127.0.0.1**.
   ii. Set “FTP service port No.” to the default “**2048** “.
   iii. Set “FTP Account” in the format of **AccessKeyID/BucketName**, where “**/** “ does not mean “**or** “.
   iv. Set “FTP Password” to **AccessKeySecret**.

   > To obtain the AccessKeyID and AccessKeySecret, you can log on to the Alibaba Cloud console and go to Access Key Management.

   v. Set the FTP timeout to the default value, 30 seconds.
   vi. Set “Remote Basic URL” to http://BucketName.Endpoint/wp. Here, we will test the bucket test-hz-jh-002 from the Hangzhou region. Therefore, we enterhttp://test-hz-jh-002.oss-cn-hangzhou.aliyuncs.com/wp
   vii. Set “FTP Remote Path”. We enter “wp”, that is, to save all attachments to the bucket’s wp directory.Note that this field is related to the “Remote Basic URL” field.
   viii. Set “HTTP Remote Path” to “.”.

   Verification.
   After the configuration is complete, click “Save” and a test starts automatically. The test results are shown at the top of the page.

   Post a new article and insert an image.
   Now you can write a new article and test the remote attachment function. After creating an article, click “Add Media” to upload an attachment.

   When the attachment is uploaded, click “Post” to view your article.

   Right-click the image and click “Open image in new tab” to see the image URL.

   The image URL indicates that the image has been successfully uploaded to the OSS.

How to integrate RAM for file sharing

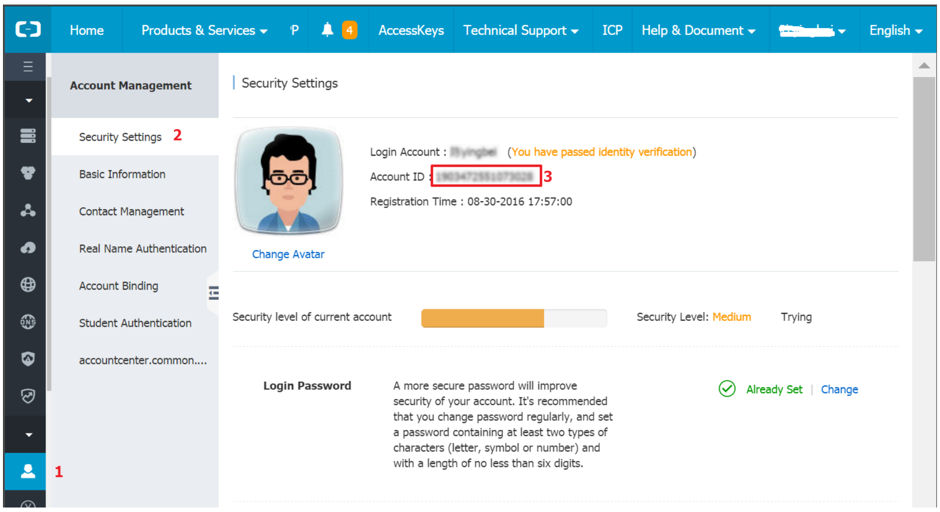
Introduction

This document instructs you on integrating the RAM service to share files and folders in user buckets. Other users will have read-only permission, while the bucket owner can edit the objects.

```
Process: Activate RAM -> Create a read-only authorization policy -> Create sub-accounts -> Grant permissions to the sub-accounts -> Verify FTP logon
```

Retrieve account ID

Retrieve your account ID, as shown in the image below:



Security Settings

Login Account : [redacted] (You have passed identity verification)

Account ID : [redacted]

Registration Time : 08-30-2016 17:57:00

Security level of current account Security Level: Medium Trying

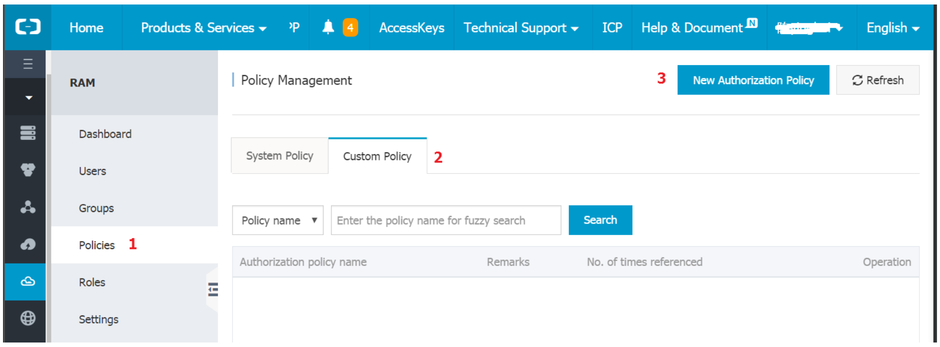
Login Password A more secure password will improve security of your account. It's recommended that you change password regularly, and set a password containing at least two types of characters (letter, symbol or number) and with a length of no less than six digits. ✓ Already Set | Change

Activate RAM

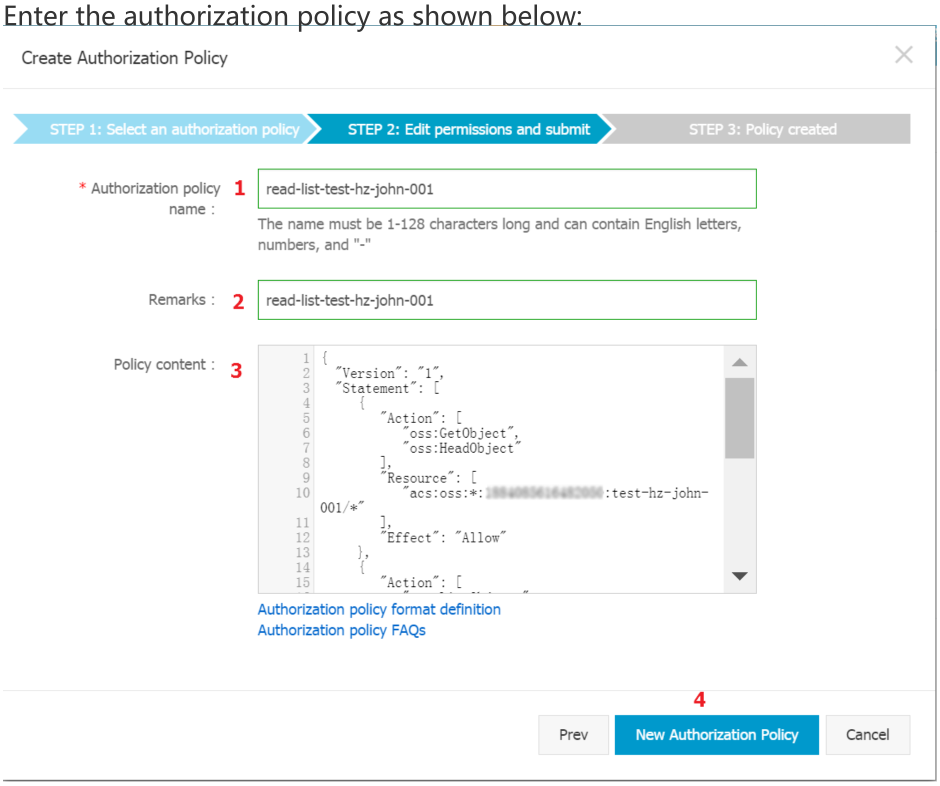
Resource Access Management (RAM) is an Alibaba Cloud service designed for controlling resource access. By creating a policy, you can create a shared read account. Users can use this account to log on to the FTP tool and read your files.

