使用Rclone进行Ali OSS与AWS S3在线迁移

利用Rclone从阿里云OSS迁移到AWS S3
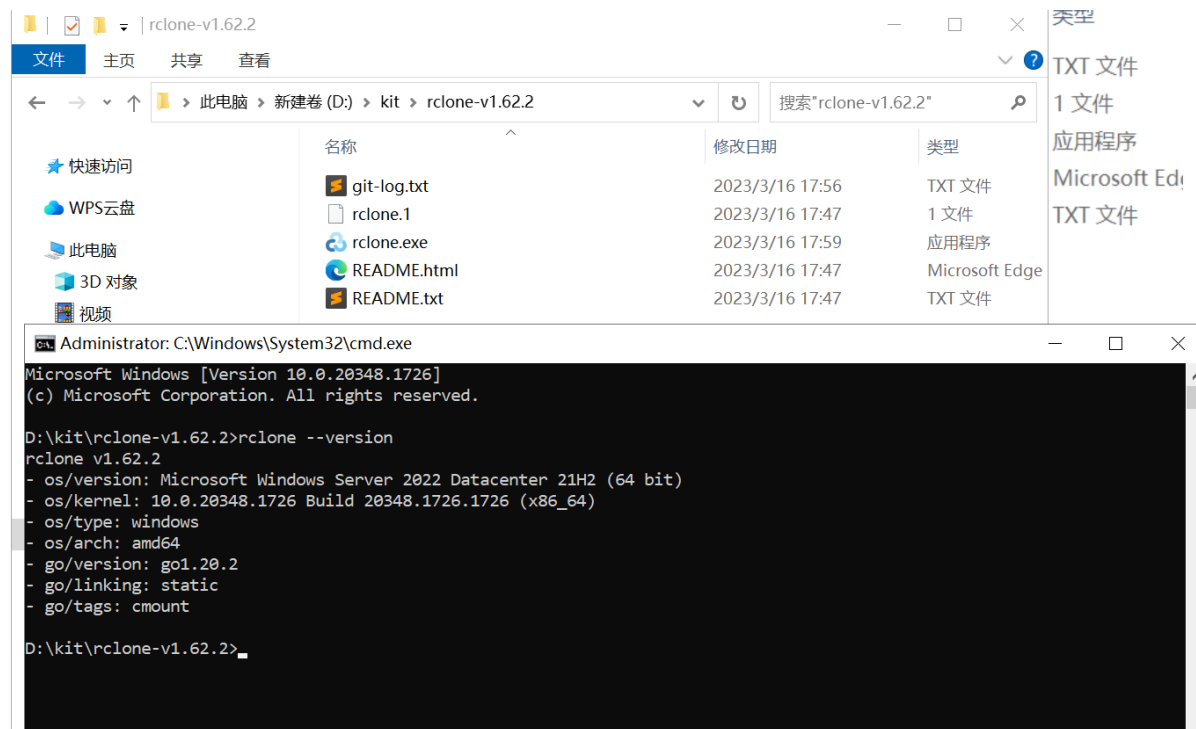
Rclone官网：https://rclone.org/

Rclone 是一款命令行工具，支持在不同对象存储、网盘间同步、上传、下载数据。采用 Go 语 言开发。支持本地与云存储间双向数据复制/同步，也支持不同云存储间的数据复制/同步。

WINDOW系统

下载Rclone

64bit系统下载，其他更多版本下载。下载后解压，打开 CMD 使用即可。

配置Rclone

配置AWS云S3

运行 rclone config 并输入 n 新建配置文件并输入名称，名字自定义。

```
rclone config
No remotes found, make a new one?
n) New remote
s) Set configuration password
q) Quit config
n/s/q> n
name> awsS3
```

