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	1.7.3.1
	1.7.3.2
	1.7.3.3
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AmazonS3RESTful API

API

- Service
- Bucket
- Object



(BaishanCloud storage service)

CDN-X

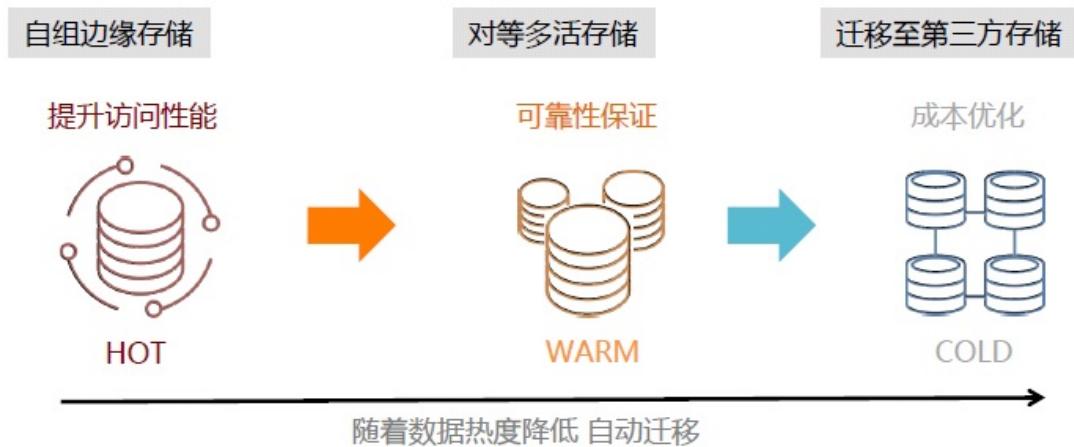
1. CDN-XCDN
- 2.
- 3.
4. 7

1. CDNCDN-XCDN
 2. Amazon S3 REST APIAmazon S3SDK,
 3. /
 - 4.
-

4

1.

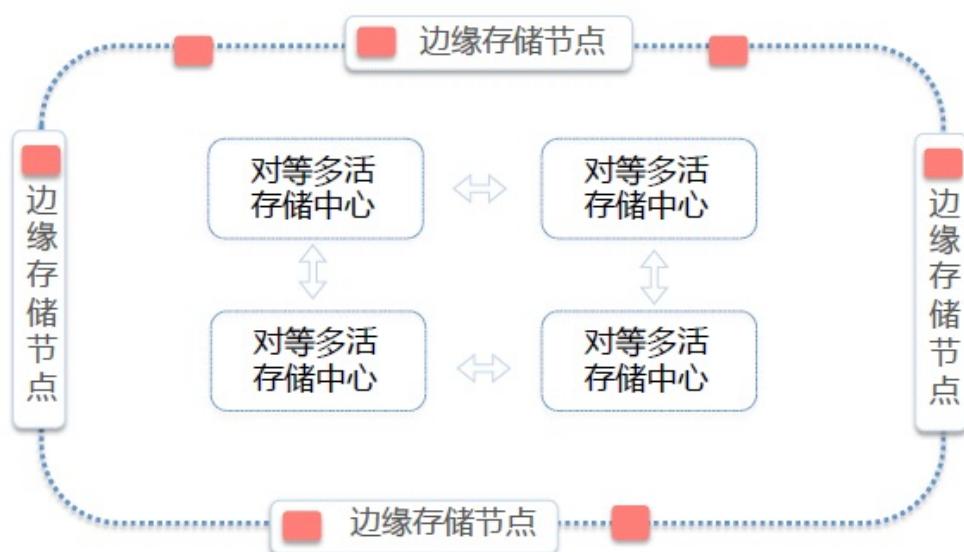
数据温度测量技术



1. IO
2. , 3 IO, , 90%IO,, 3,
3. ,,, , IO12

2.

自组边缘存储技术



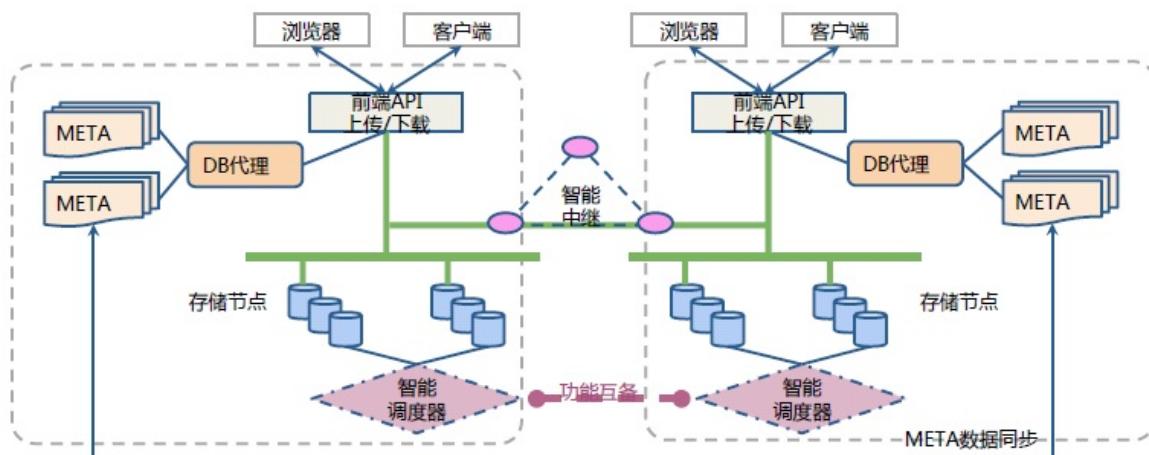
1. p2p , 128, 1000ms ,
2. 128, , ,

3. 5, , , 139

4. , , ,

3.

对等多活存储技术



1. , ,

2. ,,

3. ,

4. , , , , , 10.

5. , , ,

4.

自激质量控制技术

CPU	30秒探测	· 网络带宽
内存		· 请求数
磁盘IO	CWN-X	· 读写延迟 · 日志分析 · 服务质量

60秒	根据磁盘状态切换写入点	5分钟	检查所有副本完备性
1天	完成副本数据对比和自我修复	1个月	全量数据扫描纠错

1. paxospaxos,, , 10,, ,
2. paxos:paxospaxospaxospaxospaxos,2paxos, ,
3. :, ,
4. 605241

		100
		100PB
0		24500TB40TB
0		2410PB(1PB)
		3000

Service-Level Agreement SLA

1. 99.9999999999%139

/

50KB	300KB/	900KB/
2MB	750KB/	2MB/
4MB	1MB/	2.5MB/

Amazon S3Amazon S3SDK

		SDK
Android	AWS Mobile SDK for Android Documentation	SDK: aws-android-sdk
Browser	Getting Started with the SDK in the Browser	SDK Bower
IOS	AWS Mobile SDK iOS Developer Guid	SDK: aws-ios-sdk
Java	AWS SDK for Java Developer Guide	SDK aws-java-sdk
.NET	AWS SDK for .NET Documentation	SDK: AWSToolsAndSDKForNet.msi
Node.js	AWS SDK for JavaScript Documentation	SDK: Getting Started with the SDK in Node.js
PHP	AWS SDK for PHP Documentation	SDK: Installing via Composer
Python	Boto 3 Documentation	SDK Boto 3 - The AWS SDK for Python
Ruby	AWS SDK for Ruby	SDK AWS SDK for Ruby Developer Guide v2.16.8
Go	AWS SDK for Go	SDK aws-sdk-go
C++	AWS SDK for C++ Documentation	SDK aws-sdk-cpp

1. & CDN-X

CDN-X

- CDN
- CDN
- CDN
- CDN

CDN:

CDN

DNSCDNip

CDN-X

CDNCNAMECDN www.qq.com.i.qingcdn.comCDNs2.i.qingcdn.com

bucket

1. bucketwww.baishancloud.comwww.baishancloud.combucketCDNhost
2. bucketwww.baishancloud.comqqbucketCDNwww.baishancloud.com.s2.i.baishancloud.com
hostqq.s2.i.qingcdn.com

404

- 302location

- domain
- uriuri
-
- HEAD

:

- Cache-ControlHTTPHTTP
- CDNHTTPCache-Control

2.

BucketObject

- Bucket
- Object
-
-
- ,: baishan_yunurlPUT /baishan_yun

- baishan_yun: hello_worldurlPUT /baishan_yun/hello_world
- urlGET /baishan_yun/hello_world
- urlDELETE /baishan_yun/hello_world
- urlDELETE /baishan_yun

:

Object Object

prefix

- bucket/1.mp4
- bucket/cc/2.mp4
- bucket/cc/3.mp4
- bucket/dd/ee/ff/3.mp4

prefix cc

- 2.mp4
- 3.mp4

)API

- Object '/' file.txtbucket sandbox ,
 - object file.txt , http://s2.i.qingcdn.com/sandbox/file.txt
 - object /file.txt , http://s2.i.qingcdn.com/sandbox//file.txt
- Object '/' folderfile.txtbucket sandbox ,
 - object folder/file.txt , http://s2.i.qingcdn.com/sandbox/folder/file.txt
 - object folder//file.txt ,
http://s2.i.qingcdn.com/sandbox/folder//file.txt
 - URL2'/'CDNcache serverURL'/'/404

, Amazon S3 API (, Object "/"),

- List Objects
- Delete Object
-

- List Objects max-keys ; prefix prefix .

-

1.Bucket

```
bucket  
  
ACLACL  
ACLACL  
ACLACL
```

2.Object

```
meta  
ACLACL  
ACLACL  
ACLACL
```

bucketobject

- bucketpublic-readbucket
- bucketpublic-read-writebucketbucket
- Objectpublic-read
- CDNCDN

4:

1. SDK
2. SDK
3. 404bucket
- 4.

https

1. SSLSSL
2. <https://ss.bscstorage.combucketurl>

ftprsync

ftprsync
ftprsync

-
- ftpMac
 - cyberduck
 - Windows
 - ss3
 - browser
 - ftprsyncs3
 - cmd

3

1. uploadId, 2uploadId
2. , partNmuber
- 3.

11TB PUT10GB

1. 10GB
2. 4096
3. 1TB

HTTPBTT

2000rps/s

- SDKoffline.bscstorage.comurl http://offline_domain/bucket
- body

```
{ "Url": "http://www.abc.com/download/movie.mp4",
  "Key": "movies/2016/movie.mp4",
  "SHA1": "abcdeabcdeabcdeabcdeabcdeabcdeabcde",
  "MD5": "abcdabcdabcdabcdabcdabcdabcd",
  "CRC32": "abcdef",
  "SuccessCallbackUrl": "http://website/succ/",
  "FailureCallbackUrl": "http://website/fail/",
}
```

-

3.

flvmp4mov gop()

- imgx_manual

- 7

- CDN

- v

- useruseracceskeysecretkeyuserbucket

- acceskeysecretkeySDKdemo

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- CDN

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[TOC]

BucketObject

- Bucket
- Object
-
-
-

```
1.,: baishan_yunurlPUT /baishan_yun  
2.baishan_yun: hello_worldurlPUT /baishan_yun/hello_world  
  
3.urlGET /baishan_yun/hello_world  
4.urlDELETE /baishan_yun/hello_world  
5.urlDELETE /baishan_yun
```



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- CDNCDNCDN
- IDC
- /
- 7
- , 7*24
-
- Amazon S3Amazon S3SDK,
- Amazon S3 REST APIHTTP, Amazon S3 REST API10
- Amazon S3ACLbuckeobjectbuckeobjectACL

SDK?

- Amazon S3PythonPhpBrowserNode.js
- baishancloud_storage_apiPythonPhpBrowserNode.jsSDKAmazon S3API
- Android [AWS Mobile SDK for Android Documentation](#) SDK: [aws-android-sdk](#)
- Browser [Getting Started with the SDK in the Browser](#) SDK [Bower](#)
- ISO [AWS Mobile SDK iOS Developer Guid](#) SDK: [aws-ios-sdk](#)
- Java [AWS SDK for Java Developer Guide](#) SDK [aws-java-sdk](#)

- .NET [AWS SDK for .NET Documentation](#) [SDK: AWSToolsAndSDKForNet.msi](#)
 - Node.js [AWS SDK for JavaScript Documentation](#) [SDK: Getting Started with the SDK in Node.js](#)
 - PHP [AWS SDK for PHP Documentation](#) [SDK: Installing via Composer](#)
 - Python [Boto 3 Documentation](#) [SDK: Boto 3 - The AWS SDK for Python](#)
 - Ruby [AWS SDK for Ruby](#) [SDK: AWS SDK for Ruby Developer Guide v2.16.8](#)
 - Go [AWS SDK for Go](#) [SDK: aws-sdk-go](#)
 - C++ [AWS SDK for C++ Documentation](#) [SDK: aws-sdk-cpp](#)

Object?

Object Object

prefix

- bucket/1.mp4
 - bucket/cc/2.mp4
 - bucket/cc/3.mp4
 - bucket/dd/ee/ff/3.mp4

prefix cc

- 2.mp4
 - 3.mp4

QAPI

- Object '/' file.txtbucket sandbox ,
 - object file.txt , http://s2.i.qingcdn.com/sandbox/file.txt
 - object /file.txt , http://s2.i.qingcdn.com/sandbox//file.txt
 - Object '/' folderfile.txtbucket sandbox ,
 - object folder/file.txt , http://s2.i.qingcdn.com/sandbox/folder/file.txt
 - object folder//file.txt ,
http://s2.i.qingcdn.com/sandbox/folder//file.txt
 - URL2'/'CDNcache serverURL'/'/404

?

, Amazon S3 API (, Object "/"),,, .

- List Objects
 - Delete Object
 -

- List Objects max-keys ; prefix prefix .
-

?

CDN

- SDK
- SDK
- 404bucket
-
-

404, , ?

302,location

- domain
- uriuri
-
- HEAD

?

HTTPBT

2000rps/s

- SDKoffline.bscstorage.comurl http://offline_domain/bucket
- body

```
{ "Url":"http://www.abc.com/download/movie.mp4",
  "Key":"movies/2016/movie.mp4",
  "SHA1":"abcdeabcdeabcdeabcdeabcdeabcdeabcde",
  "MD5":"abcdabcdabcdabcdabcdabcd",
  "CRC32":"abcdef",
```

```
"SuccessCallbackUrl":"http://website/succ/",  
"FailureCallbackUrl":"http://website/fail/",  
}
```

-

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TCP

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- 1 1 TB
- PUT20GB
- - 20GB
 - 2000
 - 1TB
- 3
 - uploadId, 2uploadId
 - , partNmuber
 -
-
- Bucket
 - bucket
 -
 - ACLACL
 - ACLACL
 - ACLACL
- Object
 - meta
 - ACLACL
 - ACLACL
 - ACLACL

bucketobject()?

- bucketpublic-readbucket
- bucketpublic-read-writebucketbucket
- Objectpublic-read
- CDNCDN

•

- HTTP1.1(RFC2616)RangeContent-Range [rfc2616](#)
-

, ,

,,,,?

- imgx_manual
- 7
- CDNCDN
- v

user-agent?

?

- flvmp4mov
 - gop()
 -
-

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-
-

bucketabc/def/123.png

buckethead

bucket

bucket

?

, ,

?

CDN

DNSCDNip

cdn?

CDN,CDN

- CDN
- CDN
- CDN
- CDN
- CDN

```
CDNCNAMECDN<br/>
www.qq.com.i.qingcdn.comCDNs2.i.qingcdn.com
```

```
bucket
1bucket
```

www.qq.comwww.qq.combucketCDNhost
2bucket
www.qq.comqqbucketCDNwww.qq.com.s2.i.qingcdn.comhostqq.s2.i.qingcdn.com

https? ?

- https
- SSL
- <https://ss.bscstorage.com> bucketurl

?

?

- 139

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- -
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 -
 -
 -
 - CDN
 -
- useruseracceskeysecretkeyuserbucket
 - acceskeysecretkeySDKdemo

?

SDK

cdn ?

- CDN <http://www.qingcdn.com/account/index/login>
 -

Cache-Control HTTP

CDNHTTPCache-Control

web?

<http://console.bscstorage.com>

? ftp rsync ??

Amazon S3 REST API

SDKAmazon S3 REST API, :

- s3cmd
 - boto

ftp rsync . amazon s3 .

- ftp Mac cyberduck Windows s3browser
 - ftp rsync s3cmd aws cli

SDK

java SDKUnable to verify integrity of data upload.

Cl

content hash (contentMD5: E+6KS0B2pNPJ272XbG92fw== in base 64)

didn't match hash (etag: 359740e5918c395b6e35a2c612582e42 in hex)

calculated by Amazon S3

Java SDK “ChunkedEncoding”

```
BasicAWSCredentials awsCreds = new BasicAWSCredentials(  
    accessKey, secretKey);  
AmazonS3 s3 = new AmazonS3Client(awsCreds);  
  
s3.setS3ClientOptions(S3ClientOptions.builder().disableChunkedEncoding().build());
```

android SDK Unable to verify integrity of data upload. Client calculated content hash didn't match hash calculated by Amazon S3. You may need to delete the data stored in Amazon S3

android SDK “ChunkedEncoding” android SDK v2 “ChunkedEncoding” v4
v2

```
AWSCredentials credentials = new BasicAWSCredentials(  
    accessKey, secretKey);  
  
ClientConfiguration configuration = new ClientConfiguration();  
configuration.setSignerOverride("S3SignerType");  
  
AmazonS3 s3 = new AmazonS3Client(credentials, configuration);
```

ios SDK, Code: 403; Error Code: SignatureDoesNotMatch; Request ID: 23e338d9-1706-1410-3759-a0369fd80cca

ios SDK endpoint's3's3.amazonaws.com)s3 AWSios SDK SDK
github' <https://github.com/aws/aws-sdk-ios.git>'AWSCore/Authentication/AWSSignature.m319
'[request' setValue:contentSha256 forHTTPHeaderField:@"x-amz-content-sha256"]';'

```
chmod +x Scripts/SdkPackage.sh  
sh Scripts/Package.sh
```

AWSCoreScripts/Package.sh

```
if [ -x "Scripts/SdkPackage.sh" ]; then  
    Scripts/SdkPackage.sh AWSCore  
fi
```

frameworkbuiltFramework/frameworkAWSCore.framework

Maven Repository AWS SDK pom.xml

```
<repositories>
  <repository>
    <id>my-repo1</id>
    <name>your custom repo</name>
    <url>http://mirrors.redv.com/maven2</url>
  </repository>
</repositories>
```

SDKV2V4

java SDK

java SDK V4V2

```
import com.amazonaws.ClientConfiguration;

ClientConfiguration clientconfiguration = new ClientConfiguration();
clientconfiguration.setSignerOverride("S3SignerType");
AmazonS3 client = new AmazonS3Client(awsCreds, clientconfiguration);
```

python SDK

python SDK(boto3) V2V4

```
from botocore.client import Config

config = Config(signature_version='s3v4')
client = boto3.client(
    's3',
    aws_access_key_id = access_key,
    aws_secret_access_key = secret_key,
    config = config,
    region_name = 'us-east-1',
    endpoint_url = 'http://bscstorage.com',
)
```

php SDK

php SDK V4V2

go SDK

go SDK V4V2

JavaScript SDK

JavaScript SDK V2V4

```
AWS.config.signatureVersion = 'v4';
```


Amazon SDK

Python Demo

AWS Python boto3

```
pip install boto3
```

```
import boto3
from boto3.s3.transfer import TransferConfig

cli = boto3.client(
    's3',
    aws_access_key_id='ziw5dp1alvty9n47qksu', #access_key
    aws_secret_access_key='V+TZ5u5wNvXb+KP5g0dMNzhMeWe372/yRKx4hZV', #secret_key

    endpoint_url='http://ss.bscstorage.com'
)
```

put_object

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```
resp = cli.put_object(
    ACL='public-read',
    Bucket='test-bucket-xxx',
    Key='test-key-xxx',
    ContentType='image/jpeg', #
    Body='the content of the file as a string'
)
```

upload_file

```
config = TransferConfig(
    multipart_threshold=30 * 1024 * 1024,
    multipart_chunksize=8 * 1024 * 1024,
    max_concurrency=10
)
resp = cli.upload_file(
```

```

    '/root/test.mp4',
    'test-bucket-xxx',
    'test-key-xxx',
    ExtraArgs={
        'ContentType': 'image/jpeg', #
        'ACL': 'private',
    },
    Config=config
)

```

```

resp = cli.get_object(
    Bucket='test-bucket-xxx',
    Key='test-key-xxx'
)

```

URL

URLExpiresIn

```

url = cli.generate_presigned_url(
    'get_object',
    Params={
        'Bucket': 'test-bucket-xxx',
        'Key': 'test-key-xxx'
    },
    ExpiresIn=60
)
print url

```

```

resp = cli.delete_object(
    Bucket='test-bucket-xxx',
    Key='test-key-xxx'
)

```

ACL

```

resp = cli.get_object_acl(
    Bucket='test-bucket-xxx',
    Key='test-key-xxx'
)

```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```
resp = cli.put_object_acl(
    ACL='public-read',
    Bucket='test-bucket-xxx',
    Key='test-key-xxx'
)
```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```
resp = cli.put_object_acl(
    AccessControlPolicy={
        'Grants': [
            {
                'Grantee': {
                    'ID': 'user_foo', #
                    'Type': 'CanonicalUser',
                },
                'Permission': 'WRITE',
            },
            {
                'Grantee': {
                    'ID': 'your-user-name',
                    'Type': 'CanonicalUser',
                },
                'Permission': 'FULL_CONTROL',
            },
        ],
        'Owner': {
            'ID': 'your-user-name',
        },
    },
    Bucket='test-bucket-xxx',
    Key='test-key-xxx'
)
```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```
resp = cli.create_bucket(
    ACL='public-read',
    Bucket='test-bucket-xxx'
```

```
)
```

, 1000

```
resp = cli.list_objects(
    Bucket='test-bucket-xxx',
    Prefix='',
    Marker='',
)
```

```
marker = ''

while True:
    resp = s3.list_objects(
        Bucket='test-bucket-xxx',
        Marker=marker,
    )

    if 'Contents' not in resp:
        break

    for content in resp['Contents']:
        print 'key: %s, size: %d' % (content['Key'], content['Size'])

    marker = resp['Contents'][-1]['Key']
```

```
resp = cli.delete_bucket(
    Bucket='test-bucket-xxx'
)
```

ACL

```
resp = cli.get_bucket_acl(
    Bucket='test-bucket-xxx'
)
```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```
resp = cli.put_bucket_acl(  
    ACL='public-read',  
    Bucket='test-bucket-xxx',  
)
```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```
resp = cli.put_bucket_acl(  
    AccessControlPolicy={  
        'Grants': [  
            {  
                'Grantee': {  
                    'ID': 'user_foo', #  
                    'Type': 'CanonicalUser',  
                },  
                'Permission': 'WRITE',  
            },  
            {  
                'Grantee': {  
                    'ID': 'your-user-name',  
                    'Type': 'CanonicalUser',  
                },  
                'Permission': 'FULL_CONTROL',  
            },  
        ],  
        'Owner': {  
            'ID': 'your-user-name',  
        },  
    },  
    Bucket='test-bucket-xxx'  
)
```

```
resp = cli.list_buckets()
```

PHP Demo

- PHP >= 5.5.0

AWS SDK for PHP

```
curl -O http://docs.aws.amazon.com/aws-sdk-php/v3/download/aws.phar
```

```
require 'aws.phar';
$cli = new Aws\S3\S3Client([
    'version' => 'latest',
    'region' => 'us-east-1',
    'credentials' => [
        'key' => 'z2qutjf718d0i9gw6skc', //access_key
        'secret' => 'SEQgcc1ppH7uXPG4ZPIcrCv2cWz8grcReMfFABCn', //secret_key
    ],
    'endpoint' => 'http://ss.bscstorage.com',
]);

```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read' , 'Body'
 'SourceFile' Body "SourceFile"

```
$resp = $cli->putObject([
    'ACL' => 'public-read',
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
    'ContentType' => 'image/jpeg', //
    'Body' => 'file content as a string',
    //'SourceFile' => '/root/test.jpg',
]);

```

```
$resp = $cli->getObject([
```

```
'Bucket' => 'test-bucket-xxx',
'Key' => 'test-key-xxx',
]);
```

URL

URL

```
$cmd = $cli->getCommand('GetObject', [
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
]);
$req = $s3->createPresignedRequest($cmd, '+10 seconds');
$url = (string) $req->getUri();
```

```
$resp = $cli->deleteObject([
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
]);
```

ACL

```
$resp = $cli->getObjectAcl([
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
]);
```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```
$resp = $cli->putObjectAcl([
    'ACL' => 'public-read-write',
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
]);
```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```
$resp = $cli->putObjectAcl([
    'AccessControlPolicy' => [
```

```

'Grants' => [
    [
        'Grantee' => [
            'ID' => 'user_foo', //
            'Type' => 'CanonicalUser',
        ],
        'Permission' => 'WRITE',
    ],
    [
        'Grantee' => [
            'ID' => 'your-user-name',
            'Type' => 'CanonicalUser',
        ],
        'Permission' => 'FULL_CONTROL',
    ],
],
'Owner' => [
    'ID' => 'your-user-name',
],
],
'Bucket' => 'test-bucket-xxx',
'Key' => 'test-key-xxx',
]);

```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```

$resp = $cli->createBucket([
    'Bucket' => 'test-bucket-xxx',
    'ACL' => 'public-read',
]);

```

, 1000

```

$resp = $cli->listObjects([
    'Bucket' => 'test-bucket-xxx',
    'Prefix' => '',
    'Marker' => '',
]);

```

```
$marker = '';
```

```

while (true):
    $resp = $cli->listObjects([
        'Bucket' => 'test-bucket-xxx',
        'Marker' => $marker,
    ]);

    if($resp['Contents'] == NULL)
    {
        break;
    }

    foreach($resp['Contents'] as $content)
    {
        var_dump($content['Key']);
        $marker = $content['Key'];
    }
endwhile;

```

```

$resp = $cli->deleteBucket([
    'Bucket' => 'test-bucket-xxx',
]);

```

ACL

```

$resp = $cli->getBucketAcl([
    'Bucket' => 'test-bucket-xxx',
]);

```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```

$resp = $cli->putBucketAcl([
    'ACL' => 'public-read-write',
    'Bucket' => 'test-bucket-xxx',
]);

```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```

$resp = $cli->putBucketAcl([
    'AccessControlPolicy' => [

```

```
'Grants' => [
    [
        'Grantee' => [
            'ID' => 'user_foo', //
            'Type' => 'CanonicalUser',
        ],
        'Permission' => 'WRITE',
    ],
    [
        'Grantee' => [
            'ID' => 'your-user-name',
            'Type' => 'CanonicalUser',
        ],
        'Permission' => 'FULL_CONTROL',
    ],
],
'Owner' => [
    'ID' => 'your-user-name',
],
],
'Bucket' => 'test-bucket-xxx',
]);
```

```
$resp = $cli->listBuckets([
]);
```

AWS SDK [aws-sdk-php](#) [api-reference](#)

PHP Demo (v2)

- PHP 5.3.3+ compiled with the cURL, JSON, and XML extensions
- A recent version of cURL 7.16.2+ compiled with OpenSSL and zlib

AWS SDK for PHP

```
curl -O http://docs.aws.amazon.com/aws-sdk-php/v2/download/aws.phar
```

```
require 'aws.phar';

$cli = Aws\S3\S3Client::factory(array(
    'endpoint' => 'http://ss.bscstorage.com',
    'credentials' => array(
        'key' => 'your access key',
        'secret' => 'your secret key',
    ),
    'region' => 'us-east-1',
));

```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read' Body

```
$resp = $cli->putObject(array(
    'ACL' => 'public-read',
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
    'ContentType' => 'image/jpeg',
    'Body' => 'file content as a string'
));
```

upload

```
$resp = $cli->upload('test-bucket-xxx',
    'test-key-xxx', fopen('path/to/my/file/test.txt', 'r'));
```

, bucket

```
$resp = $cli->uploadDirectory('/root/mydata_dir',
    'test-bucket-xxx',
    ''
);
```

```
$resp = $cli->getObject(array(
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
));
```

, bucket

```
$resp = $cli->downloadBucket('/root/download_dir',
    'test-bucket-xxx',
    ''
);
```

URL

URL

```
$cmd = $cli->getCommand('GetObject', array(
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
));
$url = $cmd->createPresignedUrl('+100 seconds');
```