Create an authorization policy

After activating RAM, go to the RAM console and click “Policies” on the left side. Follow the steps shown in the diagram below to create a new authorization policy:



Enter the authorization policy as shown below:


Create Authorization Policy
STEP 1: Select an authorization policy
STEP 2: Edit permissions and submit
STEP 3: Policy created
Authorization policy format definition
Authorization policy FAQs
4
Prev
New Authorization Policy
Cancel

* Authorization policy name : 1 read-list-test-hz-john-001

The name must be 1-128 characters long and can contain English letters, numbers, and "-"

Remarks : 2 read-list-test-hz-john-001

Policy content : 3

```
{
  "Version": "1",
  "Statement": [
    {
      "Action": [
        "oss:GetObject",
        "oss:HeadObject"
      ],
      "Resource": [
        "acs:oss:*:[redacted]:test-hz-john-
001/*"
      ],
      "Effect": "Allow"
    },
    {
      "Action": [
```

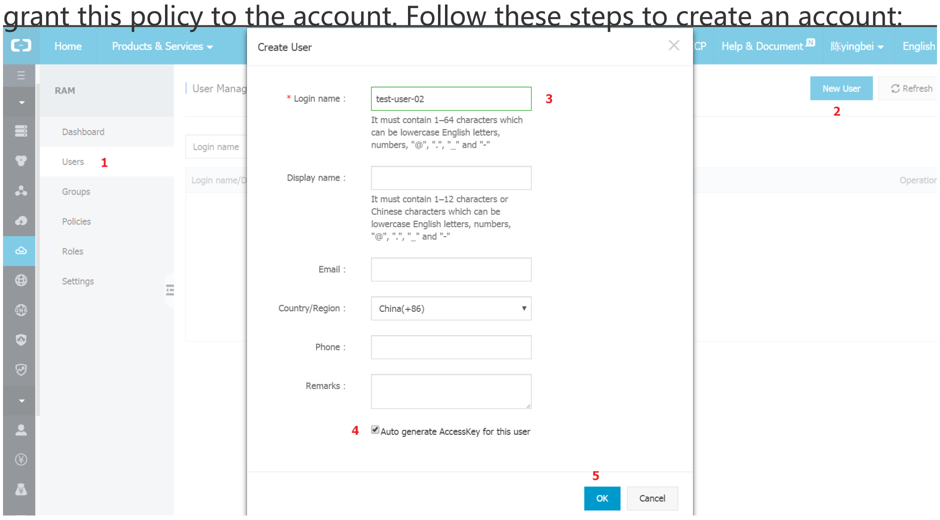
Specify policy name and remarks (fields 1 and 2) as needed. “Policy content” in field 3 determines the policy.

```
{
"Version": "1",
"Statement": [
{
"Action": [
"oss:GetObject",
"oss:HeadObject"
],
"Resource": [
"acs:oss:*:****************:test-hz-john-001/*"
],
"Effect": "Allow"
},
{
"Action": [
"oss:ListObjects",
"oss:GetBucketAcl",
"oss:GetBucketLocation"
],
"Resource": [
"acs:oss:*:***************:test-hz-john-001"
],
"Effect": "Allow"
},
{
"Action": [
"oss:ListBuckets"
],
"Resource": [
"acs:oss:*:***************:*"
],
"Effect": "Allow"
}
]
}
```

In the example above, replace *************** with your own account ID and replace test-hz-john-001 with your bucket name. Then, copy all the content and paste it in “Policy content”. Finally, click “New Authorization Policy”.

Create an account

The above authorization policy produces a read-only policy. Below, we will create an account and grant this policy to the account. Follow these steps to create an account:



Create User

* Login name : test-user-02 3

It must contain 1–64 characters which can be lowercase English letters, numbers, "@", ".", "_" and "-"

Display name :

It must contain 1–12 characters or Chinese characters which can be lowercase English letters, numbers, "@", ".", "_" and "-"

Email :

Country/Region : China(+86)

Phone :

Remarks :

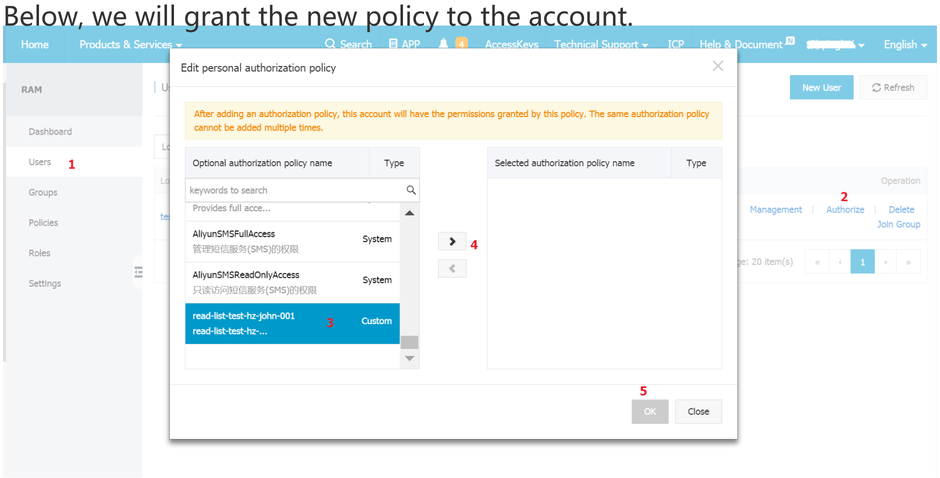
4 ☑ Auto generate AccessKey for this user

5 OK Cancel

Remember to record the new account’ s access_key.

Authorize the account

Below, we will grant the new policy to the account.



Edit personal authorization policy

After adding an authorization policy, this account will have the permissions granted by this policy. The same authorization policy cannot be added multiple times.

Optional authorization policy name	Type
Provides full acce...	
AliyunSMSFullAccess 管理短信服务(SMS)的权限	System
AliyunSMSReadOnlyAccess 只读访问短信服务(SMS)的权限	System
read-list-test-hz-john-001 read-list-test-hz-...	Custom

Selected authorization policy name	Type

Log on with the sub-account

Use the sub-account’ s access_key and the bucket in the authorization policy to log on. Now, you can download files and folders, but upload operations will fail.

ossfs

Quick installation

Introduction

ossfs allows you to mount Alibaba Cloud OSS buckets to local files in Linux systems.In the system, you can quickly use the local file system to perform operations on OSS objects, achieving data sharing.

Functions

The ossfs is constructed based on S3FS and incorporates all S3FS functions. Key functions include:

- Support for most functions of the POSIX file system, including file reading/writing, directories, link operations, permissions,UID/GID, and extended attributes.
- Uploads of large files using the OSS multipart function.
- MD5 checksum to ensure data integrity.

Installation and use

Installation package download:

Released Linux	Download
Ubuntu 14.04 (x64)	ossfs_1.80.8_ubuntu14.04_amd64.deb
CentOS 7.0 (x64)	ossfs_1.80.0_centos7.0_x86_64.rpm
CentOS 6.5 (x64)	ossfs_1.80.0_centos6.5_x86_64.rpm
CentOS 5.11 (x64)	ossfs_1.80.0_centos5.11_x86_64.rpm

Install the ossfs

- Run these commands to install Ubuntu:

```
sudo apt-get update
sudo apt-get install gdebi-core
sudo gdebi your_ossfs_package
```

- Run these commands to install CentOS 6.5 or above:

```
sudo yum localinstall your_ossfs_package
```

- Run these commands to install CentOS 5 or above:

```
sudo yum localinstall your_ossfs_package --nogpgcheck
```

Use the ossfs

Set bucket name and AccessKeyId/Secret and save it to the /etc/passwd-ossfs file.Note that the permissions for this file must be set correctly. We suggest setting it to 640.

```
echo my-bucket:my-access-key-id:my-access-key-secret > /etc/passwd-ossfs
chmod 640 /etc/passwd-ossfs
```

Mount the OSS bucket to the specified directory.

```
ossfs my-bucket my-mount-point -ourl=my-oss-endpoint
```

Example

Mount the bucket my-bucket to the /tmp/ossfs directory. The AccessKeyId is faint,the AccessKeySecret is 123, and the OSS endpoint is http://oss-cn-hangzhou.aliyuncs.com.

```
echo my-bucket:faint:123 > /etc/passwd-ossfs
chmod 640 /etc/passwd-ossfs
mkdir /tmp/ossfs
ossfs my-bucket /tmp/ossfs -ourl=http://oss-cn-hangzhou.aliyuncs.com
```

Unmount the bucket:

```
fusermount -u /tmp/ossfs
```

For more information, refer to https://github.com/aliyun/ossfs#ossfs.