输入存储的类型 s3

```
name> oss2aws

Option Storage.
Type of storage to configure.
Choose a number from below, or type in your own value.
 1 / 1Fichier
   \ (fichier)
 2 / Akamai NetStorage
   \ (netstorage)
 3 / Alias for an existing remote
   \ (alias)
 4 / Amazon Drive
   \ (amazon cloud drive)
 5 / Amazon S3 Compliant Storage Providers including AWS, Alibaba, Ceph, China Mobile, Cloudflare, ArvanCloud, DigitalOc
ean, Dreamhost, Huawei OBS, IBM COS, IDrive e2, IONOS Cloud, Liara, Lyve Cloud, Minio, Netease, RackCorp, Scaleway, Seaw
eedFS, StackPath, Storj, Tencent COS, Qiniu and Wasabi
   \ (s3)
 6 / Backblaze B2
   \ (b2)
 7 / Better checksums for other remotes
   \ (hasher)
 8 / Box
   \ (box)
 9 / Cache a remote
   \ (cache)
10 / Citrix Sharefile
   \ (sharefile)
11 / Combine several remotes into one
   \ (combine)
12 / Compress a remote
```

```
38 / SMB / CIFS
   \ (smb)
39 / SSH/SFTP
   \ (sftp)
40 / Sia Decentralized Cloud
   \ (sia)
41 / Storj Decentralized Cloud Storage
   \ (storj)
42 / Sugarsync
   \ (sugarsync)
43 / Transparently chunk/split large files
   \ (chunker)
44 / Union merges the contents of several upstream fs
   \ (union)
45 / Uptobox
   \ (uptobox)
46 / WebDAV
   \ (webdav)
47 / Yandex Disk
   \ (yandex)
48 / Zoho
   \ (zoho)
49 / premiumize.me
   \ (premiumizeme)
50 / seafile
   \ (seafile)
Storage> s3
```

输入 AWS

```
   \ (premiumizeme)
50 / seafile
   \ (seafile)
Storage> s3

Option provider.
Choose your S3 provider.
Choose a number from below, or type in your own value.
Press Enter to leave empty.
 1 / Amazon Web Services (AWS) S3
   \ (AWS)
 2 / Alibaba Cloud Object Storage System (OSS) formerly Aliyun
   \ (Alibaba)
 3 / Ceph Object Storage
   \ (Ceph)
 4 / China Mobile Ecloud Elastic Object Storage (EOS)
   \ (ChinaMobile)
 5 / Cloudflare R2 Storage
   \ (Cloudflare)
 6 / Arvan Cloud Object Storage (AOS)
   \ (ArvanCloud)
 7 / DigitalOcean Spaces
   \ (DigitalOcean)
 8 / Dreamhost DreamObjects
   \ (Dreamhost)
 9 / Huawei Object Storage Service
   \ (HuaweiOBS)
10 / IBM COS S3
   \ (IBMCOS)
11 / IDrive e2
```

选择 False 输入凭证

```
    \ (Wasabi)
24 / Qiniu Object Storage (Kodo)
    \ (Qiniu)
25 / Any other S3 compatible provider
    \ (Other)
provider> AWS

Option env_auth.
Get AWS credentials from runtime (environment variables or EC2/ECS meta data if no env vars).
Only applies if access_key_id and secret_access_key is blank.
Choose a number from below, or type in your own boolean value (true or false).
Press Enter for the default (false).
 1 / Enter AWS credentials in the next step.
   \ (false)
 2 / Get AWS credentials from the environment (env vars or IAM).
   \ (true)
env_auth> 1
```

输入AWS的凭证

```
   \ (true)
env_auth> 1

Option access_key_id.
AWS Access Key ID.
Leave blank for anonymous access or runtime credentials.
Enter a value. Press Enter to leave empty.
access_key_id> ████ROT████████

Option secret_access_key.
AWS Secret Access Key (password).
Leave blank for anonymous access or runtime credentials.
Enter a value. Press Enter to leave empty.
secret_access_key> ██████████████████QYvlHEoF███

Option region.
Region to connect to.
Choose a number from below, or type in your own value.
Press Enter to leave empty.
   / The default endpoint - a good choice if you are unsure.
 1 | US Region, Northern Virginia, or Pacific Northwest.
   | Leave location constraint empty.
   \ (us-east-1)
   / US East (Ohio) Region.
 2 | Needs location constraint us-east-2.
   \ (us-east-2)
   / US West (Northern California) Region.
 3 | Needs location constraint us-west-1.
   \ (us-west-1)
   / US West (Oregon) Region.
```

