

Object Storage Service

Go SDK Developer Guide

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1 Before You Start (SDK for Go)

This section describes the version updates, compatibility, and important notes about Object Storage Service (OBS) SDK for Go.

Version Updates and Compatibility

[Table 1-1](#) describes the version updates and compatibility of OBS SDK for Go.

Table 1-1 Version updates and compatibility of OBS SDK for Go

| Version | Update | Description | Compatible or Not |
|-----------------------------|-------------------|--|-------------------|
| 3.23.4 (the latest version) | New features | <ul style="list-style-type: none">Added obs.WithCustomHeader that allows you to add custom headers in the requests of clients interacting with OBS.Supported custom bucket domain names, with the SetBucketCustomDomain, GetBucketCustomDomain, and DeleteBucketCustomDomain APIs added.Supported mirroring-based back to source, with the SetBucketMirrorBackToSource, GetBucketMirrorBackToSource, and DeleteBucketMirrorBackToSource APIs added. | - |
| 3.23.3 | New features | Added obs.WithCallbackHeader that allows you to configure callback parameters in object upload requests. | Yes |
| 3.22.11 | Code optimization | Optimized the OBS SDK for Go code. | Yes |

| Version | Update | Description | Compatible or Not |
|----------------------|--------------|--|-------------------|
| 3.21.12 | New features | Added obs.WithTrafficLimitHeader that limits the bandwidth for a single connection. | Yes |
| Earlier than 3.21.12 | - | End of matching. You are advised to upgrade the version. | - |

Important Notes

- Make sure that you are familiar with basic OBS concepts, such as [buckets](#), [objects](#), [access keys \(AKs/SKs\)](#), and [endpoints and domain names](#).
- Some features are available only for some regions. If **405** HTTP status code is returned for a certain feature API, check whether the region supports that feature. For details, refer to [Function Overview](#) or [submit a service ticket](#) to contact technical support.
- Namespace: **obs** is used as the namespace to be compatible with earlier OBS 2.0 versions (2.2.x). All data types and API definitions contained in the SDK belong to this namespace. Before using OBS SDK for Go, you need to import **obs**.
- API functions are compatible with earlier OBS 2.0 versions (2.2.x).

2 API Overview of OBS SDK for Go

Table 2-1 describes the APIs provided by OBS SDK for Go. You can click an API name in the table to see its detailed information and sample code.

Table 2-1 APIs provided by OBS SDK for Go

| API | Method | Function |
|---|--------------------------------|---|
| Creating a Bucket | obsClient.CreateBucket | Creates a bucket. |
| Obtaining a Bucket List | obsClient.ListBuckets | Returns a list of buckets in alphabetical order. |
| Checking Whether a Bucket Exists | obsClient.HeadBucket | Determines whether a bucket exists. |
| Deleting a Bucket | obsClient.DeleteBucket | Deletes an empty bucket. |
| Listing Objects in a Bucket | obsClient.ListObjects | Returns some or all (up to 1,000) of the objects in a bucket. |
| Listing Object Versions in a Bucket | obsClient.ListVersions | Lists some or all (up to 1,000) of the object versions in a bucket. |
| Obtaining Bucket Metadata | obsClient.GetBucketMetadata | Returns the metadata information of a bucket. |
| Obtaining the Region of a Bucket | obsClient.GetBucketLocation | Returns the region where the bucket is created. |
| Obtaining Storage Information of a Bucket | obsClient.GetBucketStorageInfo | Returns the storage information of a bucket, including the number of objects and the space occupied by the objects in the bucket. |

| API | Method | Function |
|---|--|---|
| Configuring a Storage Quota | obsClient.SetBucketQuota | Sets a storage quota for a bucket. |
| Obtaining a Bucket Storage Quota | obsClient.GetBucketQuota | Returns the storage quota of a bucket. |
| Configuring Storage Class for a Bucket | obsClient.SetBucketStoragePolicy | Configures a storage class for a bucket. |
| Obtaining the Storage Class of a Bucket | obsClient.GetBucketStoragePolicy | Returns the storage class of a bucket. |
| Configuring a Bucket ACL | obsClient.SetBucketAcl | Configures the ACL for a bucket. |
| Obtaining the Bucket ACL | obsClient.GetBucketAcl | Returns the bucket ACL. |
| Configuring Logging for a Bucket | obsClient.SetBucketLoggingConfiguration | Configures logging for a bucket. |
| Obtaining the Logging Configuration of a Bucket | obsClient.GetBucketLoggingConfiguration | Returns the logging configuration of a bucket. |
| Configuring a Bucket Policy | obsClient.SetBucketPolicy | Configures a policy for a bucket. |
| Obtaining the Policy of a Bucket | obsClient.GetBucketPolicy | Returns the policy of a bucket. |
| Deleting a Bucket Policy | obsClient.DeleteBucketPolicy | Deletes the policy of a bucket. |
| Configuring Lifecycle Rules for a Bucket | obsClient.SetBucketLifecycleConfiguration | Configure lifecycle rules for a bucket to periodically transition objects between storage classes and delete objects. |
| Obtaining the Lifecycle Configuration of a Bucket | obsClient.GetBucketLifecycleConfiguration | Returns the lifecycle configuration of a bucket. |
| Deleting the Lifecycle Configuration of a Bucket | obsClient.DeleteBucketLifecycleConfiguration | Deletes all lifecycle rules of a bucket. |

| API | Method | Function |
|---|--|---|
| Configuring Static Website Hosting for a Bucket | obsClient.SetBucketWebsiteConfiguration | Configures static website hosting for a bucket. |
| Obtaining the Static Website Hosting Configuration of a Bucket | obsClient.GetBucketWebsiteConfiguration | Returns the static website hosting configuration of a bucket. |
| Deleting the Static Website Hosting Configuration of a Bucket | obsClient.DeleteBucketWebsiteConfiguration | Deletes the static website hosting configuration of a bucket. |
| Configuring Versioning for a Bucket | obsClient.SetBucketVersioning | Configures versioning for a bucket. |
| Obtaining the Versioning Status of a Bucket | obsClient.GetBucketVersioning | Returns the versioning status of a bucket. |
| Configuring CORS for a Bucket | obsClient.SetBucketCors | Configures CORS for a bucket to allow cross-origin requests. |
| Obtaining the CORS Configuration of a Bucket | obsClient.GetBucketCors | Returns the CORS rules of a bucket. |
| Deleting the CORS Configuration of a Bucket | obsClient.DeleteBucketCors | Deletes the CORS configuration of a bucket. |
| Configuring Tags for a Bucket | obsClient.SetBucketTagging | Adds tags to a bucket. |
| Obtaining Bucket Tags | obsClient.GetBucketTagging | Returns the tags of a bucket. |
| Deleting Bucket Tags | obsClient.DeleteBucketTagging | Deletes the tags of a bucket. |
| Uploading an Object | obsClient.PutObject | Uploads an object to a bucket. |
| Uploading a File | obsClient.PutFile | Uploads a file or folder to a bucket. |

| API | Method | Function |
|--|-----------------------------------|--|
| Download an Object | obsClient.GetObject | Downloads an object from a bucket. |
| Copying an Object | obsClient.CopyObject | Creates a copy for a specified object. |
| Deleting an Object | obsClient.DeleteObject | Deletes a single object from a bucket. |
| Batch Deleting Objects | obsClient.DeleteObjects | Delete multiple objects from a bucket in a batch. |
| Obtaining Object Metadata | obsClient.GetObjectMetadata | Returns the object metadata. |
| Configuring Object Metadata | obsClient.SetObjectMetadata | Configures the metadata for an object. |
| Configuring an Object ACL | obsClient.SetObjectAcl | Configures the ACL for an object. |
| Obtaining Object ACL Information | obsClient.GetObjectAcl | Returns the ACL of an object. |
| Initiating a Multipart Upload | obsClient.InitiateMultipartUpload | Initiates a multipart upload in a bucket. |
| Uploading a Part | obsClient.UploadPart | Uploads parts to a bucket by specifying the multipart upload ID. |
| Copying a Part | obsClient.CopyPart | Copies a part to a specified bucket. |
| Listing Uploaded Parts | obsClient.ListParts | Returns the uploaded parts in a bucket by specifying the multipart upload ID. |
| Listing Multipart Uploads | obsClient.ListMultipartUploads | Returns the multipart uploads that are initiated but have not been assembled or aborted in a bucket. |
| Assembling Parts | obsClient.CompleteMultipartUpload | Completes a multipart upload based on the multipart upload ID and information (including PartNumber and Etag) about the uploaded parts. |
| Aborting a Multipart Upload | obsClient.AbortMultipartUpload | Aborts a multipart upload in a bucket by specifying the multipart upload ID. |
| Restoring an Archive Object | obsClient.RestoreObject | Restores an Archive object. |

| API | Method | Function |
|---|---------------------------------------|---|
| Creating a Signed URL | obsClient.CreateSignedUrl | Creates a signed URL based on the specified AK and SK, HTTP method, and request parameters. |
| Creating Parameters for Browser-based Upload | obsClient.CreateBrowserBasedSignature | Creates request parameters for authentication to enable browser-based upload with POST. |
| Uploading an Object - Resumable | obsClient.UploadFile | Enables resumable uploads of objects in the event of unstable network connections or program crashes. |
| Downloading an Object - Resumable | obsClient.DownloadFile | Enables resumable downloads of objects in the event of unstable network connections or program crashes. |

3 Preparations (SDK for Go)

Before using OBS SDK for Go to access Huawei Cloud OBS, you need to prepare the service and development environments. To prepare the service environment, you must get a HUAWEI ID and an access key. Both of them are necessary for interaction between OBS SDK for Python and OBS. To ensure successful SDK installation and SDK-based code development and running, you should also set up a local development environment, for example, installing dependencies and development tools.

Preparing a HUAWEI ID

Before using OBS, you must create a HUAWEI ID. For details, see [Creating a HUAWEI ID and Enabling Huawei Cloud Services](#).

Preparing Access Keys

Access keys consist of two parts: an access key ID (AK) and a secret access key (SK). OBS uses access keys to sign requests to make sure that only authorized accounts can access specified OBS resources. Programmatic access must be enabled for an IAM user before the IAM user can get access keys. To enable programmatic access, see [Viewing or Modifying IAM User Information](#). Access keys are explained as follows:

- One AK maps to only one user but one user can have multiple AKs. OBS authenticates users by their AKs.
- An SK is required for accessing OBS. Authentication information is generated based on the SK and request headers. AKs and SKs are in one-to-one match.

Access keys are classified into permanent access keys (AK/SK) and temporary access keys (AK/SK and security token). Each user can create at most two permanent access keys. Temporary access keys must be used within a given validity period. Once expired, they must be requested again. For security purposes, you are advised to use temporary access keys to access OBS. If you want to use permanent access keys, periodically update them. The following describes how to obtain two types of access keys.

- To get permanent access keys, do as follows:
 - a. Log in to the [management console](#).

- b. In the upper right corner, hover over the username and choose **My Credentials**.
- c. On the **My Credentials** page, click **Access Keys** in the navigation pane.
- d. On the **Access Keys** page, click **Create Access Key**.
- e. In the displayed dialog box, enter the login password and verification code.

 NOTE

- If you have not bound an email address or a mobile number yet, only the login password is required.
- If you have bound both an email address and a mobile number, you can use either of them for verification.

- f. Click **OK**.
- g. Click **Download**. The access key file is automatically saved to your browser's default download path.
- h. Open the downloaded **credentials.csv** file to obtain the access keys (AK and SK).

 NOTE

- Each user can create a maximum of two valid access key pairs.
 - Keep AKs and SKs properly to prevent information leakage. If you click **Cancel** in the download dialog box, the access keys will not be downloaded and cannot be downloaded later. You can create a new AK/SK pair if needed.
- To get temporary access keys, refer to the following:
Temporary access keys are issued by the system and are only valid for 15 minutes to 24 hours. Once expired, they must be requested again. They follow the principle of least privilege. When a temporary AK/SK pair is used for authentication, a security token must be used at the same time.
To obtain them, see [Obtaining a Temporary AK/SK and a Security Token](#).

NOTICE

OBS is a global service. When obtaining temporary access keys, set the token scope to **domain** to apply the token to global services. Global services are not differentiated by any project or region.

Setting Up a Development Environment

- Download a proper Go version (Go 1.14 or later recommended) from the [Go official website](#) and install it.
- (Optional) Download the latest version of GoLand from the [JetBrains official website](#) and install it.

4 Downloading and Installing OBS SDK for Go

This topic provides the download links and installation methods of OBS SDK for Go.

Downloading OBS SDK for Go

- [Source code of the latest version of OBS SDK for Go](#)

Installing OBS SDK for Go

You can use the methods listed in [Table 4-1](#) to install OBS SDK for Go.

Table 4-1 Methods of installing OBS SDK for Go

| No. | Method |
|-----|---|
| 1 | Download an installation package and use GoLand to create a go project. |
| 2 | Run the go get command. |

Method 1: Downloading a Go SDK and Using GoLand to Compile It

This procedure uses the latest version as an example:

1. Download [the SDK package](#).
2. Decompress the package to obtain the following files: **obs** (the SDK source code), **main**, **examples** (the sample code), and **README.MD** (the feature description file of SDK versions).
3. Use GoLand to create a Go project and copy the **obs**, **examples**, and **main** folders to the **src** folder of your Go project.
4. Right-click the Go project and choose **Build Project** from the drop-down list, and wait until the building is complete.

 **NOTE**

After the building is complete, you can get a directory structure similar to the following:

```
|— bin
|— pkg
|— src
-----|— examples
-----|— main
-----|— obs
      |— README.MD
```

Method 2: Running the go get Command

```
go get github.com/huaweicloud/huaweicloud-sdk-go-obs
```

5 Getting Started with OBS SDK for Go

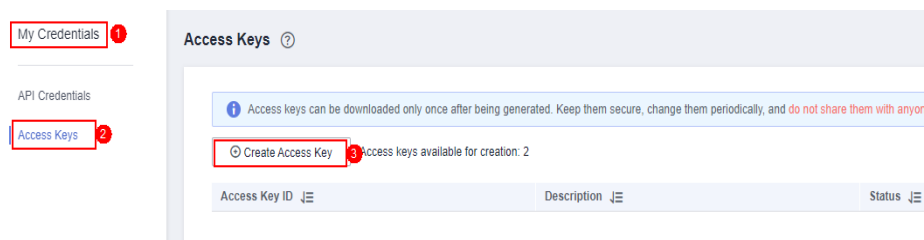
Preparing Access Keys

OBS employs access keys (AK and SK) for signature verification to ensure that only authorized accounts can access specified OBS resources. Detailed explanations of access keys are as follows:

- AK is short for Access Key ID. One AK maps to only one user but one user can have multiple AKs. OBS authenticates users by their AKs.
- SK is short for Secret Access Key, which is used to access OBS. You can generate authentication information based on SKs and request headers. An SK maps to an AK, and they group into a pair.

Access keys are permanent. There are also temporary security credentials (consisting of an AK/SK pair and a security token). Each user can create a maximum of two valid AK/SK pairs. Temporary security credentials can only be used to access OBS within the specified validity period. Once they expire, they must be requested again. For security purposes, you are advised to use temporary security credentials to access OBS. If you want to use permanent access keys, periodically update them.

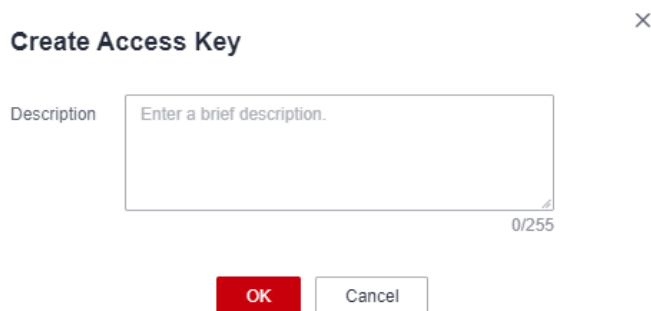
1. Log in to the [management console](#).
2. In the upper right corner, hover your cursor over the username and choose **My Credentials**.
3. On the **My Credentials** page, click **Access Keys** in the navigation pane.
4. On the **Access Keys** page, click **Create Access Key**.



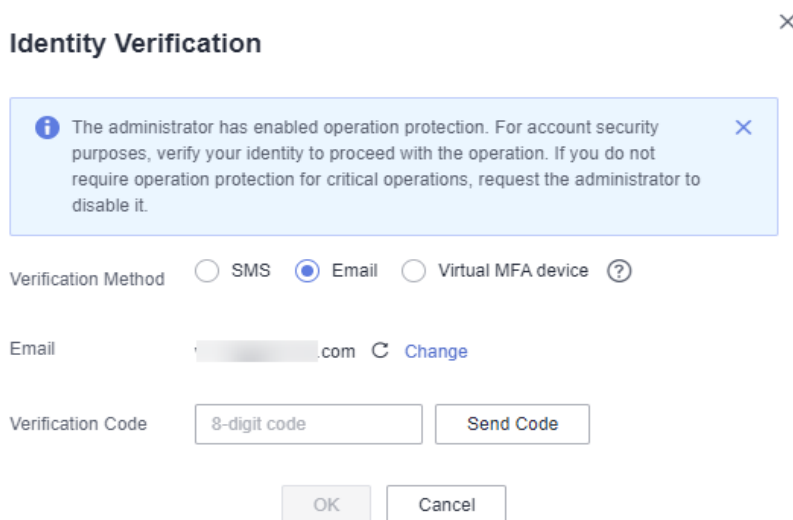
NOTE

Each user can create a maximum of two valid AK/SK pairs.

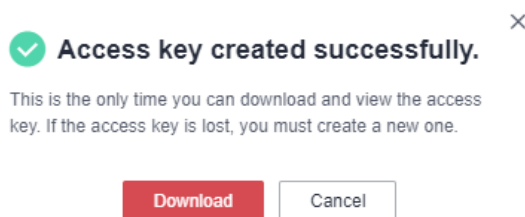
5. In the **Create Access Key** dialog box, enter a description (recommended), and click **OK**.



6. (Optional) In the displayed **Identity Verification** dialog box, select a verification method, enter the verification code, and click **OK**.



7. In the displayed dialog box, click **Download** to save the access keys to your browser's default download path.



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

NOTE

- In the **credentials.csv** file, the AK is the value in the **Access Key ID** column, and the SK is the one in the **Secret Access Key** column.
- Keep the access keys properly to prevent information leakage. If you click **Cancel** in the download dialog box, the access keys will not be downloaded and cannot be downloaded later. You can create new access keys if required.

Obtaining Endpoints

- View the [endpoints and regions](#) available for OBS.

NOTICE

OBS SDK for Go allows you to pass endpoints with or without a protocol. Suppose the endpoint you obtained is **your-endpoint**. You can pass **http://your-endpoint**, **https://your-endpoint**, or **your-endpoint** when initializing an `obsClient` instance.

Initializing an `obsClient` Instance

Each time you want to send an HTTP or HTTPS request to OBS, you must create an `ObsClient` struct first. Sample code is as follows:

```
// Import the dependency package.
import (
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import it in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err == nil {
        // Use the obsClient to access OBS.

        // Close the obsClient.
        obsClient.Close()
    }
}
```

NOTE

- For more information, see section "Initializing OBS SDK for Go."
- To learn log configuration, see [Log Initialization \(SDK for Go\)](#).
- If the **endpoint** you specified does not contain a protocol, HTTPS is used by default.
- For the sake of high DNS resolution performance and OBS reliability, you can set **endpoint** only to an OBS domain name, instead of an IP address.

Creating a Bucket

A bucket is a global namespace of OBS. It is a container for storing objects and functions as a root directory of a file system.

This example creates a bucket named **examplebucket**. For bucket details, see the code comments below.

```
package main

import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the region where the bucket is to be created. CN-Hong Kong is
    used here as an example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.CreateBucketInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the region where the bucket is to be created. The region must be the same as that in the
    endpoint passed. ap-southeast-1 is used as an example.
    input.Location = "ap-southeast-1"
    // Specify an access control policy for the bucket. obs.AclPrivate is used as an example.
    input.ACL = obs.AclPrivate
    // Specify a storage class for the bucket. obs.StorageClassWarm is used as an example. If this parameter
    is not specified, the created bucket is in the Standard storage class.
    input.StorageClass = obs.StorageClassWarm
    // Specify the AZ type for the bucket. 3az is used as an example. If the bucket region does not support
    multi-AZ storage, single-AZ storage will be applied. If this parameter is not specified, single-AZ storage is
    used by default.
    input.AvailableZone = "3az"
    // Create a bucket.
    output, err := obsClient.CreateBucket(input)
    if err == nil {
        fmt.Printf("Create bucket:%s successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Create bucket:%s fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

 NOTE

- A bucket name must be unique across all accounts and regions.
- A bucket name:
 - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.
 - Cannot be formatted as an IP address.
 - Cannot start or end with a hyphen (-) or period (.).
 - Cannot contain two consecutive periods (..), for example, **my..bucket**.
 - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, **my-.bucket** or **my.bucket**.
- If you repeatedly create buckets of the same name, no error will be reported and the bucket attributes comply with those specified in the first creation request.
- For more information, see [Creating a Bucket \(SDK for Go\)](#).

NOTICE

When creating a bucket, if the endpoint you use corresponds to the default region CN North-Beijing1 (cn-north-1), specifying a region is not a must. If the endpoint you use corresponds to a region other than the default one, you must set the region to the one the used endpoint corresponds to. For details, see [Creating a Bucket \(SDK for Go\)](#). To learn the valid regions, see [Regions and Endpoints](#).

Uploading an Object

After creating a bucket, you can upload objects to it.

This example uploads **localfile** to **examplebucket** as an object named **example/objectname**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.PutFileInput{}
```

```
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify the object (example/objectname as an example) to upload.
input.Key = "example/objectname"
// Specify a local file (localfile as an example).
input.SourceFile = "localfile"
// Perform the file-based upload.
output, err := obsClient.PutFile(input)
if err == nil {
    fmt.Printf("Put file(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
    fmt.Printf("StorageClass:%s, ETag:%s\n",
        output.StorageClass, output.ETag)
    return
}
fmt.Printf("Put file(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

 **NOTE**

For more information, see [Object Upload Overview \(SDK for Go\)](#).

6 Initializing OBS SDK for Go

6.1 obsClient Initialization (OBS SDK for Go)

Function

ObsClient functions as the Go client for accessing OBS. It offers users a series of APIs for interaction with OBS. These APIs are used for managing and operating resources, such as buckets and objects, stored in OBS. To use the OBS Go SDK to send a request to OBS, you need to initialize an instance of ObsClient and modify configuration parameters of the instance based on actual needs.

Initialization Method

```
func New(ak, sk, endpoint string, configurers ...configurer) (*ObsClient, error)
```

Parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--------|--------------------|--|
| ak | string | Yes | Access key ID (AK) |
| sk | string | Yes | Secret access key (SK) |
| endpoint | string | Yes | Endpoint for accessing OBS, which contains the protocol type, domain name (or IP address), and port ID. For example, https://your-endpoint:443. For security purposes, you are advised to use HTTPS. To view the endpoints available for OBS, see Regions and Endpoints . |
| securityToken | string | No | The security token in temporary security credentials. |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|---|--------------------|---|
| configurers | configurer (private type contained in the obs package) | No | A group of parameters used to configure ObsClient , including connection timeout period, maximum retries, and maximum number of connections. |

Available Configurers

You can use configurers (private type provided by the **obs** namespace) to configure **ObsClient**. The following table lists available configurers:

| Configurer | Description | Recommended Value |
|--|--|-------------------|
| WithSslVerifyAndPem-Certs(sslVerify bool, pemCerts []byte) | Specifies whether to verify server-side certificates. Server-side certificates will not be verified by default. | N/A |
| WithHeaderTimeout(headerTimeout int) | Specifies the timeout period of obtaining the response headers. The default value is 60 , in seconds. | [10, 60] |
| WithMaxConnections(maxIdleConns int) | Specifies the maximum number of idle HTTP connections. The default value is 1000. | N/A |
| WithConnectTimeout(connectTimeout int) | Specifies the timeout period for establishing an HTTP/HTTPS connection, in seconds. The default value is 60 . | [10, 60] |
| WithSocketTimeout(socketTimeout int) | Specifies the timeout duration for transmitting data at the socket layer, in seconds. The default value is 60 . | [10, 60] |
| WithIdleConnTimeout(idleConnTimeout int) | Specifies the timeout period of an idle HTTP connection in the connection pool, in seconds. The default value is 30 . | Default |
| WithMaxRetryCount(maxRetryCount int) | Specifies the maximum number of retries when an HTTP/HTTPS connection is abnormal. The default value is 3 . | [1, 5] |

| Configurer | Description | Recommended Value |
|--|--|-------------------|
| WithProxyUrl(proxyUrl string) | Configures the HTTP proxy. | N/A |
| WithCustomDomain-Name(cname bool) | Whether to use a custom domain name to access OBS. The default value is false . | Default |
| WithHttpTransport(transport *http.Transport) | Configures custom structs of the Transport type. | Default |
| WithRequestContext(ctx context.Context) | Configures the context for each HTTP request. | N/A |
| WithMaxRedirect-Count(maxRedirectCount int) | Specifies the maximum number of times that the HTTP/HTTPS request is redirected. The default value is 3 . | [1, 5] |
| WithSecurityToken(securityToken string) | Specifies security token in the temporary access keys. | N/A |

 **NOTE**

- Parameters whose recommended value is **N/A** need to be set according to the actual conditions.
- If the network is unstable, you are advised to set larger values for **WithConnectTimeout** and **WithSocketTimeout**.

Code Examples

- You can call **New** to create an instance of ObsClient. Sample code for creating an instance of ObsClient using permanent access keys (AK/SK):

```
// Import the dependency package.
import (
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using
    hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak :=
    os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example.
    Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    obsClient, err := obs.New(ak, sk, endPoint)
    if err == nil {
        // Use the obsClient to access OBS.