```
$resp = $cli->deleteObject(array(
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
));
```

ACL

```
$resp = $cli->getObjectAcl(array(
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
));
```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```
$resp = $cli->putObjectAcl(array(
    'ACL' => 'public-read-write',
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
));
```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```
$resp = $cli->putObjectAcl(array(
    'Grants' => array(
        array(
            'Grantee' => array(
                'ID' => 'user_foo', //
                'Type' => 'CanonicalUser',
            ),
            'Permission' => 'FULL_CONTROL',
        ),
    ),
    'Owner' => array(
        'ID' => 'your-user-name',
    ),
    'Bucket' => 'test-bucket-xxx',
    'Key' => 'test-key-xxx',
));
```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```
$resp = $cli->createBucket(array(
    'Bucket' => 'test-bucket-xxx',
    'ACL' => 'public-read',
));
```

, 1000

```
$resp = $cli->listObjects(array(
    'Bucket' => 'test-bucket-xxx',
```

```
'Prefix' => '',
'Marker' => '',
));
```

```
$marker = '';
while (true):
    $resp = $cli->listObjects(array(
        'Bucket' => 'test-bucket-xxx',
        'Marker' => $marker,
    ));

    if($resp['Contents'] == NULL)
    {
        break;
    }

    foreach($resp['Contents'] as $content)
    {
        var_dump($content['Key']);
        $marker = $content['Key'];
    }
endwhile;
```

```
$resp = $cli->deleteBucket(array(
    'Bucket' => 'test-bucket-xxx',
));
```

ACL

```
$resp = $cli->getBucketAcl(array(
    'Bucket' => 'test-bucket-xxx',
));
```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```
$resp = $cli->putBucketAcl(array(
    'ACL' => 'public-read-write',
    'Bucket' => 'test-bucket-xxx',
));
```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```
$resp = $cli->putBucketAcl(array(
    'Grants' => array(
        array(
            'Grantee' => array(
                'ID' => 'user_foo', //
                'Type' => 'CanonicalUser',
            ),
            'Permission' => 'FULL_CONTROL',
        ),
    ),
    'Owner' => array(
        'ID' => 'your-user-name',
    ),
    'Bucket' => 'test-bucket-xxx',
));

```

```
$resp = $cli->listBuckets();
```

AWS SDK [aws-sdk-php](#) [api-reference](#)

JavaScript Demo

```

<html>
<!---->
<!---->
<textarea id="data"></textarea>
<button id="upload-button">Upload to S3</button>
<div id="results"></div>
<script src='https://sdk.amazonaws.com/js/aws-sdk-2.5.0.min.js'></script>
<script type="text/javascript">
    AWS.config.update({
        accessKeyId: 'ziw5dp1alvty9n47qksu',      <!--access key-->
        secretAccessKey: 'V+TZ5u5wNvXb+KP5g0dMNzhMeWe372/yRKx4hZV'     <!--secret k
ey-->
    });
    AWS.config.region = 'us-west-1';
    AWS.config.endpoint = 'http://ss.bscstorage.com';
    AWS.config.s3ForcePathStyle = true

    var bucket_name = 'test-bucket'      <!--bucket-->

    var s3 = new AWS.S3({
        params: {
            Bucket: bucket_name
        }
    });

    var textarea = document.getElementById('data');
    var button = document.getElementById('upload-button');
    var results = document.getElementById('results');

    button.addEventListener('click', function() {
        results.innerHTML = '';

        var params = {
            Key: 'data.txt',
            Body: textarea.value
        };
        s3.upload(params, function(err, data) {
            results.innerHTML = err ? 'ERROR!' : 'SAVED.';

            s3.listObjects({
                Bucket: bucket_name
            }, function(err, data) {
                if (err) {
                    console.log(err);
                } else {

```

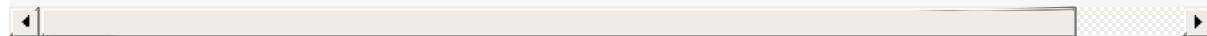
```

        console.log(data);
    }

});

s3.getObject({
    Bucket: bucket_name,
    Key: 'data.txt'
}, function(err, data) {
    if (err) {
        console.log(err);
    } else {
        console.log(data);
    }
});

}, false);
</script>
</html>
```



```

<html>
<!--URL-->
<!---->
<input type="file" id="file-chooser" />
<button id="upload-button">Upload to S3</button>
<div id="results"></div>
<div id="signed_url"></div>

<script src='https://sdk.amazonaws.com/js/aws-sdk-2.5.0.min.js'></script>
<script type="text/javascript">

<!--access key secret key-->
AWS.config.update({accessKeyId: 'ziw5dp1alvty9n47qksu', secretAccessKey: 'V+TZ5u
5wNvXb+KP5g0dMNzhMeWe372/yRKx4hZV'});
AWS.config.region = 'us-west-1';
AWS.config.endpoint = 'http://ss.bscstorage.com';
AWS.config.s3ForcePathStyle = true

var bucket_name = 'test-bucket'      <!--bucket-->

var s3 = new AWS.S3({params: {Bucket: bucket_name}});

var fileChooser = document.getElementById('file-chooser');
var button = document.getElementById('upload-button');
var results = document.getElementById('results');
var signed_url = document.getElementById('signed_url')
```

```
button.addEventListener('click', function() {
  var file = fileChooser.files[0];
  if (file) {
    results.innerHTML = '';
    signed_url.innerHTML = '';

    var params = {Key: file.name, ContentType: file.type, Body: file};
    s3.upload(params, function (err, data) {
      var params_get = { Bucket: bucket_name, Key: file.name, Expires: 60 };
      var url = s3.getSignedUrl('getObject', params_get, function(err, url) {
        signed_url.innerHTML = err ? 'ERROR!' : 'retrive the file use this signed url: ' + url;
      });
      results.innerHTML = err ? 'ERROR!' : 'UPLOADED.';
    });
  } else {
    results.innerHTML = 'Nothing to upload.';
  }
}, false);
</script>
</html>
```

AWS SDK [aws-sdk-browser](#)

Node.js Demo

AWS SDK for JavaScript in Node.js

```
npm install aws-sdk
```

```
var AWS = require('aws-sdk');
var fs = require('fs');

AWS.config.accessKeyId = 'ziw5dp1alvty9n47qksu'; //access_key
AWS.config.secretAccessKey = 'V+TZ5u5wNvXb+KP5g0dMNzhMeWe372/yRKx4hZV'; //secret_key
AWS.config.region = 'us-west-1';
AWS.config.endpoint = 'http://ss.bscstorage.com';
AWS.config.s3ForcePathStyle = true

var s3 = new AWS.S3();
```

putObject

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```
var params = {
  Bucket: 'test-bucket-xxx',
  Key: 'test-key-xxx',
  ACL: 'public-read',
  Body: new Buffer('blablabla')
};
s3.putObject(params, function(err, data) {
  if (err) console.log(err, err.stack);
  else console.log(data);
});
```

upload

```
var file_stream = fs.createReadStream('/root/test.mp4')
var params = {
```

```

    Bucket: 'test-bucket-xxx',
    Key: 'test-key-xxx',
    Body: file_stream,
    ACL: 'public-read'
}
var options = {partSize: 10 * 1024 * 1024, queueSize: 10}
s3.upload(params, options, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});

```

```

var params = {
    Bucket: 'test-bucket-xxx',
    Key: 'test-key-xxx'
};
s3.getObject(params, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});

```

URL

URLExpires

```

var params = {
    Bucket: 'test-bucket-xxx',
    Key: 'test-key-xxx',
    Expires: 60
};
var url = s3.getSignedUrl('getObject', params);
console.log('The URL is', url);

```

```

var params = {
    Bucket: 'test-bucket-xxx',
    Key: 'test-key-xxx'
};
s3.deleteObject(params, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});

```

ACL

```

var params = {
  Bucket: 'test-bucket-xxx',
  Key: 'test-key-xxx'
};
s3.getObjectAcl(params, function(err, data) {
  if (err) console.log(err, err.stack);
  else console.log(data);
});

```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```

var params = {
  Bucket: 'test-bucket-xxx',
  Key: 'test-key-xxx',
  ACL: 'public-read'
};
s3.putObjectAcl(params, function(err, data) {
  if (err) console.log(err, err.stack);
  else console.log(data);
});

```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```

var params = {
  Bucket: 'test-bucket-xxx',
  Key: 'test-key-xxx',
  AccessControlPolicy: {
    Grants: [
      {
        Grantee: {
          Type: 'CanonicalUser',
          ID: 'user-foo'
        },
        Permission: 'WRITE'
      },
      {
        Grantee: {
          Type: 'CanonicalUser',
          ID: 'your-user-name'
        },
        Permission: 'FULL_CONTROL'
      },
    ],
  }
};

```

```

        Owner: {
            ID: 'your-user-name'
        }
    }
};

s3.putObjectAcl(params, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});

```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```

var params = {
    Bucket: 'test-bucket-xxx',
    ACL: 'public-read'
};
s3.createBucket(params, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});

```

```

var params = {
    Bucket: 'test-bucket-xxx',
};
s3.listObjects(params, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});

```

```

var params = {
    Bucket: 'test-bucket-xxx',
};
s3.deleteBucket(params, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});

```

ACL

```

var params = {
  Bucket: 'test-bucket-xxx',
};
s3.getBucketAcl(params, function(err, data) {
  if (err) console.log(err, err.stack);
  else console.log(data);
});

```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```

var params = {
  Bucket: 'test-bucket-xxx',
  ACL: 'public-read'
};
s3.putBucketAcl(params, function(err, data) {
  if (err) console.log(err, err.stack);
  else console.log(data);
});

```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```

var params = {
  Bucket: 'test-bucket-xxx',
  AccessControlPolicy: {
    Grants: [
      {
        Grantee: {
          Type: 'CanonicalUser',
          ID: 'user-foo'
        },
        Permission: 'WRITE'
      },
      {
        Grantee: {
          Type: 'CanonicalUser',
          ID: 'your-user-name'
        },
        Permission: 'FULL_CONTROL'
      },
    ],
    Owner: {
      ID: 'your-user-name'
    }
}

```

```
        }
    };
s3.putBucketAcl(params, function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});
```

```
s3.listBuckets(function(err, data) {
    if (err) console.log(err, err.stack);
    else console.log(data);
});
```

[AWS SDK](#) [aws-sdk-node.js](#) [api-reference](#)

Java Demo

AWS Java SDK

mavenpom.xml

```
<dependencyManagement>
    <dependencies>
        <dependency>
            <groupId>com.amazonaws</groupId>
            <artifactId>aws-java-sdk-bom</artifactId>
            <version>1.11.77</version>
            <type>pom</type>
            <scope>import</scope>
        </dependency>
    </dependencies>
</dependencyManagement>

<dependencies>
    <dependency>
        <groupId>com.amazonaws</groupId>
        <artifactId>aws-java-sdk-s3</artifactId>
    </dependency>
</dependencies>
```

```
package com.baishancloud.sdk_test;

import java.io.*;
import java.util.ArrayList;
import java.util.List;
import com.google.gson.*;
import com.amazonaws.auth.BasicAWSCredentials;
import com.amazonaws.services.s3.AmazonS3;
import com.amazonaws.services.s3.AmazonS3Client;
import com.amazonaws.regions.Region;
import com.amazonaws.regions.Regions;
import com.amazonaws.services.s3.S3ClientOptions;
import com.amazonaws.services.s3.model.*;
import com.amazonaws.ClientConfiguration;

public class App
{
    private static String endPoint = "http://ss.bscstorage.com";
    private static String accessKey = "ziw5dp1alvty9n47qksu"; //access key
    private static String secretKey = "V+TZ5u5wNvXb+KP5g0dMNzhMeWe372/yRKx4hZV"; /
```

```

秘密 key

public static void main( String[] args )
{
    BasicAWSCredentials awsCreds = new BasicAWSCredentials(
        accessKey, secretKey);

    ClientConfiguration clientconfiguration = new ClientConfiguration();
    clientconfiguration.setSocketTimeout(60 * 60 * 1000); // in milliseconds
    clientconfiguration.setConnectionTimeout(60 * 60 * 1000); // in milliseconds

    AmazonS3 s3 = new AmazonS3Client(awsCreds, clientconfiguration);

    s3.setRegion(Region.getRegion(Regions.US_EAST_1));
    s3.setEndpoint(endPoint);
    s3.setS3ClientOptions(S3ClientOptions.builder().setPathStyleAccess(true)
        .disableChunkedEncoding().build()); //ChunkedEncoding
}
}

```

```

String file_content = "bla bla";
InputStream inputStream = new ByteArrayInputStream(file_content.getBytes());

ObjectMetadata objectMetadata = new ObjectMetadata();
objectMetadata.setContentType("image/jpeg"); //
objectMetadata.addUserMetadata("key-foo", "value_bar");

PutObjectRequest putObjectrequest = new PutObjectRequest(
    "test-bucket", "test-key", inputStream, objectMetadata);

//ACL
putObjectrequest.setCannedAcl(CannedAccessControlList.PublicReadWrite);

//AccessControlList accessControlList = new AccessControlList();
//accessControlList.setOwner(new Owner("your_user_id", ""));
//accessControlList.grantPermission(GroupGrantee.AllUsers, Permission.Read);
//accessControlList.grantPermission(GroupGrantee.AllUsers, Permission.ReadAcp);
//accessControlList.grantPermission(GroupGrantee.AuthenticatedUsers, Permission.Write);
//putObjectrequest.setAccessControlList(accessControlList);

PutObjectResult putObjectResult = s3.putObject(putObjectrequest);

```

```

GetObjectRequest getObjectRequest = new GetObjectRequest("test-bucket", "test-key")
;
S3Object s3object = s3.getObject(getObjectRequest);

System.out.println(s3object.getObjectMetadata().getUserMetadata().get("key-foo"));
byte[] buf = new byte[1024];
try {
    int n = s3object.getObjectContent().read(buf, 0, 1024);
    System.out.println(new String(buf, "UTF-8"));
} catch (IOException e) {
    System.out.println("errr");
}

```

```

GetObjectRequest getObjectRequest = new GetObjectRequest("test-bucket", "test-key")
;
ObjectMetadata meta = s3.getObject(getObjectRequest, new File("/root/test.down"));

```

URL

URL

```

URL url = s3.generatePresignedUrl("test-bucket", "test-key",
                                   new Date(116, 11, 17)); //20161217
System.out.println(url.toString());

```

```

s3.deleteObject("test-bucket", "test_key");

```

ACL

```

AccessControlList accessControlList = s3.getObjectAcl("test-bucket", "test-key");

```

ACL

ACL

```

s3.setObjectAcl(bucketName, "test-key", CannedAccessControlList.AuthenticatedRead);

```

ACL

```

AccessControlList accessControlList = new AccessControlList();
accessControlList.setOwner(new Owner("your_user_id", ""));

accessControlList.grantPermission(GroupGrantee.AuthenticatedUsers, Permission.Write);
accessControlList.grantPermission(GroupGrantee.LogDelivery, Permission.FullControl);
;
accessControlList.grantPermission(new CanonicalGrantee("some_user_id"), Permission.Read);
accessControlList.grantPermission(new EmailAddressGrantee("some_email@some.com"), Permission.WriteAcp);

s3.setObjectAcl("test-bucket", "test-key", accessControlList);

```

```

CreateBucketRequest createBucketRequest = new CreateBucketRequest("test-bucket");
createBucketRequest.withCannedAcl(CannedAccessControlList.PublicRead);

Bucket bucket = s3.createBucket(createBucketRequest);

```

, 1000

```

ListObjectsRequest listObjectsRequest = new ListObjectsRequest();
listObjectsRequest.setBucketName("test-bucket");
listObjectsRequest.setMarker("foo"); //key
listObjectsRequest.setPrefix("foo"); //"foo"key
listObjectsRequest.setDelimiter("/"); //keys
listObjectsRequest.setMaxKeys(200); //200

ObjectListing objectListing = s3.listObjects(listObjectsRequest);

```

```

String marker = "";

ListObjectsRequest listObjectsRequest = new ListObjectsRequest();
listObjectsRequest.setBucketName("test-bucket");
listObjectsRequest.setMarker(marker);

while (true)
{
    ObjectListing objectListing = s3.listObjects(listObjectsRequest);

```

```

List<S3ObjectSummary> contents = new ArrayList<S3ObjectSummary>();
contents = objectListing.getObjectSummaries();

if (contents.size() == 0)
{
    break;
}

for (S3ObjectSummary content: contents)
{
    String key = content.getKey();
    long size = content.getSize();
    System.out.format("key: %s, size: %d\n", key, size);
    listObjectsRequest.setMarker(key);
}
}

```

```
s3.deleteBucket("test-bucket");
```

ACL

```
AccessControlList accessControlList = s3.getBucketAcl("test-bucket");
```

ACL

ACL

```
s3.setBucketAcl("test-bucket", CannedAccessControlList.AuthenticatedRead);
```

ACL

```

AccessControlList accessControlList = new AccessControlList();
accessControlList.setOwner(new Owner("your_user_id", ""));

accessControlList.grantPermission(GroupGrantee.AuthenticatedUsers, Permission.Write
);
accessControlList.grantPermission(GroupGrantee.LogDelivery, Permission.FullControl)
;
accessControlList.grantPermission(new CanonicalGrantee("some_user_id"), Permission.
Read);
accessControlList.grantPermission(new EmailAddressGrantee("some_email@some.com"), P
ermission.WriteAcp);

s3.setBucketAcl("test-bucket", accessControlList);

```

```
List<Bucket> allBuckets = new ArrayList<Bucket>();
allBuckets = s3.listBuckets();
```

[AWS SDK](#) [aws-sdk-java](#) [api-reference](#)

Go Demo

AWS Go SDK

```
go get -u github.com/aws/aws-sdk-go/...
```

```
package main

import "fmt"
import "time"
import "bytes"
import "os"
import "github.com/aws/aws-sdk-go/aws"
import "github.com/aws/aws-sdk-go/service/s3"
import "github.com/aws/aws-sdk-go/service/s3/s3manager"
import "github.com/aws/aws-sdk-go/aws/session"
import "github.com/aws/aws-sdk-go/aws/credentials"

var access_key = "ziw5dp1alvty9n47qksu" //access key
var secret_key = "V+TZ5u5wNvXb+KP5g0dMNzhMeWe372/yRKx4hZV" //secret key
var token = ""
var end_point = "http://ss.bscstorage.com"

func main() {
    credential := credentials.NewStaticCredentials(access_key, secret_key, token)

    config := aws.NewConfig().WithRegion("us-east-1").
        WithEndpoint(end_point).
        WithCredentials(credential).WithS3ForcePathStyle(true)

    sess := session.New(config)
    svc := s3.New(sess)
    uploader := s3manager.NewUploader(sess)
    downloader := s3manager.NewDownloader(sess)
}
```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```
params := &s3.PutObjectInput{
```

```

Bucket: aws.String("test-bucket"),
Key: aws.String("test-key"),
ACL: aws.String("public-read"),
ContentType: aws.String("image/jpeg"), //
Body: bytes.NewReader([]byte("bla bla")),
Metadata: map[string]*string{
    "key-foo": aws.String("value-bar"),
},
}

resp, err := svc.PutObject(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

uploader

```

f, err := os.Open("/root/test.txt")
if err != nil {
    fmt.Println("open file error")
    return
}

params := &s3manager.UploadInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),
    Body: f,
}

result, err := uploader.Upload(params)
if err != nil {
    fmt.Println("upload file error")
    return
}
fmt.Printf("file uploaded to: %s\n", result.Location)

```

```

params := &s3.GetObjectInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),
}

resp, err := svc.GetObject(params)
if err != nil {
    fmt.Println(err.Error())
    return
}

```

```

    }
    buf := new(bytes.Buffer)
    buf.ReadFrom(resp.Body)
    fmt.Println(buf.String())
}

```

downloader

```

f, err := os.Create("/root/test.txt.download")
if err != nil {
    fmt.Println("create file error")
    return
}

params := &s3.GetObjectInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),
}

n, err := downloader.Download(f, params)
if err != nil {
    fmt.Println("download file error")
    return
}
fmt.Printf("file download %d bytes\n", n)
}

```

URL

URL

```

params := &s3.GetObjectInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),
}
req, _ := svc.GetObjectRequest(params)
url, _ := req.Presign(300 * time.Second) //300
fmt.Println(url)
}

```

```

params := &s3.DeleteObjectInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),
}
resp, err := svc.DeleteObject(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
}

```

```
fmt.Println(resp)
```

ACL

```
params := &s3.GetObjectAclInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),
}

resp, err := svc.GetObjectAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)
```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```
params := &s3.PutObjectAclInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),
    ACL: aws.String("private"),
}

resp, err := svc.PutObjectAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)
```

GrantACL

```
params := &s3.PutObjectAclInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),

    GrantFullControl: aws.String("id=your_user_id"),
    GrantRead: aws.String("uri=\"http://acs.amazonaws.com/groups/global/AllUsers\""),
},
    GrantReadACP: aws.String("id=some_user_id, id=another_user_id"),
    GrantWrite: aws.String("uri=\"http://acs.amazonaws.com/groups/global/AuthenticatedUsers\""),
    GrantWriteACP: aws.String("emailAddress=\"some_email@some.com\", id=some_user_i
```

```

d"),
}

resp, err := svc.PutObjectAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```

params := &s3.PutObjectAclInput{
    Bucket: aws.String("test-bucket"),
    Key: aws.String("test-key"),

    AccessControlPolicy: &s3.AccessControlPolicy{
        Grants: []*s3.Grant{
            {
                Grantee: &s3.Grantee{
                    Type: aws.String("CanonicalUser"),
                    DisplayName: aws.String(""),
                    ID: aws.String("some_user_id"),
                },
                Permission: aws.String("FULL_CONTROL"),
            },
            {
                Grantee: &s3.Grantee{
                    Type: aws.String("Group"),
                    URI: aws.String("http://acs.amazonaws.com/groups/global/AllUsers"),
                },
                Permission: aws.String("READ"),
            },
            {
                Grantee: &s3.Grantee{
                    Type: aws.String("AmazonCustomerByEmail"),
                    DisplayName: aws.String(""),
                    EmailAddress: aws.String("some_email@some.com"),
                },
                Permission: aws.String("READ"),
            },
        },
        Owner: &s3.Owner{
            DisplayName: aws.String(""),
            ID: aws.String("your_user_id"),
        },
    },
}

```

```

}

resp, err := svc.PutObjectAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

ACL'private' 'public-read' 'public-read-write' 'authenticated-read'

```

params := &s3.CreateBucketInput{
    Bucket: aws.String("test-bucket"),
    ACL: aws.String("public-read"),
}

resp, err := svc.CreateBucket(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

, 1000

```

params := &s3.ListObjectsInput{
    Bucket: aws.String("test-bucket"),
    Marker: aws.String("foo"), //key
    Prefix: aws.String("foo"), ///"foo"key
    Delimiter: aws.String("/"), //keys
    MaxKeys: aws.Int64(200), //200
}

resp, err := svc.ListObjects(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

```
marker := ""
```

```

for {
    params := &s3.ListObjectsInput{
        Bucket: aws.String("test-bucket"),
        Marker: aws.String(marker),
    }

    resp, err := svc.ListObjects(params)
    if err != nil {
        fmt.Println(err.Error())
        return
    }

    if len(resp.Contents) == 0 {
        break;
    }

    for _, content := range resp.Contents {
        fmt.Printf("key:%s, size:%d\n", *content.Key, *content.Size)
        marker = *content.Key
    }
}

```

```

params := &s3.DeleteBucketInput{
    Bucket: aws.String("test-bucket"),
}
resp, err := svc.DeleteBucket(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

ACL

```

params := &s3.GetBucketAclInput{
    Bucket: aws.String("test-bucket"),
}
resp, err := svc.GetBucketAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

ACL

ACL

ACL'private', 'public-read', 'public-read-write' 'authenticated-read'

```
params := &s3.PutBucketAclInput{
    Bucket: aws.String("test-bucket"),
    ACL: aws.String("public-read-write"),
}

resp, err := svc.PutBucketAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)
```

GrantACL

```
params := &s3.PutBucketAclInput{
    Bucket: aws.String("test-bucket"),

    GrantFullControl: aws.String("id=your_user_id"),
    GrantRead: aws.String("uri=\"http://acs.amazonaws.com/groups/global/AllUsers\""),
    GrantReadACP: aws.String("id=some_user_id, id=another_user_id"),
    GrantWrite: aws.String("uri=\"http://acs.amazonaws.com/groups/global/AuthenticatedUsers\""),
    GrantWriteACP: aws.String("emailAddress=\"some_email@some.com\", id=some_user_id"),
}

resp, err := svc.PutBucketAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)
```

ACL

Permission'FULL_CONTROL', 'WRITE', 'WRITE_ACP', 'READ', 'READ_ACP'

```
params := &s3.PutBucketAclInput{
    Bucket: aws.String("test-bucket"),

    AccessControlPolicy: &s3.AccessControlPolicy{
        Grants: []*s3.Grant{
            {
                Grantee: &s3.Grantee{
```

```

        Type: aws.String("CanonicalUser"),
        DisplayName: aws.String(""),
        ID: aws.String("some_user_id"),
    },
    Permission: aws.String("FULL_CONTROL"),
},
{
    Grantee: &s3.Grantee{
        Type: aws.String("Group"),
        URI: aws.String("http://acs.amazonaws.com/groups/global/AllUsers"),
    },
    Permission: aws.String("READ"),
},
{
    Grantee: &s3.Grantee{
        Type: aws.String("AmazonCustomerByEmail"),
        DisplayName: aws.String(""),
        EmailAddress: aws.String("some_email@some.com"),
    },
    Permission: aws.String("READ"),
},
},
Owner: &s3.Owner{
    DisplayName: aws.String(""),
    ID: aws.String("your_user_id"),
},
},
}

resp, err := svc.PutBucketAcl(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```

```

var params *s3.ListBucketsInput
resp, err := svc.ListBuckets(params)
if err != nil {
    fmt.Println(err.Error())
    return
}
fmt.Println(resp)

```


●

- bucketobject keymetaACLUTF-8=
- urlrawurlencode
- object key“/”rawurlencode

●

APIbucketobject

bucket:

-
- “-”6~63;
- ‘-’;
- ‘_’;
- xxx.foo.com.cn

object:

- key512
- key“/”rawurlencode

- httpAccessKey
- httpAccessKeyAccessKeyAccessKey AccessKeyAccessKeySecretKey SecretKeyhttpSecretKeySecretKey
- Authorization
- Amazon S3signature version 2 signature version 4

SDKsSDK

version 2

Authorization

```
Authorization: AWS AWSAccessKeyId:Signature
```

- AWSAccessKeyId: AccessKey
- Signature:

```
Authorization: AWS ziw5dp1alvty9n47qksu:frJIUN8DYpKDtOLCwo//yllqDzg=
```

- AWSAccessKeyIdAccessKey
- Signature
- Expires

```
GET /yourbucket/yourkey?AWSAccessKeyId=ziw5dp1alvty9n47qksu&Expires=1141889120&Signature=vjbyPxybdZaNmGa%2ByT272YEAiv4%3D
```

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

StringToSign = HTTP-Verb + "\n" +
    Content-MD5 + "\n" +
    Content-Type + "\n" +
    Date|Expires + "\n" +
    CanonicalizedAmzHeaders +
    CanonicalizedResource
```

- YourSecretKey: SecretKey
- HTTP-Verb: PUT GET DELETE POST
- Content-MD5: Content-MD5
- Content-Type: Content-Type
- Date|Expires: AuthorizationDateDateExpires
- CanonicalizedAmzHeaders: x-amz-,
- CanonicalizedResource:

CanonicalizedHeaders

```
Date: Tue, 27 Mar 2007 19:36:42 +0000
X-Amz-b: Bar
x-amz-a: foob
x-Amz-a: fooa
Host: johnsmith.s3.amazonaws.com

CanonicalizedAmzHeaders
x-amz-a:fooa,foob
x-amz-b:Bar
```

1.23

CanonicalizedResource

```
GET /?foo=bar
GET /yourbucket/yourkey?foo=bar
GET /yourbucket/yourkey?acl&foo=bar

nicalizedResource
```

```
/yourbucket/yourkey
/yourbucket/yourkey?acl
```