输入AWS的区域

```
18 | Needs location constraint ap-east-1.
   \ (ap-east-1)
   / South America (Sao Paulo) Region.
19 | Needs location constraint sa-east-1.
   \ (sa-east-1)
   / Middle East (Bahrain) Region.
20 | Needs location constraint me-south-1.
   \ (me-south-1)
   / Africa (Cape Town) Region.
21 | Needs location constraint af-south-1.
   \ (af-south-1)
   / China (Beijing) Region.
22 | Needs location constraint cn-north-1.
   \ (cn-north-1)
   / China (Ningxia) Region.
23 | Needs location constraint cn-northwest-1.
   \ (cn-northwest-1)
   / AWS GovCloud (US-East) Region.
24 | Needs location constraint us-gov-east-1.
   \ (us-gov-east-1)
   / AWS GovCloud (US) Region.
25 | Needs location constraint us-gov-west-1.
   \ (us-gov-west-1)
region> ap-northeast-1
```

输入 endpoint

根据各自账号的配置，找到相应的地址，正确的地址格式如下：

```
s3.ap-northeast-1.amazonaws.com
```

注意：下面截图的示例是错误的，<u>不需要添加https头和桶名称前缀</u>，在运行过程中，这些会自动添加。

```
21 | Needs location constraint af-south-1.
   \ (af-south-1)
   / China (Beijing) Region.
22 | Needs location constraint cn-north-1.
   \ (cn-north-1)
   / China (Ningxia) Region.
23 | Needs location constraint cn-northwest-1.
   \ (cn-northwest-1)
   / AWS GovCloud (US-East) Region.
24 | Needs location constraint us-gov-east-1.
   \ (us-gov-east-1)
   / AWS GovCloud (US) Region.
25 | Needs location constraint us-gov-west-1.
   \ (us-gov-west-1)
region> ap-northeast-1

Option endpoint.
Endpoint for S3 API.
Leave blank if using AWS to use the default endpoint for the region.
Enter a value. Press Enter to leave empty.
endpoint> https://bucket-20230527.s3.ap-northeast-1.amazonaws.com_
```

指定位置约束，这里选择跟上面的地区一样的，ap-northeast-1。

```
12 / Asia Pacific (Singapore) Region
   \ (ap-southeast-1)
13 / Asia Pacific (Sydney) Region
   \ (ap-southeast-2)
14 / Asia Pacific (Tokyo) Region
   \ (ap-northeast-1)
15 / Asia Pacific (Seoul) Region
   \ (ap-northeast-2)
16 / Asia Pacific (Osaka-Local) Region
   \ (ap-northeast-3)
17 / Asia Pacific (Mumbai) Region
   \ (ap-south-1)
18 / Asia Pacific (Hong Kong) Region
   \ (ap-east-1)
19 / South America (Sao Paulo) Region
   \ (sa-east-1)
20 / Middle East (Bahrain) Region
   \ (me-south-1)
21 / Africa (Cape Town) Region
   \ (af-south-1)
22 / China (Beijing) Region
   \ (cn-north-1)
23 / China (Ningxia) Region
   \ (cn-northwest-1)
24 / AWS GovCloud (US-East) Region
   \ (us-gov-east-1)
25 / AWS GovCloud (US) Region
   \ (us-gov-west-1)
location_constraint> ap-northeast-1
```

选择 ACL 建议 private

```
Option acl.
Canned ACL used when creating buckets and storing or copying objects.
This ACL is used for creating objects and if bucket_acl isn't set, for creating buckets too.
For more info visit https://docs.aws.amazon.com/AmazonS3/latest/dev/acl-overview.html#canned-acl
Note that this ACL is applied when server-side copying objects as S3
doesn't copy the ACL from the source but rather writes a fresh one.
If the acl is an empty string then no X-Amz-Acl: header is added and
the default (private) will be used.
Choose a number from below, or type in your own value.
Press Enter to leave empty.
   / Owner gets FULL_CONTROL.
 1 | No one else has access rights (default).
   \ (private)
   / Owner gets FULL_CONTROL.
 2 | The AllUsers group gets READ access.
   \ (public-read)
   / Owner gets FULL_CONTROL.
 3 | The AllUsers group gets READ and WRITE access.
   | Granting this on a bucket is generally not recommended.
   \ (public-read-write)
   / Owner gets FULL_CONTROL.
 4 | The AuthenticatedUsers group gets READ access.
   \ (authenticated-read)
   / Object owner gets FULL_CONTROL.
 5 | Bucket owner gets READ access.
   | If you specify this canned ACL when creating a bucket, Amazon S3 ignores it.
   \ (bucket-owner-read)
   / Both the object owner and the bucket owner get FULL_CONTROL over the object.
 6 | If you specify this canned ACL when creating a bucket, Amazon S3 ignores it.
   \ (bucket-owner-full-control)
acl> 1
```