        // Close the obsClient.
        obsClient.Close()
    }
}
```

- Sample code for creating an ObsClient instance with a proxy:

```
// Import the dependency package.
import (
    "obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using
    hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak :=
    os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example.
    Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithProxyUrl("https://username:password!
    @yourProxy"))
    if err == nil {
        // Use the obsClient to access OBS.

        // Close the obsClient.
        obsClient.Close()
    }
}
```

- Sample code for creating an instance of ObsClient using temporary access keys (AK/SK and security token):

```
// Import the dependency package.
import (
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using
    hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak :=
    os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are
    advised not to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using
    environment variables or import it in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example.
    Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the
    obs.WithSecurityToken method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err == nil {
        // Use the obsClient to access OBS.

        // Close the obsClient.
        obsClient.Close()
    }
}
```

- You can also create an instance of ObsClient by using temporary access keys obtained by configuring system environment variables or by accessing an ECS.
 - Sample code for creating an instance of ObsClient using access keys obtained from environment variables:

```
// Import the dependency package.
import (
```

```
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways.
    Using hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak :=
    os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are
    advised not to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using
    environment variables or import it in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an
    example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the
    obs.WithSecurityToken method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint,
    obs.WithSecurityProviders(obs.NewEnvSecurityProvider(""))
    if err == nil {
        // Use the obsClient to access OBS.

        // Close the obsClient.
        obsClient.Close()
    }
}
```

NOTE

In the preceding method, access keys are searched from the environment variables in the current system. The **OBS_ACCESS_KEY_ID** and **OBS_SECRET_ACCESS_KEY** fields need to be defined in the corresponding environment variables. If temporary access keys are also used, the **OBS_SECURITY_TOKEN** field must also be defined in the environment variables.

- Sample code for creating an instance of ObsClient by obtaining temporary access keys from an ECS:

```
// Import the dependency package.
import (
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways.
    Using hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak :=
    os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are
    advised not to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using
    environment variables or import it in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an
    example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the
    obs.WithSecurityToken method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint,
    obs.WithSecurityProviders(obs.NewEcsSecurityProvider(1))
    if err == nil {
        // Use the obsClient to access OBS.

        // Close the obsClient.
        obsClient.Close()
    }
}
```

```
}  
}
```

NOTE

If an application is deployed on an ECS and the ECS has relevant agencies bound, you can use the preceding method to automatically obtain temporary access keys from the ECS.

- Sample code for creating an instance of `ObsClient` by obtaining access keys from system environment variables or ECSs in sequence:

```
// Import the dependency package.  
import (  
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"  
)  
  
func main() {  
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways.  
    Using hard coding may result in leakage.  
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak :=  
    os.Getenv("AccessKeyID")  
    sk := os.Getenv("SecretAccessKey")  
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are  
    advised not to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using  
    environment variables or import it in other ways.  
    // securityToken := os.Getenv("SecurityToken")  
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an  
    example. Replace it with the one currently in use.  
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"  
    // Create an obsClient instance.  
    // If you use a temporary AK/SK pair and a security token to access OBS, use the  
    obs.WithSecurityToken method to specify a security token when creating an instance.  
    obsClient, err := obs.New(ak, sk, endPoint,  
        obs.WithSecurityProviders(obs.NewEnvSecurityProvider(""), obs.NewEcsSecurityProvider(1))  
    )  
    if err == nil {  
        // Use the obsClient to access OBS.  
  
        // Close the obsClient.  
        obsClient.Close()  
    }  
}
```

NOTE

In the preceding initialization process, access keys are obtained from environment variables and ECSs in sequence, and the first group of obtained access keys is used to create an `ObsClient`.

NOTE

- The project can contain one or more instances of `ObsClient`.
- `ObsClient` is thread-safe and can be simultaneously used by multiple threads.
- After you call the **`ObsClient.close`** method to close an instance of **`ObsClient`**, the instance cannot be used anymore.
- You can call **`WithHttpTransport`** to pass a user-defined **`Transport`** parameter that specifies maximum connections for a single host. The sample code is as follows:

```
// Import the dependency package.  
import (  
    "time"  
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"  
)  
  
// Create an obsClient struct.
```

```
var obsClient, err = obs.New(ak, sk, endpoint, obs.WithHttpTransport(transport))

func main() {
    //Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using
    hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak :=
    os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are
    advised not to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using
    environment variables or import it in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example.
    Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Initialize the user-defined transport.
    var maxIdleConns = 1000
    var maxConnsPerHost = 1000
    var idleConnTimeout = 30
    var transport = &http.Transport{
        MaxIdleConns:    maxIdleConns,
        MaxIdleConnsPerHost: maxIdleConns,
        MaxConnsPerHost:  maxConnsPerHost,
        IdleConnTimeout:  time.Second * time.Duration(idleConnTimeout),
    }
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the
    obs.WithSecurityToken method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithHttpTransport(transport))

    if err == nil {
        // Use the obsClient to access OBS.
        // Close the obsClient.
        obsClient.Close()
    }
}
```

NOTICE

- The **MaxConnsPerHost** parameter can be specified in the **Transport** struct only in Golang 1.11 and later versions.
- If a user-defined **Transport** is specified, the maximum number of idle connections and proxy can only be configured in **Transport**, rather than through the methods **WithMaxConnections** and **WithProxyUrl**.

6.2 Log Initialization (SDK for Go)

Function

You can enable the SDK log function to record log information generated during API calling into log files for subsequent data analysis or fault location. You can use **InitLog** to enable logging, **CloseLog** to disable logging, and **SyncLog** to synchronize log information from the cache to log files.

Initialization Method

```
func InitLog(logFullPath string, maxLogSize int64, backups int, level Level, logToConsole bool) error
```

Parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|-----------------------|--------------------|--|
| logFullPath | string | Yes | Full path to the log file |
| maxLogSize | int64 | Yes | Log file size in bytes |
| backups | int | Yes | Maximum number of log files that can be retained |
| level | Level | Yes | Log level |
| logToConsole | bool | Yes | Whether to print logs to the console Value options: true or false true : Logs are printed to the console. false : Logs are not printed to the console. Default value: false |

Table 6-1 Level

| Constant | Default Value | Description |
|-------------|---------------|--|
| LEVEL_OFF | 500 | Close level. If this level is set, logging will be disabled. |
| LEVEL_ERROR | 400 | Error level. If this level is set, only error information will be printed. |
| LEVEL_WARN | 300 | Warning level. If this level is set, information about logs at the error level and information about partial critical events will be printed. |
| LEVEL_INFO | 200 | Information level. If this level is set, information about logs of the warning level, time consumed for each HTTP/HTTPS request, and time consumed for calling the ObsClient API will be printed. |
| LEVEL_DEBUG | 100 | Debugging level. If this level is set, information about logs at the information level, HTTP/HTTPS request and response headers, and stringToSign information calculated by authentication algorithm will be printed. |

Code Examples

```
// Import the dependency package.
import (
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    // Set a path for saving log files.
    var logFullPath string = "./logs/OBS-SDK.log"
    // Set a size (in bytes) for each log file.
    var maxLogSize int64 = 1024 * 1024 * 10
    // Set the number of retained log files.
    var backups int = 10
    // Set a log level.
    var level = obs.LEVEL_INFO
    // Specify whether to print logs to OBS Console.
    var logToConsole bool = false
    // Enable logging.
    obs.InitLog(logFullPath, maxLogSize, backups, level, logToConsole)
    // Disable logging and synchronize cached data to log files.
    obs.CloseLog()
}
```

NOTE

- The logging function is disabled by default. You need to enable it manually.
- For details about SDK logs, see [Log Analysis](#).
- By default, logs are written to the cache (then written to log files after logs are accumulated to a certain amount). You can call **obs.CloseLog()** to forcibly synchronize the log information from the cache to log files.

6.3 Custom Errors of OBS SDK for Go

Function

Each time you fail to call an **ObsClient** API, an SDK custom error — containing an HTTP status code, OBS error code, and error message — is returned, to help you locate and rectify the fault.

Type Definition

```
type ObsError struct
```

Parameters

| Parameter | Type | Description |
|-----------------|-------------------------|---------------------------------------|
| StatusCode | int | HTTP status code |
| RequestId | string | Request ID returned by the OBS server |
| ResponseHeaders | map[string] []string | HTTP response headers |
| Status | string | Reason description |
| Code | string | Error code returned by the OBS server |

| Parameter | Type | Description |
|-----------|--------|--|
| Message | string | Error description returned by the OBS server |
| Resource | string | Bucket and object related to the error |
| HostId | string | Requested server ID |

7 Buckets (SDK for Go)

7.1 Bucket API Overview (SDK for Go)

OBS SDK for Go provides methods for accessing OBS using bucket-related APIs with signed URLs. Such methods may contain the following three parameters:

- A signed URL
- Headers required in a request made by using a signed URL
- Data carried in a request (optional)

For details about how to generate a signed URL, see [Creating a Signed URL \(SDK for Go\)](#).

7.2 Creating a Bucket (SDK for Go)

Function

This API creates an OBS bucket. Buckets are containers for storing objects (files uploaded to OBS) in OBS.

When creating a bucket, you can also configure parameters such as the storage class, region, and access control as needed.

Restrictions

- To create a bucket, you must have the **obs:bucket:CreateBucket** permission. IAM is recommended for granting permissions. For details, see [IAM Custom Policies](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

When creating a bucket, if you use the endpoint **obs.myhuaweicloud.com** for client initialization, you do not have to specify a region (indicated by **location**) where the bucket will be created, because OBS automatically creates the bucket in the CN North-Beijing1 (cn-north-1) region. However, if the endpoint you use is not **obs.myhuaweicloud.com**, you must specify a region that matches the used endpoint, or status code **400** is returned.

For example, if the endpoint used for initialization is **obs.ap-southeast-1.myhuaweicloud.com**, you must set **Location** to **ap-southeast-1** when creating a bucket. Otherwise, status code **400** is returned.

- A maximum of 100 buckets (regardless of regions) can be created for an account. There is no limit on the number and size of objects in a bucket.
- A bucket name must be unique in OBS. If you repeatedly create buckets with the same name in the same region, an HTTP status code **200** will be returned. In other cases, creating a bucket with the same name as an existing bucket will have an HTTP status code **409** returned, indicating that such a bucket already exists.
- The name of a deleted bucket can be reused for another bucket or a parallel file system at least 30 minutes after the deletion.
- Not all regions support the creation of multi-AZ buckets. You can check whether a region allows you to create multi-AZ buckets by referring to [Product Pricing Details](#).

Method

```
func (obsClient ObsClient) CreateBucket(input *CreateBucketInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-1 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------|--------------------|---|
| input | *CreateBucketInput | Yes | Explanation: Input parameters for creating a bucket. For details, see Table 7-2 . |

Table 7-2 CreateBucketInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|----------------------------------|---|---|
| Location | string | Yes if the region where the OBS service resides is not the default region | <p>Explanation: Region where a bucket will be created</p> <p>Restrictions: If the used endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |
| ACL | AclType | No | <p>Explanation: Access control list (ACL) that can be pre-defined when a bucket is created. For details about ACLs, see ACLs.</p> <p>Value range: See Table 7-3.</p> <p>Default value: private</p> |
| StorageClass | StorageClassType | No | <p>Explanation: Bucket storage class that can be pre-defined during bucket creation</p> <p>Value range: StorageClassType lists the available value options.</p> <p>Default value: STANDARD</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|--------|--------------------|--|
| Grant ReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can list objects, multipart uploads, and object versions in the bucket you are creating, and can obtain bucket metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant WriteId | string | No | <p>Explanation: ID (domain_id) of an account the WRITE permission is granted to. The account with the WRITE permission can create, delete, and overwrite objects in the bucket you are creating, and can initiate or abort multipart uploads, as well as upload, copy, and assemble parts.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant ReadAcpld | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL information of the bucket you are creating.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------------|--------|--------------------|--|
| Grant Write Acpld | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can modify the ACL information of the bucket you are creating.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant FullControlld | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can perform any operation on the bucket you are creating.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant Read Deliveredld | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. By default, this READ permission applies to all objects in the bucket.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------|--------|--------------------|---|
| GrantFullControl | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission has full control over the bucket you are creating. By default, the FULL_CONTROL permission applies to all objects in the bucket.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Epid | string | No | <p>Explanation: Enterprise project ID that can be specified during bucket creation. If you have enabled Enterprise Project Management Service (EPS), you can obtain the project ID from the EPS console.</p> <p>Restrictions: The value of Epid is a Universally Unique Identifier (UUID). Epid is not required if you have not enabled EPS yet.</p> <p>Example: 9892d768-2d13-450f-aac7-ed0e44c2585f</p> <p>Default value: None</p> |
| AvailableZone | string | No | <p>Explanation: Data redundancy type that can be specified during bucket creation</p> <p>Restrictions: Multi-AZ redundancy is not available for Archive storage. If the region where the bucket is located does not support multi-AZ storage, single-AZ storage is used by default.</p> <p>Value range: To configure multi-AZ storage for the bucket, set this parameter to 3az. To configure single-AZ storage (default value assigned by OBS) for the bucket, you do not need to specify this parameter.</p> <p>Default value: single AZ</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|------|--------------------|---|
| IsFSFileInterface | bool | No | <p>Explanation: Whether a parallel file system is created</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: A parallel file system is created. • false: A bucket is created. <p>Default value: false</p> |

Table 7-3 AclType

| Constant | Default Value | Description |
|--------------------|-------------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadWrite | public-read-write | Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object. |

| Constant | Default Value | Description |
|-----------------------------|-----------------------------|---|
| AclPublicReadDelivered | public-read-delivered | <p>Public read on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadDelivered does not apply to objects.</p> |
| AclPublicReadWriteDelivered | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadWriteDelivered does not apply to objects.</p> |
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 7-4 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 7-5 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-6 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-6 BaseModel

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example creates a bucket named **examplebucket**. For bucket details, see the code comments below.

```
package main

import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the region where the bucket is to be created. CN-Hong Kong is
    used here as an example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.CreateBucketInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the region where the bucket is to be created. The region must be the same as that in the
    endpoint passed. ap-southeast-1 is used as an example.
    input.Location = "ap-southeast-1"
    // Specify an access control policy for the bucket. obs.AclPrivate is used as an example.
    input.ACL = obs.AclPrivate
    // Specify a storage class for the bucket. obs.StorageClassWarm is used as an example. If this parameter
    is not specified, the created bucket is in the Standard storage class.
    input.StorageClass = obs.StorageClassWarm
    // Specify the AZ type for the bucket. 3az is used as an example. If the bucket region does not support
    multi-AZ storage, single-AZ storage will be applied. If this parameter is not specified, single-AZ storage is
    used by default.
    input.AvailableZone = "3az"
    // Create a bucket.
    output, err := obsClient.CreateBucket(input)
    if err == nil {
        fmt.Printf("Create bucket:%s successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
}
```

```
fmt.Printf("Create bucket:%s fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Creating a Bucket](#)
- [Bucket Creation Sample Code on GitHub](#)
- [OBS Error Codes](#)
- [Why Am I Unable to Create a Bucket?](#)

7.3 Obtaining a Bucket List (SDK for Go)

Function

OBS buckets are containers for storing objects you upload to OBS. This API returns a list of all buckets that meet the specified conditions in all regions of the current account. Returned buckets are listed in alphabetical order.

Restrictions

- To obtain a bucket list, you must have the **obs:bucket:ListAllMyBuckets** permission. IAM is recommended for granting permissions. For details, see [IAM Custom Policies](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) ListBuckets(input *ListBucketsInput) (output
*ListBucketsOutput, err error)
```

Request Parameters

Table 7-7 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------|--------------------|---|
| input | *ListBucketInput | No | Explanation: Input parameters for obtaining a bucket list. For details, see Table 7-8 . |

Table 7-8 ListBucketsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|----------------------------|--------------------|---|
| QueryLocation | bool | No | <p>Explanation: Whether to query the bucket region</p> <p>Value range:</p> <ul style="list-style-type: none"> true: The bucket location is queried. false: The bucket location is not queried. <p>Default value: false</p> |
| BucketType | BucketType | No | <p>Explanation: Type of buckets to list</p> <p>Value range: See BucketType.</p> <p>Default value: If this parameter is not specified, all buckets and parallel file systems are listed.</p> |

Table 7-9 BucketType

| Constant | Default Value | Description |
|----------|---------------|---|
| OBJECT | OBJECT | An object bucket |
| POSIX | POSIX | A parallel POSIX-compatible file bucket |

Responses

Table 7-10 List of returned results

| Parameter | Type | Description |
|-----------|-------------------------------------|---|
| output | * ListBucketsOutput | <p>Explanation: Returned results. For details, see Table 7-11.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 7-11 ListBucketsOutput

| Parameter | Type | Description |
|-----------------|---------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Owner | Owner | <p>Explanation: The owner of the buckets listed</p> <p>Value range: See Owner.</p> |
| Buckets | [] Bucket | <p>Explanation: Bucket information list</p> <p>Value range: See Bucket.</p> |

Table 7-12 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 7-13 Bucket

| Parameter | Type | Description |
|--------------|-----------|--|
| Name | string | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. <p>Default value: None</p> |
| CreationDate | time.Time | <p>Explanation: Time when the bucket was created</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|------------|--------|--|
| Location | string | <p>Explanation: Region where a bucket is located</p> <p>Restrictions: If the used endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |
| BucketType | string | <p>Explanation: Bucket type</p> <p>Value range:</p> <ul style="list-style-type: none"> Object bucket: OBJECT Parallel file system: POSIX <p>Default value: None</p> |

Code Examples

This example lists all buckets.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
```

```
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.ListBucketsInput{}
// Specify whether Location exists in the bucket list. true is used as an example. The default value is false.
input.QueryLocation = true
// Specify a bucket type. obs.OBJECT is used as an example, indicating that all buckets are listed. This
parameter is not specified by default, indicating that all buckets and parallel file systems are listed.
input.BucketType = obs.OBJECT
// List buckets.
output, err := obsClient.ListBuckets(input)
if err == nil {
    fmt.Printf("List buckets successful!\n")
    fmt.Printf("RequestId:%s\n", output.RequestId)
    for index, val := range output.Buckets {
        fmt.Printf("Bucket[%d]-Name:%s,CreationDate:%s\n", index, val.Name, val.CreationDate)
    }
    return
}
fmt.Printf("List buckets fail!\n")
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Listing Buckets](#)
- [OBS Error Codes](#)

7.4 Checking Whether a Bucket Exists (SDK for Go)

Function

This API checks whether a bucket exists. If an HTTP status code **200** is returned, the bucket exists. If **404** is returned, the bucket does not exist.

Restrictions

- To determine whether a bucket exists, you must be the bucket owner or have the required permission (**obs:bucket:HeadBucket** in IAM or **HeadBucket** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) HeadBucket(**bucketName** string) (output ***BaseModel**, err error)

Request Parameters

Table 7-14 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|---|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (.), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-15 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|--|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-16 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-16 BaseModel

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |

Code Examples

This example checks whether bucket **examplebucket** exists.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
```

```
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Check whether the bucket exists.
output, err := obsClient.HeadBucket(bucketname)
if err == nil {
    fmt.Printf("Head bucket(%s) successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Head bucket(%s) fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Obtaining Bucket Metadata](#). The same REST API is used to determine whether a bucket exists and to obtain bucket metadata.
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.5 Deleting a Bucket (SDK for Go)

Function

This API deletes an empty bucket. You can delete buckets you no longer use to free up space. The name of a deleted bucket can be reused for another bucket at least 30 minutes after the deletion.

NOTE

The data you deleted from OBS cannot be recovered on Huawei Cloud. Exercise caution when using this API.