-
-
- <http://docs.aws.amazon.com/AmazonS3/latest/dev/RESTAuthentication.html>
 - <http://docs.aws.amazon.com/general/latest/gr/signature-version-2.html>

version 4

Authorization

```
Authorization: AWS4-HMAC-SHA256 Credential=ziw5dp1alvty9n47qksu/20160830/us-east-1/  
s3/aws4_request, SignedHeaders=content-type;host;x-amz-date, Signature=5d672d79c15b  
13162d9279b0855cfba6789a8edb4c82c400e06b5924a6f2b5d7
```

- CredentialAccessKeyregion `aws4_request`
 - SignedHeaders:
 - Signature:
-
- X-Amz-Algorithm: Hash `AWS4-HMAC-SHA256`
 - X-Amz-Credential: AccessKeyregion
 - X-Amz-Date:
 - X-Amz-Expires:
 - X-Amz-SignedHeaders:
 - X-Amz-Signature:

```
GET /yourbucket/test.mp4??X-Amz-Algorithm=AWS4-HMAC-SHA256&&X-Amz-Credential=ziw5dp  
1alvty9n47qksu/20160830/us-east-1/s3/aws4_request&X-Amz-Date=20160830T201207Z&X-Amz  
-Expires=86400&X-Amz-SignedHeaders=host&X-Amz-Signature=5d672d79c15b13162d9279b0855  
cfba6789a8edb4c82c400e06b5924a6f2b5d7
```

CanonicalRequest

```

CanonicalRequest =
    HTTPRequestMethod + '\n' +
    CanonicalURI + '\n' +
    CanonicalQueryString + '\n' +
    CanonicalHeaders + '\n' +
    SignedHeaders + '\n' +
    HexEncode(Hash(RequestPayload))

```

- HTTPRequestMethod: PUT , GET , DELETE , POST
- CanonicalURI: uri
- CanonicalQueryString:
- CanonicalHeaders:
- SignedHeaders
- HexEncode(Hash(RequestPayload))bodyhash16, UNSIGNED-PAYLOAD

StringToSign

```

StringToSign =
    Algorithm + '\n' +
    RequestDate + '\n' +
    CredentialScope + '\n' +
    HashedCanonicalRequest

```

- Algorithm: AWS4-HMAC-SHA256
- RequestDate: ISO8601 basic 20160830T123600Z
- CredentialScope: region 20160830/us-east-1/s3/aws4_request
- HashedCanonicalRequest: Hex(SHA256Hash(CanonicalRequest)),CanonicalRequesthash16

signing key

```

kSecret = YourSecretKey
kDate = HMAC("AWS4" + kSecret, Date)
kRegion = HMAC(kDate, Region)
kService = HMAC(kRegion, Service)
kSigning = HMAC(kService, "aws4_request")

```

- YourSecretKey: SecretKey
- Date8CredentailDate
- Region Credentialregion
- Service: Credential

-
- kSigningsigning key

```
signature = HexEncode(HMAC-SHA256(kSigning, StringToSign))
```

- <http://docs.aws.amazon.com/AmazonS3/latest/API/sig-v4-authenticating-requests.html>
- <http://docs.aws.amazon.com/general/latest/gr/signature-version-4.html>

ACL(Access Control List)

(ACL)(bucket)(object)ACL, ()S2ACL

S2ACLACL

```
<?xml version="1.0" encoding="UTF-8"?>
<AccessControlPolicy xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Owner>
        <ID>*** Owner-Canonical-User-ID ***</ID>
        <DisplayName>owner-display-name</DisplayName>
    </Owner>
    <AccessControlList>
        <Grant>
            <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type
="Canonical User">
                <ID>*** Owner-Canonical-User-ID ***</ID>
                <DisplayName>display-name</DisplayName>
            </Grantee>
            <Permission>FULL_CONTROL</Permission>
        </Grant>
    </AccessControlList>
</AccessControlPolicy>
```

ACLOwnerGrantGrant

(Grantee)

s2S2emailemailS2emailACLAACLs2email

S2(Group)

S2URI

- (Authenticated Users group), <http://acs.amazonaws.com/groups/global/AuthenticatedUsers>, s2s2,
- (All Users group), <http://acs.amazonaws.com/groups/global/AllUsers>
- (Log Delivery group), <http://acs.amazonaws.com/groups/s3/LogDelivery>, WRITE

(Permissions)

S2ACL

Permission	

READ	bucket	meta
WRITE		
READ_ACP	ACL	ACL
WRITE_ACP	ACL	ACL
FULL_CONTROL	READWRITEREAD_ACP WRITE_ACP	READREAD_ACP WRITE_ACP

Canned ACL

S2ACLACLACL

Canned ACL	ACL
private	FULL_CONTROL
public-read	FULL_CONTROLREAD
public-read-write	FULL_CONTROLAllUsersREAD, WRITE, WRITE
authenticated-read	FULL_CONTROLAuthenticatedUsersREAD

ACL

S2 APIACL S2APIACL APIACL

- headerACL – x-amz-aclCanned acl, x-amz-grant-*
- ACL APIACL – ACLbodyACL, put_object_acl API
- :
- x-amz-aclx-amz-grant-*, 400
- put_object_acl API, x-amz-aclx-amz-grant-*, bodyACL

x-amz-grant-*

x-amz-grant-*type=value, tpye=value, x-amz-grant-*, type:

- emailAddress, email
- id,
- uri, uri

Name	Description
x-amz-grant-read	READ
x-amz-grant-write	WRITE
x-amz-grant-read-acp	READ_ACP
x-amz-grant-write-acp	WRITE_ACP
x-amz-grant-full-control	READ, WRITE, READ_ACP, WRITE_ACP

:

```
x-amz-grant-read: emailAddress="xyz@amazon.com", emailAddress="abc@amazon.com"
```

Service

GET Service (List Buckets)

- OwnerBucket
-

```
GET /?formatter=json HTTP/1.1
Host: s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

```
GET /<Your-Bucket-Name>/?formatter=json HTTP/1.1
Host: s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

- HTTP Body

```
{
  "Owner": {
    "DisplayName": "",
    "ID": "Baishan0000001234567890"
  },
  "Buckets": {
    "Bucket": [
      {
        "CreationDate": "Fri, 21 Mar 2014 01:13:42 UTC",
        "Name": "bucket_name_0"
      },
      {
        "CreationDate": "Fri, 12 Mar 2013 02:25:22 UTC",
        "Name": "bucket_name_1"
      },
      ...
    ]
  }
}
```

-

Name	Description
Owner	

DisplayName	
ID	UserId
Buckets	Buckets
Bucket	Bucket
CreationDate	Bucket
Name	Bucket

•

```
curl -v -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: Baishan <access_key>:<ssig>" "http://s2.i.qingcdn.com/?formatter=json"
```

```
curl -v "http://s2.i.qingcdn.com/?KID=baishan,<access_key>&Expires=1398873316&ssig=<ssig>&formatter=json"
```

•

```
HTTP/1.1 200 OK
Server: openresty/1.9.7.4
Date: Mon, 08 Aug 2016 04:04:52 GMT
Content-Type: application/json
Connection: keep-alive
Content-Length: 155
x-amz-s2-requester: your user id
x-amz-request-id: 000011e5-1608-0812-0452-00163e0069ec

{
  "Owner": {
    "DisplayName": "",
    "ID": "Baishan0000001234567890"
  },
  "Buckets": {
    "Bucket": [
      {
        "CreationDate": "Mon, 08 Aug 2016 03:15:40 UTC",
        "Name": "bucket_name_0"
      },
      {
        "CreationDate": "Mon, 08 Aug 2016 03:15:40 UTC",
        "Name": "bucket_name_1"
      },
      ...
    ]
  }
}
```

```
    }  
}
```

Bucket

GET Bucket (List Objects)

- bucketobject
-

```
GET /?formatter=json HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

```
GET /<Your-Bucket-Name>/?formatter=json HTTP/1.1
Host: s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

-

Parameter	Description	Required
delimiter	'/'	No
marker	KeyKey‘’	No
max-keys	Key400	No
prefix	Key	No

HTTP Body

```
{
  Delimiter: "/",
  Prefix: "html/",
  CommonPrefixes: [
    {
      Prefix: "html/assets/"
    },
    {
      Prefix: "html/attribution/"
    },
    {
      Prefix: "html/documentation/"
```

```

    },
    ...
],
Marker: null,
ContentsQuantity: 5,
CommonPrefixesQuantity: 3,
NextMarker: null,
IsTruncated: false,
Contents: [
{
    SHA1: "9fc710aa89efbe42020b0310d16a07449bf06131",
    Name: "html/coming-soon.html",
    Expiration-Time: null,
    Last-Modified: "Fri, 21 Mar 2014 01:50:46 UTC",
    Owner: "Baishan0000000000000001",
    MD5: "934d922cac80449ee361cefeb3276b3e",
    Content-Type: "text/html",
    Size: 8781
},
{
    SHA1: "a9625a128263f05e331f6d78add9bd15911c3565",
    Name: "html/ebook.html",
    Expiration-Time: null,
    Last-Modified: "Fri, 21 Mar 2014 01:50:47 UTC",
    Owner: "Baishan0000000000000001",
    MD5: "cb7ed943ead4aeb513aa8c0b76865a8b",
    Content-Type: "text/html",
    Size: 18734
},
...
]
}
•

```

Name	Description
Contents	ObjectMetadata
CommonPrefixes	PrefixPrefix
Delimiter	

Prefix	
Marker	Marker
ContentsQuantity	Contents
CommonPrefixesQuantity	CommonPrefixes
NextMarker	Marker
IsTruncated	
SHA1	sha1
Name	ObjectKey()
Last-Modified	Object
Owner	Object
MD5	md5
Content-Type	mime type
Size	0

- Bucket(json)

```

join/mailaddresss.txt
join/mycodelist.txt
join/personalfiles/connects.docx
join/personalfiles/myphoto.jpg
join/readme.txt
join/userlist.txt
join/zero.txt
mary/personalfiles/mary.jpg
mary/readme.txt
sai/readme.txt

```

prefixjoin/

```

GET /?prefix=join/&formatter=json HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #

```

Contents:

```

join/mailaddresss.txt
join/mycodelist.txt
join/personalfiles/connects.docx
join/personalfiles/myphoto.jpg
join/readme.txt

```

```
join/userlist.txt  
join/zero.txt
```

delimiter‘/’

```
GET /?delimiter=/&formatter=json HTTP/1.1  
Host: <Your-Bucket-Name>.s2.i.qingcdn.com  
Date: <date>  
Authorization: <authorization string> #
```

Contents:

CommonPrefix:

```
join  
mary  
sai
```

prefixjoin/delimiter‘/’

```
GET /?prefix=join/&delimiter=/&formatter=json HTTP/1.1  
Host: <Your-Bucket-Name>.s2.i.qingcdn.com  
Date: <date>  
Authorization: <authorization string> #
```

Contents:

```
join/mailaddresss.txt  
join/mycodelist.txt  
join/readme.txt  
join/userlist.txt  
join/zero.txt
```

CommonPrefix:

```
join/personalfiles/
```

max-keys

```
GET /?prefix=join/&delimiter=/&max-keys=4&formatter=json HTTP/1.1  
Host: <Your-Bucket-Name>.s2.i.qingcdn.com  
Date: <date>  
Authorization: <authorization string> #
```

```
IsTruncated : true
Next-Marker : join/userlist.txt
Contents:
  join/mailaddresss.txt
  join/mycodelist.txt
  join/readme.txt
CommonPrefix:
  join/personalfiles/
```

marker

```
GET /?prefix=join/&delimiter=/&max-keys=4&marker=join/userlist.txt&formatter=json H
HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

```
IsTruncated : false
Contents:
  join/userlist.txt
  join/zero.txt
```

PUT Bucket

- Bucket
-

```
PUT /?formatter=json HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
x-amz-acl: <Canned-ACL> #[ACL](./acl/acl.md)
```

```
PUT /<Your-Bucket-Name>/?formatter=json HTTP/1.1
Host: s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
x-amz-acl: <Canned-ACL> #[ACL](./acl/acl.md)
```

- Request Header

Name	Description	Required
x-amz-acl	BucketACLACL	No

- HTTP Body

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Content-Length: 0
Connection: keep-alive
X-RequestId: 00078d50-1404-0810-5947-782bcb10b128
X-Requester: Your UserId
```

-

```
curl -v -X PUT -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: Baishan
<access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/?formatter=json"
```

```
curl -v -X PUT "http://<Your-Bucket-Name>.s2.i.qingcdn.com/?KID=baishan,<access_key
>&Expires=1398873316&ssig=<ssig>&formatter=json"
```

```
curl -v -X PUT "http://s2.i.qingcdn.com/<Your-Bucket-Name>/?KID=baishan,<access_key>&Expires=1398873316&ssig=<ssig>&formatter=json"
```

DELETE Bucket

- Bucket
- Bucket
-

```
DELETE /?formatter=json HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

```
DELETE /<Your-Bucket-Name>/?formatter=json HTTP/1.1
Host: s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

- HTTP Body

```
HTTP/1.1 204 No Content
Date: Tue, 08 Apr 2014 02:59:47 GMT
Content-Length: 0
Connection: keep-alive
X-RequestId: 00078d50-1404-0810-5947-782bcb10b128
X-Requester: Your UserId
```

-

```
curl -v -X DELETE -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: Baishan <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/?formatter=json"
```

```
curl -v -X DELETE "http://<Your-Bucket-Name>.s2.i.qingcdn.com/?KID=baishan,<access_key>&Expires=1398873316&ssig=<ssig>&formatter=json"
```

```
curl -v -X DELETE "http://s2.i.qingcdn.com/<Your-Bucket-Name>/?KID=baishan,<access_key>&Expires=1398873316&ssig=<ssig>&formatter=json"
```


PUT Bucket ACL

- BucketACL [ACL](#)
-

```
PUT /?acl&formatter=json HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #

#ACL
{
    'Baishan0000000000000001' : [ "read", "read_acp" , "write", "write_acp" ],
    'GRPS00000ANONYMOUSE' : [ "read", "read_acp" , "write", "write_acp" ],
    'GRPS0000000CANONICAL' : [ "read", "read_acp" , "write", "write_acp" ],
}
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
X-RequestId: 00078d50-1404-0810-5947-782bcb10b128
X-Requester: Your UserId
{
    "Owner": {
        "DisplayName": "",
        "ID": "user_authed"
    },
    "AccessControlList": {
        "Grant": [
            {
                "Grantee": {
                    "DisplayName": "",
                    "ID": "Baishan0000000000000001"
                },
                "Permission": "READ,READ_ACP,WRITE,WRITE_ACP"
            },
            ...
        ]
    }
}
```

- [ACL](#)
-

```
curl -v -T "acl.txt" -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: Ba  
ishan <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/?acl&formatt  
er=json"
```

GET Bucket ACL

- BucketACL **ACL**)
-

```
GET /?acl&formatter=json HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

```
GET /<Your-Bucket-Name>/?acl&formatter=json HTTP/1.1
Host: s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Content-Length: 123
Connection: keep-alive
X-RequestId: 00078d50-1404-0810-5947-782bcb10b128
X-Requester: Your UserId
```

```
{
  "Owner": {
    "DisplayName": "",
    "ID": "Baishan0000000000000001"
  },
  "AccessControlList": {
    "Grant": [
      {
        "Grantee": {
          "DisplayName": "",
          "ID": "GRPS00000ANONYMOUSE"
        },
        "Permission": "READ"
      },
      {
        "Grantee": {
          "DisplayName": "",
          "ID": "Baishan000001001NHT3M7"
        },
        "Permission": "READ, READ_ACP, WRITE, WRITE_ACP"
      }
    ]
  }
}
```

```
        },
        {
            "Grantee": {
                "DisplayName": "",
                "ID": "Baishan0000000000000001"
            },
            "Permission": "READ, WRITE"
        },
        ...
    ]
}
```

- [ACL](#))

-

```
curl -v -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: Baishan <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/?acl&formatter=json"
```

```
curl -v "http://<Your-Bucket-Name>.s2.i.qingcdn.com/?acl&KID=baishan,<access_key>&Expires=1398873316&ssig=<ssig>&formatter=json"
```

```
curl -v "http://s2.i.qingcdn.com/<Your-Bucket-Name>/?acl&KID=baishan,<access_key>&Expires=1398873316&ssig=<ssig>&formatter=json"
```

Object

HEAD Object

- HEADObjectMetadata
-

```
HEAD /<ObjectName> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

- HTTP Body

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
Content-Type: <object-mime-type>
Content-Length: <object-file-bytes>
ETag: "<MD5>" 
Last-Modified: <>
x-amz-request-id: 0000106c-1608-0810-4621-00163e0000064
x-amz-s2-requester: <Your UserName>
x-amz-meta-foo1: <value1> #metafoo1
x-amz-meta-foo2: <value2> #metafoo2
```

- Request Headers

Name	Description	Required
Range	Downloads the specified range bytes of an object. For more information about the HTTP Range header, go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.35 . <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No
If-Modified-Since	Return the object only if it has been modified since the specified time, otherwise return a 304 (not modified). <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No
If-Unmodified-Since	Return the object only if it has not been modified since the specified time, otherwise return a 412 (precondition failed). <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No
If-Match	Return the object only if its entity tag (ETag) is the same as the one specified; otherwise, return a 412 (precondition failed). <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No

If-None-Match	<p>Return the object only if its entity tag (ETag) is different from the one specified; otherwise, return a 304 (not modified).</p> <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No
---------------	--	----

- Response Headers

Name	Description
Content-Type	Objectmime-type
Content-Length	ObjectSize(bytes)
ETag	Objecthashmd5
Last-Modified	Object
x-amz-meta-*	x-amz-meta-UploadLocation: My Home X-amz-meta-ReviewedBy: test@test.net X-amz-meta-FileChecksum: 0x02661779 X-amz-meta-CheckSumAlgorithm: crc32
x-amz-meta-crc32	ObjectCRC32

-

```
curl -v -X HEAD -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/<Object-Name>"
```

GET Object

- Object
-

```
GET /<ObjectName> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
Range: bytes=<byte_range> #
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
Content-Type: <object-mime-type>
Content-Length: <object-file-bytes>
ETag: "<MD5>"
Last-Modified: <>
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>
x-amz-meta-foo1: <value1> #metafoo1
x-amz-meta-foo2: <value2> #metafoo2

#
<BODY>
```

- Request Headers

Name	Description	Required
Range	Downloads the specified range bytes of an object. For more information about the HTTP Range header, go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.35 . <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No
If-Modified-Since	Return the object only if it has been modified since the specified time, otherwise return a 304 (not modified). <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No
If-Unmodified-Since	Return the object only if it has not been modified since the specified time, otherwise return a 412 (precondition failed). <ul style="list-style-type: none"> • Type: String • Default: None • Constraints: None 	No

If-Match	Return the object only if its entity tag (ETag) is the same as the one specified; otherwise, return a 412 (precondition failed). • Type: String • Default: None • Constraints: None	No
If-None-Match	Return the object only if its entity tag (ETag) is different from the one specified; otherwise, return a 304 (not modified). • Type: String • Default: None • Constraints: None	No

- Response Headers

Name	Description
Content-Type	Objectmime-type
Content-Length	ObjectSize(bytes)
ETag	Objecthashmd5
Last-Modified	Object
x-amz-meta-*	x-amz-meta-UploadLocation: My Home X-amz-meta-ReviewedBy: test@test.net X-amz-meta-FileChecksum: 0x02661779 X-amz-meta-CheckSumAlgorithm: crc32
x-amz-meta-crc32	ObjectCRC32

-

```
curl -v -H "Range: bytes=0-1024" -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/<Object-Name>"
```

-

◦

```
GET /my_bucket/path/to/my/file.txt HTTP/1.1
Host: s2.i.qingcdn.com
Date: Sun, 1 Jan 2006 12:00:00 GMT
Authorization: AWS AccessKey:ssig
Range: bytes=100-2048
```

-

HTTP/1.1 206 Partial Content

Server: openresty/1.9.7.4

```
Content-Type: application/xml
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: GRPS000000ANONYMOUSE
Date: Mon, 08 Aug 2016 02:46:21 GMT
Last-Modified: Mon, 08 Aug 2016 02:45:55 GMT
ETag: "21b1a992d1cbf49729fc4461e55dd94f"
x-amz-meta-s2-size: 109051904
x-amz-meta-s2-crc32: 9422bc32
Cache-Control: max-age=31536000
Content-Length: 109051904
```

```
...
file_content
...
```

```
•
```

```
GET /path/to/my/file.txt?AWSAccessKeyId=<AccessKey>&Expires=<1175139620>&Signature=<your_sign> HTTP/1.1
Host: my_bucket.s2.i.qingcdn.com
Date: date
Range: bytes=byte_range
```

```
•
```

```
HTTP/1.1 206 Partial Content
Server: openresty/1.9.7.4
Content-Type: application/xml
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: GRPS000000ANONYMOUSE
Date: Mon, 08 Aug 2016 02:46:21 GMT
Last-Modified: Mon, 08 Aug 2016 02:45:55 GMT
ETag: "21b1a992d1cbf49729fc4461e55dd94f"
x-amz-meta-s2-size: 109051904
x-amz-meta-s2-crc32: 9422bc32
Cache-Control: max-age=31536000
Content-Length: 109051904
```

```
...
file_content
...
```

QueryString[][1]

PUT Object

- PUTmetaacl
-

```
PUT <ObjectName> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Content-Length: <object data length>
Content-Type: <mime-type>
Authorization: <authorization string> #

[object data]
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
ETag: "<MD5>"
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>
```

- Request Headers

Name	Description	Required
Expires	http://www.w3.org/Protocols/rfc2616/sec14.html#sec14.21.	No
Cache-Control	CacheHTTP://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.9	No
Content-Type	mime type	No
Content-Length		Yes
Content-MD5	base64MD5rfcbase64	No
Content-Disposition	HTTP://www.w3.org/Protocols/rfc2616/rfc2616-sec19.html#sec19.5.1	No
Content-Encoding	HTTP://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.11	No
x-amz-acl	ACLACL	No
x-amz-meta-*	MetaData, headerx-amz-meta-, metakey:value,64KB,	No

-

```
curl -v -T "myfile.txt" -H "x-amz-meta-UploadLocation: My Home" -H "Date: Sat, 20 Nov 2015 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.iqingcdn.com/path/to/myfile.txt"
```

Append Object

- Append Objectbucket() : put Objectcopy Object

Appendput Object

- x-amz-meta-s2-append-position append
 - position0size0409
 - position0sizesize409responsex-amz-meta-append-position headersize
- x-amz-meta-s2-directiveCOPY, REPLACE, (COPY)appendfile meta

- positionposition
- 2000
- 20G
- 1T

-

```
PUT /<ObjectName> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Content-Length: <object data length>
Content-Type: <mime-type>
x-amz-meta-s2-append-position: <position>
Authorization: <authorization string> #

[object data]
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
ETag: "<MD5>"
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>
x-amz-meta-s2-append-position: <position>
```

- Request Headers

Name	Description	Required
x-amz-meta-append-position	append	Yes
x-amz-meta-s2-	appendfile metaCOPY,REPALCE:COPY, COPY	No

directive	appendfile metaREPLACE, appendfile meta	No
Expires	http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.21.	No
Cache-Control	CacheHTTP http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.9	No
Content-Type	mime type	No
Content-Length		Yes
Content-MD5	base64MD5rfcbase64	No
Content-Disposition	HTTPPhttp://www.w3.org/Protocols/rfc2616/rfc2616-sec19.html#sec19.5.1	No
Content-Encoding	HTTP http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.11	No
x-amz-acl	ACLAACL	No
x-amz-meta-*	MetaData, headerx-amz-meta-, metakey:value,64KB, HEADGET	No

POST Object

- POST
-

```

POST / HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Content-Length: <length>

Content-Type: multipart/form-data; boundary=----WebKitFormBoundary1dIjDASRYXQm6DNA

-----WebKitFormBoundary1dIjDASRYXQm6DNA
Content-Disposition: form-data; name="key"

destinationProject/${filename}
-----WebKitFormBoundary1dIjDASRYXQm6DNA
Content-Disposition: form-data; name="success_action_redirect"

http://123.abc.com/1.php?f=1111.txt
-----WebKitFormBoundary1dIjDASRYXQm6DNA
Content-Disposition: form-data; name="AWSAccessKeyId"

00M414Z00X30
-----WebKitFormBoundary1dIjDASRYXQm6DNA
Content-Disposition: form-data; name="Policy"

eyJleHBpcmF0aW9uIjoiMjAxMi0wNi0wNj0zOT0MS4wMDBaIiwiY29uZG10aw9ucyI6W3siYnVja2V
0IjoiczN4cC5zM3dhdGNoIn0sWyJzdGFydHmtd2l0aCIsIiRrZXkiLCJhbmdlbFwvIl1dfQ==
-----WebKitFormBoundary1dIjDASRYXQm6DNA
Content-Disposition: form-data; name="Signature"

VK6Kw4kRqW2e84ZIX2cV2QqHo58=
-----WebKitFormBoundary1dIjDASRYXQm6DNA
Content-Disposition: form-data; name="file"; filename="112233.txt"
Content-Type: text/plain

-----WebKitFormBoundary1dIjDASRYXQm6DNA
Content-Disposition: form-data; name="submit"

-----WebKitFormBoundary1dIjDASRYXQm6DNA-

```

-

Name	Description	Required
AWSAccessKeyId	AccessKey	Yes
	objectkeyangel/\${filename}	

key	<code> \${filename} angel/path/to/myfile.txt, : filename, sha1, md5, size</code>	Yes
acl	ACLACL	No
success_action_status	:200, 201, or 204(defalut), body, status200204, 201, xmlbody, stats 201, , ,204 : success_action_redirectredirect,	200204 No
success_action_redirect, redirect	URL,locationURLbucket, keyetag querystring	No
Policy	jsonbase64	Yes
Signature	SecretKey	Yes
file	type=fileinput	Yes
x-amz-meta-*	MetaDelta, headerx-amz-meta-, meta key:value,64KB, HEADGET	No
Cache-Control, Content- Type, Content-Disposition, Content- Encoding, Expires	put_file, put_file	No

Policy

UTF-8 Base64 JSON

```
{
    "expiration": "2014-04-10T08:55:34.000Z",

    "conditions": [
        {
            "bucket": "my-bucket-name"
        },
        {
            "acl": "private"
        },
        [
            "starts-with", "$key", "my_prefix/"
        ],
        [
            "content-length-range", 0, 52428800
        ]
    ]
}
```

-

- "2014-04-10T08:55:34.000Z"
- "my-bucket-name"bucket
- starts-with\$key"my_prefix/" (Policy"\$key""\$")\$key
- content-length-range
- policybase64Policyvalue

expiration:

expirationpolicy, ISO 8601 UTC“2007-12-01T12:00:00.000Z”,

Condition:

Condition

Condition

Condition	Description
	1. ACL {"acl": "public-read" } 2.ACL : ["eq", "\$acl", "public-read"]
Starts With	starts-with\$user/betty ["starts-with", "\$key", "user/betty/"]
	1 10 MB ["content-length-range", 1048579, 10485760],

Conditions

AWSAccessKeyIdSignature filePolicy

Signature

- UTF-8policy
- Base64UTF-8policy
- HMAC SHA-1Secret Keypolicybase64phpbase64_encode(hash_hmac("sha1", \$policy, \$SECRETKEY, true));
- Signaturevalue
 - html

```
<form method="post" action="http://my-bucket.<?=c('api_host');?>/" enctype="multipart/form-data">
  <input type="hidden" name="AWSAccessKeyId" value="accesskey" />
  <input type="hidden" name="key" value="my_prefix/${filename}" />
  <input type="hidden" name="acl" value="private" />
  <input type="hidden" name="success_action_status" value="201" />
  <input type="hidden" name="Policy" value="eyJleHBpcmF0aW9uIjoiMjAxNC0wNC0xMFQwOToxNzozMC4wMDBaIiwiY29uZG10aw9ucyI6W3siYnVja2V0IjoiY2xvdWQzMjMqwqwsdifsGfydHMTd2l0aCIsIiRrZXkiLCJteWZpbGVzLyJdLFsic3RhcnRzLXdpdGgiLCIkQ29udGVudC1UeXB1IiwiIl0sWyJzdGFydHMTd2l0aCIsIiRDb250ZW50LURpc3Bvc2l0aw9uIiwiIl0seyJ1awQi0iIxMjMifSxbImNvbnR1bnQtbGVuZ3RoLXJhbmdlIiwwLDUyNDI4ODAwXV19" />
  <input type="hidden" name="Signature" value="Hn0Sk3kfx5LFtn4CIiFcSglQUxc=" />
```