Limitations

Compared to a local file system, the functions and performance provided by ossfs have certain limitations. These include:

- Random write and append operations will overwrite the entire file.
- The performance of metadata operations, such as list directory, is poor because the system has to remotely access the OSS server.
- The file/folder rename operation is not atomic.
- When multiple clients are attached to a single OSS bucket, you must coordinate the actions of each client manually. For example, you need to avoid multiple clients writing the same file.
- Hard link is not supported.
- This system is not suitable for highly-concurrent read/write scenarios, as this will greatly increase the system load.

Release log

Refer to https://github.com/aliyun/ossfs/blob/master/ChangeLog.

FAQ

- Q: For what programs is ossfs suitable?
    - ossfs mounts OSS buckets locally. If you want a program that does not support OSS to automatically sync the data to the OSS, ossfs is a great option.
- Q: What are the limitations of ossfs?
    - Because data must be synced to the cloud over the network, the performance and functions of ossfs may differ from those of local file systems. If you want to run a

database or other applications with frequent I/O operations on a mounted ossfs disk, you must consider this carefully. ossfs differs from local file systems in the following ways:

    - Random write and append operations will overwrite the entire file.
    - The performance of metadata operations, such as list directory, is poor because the system has to remotely access the OSS server.
    - The file/folder rename operation is not atomic.
    - When multiple clients are attached to a single OSS bucket, you must coordinate the actions of each client manually. For example, you need to avoid multiple clients writing the same file.
    - Hard link is not supported.

- Q: Do I need to use Alibaba Cloud hosts for ossfs?
  - ossfs does not need to be used with Alibaba Cloud intranet. It can be used on external Internet hosts.
- Q: Can ossfs simultaneously mount multiple OSS buckets?
  - Yes, just write multiple OSS configuration information entries in the passwd-ossfs file. Buckets from different OSS accounts are supported.
- Q: When trying to mount a bucket, why do I receive the error “ossfs: unable to access MOUNTPOINT /tmp/ossfs: Transport endpoint is not connected”?
  - First, run the umount command for the corresponding directory.
  - When mounting with ossfs, check that the entered URL parameter is correct and the bucket, access key ID, and access key secret match.
  - DO NOT include the bucket name in the URL. For example, if the bucket domain name isossfs-test-1.oss-cn-hangzhou.aliyuncs.com on the OSS console, set the URL to http://oss-cn-hangzhou.aliyuncs.com.
- Q: Why does ossfs display “ossfs: unable to access MOUNTPOINT /tmp/odat: No such file or directory”?
  - This error occurs if the directory is not yet created. You must create the directory before mounting.
- Q: Why does the “operation not permitted” error occur after I mount the bucket locally and run the ls command for the directory?
  - In your bucket, check if the directory name contains any OSS objects with invisible characters. The file system has strict restrictions for file/directory names. If the directory name fails to meet the restrictions, this error occurs. Use another tool to rename these objects and run the ls command, the directory content can be correctly displayed.
- Q: How do I set permissions during ossfs mounting?
  - If you want to allow other users to access mounted folders, specify the allow_other parameter as follows when running ossfs:
    - ossfs your_bucket your_mount_point -ourl=your_endpoint -o allow_other
  - If you want to allow the mounting of folders (/tmp/ossfs) that belong to another user, you must create and mount a folder and use OSSFS as this user:
    - sudo -u user mkdir /tmp/ossfs

        - sudo -u user ossfs bucket-name /tmp/ossfs

- Q: How can I mount ossfs automatically when the device starts up?
    - Step 1: Write the bucket name, access key ID/secret, and other information into /etc/passwd-ossfs, and change the permissions for this file to 640.
        - echo your_bucket_name:your_access_key_id:your_access_key_secret > /etc/passwd-ossfs
        - chmod 640 /etc/passwd-ossfs

Step 2: Make the appropriate settings (the setting methods differ for different system versions).

- Step 2A: Use the fstab method to automatically mount the ossfs (applies to Ubuntu 14.04 and CentOS 6.5).
    - Add the following command in /etc/fstab:
    - ossfs#your_bucket_name your_mount_point fuse _netdev,url=your_url,allow_other 0 0
    - In the above command, replace 'your_xxx' with your actual bucket name and other information.
    - Save the /etc/fstab file. Execute the mount -a command. If no error is reported, the settings are correct.
    - Now, Ubuntu 14.04 can automatically mount the ossfs. For CentOS 6.5, also execute the following command:
    - chkconfig netfs on
- Step 2B: Mount ossfs using a boot script (applies to CentOS 7.0 and above).
    - Create the file ossfs in the /etc/init.d/ directory. Copy the content in the Template File to the new file. Here, replace 'your_xxx' with your own information.
    - Execute the command: chmod a+x /etc/init.d/ossfs.
    - The above command will grant execution permission to the new ossfs script. You can now execute this script. If there are no errors in the script content, the OSS bucket has been mounted to the specified directory.
    - Execute the command: chkconfig ossfs on.
    - The above command sets the ossfs boot script as another service, so it will be automatically started when the device starts up.
    - ossfs can now automatically mount upon startup. To sum up, if you use Ubuntu 14.04 or CentOS 6.5, perform Steps 1 and 2A; if you use CentOS 7.0, perform Steps 1 and 2B.

Q: I need to use a www user to mount ossfs. In this case, how do I set up automatic mounting?

Refer to the answer to the question above. Perform Step 1 as stated. Perform Step 2B with the command in the /etc/init.d/ossfs file changed to:

```
sudo -u www ossfs your_bucket your_mountpoint -ourl=your_url
```

- Set the boot script to allow the use of sudo to edit /etc/sudoers. Change the Defaults requiretty line to #Defaults requiretty (comment out this line).

- Q: How do I solve the fusermount: failed to open current directory: Permission denied error?

- This is a fuse bug. It requires the current user to have read permission for the current directory (unmounted directory). To solve this problem, run the cd command to change to a directory with read permission and then run the ossfs command again.

osscmd

Quick installation

Environment requirement

Python SDK requires a Python-ready environment. Python versions: Version 2.5 to Version 2.7. SDK is applicable to Windows and Linux, but as Python3.0 is not fully compatible with SDK Version 2.x, SDK does not support Python3.0 or above.

After Python is installed:

- Input **python** in Linux shell and press Enter to view the Python version. As shown below:

```
Python 2.5.4 (r254:67916, Mar 10 2010, 22:43:17)
[GCC 4.1.2 20080704 (Red Hat 4.1.2-46)] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

- Input **python** in Windows cmd and press Enter to view the Python version. As shown below:

```
C:\Documents and Settings\Administrator>python
Python 2.7.5 (default, May 15 2013, 22:43:36) [MSC v.1500 32 bit (Intel)] on win
32
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

The above shows the Python has been installed successfully.

Exception: After entering **python** in Windows cmd and pressing Enter, the system prompts **Not an**

internal or external command. In such a case, check the configuration **Environment variables** > **Path** and add the Python installation path.

If the Python is not installed, you can get its installer from Python official website. The website provides detailed instructions and guidance for installing and using Python.

Installation and usage

Click here to view how to download the file. Unzip the downloaded Python SDK to the directory of the osscmd and then execute python osscmd + operation. For example, upload an object to the bucket:

```
python  osscmd  put  myfile.txt  oss://mybucket
```

Please note that in osscmd, we use oss://bucket or oss://bucket/object to indicate a bucket or an object. oss:// is merely a way to indicate the resource with no other meanings.

If you need the detailed command list, enter: python osscmd.

If you need the detailed parameter list instructions, enter: python osscmd help.

Example

Install and configure osscmd

After you download SDK installer in Linux or Windows, unzip the downloaded packet to start using osscmd.

You can directly invoke python osscmd to get instructions for use. Every command has two modes for execution. Take querying the user-created bucket for example. The gs command (short for “get service”) will be executed.

- Method 1: No ID or Key is specified, and osscmd will read the ID and Key from default files.

```
$ python osscmd gs
can't get accessid/accesskey, setup use : config --id=accessid --key=accesskey
```

Note: In the case of such prompts, it indicates that the ID and Key are not properly configured. See the configuration command in Step 2.