Restrictions

- Only empty buckets can be deleted. An empty bucket means that:
 - The bucket does not contain any object (including noncurrent versions and delete markers).
 - The bucket does not contain any fragments, which means that there are no multipart uploads that have not been completed in the bucket.
- To delete a bucket, you must be the bucket owner or have the required permission (**obs:bucket:DeleteBucket** in IAM or **DeleteBucket** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) DeleteBucket(bucketName string) (output *BaseModel, err error)
```

Request Parameters

Table 7-17 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-18 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|--|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-19 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-19 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be <i>2xx</i> (indicating successes) or <i>4xx</i> or <i>5xx</i> (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```



```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Delete the bucket.
output, err := obsClient.DeleteBucket(bucketname)
if err == nil {
    fmt.Printf("Delete bucket:%s successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete bucket:%s fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Deleting an Object](#)
- [Managing Fragments](#)
- [Listing Objects](#) and [Listing Initiated Multipart Uploads in a Bucket](#). These two operations can help you determine whether a bucket is empty.
- [Deleting Buckets](#)
- [Bucket Deletion Sample Code on GitHub](#)
- [OBS Error Codes](#)
- [Why Can't I Delete a Bucket?](#)

7.6 Listing Objects in a Bucket (SDK for Go)

Function

This API lists some or all of the objects in a bucket. You can use parameters such as the prefix, number of returned objects, and start position to list objects that meet specified criteria. The listed objects are ordered alphabetically using the object name.

Restrictions

- A maximum of 1,000 objects can be listed for each API call.
- To list objects in a bucket, you must be the bucket owner or have the required permission (**obs:bucket:ListBucket** in IAM and **ListBucket** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) ListObjects(input *ListObjectsInput) (output *ListObjectsOutput, err error)
```

Request Parameters

Table 7-20 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------|--------------------|--|
| input | *ListObjectsInput | Yes | Explanation: Input parameters for listing objects in a bucket. For details, see Table 7-21 . |

Table 7-21 ListObjectsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Marker | string | No | <p>Explanation: Object name to start with when listing objects in a bucket. All objects following this parameter are listed in alphabetical order.</p> <p>Restrictions: This parameter is only used for listing objects with a single version.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Prefix | string | No | <p>Explanation: Name prefix that the objects to be listed must contain</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, logs/day1, logs/day2, and logs/day3 will be returned. If you leave this parameter blank, all objects in the bucket will be returned.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| MaxKeys | int | No | <p>Explanation: The maximum number of objects returned in the response in alphabetical order</p> <p>Value range: The value ranges from 1 to 1000. If the specified value is beyond this range, only 1,000 objects are returned.</p> <p>Default value: 1000</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Delimiter | string | No | <p>Explanation:</p> <p>Object names are grouped by this parameter, which is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a bucket has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix.</p> <p>For a parallel file system, if this parameter is not specified, all the content in the current directory is recursively listed by default, and subdirectories are also listed. In big data scenarios, parallel file systems usually have deep directory levels and each directory has a large number of files. In such case, you are advised to configure [delimiter=/] to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p>Value range:</p> <p>The value must contain 1 to 1,024 characters.</p> <p>Default value:</p> <p>None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--------|--------------------|---|
| Encoding Type | string | No | <p>Explanation: Encoding method that is applied to some elements in the response. If Delimiter, Marker, Prefix, CommonPrefixes, NextMarker, and Key contain control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to url.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to elements.</p> |

Responses

Table 7-22 List of returned results

| Parameter | Type | Description |
|-----------|-------------------------------------|--|
| output | * ListObjectsOutput | <p>Explanation: Returned parameters for listing objects in a bucket. For details, see Table 7-23.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 7-23 ListObjectsOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|-----------|--------|--|
| Location | string | <p>Explanation: Region where a bucket is located</p> <p>Restrictions: If the used endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |

| Parameter | Type | Description |
|-----------|--------|--|
| Name | string | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> |

| Parameter | Type | Description |
|-----------|--------|--|
| Prefix | string | <p>Explanation: Object name prefix, which is consistent with that set in the request</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, logs/day1, logs/day2, and logs/day3 will be returned. If you leave this parameter blank, all objects in the bucket will be returned.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Marker | string | <p>Explanation: Object name to start with for listing objects Object name to start with when listing objects in a bucket. All objects following this parameter are listed in alphabetical order.</p> <p>Restrictions: This parameter is only used for listing objects with a single version.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|--|
| Delimiter | string | <p>Explanation:</p> <p>Object names are grouped by this parameter, which is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a bucket has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcd as the prefix.</p> <p>For a parallel file system, if this parameter is not specified, all the content in the current directory is recursively listed by default, and subdirectories are also listed. In big data scenarios, parallel file systems usually have deep directory levels and each directory has a large number of files. In such case, you are advised to configure [delimiter=/] to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p>Value range:</p> <p>The value must contain 1 to 1,024 characters.</p> <p>Default value:</p> <p>None</p> |

| Parameter | Type | Description |
|-------------|---------------------------|--|
| MaxKeys | int | <p>Explanation: Maximum number of listed objects, which is consistent with that set in the request. The maximum number of objects returned in the response in alphabetical order.</p> <p>Value range: The value ranges from 1 to 1000. If the specified value is beyond this range, only 1,000 objects are returned.</p> <p>Default value: 1000</p> |
| IsTruncated | bool | <p>Explanation: Whether all results are returned in the response. A maximum of 1,000 objects can be listed at a time. If the number of objects is greater than 1,000, the objects beyond 1,000 cannot be returned.</p> <p>Value range: true: Not all results are returned. false: All results are returned.</p> <p>Default value: None</p> |
| NextMarker | string | <p>Explanation: Where in the bucket the next listing begins. If not all results are returned, the response contains this parameter to mark the last object listed in the request. In a subsequent request, you can set Marker to the value of this parameter to list the remaining objects.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Contents | []Content | <p>Explanation: List of objects in the bucket. For details, see Content.</p> |

| Parameter | Type | Description |
|----------------|----------|--|
| CommonPrefixes | []string | <p>Explanation: List of object name prefixes grouped according to the Delimiter parameter (if specified)</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| EncodingType | string | <p>Explanation: Encoding method that is applied to some elements in the response. If Delimiter, Marker, Prefix, CommonPrefixes, NextMarker, and Key contain control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to url.</p> <p>Value range: url</p> <p>Default value: None</p> |

Table 7-24 Content

| Parameter | Type | Description |
|-----------|--------|--|
| Key | string | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--------------|---|
| LastModified | time.Time | <p>Explanation: Time (UTC) when an object was last modified</p> <p>Value range: UTC time</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Size | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| Owner | Owner | <p>Explanation: Object owner. This parameter contains the domain ID and name of the object owner. For details, see Table 7-26.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--------|---|
| StorageClass | string | Explanation: Object storage class Value range: See Table 7-25 . Default value: None |

Table 7-25 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 7-26 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | Explanation: Account (domain) ID of the owner Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None |

Listing Objects

This example lists objects in a bucket. A maximum of 1,000 objects can be returned.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.ListObjectsInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // List objects in the bucket.
    output, err := obsClient.ListObjects(input)
    if err == nil {
        fmt.Printf("List objects under the bucket(%s) successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        for index, val := range output.Contents {
            fmt.Printf("Content[%d]-OwnerId:%s, ETag:%s, Key:%s, LastModified:%s, Size:%d\n",
                index, val.Owner.ID, val.ETag, val.Key, val.LastModified, val.Size)
        }
        return
    }
    fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Listing a Specified Number of Objects

This example lists a specified number of objects in a bucket.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
```



```
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    // coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    // to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    // import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    // with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    // method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.ListObjectsInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the maximum number of objects to be returned. 100 is used as an example. Returned objects
    // are listed in alphabetic order. The default value is 1000.
    input.MaxKeys = 100
    // List objects in the bucket.
    output, err := obsClient.ListObjects(input)
    if err == nil {
        fmt.Printf("List objects under the bucket(%s) successful!\n", input.Bucket)
        fmt.Printf("RequestID:%s\n", output.RequestID)
        for index, val := range output.Contents {
            fmt.Printf("Content[%d]-OwnerId:%s, ETag:%s, Key:%s, LastModified:%s, Size:%d\n",
                index, val.Owner.ID, val.ETag, val.Key, val.LastModified, val.Size)
        }
        return
    }
    fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Listing Objects with a Specified Prefix

This example lists objects with a specified prefix.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    // coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    // to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
```

```
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.ListObjectsInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify an object prefix (test/ as an example). Objects whose names contain the specified prefix will
be listed.
input.Prefix = "test/"
// Specify the maximum number of objects to be returned. 100 is used as an example. Returned objects
are listed in alphabetic order. The default value is 1000.
input.MaxKeys = 100
// List objects in the bucket.
output, err := obsClient.ListObjects(input)
if err == nil {
    fmt.Printf("List objects under the bucket(%s) successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    for index, val := range output.Contents {
        fmt.Printf("Content[%d]-OwnerId:%s, ETag:%s, Key:%s, LastModified:%s, Size:%d\n",
            index, val.Owner.ID, val.ETag, val.Key, val.LastModified, val.Size)
    }
    return
}
fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Listing All Objects Using Pagination

This example lists all objects using pagination.

```
// This example lists all files in bucket examplebucket using pagination.
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
```

```
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.ListObjectsInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify the maximum number of objects to be returned. 100 is used as an example. Returned objects
are listed in alphabetic order. The default value is 1000.
input.MaxKeys = 100
// Specify an encoding type. url is used as an example. If the objects to list contain special characters,
this parameter must be passed.
input.EncodingType = "url"
for {
    // List objects in the bucket.
    output, err := obsClient.ListObjects(input)
    if err != nil {
        fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
        if obsError, ok := err.(obs.ObsError); ok {
            fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an
error response.")
            fmt.Println(obsError.Error())
        } else {
            fmt.Println("An Exception was found, which means the client encountered an internal problem
when attempting to communicate with OBS, for example, the client was unable to access the network.")
            fmt.Println(err)
        }
        os.Exit(-1)
    }
    // Print the listing result. By default, 100 records are returned at a time.
    fmt.Printf("List objects under the bucket(%s) successful!\n", input.Bucket)
    for index, val := range output.Contents {
        fmt.Printf("Content[%d]-OwnerId:%s, ETag:%s, Key:%s, LastModified:%s, Size:%d\n",
            index, val.Owner.ID, val.ETag, val.Key, val.LastModified, val.Size)
    }
    if output.IsTruncated {
        input.Marker = output.NextMarker
    } else {
        break
    }
}
}
```

Listing All Objects with Folder Name as a Prefix

There is no concept of folders in OBS. All elements stored in OBS buckets are objects. Folders are actually objects whose sizes are 0 and whose names end with a slash (/). You can set a folder name to a prefix to list objects in this folder. Sample code is as follows:

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyId")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
```

```
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.ListObjectsInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify the maximum number of objects to be returned. 100 is used as an example. Returned objects
are listed in alphabetic order. The default value is 1000.
input.MaxKeys = 100
// Specify a delimiter for grouping object names. A slash (/) is used as an example.
input.Delimiter = "/"
// List objects in the bucket.
output, err := obsClient.ListObjects(input)
if err == nil {
    fmt.Printf("List objects under the bucket(%s) successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    for index, val := range output.Contents {
        fmt.Printf("Content[%d]-OwnerId:%s, ETag:%s, Key:%s, LastModified:%s, Size:%d\n",
            index, val.Owner.ID, val.ETag, val.Key, val.LastModified, val.Size)
    }
    return
}
fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Listing Objects in a Bucket](#)
- [Object Listing Sample Code on GitHub](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.7 Listing Object Versions in a Bucket (SDK for Go)

Function

This API returns some or all of the object versions in a bucket. You can use parameters such as the prefix, number of returned object versions, and start position to return the object versions that meet specified criteria. Returned object versions are listed in alphabetical order.

Restrictions

- To list object versions in a bucket, you must be the bucket owner or have the required permission (**obs:bucket:ListBucketVersions** in IAM or **ListBucketVersions** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) ListVersions(input *ListVersionsInput) (output *ListVersionsOutput, err error)
```

Request Parameters

Table 7-27 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------|--------------------|--|
| input | *ListVersionsInput | Yes | Explanation: Input parameters for listing object versions in a bucket. For details, see Table 7-28 . |

Table 7-28 ListVersionsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| KeyMarker | string | No | <p>Explanation: Object name to start with when listing object versions in a bucket. All object versions following the value specified by this parameter are listed in alphabetical order by object name.</p> <p>Restrictions: This parameter is only used for listing objects with multiple versions.</p> <p>Value range: Value of NextKeyMarker in the response body of the last request</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|--------|--------------------|--|
| VersionIdMarker | string | No | <p>Explanation: This parameter is used together with KeyMarker. Version ID you want to start listing from. All object versions following the value specified by this parameter are listed in alphabetical order by object name and version ID. KeyMarker specifies the object name, and VersionIdMarker specifies the version ID of the specified object.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> This parameter is only used for listing objects with multiple versions. If the object specified by KeyMarker does not have the version specified by VersionIdMarker, this parameter is invalid. <p>Value range: Object version ID, that is, the value of NextVersionIdMarker in the response body of the last request</p> <p>Default value: None</p> |
| Prefix | string | No | <p>Explanation: Name prefix that the objects to be listed must contain</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, logs/day1, logs/day2, and logs/day3 will be returned. If you leave this parameter blank, all objects in the bucket will be returned.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| MaxKeys | int | No | <p>Explanation: The maximum number of objects returned in the response in alphabetical order</p> <p>Value range: The value ranges from 1 to 1000. If the specified value is beyond this range, only 1,000 objects are returned.</p> <p>Default value: 1000</p> |
| Delimiter | string | No | <p>Explanation: Object names are grouped by this parameter, which is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a bucket has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix.</p> <p>For a parallel file system, if this parameter is not specified, all the content in the current directory is recursively listed by default, and subdirectories are also listed. In big data scenarios, parallel file systems usually have deep directory levels and each directory has a large number of files. In such case, you are advised to configure [delimiter=/] to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|---|
| EncodingType | string | No | <p>Explanation: Encoding type for some elements in the response. If Delimiter, KeyMarker, Prefix, CommonPrefixes, NextKeyMarker, and Key contain control characters that are not supported by the XML 1.0 standard, you can use EncodingType to encode Delimiter, KeyMarker, Prefix, CommonPrefixes, NextKeyMarker, and Key in the response.</p> <p>Value range: Value option: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to elements.</p> |

Responses

Table 7-29 List of returned results

| Parameter | Type | Description |
|-----------|--------------------------------------|--|
| output | * ListVersionsOutput | <p>Explanation: Returned parameters for listing object versions in a bucket. For details, see Table 7-30.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 7-30 ListVersionsOutput

| Parameter | Type | Description |
|-----------------|---------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Location | string | <p>Explanation: Region where a bucket is located</p> <p>Restrictions: If the used endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| Name | string | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.) - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> |
| Prefix | string | <p>Explanation: Object name prefix, which is consistent with that set in the request</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, logs/day1, logs/day2, and logs/day3 will be returned. If you leave this parameter blank, all objects in the bucket will be returned.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------------|--------|---|
| KeyMarker | string | <p>Explanation: Object name to start listing from. All object versions following the value specified by this parameter are listed in alphabetical order by object name.</p> <p>Restrictions: This parameter is only used for listing objects with multiple versions.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionIdMarker | string | <p>Explanation: Version ID of the object specified by keyMarker.</p> <p>This parameter is used together with KeyMarker. All object versions following the value specified by this parameter are listed in alphabetical order by object name and version ID. KeyMarker specifies the object name, and VersionIdMarker specifies the version ID of the specified object.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • This parameter is only used for listing objects with multiple versions. • If the object specified by KeyMarker does not have the version specified by VersionIdMarker, this parameter is invalid. <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| Delimiter | string | <p>Explanation:</p> <p>Object names are grouped by this parameter, which is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a bucket has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix.</p> <p>For a parallel file system, if this parameter is not specified, all the content in the current directory is recursively listed by default, and subdirectories are also listed. In big data scenarios, parallel file systems usually have deep directory levels and each directory has a large number of files. In such case, you are advised to configure [delimiter=/] to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| MaxKeys | int | <p>Explanation:</p> <p>Maximum number of objects to list The maximum number of objects returned in the response in alphabetical order</p> <p>Value range:</p> <p>The value ranges from 1 to 1000. If the specified value is beyond this range, only 1,000 objects are returned.</p> <p>Default value: 1000</p> |

| Parameter | Type | Description |
|---------------------|----------------------------|---|
| IsTruncated | bool | <p>Explanation: Whether all results are returned in the response. A maximum of 1,000 objects can be listed at a time. If the number of objects is greater than 1,000, the objects beyond 1,000 cannot be returned.</p> <p>Value range: true: Not all results are returned. false: All results are returned.</p> <p>Default value: None</p> |
| NextKeyMarker | string | <p>Explanation: Object name to start with in the next request for listing object versions Key marker for the last returned object in the list. NextKeyMarker is returned when not all the objects are listed. You can set KeyMarker to this value in the next request to list the remaining objects.</p> <p>Restrictions: This parameter is only used for listing objects with multiple versions.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| NextVersionIdMarker | string | <p>Explanation: Version ID to start with in the next request for listing object versions. It must be used together with NextKeyMarker. NextVersionIdMarker is returned when not all the objects are listed. You can set VersionIdMarker to this value in the next request to list the remaining objects.</p> <p>Restrictions: This parameter is only used for listing objects with multiple versions.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Versions | [] Version | <p>Explanation: List of object versions in the bucket. For details, see Table 7-31.</p> |

| Parameter | Type | Description |
|----------------|----------------|--|
| DeleteMarkers | []DeleteMarker | Explanation: List of delete markers in the bucket. For details, see Table 7-32 . |
| CommonPrefixes | []string | Explanation: List of object name prefixes grouped according to the Delimiter parameter (if specified) Value range: The value must contain 1 to 1,024 characters. Default value: None |
| EncodingType | string | Explanation: Encoding type for some elements in the response. If Delimiter , KeyMarker , Prefix , CommonPrefixes , NextKeyMarker , and Key contain control characters that are not supported by the XML 1.0 standard, you can use EncodingType to encode Delimiter , KeyMarker , Prefix , CommonPrefixes , NextKeyMarker , and Key in the response. Value range: Value option: url Default value: None |

Table 7-31 Version

| Parameter | Type | Description |
|-----------|--------|---|
| Key | string | Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. For example, if the address for accessing an object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt , the object name is folder/test.txt . Value range: The value must contain 1 to 1,024 characters. Default value: None |

| Parameter | Type | Description |
|--------------|--------------|---|
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| LastModified | time.Time | <p>Explanation: Time (UTC) when an object was last modified</p> <p>Value range: UTC time</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Size | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| Owner | Owner | <p>Explanation: Object owner. For details, see Table 7-33.</p> |

| Parameter | Type | Description |
|--------------|----------------------------------|---|
| StorageClass | StorageClassType | Explanation: Storage class of the object. For details, see Table 7-34 . |
| IsLatest | bool | Explanation: Whether the object is of the current version Value range: <ul style="list-style-type: none"> • true: The object is the latest version. • false: The object is not the latest version. Default value: false |

Table 7-32 DeleteMarker

| Parameter | Type | Description |
|-----------|--------|--|
| Key | string | Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt , the object name is folder/test.txt . Value range: The value must contain 1 to 1,024 characters. Default value: None |
| VersionId | string | Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None |

| Parameter | Type | Description |
|--------------|-------------------------|--|
| IsLatest | bool | <p>Explanation: Whether the object is of the current version</p> <p>Value range: true: The object is the latest version. false: The object is not the latest version.</p> <p>Default value: false</p> |
| LastModified | time.Time | <p>Explanation: Time (UTC) when an object was last modified</p> <p>Value range: UTC time</p> <p>Default value: None</p> |
| Owner | Owner | <p>Explanation: Object owner. This parameter contains the domain ID and name of the object owner. For details, see Table 7-33.</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range: For details about storage classes, see Table 7-34.</p> <p>Default value: None</p> |

Table 7-33 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 7-34 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Code Examples

This example returns object versions in bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.ListVersionsInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object prefix (test/ as an example). Objects whose names contain the specified prefix will
    be listed.
    input.Prefix = "test/"
    // Specify the maximum number of objects to be returned. 100 is used as an example. Returned objects
```

are listed in alphabetic order. The default value is **1000**.

```
input.MaxKeys = 100
// Specify the position (test/test2 as an example) where the version listing starts.
input.KeyMarker = "test/test2"
// VersionIdMarker must be used together with KeyMarker. If there is no VersionIdMarker mapping to
the specified KeyMarker, ignore VersionIdMarker.
input.VersionIdMarker = "G001117FCE89978B0000401205D5DC9A"
// Specify an encoding type. url is used as an example. If the objects to list contain special characters,
this parameter must be passed.
input.EncodingType = "url"
// List object versions in the bucket.
output, err := obsClient.ListVersions(input)
if err == nil {
    fmt.Printf("List version objects under the bucket(%s) successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    for index, val := range output.Versions {
        fmt.Printf("Version[%d]-OwnerId:%s, ETag:%s, Key:%s, VersionId:%s, LastModified:%s, Size:%d\n",
            index, val.Owner.ID, val.ETag, val.Key, val.VersionId, val.LastModified, val.Size)
    }
    for index, val := range output.DeleteMarkers {
        fmt.Printf("DeleteMarker[%d]-OwnerId:%s, Key:%s, VersionId:%s, LastModified:%s\n",
            index, val.Owner.ID, val.Key, val.VersionId, val.LastModified)
    }
    return
}
fmt.Printf("List version objects under the bucket(%s) fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Listing Objects in a Bucket](#)
- [GitHub \(Sample Code for Listing Object Versions\)](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.8 Obtaining Bucket Metadata (SDK for Go)

Function

This API returns information about a bucket, including the storage class, region, CORS rules, and redundancy policy.

Restrictions

- To obtain bucket metadata, you must be the bucket owner or have the required permission (**obs:bucket:HeadBucket** in IAM or **HeadBucket** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketMetadata(input *GetBucketMetadataInput)  
(output *GetBucketMetadataOutput, err error)
```

Request Parameters

Table 7-35 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------|-----------------------|--|
| input | *GetBucketMetadataInput | Yes | Explanation: Request parameters for obtaining bucket metadata. For details, see Table 7-36 . |

Table 7-36 GetBucketMetadataInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-37 List of returned results

| Parameter | Type | Description |
|-----------|--------------------------|---|
| output | *GetBucketMetadataOutput | <p>Explanation: Returned results. For details, see Table 7-38.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 7-38 GetBucketMetadataOutput

| Parameter | Type | Description |
|-----------------|----------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string] []string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Location | string | <p>Explanation: Region where a bucket is located</p> <p>Restrictions: If the used endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |

| Parameter | Type | Description |
|--------------|-----------------------------------|---|
| Version | string | <p>Explanation: OBS version of the bucket</p> <p>Value range:</p> <ul style="list-style-type: none"> • 3.0 indicates the latest OBS version. • -- indicates any version earlier than 3.0. <p>Default value: None</p> |
| StorageClass | StorageClass Type | <p>Explanation: Storage class of the bucket. For details, see Table 7-39.</p> <p>Value range: If the storage class of the bucket is Standard, leave this parameter blank.</p> |
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can contain only one MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| Epid | string | <p>Explanation: Enterprise project ID that can be specified during bucket creation. If you have enabled EPS, you can obtain the project ID from the EPS console.</p> <p>Restrictions: The value of Epid is a UUID. Epid is not required if you have not enabled EPS yet. Example: 9892d768-2d13-450f-aac7-ed0e44c2585f</p> <p>Value range: To obtain the enterprise project ID, see How Do I Obtain an Enterprise Project ID?</p> <p>Default value: None</p> |

Table 7-39 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Code Examples

This example returns the metadata of bucket **examplebucket**.