选择加密方式，此次选择不加密。根据需求来决定是否加密

```
Option server_side_encryption.
The server-side encryption algorithm used when storing this object in S3.
Choose a number from below, or type in your own value.
Press Enter to leave empty.
 1 / None
   \ ()
 2 / AES256
   \ (AES256)
 3 / aws:kms
   \ (aws:kms)
server_side_encryption> 1
```

KMS 选择，因为上层选择了不加密所以默认即可

```
Option sse_kms_key_id.
If using KMS ID you must provide the ARN of Key.
Choose a number from below, or type in your own value.
Press Enter to leave empty.
 1 / None
   \ ()
 2 / arn:aws:kms:*
   \ (arn:aws:kms:us-east-1:*)
sse_kms_key_id> 1
```

选择存储级别，默认即可

```
Option storage_class.
The storage class to use when storing new objects in S3.
Choose a number from below, or type in your own value.
Press Enter to leave empty.
 1 / Default
   \ ()
 2 / Standard storage class
   \ (STANDARD)
 3 / Reduced redundancy storage class
   \ (REDUCED_REDUNDANCY)
 4 / Standard Infrequent Access storage class
   \ (STANDARD_IA)
 5 / One Zone Infrequent Access storage class
   \ (ONEZONE_IA)
 6 / Glacier storage class
   \ (GLACIER)
 7 / Glacier Deep Archive storage class
   \ (DEEP_ARCHIVE)
 8 / Intelligent-Tiering storage class
   \ (INTELLIGENT_TIERING)
 9 / Glacier Instant Retrieval storage class
   \ (GLACIER_IR)
storage_class> 1
```

高级配置选择 n 即可

```
Edit advanced config?
y) Yes
n) No (default)
y/n> n
```

保存刚刚的配置，最终正确的结果如下：

```
Configuration complete.
Options:
- type: s3
- provider: AWS
- access_key_id: xxxxxxxx
- secret_access_key: yyyyyy
- region: ap-northeast-1
- endpoint: s3.ap-northeast-1.amazonaws.com
- location_constraint: ap-northeast-1
- acl: private
Keep this "awsS3" remote?
y) Yes this is OK (default)
e) Edit this remote
d) Delete this remote
y/e/d>

Current remotes:

Name                    Type
====                    ====
awsS3                   s3

e) Edit existing remote
n) New remote
d) Delete remote
r) Rename remote
c) Copy remote
s) Set configuration password
q) Quit config
e/n/d/r/c/s/q>
```