```
<input type="file" name="file" />
<input type="submit" value=""    />
</form>
```

- - POSTuri“/”
 - success_action_redirectURL
 - key\${filename}

PUT Object - Copy

- ObjectCOPY

-

```
PUT <ObjectName> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
x-amz-copy-source: </source-bucket/source-object>
Authorization: <authorization string> #
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
ETag: "<MD5>"
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>

<?xml version="1.0" encoding="UTF-8"?>
<CopyObjectResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <LastModified>Mon, 08 Aug 2016 05:04:10 GMT</LastModified>
    <ETag>870c06c00566c4fb1861bb10f34d1904</ETag>
</CopyObjectResult>
```

- Request Headers

Name	Description	Required
x-amz-copy-source	copy/source-bucket/source-objecturlencode.	Yes
Cache-Control	CacheHTTP http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.9	No
Expires	Sun, 29 Jul 2018 20:36:14 UTC	No
Content-Type	mime type	No
Content-Length	0	=0
Content-Disposition	HTTP http://www.w3.org/Protocols/rfc2616/rfc2616-sec19.html#sec19.5.1	No
Content-Encoding	HTTP http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.11	No
x-amz-acl	ACLACLACL	No

x-amz-meta-*	MetaDeta, headerx-amz-meta-, metakey:value,64KB, HEADGET	No
x-amz-copy-source-if-match	ETagETag, copy, 412(PreconditionFailed)	No
x-amz-copy-source-if-nonmatch	ETagETag, copy, 412(PreconditionFailed)	No
x-amz-copy-source-if-unmodified-since	, copy, 412(PreconditionFailed)	No
x-amz-copy-source-if-modified-since	, copy, 412(PreconditionFailed)	No

- Response BodyXML Body

Name	Description
CopyObjectResult	ETagLastModified
ETag	ETag
CopyObjectResult	

-

```
curl -v -X PUT -H "x-amz-copy-source: /bucket-123/path/to/file123.txt" -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/path/to/myfile.txt"
```

DELETE Object

- Object
-

```
DELETE /<ObjectName> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

- HTTP Body

```
HTTP/1.1 204 No Content
Date: Tue, 08 Apr 2014 02:59:47 GMT
Content-Length: 0
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>
```

-

```
curl -v -X DELETE -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/path/to/my/file.txt"
```

GET Object ACL

- ObjectACL [ACL](#)
-

```
GET /<ObjectName>?acl HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Content-Length: 123
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>
```

Json format:

Note: You can specify the XML with formatter request parameter

```
{
  "Owner": "Baishan0000000000000001",
  "ACL": {
    "GRPS000000ANONYMOUSE": [
      "read"
    ],
    "Baishan0000001001NHT3M7": [
      "read",
      "write",
      "read_acp",
      "write_acp"
    ],
    "Baishan0000000000000001": [
      "read",
      "write",
      "read_acp",
      "write_acp"
    ],
    "Baishan0000001001HBK3UT": [
      "read",
      "write"
    ]
  }
}
```

```
        "write",
        "read_acp",
        "write_acp"
    ],
    "GRPS00000000CANONICAL": [
        "read",
        "write",
        "read_acp",
        "write_acp"
    ],
    ...
}
```

- [ACL](#)
-

```
curl -v -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/path/to/my/file.txt?acl"
```

PUT Object ACL

- ObjectACL [ACL](#)
-

```
PUT /<ObjectName>?acl HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #

#ACL: XML or Json
{
    "Baishan000000000000000001" : [ "read", "read_acp" , "write", "write_acp" ],
    "GRPS00000ANONYMOUSE" : [ "read", "read_acp" , "write", "write_acp" ],
    "GRPS0000000CANONICAL" : [ "read", "read_acp" , "write", "write_acp" ]
}
```

- Request Headers

Name	Description	Required
x-amz-acl	ACLACL	No

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>
```

- Request BodyBody XML or JSON format acl body

Note: x-amz-acl headerbodyacl, bodyxmlformatter, XML

- ResponseHTTP Body
- [ACL](#)
-

```
curl -v -T "acl.txt" -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/path/to/my/file.txt"
```


Initiate Multipart Upload

-
- meta
-

```
POST /<ObjectName>?uploads HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Content-Type: <mime-type>
x-amz-meta-foo1: <value1> #metafoo1
x-amz-meta-foo2: <value2> #metafoo2
Authorization: <authorization string> #
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>

<?xml version="1.0" encoding="UTF-8"?>
<InitiateMultipartUploadResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Bucket>your-bucket</Bucket>
    <Key>objectName</Key>
    <UploadId>VXBsb2FkIE1EIGZvcia2awWpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZA</UploadId>
</InitiateMultipartUploadResult>
```

- Request Headers put_object
- Response BodyXML Body

Name	Description
InitiateMultipartUploadResult	Bucket, KeyUploadId
Bucket	bucket name
Key	objectName
UploadId	ID,

-

```
curl -v -X POST "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/path/to/my/file.txt?uploads"
```


Upload Part

-
-

```
PUT <ObjectName>?partNumber=<PartNumber>&uploadId=<UploadId> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Content-Length: <Content-Length>
Content-MD5: <Content-MD5>
Authorization: <authorization string> #

...
file_content
...
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>
Etag: <Etag>
```

- Request Parameters()

Parameter	Description	Required
partNumber	1	Yes
uploadId	Initiate Multipart UploaduploadId	Yes

- Request Headers()

Name	Description	Required
Content-Length		Yes
Content-MD5	base64MD5rfcbase64	No

- - 2000

Upload Part - Copy

- COPY
-

```
PUT /<ObjectName>?partNumber=PartNumber&uploadId=UploadId HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
x-amz-copy-source: </source-bucket/source-object>
Authorization: <authorization string> #
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
ETag: "<MD5>"
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>

<?xml version="1.0" encoding="UTF-8"?>
<CopyObjectResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <LastModified>Mon, 08 Aug 2016 05:04:10 GMT</LastModified>
    <ETag>870c06c00566c4fb1861bb10f34d1904</ETag>
</CopyObjectResult>
```

- Request Parameters()

Parameter	Description	Required
partNumber	1	Yes
uploadId	Initiate Multipart UploaduploadId	Yes

- Request Headers

Name	Description	Required
x-amz-copy-source	copy/source-bucket/source-object urlencode.	Yes
Content-Length	0	=0
x-amz-copy-source-if-match	ETagETag, copy, 412(PreconditionFailed)	No
x-amz-copy-source-if-nonmatch	ETagETag, copy, 412(PreconditionFailed)	No
x-amz-copy-source-if-unmodified-since	, copy, 412(PreconditionFailed)	No
x-amz-copy-source-if-modified-		

since		
-------	--	--

- Response BodyXML Body

Name	Description
CopyObjectResult	ETagLastModified
ETag	ETag
CopyObjectResult	

-

```
curl -v -X PUT -H "x-amz-copy-source: /bucket-123/path/to/file123.txt" -H "Date: Sat, 20 Nov 2286 17:46:39 GMT" -H "Authorization: AWS <access_key>:<ssig>" "http://<Your-Bucket-Name>.s2.i.qingcdn.com/path/to/myfile.txt?partNumber=<PartNumber>&uploadId=<UploadId>"
```

Complete Multipart Upload

-
-

```
POST /<ObjectName>?uploadId=<UploadId> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Content-Type: text/json
Authorization: <authorization string> #

<CompleteMultipartUpload>
    <Part>
        <PartNumber>1</PartNumber>
        <ETag>"a54357aff0632cce46d942af68356b38"</ETag>
    </Part>
    <Part>
        <PartNumber>2</PartNumber>
        <ETag>"0c78aef83f66abc1fa1e8477f296d394"</ETag>
    </Part>
    <Part>
        <PartNumber>3</PartNumber>
        <ETag>"acbd18db4cc2f85cedef654fcc4a4d8"</ETag>
    </Part>
</CompleteMultipartUpload>
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>

<?xml version="1.0" encoding="UTF-8"?>
<CompleteMultipartUploadResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Location>http://Example-Bucket.s2.i.qingcdn.com/Example-Object</Location>
    <Bucket>Example-Bucket</Bucket>
    <Key>Example-Object</Key>
    <ETag>"3858f62230ac3c915f300c664312c11f-9"</ETag>
</CompleteMultipartUploadResult>
```

- Request Parameters()

Parameter	Description	Required
uploadId	Initiate Multipart UploaduploadId	Yes

- Request BodyBody

Name	Description	Required
PartNumber		Yes
ETag	Upload PartEtag	Yes

- Response BodyXML Body

Name	Description	Required
CompleteMultipartUploadResult	Location, Bucket, KeyETag	Yes
Location	URI	Yes
Bucket	bucket name	Yes
Key	objectName	Yes
ETag	ETag, ETagput_objectETag, md5	Yes

List Parts

-
-

```
GET /<ObjectName>?uploadId=<UploadId> HTTP/1.1
Host: <Your-Bucket-Name>.s2.i.qingcdn.com
Date: <date>
Authorization: <authorization string> #
```

-

```
HTTP/1.1 200 OK
Date: Tue, 08 Apr 2014 02:59:47 GMT
Connection: keep-alive
x-amz-request-id: 0000106c-1608-0810-4621-00163e000064
x-amz-s2-requester: <Your UserName>

<?xml version="1.0" encoding="UTF-8"?>
<ListPartsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
<Bucket>example-bucket</Bucket>
<Key>example-object</Key>
<UploadId>XXBsB2FkIE1EIGZvcIBlbHZpbmcncyVcdS1tb3ZpZS5tMnRzEEEwbG9hZA</UploadId>
<Initiator>
  <ID>initiator</ID>
  <DisplayName></DisplayName>
</Initiator>
<Owner>
  <ID>owner</ID>
  <DisplayName></DisplayName>
</Owner>
<StorageClass>STANDARD</StorageClass>
<PartNumberMarker>1</PartNumberMarker>
<NextPartNumberMarker>3</NextPartNumberMarker>
<MaxParts>2</MaxParts>
<IsTruncated>true</IsTruncated>
<Part>
  <PartNumber>2</PartNumber>
  <LastModified>2010-11-10T20:48:34.000Z</LastModified>
  <ETag>"7778aef83f66abc1fa1e8477f296d394"</ETag>
  <Size>10485760</Size>
</Part>
<Part>
  <PartNumber>3</PartNumber>
  <LastModified>2010-11-10T20:48:33.000Z</LastModified>
  <ETag>"aaaa18db4cc2f85cedef654fcc4a4x8"</ETag>
  <Size>10485760</Size>
```

```
</Part>
</ListPartsResult>
```

- Request Parameters

Parameter	Description	Required
uploadId	Initiate Multipart UploaduploadId	Yes
max-parts	part, 2048	Yes
part-number-marker	partNumberparts, partNUmberpart, partNUmber1	Yes

- Request Headers

- Response BodyXML Body

Name	Description
ListPartsResult	Bucket, Key, UploadId, Initiator, Owner, StorageClass, PartNumberMarker, NextPartNumberMarker, MaxParts, IsTruncated, Part
Bucket	bucket name
Key	objectName
UploadId	ID,
Initiator	ID, DisplayName
ID	init UserName
DisplayName	
Owner	ID, DisplayName, owner
StorageClass	
PartNumberMarker	listpartNumber, partNumber
NextPartNumberMarker	listpartNumber
MaxParts	part
IsTruncated	truncated
Part	PartNumber, LastModified, ETag, Size, part
PartNumber	partnumber
LastModified	part
ETag	partmd5
Size	partsize

Offline Download Interface

Authorization

Use AccessKey and SecretKey.

Please refer to [REST-Authentication](#).

Error Response Status Code and Error

Following is a list of error response definitions, including:

Status code Error code and its description.

- **400 InvalidURI**

Couldn't parse the specified URI.

- **400 DownloadSourceException**

Download source exception can not download file.

- **404 NoSuchDownloadSource**

The specified download source does not exist.

- **500 InternalError**

We encountered an internal error. Please try again.

- **501 NotImplemented**

Current request not implemented.

Other status code is same as Amazon S3. Please refer to [ErrorResponses](#).

Signature of all requests is same as Amazon S3.

Commit Offline Download Task

Request URI

`http://offline_domain/<bucket>`

Request Method

PUT

Request Body

Data of JSON format.

Following is a list of request content, including:

Element Name Element Type and its description.

- Elements for ALL requests:

- **Url** String

Download resource URL (including BT, Magnet, HTTP).

- **SuccessCallbackUrl** String

URL callback success.

- **FailureCallbackUrl** String

URL callback failure.

- **Target** String *optional*

Prefix of **Key** for the file to store.

- **ACLs** Dict *optional*

Access control lists. you can see ACL part in s2 doc for detail

Examples:

- Specify the upload file's ACL:

```
task['ACLs'] = {'acl': 'private'} , task['ACLs'] = {'acl': 'public-read'} ,  
task['ACLs'] = {'acl': 'authenticated-read'}
```

- Authorize the specified user's access to this file:

```
task['ACLs'] = {'grant-read': 'id=user_name', 'grant-write':  
'id=user_name', 'grant-read-acp': 'id=user_name', 'grant-write-acp':  
'id=user_name'}
```

- Authorize the specified multi users' access to this file:

```
task['ACLs'] = {'grant-full-control': 'id=user_name'}  
  
task['ACLs'] = {'grant-read': 'user_name1', 'grant-write': 'user_name2'}  
  
task['ACLs'] = {'grant-read-acp': 'emailAddress=user_email', 'grant-write-  
acp': 'id=user_email'}
```

- Elements for BT request:

- **Files** Array

Contains files which user wanted.

- Elements for HTTP request:

- **Key** String *optional*

Specify put object url, if this field is set, **Target** field will be ignored.

- **SHA1** String *optional*

SHA1 hash of this file. Check the file's accuracy.

- **MD5** `String optional`
MD5 hash for this file. Check the file's accuracy.
- **CRC32** `String optional`
CRC32 hash of this file. Check the file's accuracy.
- **Size** `Int optional`
Size of this file. Check the file's accuracy.
- **OnKeyExist** `String optional`
specify this file's ignore rule.

Ignore rules (If the same `key` file exists):

- `ignore` : Always ignore.
- `ignore-same-md5` : This key just work with `MD5` key. If this file with the same MD5 value exists, ignore this file.
- `ignore-same-sha1` : This key just work with `SHA1` key. If this file with the same SHA1 value exists, ignore this file.
- `ignore-same-crc32` : This key just work with `CRC32` key. If this file with the same CRC32 value exists, ignore this file.
- `ignore-same-checksum` : This key just work with `MD5` or `SHA1` or `CRC32` key. If this file with the same value of any one of the three exists, ignore this file.
- `ignore-same-size` : This just work with `Size` key. If this file with the same size exists, ignore this file.
- `override` : Always override.

Request Example

```
//BT method.
{
  "Files": ["movie1.txt", "movie2.jpg"],
  "Url": "http://www.abc.com/download/movie.torrent",
  "Target": "movie/2016",
  "SuccessCallbackUrl": "http://website/succ/",
  "FailureCallbackUrl": "http://website/fail/",
}
```

or

```
//HTTP method.
{
  "Url": "http://www.abc.com/download/movie.mp4",
  "Key": "movies/2016/movie.mp4",
  "ACLS": {'acl': 'private'},
  "SHA1": "abcdeabcdeabcdeabcdeabcdeabcdeabcde",
  "MD5": "abcdabcdabcdabcdabcdabcd",
  "CRC32": "abcdef",
```

```
    "SuccessCallbackUrl":"http://website/succ/",  
    "FailureCallbackUrl":"http://website/fail/",  
}
```

or

```
//Magnet method.  
{  
    "Url":"magnet:?xt=urn:btih:88594AAACBDE40EF3E2510C47374EC0AA396C08E&dn=movie.mp  
4",  
    "Target":"movie/2016",  
    "SuccessCallbackUrl":"http://website/succ/",  
    "FailureCallbackUrl":"http://website/fail/",  
}
```

Request Response

- **Success**

Return status code 200.

- **Failure**

Same as Amazon, refer to [ErrorResponses](#).

Request Response Header

After request handled successful, it generated a `x-amz-s2-offline-task-id` header, contains this offline download task ID. The subsequent query task and cancel task both can be done by looking up this ID.

Query Status Of Offline Download Task

Request URI

```
http://offline_domain/<bucket>/<taskId>
```

Request Method

GET

Request Response

- **Success**

Return status code 200 and body.

Body contains **State** and **Percent** (total download progress percent). (Json type)

Example:

```
{  
    "State": "TASK_UNDO",  
    "Percent": "0.00"  
}
```

or

```
{  
    "State": "TASK_DOING",  
    "Percent": "80.00"  
}
```

or

```
{  
    "State": "TASK_SUCCESS",  
    "Percent": "100.00"  
}
```

or

```
{  
    "State": "TASK_FAILED"  
}
```

or

```
{  
    "State": "TASK_CANCELLED"  
}
```

- **Failure**

Same as Amazon, refer to [ErrorResponses](#).

Delete Offline Download Task

Request URI

`http://offline_domain/<bucket>/<taskId>`

Request Method

DELETE

Request Response

- **Success**

Return status code 204.

- **Failure**

Same as Amazon, refer to [ErrorResponses](#).

notice: current delete download task is not open to user if you want to use this feature contact us.

Success Callback

Request URL

Determined by argument of `SuccessCallbackUrl` Request.

Request Method

POST

Request Body

Data of JSON format.

Following is a list of request content, including:

Element Name `Element Type` and its description.

Not null for ALL of these elements.

- **ETag** `String`

MD5 hash of this file. This md5 value must be enclosed in double quotes.

- **MD5** `String`

MD5 hash of this file.

- **SHA1** `String`

SHA1 hash of this file.

- **CRC32** `String`

CRC32 hash of this file.

- **Key** `String`

Name of this file. (e.g. `<Target>/<File>` or `<Key>`)

- **Size** Int
Size of this file.
- **Content-Type** String
MIME type of this file (Converted to lowercase letters)
- **LastModified** String
Upload time. (Unit: ms)
- **Task** String
Name of this offline download task. (e.g. <bucket>/<taskId>)
- **Concrete-Upload** bool
Concrete upload file to storage, (offline will ignore upload file if it already existed in storage)
- **Success-IDC** String
file has uploaded succeed idc list, use comma to split idcs. if Concrete-Upload value is false, this field is null
- **Failure-IDC** String
file has uploaded failed idc list, use comma to split idcs. if Concrete-Upload value is false, this field is null

Request Example

```
{
  "movie1": {
    "ETag": "\"abcdabcdabcdabcdabcdabcd\"",
    "MD5": "abcdabcdabcdabcdabcdabcd",
    "SHA1": "abcdeabcdeabcdeabcdeabcdeabcde",
    "CRC32": "fasdfasdf",
    "Key": "offline/prefix/movie1",
    "Size": "123456",
    "Content-Type": "video\\mp4",
    "LastModified": "1467355438043.852",
    "Task": "bucket/0000d1f001000000062",
    "Concrete-Upload": true,
    "Success-IDC": "idc1,idc2",
    "Failure-IDC": ""
  }
}
```

or

```
{
  "movie1": {
    "ETag": "\"abcdabcdabcdabcdabcdabcd\"",
    "MD5": "abcdabcdabcdabcdabcdabcd",
    "SHA1": "abcdeabcdeabcdeabcdeabcdeabcde",
    "CRC32": "fasdfasdf",
    "Key": "offline/prefix/movie1",
```

```
        "Size":"123456",
        "Content-Type":"video\mp4",
        "LastModified":"1467355438043.852",
        "Task":"bucket/0000d1f0010000000062",
        "Concrete-Upload": false,
        "Success-IDC": null,
        "Failure-IDC": null
    } ,
}
```

Request Response

- **Success**

Return status code 200.

- **Failure**

Same as Amazon, refer to [ErrorResponses](#).

Failure Callback

Request URL

Determined by argument of FailureCallbackUrl Response.

Request Method

POST

Request Body

Data of JSON format.

Following is a list of request content, including:

Element Name Element Type and its description.

Not null for ALL of these elements EXCEPT **Files**.

- **Code** String

Error code.

- **Message** String

Error description information.

- **Resource** String

Resource name, contains URL of this offline request task.

- **RequestId** `String`
Request ID.
- **Task** `String`
Name of this offline download task. (e.g. `<bucket>/<taskId>`)
- **Files** `dict optional`
Contains information of files which has been uploaded. With this element, users can pick up information of files which has been uploaded sucessful.

Request Example

```
{
  "Code": "NoSuchDownloadSource",
  "Message": "The specified download source does not exist",
  "Resource": "http://www.abc.com/download/movie.torrent",
  "RequestId": "4442587FB7D0A2F9",
  "Task": "bucket/0000d1f0010000000062",
}
```

or

```
{
  "Code": "InternalError",
  "Message": "We encountered an internal error. Please try again.",
  "Resource": "http://www.abc.com/download/movie.torrent",
  "RequestId": "4442587FB7D0A2F9",
  "Task": "bucket/0000d1f0010000000063",
  "Uploaded_Files": {
    "movie1": {
      "ETag": "\\"abcdabcdabcdabcdabcdabcd\\\"",
      "SHA1": "abcdeabcdeabcdeabcdeabcdeabcdeabcde",
      "CRC32": "fasdfasdf",
      "Key": "offline/prefix/movie1",
      "Size": "123456",
      "Content-Type": "video\\mp4",
      "LastModified": "1467355438043.852",
    }
  }
}
```

Request Response

- **Success**

Return status code 200.

- **Failure**

Same as Amazon, refer to [ErrorResponses](#).



Imgx()

imgx

URL

```
http://imgx-ss.bscstorage.com/<bucket>/<>/<>?<>
```

```
http://<bucket>.imgx-ss.bscstorage.com/<>/<>?<>
```

- `<bucket>` : bucket
- `:`
- `:`
- `:`

url http://s2.i.qingcdn.com/imgx-test/demo/1.jpg?AWSAccessKeyId=acc_drdrxp&Expires=2464773061&Signature=jFVHRSrOLeg5e3nIR00UE2vik0A%3D

- `bucketimgx-test`
- `bucketdemo/1.jpg`

- , `400x400` `c_thumb, g_face, w_400, h_400`
 - `()` `r_max`
 - `8%` `e_brightness:8`
 - `png` `f_png`
- ```
c_thumb, g_face, w_400, h_400, r_max, e_brightness:8, f_png URL
```

```
http://imgx-ss.bscstorage.com/imgx-test/c_thumb,g_face,w_400,h_400,r_max,e_brightness%3A8,f_png/demo/1.jpg?AWSAccessKeyId=acc_drdrxp&Expires=2464773122&Signature=4cwx t1e%2Fg2NL10fsldaVsa8SD9s%3D
```

```
http://imgx-test.imgx-ss.bscstorage.com/c_thumb,g_face,w_400,h_400,r_max,e_brightne
ss%3A8,f_png/demo/1.jpg?AWSAccessKeyId=acc_drdrxp&Expires=2464773122&Signature=4cwx
t1e%2Fg2NL10fsldaVsa8SD9s%3D
```

json(URL)

```
[
 {
 "crop" : "thumb",
 "gravity" : "face",
 "width" : 400,
 "height" : 400,
 "radius" : "max",
 "effect" : "brightness:8",
 "format" : "png"
 }
]
```

bucket

```
imgx/cmd_template/my_thumb.json #(my_thumb)""cssclass
```

URLURLjson

```
http://imgx-ss.bscstorage.com/imgx-test/t_my_thumb/demo/1.jpg?AWSAccessKeyId=acc_dr
drxp&Expires=2464773563&Signature=WIMaNLacGaPRA1A6f1%2BGAsStfoQ%3D
```

- “\_”                c\_fit
- ,”                c\_fit,w\_100,h\_100,g\_face
- “--”              c\_fit,w\_100,h\_100,g\_face,r\_max--l\_text:my\_font:hello+word,w\_100,h\_40

AWS-V2URLphp

```
/**
 * Get a query string authenticated URL
 *
 * @param string $accessKey AccessKey
 * @param string $secretKey SecretKey
 * @param string $bucket Bucket name
 * @param string $uri Object URI
 * @param integer $lifetime Lifetime in seconds
```

```

* @param boolean $hostBucket Use the bucket name as the hostname
* @param boolean $https Use HTTPS ($hostBucket should be false for SSL verification
)
* @return string
*/
function getAuthenticatedURL($accessKey, $secretKey, $bucket, $uri, $lifetime, $hos
tBucket = false, $https = false, $endpoint = 'imgx-ss.bscstorage.com') {

 $expires = time() + $lifetime;
 $uri = str_replace(array('%2F', '%2B', '%2C', '%3A', '%20'), array('/', '+', ',', ':', '+'), rawurlencode($uri));
 return sprintf(($https ? 'https' : 'http').'://%s/%s?AWSAccessKeyId=%s&Expires=
%u&Signature=%s',
 $hostBucket ? $bucket : $endpoint.'/'.$bucket, $uri, $accessKey, $expires,
 urlencode(base64_encode(hash_hmac('sha1', "GET\n\n\n{$expires}\n/{$bucket}/{$ur
i}", $secretKey, true))));