```
package main
import (
    "fmt"
```

```
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetBucketMetadataInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Obtain the bucket metadata.
    output, err := obsClient.GetBucketMetadata(input)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s metadata successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("StorageClass:%s\n", output.StorageClass)
        fmt.Printf("Location:%s\n", output.Location)
        fmt.Printf("AZRedundancy:%s\n", output.AZRedundancy)
        fmt.Printf("Epid:%s\n", output.Epid)
        return
    }
    fmt.Printf("Get bucket(%s)'s metadata fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Obtaining Bucket Metadata](#)
- [\(GitHub\) Sample Code for Obtaining Bucket Metadata](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.9 Obtaining the Region of a Bucket (SDK for Go)

Function

This API returns the region of a bucket.

Restrictions

- To obtain the region of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketLocation** in IAM or **GetBucketLocation** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketLocation(bucketName string) (output *GetBucketLocationOutput, err error)
```

Request Parameters

Table 7-40 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-41 List of returned results

| Parameter | Type | Description |
|-----------|---|--|
| output | * GetBucketLocationOutput | Explanation: Returned results. For details, see Table 7-42 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-42 GetBucketLocationOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|-----------|--------|--|
| Location | string | <p>Explanation: Region where a bucket is located</p> <p>Restrictions: If the used endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |

Code Examples

This example returns the region where bucket **examplebucket** locates.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket region.
```

```
output, err := obsClient.GetBucketLocation(bucketname)
if err == nil {
    fmt.Printf("Get bucket(%s)'s location successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    fmt.Printf("Location:%s\n", output.Location)
    return
}
fmt.Printf("Get bucket(%s)'s location fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Obtaining the Region of a Bucket](#)
- [\(GitHub\) Sample Code for Obtaining the Region of a Bucket](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.10 Obtaining Storage Information of a Bucket (SDK for Go)

Function

This API returns the storage information of a bucket, including the number of objects and the space occupied by the objects in the bucket.

NOTE

OBS measures bucket storage statistics in the background and does not update the storage information in real time. So, you are advised not to perform real-time verification on the storage information.

Restrictions

- To obtain the storage information of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketStorage** in IAM or **GetBucketStorage** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) GetBucketStorageInfo(**bucketName** string) (output *[GetBucketStorageInfoOutput](#), err error)

Request Parameters

Table 7-43 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-44 List of returned results

| Parameter | Type | Description |
|-----------|--|---|
| output | * GetBucketStorageInfoOutput | <p>Explanation: Returned results. For details, see Table 7-45.</p> |

| Parameter | Type | Description |
|-----------|-------|---|
| err | error | Explanation: Error messages returned by the API |

Table 7-45 GetBucketStorageInfoOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| Size | int64 | Explanation: Size of the space occupied by objects in the bucket Value range: 0 to $(2^{63} - 1)$, in bytes |
| ObjectNumber | int | Explanation: Number of objects in the bucket Value range: An integer from 0 to $(2^{31} - 1)$ Default value: None |

Code Examples

This example returns the storage information of bucket **examplebucket**, including the number of objects and the space occupied by objects.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain bucket storage information.
    output, err := obsClient.GetBucketStorageInfo(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s storage-info successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("Size:%d, ObjectNumber:%d\n", output.Size, output.ObjectNumber)
        return
    }
    fmt.Printf("Get bucket(%s)'s storage-info fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Obtaining Storage Information of a Bucket](#)
- [\(GitHub\) Sample Code for Obtaining Storage Information of a Bucket](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.11 Configuring a Storage Quota (SDK for Go)

Function

A quota limits the maximum capacity allowed in a bucket. By default, there is no limit on the storage capacity of the entire OBS system or a single bucket, and any number of objects can be stored. You can set a storage quota to control the total

size of objects that can be uploaded to the bucket. After the storage quota has been reached, object upload will fail.

A quota limit does not apply to the objects uploaded before the quota is configured. If the specified quota is already smaller than the total size of existing objects in the bucket, the existing objects in the bucket will not be deleted, but no more object can be uploaded to the bucket later. In this case, to upload new objects, you must delete some existing objects to make the used space below the quota limit.

Restrictions

- A bucket storage quota must be a non-negative integer expressed in bytes. The maximum value is as follows: $2^{63} - 1$.
- OBS does not provide an API for deleting bucket storage quotas. You can set the bucket storage quota to **0** to cancel the limit.
- To configure a storage quota for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketQuota** in IAM or **PutBucketQuota** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketQuota(input *SetBucketQuotaInput)
(output *BaseModel, err error)
```

Request Parameters

Table 7-46 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------------------------|--------------------|--|
| input | *SetBucketQuotaInput | Yes | Explanation: Input parameters for configuring a storage quota. For details, see Table 7-47 . |

Table 7-47 SetBucketQuotaInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Quota | int64 | Yes | <p>Explanation: Bucket storage quota</p> <p>Value range: 0 to $(2^{63} - 1)$, in bytes</p> <p>Default value: 0, indicating that there is no limit on the bucket quota.</p> |

Responses

Table 7-48 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|--|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-49 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-49 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures a 1 GB quota for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
```

```
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketQuotaInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify a 1 GB quota (measured in bytes) for the bucket.
input.Quota = 1024 * 1024 * 1024
// Configures a quota for the bucket.
output, err := obsClient.SetBucketQuota(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s quota successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s quota fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring a Bucket Storage](#)
- [\(GitHub\) Sample Code for Configuring a Storage Quota](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.12 Obtaining a Bucket Storage Quota (SDK for Go)

Function

This API returns the storage quota (upper limit of the storage capacity) of a bucket. If the quota is 0, there is no upper limit on the bucket capacity.

Restrictions

- A bucket storage quota must be a non-negative integer expressed in bytes. The maximum value is as follows: $2^{63} - 1$.

- A frozen bucket owner (due to account in arrears) is not allowed to query the bucket storage quota.
- To obtain the storage quota of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketQuota** in IAM or **GetBucketQuota** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketQuota(bucketName string) (output *GetBucketQuotaOutput, err error)
```


Request Parameters

Table 7-50 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-51 List of returned results

| Parameter | Type | Description |
|-----------|---|--|
| output | * GetBucketQuota Output | Explanation: Returned results. For details, see Table 7-52 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-52 GetBucketQuotaOutput

| Parameter | Type | Description |
|-----------------|----------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |
| Quota | int64 | Explanation: Bucket storage quota Value range: 0 to $(2^{63} - 1)$, in bytes Default value: 0 , indicating that there is no limit on the bucket quota. |

Code Examples

This example returns the quota of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket quota.
    output, err := obsClient.GetBucketQuota(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s quota successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("Quota:%d\n", output.Quota)
        return
    }
    fmt.Printf("Get bucket(%s)'s quota fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Querying Bucket Storage Quota](#)
- [\(GitHub\) Sample Code for Obtaining Bucket Storage Quota](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.13 Configuring Storage Class for a Bucket (SDK for Go)

Function

OBS offers the following storage classes: Standard, Infrequent Access, and Archive. For details, see [Storage Classes](#).

This API configures a storage class for a bucket. If you do not specify a storage class when uploading or copying an object, or initiating a multipart upload, the object will inherit the bucket's storage class.

Restrictions

- To configure a storage class for a bucket, you must be the bucket owner or have the required permission (**obs:PutBucketStoragePolicy** in IAM or **PutBucketStoragePolicy** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketStoragePolicy(input
*SetBucketStoragePolicyInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-53 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------------------|--------------------|---|
| input | *SetBucketStoragePolicyInput | Yes | Explanation: Input parameters for configuring a bucket storage class. For details, see Table 7-54 . |

Table 7-54 SetBucketStoragePolicyInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|----------------------------------|--------------------|---|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.) – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> <p>Default value: None</p> |
| StorageClasses | StorageClassType | Yes | <p>Explanation: Storage class of the bucket</p> <p>Value range: For details about storage classes, see Table 7-55.</p> <p>Default value: None</p> |

Table 7-55 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 7-56 List of returned results

| Parameter | Type | Description |
|-----------|------------|--|
| output | *BaseModel | Explanation: Returned results. For details, see Table 7-57 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-57 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example returns the storage class of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
}
```

```
input := &obs.SetBucketStoragePolicyInput{}
// Specify a bucket name.
input.Bucket = "bucketname"
// Specify a storage class (obs.StorageClassWarm as an example) for the bucket.
input.StorageClass = obs.StorageClassWarm
// Configure a storage class for the bucket.
output, err := obsClient.SetBucketStoragePolicy(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s storage-class successful!\n", input.Bucket)
    fmt.Printf("Set bucket storage-class successful!\n")
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s storage-class fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring Storage Class for a Bucket](#)
- [\(GitHub\) Sample Code for Configuring a Bucket Storage Class](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.14 Obtaining the Storage Class of a Bucket (SDK for Go)

Function

This API returns the storage class of a bucket.

Restrictions

- To obtain a bucket's storage class, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketStoragePolicy** in IAM or **GetBucketStoragePolicy** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) GetBucketStoragePolicy(**bucketName** string) (output ***GetBucketStoragePolicyOutput**, err error)

Request Parameters

Table 7-58 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|---|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.) – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-59 List of returned results

| Parameter | Type | Description |
|-----------|--|---|
| output | * GetBucketStoragePolicyOutput | <p>Explanation: Returned results. For details, see Table 7-60.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 7-60 GetBucketStoragePolicyOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| StorageClass | StorageClassType | <p>Explanation: Storage class of the bucket</p> <p>Value range: For details about storage classes, see Table 7-61.</p> <p>Default value: None</p> |

Table 7-61 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Code Examples

This example returns the storage class of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket's storage class.
    output, err := obsClient.GetBucketStoragePolicy(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s storage-class successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("StorageClass:%s\n", output.StorageClass)
        return
    }
    fmt.Printf("Get bucket(%s)'s storage-class fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

```
}  
}
```

Helpful Links

- [Obtaining a Bucket's Storage Class](#)
- [\(GitHub\) Sample Code for Obtaining a Bucket's Storage Class](#)
- [OBS Error Codes](#)
- [FAQ for Buckets and Objects](#)

7.15 Configuring a Bucket ACL (SDK for Go)

Function

OBS provides access control over buckets. You can use an access policy to define whether a user can perform certain operations on a specific bucket. OBS access control can be implemented using IAM permissions, bucket policies, and ACLs (including bucket and object ACLs). For more information, see [Introduction to OBS Access Control](#).

A bucket ACL applies permissions to another Huawei Cloud account and its IAM users, rather than the current account and its IAM users. It can grant access to both a bucket (including the objects in it) and the bucket ACL. The granted access includes view and edit permissions. You must specify a bucket name when configuring a bucket ACL. For more information, see [ACLs](#).

This API modifies a bucket ACL.

Restrictions

- A bucket ACL can have up to 100 grants.
- To configure an ACL for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketAcl** in IAM or **PutBucketAcl** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) SetBucketAcl(input *[SetBucketAclInput](#)) (output *[BaseModel](#), err error)

Request Parameters

Table 7-62 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------------------|--------------------|---|
| input | * SetBucketAclInput | Yes | Explanation: Input parameters for configuring a bucket ACL. For details, see Table 7-63 . |

Table 7-63 SetBucketAclInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| ACL | AclType | No | <p>Explanation: Pre-defined ACL</p> <p>Value range: See Table 7-64.</p> <p>Default value: None</p> |
| Owner | Owner | No | <p>Explanation: ID of the bucket owner. For details, see Table 7-65.</p> <p>Restrictions: Owner and Grants must be used together and they cannot be used with ACL.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------|--------------------|--|
| Grants | Grant | No | Explanation: Grantees' permission information. For details, see Table 7-66 . |

Table 7-64 AclType

| Constant | Default Value | Description |
|------------------------|-----------------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadWrite | public-read-write | Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadDelivered | public-read-delivered | Public read on a bucket as well as objects in the bucket If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket. NOTE AclPublicReadDelivered does not apply to objects. |

| Constant | Default Value | Description |
|-----------------------------|-----------------------------|---|
| AclPublicReadWriteDelivered | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadWriteDelivered does not apply to objects.</p> |
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 7-65 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 7-66 Grant

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------------------------------|------------------------------------|---|
| Grantee | Grantee | Yes if used as a request parameter | Explanation: Grantee information. For details, see Table 7-67 . |
| Permission | PermissionType | Yes if used as a request parameter | Explanation: Granted permission Value range: See Table 7-69 . Default value: None |

Table 7-67 Grantee

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------------|---|--|
| Type | GranteeType | Yes if used as a request parameter | Explanation: Grantee type Value range: See Table 7-68 . Default value: None |
| ID | string | Yes if this parameter is used as a request parameter and Type is set to GranteeUser | Explanation: Account (domain) ID of the grantee Value range: To obtain an account ID, see Obtaining the Account ID . Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|--------|-----------------------------------|---|
| DisplayName | string | No if used as a request parameter | <p>Explanation: Account name of the grantee</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • Starts with a letter. • Contains 6 to 32 characters. • Contains only letters, digits, hyphens (-), or underscores (_). <p>Default value: None</p> |

Table 7-68 GranteeType

| Constant | Default Value | Description |
|--------------|---------------|-----------------|
| GranteeGroup | Group | User group |
| GranteeUser | CanonicalUser | Individual user |

Table 7-69 PermissionType

| Constant | Default Value | Description |
|-----------------------|---------------|---|
| PermissionRead | READ | Read permission |
| PermissionWrite | WRITE | Write permission |
| PermissionReadAcp | READ_ACP | Permission to read ACL configurations |
| PermissionWriteAcp | WRITE_ACP | Permission to modify ACL configurations |
| PermissionFullControl | FULL_CONTROL | Full control access, including read and write permissions for a bucket and its ACL, or for an object and its ACL. |

Responses

Table 7-70 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|--|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-71 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-71 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example sets the ACL of bucket **examplebucket** to be private.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
//securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketAclInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Set the bucket ACL to be private.
input.ACL = obs.AclPrivate
// Configure the bucket ACL.
output, err := obsClient.SetBucketAcl(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s acl successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s acl fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring a Bucket ACL](#)
- [\(GitHub\) Sample Code for Configuring a Bucket ACL](#)
- [OBS Error Codes](#)
- [Access Control FAQ](#)

7.16 Obtaining the Bucket ACL (SDK for Go)

Function

OBS provides access control over buckets. You can use an access policy to define whether a user can perform certain operations on a specific bucket. OBS access control can be implemented using IAM permissions, bucket policies, and ACLs (including bucket and object ACLs). For more information, see [Introduction to OBS Access Control](#).

A bucket ACL applies permissions to another Huawei Cloud account and its IAM users, rather than the current account and its IAM users. It can grant access to both a bucket (including the objects in it) and the bucket ACL. The granted access includes view and edit permissions. You must specify a bucket name when configuring a bucket ACL. For more information, see [ACLs](#).

This API returns the ACL of a bucket.

Restrictions

- To obtain the ACL of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketAcl** in IAM or **GetBucketAcl** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketAcl(bucketName string) (output *GetBucketAclOutput, err error)
```

Request Parameters

Table 7-72 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (. – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-73 List of returned results

| Parameter | Type | Description |
|-----------|--------------------------------------|--|
| output | * GetBucketAclOutput | Explanation: Returned results. For details, see Table 7-74 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-74 GetBucketAclOutput

| Parameter | Type | Description |
|-----------------|-----------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| Owner | Owner | Explanation: Bucket owner. For details, see Table 7-75 . |
| Grants | Grant | Explanation: Grantees' permission information. For details, see Table 7-76 . |

Table 7-75 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 7-76 Grant

| Parameter | Type | Description |
|------------|---------------------------------|--|
| Grantee | Grantee | <p>Explanation: Grantee information. For details, see Table 7-77.</p> |
| Permission | Permission Type | <p>Explanation: Granted permission. For details, see Table 7-80.</p> |

Table 7-77 Grantee

| Parameter | Type | Description |
|-----------|-----------------------------|--|
| Type | GranteeType | <p>Explanation: Grantee type</p> <p>Value range: See Table 7-78.</p> <p>Default value: None</p> |
| ID | string | <p>Explanation: Account (domain) ID of the grantee</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------|------------------------------|---|
| DisplayName | string | <p>Explanation: Account name of the grantee</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • Starts with a letter. • Contains 6 to 32 characters. • Contains only letters, digits, hyphens (-), or underscores (_). <p>Default value: None</p> |
| URI | GroupUriType | <p>Explanation: Authorized user group</p> <p>Value range: See Table 7-79.</p> <p>Default value: None</p> |

Table 7-78 GranteeType

| Constant | Default Value | Description |
|--------------|---------------|-----------------|
| GranteeGroup | Group | User group |
| GranteeUser | CanonicalUser | Individual user |

Table 7-79 GroupUriType

| Constant | Default Value | Description |
|---------------|---------------|-------------|
| GroupAllUsers | AllUsers | All users |

Table 7-80 PermissionType

| Constant | Default Value | Description |
|-----------------|---------------|------------------|
| PermissionRead | READ | Read permission |
| PermissionWrite | WRITE | Write permission |

| Constant | Default Value | Description |
|-----------------------|---------------|---|
| PermissionReadAcp | READ_ACP | Permission to read ACL configurations |
| PermissionWriteAcp | WRITE_ACP | Permission to modify ACL configurations |
| PermissionFullControl | FULL_CONTROL | Full control access, including read and write permissions for a bucket and its ACL, or for an object and its ACL. |

Code Examples

This example returns the ACL information of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket ACL.
    output, err := obsClient.GetBucketAcl(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s acl rules successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("Owner.ID:%s\n", output.Owner.ID)
        for index, grant := range output.Grants {
            fmt.Printf("Grant[%d]-Type:%s, ID:%s, URI:%s, Permission:%s\n",
                index, grant.Grantee.Type, grant.Grantee.ID, grant.Grantee.URI, grant.Permission)
        }
    }
    return
}
fmt.Printf("Get bucket(%s)'s acl rules fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
    response.")
}
```

```
    fmt.Println(obsError.Error())
  } else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
  }
}
```

Helpful Links

- [Obtaining the Bucket ACL](#)
- [\(GitHub\) Sample Code for Obtaining the Bucket ACL](#)
- [OBS Error Codes](#)
- [Access Control FAQ](#)

7.17 Configuring Logging for a Bucket (SDK for Go)

Function

This API enables logging for a bucket (source) and configures another bucket (target) to store the log files. When a bucket is created, logging is not enabled by default. You can call this API to enable logging for the bucket. With logging enabled, a log message is generated for each operation on the bucket. Multiple log messages are packed into a file. The bucket for storing log files must be specified when logging is enabled. It can be the bucket logging is enabled for, or any other bucket you have access to. If you specify another bucket for storing logs, the bucket must be in the same region as the logged bucket. You can also configure access to log files and the name prefix of log files.

Restrictions

- OBS creates log files and uploads them to the bucket. Before enabling logging for a bucket, you need to create an IAM agency to delegate OBS to upload log files to the specified bucket.
- To configure logging for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketLogging** in IAM or **PutBucketLogging** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) SetBucketLoggingConfiguration(input *[SetBucketLoggingConfigurationInput](#)) (output *[BaseModel](#), err error)

Request Parameters

Table 7-81 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---|--------------------|---|
| input | *SetBucketLoggingConfigurationInput | Yes | Explanation: Input parameters for configuring bucket logging. For details, see Table 7-82 . |

Table 7-82 SetBucketLoggingConfigurationInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|---|---|
| Agency | string | Yes if the parameter is in a request to enable bucket logging | <p>Explanation: Name of the IAM agency created by the owner of the target bucket for OBS. You can select an existing IAM agency or create one. For details about how to create an agency, see Creating an IAM Agency.</p> <p>Restrictions: By default, the IAM agency only requires the PutObject permission to upload logs to the target bucket. If default encryption is enabled for the target bucket, the agency also requires the KMS Administrator permission in the region where the target bucket is located.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--|---|
| TargetBucket | string | Yes if you enable logging for the bucket Do not set this parameter when you disable logging for the bucket. | <p>Explanation: Name of the bucket for storing log files</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • This bucket must be in the same region as the bucket with logging enabled. • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|---------|--|--|
| TargetPrefix | string | Yes if you enable logging for the bucket Do not set this parameter when you disable logging for the bucket. | Explanation: Name prefix for log files stored in the log storage bucket Value range: The value must contain 1 to 1,024 characters. Default value: None |
| TargetGrants | []Grant | No | Explanation: Permission information list of grantees, which defines grantees and their permissions for log files. For details, see Table 7-83 . |

Table 7-83 Grant

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|----------------|------------------------------------|---|
| Grantee | Grantee | Yes if used as a request parameter | Explanation: Grantee information. For details, see Table 7-84 . |
| Permission | PermissionType | Yes if used as a request parameter | Explanation: Granted permission Value range: See Table 7-87 . Default value: None |

Table 7-84 Grantee

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|------------------------------|---|--|
| Type | Grantee Type | Yes | Explanation: Grantee type Value range: See Table 7-85 . Default value: None |
| ID | string | Yes if Type is set to Grantee User | Explanation: Account (domain) ID of the grantee Value range: To obtain an account ID, see Obtaining the Account ID . Default value: None |
| DisplayName | string | No | Explanation: Account name of the grantee Restrictions: <ul style="list-style-type: none"> Starts with a letter. Contains 6 to 32 characters. Contains only letters, digits, hyphens (-), or underscores (_). Default value: None |
| URI | GroupUriType | Yes if Type is set to Grantee Group | Explanation: Authorized user group Value range: See Table 7-86 . Default value: None |

Table 7-85 GranteeType

| Constant | Default Value | Description |
|--------------|---------------|-----------------|
| GranteeGroup | Group | User group |
| GranteeUser | CanonicalUser | Individual user |

Table 7-86 GroupUriType

| Constant | Default Value | Description |
|---------------|---------------|-------------|
| GroupAllUsers | AllUsers | All users |

Table 7-87 PermissionType

| Constant | Default Value | Description |
|-----------------------|---------------|---|
| PermissionRead | READ | Read permission |
| PermissionWrite | WRITE | Write permission |
| PermissionReadAcp | READ_ACP | Permission to read ACL configurations |
| PermissionWriteAcp | WRITE_ACP | Permission to modify ACL configurations |
| PermissionFullControl | FULL_CONTROL | Full control access, including read and write permissions for a bucket and its ACL, or for an object and its ACL. |

Responses

Table 7-88 List of returned results

| Parameter | Type | Description |
|-----------|------------|--|
| output | *BaseModel | Explanation: Returned results. For details, see Table 7-89 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-89 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures logging for bucket **examplebucket**, with **obs_test_agency** as the agency, **TargetPrefixtest/** as the prefix for generated log files, and **TargetBucketname** as the bucket for storing log files.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
```

```
obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketLoggingConfigurationInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify an agency name (obs_test_agency as an example).
input.Agency = "obs_test_agency"
// Specify a bucket (TargetBucketname as an example) for storing generated log files.
input.TargetBucket = "TargetBucketname"
// Specify a prefix (TargetPrefixtest/ as an example) for log files to be generated.
input.TargetPrefix = "TargetPrefixtest/"
// Configure logging for the bucket.
output, err := obsClient.SetBucketLoggingConfiguration(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s logging configuration successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s logging configuration fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring Logging for a Bucket](#)
- [\(GitHub\) Sample Code for Bucket Logging Configuration](#)
- [OBS Error Codes](#)

7.18 Obtaining the Logging Configuration of a Bucket (SDK for Go)

Function

This API returns the logging configuration of a bucket.

Restrictions

- To obtain the logging configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketLogging** in IAM or **GetBucketLogging** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketLoggingConfiguration(bucketName string)
(output *GetBucketLoggingConfigurationOutput, err error)
```