按照以上步骤可继续添加其他云存储。

配置Ali云OSS

```
# 取名
No remotes found, make a new one?
n) New remote
s) Set configuration password
q) Quit config
n/s/q> n
name> aliYunOss

# 配置存储类型
Type of storage to configure.
Enter a string value. Press Enter for the default ("").
Choose a number from below, or type in your own value
[snip]
 4 / Amazon S3 Compliant Storage Providers including AWS, Alibaba, Ceph,
ChinaMobile, ArvanCloud, DigitalOcean, Dreamhost, Huawei OBS, IBM COS, Liara,
Minio, and Tencent COS
```

```
        \ "s3"
[snip]
Storage> s3

# oss配置的云服务提供者
Choose your S3 provider.
Enter a string value. Press Enter for the default ("").
Choose a number from below, or type in your own value
  1 / Amazon Web Services (AWS) S3
    \ (AWS)
  2 / Alibaba Cloud Object Storage System (OSS) formerly Aliyun
    \ (Alibaba)
  3 / Ceph Object Storage
    \ (Ceph)
  4 / China Mobile Ecloud Elastic Object Storage (EOS)
    \ (ChinaMobile)
  5 / Cloudflare R2 Storage
    \ (Cloudflare)
  6 / Arvan Cloud Object Storage (AOS)
    \ (ArvanCloud)
  7 / DigitalOcean Spaces
    \ (DigitalOcean)
  8 / Dreamhost DreamObjects
    \ (Dreamhost)
  9 / Huawei Object Storage Service
    \ (HuaweiOBS)
 10 / IBM COS S3
    \ (IBMCOS)
 11 / IDrive e2
    \ (IDrive)
 12 / IONOS Cloud
    \ (IONOS)
 13 / Seagate Lyve Cloud
    \ (LyveCloud)
 14 / Liara Object Storage
    \ (Liara)
 15 / Minio Object Storage
    \ (Minio)
 16 / Netease Object Storage (NOS)
    \ (Netease)
 17 / RackCorp Object Storage
    \ (RackCorp)
 18 / Scaleway Object Storage
    \ (Scaleway)
 19 / SeaweedFS S3
    \ (SeaweedFS)
 20 / StackPath Object Storage
    \ (StackPath)
 21 / Storj (S3 Compatible Gateway)
    \ (Storj)
 22 / Tencent Cloud Object Storage (COS)
    \ (TencentCOS)
 23 / Wasabi Object Storage
    \ (Wasabi)
 24 / Qiniu Object Storage (Kodo)
    \ (Qiniu)
 25 / Any other S3 compatible provider
    \ (Other)
```

```
[snip]
provider> Alibaba

# 环境变量设置，只有在access_key_id和secret_access_key为空有用，我们直接在下一步输入
Get AWS credentials from runtime (environment variables or EC2/ECS meta data if
no env vars).
Only applies if access_key_id and secret_access_key is blank.
Enter a boolean value (true or false). Press Enter for the default ("false").
Choose a number from below, or type in your own value
 1 / Enter AWS credentials in the next step
   \ "false"
 2 / Get AWS credentials from the environment (env vars or IAM)
   \ "true"
env_auth> 1

# access_key_id
AWS Access Key ID.
Leave blank for anonymous access or runtime credentials.
Enter a string value. Press Enter for the default ("").
access_key_id> accesskeyid

# secret_access_key
AWS Secret Access Key (password)
Leave blank for anonymous access or runtime credentials.
Enter a string value. Press Enter for the default ("").
secret_access_key> secretaccesskey

# 选择正确的endpoint
Endpoint for OSS API.
Enter a string value. Press Enter for the default ("").
Choose a number from below, or type in your own value
Option endpoint.
Endpoint for OSS API.
Choose a number from below, or type in your own string value.
Press Enter for the default (oss-accelerate.aliyuncs.com).
 1 / Global Accelerate
   \ (oss-accelerate.aliyuncs.com)
 2 / Global Accelerate (outside mainland China)
   \ (oss-accelerate-overseas.aliyuncs.com)
 3 / East China 1 (Hangzhou)
   \ (oss-cn-hangzhou.aliyuncs.com)
 4 / East China 2 (Shanghai)
   \ (oss-cn-shanghai.aliyuncs.com)
 5 / North China 1 (Qingdao)
   \ (oss-cn-qingdao.aliyuncs.com)
 6 / North China 2 (Beijing)
   \ (oss-cn-beijing.aliyuncs.com)
 7 / North China 3 (Zhangjiakou)
   \ (oss-cn-zhangjiakou.aliyuncs.com)
 8 / North China 5 (Hohhot)
   \ (oss-cn-huhehaote.aliyuncs.com)
 9 / North China 6 (Ulanqab)
   \ (oss-cn-wulanchabu.aliyuncs.com)
10 / South China 1 (Shenzhen)
   \ (oss-cn-shenzhen.aliyuncs.com)
11 / South China 2 (Heyuan)
   \ (oss-cn-heyuan.aliyuncs.com)
12 / South China 3 (Guangzhou)
```

```
       \ (oss-cn-guangzhou.aliyuncs.com)
13 / West China 1 (Chengdu)
       \ (oss-cn-chengdu.aliyuncs.com)
14 / Hong Kong (Hong Kong)
       \ (oss-cn-hongkong.aliyuncs.com)
15 / US West 1 (Silicon Valley)
       \ (oss-us-west-1.aliyuncs.com)
16 / US East 1 (Virginia)
       \ (oss-us-east-1.aliyuncs.com)
17 / Southeast Asia Southeast 1 (Singapore)
       \ (oss-ap-southeast-1.aliyuncs.com)
18 / Asia Pacific Southeast 2 (Sydney)
       \ (oss-ap-southeast-2.aliyuncs.com)
19 / Southeast Asia Southeast 3 (Kuala Lumpur)
       \ (oss-ap-southeast-3.aliyuncs.com)
20 / Asia Pacific Southeast 5 (Jakarta)
       \ (oss-ap-southeast-5.aliyuncs.com)
21 / Asia Pacific Northeast 1 (Japan)
       \ (oss-ap-northeast-1.aliyuncs.com)
22 / Asia Pacific South 1 (Mumbai)
       \ (oss-ap-south-1.aliyuncs.com)
23 / Central Europe 1 (Frankfurt)
       \ (oss-eu-central-1.aliyuncs.com)
24 / West Europe (London)
       \ (oss-eu-west-1.aliyuncs.com)
25 / Middle East 1 (Dubai)
       \ (oss-me-east-1.aliyuncs.com)
endpoint> 1

# 访问OSS文件的权限使用默认的
Canned ACL used when creating buckets and storing or copying objects.
Note that this ACL is applied when server-side copying objects as S3
doesn't copy the ACL from the source but rather writes a fresh one.
Enter a string value. Press Enter for the default ("").
Choose a number from below, or type in your own value
 1 / Owner gets FULL_CONTROL. No one else has access rights (default).
    \ "private"
 2 / Owner gets FULL_CONTROL. The AllUsers group gets READ access.
    \ "public-read"
    / Owner gets FULL_CONTROL. The AllUsers group gets READ and WRITE access.
[snip]
acl> 1

# 选默认即可
The storage class to use when storing new objects in OSS.
Enter a string value. Press Enter for the default ("").
Choose a number from below, or type in your own value
 1 / Default
    \ ()
 2 / Standard storage class
    \ (STANDARD)
 3 / Reduced redundancy storage class
    \ (REDUCED_REDUNDANCY)
 4 / Standard Infrequent Access storage class
    \ (STANDARD_IA)
 5 / One Zone Infrequent Access storage class
    \ (ONEZONE_IA)
 6 / Glacier storage class
```

```
      \ (GLACIER)
  7 / Glacier Deep Archive storage class
      \ (DEEP_ARCHIVE)
  8 / Intelligent-Tiering storage class
      \ (INTELLIGENT_TIERING)
  9 / Glacier Instant Retrieval storage class
      \ (GLACIER_IR)
storage_class> 1

# 不开启高级选项
Edit advanced config? (y/n)
y) Yes
n) No
y/n> n

# 最终配置结果如下
Remote config
Configuration complete.
Options:
- type: s3
- provider: Alibaba
- access_key_id: xxxxxxx你的access_key_id
- secret_access_key: yyyyyy你的secret_access_key
- endpoint: oss-accelerate.aliyuncs.com
- acl: private
- bucket_acl: private
Keep this "aliYunOss" remote?
y) Yes this is OK (default)
e) Edit this remote
d) Delete this remote
y/e/d>
```