}
//echo getAuthenticatedURL('accessKey' , 'secretKey' , 'bucket' , '/' , '()');
$lifetime1000000000

```

## & CDN

- 2
- CDNCDN

1. [demo/charles.png](#)
2. [demo/1.jpg](#)
3. [demo/3.png](#)
4. [demo/4.png](#)
5. [demo/sheep.png](#)
6. [demo/horses.png](#)
7. [avatar.png](#)

|             |          | <b>Value</b> |                          |                                |
|-------------|----------|--------------|--------------------------|--------------------------------|
| <b>crop</b> | <b>c</b> | <b>mode</b>  |                          |                                |
|             |          | <b>scale</b> | <input type="checkbox"/> | <code>c_scale,h_80,w_80</code> |
|             |          | <b>fill</b>  | <input type="checkbox"/> |                                |

|                |                   |              |                          |                                                       |
|----------------|-------------------|--------------|--------------------------|-------------------------------------------------------|
|                |                   |              |                          | c_fill, h_80, w_80                                    |
|                |                   | <b>lfill</b> | <input type="checkbox"/> | <i>fill</i><br>c_lfill, h_80, w_80                    |
|                |                   | <b>fit</b>   | <input type="checkbox"/> | c_fit, h_80, w_80                                     |
|                |                   | <b>mfit</b>  | <input type="checkbox"/> | <i>fit</i><br>c_mfit, h_80, w_80                      |
|                |                   | <b>limit</b> | <input type="checkbox"/> | <i>fit</i><br>c_limit, h_80, w_80                     |
|                |                   | <b>pad</b>   | <input type="checkbox"/> | c_pad, h_80, w_80, g_center, b_ddddd                  |
|                |                   | <b>lpad</b>  | <input type="checkbox"/> | <i>pad</i><br>c_lpad, h_640, w_640, g_center, b_ddddd |
|                |                   | <b>mpad</b>  | <input type="checkbox"/> | <i>pad</i><br>c_mp pad, h_80, w_80, g_center, b_ddddd |
|                |                   | <b>crop</b>  | <input type="checkbox"/> | c_crop, h_210, w_210, g_face                          |
|                |                   | <b>thumb</b> | <input type="checkbox"/> | 'face'faces'<br>c_thumb, h_250, w_250, g_face         |
| <b>width</b>   | <b>w</b>          |              |                          | (crop)      (overlay)                                 |
|                | 80                |              | <input type="checkbox"/> | 80<br>w_80                                            |
|                | 0.1               |              | <input type="checkbox"/> | 10<br>w_0.1                                           |
| <b>height</b>  | <b>h</b>          |              |                          | (crop)      (overlay)                                 |
|                | 80                |              | <input type="checkbox"/> | 80<br>h_80                                            |
|                | 0.1               |              | <input type="checkbox"/> | 10<br>h_0.1                                           |
| <b>gravity</b> | <b>g</b>          |              |                          | 1.    'crop', 'pad', 'fill'<br>2.    (overlay)        |
|                | <b>north_west</b> |              | <input type="checkbox"/> | c_crop, g_north_west, h_200, w_200                    |

|          |          |                     |                          |                                                           |
|----------|----------|---------------------|--------------------------|-----------------------------------------------------------|
|          |          | <b>north</b>        | <input type="checkbox"/> | c_crop, g_north, h_200, w_200                             |
|          |          | <b>north_east</b>   | <input type="checkbox"/> | c_crop, g_north_east, h_200, w_200                        |
|          |          | <b>west</b>         | <input type="checkbox"/> | c_crop, g_west, h_200, w_200                              |
|          |          | <b>center</b>       | <input type="checkbox"/> | c_crop, g_center, h_200, w_200                            |
|          |          | <b>east</b>         | <input type="checkbox"/> | c_crop, g_east, h_200, w_200                              |
|          |          | <b>south_west</b>   | <input type="checkbox"/> | c_crop, g_south_west, h_200, w_200                        |
|          |          | <b>south</b>        | <input type="checkbox"/> | c_crop, g_south, h_200, w_200                             |
|          |          | <b>south_east</b>   | <input type="checkbox"/> | c_crop, g_south_east, h_200, w_200                        |
|          |          | <b>xy_center</b>    | <input type="checkbox"/> | x,y<br>c_crop, g_xy_center,<br>h_400, w_400, x_245, y_240 |
|          |          | <b>face</b>         | <input type="checkbox"/> | c_crop, g_face, h_140, w_140                              |
|          |          | face (thumb)        | <input type="checkbox"/> | c_thumb, g_face, h_130, w_140, f_png                      |
|          |          | <b>faces</b>        | <input type="checkbox"/> | c_thumb, g_faces, h_220, w_600,<br>e_brightness:18        |
|          |          | <b>face:center</b>  | <input type="checkbox"/> | c_thumb, g_face:center, h_140, w_140                      |
|          |          | <b>faces:center</b> | <input type="checkbox"/> | c_thumb, g_faces:center,<br>h_120, w_330, e_brightness:18 |
| <b>x</b> | <b>x</b> |                     |                          |                                                           |
|          |          | 110                 | <input type="checkbox"/> | 180x180110<br>c_crop, h_180, w_180, x_110                 |

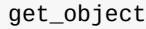
|                |          |                       |                          |                                                    |
|----------------|----------|-----------------------|--------------------------|----------------------------------------------------|
| <b>y</b>       | <b>y</b> |                       |                          |                                                    |
|                |          | 230                   | <input type="checkbox"/> | 180x180230<br>c_crop, h_180, w_180, x_180, y_230   |
| <b>quality</b> | <b>q</b> |                       |                          | <b>JPGWEBP1100</b>                                 |
|                |          | 100                   | <input type="checkbox"/> | 100%14.3KB<br>c_thumb, g_face, h_130, w_140, q_100 |
|                |          | 10                    | <input type="checkbox"/> | 10%1.5KB<br>c_thumb, g_face, h_130, w_140, q_10    |
| <b>radius</b>  | <b>r</b> | 'max'                 |                          |                                                    |
|                |          | 30                    | <input type="checkbox"/> | 30<br>c_thumb, g_face, h_140, w_140, f_png, r_30   |
|                |          | max                   | <input type="checkbox"/> | c_thumb, g_face, h_140, w_140, f_png, r_max        |
| <b>angle</b>   | <b>a</b> |                       |                          |                                                    |
|                |          | 90                    | <input type="checkbox"/> | 90<br>c_fill, h_80, w_80, a_90                     |
|                |          | 10                    | <input type="checkbox"/> | 10<br>c_fill, h_80, w_80, a_10                     |
|                |          | -20                   | <input type="checkbox"/> | 20<br>c_fill, h_80, w_80, a_-20                    |
|                |          | vflip                 | <input type="checkbox"/> | c_fill, h_80, w_80, a_vflip                        |
|                |          | hflip                 | <input type="checkbox"/> | c_fill, h_80, w_80, a_hflip                        |
| <b>effect</b>  | <b>e</b> | <b>name and value</b> |                          |                                                    |
|                |          | grayscale             | <input type="checkbox"/> | c_fill, h_380, w_380, e_grayscale                  |
|                |          | oil_paint             | <input type="checkbox"/> | c_fill, h_380, w_380, e_oil_paint                  |
|                |          | oil_paint:2           | <input type="checkbox"/> | level2184<br>c_fill, h_380, w_380, e_oil_paint:2   |
|                |          | negate                | <input type="checkbox"/> |                                                    |

|  |  |                      |                          |                                                         |
|--|--|----------------------|--------------------------|---------------------------------------------------------|
|  |  |                      |                          | c_fill, h_380, w_380, e_negate:2                        |
|  |  | brightness:28        | <input type="checkbox"/> | 28-10010030<br>c_fill, h_380, w_380, e_brightness:28    |
|  |  | brightness:-28       | <input type="checkbox"/> | -20-10010030<br>c_fill, h_380, w_380, e_brightness:-20  |
|  |  | <b>blur</b>          | <input type="checkbox"/> | c_fill, h_380, w_380, e_blur                            |
|  |  | blur:300             | <input type="checkbox"/> | level30012000100<br>c_fill, h_380, w_380, e_blur:300    |
|  |  | <b>pixelate</b>      | <input type="checkbox"/> | c_fill, h_380, w_380, e_pixelate:20                     |
|  |  | pixelate:40          | <input type="checkbox"/> | level405<br>c_fill, h_380, w_380, e_pixelate:40         |
|  |  | <b>sharpen</b>       | <input type="checkbox"/> | c_fill, h_380, w_380, e_sharpen                         |
|  |  | sharpen:400          | <input type="checkbox"/> | level40012000100<br>c_fill, h_380, w_380, e_sharpen:400 |
|  |  | <b>auto_contrast</b> | <input type="checkbox"/> | c_fill, h_380, w_380, e_auto_contrast                   |
|  |  | <b>improve</b>       | <input type="checkbox"/> | c_fill, h_380, w_380, e_improve                         |
|  |  | <b>sepia</b>         | <input type="checkbox"/> | c_fill, h_380, w_380, e_sepia                           |
|  |  | sepia:60             | <input type="checkbox"/> | level60110080<br>c_fill, h_380, w_380, e_sepia:60       |
|  |  | red:40               | <input type="checkbox"/> | c_fill, h_380, w_380, e_red:40                          |
|  |  | green:40             | <input type="checkbox"/> | c_fill, h_380, w_380, e_green:40                        |
|  |  | blue:40              | <input type="checkbox"/> | c_fill, h_380, w_380, e_blue:40                         |
|  |  | yellow:40            | <input type="checkbox"/> | c_fill, h_380, w_380, e_yellow:40                       |

|                   |           |                      |                          |                                                                                                                                                                                                                                                            |
|-------------------|-----------|----------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |           | <i>cyan:40</i>       | <input type="checkbox"/> | <code>c_fill, h_380, w_380, e_cyan:40</code>                                                                                                                                                                                                               |
|                   |           | <i>magenta:40</i>    | <input type="checkbox"/> | <code>c_fill, h_380, w_380, e_magenta:40</code>                                                                                                                                                                                                            |
| <b>opacity</b>    | <b>o</b>  |                      |                          | <b>PNGWEBP1100</b>                                                                                                                                                                                                                                         |
|                   |           | <i>25</i>            | <input type="checkbox"/> | <code>25%</code><br><code>h_330, w_330, o_25</code>                                                                                                                                                                                                        |
| <b>border</b>     | <b>bo</b> | <b>style</b>         |                          |                                                                                                                                                                                                                                                            |
|                   |           | <i>10_0000004a</i>   | <input type="checkbox"/> | <code>10px4a16</code><br><code>h_330, w_330, bo_10_0000004a</code>                                                                                                                                                                                         |
|                   |           | <i>8_bbbbbbb</i>     | <input type="checkbox"/> | <code>8pxbbbbbb</code><br><code>h_330, w_330, bo_8_bbbbbbb, r_100</code>                                                                                                                                                                                   |
| <b>background</b> | <b>b</b>  | <b>color</b>         |                          |                                                                                                                                                                                                                                                            |
|                   |           | <i>ddddd</i>         | <input type="checkbox"/> | <code>ddddd</code><br><code>c_pad, w_380, h_180, b_ddddd</code>                                                                                                                                                                                            |
|                   |           | <i>ffff6def0</i>     | <input type="checkbox"/> | <code>ffff6def0 (16)</code><br><code>c_fill, h_110, w_110, a_30, b_ffff6def0</code>                                                                                                                                                                        |
|                   |           | <i>dbeced</i>        | <input type="checkbox"/> | <code>ddddd</code><br><code>c_fill, h_140, w_140, r_max, b_dbeced--</code><br><code>c_lpad, g_center, w_152, h_152, b_dbeced</code>                                                                                                                        |
| <b>overlay</b>    | <b>l</b>  |                      |                          | <b>whxyo</b>                                                                                                                                                                                                                                               |
|                   |           | <i>superman</i>      | <input type="checkbox"/> | <code>pngbucket</code><br><code>imgx/overlay/my_name.pngl_my_name</code><br><br><code>c_fill, w_500, h_500, g_face, f_png--</code><br><code>l_superman, g_south_east,</code><br><code>w_250, x_-120, y_-60--</code><br><code>l_scs_logo, x_20, y_20</code> |
|                   |           | <i>text:font_me:</i> | <input type="checkbox"/> | <br><code>l_text:font_me:,</code><br><code>g_north_east, x_14, y_14--w_400</code>                                                                                                                                                                          |
| <b>format</b>     | <b>f</b>  |                      |                          |                                                                                                                                                                                                                                                            |
|                   |           | <i>png</i>           |                          | <code>f_png</code>                                                                                                                                                                                                                                         |
|                   |           | <i>webp</i>          |                          | <code>f_webp</code>                                                                                                                                                                                                                                        |
|                   |           | <i>jpeg</i>          |                          | <code>f_jpeg</code>                                                                                                                                                                                                                                        |
|                   |           | <i>jpg</i>           |                          | <code>f_jpg</code>                                                                                                                                                                                                                                         |
| <b>version</b>    | <b>v</b>  |                      |                          |                                                                                                                                                                                                                                                            |

|                       |          |                  |                                                                  |                  |
|-----------------------|----------|------------------|------------------------------------------------------------------|------------------|
|                       |          | 1.21             |                                                                  | v_1.21           |
|                       |          | 13               |                                                                  | v_13             |
| <b>transformation</b> | <b>t</b> | <b>""URLjson</b> |                                                                  |                  |
|                       |          | <i>my_thumbs</i> | bucket<br><i>imgx/cmd_template/my_thumbs.json</i><br>t_my_thumbs |                  |
| <b>information</b>    | <b>i</b> |                  |                                                                  |                  |
|                       |          | <i>exif</i>      | <i>exif</i>                                                      | i_exif, jsonexif |
|                       |          | <i>iptc</i>      | <i>iptc</i>                                                      | i_iptc, jsoniptc |
|                       |          | <i>all</i>       | <i>all</i>                                                       | i_all, json      |

## AWS-SDK

AWS-SDK

python boto3 sdk

```
import boto3

s2_imgx_domain_name = 'http://imgx-ss.bscstorage.com' #
s2_imgx_access_key = 'xxxxxx' # access key
s2_imgx_secret_key = 'xxxxxx' # secret key

imgx_cmd = 'c_scale,w_100,h_100' #
imgx_bucket = 'my_imgx_bucket' # bucket
imgx_key = 'my_img.jpg' # key

s2 client
imgx_cli = boto3.client('s3',
 endpoint_url=s2_imgx_domain_name,
 aws_access_key_id=s2_imgx_access_key,
 aws_secret_access_key=s2_imgx_secret_key)

imgx_cmd_key = u'{cmd}/{key}'.format(cmd=imgx_cmd, key=imgx_key) # Key
resp = imgx_cli.get_object(Bucket=imgx_bucket, Key=imgx_cmd_key)

print resp
```

2. 1 1 w h g x y o bo e a r

bucket imgx/overlay/<filename>.png png

| <input type="checkbox"/> | imgx/overlay/icon_v.png  | l_icon_v  |
|--------------------------|--------------------------|-----------|
| <input type="checkbox"/> | imgx/overlay/bs_logo.png | l_bs_logo |

| <input type="checkbox"/> | 1.<br>2.<br>(x_43,y_20)<br>120px<br>35%10 | c_fit,w_300,f_png--<br>l_bs_logo,g_north_west,<br>w_120,o_35,x_43,y_20,a_-10                                |
|--------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | 1.<br>2.<br>(x_-1,y_-5)<br>60px           | c_thumb,g_face,w_200,h_200,<br>r_max,bo_6_ffffff80,f_png--l_icon_v,<br>g_south_east,w_60,x_-1,y_-5          |
| <input type="checkbox"/> | 1.<br>2.                                  | c_thumb,g_face,w_200,h_200,<br>r_max,bo_6_ffffff80,f_png--l_icon_v,<br>g_south_east,w_60,x_-1,y_-5,e_negate |

(json)bucket imgx/overlay/<file>.json

```
{
 "font_family" : "Xingkai SC",
 "font_style" : "bold",
 "font_size" : 30,
 "font_color" : "000000",
 "background" : "ff0000cc",
 "padding" : 10,
 "word_spacing" : 1,
 "kerning" : 1,
 "line_spacing" : 2,
 "pierced" : false,
 "tile" : false,
 "text" : ""
}
```

imgx/overlay/my\_font.json

|                     |                                                           |             |
|---------------------|-----------------------------------------------------------|-------------|
|                     |                                                           |             |
| <b>font_family</b>  |                                                           | Songti SC   |
| <b>font_style</b>   | normal<br>normal<br><i>italic</i><br><b>bold</b><br>light | normal      |
| <b>font_size</b>    | px                                                        | 14          |
| <b>font_color</b>   | 16rgba6rgb2alpha0f                                        | (000000)    |
| <b>background</b>   | 16rgba6rgb2alpha0f                                        | (fffffff00) |
| <b>padding</b>      | px                                                        | 6           |
| <b>word_spacing</b> | px                                                        | 0           |
| <b>kerning</b>      | px                                                        | 0           |
| <b>line_spacing</b> | px                                                        | 0           |
| <b>pierced</b>      | bool                                                      | false       |
| <b>tile</b>         | bool                                                      | false       |
| <b>text</b>         |                                                           |             |

**1**

```
imgx/overlay/simple_font.json :

{
 "font_family" : "Microsoft YaHei",
 "font_size" : 40,
 "font_color" : "fffffff"
}
```



```
w_800,f_png--l_text:simple_font>Hello+Bai+Shan!!,x_20,y_20,a_-25
```

**2**

```
imgx/overlay/subtitles.json :
```

```
{
```

```

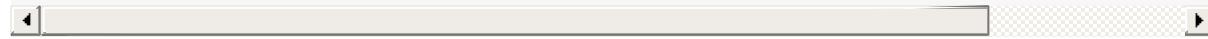
 "font_size" : 22,
 "font_color" : "fffffff"
}
```

imgx/overlay/subtitles\_s.json :

```
{
 "font_size" : 16,
 "font_color" : "fffffff"
}
```

, 

f\_png,c\_fill,w\_800,h\_400,e\_brightness:-8--c\_pad,w\_800,h\_550,g\_center,b\_000000ff,e\_y  
 ellow:30--l\_text:subtitles:,g\_south,y\_100--l\_text:subtitles\_s:Imgx is the image bac  
 k-end for web and mobile developers,g\_south,y\_80



3

imgx/overlay/my\_font.json :

```
{
 "font_family" : "Xingkai SC",
 "font_style" : "bold",
 "font_size" : 40,
 "font_color" : "000000",
 "background" : "ff0000cc",
 "padding" : 18
}
```



w\_800,f\_png--l\_text:my\_font:,g\_south\_west,w\_40,x\_20,y\_100--l\_text:my\_font:,g\_south\_east,w\_40,x\_20,y\_100--l\_text:my\_font:,g\_north,y\_20



4

imgx/overlay/font\_me.json :

```
{
 "font_family": "Microsoft YaHei",
```

```
"font_size": 30,
"font_color": "ffffff",
"font_style": "bold",
"background": "00000008f",
"pierced": true,
"tile": false,
"padding": 12,
"word_spacing": 2.2,
"line_spacing": 1.2,
"kerning": 1.5
}
```



```
l_text:font_me:,g_north_west,x_20,y_20--w_800
```

## 5

```
imgx/overlay/tile.json :
```

```
{
 "font_family" : "Microsoft YaHei",
 "font_style" : "bold",
 "font_size" : 40,
 "font_color" : "000000",
 "background" : "ff000066",
 "padding" : 18,
 "tile": true
}
```



```
w_800,f_png--l_text:title:Hello BaiShan!!,g_south
```

## 6

```
imgx/overlay/badge.json :
```

```
{
 "font_style" : "bold",
 "font_size" : 30,
 "font_color" : "ffffff",
 "background" : "ff0000cc",
 "padding" : 15
```

```
}
```

badge()



```
c_thumb,g_face,w_200,h_200,r_max,bo_6_ffffffff80,f_png--1_text:badge:69,r_max,g_south
_east,w_34,h_34,x_-1,y_-5
```

“”

URL

- jsonbucket [imgx/cmd\\_template/avatar.json](#)

```
[
 {
 "crop" : "thumb",
 "gravity" : "face:center",
 "width" : 200,
 "height" : 200,
 "radius" : "max",
 "border" : "6_ffffffff80",
 "format" : "png"
 },
 {
 "overlay" : "icon_v",
 "gravity" : "south_east",
 "width" : 60,
 "x" : -1,
 "y" : -5
 }
]
```

- 

```
http://imgx-ss.bscstorage.com/imgx-test/t_avatar/demo/1.jpg?<>
http://imgx-ss.bscstorage.com/imgx-test/t_avatar/demo/3.jpg?<>
```

- 

## (font\_family)

API <http://imgx-ss.bscstorage.com/fonts>



- 3GPAVIFLVMP4M3U8MPGWMVMKVMOVTS DIVGIFAMRMP3

- H.264H.265MPEG-1MPEG-2MPEG-4VP8VP9Windows Media Video
- AACAC-3MP2MP3SPEEXWindows Media Audio

- FLVMP4TSM3U8MPGTSGIFMP3MP2AACWMVWMAAACDASH
- H.264H.265GIFMPEG-2MS-MPEG4
- AACMP2MP3Windows Media Video
- 

|                     |                   |
|---------------------|-------------------|
|                     |                   |
| H.264               | FLV, MP4, TS      |
| H.265               | FLV, MP4, TS      |
| GIF                 | GIF               |
| MPEG2               | MPG               |
| AAC                 | FLV, MP4, TS, AAC |
| MP2                 | MPG, MP2          |
| MP3                 | MP3, FLV, MP4, TS |
| MP3                 | MP3, FLV, MP4, TS |
| MS-MPEG4            | WMV               |
| Windows Media Audio | WMV, WMA          |

- 
- 
- 

Bucket

- 

- JPG/PNG

- 

- 

- 

- 

- 

- 

- GOP

- HLS

- DASH

- FastStart MP4

## Preset

## Job

Bucket

## Pipeline

5

-> UI



---

## Transcoder

Transcoder API Transcoder AWS V4

1. Canonical Request
2. String to Sign      `elastictranscoder`
3. HMAC

V4

POST /2012-09-25/pipelines/

```
POST /2012-09-25/pipelines HTTP/1.1
Content-Type: application/json; charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyID/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
Content-Length: number of characters in the JSON string
{
 "Name": " ",
 "InputBucket": " Bucket ",
 "OutputBucket": " Bucket ",
 "ContentConfig": {
 "Permissions": [
 {
 "GranteeType": "Canonical|Email|Group",
 "Grantee": "(Canonical)|(Email)|
 AllUsers|AuthenticatedUsers|LogDelivery(Group)",
 "Access": [
 "Read|ReadAcp|WriteAcp|FullControl",
 ...
]
 },
 {...}
],
 "SuccessCallbackUrl": " URL",
 "FailureCallbackUrl": " URL",
 }
}
```

- Name

- InputBucket

Bucket Bucket

- OutputBucket

Bucket Bucket

- () ContentConfig: Permissions

Permissions

- () SuccessCallbackUrl

URL HTTP URL URL POST JSON :

```
{
 "result": "success",
 "input_bucket": "in_bucket_name",
 "input_key": "test.mp4",
 "output_bucket": "out_bucket_name",
 "output_keys": ["test_300K.mp4",

 # HLS
 "output_playlists": ["test_300K.m3u8"],

 #
 "metadata": {
 "test_300K.mp4": {
 'etag': "xxxx",
 'video_streams': [
 {
 "index": 0,
 "codec_name": "h264",
 "width": 560,
 "height": 320,
 "duration_ts": 498000,
 "duration": "5.533333",
 "bit_rate": "300000",
 ...
 },
 {}
],
 'audio_stream': [
 {
 "index": 1,
 "codec_name": "aac",
 "sample_fmt": "fltp",
 "sample_rate": "48000",
 "channels": 1,
 "channel_layout": "mono",
 }
]
 }
 }
 }
}
```

```

 "bits_per_sample": 0,
 "bit_rate": "83050",
 ...
 }
],
'format': {
 "nb_streams": 2,
 "nb_programs": 0,
 "format_name": "mov,mp4,m4a,3gp,3g2,mj2",
 "format_long_name": "QuickTime / MOV",
 "start_time": "0.000000",
 "duration": "5.568000",
 "size": "383631",
 "bit_rate": "323000",
}
},
"test_300K.m3u8": { ... }
}
}

```

- () FailureCallbackUrl

URL HTTP URL URL POST JSON :

```
{
 "result": "failure",
 "input_bucket": "in_bucket_name",
 "input_key": "test.mp4",
 "error_type": "InternalError",
 "error_message": "...",
}
```

```
Status: 201 Created
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jun 2017 06:01:47 GMT
```

```
{
 "Pipeline": {
 "Id": "123456789012345678",
 "Name": "my_pipeline",
 "InputBucket": "input_bucket",
 "OutputBucket": "output_bucket",
 "ContentConfig": {
 "Permissions": [
 {

```

```
 "GranteeType": "Group",
 "Grantee": "AllUsers",
 "Access": ["Read"]
 },
],
},
"SuccessCallbackUrl": "http://mydomain.com/cb",
"FailureCallbackUrl": "http://mydomain.com/cb",
"Status": "Active|Paused",
}
}
```

---

```
GET /2012-09-25/pipelines/pipelineId
```

```
GET /2012-09-25/pipelines/pipelineId HTTP/1.1
Content-Type: charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyID/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
```

```
Status: 200 OK
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jun 2017 06:01:47 GMT
```

```
{
 "Pipeline": {
 "Id": "123456789012345678",
 "Name": "my_pipeline",
 "InputBucket": "input_bucket",
 "OutputBucket": "output_bucket",
 "ContentConfig": {
 "Permissions": [
 {
 "GranteeType": "Group",
 "Grantee": "AllUsers",
 "Access": ["Read"]
 }
],
 "SuccessCallbackUrl": "http://mydomain.com/cb",
 "FailureCallbackUrl": "http://mydomain.com/cb",
 "Status": "Active|Paused",
 }
 }
}
```

---

}

---

```
GET /2012-09-25/pipelines/
```

```
GET /2012-09-25/pipelines?PageToken=value HTTP/1.1
Content-Type: charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyID/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
```

- PageToken

```
Transcoder NextPageToken PageToken
```

```
Status: 200 OK
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jun 2017 06:01:47 GMT

{
 "Pipelines": [
 {
 "Id": "123456789012345678",
 "Name": "my_pipeline",
 "InputBucket": "input_bucket",
 "OutputBucket": "output_bucket",
 "SuccessCallbackUrl": "http://mydomain.com/cb",
 "FailureCallbackUrl": "http://mydomain.com/cb",
 "ContentConfig": {...},
 "Status": "Active|Paused",
 },
],
}
```

```
 { ... }
],
"NextPageToken": "123456789012345679"
}
```

---

```
DELETE /2012-09-25/pipelines/pipelineId
```

```
DELETE /2012-09-25/pipelines/pipelineId HTTP/1.1
Content-Type: charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyId/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
```

```
Status: 202 Accepted
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jun 2017 06:01:47 GMT

{
 "Success":"true"
}
```

---

```
PUT /2012-09-25/pipelines/pipelineId
```

## Body

```
PUT /2012-09-25/pipelines/pipelineId HTTP/1.1
Content-Type: application/json; charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyId/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
Content-Length: number of characters in the JSON string
{
 "Name": " ",
 "InputBucket": " Bucket ",
 "OutputBucket": " Bucket ",
 "ContentConfig": {
 "Permissions": [
 {
 "GranteeType": "Canonical|Email|Group",
 "Grantee": "(Canonical)|(Email)|"
 AllUsers|AuthenticatedUsers|LogDelivery(Group)",
 "Access": [
 "Read|ReadAcp|WriteAcp|FullControl",
 ...
],
 ...
 },
 {...}
],
 },
 "SuccessCallbackUrl": " URL",
 "FailureCallbackUrl": " URL",
 }
}
```

- Name

40

- InputBucket

Bucket Bucket

- OutputBucket

Bucket Bucket

- () ContentConfig: Permissions

Permissions

- () SuccessCallbackUrl

URL HTTP URL URL POST

- () FailureCallbackUrl

URL HTTP URL URL POST

```
Status: 202 Accepted
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jun 2017 06:01:47 GMT

{
 "Pipeline": {
 "Id": "123456789012345678",
 "Name": " my_pipeline",
 "InputBucket": "input_bucket",
 "OutputBucket": "output_bucket",
 "SuccessCallbackUrl": "http://mydomain.com/cb",
 "FailureCallbackUrl": "http://mydomain.com/cb",
 "ContentConfig": {...},
 "Status": "Active|Paused",
 }
}
```

POST /2012-09-25/jobs

```
POST /2012-09-25/jobs HTTP/1.1
Content-Type: application/json; charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyID/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
Content-Length: number of characters in the JSON string
{
 "Inputs": [
 {
 "Key": ""
 }
],
 "OutputKeyPrefix": "",
 "Outputs": [
 {
 "Key": "",
 "PresetId": " ID",
 "SegmentDuration": "[1,60]",
 "Watermarks": [
 {
 "InputKey": "string",
 }
],
 "Encryption": {
 "Mode": "string",
 "Key": "string",
 "KeyMd5": "string",
 "InitializationVector": "string"
 },
 "Composition": [
 {
 "TimeSpan": {
 "StartTime": "string",
 "Duration": "string"
 }
 }
],
 ...
 }
],
 "Snapshots": [
 {
 ...
 }
]
}
```

```

 "Key":"",
 "Format":"jpg|png",
 "Time":"",
 "Interval":"",
 "Number":"",
},
{...}]
"Playlists": [
 "Format":"HLSv3|HLSv4",
 "Name":"",
 "OutputKeys":[
 "",
 ...
],
},
{...}],
"PipelineId": " ID"
}

```

- Inputs

input

```

"Inputs": [
 "Key": "path/to/orginal.mp4"
]

```

- Inputs: Key

- OutputKeyPrefix

OutputKeyPrefix                    transcode\_output/            transcode\_ouput

- () Outputs

Outputs Snapshots

- Outputs: Key

OutputBucket

- 
- Container    ts   SegmentDuration                    00000.ts            .m3u8            .ts
- OutputKeyPrefixKey.ts00000.ts
- Outputs: PresetId

ID

- (TS Only) Outputs: SegmentDuration

## HLS 1 - 60 SegmentDuration Container

## ts Container

- () Outputs: Watermarks

11

```
"Watermarks": [{
 "InputKey": "abc.png",
}]
```

, jpgpng"InputKey"input bucketkey

- (, hls) Outputs: Encryption

hlsAES-128hls

```
"Encryption": {
 "Mode": "AES128",
 "Key": "string",
 "KeyMd5": "string",
 "InitializationVector": "string"
}
```

```
"Mode""AES128" "Key"jsonAES12816urlbase64 '{"Url":
"http://ss.bscstorage.com/file.key", "Key": "1111111222222222"}"base64
'eyJVcmwiOiAiaHR0cDovL3NzLmJzY3N0b3JhZ2UuY29tL2ZpbGUua2V5IiwgIktleSI6ICIxMTEzMTEzMTEyMT
IyMjIyMjIyIn0=' "KeyMd5"base64keymd5base64 "InitializationVector"16
base64
```

- (, ) Outputs: Composition

```
"Composition": [{"
 "TimeSpan": {
 "StartTime": "string",
 "Duration": "string"
 }
}]
```

"StartTime" "Duration"

- ## • Snapshots

## Outputs Snapshots

- Snapshots: Format

png, jpg

- Snapshots: Key

Format

- Snapshots: Time

s.Ss S

- Snapshots: Interval

s.Ss S Number > 1

snapshot0000.png -

snapshot0010.png

- Snapshots: Number

1

- Snapshots: Resolution

[width]x[height] : 1920x1080

- Snapshots: AspectRatio

["1:1", "4:3", "3:2", "16:9"]

- Playlists

HLS

- Playlists: Format

HLSv3HLSv4 HLSHLS

- HLSv3tsvideo00000.ts, video00001.ts, ...m3u8

- HLSv4tsm3u8

- Playlists: Name

HLS

.m3u8

Playlists: OutputKeys

HLS HLS Container

ts SegmentDuration SegmentDuration

- PipelineId

ID

Status: 201 Created