Request Parameters

Table 7-90 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|---|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-91 List of returned results

| Parameter | Type | Description |
|-----------|--|--|
| output | * GetBucketLogging-ConfigurationOutput | Explanation: Returned results. For details, see Table 7-92 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-92 GetBucketLoggingConfigurationOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|--------------|--------|---|
| Agency | string | <p>Explanation: Name of the IAM agency created by the owner of the target bucket for OBS. You can select an existing IAM agency or create one. For details about how to create an agency, see Creating an IAM Agency.</p> <p>Restrictions: By default, the IAM agency only requires the PutObject permission to upload logs to the target bucket. If default encryption is enabled for the target bucket, the agency also requires the KMS Administrator permission in the region where the target bucket is located.</p> <p>Default value: None</p> |
| TargetBucket | string | <p>Explanation: Name of the bucket for storing log files</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • This bucket must be in the same region as the bucket with logging enabled. • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|---------|--|
| TargetPrefix | string | <p>Explanation: Name prefix for log files stored in the log storage bucket</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| TargetGrants | []Grant | <p>Explanation: Permission information list of grantees, which defines grantees and their permissions for log files. For details, see Table 7-93.</p> |

Table 7-93 Grant

| Parameter | Type | Description |
|------------|-----------------|--|
| Grantee | Grantee | <p>Explanation: Grantee information. For details, see Table 7-94.</p> |
| Permission | Permission Type | <p>Explanation: Granted permission</p> <p>Value range: See Table 7-97.</p> <p>Default value: None</p> |

Table 7-94 Grantee

| Parameter | Type | Description |
|-----------|-------------|--|
| Type | GranteeType | <p>Explanation: Grantee type</p> <p>Value range: See Table 7-95.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------|------------------------------|--|
| ID | string | <p>Explanation: Account (domain) ID of the grantee</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| DisplayName | string | <p>Explanation: Account name of the grantee</p> <p>Restrictions:</p> <ul style="list-style-type: none"> Starts with a letter. Contains 6 to 32 characters. Contains only letters, digits, hyphens (-), or underscores (_). <p>Default value: None</p> |
| URI | GroupUriType | <p>Explanation: Authorized user group. For details, see Table 7-96.</p> |

Table 7-95 GranteeType

| Constant | Default Value | Description |
|--------------|---------------|-----------------|
| GranteeGroup | Group | User group |
| GranteeUser | CanonicalUser | Individual user |

Table 7-96 GroupUriType

| Constant | Default Value | Description |
|---------------|---------------|-------------|
| GroupAllUsers | AllUsers | All users |

Table 7-97 PermissionType

| Constant | Default Value | Description |
|----------------|---------------|-----------------|
| PermissionRead | READ | Read permission |

| Constant | Default Value | Description |
|-----------------------|---------------|---|
| PermissionWrite | WRITE | Write permission |
| PermissionReadAcp | READ_ACP | Permission to read ACL configurations |
| PermissionWriteAcp | WRITE_ACP | Permission to modify ACL configurations |
| PermissionFullControl | FULL_CONTROL | Full control access, including read and write permissions for a bucket and its ACL, or for an object and its ACL. |

Code Examples

This example returns the logging configuration of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the logging configuration of the bucket.
    output, err := obsClient.GetBucketLoggingConfiguration(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s BucketLoggingConfiguration successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("TargetBucket:%s, TargetPrefix:%s\n", output.TargetBucket, output.TargetPrefix)
        for index, grant := range output.TargetGrants {
            fmt.Printf("Grant[%d]-Type:%s, ID:%s, URI:%s, Permission:%s\n",
                index, grant.Grantee.Type, grant.Grantee.ID, grant.Grantee.URI, grant.Permission)
        }
    }
    return
}
fmt.Printf("Get bucket(%s)'s BucketLoggingConfiguration fail!\n", bucketname)
```

```
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
```

Helpful Links

- [Obtaining the Bucket Logging Configuration](#)
- [\(GitHub\) Sample Code for Obtaining the Bucket Logging Configuration](#)
- [OBS Error Codes](#)

7.19 Configuring a Bucket Policy (SDK for Go)

Function

OBS provides access control over buckets. You can use an access policy to define whether a user can perform certain operations on a specific bucket. OBS access control can be implemented using IAM permissions, bucket policies, and ACLs. For more information, see [Introduction to OBS Access Control](#).

A bucket policy is applied to a configured bucket and the objects in it. You can use a bucket policy to grant permissions for the bucket and the objects in it to IAM users or other accounts. If you want IAM users to have different permissions for different buckets, you can configure required bucket policies.

This API configures a policy for a bucket.

Restrictions

- Permissions for creating a bucket and obtaining a bucket list are service level and should be granted using [IAM Permissions](#).
- Due to data caching, after a bucket policy is configured, it takes 5 minutes at most for the policy to take effect.
- To configure a bucket policy, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketPolicy** in IAM or **PutBucketPolicy** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) SetBucketPolicy(input *[SetBucketPolicyInput](#)) (output *[BaseModel](#), err error)

Request Parameters

Table 7-98 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------------------------------|--------------------|--|
| input | *SetBucketPolicyInput | Yes | Explanation: Input parameters for configuring a bucket policy. For details, see Table 7-99 . |

Table 7-99 SetBucketPolicyInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Policy | string | Yes | <p>Explanation: Policy information in JSON format</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The bucket name contained in the Resource parameter of the policy must be the one specified for the current bucket policy. • For details about the policy format, see Bucket Policy Parameters. <p>Default value: None</p> |

Responses

Table 7-100 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-101 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-101 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be <i>2xx</i> (indicating successes) or <i>4xx</i> or <i>5xx</i> (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures a policy for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketPolicyInput{}
// Specify a bucket name.
input.Bucket = "exampleBucket"
// Create a bucket policy.
input.Policy = "{\"Statement\":[{\"Sid\":\"Custom policy-2482\",\"Effect\":\"Allow\",\"Principal\":{\"ID\":
[\"*\"]},\"Action\":[\"*\",\"ListBucket\"],\"Resource\":[\"\" + input.Bucket + "\"]}]}"
// Configure the bucket policy.
output, err := obsClient.SetBucketPolicy(input)
if err == nil {
    fmt.Printf("SetBucketPolicy:%s successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("SetBucketPolicy:%s fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring a Bucket Policy](#)
- [OBS Error Codes](#)
- [Access Control FAQ](#)

7.20 Obtaining the Policy of a Bucket (SDK for Go)

Function

OBS provides access control over buckets. You can use an access policy to define whether a user can perform certain operations on a specific bucket. OBS access control can be implemented using IAM permissions, bucket policies, and ACLs. For more information, see [Introduction to OBS Access Control](#).

A bucket policy is applied to a configured bucket and the objects in it. You can use a bucket policy to grant permissions for the bucket and the objects in it to IAM

users or other accounts. If you want IAM users to have different permissions for different buckets, you can configure required bucket policies.

This API returns the policy of a bucket.

Restrictions

- OBS returns "404 NoSuchBucketPolicy" when you call this API in the following scenarios:
 - The specified bucket policy does not exist.
 - Access to the specified bucket is denied.
- To obtain the policy of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketPolicy** in IAM or **GetBucketPolicy** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketPolicy(bucketName string) (output *GetBucketPolicyOutput, err error)
```


Request Parameters

Table 7-102 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-103 List of returned results

| Parameter | Type | Description |
|-----------|---|---|
| output | * GetBucketPolicyOutput | Explanation: Returned results. For details, see Table 7-104 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-104 GetBucketPolicyOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|-----------|--------|---|
| Policy | string | <p>Explanation: Policy information in JSON format</p> <p>Restrictions:</p> <ul style="list-style-type: none">• The bucket name contained in the Resource parameter of the policy must be the one specified for the current bucket policy.• For details about the policy format, see Bucket Policy Parameters. <p>Default value: None</p> |

Code Examples

This example returns the policy of bucket **bucketname**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket policy.
    output, err := obsClient.GetBucketPolicy(bucketname)
    if err == nil {
        fmt.Printf("Get policy successful with bucket:%s!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("Policy:%s\n", output.Policy)
        return
    }
    fmt.Printf("Get policy fail with bucket:%s!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    }
}
```

```
    } else {  
        fmt.Println("An Exception was found, which means the client encountered an internal problem when  
attempting to communicate with OBS, for example, the client was unable to access the network.")  
        fmt.Println(err)  
    }  
}
```

Helpful Links

- [Obtaining the Bucket Policy](#)
- [OBS Error Codes](#)
- [Access Control FAQ](#)

7.21 Deleting a Bucket Policy (SDK for Go)

Function

OBS provides access control over buckets. You can use an access policy to define whether a user can perform certain operations on a specific bucket. OBS access control can be implemented using IAM permissions, bucket policies, and ACLs. For more information, see [Introduction to OBS Access Control](#).

A bucket policy is applied to a configured bucket and the objects in it. You can use a bucket policy to grant permissions for the bucket and the objects in it to IAM users or other accounts. If you want IAM users to have different permissions for different buckets, you can configure required bucket policies.

This API deletes the policy of a bucket. OBS returns "204 No Content" upon a successful deletion, regardless of whether the requested bucket policy exists or not.

Restrictions

- To delete the policy of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:DeleteBucketPolicy** in IAM or **DeleteBucketPolicy** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) DeleteBucketPolicy(bucketName string) (output *BaseModel, err error)
```

Request Parameters

Table 7-105 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-106 List of returned results

| Parameter | Type | Description |
|-----------|------------|---|
| output | *BaseModel | Explanation: Returned results. For details, see Table 7-107 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-107 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be <i>2xx</i> (indicating successes) or <i>4xx</i> or <i>5xx</i> (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes the policy of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
```

```
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint /*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Delete the bucket policy.
    output, err := obsClient.DeleteBucketPolicy(bucketname)
    if err == nil {
        fmt.Printf("Delete policy successful with bucket:%s!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Delete policy fail with bucket:%s!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Deleting a Bucket Policy](#)
- [\(GitHub\) Sample Code for Deleting a Bucket Policy](#)
- [OBS Error Codes](#)
- [Access Control FAQ](#)

7.22 Configuring Lifecycle Rules for a Bucket (SDK for Go)

Function

You can configure lifecycle rules to periodically delete objects or transition objects between storage classes. For more information, see [Lifecycle Management](#).

This API configures lifecycle rules for a bucket.

 NOTE

- Expired objects will be permanently deleted and cannot be recovered.
- Multi-AZ redundancy is not available for Archive storage. For this reason, buckets or objects with multi-AZ redundancy cannot be transitioned to the Archive storage class based on a lifecycle rule.
- The minimum storage duration is 30 days for Infrequent Access storage, and 90 days for Archive storage. After an object is transitioned to the Archive storage class, if it stays in this storage class for less than 90 days, you still need to pay for a full 90 days.

Restrictions

- There is no limit on the number of lifecycle rules in a bucket, but the total size of XML descriptions about all lifecycle rules in a bucket cannot exceed 20 KB.
- A maximum of 20 lifecycle rules can be configured for a parallel file system.
- To configure a lifecycle rule for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutLifecycleConfiguration** in IAM or **PutLifecycleConfiguration** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) SetBucketLifecycleConfiguration(input *[SetBucketLifecycleConfigurationInput](#)) (output *[BaseModel](#), err error)

Request Parameters

Table 7-108 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--|--------------------|---|
| input | * SetBucketLifecycleConfigurationInput | Yes | Explanation: Input parameters for lifecycle configuration. For details, see Table 7-109 . |

Table 7-109 SetBucketLifecycleConfigurationInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|---------------------------------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| LifecycleRules | []LifecycleRule | Yes | <p>Explanation: Lifecycle rule information. For details, see Table 7-110.</p> |

Table 7-110 LifecycleRule

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------|------------------------------------|---|
| ID | string | No if used as a request parameter | <p>Explanation: Lifecycle rule ID</p> <p>Value range: The value must contain 1 to 255 characters.</p> <p>Default value: None</p> |
| Prefix | string | Yes if used as a request parameter | <p>Explanation: Object name prefix. It identifies the objects the rule applies to. You can leave this parameter blank to apply the rule to all objects in the bucket.</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you set Prefix to ExampleObject.jpg, the rule applies to object ExampleObject.jpg only. If you set Prefix to logs/, the rule applies to the three objects with name starting with logs/. If you leave Prefix blank, the rule applies to all objects in the bucket.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Status | RuleStatusType | Yes if used as a request parameter | <p>Explanation: Whether the rule is enabled</p> <p>Value range: See Table 7-111.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------------------|--|-----------------------------------|---|
| Transitions | <code>[]Transition</code> | No if used as a request parameter | <p>Explanation: Policies for storage class transition, including transition time and the storage class after transition. For details, see Table 7-112.</p> <p>Restrictions: This parameter applies only to the current object version.</p> |
| Expiration | <code>Expiration</code> | No if used as a request parameter | <p>Explanation: Object expiration time. For details, see Table 7-114.</p> <p>Restrictions: This parameter applies only to the current object version.</p> |
| NoncurrentVersionTransitions | <code>[]NoncurrentVersionTransition</code> | No if used as a request parameter | <p>Explanation: Policies for storage class transition, including transition time and the storage class after transition. For details, see Table 7-115.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> This parameter applies only to noncurrent object versions. Versioning is enabled (or suspended after being enabled) for the bucket. |
| NoncurrentVersionExpiration | <code>NoncurrentVersionExpiration</code> | No if used as a request parameter | <p>Explanation: Expiration time of noncurrent object versions. For details, see Table 7-116.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> This parameter applies only to noncurrent object versions. Versioning is enabled (or suspended after being enabled) for the bucket. <p>CAUTION This parameter is not available for parallel file systems.</p> |

 **NOTE**

Transitions, Expiration, NoncurrentVersionTransitions, and NoncurrentVersionExpiration cannot be all left blank.

Table 7-111 RuleStatusType

| Constant | Default Value | Description |
|--------------------|---------------|-------------|
| RuleStatusEnabled | Enabled | Enabled |
| RuleStatusDisabled | Disabled | Disabled |

Table 7-112 Transition

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|------------------------------------|------------------------------------|--|
| StorageClasses | Storage Class Type | Yes if used as a request parameter | <p>Explanation: Storage class of the object after transition</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The Standard storage class is not supported. • Restrictions on storage class transitions: <ul style="list-style-type: none"> – Only transitions from the Standard storage class to the Infrequent Access storage class are supported. To transition objects from Infrequent Access to Standard, you must manually do it. – Only transitions from the Standard or Infrequent Access storage class to the Archive storage class are supported. To transition objects from Archive to Standard or Infrequent Access, you must restore the archived objects first and then manually transition their storage classes. – Multi-AZ redundancy is not available for Archive storage. For this reason, buckets or objects with multi-AZ redundancy cannot be transitioned to the Archive storage class based on a lifecycle rule. <p>Value range: See Table 7-113.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------|--|--|
| Date | time.Time | Yes if this parameter is used as a request parameter and Days is absent | <p>Explanation: OBS executes the lifecycle rule for objects that were modified before the specified date.</p> <p>Restrictions: The value must conform with the ISO8601 standards and indicate UTC 00:00. For example, 2018-01-01T00:00:00.000Z indicates only objects that were last modified before the specified time are transitioned to the specified storage class.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| Days | int | Yes if this parameter is used as a request parameter and Date is absent | <p>Explanation: Number of days (since the last update made to the current object version) after which the lifecycle rule takes effect.</p> <p>Restrictions: This parameter applies only to the current object version.</p> <p>Value range: 0 to $(2^{31} - 1)$, in days</p> <p>Default value: None</p> |

Table 7-113 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 7-114 Expiration

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------|--|--|
| Date | time. Time | Yes if this parameter is used as a request parameter and Days is absent | <p>Explanation: OBS executes the lifecycle rule for objects that were modified before the specified date.</p> <p>Restrictions: The value must conform with the ISO8601 standards and indicate UTC 00:00. For example, 2018-01-01T00:00:00.000Z indicates only objects that were last modified before the specified time are deleted.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| Days | int | Yes if this parameter is used as a request parameter and Date is absent | <p>Explanation: Number of days (since the last update was made to the object) after which the lifecycle rule takes effect</p> <p>Restrictions: This parameter applies only to the current object version.</p> <p>Value range: 1 to $(2^{31} - 1)$, in days</p> <p>Default value: None</p> |

Table 7-115 NoncurrentVersionTransition

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|------------------|------------------------------------|--|
| StorageClass | StorageClassType | Yes if used as a request parameter | <p>Explanation: Storage class of noncurrent object versions after transition</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The Standard storage class is not supported. • Restrictions on storage class transitions: <ul style="list-style-type: none"> – Only transitions from the Standard storage class to the Infrequent Access storage class are supported. To transition objects from Infrequent Access to Standard, you must manually do it. – Only transitions from the Standard or Infrequent Access storage class to the Archive storage class are supported. To transition objects from Archive to Standard or Infrequent Access, you must restore the archived objects first and then manually transition their storage classes. – Multi-AZ redundancy is not available for Archive storage. For this reason, buckets or objects with multi-AZ redundancy cannot be transitioned to the Archive storage class based on a lifecycle rule. <p>Value range: See Table 7-113.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|------|------------------------------------|---|
| NoncurrentDays | int | Yes if used as a request parameter | <p>Explanation: Number of days after the object becomes a noncurrent version, when the specified rule takes effect</p> <p>Restrictions: This parameter applies only to noncurrent object versions.</p> <p>Value range: 0 to $(2^{31} - 1)$, in days</p> <p>Default value: None</p> |

Table 7-116 NoncurrentVersionExpiration

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|------|------------------------------------|--|
| NoncurrentDays | int | Yes if used as a request parameter | <p>Explanation: Number of days an object is noncurrent before the specified rule takes effect</p> <p>Restrictions: This parameter applies only to noncurrent object versions.</p> <p>Value range: 0 to $(2^{31} - 1)$, in days</p> <p>Default value: None</p> |

Responses

Table 7-117 List of returned results

| Parameter | Type | Description |
|-----------|------------|--|
| output | *BaseModel | <p>Explanation: Returned results. For details, see Table 7-118.</p> |

| Parameter | Type | Description |
|-----------|-------|---|
| err | error | Explanation: Error messages returned by the API |

Table 7-118 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures a lifecycle rule for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
```

```
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketLifecycleConfigurationInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Create a lifecycle rule for the bucket.
input.LifecycleRules = []obs.LifecycleRule{
    {
        ID: "rule1",
        Prefix: "objectPrefix/",
        Status: obs.RuleStatusEnabled,
        Transitions: []obs.Transition{
            {Days: 30, StorageClass: obs.StorageClassCold},
        },
        Expiration: obs.Expiration{Days: 100},
        NoncurrentVersionExpiration: obs.NoncurrentVersionExpiration{NoncurrentDays: 20},
    },
}
// Configure a lifecycle rule for the bucket.
output, err := obsClient.SetBucketLifecycleConfiguration(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s LifecycleConfiguration successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s LifecycleConfiguration fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring Bucket Lifecycle Rules](#)
- [\(GitHub\) Sample Code for Configuring a Bucket Lifecycle Rule](#)
- [OBS Error Codes](#)

7.23 Obtaining the Lifecycle Configuration of a Bucket (SDK for Go)

Function

You can configure lifecycle rules to periodically delete objects or transition objects between storage classes. For more information, see [Lifecycle Management](#).

This API returns the lifecycle rules of a bucket.