Once the ID and Key are properly configured and valid, run the command

```
$ python osscmd gs
2013-07-19 08:11 test-oss-sample
Bucket Number is: 1
```

- Method 2: Specify the ID and Key in the command and osscmd will read ID and Key from the command line. If the ID and Key are valid, run the command and the following result will show.

```
$ python osscmd gs --id=your_id --key=your_key
2013-07-19 08:11 test-oss-sample
Bucket Number is: 1
```

To configure users’ ID and Key to the default files, run the following commands. The default oss host is oss.aliyuncs.com.

```
$python osscmd config --id=YOUR_ID --key=YOUR_KEY
```

If you see a prompt saying “Your configuration is saved into” or similar, it indicates the ID and Key have been saved successfully.

Basic operations

List Created Bucket

```
$python osscmd getallbucket
```

The output will be empty if the OSS user didn’t create any buckets.

Create Bucket

Create a bucket named mybucketname.

```
$python osscmd createbucket mybucketname
```

Creating a bucket named “mybucketname” may fail because the name of the bucket in OSS is globally unique and someone might have created this bucket. In this case, you need to change the name. For example, you can add a specific date to the bucket name.

Check whether the bucket has been created successfully.

```
$python osscmd getallbucket
```

If it fails, check the error message returned.

View Object

After a bucket is successfully created, check the objects in the bucket.

```
$python osscmd list oss://mybucketname/
```

There is no objects in the bucket, so the output is empty.

Upload Object

Upload an object to the bucket. If the local file is named local_existed_file, its MD5 value is shown as below.

```
$ md5sum local_existed_file 7625e1adc3a4b129763d580ca0a78e44 local_existed_file
$ python osscmd put local_existed_file oss://mybucketname/test_object
```

View Object Again

If it is successfully created, check the object again in bucket.

```
$python osscmd list oss://mybucketname/
```

Download Object

Download an object from the bucket to local and compare the md5 value of the file downloaded.

```
$ python osscmd get oss://mybucketname/test_object download_file
$ md5sum download_file
7625e1adc3a4b129763d580ca0a78e44 download_file
```

Delete Object

```
$ python osscmd delete oss://mybucketname/test_object
```

Delete Bucket

Note: If there are objects in the bucket, the bucket cannot be deleted.

```
$ python osscmd deletebucket test-oss-aliyun-com
```

Usage Lifecycle

Configure an xml text file for lifecycle

```
<LifecycleConfiguration>
<Rule>
<ID>1125</ID>
<Prefix>log_backup/</Prefix>
```

```
<Status>Enabled</Status>
<Expiration>
<Days>2</Days>
</Expiration>
</Rule>
</LifecycleConfiguration>
```

This indicates deleting the objects of more than two days old to the current time and with the prefix of log_backup/ in the bucket. For detailed rule configuration, refer to API Reference

Write Lifecycle

```
python osscmd putlifecycle oss://mybucket lifecycle.xml
0.150(s) elapsed
```

Read Lifecycle

```
python osscmd getlifecycle oss://mybucket
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration>
<Rule>
<ID>1125</ID>
<Prefix>log_backup/</Prefix>
<Status>Enabled</Status>
<Expiration>
<Days>2</Days>
</Expiration>
</Rule>
</LifecycleConfiguration>

0.027(s) elapsed
```

Delete Lifecycle

```
python osscmd deletelifecycle oss://mybucket
0.139(s) elapsed
```

Read Lifecycle

```
python osscmd getlifecycle oss://mybucket
Error Headers:

[('content-length', '288'), ('server', 'AliyunOSS'), ('connection', 'close'), ('x-oss-request-id',
'54C74FEE5D7F6B24E5042630'), ('date', 'Tue, 27 Jan 2015 08:44:30 GMT'), ('content-type', 'application/xml')]
Error Body:

<?xml version="1.0" encoding="UTF-8"?>
<Error>
<BucketName>mybucket</BucketName>
<Code>NoSuchLifecycle</Code>
<Message>No Row found in Lifecycle Table.</Message>
```

```
<RequestId>54C74FEE5D7F6B24E5042630</RequestId>
<HostId>mybucket.oss-maque-hz-a.alibaba.net</HostId>
</Error>

Error Status:

404
getlifecycle Failed!
```

Anti-leech Settings

Allow access of blank referer

```
$osscmd putreferer oss://test --allow_empty_referer=true
0.004(s) elapsed
```

Get Configured Referer

```
$osscmd getreferer oss://test
<?xml version="1.0" encoding="UTF-8"?>
<RefererConfiguration>
<AllowEmptyReferer>true</AllowEmptyReferer>
<RefererList />
</RefererConfiguration>
```

Do not allow blank referer. Only allow test referer requests

```
$osscmd putreferer oss://test --allow_empty_referer=false --referer='www.test.com'
0.092(s) elapsed
```

Get Configured Referer

```
$osscmd getreferer oss://test
<?xml version="1.0" encoding="UTF-8"?>
<RefererConfiguration>
<AllowEmptyReferer>false</AllowEmptyReferer>
<RefererList>
<Referer>www.test.com</Referer>
</RefererList>
</RefererConfiguration>
```

Do not allow blank referer. Only allow test and test1 referer requests

```
$osscmd putreferer oss://test --allow_empty_referer=false --referer='www.test.com,www.test1.com'
```

Get Configured Referer

```
$osscmd getreferer oss://test
<?xml version="1.0" encoding="UTF-8"?>
<RefererConfiguration>
<AllowEmptyReferer>false</AllowEmptyReferer>
<RefererList>
<Referer>www.test.com</Referer>
<Referer>www.test1.com</Referer>
</RefererList>
</RefererConfiguration>
```

Bucket commands

config

Command instructions:

config --id=[accessid] --key=[accesskey] --host=[host] --sts_token=[sts_token]

Configure the default host, ID and Key of the osscmd. The default host is oss.aliyuncs.com.To access oss-internal.aliyuncs.com, you can add —host=oss-internal.aliyuncs.com.The sts_token parameter is not requisite. When sts_token is filled, the tool will perform authentication in STS method.

Example:

- python osscmd config --id=your_id --key=your_key
- python osscmd config --id=your_id --key=your_key --host=oss-internal.aliyuncs.com

getallbucket(gs)

Command instructions:

getallbucket(gs)

Show the bucket the user has created. The gs is the short form of get service. The gs achieves the same effect with getallbucket.

Example:

- python osscmd getallbucket
- python osscmd gs

createbucket(cb,mb,pb)

Command instructions:

createbucket(cb,mb,pb) oss://bucket --acl=[acl]

Create bucket commands. The cb is short for create bucket, mb is short for make bucket, pb is short for put bucket and oss://bucket indicates the bucket. The —acl parameter can be included but it is not required. The several commands all achieve the same effect.

Example:

```
- python osscmd createbucket oss://mybucket
- python osscmd cb oss://myfirstbucket --acl=public-read
- python osscmd mb oss://mysecondbucket --acl=private
- python osscmd pb oss://mythirdbucket
```

deletebucket(db)

Command instructions:

deletebucket(db) oss://bucket

Delete bucket commands. The db is short for delete bucket. Deletebucket achieves the same effect with db.

Example:

```
- python osscmd deletebucket oss://mybucket
- python osscmd db oss://myfirstbucket
```

deletewholebucket

> **Note:** This command is very risky as it will erase all the data and the erased data cannot be restored. Use it with caution.

Command instructions:

deletewholebucket oss://bucket

Delete bucket and its objects as well as the multipart contents.

Example:

```
- python osscmd deletewholebucket oss://mybucket
```

getacl

Command instructions:

getacl oss://bucket

Get bucket access and control privilege.

Example:

- python osscmd getacl oss://mybucket

setacl

Command instructions:

setacl oss://bucket --acl=[acl]

Modify bucket access and control privilege. The acl can only be one of the three, private, public-read, or public-read-write.

Example:

- python osscmd setacl oss://mybucket --acl=private

putlifecycle

Command instructions:

putlifecycle oss://mybucket lifecycle.xml

Set lifecycle rules. The lifecycle.xml is the configuration file of lifecycle. For detailed rule configuration, refer to API Reference

Example:

- python osscmd putlifecycle oss://mybucket lifecycle.xml

The lifecycle.xml contains the configuration rules of lifecycle. E.g.:

```
<LifecycleConfiguration>
<Rule>
<ID>1125</ID>
<Prefix>log_backup/</Prefix>
<Status>Enabled</Status>
<Expiration>
<Days>2</Days>
</Expiration>
</Rule>
</LifecycleConfiguration>
```

getlifecycle

Command instructions:

osscmd getlifecycle oss://bucket

Get rules of the bucket lifecycle.