```
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jan 2013 06:01:47 GMT

{
 "Job": {
 "Id": " ID",
 "Inputs": [
 {
 "Key": ""
 }
],
 "OutputKeyPrefix": "",
 "Outputs": [
 {
 "Key": "",
 "PresetId": " ID",
 "SegmentDuration": "[1, 60]",
 },
 ...
],
 "Snapshots": [
 {
 "Key": "",
 "Format": "jpg|png",
 "Time": "",
 "Interval": "",
 "Number": ""
 },
 ...
],
 "Playlists": [
 {
 "Format": "HLSv3|HLSv4",
 "Name": "",
 "OutputKeys": [
 "",
 ...
],
 },
 ...
],
 "PipelineId": " ID",
 "Status": "Submitted|Progressing|Complete|Canceled|Error",
 "Timing": {
 "SubmitTimeMillis": "epoch milliseconds",
 "FinishTimeMillis": "epoch milliseconds"
 }
 }
}
```

```
{
 "Inputs": [
 {
 "Key": "input/test.ts"
 }
],
}
```

```
"OutputKeyPrefix":"",
"Outputs": [
 "Key":"test.mp4",
 "PresetId":"123",
],
"PipelineId":"10000000000000000001"
}
```

---

```
GET /2012-09-25/jobs/jobId
```

```
GET /2012-09-25/jobs/jobId HTTP/1.1
Content-Type: charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyID/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
```

```
Status: 200 OK
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jan 2013 06:01:47 GMT
```

```
{
 "Job": {
 "Id": " ID",
 "Inputs": [
 {
 "Key": ""
 }
],
 "OutputKeyPrefix": "",
 "Outputs": [
 {
 "Key": "",
 "PresetId": " ID",
 "SegmentDuration": "[1,60]",
 },
 {...},
 ...
],
 "Snapshots": [
 {
 "Key": "",
 "Format": "jpg|png",
 "Time": "",
 "Interval": "",
 "Number": ""
 }
]
 }
}
```

```
,
{...}]
"Playlists": [
 "Format": "HLSv3|HLSv4",
 "Name": "",
 "OutputKeys": [
 "",
 ...
],
 {
 "PipelineId": " ID",
 "Status": "Submitted|Progressing|Complete|Canceled|Error",
 "Timing": {
 "SubmitTimeMillis": "epoch milliseconds",
 "FinishTimeMillis": "epoch milliseconds"
 }
 }
}
```

---

```
GET /2012-09-25/jobsByPipeline/pipelineId
```

```
GET /2012-09-25/jobsByPipeline/pipelineId?PageToken=12345678 HTTP/1.1
Content-Type: charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyID/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
```

- PageToken

NextPageToken,                  NextPageToken PageToken

```
Status: 200 OK
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jan 2013 06:01:47 GMT

{
 "Jobs": [
 {
 "Id": " ID",
 "Inputs": [
 {
 "Key": ""
 }
],
 "OutputKeyPrefix": "",
 "Outputs": [
 {
 "Key": "",
 "PresetId": " ID",
 "SegmentDuration": "[1, 60]"
 }
]
 }
]
}
```

```
{...}],
"Snapshots": [{
 "Key":"",
 "Format":"jpg|png",
 "Time":"",
 "Interval":"",
 "Number":""
},
{...}]
"Playlists": [{
 "Format":"HLSv3|HLSv4",
 "Name":"",
 "OutputKeys": [
 "",
 ...
],
},
{...}],
"PipelineId": " ID",
"Status": "Submitted|Progressing|Complete|Canceled|Error",
"Timing": {
 "SubmitTimeMillis": "epoch milliseconds",
 "FinishTimeMillis": "epoch milliseconds"
},
{...}],
"NextPageToken": "1234567890"
}
```

---

```
DELETE /2012-09-25/jobs/jobId
```

```
DELETE /2012-09-25/jobs/jobId HTTP/1.1
Content-Type: charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-date: 20170726T174952Z
Authorization: AWS4-HMAC-SHA256
 Credential=AccessKeyID/request-date/Transcoder endpoint/elastictrans
coder/aws4_request,
 SignedHeaders=host;x-amz-date;x-amz-target,
 Signature=calculated-signature
```

```
Status: 202 Accepted
Content-Type: application/json
Content-Length: number of characters in the response
Date: Mon, 14 Jan 2013 06:01:47 GMT

{
 "Success":"true"
}
```

---

```
GET /metadata/<bucket>/<key>
```

```
GET /metadata/test_bucket/test.mp4 HTTP/1.1
Content-Type: charset=UTF-8
Accept: /*
Host: transcoder-ss.bscstorage.com
x-amz-content-sha256: UNSIGNED-PAYLOAD
x-amz-date: 20170925T093131Z
Authorization: AWS4-HMAC-SHA256
 Credential=acc_yanhui/20170925/us-east-1/elastictranscoder/aws4_requ
est,
 SignedHeaders=host;x-amz-content-sha256;x-amz-date,
 Signature=e9147d9d1461d7ca92c0805735490be7fd7d9d92ddee216ee47306a7d5
fabcaa
```

- bucket

bucket

- key

key

```
Status:200

Content-length: '2253'
x-amz-s2-requester: test_bucket
server: openresty/1.11.2.4
connection: keep-alive
x-amz-request-id: 00361611-1709-2517-4651-00163e0630f7
date: Mon, 25 Sep 2017 09:46:51 GMT
content-type: application/json

{

 "audio_streams":
```

```
[
 {
 "sample_fmt": "fltp",
 "codec_tag": "0x6134706d",
 "codec_type": "audio",
 "channels": 2,
 "bit_rate": "96001",
 "codec_name": "aac",
 "duration": "716.885011",
 "nb_frames": "30876",
 "codec_time_base": "1/44100",
 "index": 1,
 "start_pts": 0,
 "profile": "LC", profile
 "tags":
 {
 "handler_name": "SoundHandler",
 "language": "und"
 },
 "r_frame_rate": "0/0",
 "start_time": "0.000000",
 "time_base": "1/44100",
 "codec_tag_string": "mp4a",
 "duration_ts": 31614629, time_base
 "codec_long_name": "AAC (Advanced Audio Coding)",
 "bits_per_sample": 0,
 "avg_frame_rate": "0/0",
 "channel_layout": "stereo",
 "max_bit_rate": "96001",
 "sample_rate": "44100"
 }
,
 "video_streams":
 [
 {
 "profile": "High", profile
 "sample_aspect_ratio": "0:1",
 "codec_tag": "0x31637661",
 "refs": 1,
 "codec_type": "video",
 "coded_height": 720,
 "bit_rate": "1500443",
 "codec_name": "h264",
 "duration": "716.800000",
 "is_avc": "true",
 "nb_frames": "17920",
 "codec_time_base": "1/50",
 "index": 0,
 "start_pts": 0,
 "width": 1280,
```

```

 "coded_width": 1280,
 "pix_fmt": "yuv420p",
 "chroma_location": "left",
 "tags":
 {
 "handler_name": "VideoHandler",
 "language": "und"
 },
 "r_frame_rate": "25/1",
 "start_time": "0.000000",
 "time_base": "1/12800",
 "codec_tag_string": "avc1",
 "duration_ts": 9175040, time_base
 "codec_long_name": "H.264 / AVC / MPEG-4 AVC / MPEG-4 part 10",