Restrictions

- To obtain the lifecycle configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetLifecycleConfiguration** in IAM or **GetLifecycleConfiguration** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketLifecycleConfiguration(bucketName string)  
(output *GetBucketLifecycleConfigurationOutput, err error)
```

Request Parameters

Table 7-119 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-120 List of returned results

| Parameter | Type | Description |
|-----------|---|---|
| output | * GetBucketLifecycleConfigurationOutput | Explanation: Returned results. For details, see Table 7-121 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-121 GetBucketLifecycleConfigurationOutput

| Parameter | Type | Description |
|-----------------|-----------------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| LifecycleRules | [] Lifecycle Rule | Explanation: Lifecycle rule information. For details, see Table 7-122 . |

Table 7-122 LifecycleRule

| Parameter | Type | Description |
|-------------|---------------------------------|---|
| ID | string | <p>Explanation: Lifecycle rule ID</p> <p>Value range: The value must contain 1 to 255 characters.</p> <p>Default value: None</p> |
| Prefix | string | <p>Explanation: Object name prefix. It identifies the objects the rule applies to. You can leave this parameter blank to apply the rule to all objects in the bucket.</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you set Prefix to ExampleObject.jpg, the rule applies to object ExampleObject.jpg only. If you set Prefix to logs/, the rule applies to the three objects with name starting with logs/. If you leave Prefix blank, the rule applies to all objects in the bucket.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Status | RuleStatus Type | <p>Explanation: Whether the rule is enabled</p> <p>Value range: See Table 7-123.</p> <p>Default value: None</p> |
| Transitions | [] Transition | <p>Explanation: Policies for storage class transition, including transition time and the storage class after transition. For details, see Table 7-124.</p> <p>Restrictions: This parameter applies only to the current object version.</p> |

| Parameter | Type | Description |
|------------------------------|---|---|
| Expiration | Expiration | <p>Explanation: Object expiration time. For details, see Table 7-126.</p> <p>Restrictions: This parameter applies only to the current object version.</p> |
| NoncurrentVersionTransitions | []NoncurrentVersionTransition | <p>Explanation: Policies for storage class transition, including transition time and the storage class after transition. For details, see Table 7-127.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • This parameter applies only to noncurrent object versions. • Versioning is enabled (or suspended after being enabled) for the bucket. |
| NoncurrentVersionExpiration | NoncurrentVersionExpiration | <p>Explanation: Expiration time of noncurrent object versions. For details, see Table 7-128.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • This parameter applies only to noncurrent object versions. • Versioning is enabled (or suspended after being enabled) for the bucket. <p>CAUTION This parameter is not available for parallel file systems.</p> |

 **NOTE**

Transitions, Expiration, NoncurrentVersionTransitions, and NoncurrentVersionExpiration cannot be all left blank.

Table 7-123 RuleStatusType

| Constant | Default Value | Description |
|--------------------|---------------|-------------|
| RuleStatusEnabled | Enabled | Enabled |
| RuleStatusDisabled | Disabled | Disabled |

Table 7-124 Transition

| Parameter | Type | Description |
|--------------|-----------------------------------|--|
| StorageClass | StorageClass Type | <p>Explanation: Storage class of the object after transition</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The Standard storage class is not supported. • Restrictions on storage class transitions: <ul style="list-style-type: none"> – Only transitions from the Standard storage class to the Infrequent Access storage class are supported. To transition objects from Infrequent Access to Standard, you must manually do it. – Only transitions from the Standard or Infrequent Access storage class to the Archive storage class are supported. To transition objects from Archive to Standard or Infrequent Access, you must restore the archived objects first and then manually transition their storage classes. – Multi-AZ redundancy is not available for Archive storage. For this reason, buckets or objects with multi-AZ redundancy cannot be transitioned to the Archive storage class based on a lifecycle rule. <p>Value range: See Table 7-125.</p> <p>Default value: None</p> |
| Date | time.Time | <p>Explanation: Date when an object will be transitioned</p> <p>Restrictions: The value must conform with the ISO8601 standards and must be at 00:00 (UTC time). For example, 2018-01-01T00:00:00.000Z, indicating only objects that were last modified before that time are transitioned to the specified storage class.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|------|--|
| Days | int | <p>Explanation: Number of days (since the last update was made to the object) after which the lifecycle rule takes effect</p> <p>Restrictions: This parameter applies only to the current object version.</p> <p>Value range: 0 to $(2^{31} - 1)$, in days</p> <p>Default value: None</p> |

Table 7-125 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |
| StorageClassWarm | WARM | <p>OBS Infrequent Access</p> <p>Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.</p> |
| StorageClassCold | COLD | <p>OBS Archive</p> <p>Used for storing rarely accessed (once a year) data.</p> |

Table 7-126 Expiration

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------|--|--|
| Date | time. Time | Yes if this parameter is used as a request parameter and Days is absent | <p>Explanation: OBS executes the lifecycle rule for objects that were modified before the specified date.</p> <p>Restrictions: The value must conform with the ISO8601 standards and indicate UTC 00:00. For example, 2018-01-01T00:00:00.000Z indicates only objects that were last modified before the specified time are deleted.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| Days | int | Yes if this parameter is used as a request parameter and Date is absent | <p>Explanation: Number of days (since the last update was made to the object) after which the lifecycle rule takes effect</p> <p>Restrictions: This parameter applies only to the current object version.</p> <p>Value range: 1 to $(2^{31} - 1)$, in days</p> <p>Default value: None</p> |

Table 7-127 NoncurrentVersionTransition

| Parameter | Type | Description |
|----------------|----------------------------------|---|
| StorageClass | StorageClassType | <p>Explanation: Storage class of noncurrent object versions after transition</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The Standard storage class is not supported. • Restrictions on storage class transitions: <ul style="list-style-type: none"> – Only transitions from the Standard storage class to the Infrequent Access storage class are supported. To transition objects from Infrequent Access to Standard, you must manually do it. – Only transitions from the Standard or Infrequent Access storage class to the Archive storage class are supported. To transition Archive objects to Standard or Infrequent Access, you must restore the archived objects first and then manually transition their storage classes. – Multi-AZ redundancy is not available for Archive storage. For this reason, buckets or objects with multi-AZ redundancy cannot be transitioned to the Archive storage class based on a lifecycle rule. <p>Value range: See Table 7-125.</p> <p>Default value: None</p> |
| NoncurrentDays | int | <p>Explanation: Number of days an object is noncurrent before the specified rule takes effect</p> <p>Restrictions: This parameter applies only to noncurrent object versions.</p> <p>Value range: 0 to (2³¹ - 1), in days</p> <p>Default value: None</p> |

Table 7-128 NoncurrentVersionExpiration

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|------|------------------------------------|---|
| NoncurrentDays | int | Yes if used as a request parameter | Explanation: Number of days an object is noncurrent before the specified rule takes effect Restrictions: This parameter applies only to noncurrent object versions. Value range: 0 to $(2^{31} - 1)$, in days Default value: None |

Code Examples

This example returns the lifecycle configuration of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"

    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the lifecycle configuration of the bucket.
    output, err := obsClient.GetBucketLifecycleConfiguration(bucketname)
    if err == nil {
        fmt.Printf("Get LifecycleConfiguration successful with bucket:%s!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
}
```

```
fmt.Printf("Get LifecycleConfiguration fail with bucket:%s\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Obtaining Bucket Lifecycle Configuration](#)
- [\(GitHub\) Sample Code for Obtaining the Bucket Lifecycle Configuration](#)
- [OBS Error Codes](#)

7.24 Deleting the Lifecycle Configuration of a Bucket (SDK for Go)

Function

You can configure lifecycle rules to periodically delete objects or transition objects between storage classes. For more information, see [Lifecycle Management](#).

This API deletes the lifecycle configuration of a bucket.

Restrictions

- To delete the lifecycle configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutLifecycleConfiguration** in IAM or **PutLifecycleConfiguration** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) DeleteBucketLifecycleConfiguration(**bucketName** string) (output ***BaseModel**, err error)

Request Parameters

Table 7-129 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-130 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-131 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-131 BaseModel

| Parameter | Type | Description |
|-----------------|----------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes all lifecycle configurations of bucket **examplebucket**. Currently, deleting a single lifecycle rule is not supported.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
```

```
)  
func main() {  
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard  
    coding may result in leakage.  
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/  
    intl/en-us/usermanual-ca/ca\_01\_0003.html.  
    ak := os.Getenv("AccessKeyId")  
    sk := os.Getenv("SecretAccessKey")  
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not  
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or  
    import an AK/SK pair in other ways.  
    // securityToken := os.Getenv("SecurityToken")  
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it  
    with the one currently in use.  
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"  
    // Create an obsClient instance.  
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken  
    method to specify a security token when creating an instance.  
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,  
    obs.WithSecurityToken(securityToken)*/)  
    if err != nil {  
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())  
    }  
    // Specify a bucket name.  
    bucketname := "examplebucket"  
    // Delete lifecycle configurations of the bucket.  
    output, err := obsClient.DeleteBucketLifecycleConfiguration(bucketname)  
    if err == nil {  
        fmt.Printf("Delete LifecycleConfiguration successful with bucket:%s!\n", bucketname)  
        fmt.Printf("RequestId:%s\n", output.RequestId)  
        return  
    }  
    fmt.Printf("Delete LifecycleConfiguration fail with bucket:%s!\n", bucketname)  
    if obsError, ok := err.(obs.ObsError); ok {  
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error  
    response.")  
        fmt.Println(obsError.Error())  
    } else {  
        fmt.Println("An Exception was found, which means the client encountered an internal problem when  
    attempting to communicate with OBS, for example, the client was unable to access the network.")  
        fmt.Println(err)  
    }  
}
```

Helpful Links

- [Deleting Lifecycle Rules](#)
- [\(GitHub\) Sample Code for Deleting the Bucket Lifecycle Configuration](#)
- [OBS Error Codes](#)

7.25 Configuring Static Website Hosting for a Bucket (SDK for Go)

Function

You can host static website resources such as HTML web pages, flash files, or audio and video files in an OBS bucket, so that you can access these hosted resources using the bucket's website endpoint. Typical use cases include:

- Redirecting all requests to another website
- Redirecting specific requests

This API configures static website hosting for a bucket.

Restrictions

- Periods (.) should be avoided in the target bucket name, or there may be certificate verification failures on the client when you use HTTPS for access.
- The request body of the website configuration cannot exceed 10 KB.
- To configure static website hosting for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketWebsite** in IAM or **PutBucketWebsite** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketWebsiteConfiguration(input
*SetBucketWebsiteConfigurationInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-132 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---|--------------------|--|
| input | *SetBucketWebsiteConfigurationInput | Yes | Explanation: Input parameters for configuring static website hosting. For details, see Table 7-133 . |

Table 7-133 SetBucketWebsiteConfigurationInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------------|---------------------------------------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> |
| RedirectAllRequestsTo | RedirectAllRequestsTo | No | <p>Explanation: Redirection rules for all requests. For details, see Table 7-134.</p> |
| IndexDocument | IndexDocument | No | <p>Explanation: Default page configuration. For details, see Table 7-135.</p> |
| ErrorDocument | ErrorDocument | No | <p>Explanation: Error page configuration. For details, see Table 7-136.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------------------------------|--------------------|--|
| RoutingRules | [] RoutingRule | No | Explanation: List of routing rules. For details, see Table 7-137 . |

 NOTE

- **ErrorDocument**, **IndexDocument**, and **RoutingRules** must be used together and they cannot be used with **RedirectAllRequestsTo**.
- When **ErrorDocument**, **IndexDocument**, and **RoutingRules** are used together, **RoutingRules** can be left blank.
- You must specify either the three parameters (**ErrorDocument**, **IndexDocument**, and **RoutingRules**), or **RedirectAllRequestsTo**.

Table 7-134 RedirectAllRequestsTo

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------------------|--|--|
| HostName | string | Yes if RedirectAllRequestsTo is specified | Explanation: Host name used for redirection, for example, www.example.com Restrictions: The host name must comply with the host name rules. Default value: None |
| Protocol | ProtocolType | No | Explanation: Protocol used for redirection Value range: See Table 7-140 . Default value: None |

Table 7-135 IndexDocument

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--|---|
| Suffix | string | Yes if IndexDocument is specified | <p>Explanation: Suffix that is appended to the request for a directory. For example, if the suffix is index.html and you request samplebucket/images/, the returned data will be for the object named images/index.html in the bucket samplebucket.</p> <p>Value range: This parameter can neither be left blank nor contain slashes (/).</p> <p>Default value: None</p> |

Table 7-136 ErrorDocument

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|---|--|
| Key | string | No if ErrorDocument is specified | <p>Explanation: Object name to use when a 4XX error occurs. This parameter specifies the webpage to display when an error occurs.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

Table 7-137 RoutingRule

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------|---------------------------------|--|
| Condition | Condition | No | <p>Explanation: Conditions that must be met for the specified redirect to apply</p> <p>Value range: See Table 7-138.</p> <p>Default value: None</p> |
| Redirect | Redirect | Yes if RoutingRule is specified | <p>Explanation: Details about the redirection. For details, see Table 7-139.</p> |

Table 7-138 Condition

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|--------|--------------------|--|
| KeyPrefixEquals | string | No | <p>Explanation: Object name prefix when the redirection is applied. When a request is sent for accessing an object, the redirection rule takes effect if the object name prefix matches the value specified for this parameter.</p> <p>For example, to redirect the request for object ExamplePage.html, set the KeyPrefixEquals to ExamplePage.html.</p> <p>Restrictions: This parameter cannot be used together with HttpErrorCodeReturnedEquals.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------------------|--------|--------------------|---|
| HttpErrorCodeReturnedEquals | string | No | <p>Explanation: HTTP error codes when the redirection takes effect. The specified redirection is applied only when the error code returned equals the value specified for this parameter.</p> <p>For example, if you want to redirect requests to NotFound.html when HTTP error code 404 is returned, set HttpErrorCodeReturnedEquals to 404 in Condition, and set ReplaceKeyWith to NotFound.html in Redirect.</p> <p>Restrictions: This parameter cannot be used together with KeyPrefixEquals.</p> <p>Value range: See Error Codes.</p> <p>Default value: None</p> |

Table 7-139 Redirect

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------------------|-----------------------------------|--|
| Protocol | ProtocolType | No if used as a request parameter | <p>Explanation: Protocol used for redirection</p> <p>Value range: See Table 7-140.</p> <p>Default value: None</p> |
| HostName | string | No if used as a request parameter | <p>Explanation: Host name used for redirection</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------------------|--------|-----------------------------------|---|
| ReplaceKeyPrefix- With | string | No if used as a request parameter | Explanation: Object name prefix used for redirection Value range: The value must contain 1 to 1,024 characters. Default value: None |
| ReplaceKeyWith | string | No if used as a request parameter | Explanation: Object name used for redirection Restrictions: This parameter cannot be used together with replaceKeyPrefixWith . Value range: The value must contain 1 to 1,024 characters. Default value: None |
| HttpRedirectCode | string | No if used as a request parameter | Explanation: HTTP status code in the response to the redirect request. For details, see Status Code . Default value: None |

Table 7-140 ProtocolType

| Constant | Default Value | Description |
|---------------|---------------|---|
| ProtocolHttp | http | HTTP protocol used for redirection |
| ProtocolHttps | https | HTTPS protocol used for the redirection request |

Responses

Table 7-141 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-142 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-142 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be <i>2xx</i> (indicating successes) or <i>4xx</i> or <i>5xx</i> (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures static website hosting for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```



```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketWebsiteConfigurationInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify a default page (index.html as an example). This configuration indicates that when
examplebucket/images/ is requested, the content of object images/index.html in bucket samplebucket
will be returned.
input.IndexDocument.Suffix = "index.html"
// Specify an error page (error.html as an example).
input.ErrorDocument.Key = "error.html"
// Specify the list of request redirect rules.
input.RoutingRules = []obs.RoutingRule{
    {Redirect: obs.Redirect{HostName: "www.a.com", Protocol: obs.ProtocolHttp, ReplaceKeyPrefixWith:
"prefix", HttpRedirectCode: "304"}},
    {Redirect: obs.Redirect{HostName: "www.b.com", Protocol: obs.ProtocolHttps, ReplaceKeyWith:
"replaceKey", HttpRedirectCode: "304"}},
}
// Configure static website hosting for the bucket.
output, err := obsClient.SetBucketWebsiteConfiguration(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s website successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s website fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring Static Website Hosting for a Bucket](#)
- [\(GitHub\) Sample Code for Configuring Static Website Hosting for a Bucket](#)
- [OBS Error Codes](#)
- [FAQ for Static Website Hosting](#)

7.26 Obtaining the Static Website Hosting Configuration of a Bucket (SDK for Go)

Function

You can host static website resources such as HTML web pages, flash files, as well as audio and video files in an OBS bucket, so that you can access these hosted resources using the bucket's website endpoint. Typical use cases include:

- Redirecting all requests to another website
- Redirecting specific requests

This API returns the static website hosting configuration of the bucket.

Restrictions

- To obtain the static website hosting configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketWebsite** in IAM or **GetBucketWebsite** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketWebsiteConfiguration(bucketName string)
(output *GetBucketWebsiteConfigurationOutput, err error)
```

Request Parameters

Table 7-143 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-144 List of returned results

| Parameter | Type | Description |
|-----------|--|---|
| output | *GetBucketWebsiteConfigurationOutput | Explanation: Returned results. For details, see Table 7-145 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-145 GetBucketWebsiteConfigurationOutput

| Parameter | Type | Description |
|-----------------------|--------------------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| RedirectAllRequestsTo | RedirectAllRequestTo | Explanation: Redirection rule of all requests For details, see Table 7-146 . |
| IndexDocument | IndexDocument | Explanation: Default page configuration. For details, see Table 7-147 . |

| Parameter | Type | Description |
|---------------|--------------------------------|---|
| ErrorDocument | ErrorDocument | Explanation: Error page configuration. For details, see Table 7-148 . |
| RoutingRules | [] RoutingRule | Explanation: Redirection rule list For details, see Table 7-149 . |

Table 7-146 RedirectAllRequestsTo

| Parameter | Type | Description |
|-----------|-------------------------------|--|
| HostName | string | Explanation: Host name used for redirection, for example, www.example.com Restrictions: The host name must be in the standard host name format. Default value: None |
| Protocol | Protocol Type | Explanation: Protocol used for redirection Value range: See Table 7-152 . Default value: None |

Table 7-147 IndexDocument

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--|---|
| Suffix | string | Yes if IndexDocument is specified | <p>Explanation: Suffix that is appended to the request for a directory. For example, if the suffix is index.html and you request samplebucket/images/, the returned data will be for the object named images/index.html in the bucket samplebucket.</p> <p>Value range: This parameter can neither be left blank nor contain slashes (/).</p> <p>Default value: None</p> |

Table 7-148 ErrorDocument

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|---|--|
| Key | string | No if ErrorDocument is specified | <p>Explanation: Object name to use when a 4XX error occurs. This parameter specifies the webpage to display when an error occurs.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

Table 7-149 RoutingRule

| Parameter | Type | Description |
|-----------|------------------|--|
| Condition | Condition | <p>Explanation: Conditions that must be met for the specified redirect to apply</p> <p>Value range: See Table 7-150.</p> <p>Default value: None</p> |
| Redirect | Redirect | <p>Explanation: Details about the redirect request. For details, see Table 7-151.</p> |

Table 7-150 Condition

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|--------|--------------------|--|
| KeyPrefixEquals | string | No | <p>Explanation: Object name prefix when the redirection is applied. When a request is sent for accessing an object, the redirection rule takes effect if the object name prefix matches the value specified for this parameter.</p> <p>For example, to redirect the request for object ExamplePage.html, set the KeyPrefixEquals to ExamplePage.html.</p> <p>Restrictions: This parameter cannot be used together with HttpErrorCodeReturnedEquals.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------------------|--------|--------------------|---|
| HttpErrorCodeReturnedEquals | string | No | <p>Explanation: HTTP error codes when the redirection takes effect. The specified redirection is applied only when the error code returned equals the value specified for this parameter.</p> <p>For example, if you want to redirect requests to NotFound.html when HTTP error code 404 is returned, set HttpErrorCodeReturnedEquals to 404 in Condition, and set ReplaceKeyWith to NotFound.html in Redirect.</p> <p>Restrictions: This parameter cannot be used together with KeyPrefixEquals.</p> <p>Value range: See Error Codes.</p> <p>Default value: None</p> |

Table 7-151 Redirect

| Parameter | Type | Description |
|-----------|-------------------------------|--|
| Protocol | Protocol Type | <p>Explanation: Protocol used for redirection</p> <p>Value range: See Table 7-152.</p> <p>Default value: None</p> |
| HostName | string | <p>Explanation: Host name used for redirection</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|----------------------|--------|---|
| ReplaceKeyPrefixWith | string | <p>Explanation: Object name prefix used for redirection</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ReplaceKeyWith | string | <p>Explanation: Object name used for redirection</p> <p>Restrictions: This parameter cannot be used together with replaceKeyPrefixWith.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| HttpRedirectCode | string | <p>Explanation: HTTP status code in the response to the redirect request. For details, see Status Code.</p> <p>Default value: None</p> |

Table 7-152 ProtocolType

| Constant | Default Value | Description |
|---------------|---------------|---|
| ProtocolHttp | http | HTTP protocol used for redirection |
| ProtocolHttps | https | HTTPS protocol used for the redirection request |

Code Examples

This example returns the website configuration of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
}
```

```
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Obtain the website configuration of the bucket.
output, err := obsClient.GetBucketWebsiteConfiguration(bucketname)
if err == nil {
    fmt.Printf("Get bucket(%s)'s website configuration successful!\n", bucketname)
    fmt.Printf("Get bucket metadata successful!\n")
    fmt.Printf("RequestId:%s\n", output.RequestId)
    fmt.Printf("Suffix:%s\n", output.IndexDocument.Suffix)
    fmt.Printf("Key:%s\n", output.ErrorDocument.Key)
    for index, routingRule := range output.RoutingRules {
        fmt.Printf("Condition[%d]-KeyPrefixEquals:%s, HttpStatusCodeReturnedEquals:%s\n",
            index, routingRule.Condition.KeyPrefixEquals,
            routingRule.Condition.HttpStatusCodeReturnedEquals)
        fmt.Printf("Redirect[%d]-Protocol:%s, HostName:%s, ReplaceKeyPrefixWith:%s,
            HttpStatusCode:%s\n",
            index, routingRule.Redirect.Protocol, routingRule.Redirect.HostName,
            routingRule.Redirect.ReplaceKeyPrefixWith, routingRule.Redirect.HttpRedirectCode)
    }
    return
}
fmt.Printf("Get bucket(%s)'s website configuration fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Obtaining the Static Website Hosting Configuration of a Bucket](#)
- [\(GitHub\) Sample Code for Obtaining the Static Website Hosting Configuration](#)
- [OBS Error Codes](#)
- [FAQ for Static Website Hosting](#)

7.27 Deleting the Static Website Hosting Configuration of a Bucket (SDK for Go)

Function

You can host static website resources such as HTML web pages, flash files, as well as audio and video files in an OBS bucket, so that you can access these hosted resources using the bucket's website endpoint. Typical use cases include:

- Redirecting all requests to another website
- Redirecting specific requests

This API deletes the static website hosting configuration of the bucket.

Restrictions

- To delete the static website hosting configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:DeleteBucketWebsite** in IAM or **DeleteBucketWebsite** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) DeleteBucketWebsiteConfiguration(**bucketName** string) (output ***BaseModel**, err error)

Request Parameters

Table 7-153 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-154 List of returned results

| Parameter | Type | Description |
|-----------|------------|---|
| output | *BaseModel | Explanation: Returned results. For details, see Table 7-155 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-155 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes the website configuration of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
```

```
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Deletes the website configuration of the bucket.
output, err := obsClient.DeleteBucketWebsiteConfiguration(bucketname)
if err == nil {
    fmt.Printf("Delete bucket(%s)'s website configuration successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete bucket(%s)'s website configuration fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Deleting the Static Website Hosting Configuration of a Bucket](#)
- [\(GitHub\) Sample Code for Deleting the Static Website Hosting Configuration](#)
- [OBS Error Codes](#)
- [FAQ for Static Website Hosting](#)

7.28 Configuring Versioning for a Bucket (SDK for Go)

Function

You can enable versioning to automatically maintain previous versions of an object. When versioning is enabled, you can access earlier versions of an object to recover your data in the event of accidental actions or application failures. For more information, see [Versioning](#).

This API configures the versioning status for a bucket.