Example:

- python osscmd getlifecycle oss://mybucket

deletelifecycle

Command instructions:

osscmd deletelifecycle oss://bucket

Delete all the lifecycle rules under the bucket.

Example:

- python osscmd deletelifecycle oss://mybucket

putreferer

Command instructions:

osscmd putreferer oss://bucket --allow_empty_referer=[true|false] --referer=[referer]

Set anti-leech rules. The allow_empty_referer parameter is requisite and used to set whether it is allowed to be null. The referer parameter is used to set the allowed white list for access, e.g., “www.test1.com,www.test2.com”, with “,” as the separator. For detailed rule configuration, refer to Product documentation.

Example:

- python osscmd putreferer oss://mybucket --allow_empty_referer=true --referer="www.test1.com,www.test2.com"

getreferer

Command instructions:

osscmd getreferer oss://bucket

Get the anti-leech rules of the bucket.

Example:

- python osscmd getreferer oss://mybucket

putlogging

Command instructions:

osscmd putlogging oss://source_bucket oss://target_bucket/[prefix]

The source_bucket indicates the bucket for logs, and the target_bucket indicates where the logs can be stored. You can set a prefix for the log files generated in the source bucket for the convenience of categorized query.

Example:

```
- python osscmd putlogging oss://mybucket oss://myloggingbucket/mb
```

getlogging

Command instructions:

osscmd getlogging oss://bucket

Get the logging rules of the bucket and an xml file will be returned.

Example:

```
- python osscmd getlogging oss://mybucket
```

Object commands

ls(list)

Command instructions:

ls(list) oss://bucket/[prefix] [marker] [delimiter] [maxkeys]

List object in the bucket.

Example:

```
- python osscmd ls oss://mybucket/folder1/folder2
- python osscmd ls oss://mybucket/folder1/folder2 maker1
- python osscmd ls oss://mybucket/folder1/folder2 maker1 /
- python osscmd ls oss://mybucket/
- python osscmd list oss://mybucket/ "" "" 100
```

Command instructions:

ls(list) oss://bucket/[prefix] --marker=xxx --delimiter=xxx --maxkeys=xxx

List object in the bucket.

Example:

```
- python osscmd ls oss://mybucket/folder1/folder2 --delimiter=/
- python osscmd ls oss://mybucket/folder1/folder2 --maker=a
- python osscmd ls oss://mybucket/folder1/folder2 --maxkeys=10
```

mkdir

Command instructions:

mkdir oss://bucket/dirname

Create an object ending with “/” of a size of 0.

Example:

```
- python osscmd mkdir oss://mybucket/folder
```

listallobject

Command instructions:

listallobject oss://bucket/[prefix]

Show all objects in the bucket, and the prefix can be specified.

Example:

```
- python osscmd listallobject oss://mybucket
- python osscmd listallobject oss://mybucket/testfolder/
```

deleteallobject

Command instructions:

deleteallobject oss://bucket/[prefix]

Delete all objects in the bucket, and the prefix can be specified.

Example:

```
- python osscmd deleteallobject oss://mybucket
- python osscmd deleteallobject oss://mybucket/testfolder/
```

downloadallobject

Command instructions:

downloadallobject oss://bucket/[prefix] localdir --replace=false --thread_num=5

Download the objects in the bucket to a local directory, with the directory structure unchanged. The prefix can be specified for downloading. —replace=false indicates that if a local file already exists with the same name, it will not be replaced during the download. —replace=true indicates that the local file with the same name will be replaced. The thread_num can be used to configure the download threading.

Example:

- python osscmd downloadallobject oss://mybucket /tmp/folder
- python osscmd downloadallobject oss://mybucket /tmp/folder –-replace=false
- python osscmd downloadallobject oss://mybucket /tmp/folder –-replace=true --thread_num=5

downloadtodir

Command instructions:

downloadallobject oss://bucket/[prefix] localdir --replace=false

Download the objects in the bucket to a local directory, with the directory structure unchanged. The prefix can be specified for downloading. —replace=false indicates that if a local file already exists with the same name, it will not be replaced during the download. —replace=true indicates that the local file with the same name will be replaced. It achieves the same effect with the downloadallobject.

Example:

- python osscmd downloadtodir oss://mybucket /tmp/folder
- python osscmd downloadtodir oss://mybucket /tmp/folder –-replace=false
- python osscmd downloadtodir oss://mybucket /tmp/folder –-replace=true

uploadfromdir

Command instructions:

uploadfromdir localdir oss://bucket/[prefix] --check_point=check_point_file --replace=false --check_md5=false --thread_num=5

Upload local files into the bucket. E.g., the localdir is /tmp/

There are three files a/b, a/c, and a, and they will be oss://bucket/a/b, oss://bucket/a/c, oss://bucket/a after being uploaded into the OSS. If the prefix is specified as mytest, the uploaded files to OSS will be oss://bucket/mytest/a/b, oss://bucket/mytest/a/c, and oss://bucket/mytest/a.

--check_point=check_point_file is the specified file. After the files are specified, osscmd will put the uploaded local files into check_point_file as time stamps, and the uploadfromdir command will compare the time stamps of the files being uploaded with that recorded in check_point_file. If there are changes, the files will be re-uploaded. Otherwise the file will be skipped. The check_point_file does not exist by default. --replace=false indicates that if a local file already exists with the same name, it will not be replaced during the download. —replace=true indicates that the local file with the same name will be replaced. --check_md5=false indicates that when the files are being uploaded, the Content-MD5 request header will not undergo verification. True indicates that the Content-MD5 request header will undergo verification.

> Note: the logs in the check_point_file involve all the uploaded files. When there are too many files uploaded, the check_point_file will be sizable.

Example:

- python osscmd uploadfromdir /mytemp/folder oss://mybucket
- python osscmd uploadfromdir /mytemp/folder oss://mybucket --check_point_file=/tmp/mytemp_record.txt
- python osscmd uploadfromdir C:\Documents and Settings\User\My Documents\Downloads oss://mybucket --check_point_file=C:\cp.txt

put

Command instructions:

put localfile oss://bucket/object --content-type=[content_type] --headers="key1:value1#key2:value2" --check_md5=false

When uploading a local file into the bucket, you can specify the object content-type, or specify customized headers. --check_md5=false indicates that when the files are being uploaded, the Content-MD5 request header will not undergo verification. True indicates that the Content-MD5 request header will undergo verification.

Example:

- python osscmd put myfile.txt oss://mybucket
- python osscmd put myfile.txt oss://mybucket/myobject.txt
- python osscmd put myfile.txt oss://mybucket/test.txt --content-type=plain/text --headers= “x-oss-meta-des:test#x-oss-meta-location:CN”
- python osscmd put myfile.txt oss://mybucket/test.txt --content-type=plain/text

upload

Command instructions:

upload localfile oss://bucket/object --content-type=[content_type] --check_md5=false

Upload local files in object group. Not recommended. --check_md5=false indicates that when the files are being uploaded, the Content-MD5 request header will not undergo verification. True indicates that the Content-MD5 request header will undergo verification.

Example:

```
- python osscmd upload myfile.txt oss://mybucket/test.txt --content-type=plain/text
```

get

Command Instructions:

get oss://bucket/object localfile

Download the object to local.

Example:

```
- python osscmd get oss://mybucket/myobject /tmp/localfile
```

multiget(multi_get)

Command instructions:

multiget(multi_get) oss://bucket/object localfile --thread_num=5

Download the object to local in multithreading. The thread count can be configured.

Example:

```
- python osscmd multiget oss://mybucket/myobject /tmp/localfile
- python osscmd multi_get oss://mybucket/myobject /tmp/localfile
```

cat

Command instructions:

cat oss://bucket/object

Read object content and print them out directly. Do not use it when the object content is big in size.

Example:

```
- python osscmd cat oss://mybucket/myobject
```

meta

Command instructions:

meta oss://bucket/object

Read the meta information of the object and print it out. The meta information includes the content-type, file length, custom meta, etc.

Example:

```
- python osscmd meta oss://mybucket/myobject
```

copy

Command instructions:

copy oss://source_bucket/source_object oss://target_bucket/target_object --headers="key1:value1#key2:value2"

Copy the source object of the source bucket to the destination object in the destination bucket.