 "display_aspect_ratio": "0:1",
 "height": 720,
 "avg_frame_rate": "25/1",
 "level": 40,
 "bits_per_raw_sample": "8",
 "has_b_frames": 2,
 "nal_length_size": "4"
 }
],
"format":
{
 "tags":
 {
 "major_brand": "isom",
 "minor_version": "512",
 "compatible_brands": "isomiso2avc1mp41letv",
 "encoder": "Lavf56.15.102"
 },
 "nb_streams": 2,
 "start_time": "0.000000",
 "format_long_name": "QuickTime / MOV",
 "format_name": "mov,mp4,m4a,3gp,3g2,mj2",
 "bit_rate": "1607943",
 "nb_programs": 0,
 "duration": "716.932000",
 "size": "144098269"
},
"other_streams": []
}

```

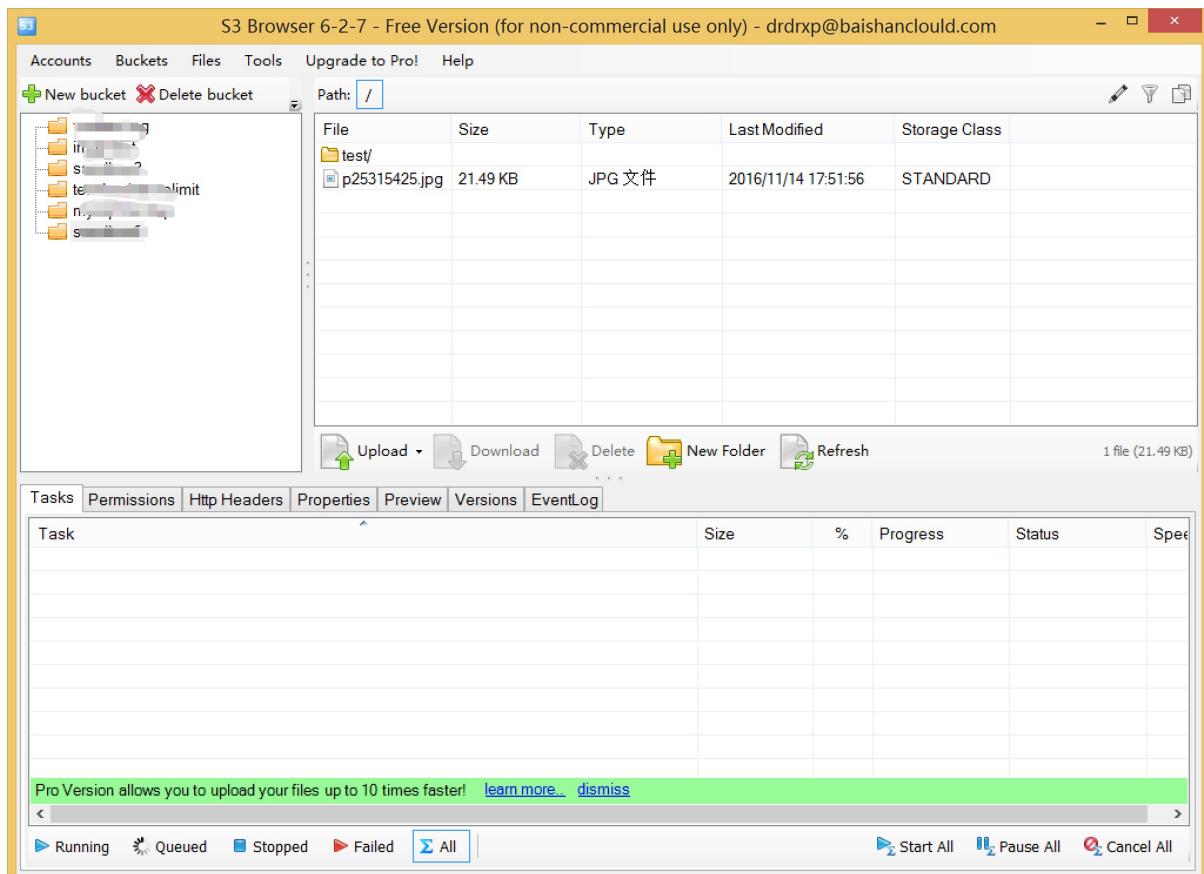




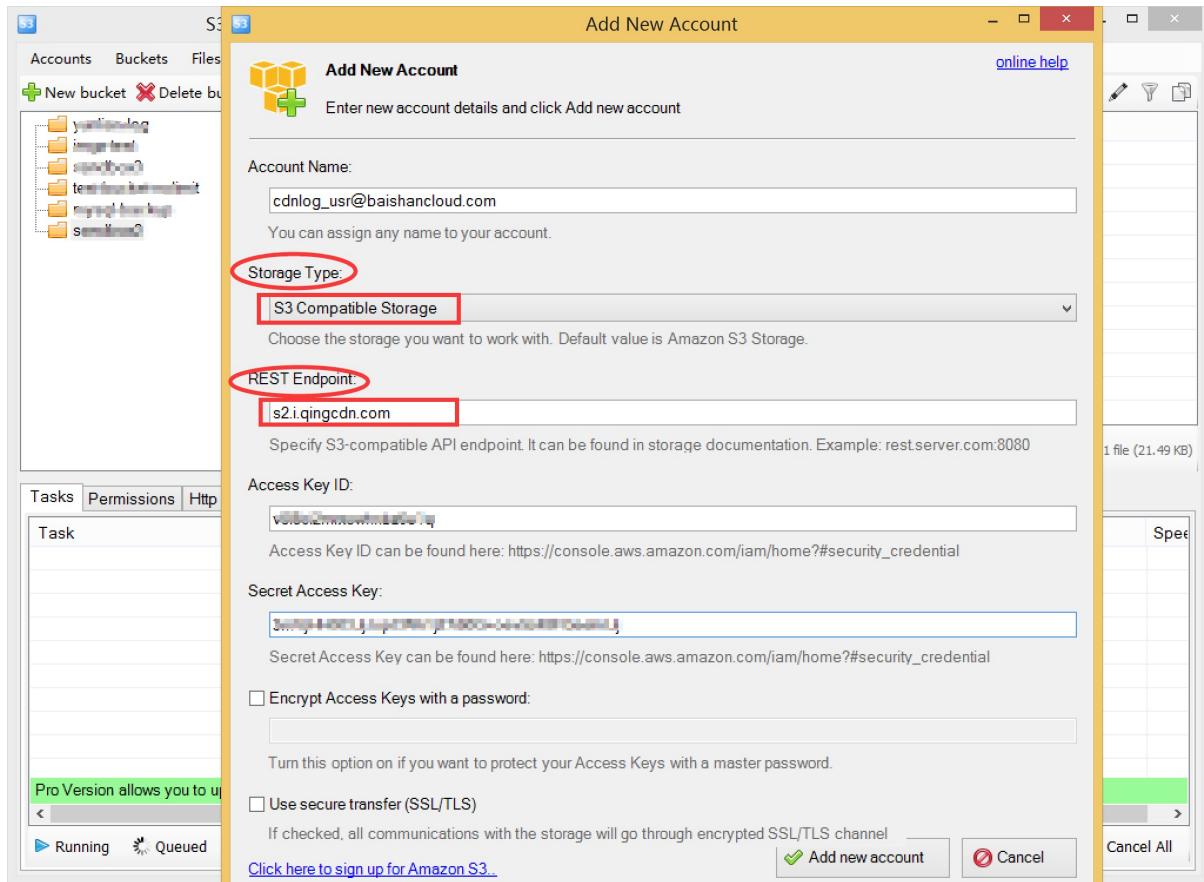


## WindowsS3 Browser

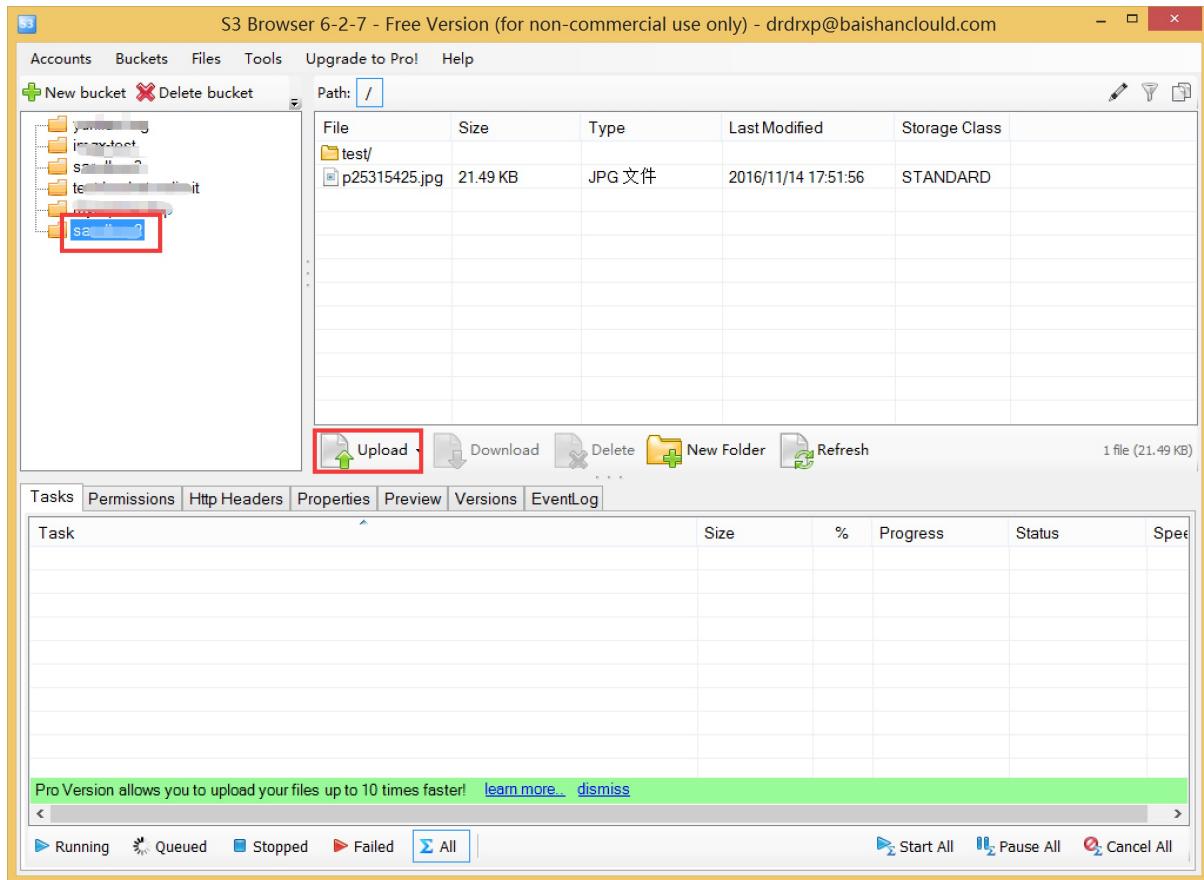
S3 Browser:



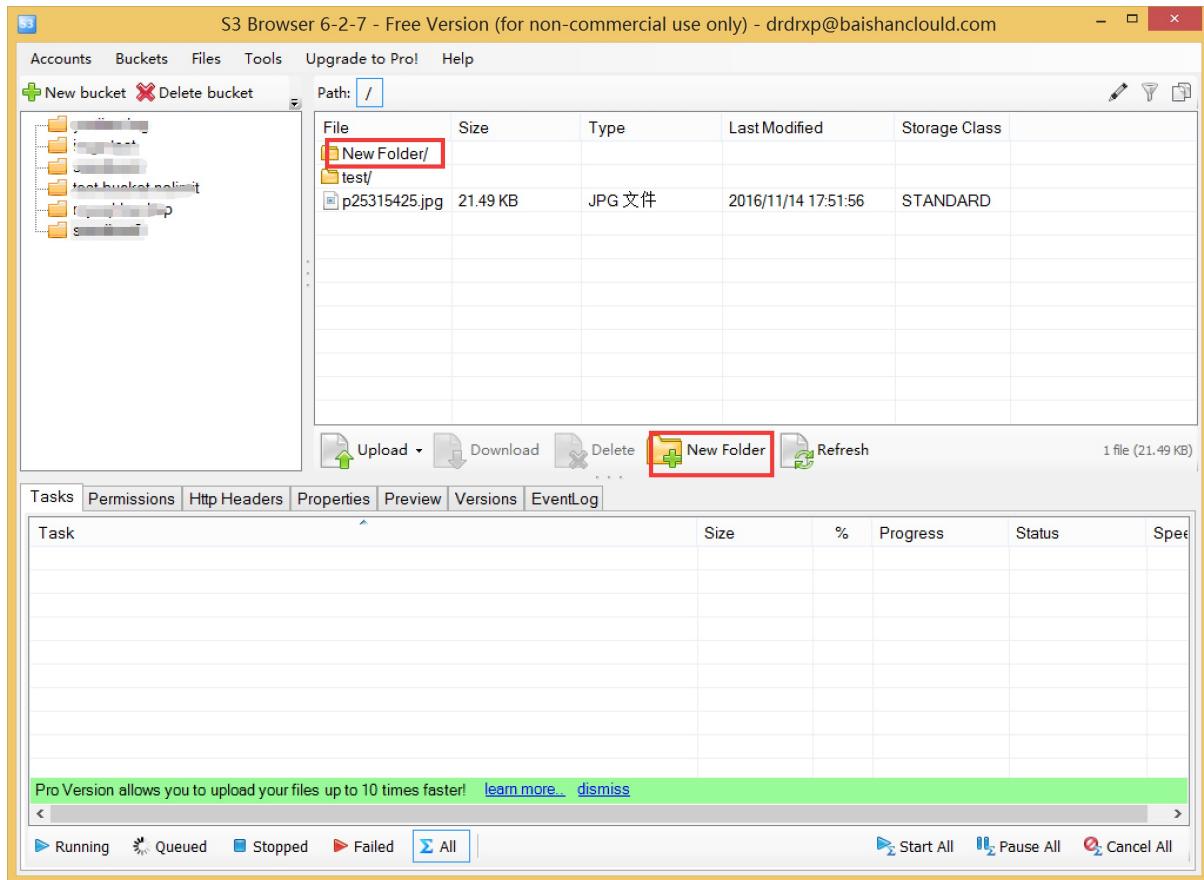
AccountsAdd New AccountStorage TypeS3 Compatible StorageREST Endpoints2.i.qingcdn.com  
AccessKeySecretKey



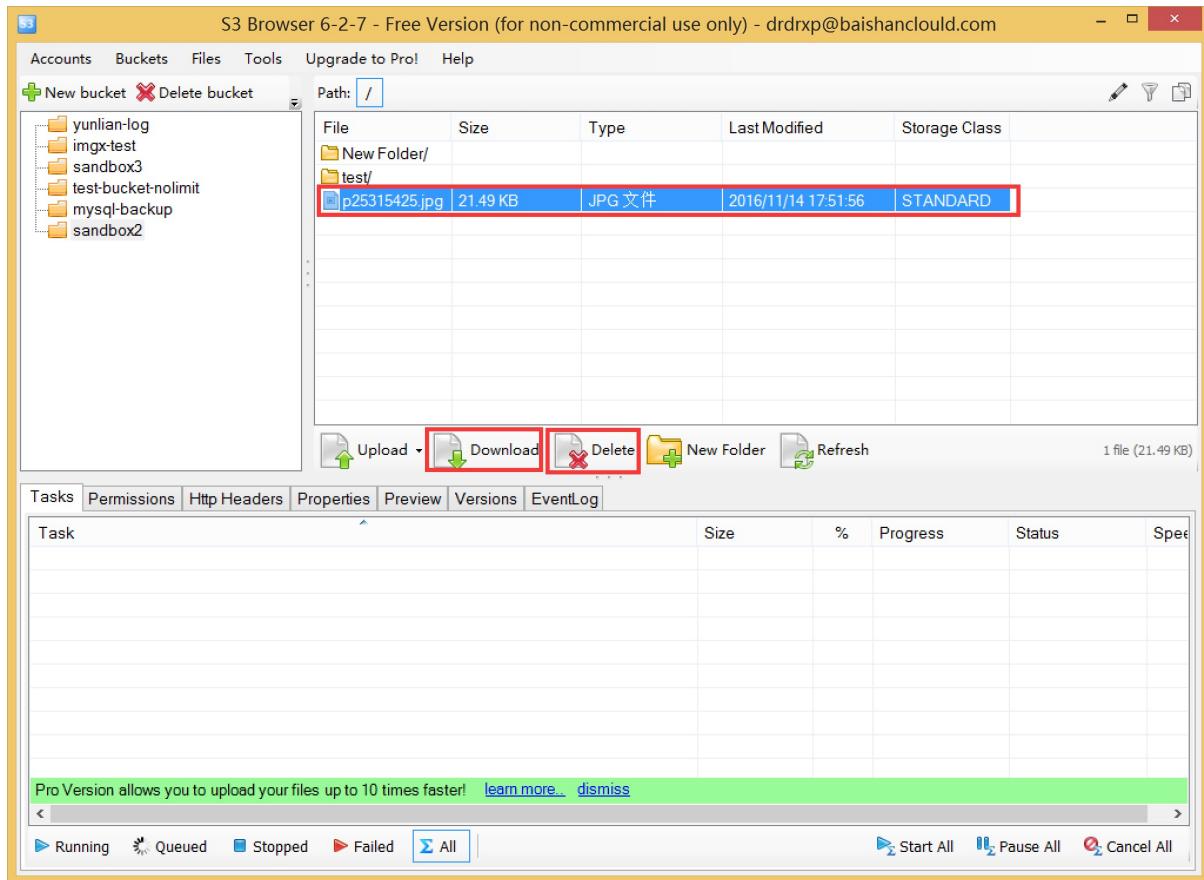
StoragebucketUploadbucket



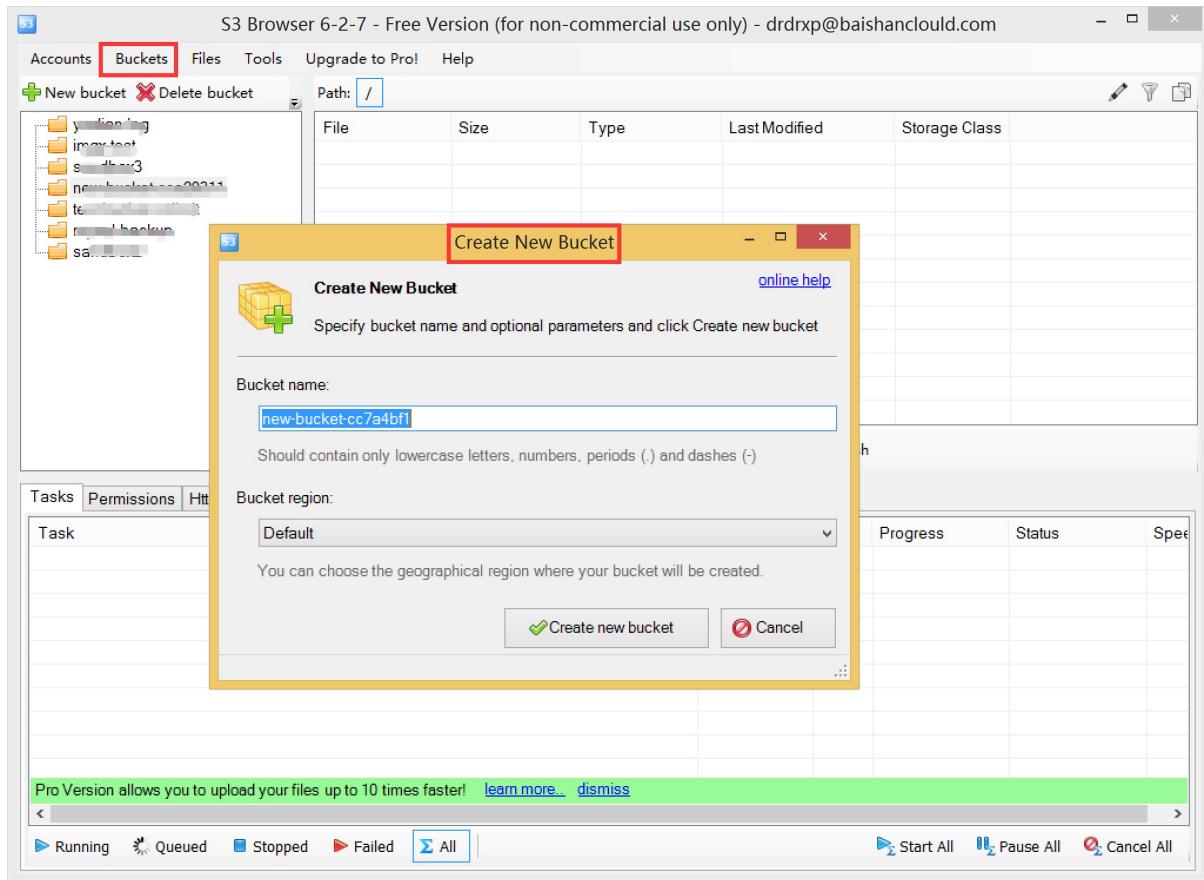
bucketNew Folderbucket



DownloadDelete



## BucketsBucket S3 Browser



S3 Browser: s3-browser



## 1.

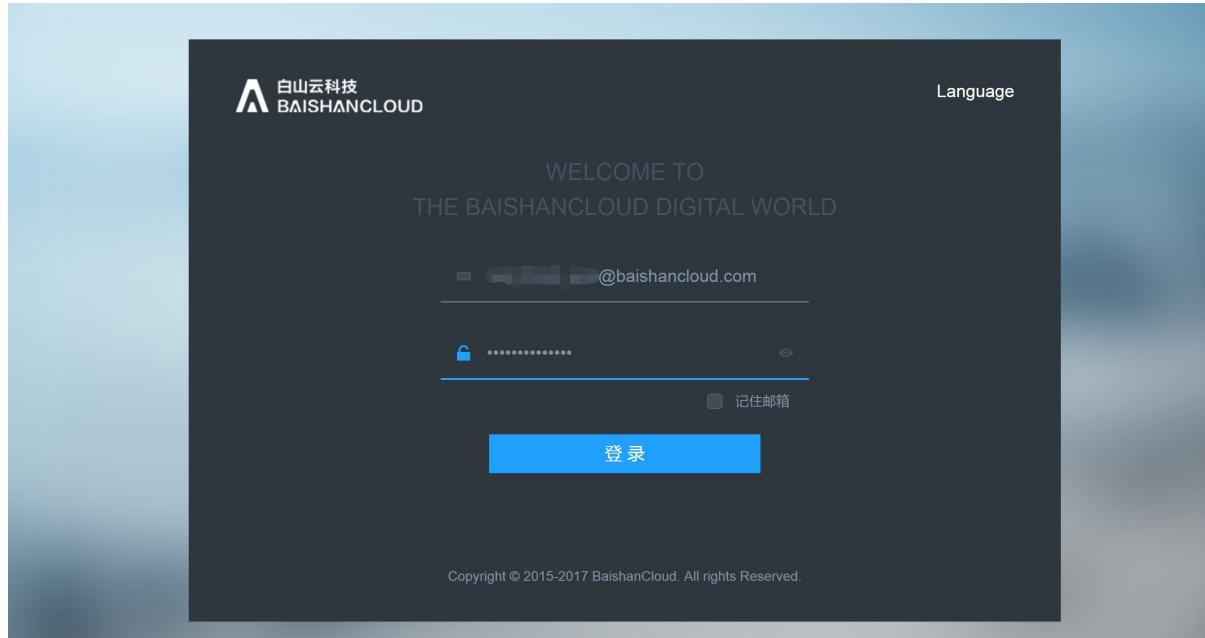
- Bucket
- Bucket
- Bucket
- Bucket

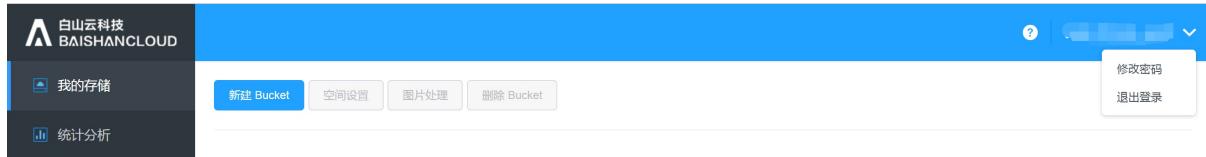
AccesskeySecretKey

## 1.

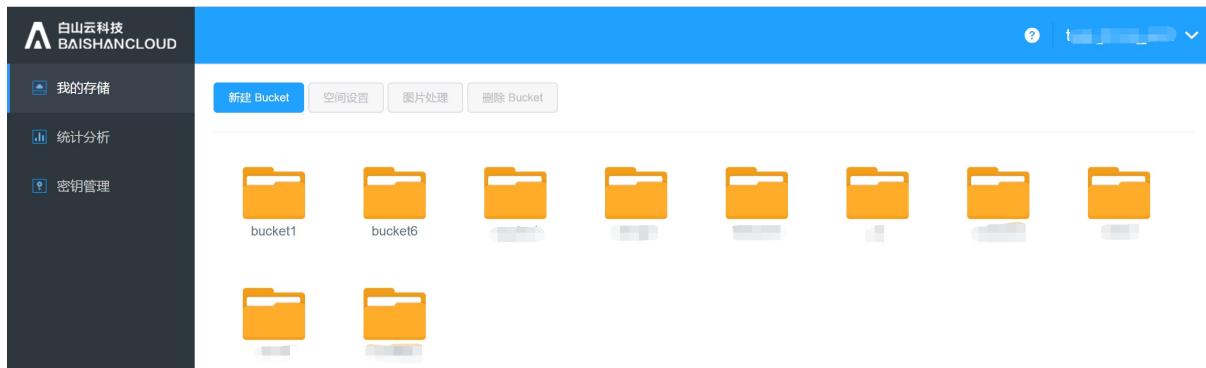
### 1.

<http://console.bscstorage.com/>



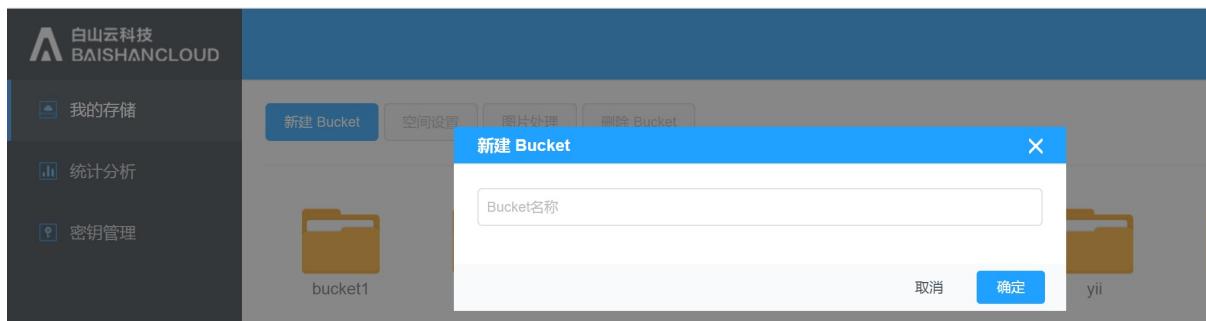


## 1.



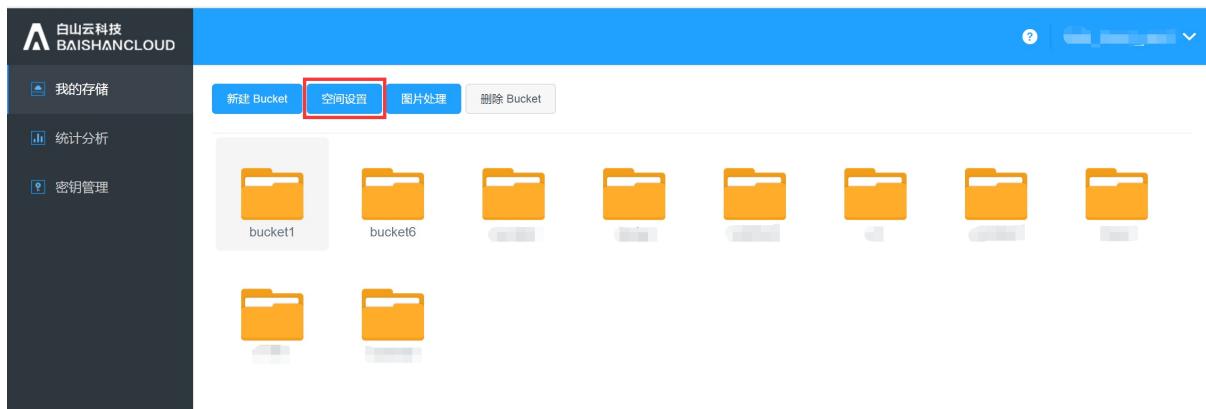
### 1. Bucket

Bucket Bucket Bucket: “-”3~63; ‘-’; ‘\_’



## 1.

Bucket“”



“”“”Bucket

The screenshot shows two pages of the BaiShanCloud storage management interface.

**Top Page:** "空间设置 (bucket1)" (Space Settings). The "权限控制" (Permission Control) tab is selected. It displays two sections: "用户组权限" (Group Permissions) and "用户权限" (User Permissions). In "用户组权限", there are two entries: "All Users" with "读取" (Read) and "写入" (Write) checked, and "Auth Users" with "读取" (Read) and "写入" (Write) checked. In "用户权限", there are three user entries, each with "读取" (Read) and "写入" (Write) checked. A "确认修改" (Confirm Modification) button is at the bottom.

**Bottom Page:** "空间设置 (bucket1)" (Space Settings). The "图片监测" (Image Monitoring) tab is selected. It displays a message: "We've got somethings special for you".

## 1.

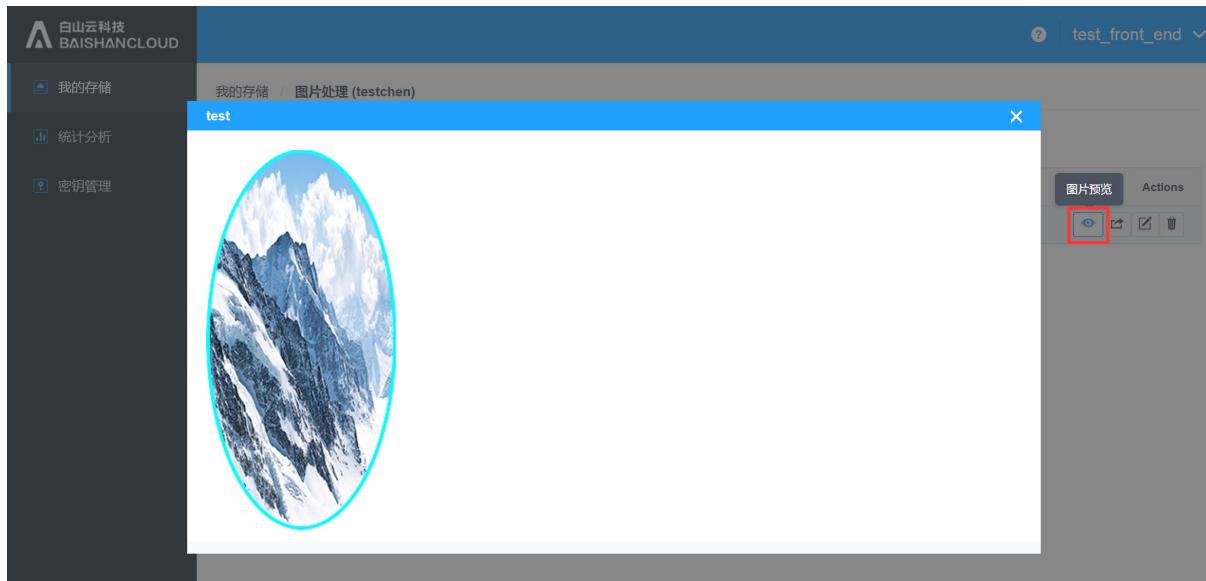
Bucket“”

The screenshot shows two pages of the BaiShanCloud storage management interface.

**Top Page:** "我的存储" (My Storage). The "图片处理" (Image Processing) tab is selected. It lists several buckets: "bucket1", "bucket6", "myytest", "design", "testchen" (highlighted with a red box), "yii", "wotutest", and "dasd". Below these are "11111" and "bucket2". A "新建 Bucket" (Create Bucket) button is at the top left.

**Bottom Page:** "我的存储" (My Storage). The "图片处理 (testchen)" (Image Processing (testchen)) tab is selected. It shows a table of styles:

| Name | Styles                                               | Quality | Format | Actions |
|------|------------------------------------------------------|---------|--------|---------|
| test | c_scale,w_200,h_400,q_100,f_webp,a_hflip,e_auto,c... | 100     | webp   |         |



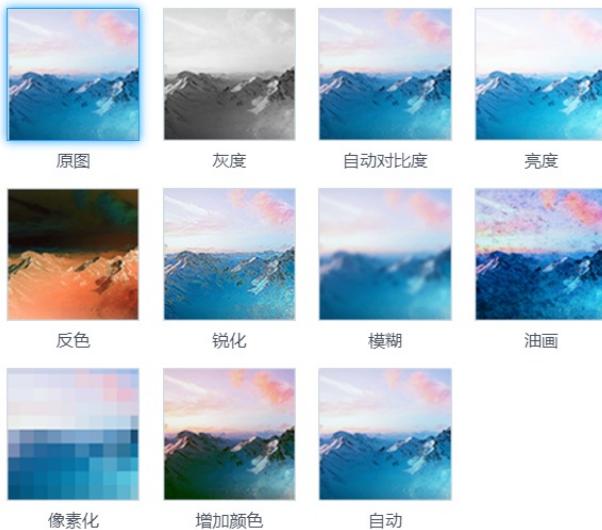
This screenshot shows the 'Create Style' dialog in the BaiShanCloud storage interface. The title bar says '创建样式 (testchen)'. Below it, there are two tabs: '基础编辑' (highlighted with a red box) and '高级编辑'. The main area displays a preview image of a snowy mountain range. To the right, there are various configuration options: '样式名称:' (Style Name) with a placeholder '样式名称', '处理方式:' (Processing Method) with radio button options for '保持原尺寸不变' (Keep original size), '固定宽高缩放' (Fixed width and height scaling), '等比例缩放' (Proportional scaling), '等比例裁剪' (Proportional crop), '指定尺寸位置裁剪' (Specify dimension position crop), '定位人脸裁剪' (Face detection crop), and '背景填充等比例缩放' (Background fill proportional scaling); a '图片质量:' (Image Quality) slider set to 100; a '保存格式:' (Save Format) dropdown set to 'original'; and a '更多设置' (More Settings) button. At the bottom left is a '预览' (Preview) button, and at the bottom right is a '添加水印' (Add Watermark) button with a '关' (Off) switch.

[更多设置 ^](#)

翻转模式： 旋转角度  垂直翻转  水平翻转

角度：

滤镜与特效：



设置边框： 关

生成圆角：

不透明度：

添加水印： 开

水印类型： 文字水印  图片水印

文字内容：

请输入水印文字内容

文字样式：

宋体

▼

16

px



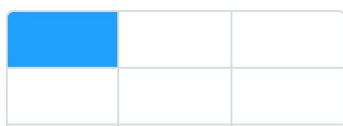
#ffffff

背景：



#ffffff

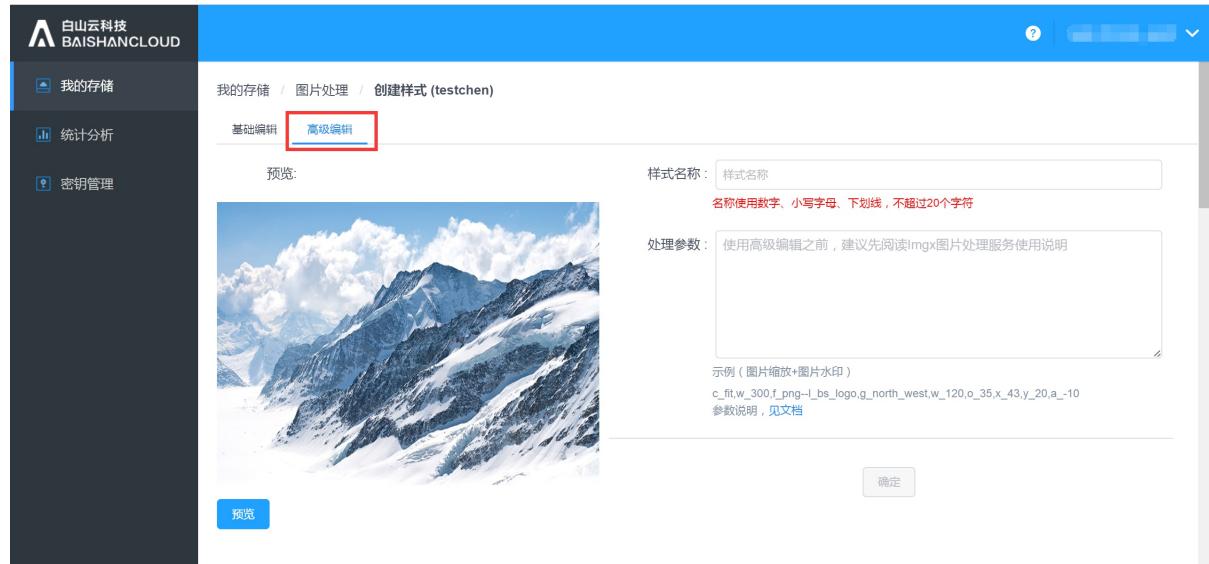
水印位置：



左边距离：

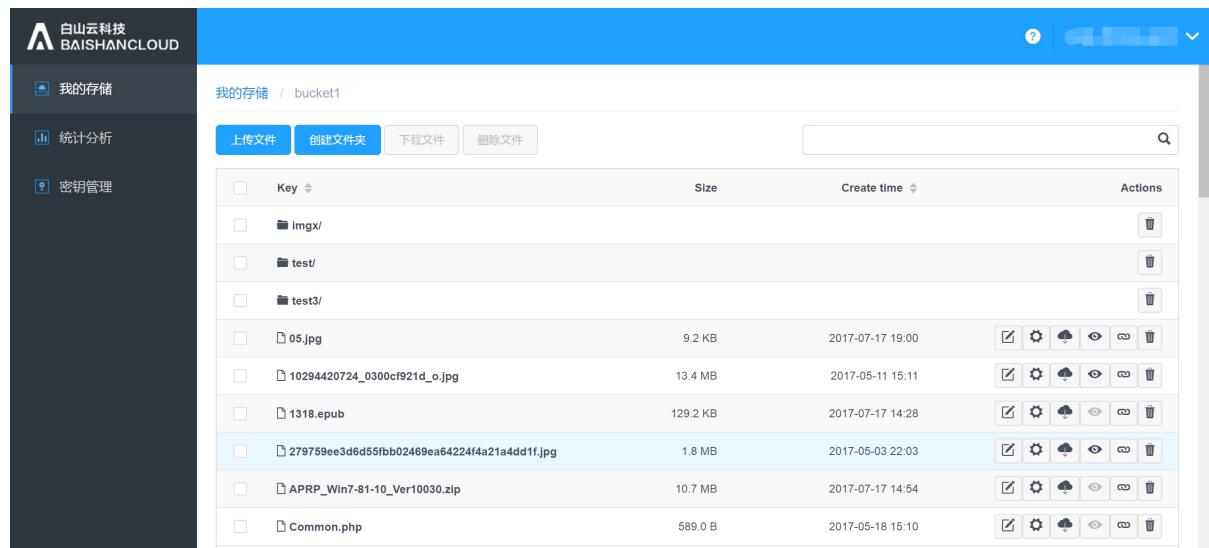
0

px



## 1.

### BucketBucket



## Bucket//

The screenshot shows the BaiShanCloud storage interface. On the left sidebar, there are three main categories: '我的存储' (My Storage), '统计分析' (Statistics Analysis), and '密钥管理' (Key Management). The '我的存储' section is selected and displays the path '我的存储 / bucket1'. Below this, there are four buttons: '上传文件' (Upload File), '创建文件夹' (Create Folder), '下载文件' (Download File), and '删除文件' (Delete File). A search bar is located at the top right. The main content area shows a table of files with columns: 'Key', 'Size', 'Create time', and 'Actions'. The files listed are:

| Key                                         | Size     | Create time      | Actions |
|---------------------------------------------|----------|------------------|---------|
| imgx/                                       |          |                  |         |
| test/                                       |          |                  |         |
| test3/                                      |          |                  |         |
| 05.jpg                                      | 9.2 KB   | 2017-07-17 19:00 |         |
| 10294420724_0300cf921d_o.jpg                | 13.4 MB  | 2017-05-11 15:11 |         |
| 1318.epub                                   | 129.2 KB | 2017-07-17 14:28 |         |
| 279759ee3d6d55fb02469ea64224f4a21a4dd1f.jpg | 1.8 MB   | 2017-05-03 22:03 |         |
| APRP_Win7-81-10_Ver10030.zip                | 10.7 MB  | 2017-07-17 14:54 |         |
| Common.php                                  | 589.0 B  | 2017-05-18 15:10 |         |

“”Bucket

The screenshot shows the BaiShanCloud storage interface with the 'Upload file' modal open. The modal has a blue header 'Upload file' and a red 'X' button in the top right. It contains a large dashed blue rectangular area with a blue cloud icon and the text '点击或拖拽上传' (Click or drag and drop to upload). Below the modal, the file list table is visible, showing the same set of files as the previous screenshot.

“”Bucket

The screenshot shows the BaiShanCloud storage interface with the 'Create folder' modal open. The modal has a blue header '创建文件夹' (Create Folder) and a red 'X' button in the top right. It contains a text input field labeled '文件夹名称' (Folder Name) with the placeholder '请输入文件夹名称' (Enter folder name). At the bottom right are two buttons: '取消' (Cancel) and '确定' (Confirm). The background shows the file list table with the same files as the previous screenshots.

“”

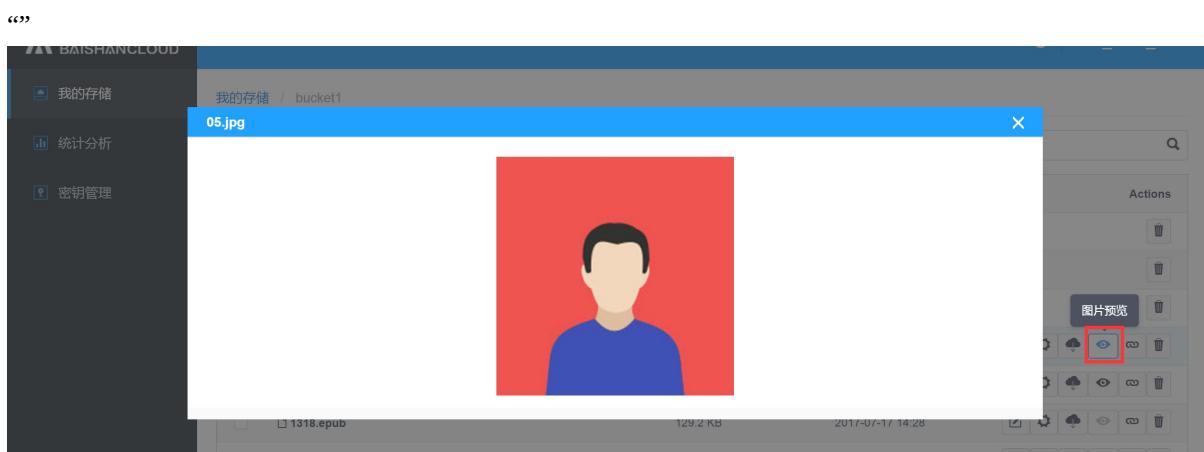
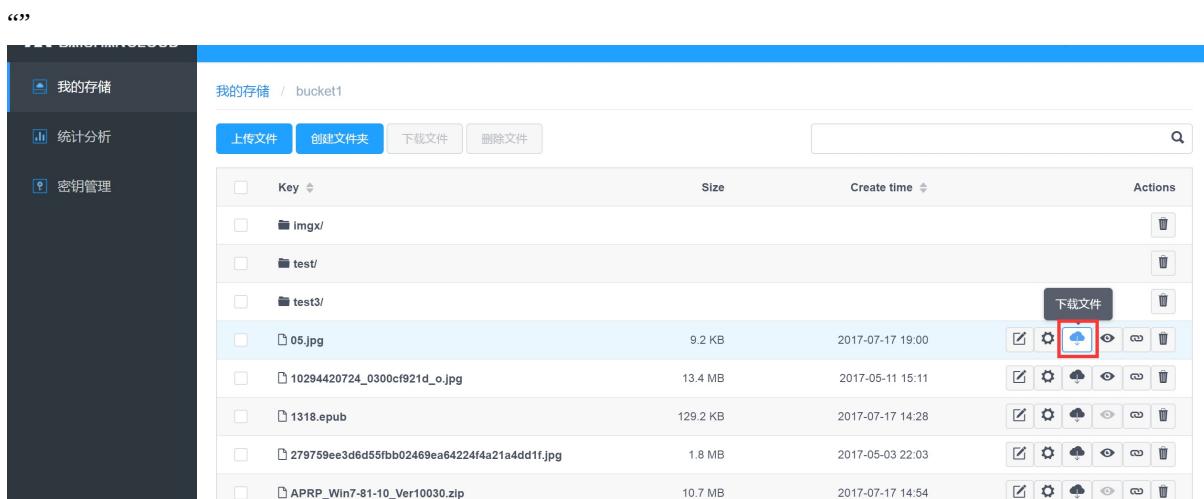
The screenshot shows the BaiShanCloud storage interface. On the left is a dark sidebar with navigation options: '我的存储' (selected), '统计分析', and '密钥管理'. The main area is titled '我的存储 / bucket1'. At the top, there are four tabs: '上传文件' (Upload file), '创建文件夹' (Create folder), '下载文件' (Download file) (which is highlighted with a red box), and '删除文件' (Delete file). Below the tabs is a search bar and a table listing files. The columns in the table are 'Key' (sorted by size), 'Size', 'Create time' (sorted by create time), and 'Actions'. The table contains several entries, including 'imgx/' and 'test/' which are folders, and various files like '05.jpg', '10294420724\_0300cf921d\_o.jpg', '1318.epub', '279759ee3d6d55fb02469ea64224f4a21a4dd1f.jpg', and '10.7.MP'. Each entry has a row of actions icons.

“”

This screenshot shows the same storage interface as the previous one, but with the 'Delete file' tab selected (highlighted with a red box). A confirmation dialog box is overlaid on the page, asking '确定删除选中的文件吗?' (Are you sure you want to delete the selected files?). The dialog has '取消' (Cancel) and '确定' (Confirm) buttons. The background table of files is partially visible.

“”

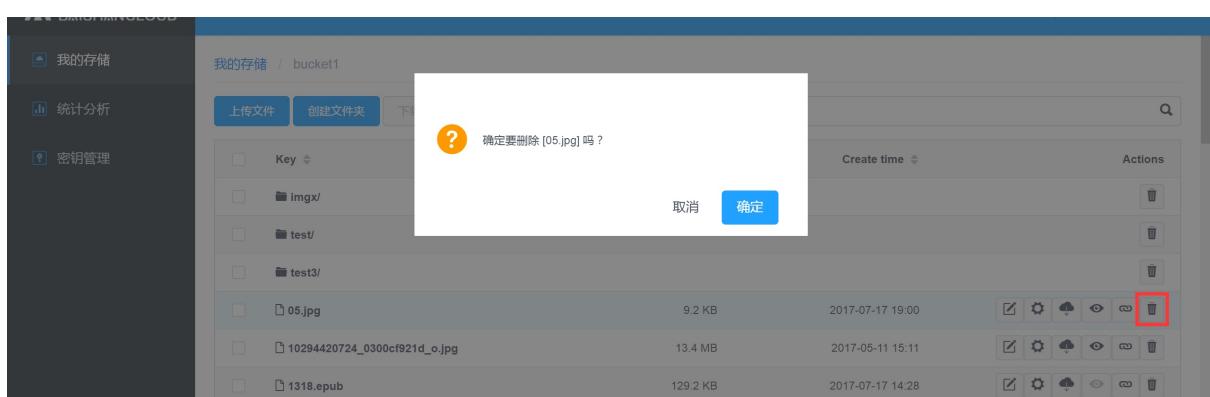
This screenshot shows the 'Rename file' dialog box open over the storage interface. The dialog has a blue header '文件重命名' (File Rename) and a text input field labeled '新文件名' (New name). There are '取消' (Cancel) and '确定' (Confirm) buttons at the bottom right. The background shows the list of files in 'bucket1', with the '05.jpg' file selected (indicated by a red box around its row in the table).



““url

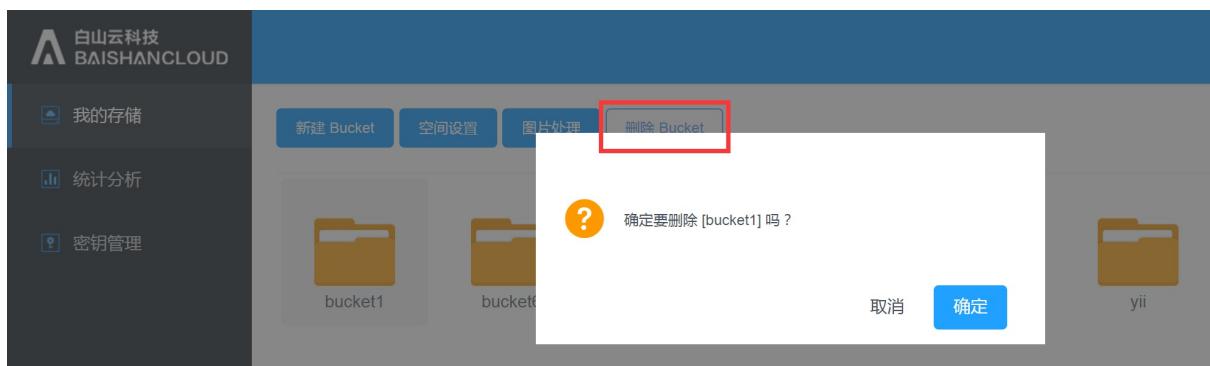


””

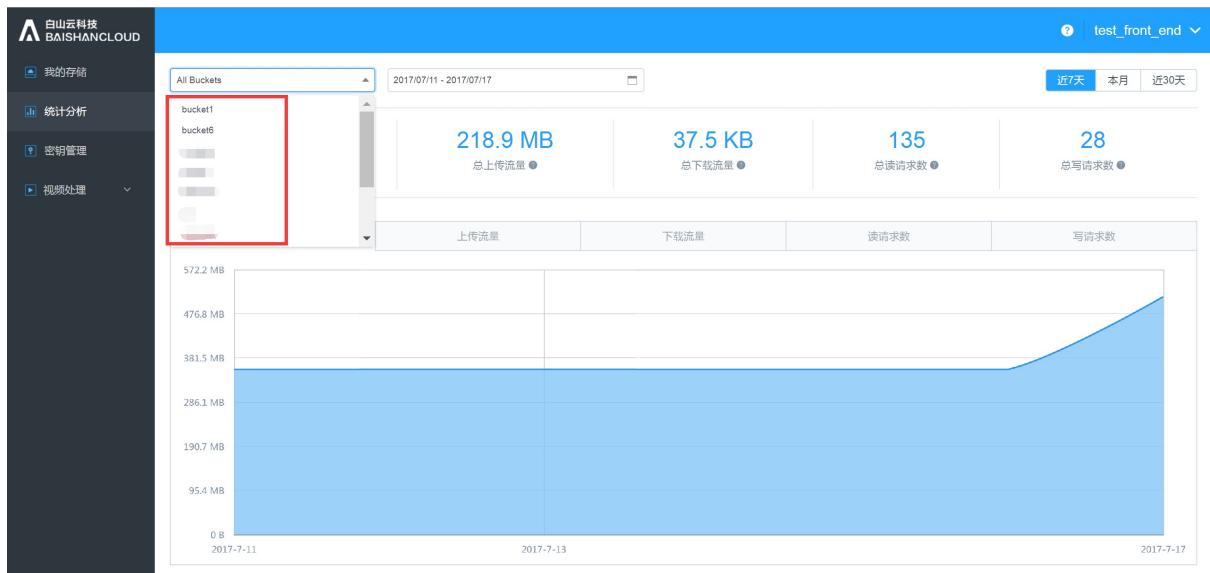
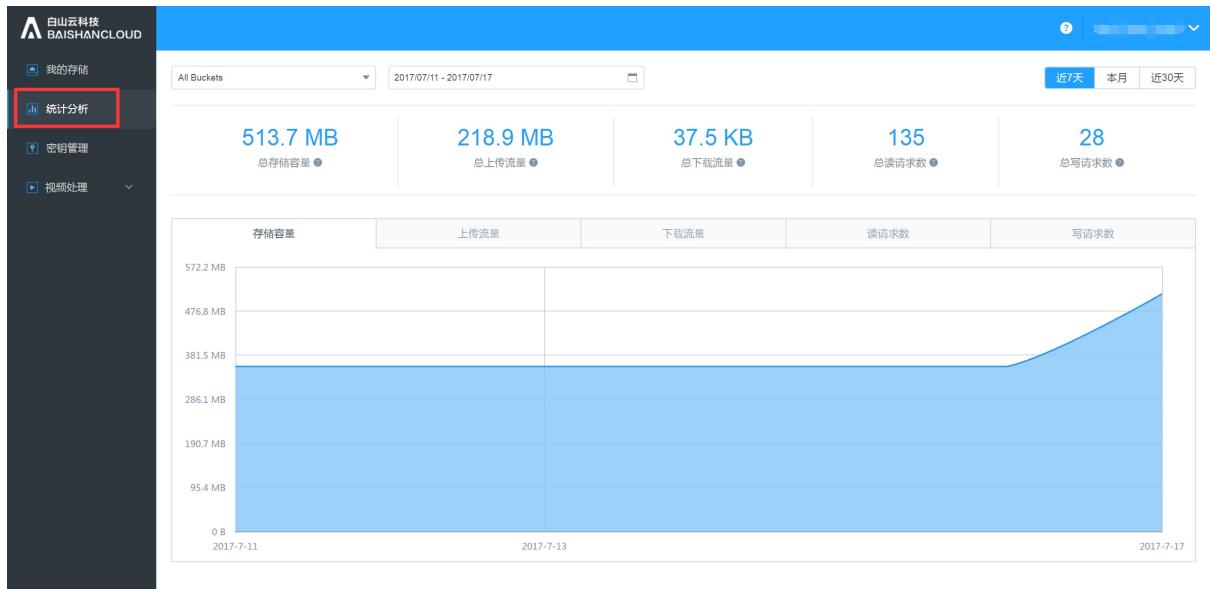


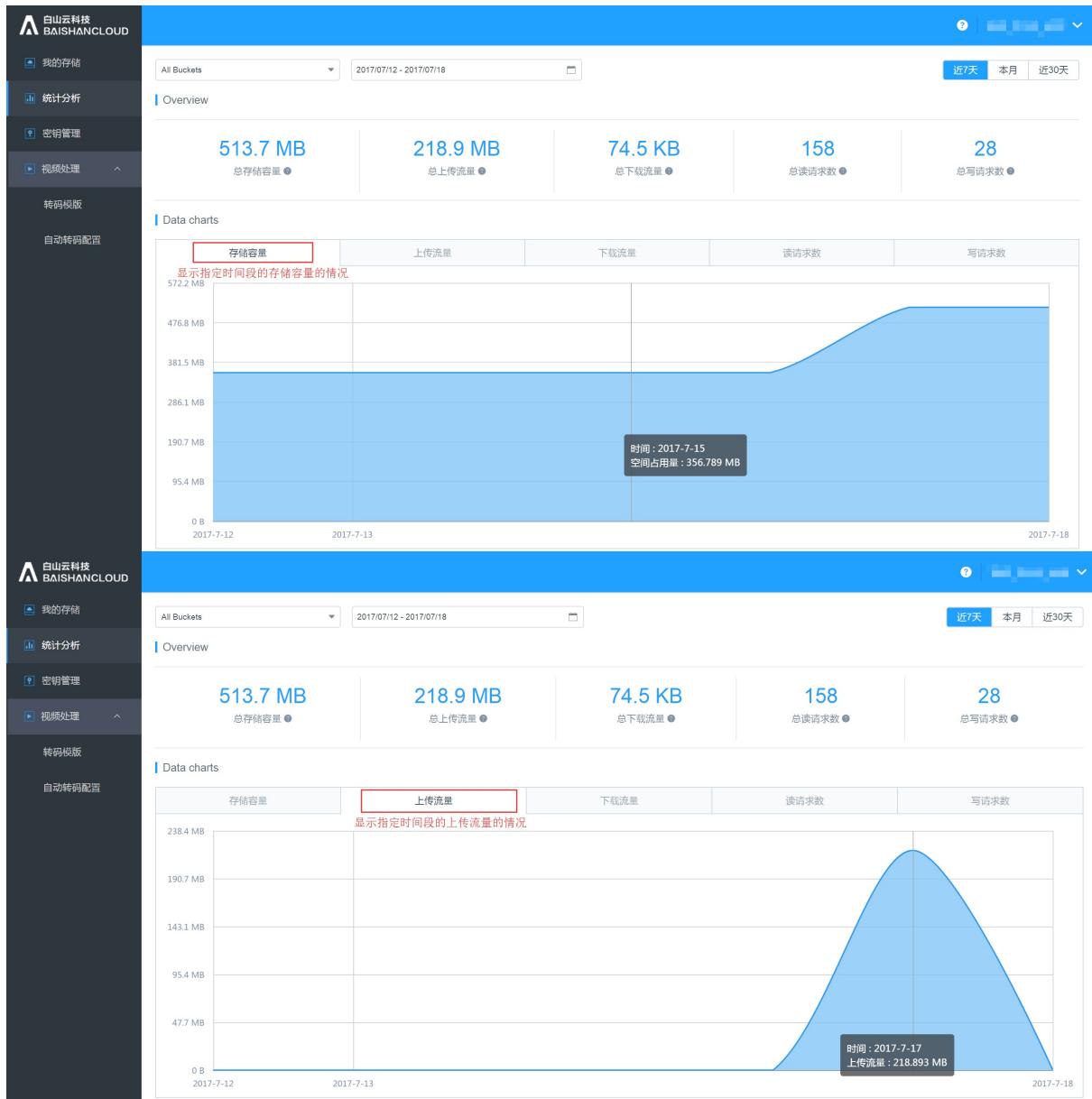
## 1. Bucket

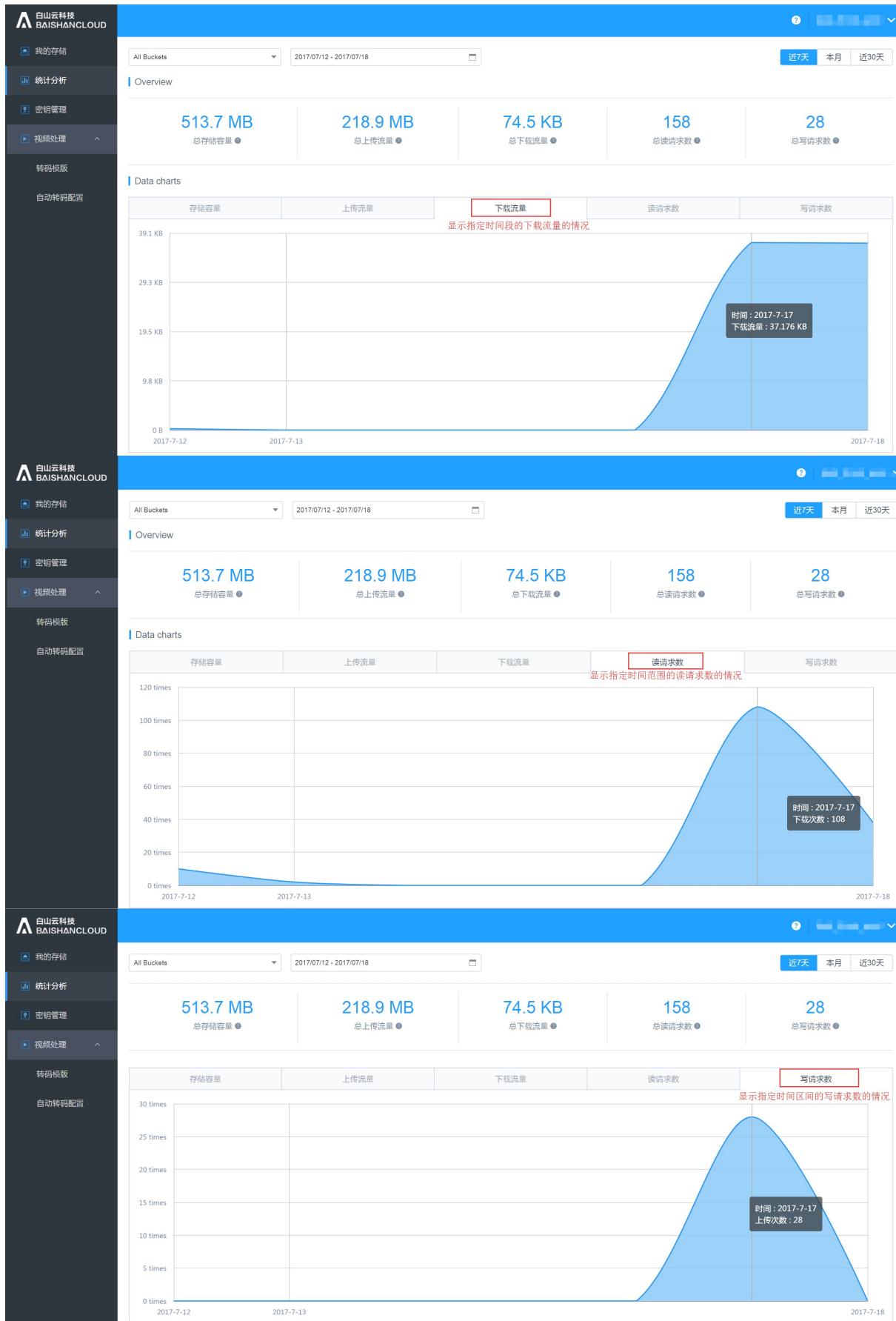
Bucket



## 1.





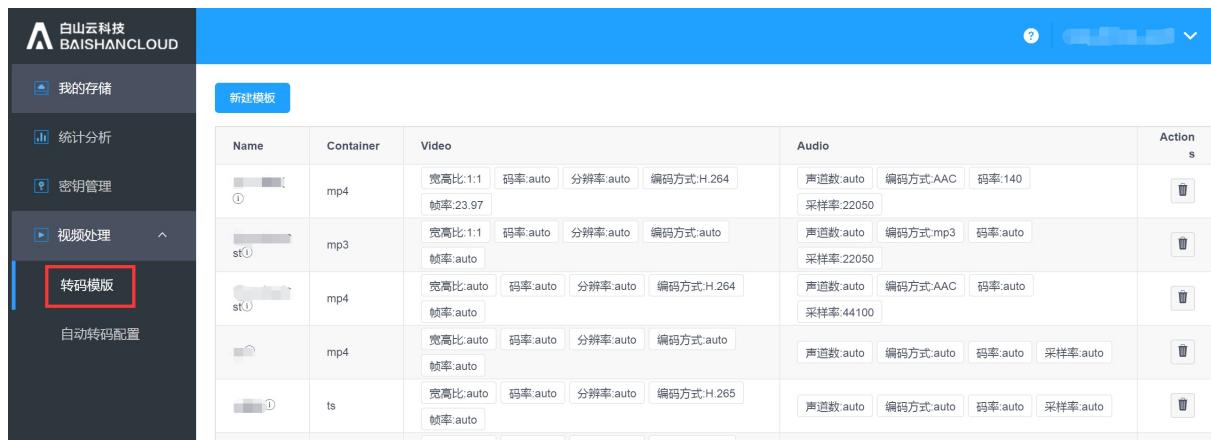


# 1.

## 1.

### 1.

“” “”



| Name | Container | Video               | Audio                             | Action                                       |
|------|-----------|---------------------|-----------------------------------|----------------------------------------------|
| ①    | mp4       | 宽高比:1:1<br>帧率:23.97 | 码率:auto<br>分辨率:auto<br>编码方式:H.264 | 声道数:auto<br>编码方式:AAC<br>码率:140<br>采样率:22050  |
| st①  | mp3       | 宽高比:1:1<br>帧率:auto  | 码率:auto<br>分辨率:auto<br>编码方式:auto  | 声道数:auto<br>编码方式:mp3<br>码率:auto<br>采样率:22050 |