Restrictions

- To configure versioning for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketVersioning** in IAM or **PutBucketVersioning** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketVersioning(input  
*SetBucketVersioningInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-156 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------------------|--------------------|---|
| input | *SetBucketVersioningInput | Yes | Explanation: Input parameters for bucket versioning configuration. For details, see Table 7-157 . |

Table 7-157 SetBucketVersioningInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------------------------------|--------------------|---|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.) – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Status | Versioning StatusType | Yes | <p>Explanation: Versioning status of the bucket</p> <p>Value range: See Table 7-158.</p> <p>Default value: None</p> |

Table 7-158 VersioningStatusType

| Constant | Default Value | Description |
|----------------------------|---------------|-------------|
| VersioningStatus-Enabled | Enabled | Enabled |
| VersioningStatus-Suspended | Suspended | Suspended |

Responses

Table 7-159 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-160 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-160 BaseModel

| Parameter | Type | Description |
|-----------------|----------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example enables versioning for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.SetBucketVersioningInput{}
    // Specify a bucket name.
    input.Bucket = "bucketname"
    // Specify the versioning status (obs.VersioningStatusEnabled as an example) for the bucket.
    input.Status = obs.VersioningStatusEnabled
    // Configure versioning for the bucket.
    output, err := obsClient.SetBucketVersioning(input)
    if err == nil {
        fmt.Printf("Set bucket(%s)'s versioning status successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Set bucket(%s)'s versioning status fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Configuring Versioning for a Bucket](#)
- [\(GitHub\) Sample Code for Configuring Versioning Status for a Bucket](#)
- [OBS Error Codes](#)
- [Versioning FAQ](#)

7.29 Obtaining the Versioning Status of a Bucket (SDK for Go)

Function

You can enable versioning to automatically maintain previous versions of an object. When versioning is enabled, you can access earlier versions of an object to recover your data in the event of accidental actions or application failures. For more information, see [Versioning](#).

This API obtains the versioning status of a bucket.

Restrictions

- To obtain the versioning status of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketVersioning** in IAM or **GetBucketVersioning** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketVersioning(bucketName string) (output *GetBucketVersioningOutput, err error)
```

Request Parameters

Table 7-161 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-162 List of returned results

| Parameter | Type | Description |
|-----------|---|---|
| output | * GetBucketVersioningOutput | Explanation: Returned results. For details, see Table 7-163 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-163 GetBucketVersioningOutput

| Parameter | Type | Description |
|-----------------|--------------------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| Status | VersioningStatusType | Explanation: Versioning status of the bucket Value range: See Table 7-164 . Default value: None |

Table 7-164 VersioningStatusType

| Constant | Default Value | Description |
|---------------------------|---------------|-------------|
| VersioningStatusEnabled | Enabled | Enabled |
| VersioningStatusSuspended | Suspended | Suspended |

Code Examples

This example returns the versioning status of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket's versioning status.
    output, err := obsClient.GetBucketVersioning(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s versioning status successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("VersioningStatus:%s\n", output.Status)
        return
    }
    fmt.Printf("Get bucket(%s)'s versioning status fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Obtaining Bucket Versioning Status](#)
- [\(GitHub\) Sample Code for Obtaining the Versioning Status of a Bucket](#)
- [OBS Error Codes](#)
- [Versioning FAQ](#)

7.30 Configuring CORS for a Bucket (SDK for Go)

Function

Cross-origin resource sharing (CORS) is a browser-standard mechanism defined by the World Wide Web Consortium (W3C). It allows a web client in one origin to interact with resources in another one. For general web page requests, website scripts and contents in one origin cannot interact with those in another because of Same Origin Policies (SOPs). OBS supports CORS rules that allow the resources in OBS to be requested from other origins.

This API configures CORS for a bucket.

Restrictions

- To configure CORS for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketCORS** in IAM or **PutBucketCORS** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketCors(input *SetBucketCorsInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-165 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------------|--------------------|---|
| input | *SetBucketCorsInput | Yes | Explanation: Input parameters for configuring CORS for a bucket. For details, see Table 7-166 . |

Table 7-166 SetBucketCorsInput

| Parameter | Type | Man dato ry (Yes /No) | Description |
|-----------|-----------------------------|-----------------------------------|---|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my.bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| CorsRules | [] CorsRule | Yes | <p>Explanation: CORS rule list of the bucket. For details, see Table 7-167.</p> <p>Restrictions: A list can have a maximum of 100 CORS rules.</p> |

Table 7-167 CorsRule

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--------|------------------------------------|---|
| ID | string | No if used as a request parameter | <p>Explanation: CORS rule ID</p> <p>Value range: The value must contain 1 to 255 characters.</p> <p>Default value: None</p> |
| AllowedMethod | string | Yes if used as a request parameter | <p>Explanation: The allowed HTTP methods cross-origin request, same as the operation types of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |
| AllowedOrigin | string | Yes if used as a request parameter | <p>Explanation: The origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|----------|-----------------------------------|--|
| AllowedHeader | []string | No if used as a request parameter | <p>Explanation: The allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | No if used as a request parameter | <p>Explanation: Time your client can cache the response for a cross-origin request</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to (2³¹ - 1), in seconds</p> <p>Default value: 100</p> |
| ExposeHeader | []string | No if used as a request parameter | <p>Explanation: The CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |

Responses

Table 7-168 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-169 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-169 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures CORS rules for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
```

```
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketCorsInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify CORS rules.
input.CorsRules = []obs.CorsRule{
    {
        ID:          "rule1",
        AllowedOrigin: []string{"http://www.a.com", "http://www.b.com"},
        AllowedMethod: []string{"GET", "PUT"},
        AllowedHeader: []string{"header1", "header2"},
        MaxAgeSeconds: 1000,
        ExposeHeader:  []string{"obs-1", "obs-2"},
    },
    {
        ID:          "rule2",
        AllowedOrigin: []string{"http://www.c.com", "http://www.d.com"},
        AllowedMethod: []string{"GET", "POST"},
        AllowedHeader: []string{"header3", "header4"},
        MaxAgeSeconds: 1000,
    },
}
// Configure CORS for the bucket.
output, err := obsClient.SetBucketCors(input)
if err == nil {
    fmt.Printf("Set bucket(%s) CORS configuration successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s) CORS configuration fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring Bucket CORS](#)
- [\(GitHub\) Sample Code for Configuring CORS for a Bucket](#)
- [OBS Error Codes](#)

7.31 Obtaining the CORS Configuration of a Bucket (SDK for Go)

Function

Cross-origin resource sharing (CORS) is a browser-standard mechanism defined by the World Wide Web Consortium (W3C). It allows a web client in one origin to interact with resources in another one. For general web page requests, website scripts and contents in one origin cannot interact with those in another because of Same Origin Policies (SOPs). OBS supports CORS rules that allow the resources in OBS to be requested from other origins.

This API returns the CORS configuration of a bucket.

Restrictions

- To obtain the CORS configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketCORS** in IAM or **GetBucketCORS** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketCors(bucketName string) (output *GetBucketCorsOutput, err error)
```

Request Parameters

Table 7-170 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-171 List of returned results

| Parameter | Type | Description |
|-----------|---------------------------------------|---|
| output | * GetBucketCorsOutput | Explanation: Returned results. For details, see Table 7-172 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-172 GetBucketCorsOutput

| Parameter | Type | Description |
|-----------------|-----------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| CorsRules | [] CorsRule | Explanation: CORS rule list of the bucket. For details, see Table 7-173 . |

Table 7-173 CorsRule

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--------|------------------------------------|---|
| ID | string | No if used as a request parameter | <p>Explanation: CORS rule ID</p> <p>Value range: The value must contain 1 to 255 characters.</p> <p>Default value: None</p> |
| AllowedMethod | string | Yes if used as a request parameter | <p>Explanation: The allowed HTTP methods cross-origin request, same as the operation types of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |
| AllowedOrigin | string | Yes if used as a request parameter | <p>Explanation: The origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|----------|-----------------------------------|--|
| AllowedHeader | []string | No if used as a request parameter | <p>Explanation: The allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | No if used as a request parameter | <p>Explanation: Time your client can cache the response for a cross-origin request</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to (2³¹ - 1), in seconds</p> <p>Default value: 100</p> |
| ExposeHeader | []string | No if used as a request parameter | <p>Explanation: The CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |

Code Examples

This example returns the CORS configuration of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "strings"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket's CORS configuration.
    output, err := obsClient.GetBucketCors(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s) CORS configuration successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        for _, corsRule := range output.CorsRules {
            fmt.Printf("ID:%s, AllowedOrigin:%s, AllowedMethod:%s, AllowedHeader:%s, MaxAgeSeconds:%d,
ExposeHeader:%s\n",
                corsRule.ID, strings.Join(corsRule.AllowedOrigin, "|"), strings.Join(corsRule.AllowedMethod, "|"),
                strings.Join(corsRule.AllowedHeader, "|"), corsRule.MaxAgeSeconds,
                strings.Join(corsRule.ExposeHeader, "|"))
        }
        return
    }
    fmt.Printf("Get bucket(%s) CORS configuration fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Obtaining the CORS Configuration of a Bucket](#)
- [\(GitHub\) Sample Code for Obtaining the CORS Configuration](#)
- [OBS Error Codes](#)

7.32 Deleting the CORS Configuration of a Bucket (SDK for Go)

Function

Cross-origin resource sharing (CORS) is a browser-standard mechanism defined by the World Wide Web Consortium (W3C). It allows a web client in one origin to interact with resources in another one. For general web page requests, website scripts and contents in one origin cannot interact with those in another because of Same Origin Policies (SOPs). OBS supports CORS rules that allow the resources in OBS to be requested from other origins.

This API deletes the CORS configuration of a bucket.

Restrictions

- To delete the CORS configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketCORS** in IAM or **PutBucketCORS** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) DeleteBucketCors(**bucketName** string) (output ***BaseModel**, err error)

Request Parameters

Table 7-174 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|---|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (.), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-175 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-176 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-176 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes CORS rules of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
```

```
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Deletes the website configuration of the bucket.
output, err := obsClient.DeleteBucketWebsiteConfiguration(bucketname)
if err == nil {
    fmt.Printf("Delete bucket(%s)'s website configuration successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete bucket(%s)'s website configuration fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Deleting the CORS Configuration of a Bucket](#)
- [\(GitHub\) Sample Code for Deleting the CORS Configuration](#)
- [OBS Error Codes](#)

7.33 Configuring Tags for a Bucket (SDK for Go)

Function

This API adds tags to a bucket.

Restrictions

- A bucket can have a maximum of 10 tags.
- A tag key and key value can contain a maximum of 36 and 43 characters, respectively.
- Tag keys and key values cannot contain commas (,), asterisks (*), vertical bars (|), slashes (/), less-than signs (<), greater-than signs (>), equal signs (=), backslashes (\), or ASCII codes (0x00 to 0x1F).

- To configure tags for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketTagging** in IAM or **PutBucketTagging** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketTagging(input *SetBucketTaggingInput)  
(output *BaseModel, err error)
```

Request Parameters

Table 7-177 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------------|--------------------|---|
| input | *SetBucketTaggingInput | Yes | Explanation: Input parameters for configuring tags for a bucket. For details, see Table 7-178 . |

Table 7-178 SetBucketTaggingInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------|--------------------|---|
| Tags | <code>[]Tag</code> | Yes | <p>Explanation: Bucket tag list. For details, see Table 7-179.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket can have a maximum of 10 tags. Each tag can have only one pair of key values. • For the same bucket, tag keys must be unique, but tag values can be duplicated or left blank. |

Table 7-179 Tag

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| Key | string | Yes if used as a request parameter | <p>Explanation: Tag key</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The tag key in the same bucket must be unique. • The value of the key can be self-defined or predefined by TMS. • The value must contain 1 to 36 characters. • The value cannot begin or end with a space, cannot include non-printable ASCII characters (0-31), and the following special characters: * < > \ = • The value is case-sensitive. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| Value | string | Yes if used as a request parameter | <p>Explanation: Tag value</p> <p>Restrictions: Tag values can be duplicated or left blank.</p> <ul style="list-style-type: none"> The value must contain 0 to 43 characters. The value cannot include non-printable ASCII characters (0-31), and the following special characters: * < > \ = The value is case-sensitive. <p>Default value: None</p> |

Responses

Table 7-180 List of returned results

| Parameter | Type | Description |
|-----------|---|--|
| output | * BaseModel type BaseModel struct | <p>Explanation: Returned results. For details, see Table 7-181.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 7-181 BaseModel

| Parameter | Type | Description |
|------------|------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example adds tags for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyId")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.SetBucketTaggingInput{}
    // Specify a bucket name.
    input.Bucket = "bucketname"
    // Specify tags for the bucket.
    input.Tags = []obs.Tag{
        {Key: "key0", Value: "value0"},
        {Key: "key1", Value: "value1"},
    }
    // Configure tags for the bucket.
    output, err := obsClient.SetBucketTagging(input)
    if err == nil {
        fmt.Printf("Set bucket(%s)'s tag configuration successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Set bucket(%s)'s tag configuration fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error")
    }
}
```

```
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring Tags for a Bucket](#)
- [\(GitHub\) Sample Code for Configuring Bucket Tags](#)
- [OBS Error Codes](#)

7.34 Obtaining Bucket Tags (SDK for Go)

Function

This API returns the tags of a bucket.

Restrictions

- To obtain the bucket tags, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketTagging** in IAM or **GetBucketTagging** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketTagging(bucketName string) (output *GetBucketTaggingOutput, err error)
```

Request Parameters

Table 7-182 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-183 List of returned results

| Parameter | Type | Description |
|-----------|--|---|
| output | * GetBucketTaggingOutput | Explanation: Returned results. For details, see Table 7-184 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-184 GetBucketTaggingOutput

| Parameter | Type | Description |
|-----------------|------------------------|--|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| Tags | [] Tag | Explanation: Bucket tag list. For details, see Table 7-185 . Restrictions: <ul style="list-style-type: none"> • A bucket can have a maximum of 10 tags. Each tag can have only one pair of key values. • For the same bucket, tag keys must be unique, but tag values can be duplicated or left blank. |

Table 7-185 Tag

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| Key | string | Yes if used as a request parameter | <p>Explanation: Tag key</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The tag key in the same bucket must be unique. • The value of the key can be self-defined or predefined by TMS. • The value must contain 1 to 36 characters. • The value cannot begin or end with a space, cannot include non-printable ASCII characters (0–31), and the following special characters: * < > \ = • The value is case-sensitive. <p>Default value: None</p> |
| Value | string | Yes if used as a request parameter | <p>Explanation: Tag value</p> <p>Restrictions: Tag values can be duplicated or left blank.</p> <ul style="list-style-type: none"> • The value must contain 0 to 43 characters. • The value cannot include non-printable ASCII characters (0–31), and the following special characters: * < > \ = • The value is case-sensitive. <p>Default value: None</p> |

Code Examples

This example returns the tag set associated with bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Obtain bucket tags.
output, err := obsClient.GetBucketTagging(bucketname)
if err == nil {
    fmt.Printf("Get bucket(%s)'s tagging configuration successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    for index, tag := range output.Tags {
        fmt.Printf("Tag[%d]-Key:%s, Value:%s\n", index, tag.Key, tag.Value)
    }
    return
}
fmt.Printf("Get bucket(%s)'s tagging configuration fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Obtaining Bucket Tags](#)
- [\(GitHub\) Sample Code for Obtaining Bucket Tags](#)
- [OBS Error Codes](#)

7.35 Deleting Bucket Tags (SDK for Go)

Function

This API deletes the tags of a bucket.

Restrictions

- To delete bucket tags, you must be the bucket owner or have the required permission (**obs:bucket:DeleteBucketTagging** in IAM or **DeleteBucketTagging** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).

- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) DeleteBucketTagging(**bucketName** string) (output ***BaseModel**, err error)

Request Parameters

Table 7-186 List of request parameters

| Parameter | Type | Man dator y (Yes/ No) | Description |
|------------|--------|-----------------------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-187 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-188 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-188 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be <i>2xx</i> (indicating successes) or <i>4xx</i> or <i>5xx</i> (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes the tags from bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Delete the tags from the bucket.
output, err := obsClient.DeleteBucketTagging(bucketname)
if err == nil {
    fmt.Printf("Delete bucket(%s)'s tagging configuration successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete bucket(%s)'s tagging configuration fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Deleting Bucket Tags](#)
- [\(GitHub\) Sample Code for Deleting Bucket Tags](#)
- [OBS Error Codes](#)

7.36 Configuring Bucket Encryption (SDK for Go)

Function

After you enable encryption for a bucket, the objects you upload to this bucket will be encrypted with the specified encryption method before they are stored in OBS. When you later download these encrypted objects, OBS decrypts them first and then returns them to you.

This API configures or updates encryption for a bucket.

Restrictions

- To configure encryption for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutEncryptionConfiguration** in IAM or

PutEncryptionConfiguration in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).

- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketEncryption(input *SetBucketEncryptionInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-189 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------------------|--------------------|---|
| input | *SetBucketEncryptionInput | Yes | Explanation: Input parameters for configuring bucket encryption. For details, see Table 7-190 . |

Table 7-190 SetBucketEncryptionInput

| Parameter | Type | Man dato ry (Yes /No) | Description |
|--------------|--------|-----------------------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| SSEAlgorithm | string | Yes | <p>Explanation: Objects are encrypted using server-side SSE-KMS.</p> <p>Value range: kms</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|--------|--------------------|---|
| KMSMasterKeyID | string | No | <p>Explanation: KMS master key used for SSE-KMS</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value: If this parameter is not specified, the default master key will be used.</p> |
| ProjectID | string | No | <p>Explanation: ID of the project where the KMS master key belongs in SSE-KMS</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The project ID must match KMSMasterKeyID. Leave the project ID blank if KMSMasterKeyID is not specified. <p>Value range: To obtain the project ID, see How Do I Obtain a Project ID?</p> <p>Default value: None</p> |

Responses

Table 7-191 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-192 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-192 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures encryption for bucket **examplebucket**, with the encryption method **kms** and key **ce706220-a1f1-4e78-9ebb-xxxxxxxxxx32** used.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint /*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketEncryptionInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify a server-side encryption algorithm (kms as an example).
input.SSEAlgorithm = "kms"
// Specify a KMS customer master key (CMK). If no CMK is specified, the default one will be used.
input.KMSMasterKeyID = "ce706220-a1f1-4e78-9ebb-xxxxxxxxx32"
// Configure encryption for the bucket.
output, err := obsClient.SetBucketEncryption(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s encryption configuration successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s encryption configuration fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring Bucket Encryption](#)
- [\(GitHub\) Sample Code for Configuring Bucket Encryption](#)
- [OBS Error Codes](#)
- [Security FAQ](#)

7.37 Obtaining the Bucket Encryption Configuration (SDK for Go)

Function

After you enable encryption for a bucket, the objects you upload to this bucket will be encrypted with the specified encryption method before they are stored in OBS. When you later download these encrypted objects, OBS decrypts them first and then returns them to you.

This API returns the encryption configuration of a bucket.

Restrictions

- To obtain the encryption configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetEncryptionConfiguration** in IAM or **GetEncryptionConfiguration** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketEncryption(bucketName string) (output *GetBucketEncryptionOutput, err error)
```

Request Parameters

Table 7-193 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none">• A bucket name must be unique across all accounts and regions.• A bucket name:<ul style="list-style-type: none">– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.– Cannot be formatted as an IP address.– Cannot start or end with a hyphen (-) or period (.).– Cannot contain two consecutive periods (..), for example, my..bucket.– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket.• If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> |

Responses

Table 7-194 List of returned results

| Parameter | Type | Description |
|-----------|---|---|
| output | * GetBucketEncryptionOutput | Explanation: Returned results. For details, see Table 7-195 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-195 GetBucketEncryptionOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| SSEAlgorithm | string | Explanation: Objects are encrypted using SSE-KMS on the server side. Value range: kms Default value: None |

| Parameter | Type | Description |
|----------------|--------|---|
| KMSMasterKeyID | string | <p>Explanation: ID of the KMS master key used for SSE-KMS</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value: If this parameter is not specified, the default master key will be used.</p> |
| ProjectID | string | <p>Explanation: ID of the project where the KMS master key belongs in SSE-KMS</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The project ID must match KMSMasterKeyID. Leave the project ID blank if KMSMasterKeyID is not specified. <p>Value range: To obtain the enterprise project ID, see How Do I Obtain a Project ID?</p> <p>Default value: None</p> |

Code Examples

This example returns the encryption configuration of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Obtain the encryption configuration of the bucket.
output, err := obsClient.GetBucketEncryption(bucketname)
if err == nil {
    fmt.Printf("Get bucket(%s)'s encryption configuration successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    fmt.Printf("Encryption:%s\n", output.SSEAlgorithm)
    fmt.Printf("KeyID:%s\n", output.KMSMasterKeyID)
    return
}
fmt.Printf("Get bucket(%s)'s encryption configuration fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Obtaining Bucket Encryption Configuration](#)
- [\(GitHub\) Sample Code for Obtaining the Bucket Encryption Configuration](#)
- [OBS Error Codes](#)
- [Security FAQ](#)

7.38 Deleting the Bucket Encryption Configuration (SDK for Go)

Function

After you enable encryption for a bucket, the objects you upload to this bucket will be encrypted with the specified encryption method before they are stored in OBS. When you later download these encrypted objects, OBS decrypts them first and then returns them to you.

This API deletes the encryption configuration of a bucket.

Restrictions

- To delete the encryption configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutEncryptionConfiguration** in IAM or **PutEncryptionConfiguration** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) DeleteBucketEncryption(bucketName string) (output *BaseModel, err error)

Request Parameters

Table 7-196 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-197 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-198 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-198 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes the encryption configuration of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
```



```
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyId")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Delete the bucket encryption configuration.
output, err := obsClient.DeleteBucketEncryption(bucketname)
if err == nil {
    fmt.Printf("Delete bucket(%s)'s encryption configuration successful!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete bucket(%s)'s encryption configuration fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Deleting the Encryption Configuration of a Bucket](#)
- [\(GitHub\) Sample Code for Deleting the Bucket Encryption Configuration](#)
- [OBS Error Codes](#)
- [Security FAQ](#)

7.39 Configuring a Custom Domain Name for a Bucket (SDK for Go)

Function

This API configures a custom domain name for a bucket.

Restrictions

- To configure a custom domain name for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketCustomDomainConfiguration** in IAM or **PutBucketCustomDomainConfiguration** in a bucket policy). For details, see

[Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).

- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) SetBucketCustomDomain(input *SetBucketCustomDomainInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-199 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---|--------------------|---|
| input | *SetBucketCustomDomainInput | Yes | Explanation: Input parameters for configuring a custom domain name for the bucket. For details, see Table 7-200 . |

Table 7-200 SetBucketCustomDomainInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| CustomDomain | string | Yes | <p>Explanation: Custom domain name to configure</p> <p>Restrictions: The value must comply with the domain name rules.</p> <p>Default value: The value can be up to 256 bytes.</p> <p>Default value: None</p> |

Responses

Table 7-201 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-202 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-202 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example configures user-defined domain name **www.example.com** for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.SetBucketCustomDomainInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify a user-defined domain name (www.example.com as an example) for the bucket.
input.CustomDomain = "www.example.com"
// Configure a user-defined domain name for the bucket.
output, err := obsClient.SetBucketCustomDomain(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s customdomain successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s customdomain fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring a Custom Domain Name for a Bucket](#)
- [OBS Error Codes](#)

7.40 Obtaining the Custom Domain Name of a Bucket (SDK for Go)

Function

This API obtains the custom domain name of a bucket.

Restrictions

- To obtain the custom domain name for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketCustomDomainConfiguration** in IAM or **GetBucketCustomDomainConfiguration** in a bucket policy). For details, see

[Introduction to OBS Access Control, IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).

- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetBucketCustomDomain(bucketName string) (output *GetBucketCustomDomainOutput, err error)
```

Request Parameters

Table 7-203 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| bucketName | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

Responses

Table 7-204 List of returned results

| Parameter | Type | Description |
|-----------|---|---|
| output | * GetBucketCustomDomainOutput | Explanation: Returned results. For details, see Table 7-205 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-205 GetBucketCustomDomainOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| Domains | []Domain | Explanation: Domain information. For details, see Table 7-206 . |

Table 7-206 Domain

| Parameter | Type | Description |
|------------|--------|---|
| DomainName | string | Explanation: User-defined domain name Restrictions: The value must comply with the domain name rules. Default value: The value can be up to 256 bytes. Default value: None |
| CreateTime | string | Explanation: Time when the custom domain name was created For example: 2019-03-13T10:22:05.912Z |

Code Examples

This example returns the user-defined domain name configured for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the custom domain name of the bucket.
    output, err := obsClient.GetBucketCustomDomain(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s customdomain successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
    }
    return
}
```

```
}
fmt.Printf("Get bucket(%s)'s customdomain fail!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Obtaining the Custom Domain Name of a Bucket](#)
- [OBS Error Codes](#)

7.41 Deleting the Custom Domain Name of a Bucket (SDK for Go)

Function

This API deletes the custom domain name of a bucket.