Example:

```
- python osscmd copy oss://bucket1/object1 oss://bucket2/object2
```

rm(delete,del)

Command instructions:

rm(delete,del) oss://bucket/object

Delete object.

Example:

```
- python osscmd rm oss://mybucket/myobject
- python osscmd delete oss://mybucket/myobject
- python osscmd del oss://mybucket/myobject
```

signurl(sign)

Command instructions:

signurl(sign) oss://bucket/object --timeout=[timeout_seconds]

Generate a URL containing the signature and specify the timeout value. This is applicable to the scenario where the private bucket provides the specified object for others’ accesses.

Example:

```
- python osscmd sign oss://mybucket/myobject
- python osscmd signurl oss://mybucket/myobject
```

Mutipart commands

init

Command instructions:

init oss://bucket/object

Initiate and generate an Upload ID. The Upload ID can be used in combination with the multiupload command.

Example:

- python osscmd init oss://mybucket/myobject

listpart

Command instructions:

listpart oss://bucket/object --upload_id=xxx

Show the uploaded parts of an Upload ID in the designated object. See OSS API Reference for related concepts. The Upload ID must be designated.

Example:

- python osscmd listpart oss://mybucket/myobject --upload_id= 75835E389EA648C0B93571B6A46023F3

listparts

Command instructions:

listparts oss://bucket

Show the uncompleted multipart Upload ID and objects in the bucket. When you want to delete a bucket but system prompts that the bucket is not empty, this command can be used to check whether there are multipart contents.

Example:

- python osscmd listparts oss://mybucket

getallpartsize

Command instructions:

getallpartsize oss://bucket

Show the total size of parts of the existing Upload ID in the bucket.

Example:

```
- python osscmd getallpartsize oss://mybucket
```

cancel

Command instructions:

cancel oss://bucket/object --upload_id=xxx

Terminate the Multipart Upload event of the Upload ID.

Example:

```
- python osscmd cancel oss://mybucket/myobject --upload_id=
  D9D278DB6F8845E9AFE797DD235DC576
```

multiupload(multi_upload,mp)

Command instructions:

multiupload(multi_upload,mp) localfile oss://bucket/object --check_md5=false --thread_num=10

Upload local files to the OSS by multipart.

Example:

```
- python osscmd multiupload /tmp/localfile.txt oss://mybucket/object
- python osscmd multiup_load /tmp/localfile.txt oss://mybucket/object
- python osscmd mp /tmp/localfile.txt oss://mybucket/object
```

Command instructions:

multiupload(multi_upload,mp) localfile oss://bucket/object --upload_id=xxx --thread_num=10 --max_part_num=1000 --check_md5=false

Upload local files to the OSS by multipart. The part count of the local file is defined in max_part_num. This command will first judge whether the ETag of corresponding parts of the Upload ID is consistent with the MD5 value of the local file. If yes, the upload will be skipped. So if an Upload ID is generated before use, it will be included as a parameter. Even if the upload fails, it can be resumed by repeating the multiupload command. --check_md5=false indicates that when the files are being uploaded, the Content-MD5 request header will not undergo verification. True indicates that the Content-MD5 request header will undergo verification.

Example:

- python osscmd multiupload /tmp/localfile.txt oss://mybucket/object --upload_id= D9D278DB6F8845E9AFE797DD235DC576
- python osscmd multiup_load /tmp/localfile.txt oss://mybucket/object --thread_num=5
- python osscmd mp /tmp/localfile.txt oss://mybucket/object --max_part_num=100

copylargefile

Command instructions:

copylargefile oss://source_bucket/source_object oss://target_bucket/target_object --part_size=10*1024*1024 --upload_id=xxx

When copying a large file of over 1G, the object can be copied to the destination location through multipart (The source bucket and the destination bucket must be in the same region). The upload_id is an optional parameter. If you need to resume the transmission of a multipart copy event, you can include the upload_id. The part_size is used to define the part size. A single part should be 100KB at minimal, and up to 10,000 parts are supported. If the set value of part_size conflicts with the OSS limit, the application will automatically adjust the part size.

Example:

- python osscmd copylargefile oss://source_bucket/source_object oss://target_bucket/target_object --part_size=10*1024*1024

uploadpartfromfile (upff)

Command instructions:

uploadpartfromfile (upff) localfile oss://bucket/object --upload_id=xxx --part_number=xxx

This command is mainly used for test and not recommended for actual use.

uploadpartfromstring(upfs)

Command instructions:

uploadpartfromstring(upfs) oss://bucket/object --upload_id=xxx --part_number=xxx --data=xxx

This command is mainly used for test and not recommended for actual use.

ossprobe

Introduction

The ossprobe is an OSS access detection tool used to troubleshoot problems caused by network errors or incorrect settings of basic parameters during the upload and download processes. If an error occurs after you run a command to upload or download data, the ossprobe displays the possible cause to help you identify the error quickly.

Version

Version: 1.0.0

Key functions

- Checks whether the network environment is normal
- Checks whether basic parameters are correct
- Tests the upload and download speeds

Platforms

- Linux
- Windows
- Mac

Download software

- windows64 ossprobe
- linux64 ossprobe
- mac ossprobe

Detect download problems

Usage

```
    ossprobe --download  [-i AccessKeyId] [-k AccessKeySecret] [-p EndPoint] [-b BucketName] [-o ObjectName] [-t LocalPath]
[-f Url] [-a Address]

-f --from Object的Url
-i --id AccessKeyId
-k --key AccessKeySecret
-p --endpoint EndPoint
```

```
-b --bucket BucketName
-o --object ObjectName
-t --to Save path for the downloaded content. By default, it is the path to a temporary file in the current directory.
-a --addr Network address for detection. The default address is www.aliyun.com. If you are using private cloud,
select an accessible address in the private cloud.

TIP: If the -f parameter is present, a URL is used for download. If the -f parameter is not present, you must set the
AccessKeyID, AccessKeySecret, EndPoint, and BucketName parameters.
```

Example

To check whether URL-based download is normal (How to obtain a URL), run the following commands:

Method	Command
Download from a specified URL	ossprobe --download -f Url
Download from a specified URL and save the downloaded content to a specified file	ossprobe --download -f Url -t tmp/example.txt
Download from a specified URL and detect the network condition of a specified address	ossprobe --download -f Url -a Addr

To check whether download using specified parameters (AccessKeyID, AccessKeySecret, EndPoint, and BucketName) is normal, run the following commands:

Method	Command
Download a random file	ossprobe --download -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName
Download a specified file	ossprobe --download -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -o ObjectName
Download a specified file and save the downloaded content to a specified local file	ossprobe --download -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -o ObjectName -t tmp/example.txt
Download a random file and detect the network condition of a specified address	ossprobe --download -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -a Addr

TIP:

- The file you downloaded is a binary executable program, and you need to add the ossprobe executable permissions through chmod +x ossprobe in the Linux system.
- By default, the -t parameter indicates the path to a temporary file in the current directory (the file name format is ossfilestore20160315060101).
- If the -t parameter indicates a directory, a temporary file is generated in the directory to save data (the file name format is ossfilestore20160315060101).
- If a file is downloaded from a URL, the file is named after the last string following the

forward slash “/ ” in the URL. For example, if the URL is http://aliyun.com/a.jpg, then the file is saved as a.jpg.