| st①  | mp4       | 宽高比:auto<br>帧率:auto | 码率:auto<br>分辨率:auto<br>编码方式:H.264 | 声道数:auto<br>编码方式:AAC<br>码率:auto<br>采样率:44100 |
|      | mp4       | 宽高比:auto<br>帧率:auto | 码率:auto<br>分辨率:auto<br>编码方式:auto  | 声道数:auto<br>编码方式:auto<br>码率:auto<br>采样率:auto |
| ①    | ts        | 宽高比:auto<br>帧率:auto | 码率:auto<br>分辨率:auto<br>编码方式:H.265 | 声道数:auto<br>编码方式:auto<br>码率:auto<br>采样率:auto |

### 1.

“”



| Name | Container | Video               | Audio                             | Action                                       |
|------|-----------|---------------------|-----------------------------------|----------------------------------------------|
| ①    | mp4       | 宽高比:1:1<br>帧率:23.97 | 码率:auto<br>分辨率:auto<br>编码方式:H.264 | 声道数:auto<br>编码方式:AAC<br>码率:140<br>采样率:22050  |
| ①    | mp3       | 宽高比:1:1<br>帧率:auto  | 码率:auto<br>分辨率:auto<br>编码方式:auto  | 声道数:auto<br>编码方式:mp3<br>码率:auto<br>采样率:22050 |
| ①    | mp4       | 宽高比:auto<br>帧率:auto | 码率:auto<br>分辨率:auto<br>编码方式:H.264 | 声道数:auto<br>编码方式:AAC<br>码率:auto<br>采样率:44100 |
| ①    | mp4       | 宽高比:auto<br>帧率:auto | 码率:auto<br>分辨率:auto<br>编码方式:auto  | 声道数:auto<br>编码方式:auto<br>码率:auto<br>采样率:auto |
| ①    | ts        | 宽高比:auto<br>帧率:auto | 码率:auto<br>分辨率:auto<br>编码方式:H.265 | 声道数:auto<br>编码方式:auto<br>码率:auto<br>采样率:auto |
| ①    | mp4       | 宽高比:auto<br>帧率:auto | 码率:auto<br>分辨率:auto<br>编码方式:auto  | 声道数:auto<br>编码方式:auto<br>码率:auto<br>采样率:auto |

“” “”“”“”mp4FastStartmp4FastStart

白山云科技  
BAISHANCLOUD

我的存储    统计分析    密钥管理

视频处理 ^

转码模版

自动转码配置

模板配置 / 新建模板

模板名称： 模板名称  
不少于1个字符，不超过20个字符

模板描述： 输入模板描述文字

输出封装格式： flac  fiv  gif  mp3  mp4  mpg  ts

FastStart： 开

视频参数配置

编码方式： 不变  H.264  H.265

码率： 自适应  自定义  Kbps

帧率：

66999

FastStart :  开

### 视频参数配置

编码方式 :  不变  H.264  H.265

码率 :  自适应  自定义  Kbps

帧率 : 不变

H.264”Profile “”Level“”“”“”“”“”“”“”

输出封装格式 :  flac  flv  gif  mp3  mp4  mpg  ts

FastStart :

### 视频参数配置

编码方式 :  不变  H.264  H.265

编码Profile :  baseline  main  high

编码Level :  1  1b  1.1  1.2  1.3  2  2.1  2.2  3  3.1  3.2  4  4.1

固定关键帧间距 :  关  1 秒 (1~100000)

码率 :  自适应  自定义  Kbps

帧率 : 不变

分辨率 :  不变  自定义 宽度 高度

宽高比 :  不变  1:1  4:3  3:2  16:9

H.265”“““““““

视频参数配置

编码方式： 不变  H.264  H.265

固定关键帧间距：  关 1 秒 (1~100000)

码率： 自适应  自定义 1 Kbps

帧率： 不变

分辨率： 不变  自定义 宽度 高度

宽高比： 不变  1:1  4:3  3:2  16:9

音频参数配置

编码方式： 不变  AAC  mp3

采样率(HZ)： 不变  22050  32000  44100  48000  96000

码率： 自适应  自定义 64

声道数： 不变

保存

1.

”“

新建配置

| ID                  | Status | Input Bucket | Output Bucket | Keys Regex | Output key prefix | Outputs                                                                | Actions                                                                               |
|---------------------|--------|--------------|---------------|------------|-------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1500608592138336636 | ●      | test033      | testchen      |            |                   | keySuffix: 视频转码模板ID 693, HLS切片时长:-, keySuffix: 视频转码模板ID 683, HLS切片时长:- | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |
| 1500615068859620799 | ●      | bucket0test  | test033       | GHTHU      |                   | keySuffix: 视频转码模板ID 683, HLS切片时长:-                                     | <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |

”“““ Bucket”“”|“

自动转码配置 / 新建模板

输入配置

允许转码的路径规则： 按文件扩展名配置  正则表达式配置 正则表达式

输入Bucket： bucket1

输出配置

## Bucket

The screenshot shows the BaiShanCloud Bucket interface. On the left sidebar, under the '视频处理' (Video Processing) section, the '转码模版' (Transcoding Template) option is selected. The main content area displays the '输出配置' (Output Configuration) section. It includes fields for '输入Bucket' (Input Bucket) set to 'bucket1', '输出文件key前缀' (Output file key prefix) set to '输出文件key前缀', and '输出Bucket' (Output Bucket) set to 'bucket1'. A red box highlights the '输出规则' (Output Rule) button. Below it, another red box highlights the '视频截图规则' (Video Screenshot Rule) button. A red message at the bottom states '输出规则和视频截图规则至少存在一个' (At least one output rule or video screenshot rule must exist). A blue '+ 添加' (Add) button is located below each highlighted section.

## tsHLS

The screenshot shows the BaiShanCloud tsHLS interface. The left sidebar shows the '转码模版' (Transcoding Template) section is selected. A modal dialog titled '输出规则' (Output Rule) is open in the center. It contains fields for '转码模板' (Transcoding Template) set to 'ts模版', '输出文件名后缀' (Output file name suffix) set to '输出文件名后缀', and 'HLS切片时长' (HLS Slice Duration) set to '0'. A blue '确定' (Confirm) button is at the bottom right of the dialog.

.....

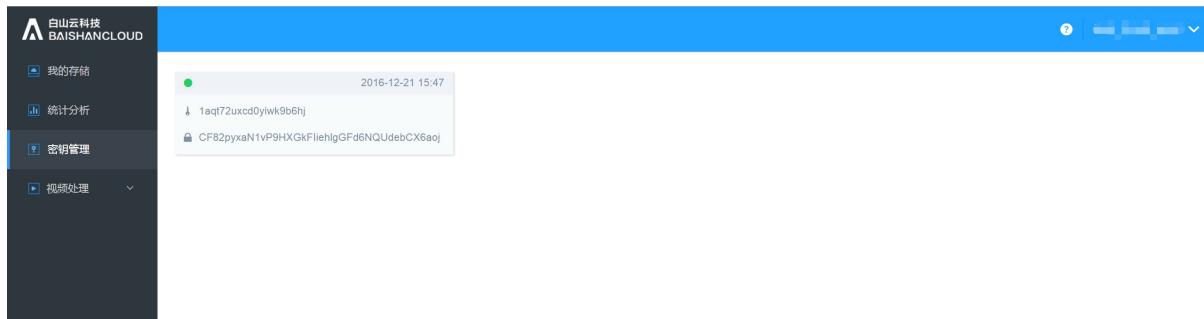
The screenshot shows the BaiShanCloud Bucket interface. The left sidebar shows the '视频处理' (Video Processing) section is selected. A modal dialog titled '输出规则' (Output Rule) is open. It includes fields for '输出文件名后缀' (Output file name suffix) set to 'jpg', '截图起始时间点' (Screenshot Start Time Point) set to '0 s', '截图间隔时间' (Screenshot Interval Time) set to '1 s', and '截图最大数量' (Screenshot Max Number) set to '1'. Below these, there are sections for '分辨率' (Resolution) with radio buttons for '不变' (Unchanged) and 'value', and '宽高比' (Aspect Ratio) with radio buttons for '不变' (Unchanged), '1:1', '4:3', '3:2', and '16:9'. At the bottom, there is a field for '转码失败回调Url' (Transcoding Failure Callback URL) with the value 'http://...'. A blue '确定' (Confirm) button is at the bottom right of the dialog.

“”“” tsHLSMasterPlayList



“”URLURL

1.



1.

The screenshots illustrate the process of creating a new account and managing existing accounts in the BaiShanCloud user management system.

**Screenshot 1: User Management - Existing Accounts**

| User name  | Type | Email                            | Acl                                                                                                                                                          | Actions                             |
|------------|------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| [REDACTED] | 子账号  | 111111111111111111@111.com       | super1 - bucket:READ,WRITE - file:READ,WRITE                                                                                                                 | <input checked="" type="checkbox"/> |
| [REDACTED] | 子账号  | bucketredirect1@baishancloud.com | super1 - bucket:READ,READ_ACP - file:READ,READ_ACP                                                                                                           | <input checked="" type="checkbox"/> |
| [REDACTED] | 子账号  | bucketredirect@baishancloud.com  | super1 - bucket:READ,WRITE,READ_ACP - file:READ,READ_ACPsuper2 - bucket:READ_ACP - file:READ_ACP                                                             | <input checked="" type="checkbox"/> |
| [REDACTED] | 子账号  | fetest12@baishancloud.com        |                                                                                                                                                              | <input checked="" type="checkbox"/> |
| [REDACTED] | 子账号  | fetest2@baishancloud.com         | super1 - bucket:READ,WRITE,WRITE_ACP,READ_ACP - file:READ,WRI<br>TE_ACP,READ_ACPsuper2 - bucket:READ,WRITE,WRITE_ACP,READ_ACP - file:READ,WRITE_ACP,READ_ACP | <input checked="" type="checkbox"/> |
| [REDACTED] | 子账号  | fetest3@baishancloud.com         | super1 - bucket:WRITE,READ_ACP - file:WRITE,READ_ACPsuper2 - buc<br>ket:READ,READ_ACP - file:READ,READ_ACP                                                   | <input checked="" type="checkbox"/> |
| [REDACTED] | 子账号  | fetest4@baishancloud.com         | super1 - bucket:READ,READ_ACP - file:READ,READ_ACPsuper2 - buc<br>ket:READ_ACP - file:READ_ACP                                                               | <input checked="" type="checkbox"/> |
| [REDACTED] | 子账号  | fetest@baishancloud.com          | super1 - bucket:READ,WRITE - file:READ,WRITE                                                                                                                 | <input checked="" type="checkbox"/> |

**Screenshot 2: New Account Creation - Step 1**

**Screenshot 3: New Account Creation - Step 2**

In Screenshot 3, the checkbox for the first account in the list has been selected, indicated by a red box.

## 1.

### FAQ SDK bucket bucket

The screenshot shows the BaiShanCloud bucket management interface. A red box highlights the "New Bucket" button in the top navigation bar.

Type to search

**概述**

我们提供了一套兼容AmazonS3的RESTful API，可以使您更加自由地开发出灵活的功能。

白山云存储服务主要提供以下三类API：

- Service操作
- Bucket操作
- Object操作

与此同时，为提高用户使用的安全性，白山云存储服务还通过使用签名来验证请求者的身份。

如需了解签名算法的详细信息，请参考[《签名算法》](#)。

注意：以下接口中所使用的示例都是在需要使用签名情况下；如果相关访问资源已设置为可匿名（所有用户）访问，则可不带签名。

Type to search

**基础知识普及**

- Bucket和Object的概念
- 编程接口相关, 用户使用相关
  - 白山云存储有哪些技术优势？
  - 白山云存储支持的语言和SDK列表？
  - 云存储的Object是以目录结构存储的吗？
  - 如何删除一个目录？
  - 是否可以使用白山云存储做整站的备份？
  - 用户如何导入数据？
  - 404回源, 如果存储上文件不存在, 是否可以自动让存储去特定的地方拉取？
  - 如何使用离线下载同步数据？
  - 多文件上传是否支持？
  - 大文件如何上传, 有什么限制？
  - 访问控制权限有哪些？
  - 是否可以不用签名操作操作bucket和object？
- 周边服务, 图片, 视频处理等
  - 白山存储支持实时图片转换, 旋转, 缩放, 剪切, 打水印吗？
  - 是否可以让存储自动判断user-agent触发特定的图片剪裁输出？
  - 是否有视频转码功能？
- 用户管理存储资源相关, 管理控制台
  - 存储用户可以通过后台查看到哪些信息？

## SDK

Type to search

**安装AWS Python 客户端boto3**

```
pip install boto3
```

**初始化，设置帐号信息和域名**

```
import boto3
from boto3.s3.transfer import TransferConfig

cli = boto3.client(
 's3',
 aws_access_key_id='ziw5dp1alvty9n47qksu', #请替换为您自己的access_key
 aws_secret_access_key='V+ZT5u5wlvXb+kP5g0dMNzhMeWe372/yRKx4hZV', #请替换为您自己的secret_key
 endpoint_url='http://s2.iqingcdn.com'
)
```

**文件操作接口**