从Aliyun OSS迁移到AWS S3

rclone [功能选项] <云存储名称:路径> <云存储名称:路径> [参数]

我们这里是云端到云端，所以选择rclone

```
rclone copy --interactive SOURCE remote:DESTINATION

# 仅包含根目录下的test目录的所有内容，
rclone copy --include "/{test}/**"
# 多个目录用逗号分隔，根目录下的test和abc目录下所有内容
rclone copy --include "/{test, abc}/**"

rclone copy -P -vv --transfers 32 --include "{test}/**" --checkers 32
aliYunOss:/bucket-251235 awsS3:/bucket-20230527
```

最后你会见到类似的成功输出

从AWS S3迁移到Aliyun OSS

跟OSS到S3类似，只是源头和目标换了个方向

```
rclone copy --interactive SOURCE remote:DESTINATION

# 仅包含根目录下的test目录的所有内容，
rclone copy --include "/{test}/**"
# 多个目录用逗号分隔，根目录下的test和abc目录下所有内容
rclone copy --include "/{test, abc}/**"

rclone copy -P -vv --transfers 32 --include "{test}/**" --checkers 32
awsS3:/bucket-20230527 aliYunOss:/bucket-251235
```

LINUX系统

除了下载的rclone程序文件与Windows不一样，其他的都一样。

下载Rclone

```
curl https://rclone.org/install.sh | sudo bash
```

配置Rclone

参考windows系统

开始迁移

参考windows系统

参考资源

rclone官网：https://rclone.org/

rclone官方文档：https://rclone.org/docs/

一个案例：https://blog.51cto.com/u_15910275/5930843

rclone官网：https://rclone.org/

rclone官方文档：https://rclone.org/docs/

一个案例：https://blog.51cto.com/u_15910275/5930843