Detect upload problems

Usage

```
ossprobe --upload -i AccessKeyId -k AccessKeySecret -p EndPoint  -b BucketName [-m normal|append|multipart]
[-s UploadFilePath] [-o ObjectName] [-a Addr]

-i --id AccessKeyID
-k --key AccessKeySecret
-p --endpoint EndPoint
-b --bucket BucketName
-s --src Path to the file you want to upload. By default, it is the path to a local temporary file.
-m --mode File upload mode. The default is normal upload.
-o --object Uploaded object name. By default, the object name is the name of the uploaded file if -s is not null. If -s
is null, by default, the object name is the name of the temporary file starting with tem.
-a --addr Network address for detection. The default address is the address of the Alibaba Cloud website. If you are
using private cloud, select an accessible address in the private cloud.
```

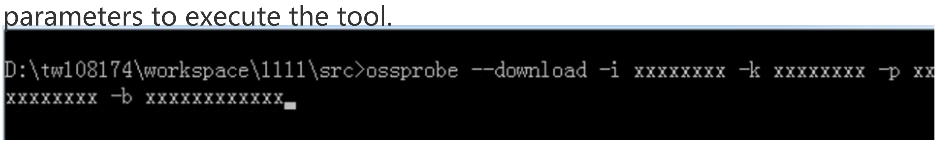
Example

Method	Command
Generate a temporary file and upload it in normal mode	ossprobe --upload -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName
Generate a temporary file and upload it in append mode	ossprobe --upload -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -o ObjectName -m append
Generate a temporary file and upload it in multipart mode	ossprobe --upload -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -o ObjectName -m multipart
Upload specified content in multipart mode	ossprobe --upload -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -o ObjectName -m multipart -s src
Upload specified content in multipart mode and specify the object name	ossprobe --upload -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -m multipart -s src -o example.txt
Generate a temporary file, upload it in normal mode, and detect the network condition of a specified address	ossprobe --upload -i AccessKeyId -k AccessKeySecret -p EndPoint -b BucketName -a Addr

TIP: The name of a randomly generated file starts with ossuploadtmp.

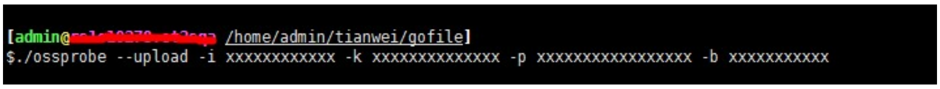
Platform differences

- Windows
  Press Win+R to bring up the “Run” dialog box, enter cmd, and press Enter. On the command-line interface (CLI), enter the path to the tool and fill in related detection parameters to execute the tool.



```
D:\tw108174\workspace\1111\src>ossprobe --download -i xxxxxxxx -k xxxxxxxx -p xx
xxxxxxxx -b xxxxxxxxxxxx
```

- Linux and Mac
  Open the terminal. On the displayed interface, enter the path to the tool and fill in related detection parameters to execute the tool.



```
[admin@[redacted] /home/admin/tianwei/gofile]
$./ossprobe --upload -i xxxxxxxxxxxx -k xxxxxxxxxxxxxx -p xxxxxxxxxxxxxxxxx -b xxxxxxxxxxx
```

View report data

After command execution, a report named logOssProbe20060102150405.txt is generated (the numbers following logOssProbe indicate the formatted date of report generation). The possible error cause is printed in command line mode. If you think the error message is not specific, you can view the report. If the problem persists, you can submit a ticket attached with the detection report.

Console display

The console displays the following main information:

- After execution, the steps marked with × fail, whereas the steps not marked with × are successful.
- The result indicates whether the upload or download operation is successful. If the upload or download operation is successful, the console displays the file size and upload/download time.
- The “Suggested Change” column shows the error cause or change suggestions.
- If you are familiar with OSS error codes, you can perform troubleshooting based on the error message returned by OSS.
- The “Log Info” columns shows the log name and address, allowing you to find the log.

(TIP: No change suggestions may be given when an error is detected. When this happens, perform troubleshooting based on the returned error code by referring to OSS ErrorCode.)

Log file

Different from console display, log files contain network detection details. Ping is used to detect a specified network or the network of a specified EndPoint, tracert is used to detect the route for EndPoint access, and nslookup is used for DNS detection.

References

OSS ErrorCode

Naming conventions of buckets and objects

How to obtain a URL

Official migration tool

Migrate data to OSS on Linux

The ossimport2 sync tool can synchronize your files stored locally or in the third-party cloud to OSS.

Key features:

- Supports synchronization of local files, HTTP link files, and files stored in OSS, Qiniu Resource (Cloud) Storage, Baidu Object Storage, Kingsoft Standard Storage, Upyun Storage, and Amazon S3 to a specified OSS bucket
- Supports synchronization of inventory data (allowing you to synchronize only files modified after a specified time)
- Supports automatic synchronization of incremental data
- Supports resumable data transfer
- Supports upload/download traffic control
- Supports parallel LIST and parallel data upload/download

If you want to migrate a large volume of data (more than 20 TB) to OSS in a short time, in addition to the [ossimport2] sync tool, our technical staff also provides you with a multi-machine parallel synchronization solution. Contact us through the TradeManager group: 904193608.

Runtime environment

You need to run the [ossimport2] sync tool in an environment higher than Java JDK 1.7. The Oracle JDK is recommended.

Click to view

NOTE:Before running the program, run the ulimit -n command to check the number of opened files allowed by the process. If the number is smaller than 10,240, make modification.

Tool deployment

First, create a synchronization working directory on the local server and then download the [ossimport2] toolkit to this directory.

Example: Create /root/ms as the working directory and download the toolkit to this directory.

```
export work_dir=/root/ms
wget http://oss.aliyuncs.com/import-service-package/ossimport4linux.zip
unzip ./ossimport4linux.zip -d "$work_dir"
```

Tool configuration

Edit the configuration file /conf/sys.properties in the working directory ($work_dir) as follows:

```
vim $work_dir/conf/sys.properties
workingDir=/root/ms
slaveUserName=
slavePassword=
privateKeyFile=
slaveTaskThreadNum=60
slaveMaxThroughput(KB/s)=100000000
slaveAbortWhenUncatchedException=false
dispatcherThreadNum=5
```

You can simply use the default configuration values. If needed, you can edit the configuration field values.

Field	Description
workingDir	Indicates the current working directory, that is, the directory to which the toolkit is extracted.
slaveTaskThreadNum	Indicates the number of worker threads that execute synchronization simultaneously.
slaveMaxThroughput(KB/s)	Indicates the maximum migration throughput.
slaveAbortWhenUncatchedException	Indicates whether to skip or abort an unknown error. Unknown errors are not aborted by default.

dispatcherThreadNum	Indicates the number of parallel threads in a dispatching job. Generally, the default value is adequate.

Service running

ossimport2 supports the following commands:

- Submit a job: ‘java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties submit $jobConfigPath’
- Cancel a job: ‘java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties clean $jobName’
- View status: ‘java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties stat detail’
- Retry a job: ‘java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties retry $jobName’

The process for running and using the service is as follows:

1. Run the following command to launch the service:

```
cd $work_dir
nohup java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties start >
$work_dir/logs/ossimport2.log 2>&1 &
```

NOTE: An associated log file is automatically generated in the logs directory of the directory where the service is launched. We suggest launching the service in the working directory ($work_dir).

1. Edit the sample job description file local_job.cfg.

Field description:

Field	Description
jobName	A custom job name uniquely identifies a job. You can submit multiple jobs with different names.
jobType	This field can be set to import (which indicates executing data synchronization) or audit (which indicates only verifying the global consistency of the synchronized source and target data).
isIncremental=false	This field indicates whether to enable the automatic incremental mode. If it is set to true, incremental data is scanned at the interval specified by incrementalModeInterval (unit: seconds) and synchronized to OSS.

incrementalModeInterval=86400	This field indicates a synchronization interval in incremental mode.
importSince	This field indicates a time point. Only data later than this time point are synchronized. The time point is specified as a unix timestamp (number of seconds) and the default value is 0.
srcType	This field indicates the synchronization source type and currently supports oss, qiniu, baidu, ks3, youpai, and local.
srcAccessKey	This field must be set to the access key of the data source if srcType is set to oss, qiniu, baidu, ks3, or youpai.
srcSecretKey	This field must be set to the secret key of the data source if srcType is set to oss, qiniu, baidu, ks3, or youpai.
srcDomain	This field indicates the source endpoint.
srcBucket	This field indicates the name of the source bucket.
srcPrefix	This field indicates the source prefix and is blank by default. If srcType is set to local, fill in the path to the local directory you want to synchronize. Note that the directory path must be complete (ending with ’/ ’). If srcType is set to oss, qiniu, baidu, ks3, or youpai, fill in the name prefix of the object you want to synchronize. To synchronize all files, you can leave the prefix blank.
destAccessKey	Fill in the access key for the destination OSS.
destSecretKey	Fill in the secret key for the destination OSS.
destDomain	Fill in the endpoint for the destination OSS.
destBucket	Fill in the bucket of the destination OSS.
destPrefix	Fill in the file name prefix used at the destination, which is blank by default.
taskObjectCountLimit	This field indicates the maximum number of files in each child job. The value affects the parallel execution of tasks and is usually set to the total number of files or the number of download threads you specified. If you do not know the total number of files, set this field to the default value.
taskObjectSizeLimit	This field indicates the maximum volume (in bytes) of data downloaded in each child job.
scanThreadCount	This field indicates the number of parallel file scan threads. The value affects file scanning efficiency.

maxMultiThreadScanDepth	This field indicates the maximum directory depth for parallel scan. The default value is adequate.

NOTE:(1) If the automatic incremental mode is configured, the job is executed periodically and permanently to scan the latest data.(2) If srcType is set to youpai, checkpoint cannot be executed for the file LIST operation due to the API restrictions of Upyun Storage. If the process is killed before the file LIST operation is completed, files will be listed all over again.

1. Submit the job.

```
java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties  submit $work_dir/local_job.cfg
```

NOTE:

- If the job you submit has the same name as a job in progress, the job will fail to be submitted.
- If you need to pause the synchronization job, you can stop the ossimport2 process. If you need to continue, restart the ossimport2 process to resume the synchronization job from where it was paused.
- To resynchronize all files, stop the ossimport2 process and then re-call the following command to clear the current job.

For example, if the current job is named local_test (this name is specified in the local_job.cfg file), run the following command:

```
ps axu | grep "ossimport2.jar.* start" | grep -v grep | awk '{print "kill -9 "$2}' | bash
java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties clean local_test
```

1. Check the job execution status.

```
[root@iZ23gztmc8fZ local]# java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties  stat detail
--------------job stats begin---------------
----------------job stat begin------------------
JobName:local_test
JobState:Running
PendingTasks:0
RunningTasks:1
SucceedTasks:0
FailedTasks:0
ScanFinished:true
RunningTasks Progress:
FD813E8B93F55E67A843DBCFA3FAF5B6_1449307162636:26378979/26378979 1/1
----------------job stat end------------------
--------------job stats end---------------
```

This shows the overall progress of the current job and the progress of the current task. In this example: “26378979/26378979” indicates the total amount of data to be uploaded (26,378,979 bytes)/the amount of data already uploaded (26,378,979 bytes). “1/1” indicates the total number of files to be uploaded (one file)/the number of files already uploaded (one file).

The migration tool splits one job you submitted into multiple tasks for parallel execution. After all the tasks are completed, the job is considered complete.After the job is completed, JobState is displayed as “Succeed” or “Failed”, indicating that the job is successful or fails.If the job fails, use the following command to view the failure cause of each task:

In the following command, replace $jobName with the name of the actual job (jobName is specified in the local_job.cfg file).

```
cat $work_dir/master/jobs/$jobName/failed_tasks/*/audit.log
```

As we have already attempted to retry a failed job in the tool, the failure may be due to the temporary unavailability of the source or target data. Use the following command to retry the failed task:

```
java -jar $work_dir/bin/ossimport2.jar -c $work_dir/conf/sys.properties retry $jobName
```

1. Common job failure causes

   - The job configuration is incorrect. For example, the access key/id is incorrect or permissions are insufficient. In this case, all tasks fail. To confirm the specific cause, check the $work_dir/logs/ossimport2.log file.
   - The source file name encoding method is inconsistent with the system’s default file name encoding method. For example, Windows’ default file name encoding method is GBK and Linux’s is UTF-8. This failure cause is typical of NFS data sources.
   - A file in the source directory is modified during the upload process. This failure cause is indicated by a SIZE_NOT_MATCH error in audit.log. In this case, the old file has been uploaded successfully, but the changes have not been synchronized to OSS.
   - The source file is deleted during the upload process. In this case, the file cannot downloaded.
   - The source file name is inconsistent with the naming conventions of OSS (for example, the file name cannot start with ‘/’ or be blank). In this case, the file cannot be uploaded to OSS.
   - An error occurs in the data source, causing a source data download failure.

   The CLEAN operation is performed before the process is killed, which may cause a program execution error.

   The program is unexpectedly exited and the job status is Aborted. If this happens, contact us (TradeManager group: 904193608).

1. Suggestion

If you need to migrate data from the cloud (not locally) to OSS but bandwidth resources are insufficient, we suggest you buy an ECS instance in Pay-As-You-Go mode (purchase address: https://ecs-buy.aliyun.com/#/postpay).

ECS configuration:

i. Select the Pay-As-You-Go method of payment.
i. Select the region where your OSS instance is located.
i. Select the 100M peak bandwidth (inbound traffic and intranet traffic are not billed).
i. Select the Linux or Windows system based on your need.
i. Select the minimum configurations for other items.

Fees vary slightly with different regions. For Hangzhou, the configuration fee is 0.277 yuan/hour and the public traffic fee is 0.8 yuan/GB. (Public bandwidth is billed in PayByTraffic mode. Only [outbound] traffic is billed, but [inbound traffic and intranet traffic] are not billed. Fees are deducted hourly based on the actual usage. For example, if you use 2.5 GB of Internet outbound traffic in an hour, the charge will be 2.5 GB x 0.8 yuan/hour = 2.0 yuan.)

When you configure the migration service, set targetDomain to an intranet domain name containing “internal”. If the source end is also OSS, set srcDomain to an intranet domain name containing “internal”. The configuration saves you the traffic fee otherwise incurred by download from the source OSS, and you only need to pay for OSS access times.

After migration, release (not close) the ECS instance.

Migrate data to OSS on Windows

Introduction

The ossimport2 tool allows you to migrate files stored locally or in other cloud storage systems to OSS.

Key features:

- Supports migration of local files, HTTP link files, and files stored in Qiniu Resource (Cloud) Storage, Baidu Object Storage, Kingsoft Standard Storage, Upyun Storage, and Amazon S3
- Supports resumable data transfer
- Supports upload traffic control
- Supports synchronization of only data files modified after a specified time
- Supports parallel LIST and parallel data upload/download

- Supports automatic synchronization of incremental data

We provide the migration service in addition to the offline ossimport2 tool to support migration of the preceding data sources as well as multi-machine parallel migration to OSS. If you want to migrate a large volume of data to OSS in a short time, contact us through the TradeManager group: 904193608.

Runtime environment

Ensure that your machine runs a Java JDK 7 environment or higher. If the Java environment is lower than JDK 7, click here to upgrade the Java environment to the latest version.

Tool deployment

Click here to download and extract the toolkit.

Tool configuration

Edit the configuration files conf/sys.properties and conf/local_job.cfg in the working directory. Configure the tool according to the prompts in the files.

Service running

Execute the “One-key Import.bat” program.

If you have previously executed this program, the system prompts if you want to continue the previous job from where it was paused or execute a new synchronization job. If the synchronization source or destination configuration has been modified, execute a new synchronization job.

After the job starts, a new cmd window pops up showing the synchronization job in progress and the log. The job status in the old window refreshes every 10 seconds. Do not close these two windows during the synchronization process.

When the job is finished but a task fails, the system prompts if you want to retry. Enter y to retry or n to exit the program.

The files that fail to be uploaded and the failure causes can be found in master/jobs/local_test/failed_tasks/taskid/audit.log.

Common job failure causes

- The job configuration is incorrect. For example, the access key/id is incorrect or permissions are insufficient. In this case, all tasks fail. To confirm the specific cause, check the logs/ossimport2.log file.
- The source file name encoding method is inconsistent with the system’ s default file name encoding method. For example, Windows’ default file name encoding method is GBK and Linux’ s is UTF-8.
- A file in the source directory is modified during the upload process. This failure cause is indicated by a SIZE_NOT_MATCH error in audit.log. In this case, the old file has been uploaded successfully, but the changes have not been synchronized to OSS.
- The source file is deleted during the upload process. In this case, the file cannot downloaded.
- The source file name is inconsistent with the naming conventions of OSS (for example, the file name cannot start with ‘/ ‘ or be blank). In this case, the file cannot be uploaded to OSS.
- An error occurs in the data source, causing a source data download failure.
- The program is unexpectedly exited and the job status is Aborted. If this happens, contact us (TradeManager group: 904193608).