Restrictions

- To delete the custom domain name of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:DeleteBucketCustomDomainConfiguration** in IAM or **DeleteBucketCustomDomainConfiguration** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) DeleteBucketCustomDomain(input *[DeleteBucketCustomDomainInput](#)) (output *[BaseModel](#), err error)

Request Parameters

Table 7-207 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------------------|--------------------|---|
| input | *DeleteBucketCustomDomainInput | Yes | Explanation: Input parameters for deleting the custom domain name of a bucket. For details, see Table 7-208 . |

Table 7-208 DeleteBucketCustomDomainInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| CustomDomain | string | Yes | <p>Explanation: Custom domain name to be deleted</p> <p>Restrictions: The value must comply with the domain name rules.</p> <p>Default value: The value can be up to 256 bytes.</p> <p>Default value: None</p> |

Responses

Table 7-209 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 7-210 . |
| err | error | Explanation: Error messages returned by the API |

Table 7-210 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example deletes the user-defined domain name **www.example.com** bound to bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
```

```
//Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
//Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
intl/en-us/usermanual-ca/ca\_01\_0003.html.
ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.DeleteBucketCustomDomainInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify a user-defined domain name (www.example.com as an example) for the bucket.
input.CustomDomain = "www.example.com"
// Delete the user-defined domain name bound to the bucket.
output, err := obsClient.DeleteBucketCustomDomain(input)
if err == nil {
    fmt.Printf("Delete bucket(%s)'s customdomain successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete bucket(%s)'s customdomain fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Deleting the Custom Domain Name of a Bucket](#)
- [OBS Error Codes](#)

8 Parallel File System APIs (SDK for Go)

8.1 Creating a Parallel File System (SDK for Go)

Function

Parallel file systems (PFSs) are containers for storing objects in OBS. Files uploaded to OBS are stored as objects in PFSs. This API creates a PFS.

When creating a PFS, you can also configure parameters such as the storage class, region, and access control as needed.

Restrictions

- To create a PFS, you must have the **obs:bucket:CreateBucket** permission. IAM is recommended for granting permissions. For details, see [IAM Custom Policies](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

When creating a PFS, if you use the endpoint **obs.myhuaweicloud.com** for client initialization, you do not have to specify a region (indicated by **location**) where the PFS will be created, because OBS automatically creates the PFS in the CN North-Beijing1 (cn-north-1) region. However, if the endpoint you use is not **obs.myhuaweicloud.com**, you must specify a region that matches the used endpoint, or status code **400** is returned.

For example, if the endpoint used for initialization is **obs.ap-southeast-1.myhuaweicloud.com**, you must set **Location** to **ap-southeast-1** when creating a PFS. Otherwise, status code **400** is returned.

- A maximum of 100 PFSs (regardless of regions) can be created for an account. There is no limit on the number and size of objects in a PFS.
- The name of a PFS must be unique in OBS. If you repeatedly create PFSs with the same name in the same region, an HTTP status code **200** will be returned. In other cases, creating a PFS with the same name as an existing PFS will have an HTTP status code **409** returned, indicating that such a PFS already exists.

- The name of a deleted PFS can be reused for another PFS at least 30 minutes after the deletion.
- Not all regions support the creation of multi-AZ PFSs. You can check whether a region allows you to create multi-AZ PFSs by referring to [Product Pricing Details](#).

Method

```
func (obsClient ObsClient) CreateBucket(input *CreateBucketInput) (output *BaseModel, err error)
```

Request Parameters

Table 8-1 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------|--------------------|--|
| input | *CreateBucketInput | Yes | Explanation: Input parameters for creating a PFS. For details, see Table 8-2 . |

Table 8-2 CreateBucketInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: PFS name.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A PFS name must be unique across all accounts and regions. • A PFS name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain periods (.) and hyphens (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create PFSs with the same name in the same region, no error will be reported and the PFS attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|----------------------------------|---|--|
| Location | string | Yes if the region where the OBS service resides is not the default region | <p>Explanation: Region where the PFS is to be created.</p> <p>Restrictions: If the specified endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoints are specified, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |
| ACL | AclType | No | <p>Explanation: Access control list (ACL) that can be pre-defined when a PFS is created. For details about ACLs, see ACLs.</p> <p>Value range: See Table 8-3.</p> <p>Default value: private</p> |
| StorageClass | StorageClassType | No | <p>Explanation: PFS storage class that can be specified at PFS creation.</p> <p>Value range: See Table 8-4.</p> <p>Default value: STANDARD</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------|--------|--------------------|---|
| Grant ReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can list objects, multipart uploads, and object versions in the PFS you are creating, and can obtain PFS metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant WriteId | string | No | <p>Explanation: ID (domain_id) of an account the WRITE permission is granted to. The account with the WRITE permission can create, delete, and overwrite objects in the PFS you are creating, and can initiate or abort multipart uploads, as well as upload, copy, and assemble parts.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant ReadAcplId | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the PFS you are creating.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------------|--------|--------------------|---|
| Grant Write Acpld | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can modify the ACL of the PFS you are creating.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant FullControlld | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can perform any operation on the PFS you are creating.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Grant Read Deliveredld | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. By default, this READ permission applies to all objects in the PFS.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------------------|--------|--------------------|---|
| GrantFullControlDelivered | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission has full control over the PFS you are creating. By default, the FULL_CONTROL permission applies to all objects in the PFS.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Epid | string | No | <p>Explanation: Enterprise project ID that can be specified at PFS creation. If you have enabled EPS, you can obtain the project ID from the EPS console.</p> <p>Restrictions: The value of Epid is a UUID. Epid is not required if you have not enabled EPS.</p> <p>Example: 9892d768-2d13-450f-aac7-ed0e44c2585f</p> <p>Default value: None</p> |
| AvailableZone | string | No | <p>Explanation: Data redundancy type that can be specified at PFS creation.</p> <p>Restrictions: Multi-AZ redundancy is not available for Archive storage. If the region where the PFS is to be created does not support multi-AZ storage, the PFS uses single-AZ storage by default.</p> <p>Value range: To configure multi-AZ storage for the PFS, set this parameter to 3az. To configure single-AZ storage (default value assigned by OBS) for the PFS, you do not need to specify this parameter.</p> <p>Default value: single AZ</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|------|--------------------|---|
| IsFSFileInterface | bool | No | <p>Explanation: Whether a PFS is created</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: A PFS is created. • false: A bucket is created. <p>Default value: false</p> |

Table 8-3 AclType

| Constant | Default Value | Description |
|--------------------|-------------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadWrite | public-read-write | Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object. |

| Constant | Default Value | Description |
|-----------------------------|-----------------------------|---|
| AclPublicReadDelivered | public-read-delivered | <p>Public read on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadDelivered does not apply to objects.</p> |
| AclPublicReadWriteDelivered | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadWriteDelivered does not apply to objects.</p> |
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 8-4 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 8-5 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| output | * BaseModel | Explanation: Returned results. For details, see Table 8-6 . |
| err | error | Explanation: Error messages returned by the API |

Table 8-6 BaseModel

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example creates a PFS.

```
package main

import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding, which may result in information leakage. You can obtain an AK/SK pair using
    environment variables or import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the region where the bucket is to be created. CN-Hong Kong is
    used here as an example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.CreateBucketInput{}
    // Specify the name of the PFS.
    input.Bucket = "examplebucket"
    // Specify the region where the bucket is to be created. The region must be the same as that in the
    passed endpoint. ap-southeast-1 is used as an example.
    input.Location = "ap-southeast-1"
    // Specify an access control policy for the bucket. obs.AclPrivate is used as an example.
    input.ACL = obs.AclPrivate
    // Specify the AZ type for the bucket. If this parameter is not specified, or it is specified but the involved
    region does not support multi-AZ storage, single-AZ storage is applied. 3az is used as an example.
    input.AvailableZone = "3az"
    // Specify the bucket type as PFS.
    input.IsFSFileInterface = true
    // Create a bucket.
    output, err := obsClient.CreateBucket(input)
    if err == nil {
        fmt.Printf("Create bucket:%s successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Create bucket:%s fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error")
    }
}
```

```
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

8.2 Listing Parallel File Systems (SDK for Go)

Function

Parallel file systems (PFSs) are containers for storing objects in OBS. Files uploaded to OBS are stored as objects in PFSs. This API returns a list of all PFSs that meet the specified conditions in all regions of the current account. Returned PFSs are listed in alphabetical order by PFS name.

Restrictions

- To list PFSs, you must have the **obs:bucket:ListAllMyBuckets** permission. IAM is recommended for granting permissions. For details, see [IAM Custom Policies](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) ListBuckets(input *[ListBucketsInput](#)) (output *[ListBucketsOutput](#), err error)

Request Parameters

Table 8-7 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------------------|--------------------|--|
| input | * ListBucketInput | No | Explanation: Input parameters for listing PFSs. For details, see Table 8-8 . |

Table 8-8 ListBucketsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|----------------------------|--------------------|---|
| QueryLocation | bool | No | <p>Explanation: Whether to query the PFS location.</p> <p>Value range:</p> <ul style="list-style-type: none"> true: The PFS location is queried. false: The PFS location is not queried. <p>Default value: false</p> |
| BucketType | BucketType | No | <p>Explanation: Type of the buckets to be listed.</p> <p>Value range: See Table 8-9.</p> <p>Default value: If this parameter is not specified, all buckets and parallel file systems are listed.</p> |

Table 8-9 BucketType

| Constant | Default Value | Description |
|----------|---------------|---|
| OBJECT | OBJECT | An object bucket |
| POSIX | POSIX | A parallel POSIX-compatible file bucket |

Responses

Table 8-10 List of returned results

| Parameter | Type | Description |
|-----------|-------------------------------------|---|
| output | * ListBucketsOutput | <p>Explanation: Returned results. For details, see Table 8-11.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 8-11 ListBucketsOutput

| Parameter | Type | Description |
|-----------------|---------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Owner | Owner | <p>Explanation: PFS owner.</p> <p>Value range: See Table 8-12.</p> |
| Buckets | [] Bucket | <p>Explanation: PFS list.</p> <p>Value range: See Table 8-13.</p> |

Table 8-12 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 8-13 Bucket

| Parameter | Type | Description |
|--------------|-----------|--|
| Name | string | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. <p>Default value: None</p> |
| CreationDate | time.Time | <p>Explanation: Time when the bucket was created</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|------------|--------|--|
| Location | string | <p>Explanation: Region where a bucket is located</p> <p>Restrictions: If the used endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |
| BucketType | string | <p>Explanation: Bucket type</p> <p>Value range:</p> <ul style="list-style-type: none"> Object bucket: OBJECT Parallel file system: POSIX <p>Default value: None</p> |

Code Examples

This example lists all PFSs.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding, which may result in information leakage. You can obtain an AK/SK pair using
    environment variables or import an AK/SK pair in other ways.
```

```
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the region where the bucket is located. CN-Hong Kong is used
// here as an example. Replace it with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
// method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.ListBucketsInput{}
// Specify whether to query the PFS location in the listing. The default value is false. true is used as an
// example.
input.QueryLocation = true
// Specify the type of the buckets to list. By default, all buckets and PFSs are listed. obs.POSIX is used as an
// example, indicating that all PFSs are listed.
input.BucketType = obs.POSIX
// List PFSs.
output, err := obsClient.ListBuckets(input)
if err == nil {
    fmt.Printf("List buckets successful!\n")
    fmt.Printf("RequestId:%s\n", output.RequestId)
    for index, val := range output.Buckets {
        fmt.Printf("Bucket[%d]-Name:%s,CreationDate:%s\n", index, val.Name, val.CreationDate)
    }
    return
}
fmt.Printf("List buckets fail!\n")
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

8.3 Listing Objects in a Parallel File System (SDK for Go)

Function

This API lists some or all of the objects in a parallel file system (PFS). You can configure the prefix, number, and start position to list objects that meet specified criteria. Returned objects are listed in alphabetical order by object name.

Restrictions

- A maximum of 1,000 objects can be listed for each API call.
- To list objects in a PFS, you must be the PFS owner or have the required permission (**obs:bucket:ListBucket** in IAM or **ListBucket** in a policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Creating a Custom Bucket Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

func (obsClient ObsClient) ListObjects(input *[ListObjectsInput](#)) (output *[ListObjectsOutput](#), err error)

Request Parameters

Table 8-14 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------------------------|--------------------|---|
| input | * ListObjectsInput | Yes | Explanation: Input parameters for listing objects in a PFS. For details, see Table 8-15 . |

Table 8-15 ListObjectsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: PFS name.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A PFS name must be unique across all accounts and regions. • A PFS name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create PFSs with the same name in the same region, no error will be reported and the PFS attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Marker | string | No | <p>Explanation: Object name to start with when listing objects in a bucket. Objects after the specified object are returned in alphabetical order.</p> <p>Restrictions: This parameter is only used for listing objects with a single version.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Prefix | string | No | <p>Explanation: Name prefix that the objects to be listed must contain</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, logs/day1, logs/day2, and logs/day3 will be returned. If this parameter is left blank and there are no other filter criteria, all objects in the PFS will be returned.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| MaxKeys | int | No | <p>Explanation: The maximum number of objects returned in the response in alphabetical order</p> <p>Value range: The value ranges from 1 to 1000. If the specified value is greater than 1000, only 1,000 objects are returned.</p> <p>Default value: 1000</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--------|--------------------|--|
| Delimiter | string | No | <p>Explanation:</p> <p>Object names are grouped by this parameter, which is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a PFS has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, files abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix.</p> <p>For a PFS, if this parameter is not specified, all the contents in the current directory are recursively listed by default, and subdirectories are also listed. In big data scenarios, PFSs usually have multiple directory levels and each directory level has a large number of objects. In such case, you are advised to configure [delimiter=/] to list only the content in the current directory, without the content in subdirectories, to make the listing more efficient.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Encoding Type | string | No | <p>Explanation:</p> <p>Encoding type for some elements in the response. If Delimiter, Marker, Prefix, CommonPrefixes, NextMarker, and Key contain control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to url.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied.</p> |

Responses

Table 8-16 List of returned results

| Parameter | Type | Description |
|-----------|-------------------------------------|--|
| output | * ListObjectsOutput | Explanation: Response parameters for listing objects in a PFS. For details, see Table 8-17 . |
| err | error | Explanation: Error messages returned by the API |

Table 8-17 ListObjectsOutput

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits indicating the status of a response. It ranges from 2xx (indicating successes) to 4xx or 5xx (indicating errors). For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|-----------|--------|--|
| Location | string | <p>Explanation: Region where the PFS is located.</p> <p>Restrictions: If the specified endpoint is obs.myhuaweicloud.com, this parameter is not required. If any other endpoints are specified, this parameter is required.</p> <p>Value range: To learn about valid regions and endpoints, see Regions and Endpoints. An endpoint is the request address for calling an API. Endpoints vary depending on services and regions. To obtain the regions and endpoints, contact the enterprise administrator.</p> <p>Default value: If obs.myhuaweicloud.com is used as the endpoint and no region is specified, cn-north-1 (the CN North-Beijing1 region) is used by default.</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| Name | string | <p>Explanation: PFS name.</p> <p>Restrictions:</p> <ul style="list-style-type: none">• A PFS name must be unique across all accounts and regions.• A PFS name:<ul style="list-style-type: none">– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.– Cannot be formatted as an IP address.– Cannot start or end with a hyphen (-) or period (.).– Cannot contain two consecutive periods (..), for example, my..bucket.– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket.• If you repeatedly create PFSs with the same name in the same region, no error will be reported and the PFS attributes comply with those set in the first creation request. <p>Value range: The value can contain 3 to 63 characters.</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| Prefix | string | <p>Explanation: Object name prefix, which is consistent with that set in the request. Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, logs/day1, logs/day2, and logs/day3 will be returned. If this parameter is left blank and there are no other filter criteria, all objects in the PFS will be returned.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Marker | string | <p>Explanation: Object name to start with for listing objects. All objects following the specified object are returned in alphabetical order by object name.</p> <p>Restrictions: This parameter is only used for listing objects with a single version.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|--|
| Delimiter | string | <p>Explanation:</p> <p>Object names are grouped by this parameter, which is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a PFS has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, files abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix.</p> <p>For a PFS, if this parameter is not specified, all the contents in the current directory are recursively listed by default, and subdirectories are also listed. In big data scenarios, PFSs usually have multiple directory levels and each directory level has a large number of objects. In such case, you are advised to configure [delimiter=/] to list only the content in the current directory, without the content in subdirectories, to make the listing more efficient.</p> <p>Value range:</p> <p>The value can contain 1 to 1,024 characters.</p> <p>Default value:</p> <p>None</p> |

| Parameter | Type | Description |
|-------------|----------------------------|---|
| MaxKeys | int | <p>Explanation: The maximum number of objects returned in the response in alphabetical order.</p> <p>Value range: The value ranges from 1 to 1000. If the specified value is greater than 1000, only 1,000 objects are returned.</p> <p>Default value: 1000</p> |
| IsTruncated | bool | <p>Explanation: Whether all results are returned in the response. A maximum of 1,000 objects can be listed at a time. If the number of objects is greater than 1,000, the objects beyond 1,000 cannot be returned.</p> <p>Value range: true: Not all results are returned. false: All results are returned.</p> <p>Default value: None</p> |
| NextMarker | string | <p>Explanation: Where in the bucket the next listing begins. If not all results are returned, the response contains this parameter to mark the last object listed in the request. In a subsequent request, you can set Marker to the value of this parameter to list the remaining objects.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Contents | [] Content | <p>Explanation: List of objects in the PFS. For details, see Table 8-18.</p> |

| Parameter | Type | Description |
|----------------|----------|---|
| CommonPrefixes | []string | <p>Explanation: List of object name prefixes grouped according to the Delimiter parameter (if specified)</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| EncodingType | string | <p>Explanation: Encoding type for some elements in the response. If Delimiter, Marker, Prefix, CommonPrefixes, NextMarker, and Key contain control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to url.</p> <p>Value range: url</p> <p>Default value: None</p> |

Table 8-18 Content

| Parameter | Type | Description |
|-----------|--------|--|
| Key | string | <p>Explanation: Object name. An object is uniquely identified by an object name in a PFS. An object name is the complete path of the object without the PFS name. For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--------------|--|
| LastModified | time.Time | <p>Explanation: Time when the object was last modified.</p> <p>Value range: UTC time</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object contents that is used to determine whether the contents of an object are changed. For example, if the ETag value is A when an object is uploaded and becomes B when the object is downloaded, this indicates the contents of the object were changed. The ETag reflects changes of an object, not of the metadata. Objects created by the upload and copy operations have unique ETags after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Size | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| Owner | Owner | <p>Explanation: Object owner. This parameter contains the domain ID and name of the object owner. For details, see Table 8-20.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--------|---|
| StorageClass | string | Explanation: Object storage class Value range: See Table 8-19 . Default value: None |

Table 8-19 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 8-20 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | Explanation: Account (domain) ID of the owner Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None |

Code Examples

This example lists all files in a PFS **examplebucket** using pagination.

```
// This example lists all files in examplebucket using pagination.
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding, which may result in information leakage. You can obtain an AK/SK pair using
    environment variables or import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the region where the bucket is located. CN-Hong Kong is used
    here as an example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.ListObjectsInput{}
    // Specify the name of the PFS.
    input.Bucket = "examplebucket"
    // Specify the maximum number of objects to be returned in alphabetic order. The default value is 1000.
    100 is used as an example.
    input.MaxKeys = 100
    // Specify an encoding type. url is used as an example. If the objects to list contain special characters,
    this parameter must be passed.
    input.EncodingType = "url"
    for {
        // List objects in the PFS.
        output, err := obsClient.ListObjects(input)
        if err != nil {
            fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
            if obsError, ok := err.(obs.ObsError); ok {
                fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an
                error response.")
                fmt.Println(obsError.Error())
            } else {
                fmt.Println("An Exception was found, which means the client encountered an internal problem
                when attempting to communicate with OBS, for example, the client was unable to access the network.")
                fmt.Println(err)
            }
            os.Exit(-1)
        }
        // Print the result. By default, 100 records are returned at a time.
        fmt.Printf("List objects under the bucket(%s) successful!\n", input.Bucket)
        for index, val := range output.Contents {
            fmt.Printf("Content[%d]-OwnerId:%s, ETag:%s, Key:%s, LastModified:%s, Size:%d\n",
                index, val.Owner.ID, val.ETag, val.Key, val.LastModified, val.Size)
        }
        if output.IsTruncated {
            input.Marker = output.NextMarker
        } else {
            break
        }
    }
}
```

```
}  
}
```

8.4 Renaming an Object (SDK for Go)

Function

This API renames an object in the parallel file system (PFS).

Restrictions

- To rename an object, you must be the PFS owner or have the required permission (**obs:bucket:PutObject** in IAM or **PutObject** in a policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- This API is currently available only for PFSs. Object buckets do not support this API. For details about how to create a PFS, see [Creating a Parallel File System \(SDK for Go\)](#).

Method

```
func (obsClient ObsClient) RenameFile(input *RenameFileInput) (output *RenameFileOutput, err error)
```

Request Parameters

Table 8-21 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------------------|--------------------|---|
| input | * RenameFileInput | Yes | Explanation: Request parameters for renaming an object. For details, see Table 8-22 . |

Table 8-22 RenameFileInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Bucket | string | Yes | <p>Explanation: PFS name.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A PFS name must be unique across all accounts and regions. • A PFS name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.bucket. • If you repeatedly create PFSs with the same name in the same region, no error will be reported and the PFS attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Key | string | Yes | <p>Explanation: Directory name. It is the complete path of a directory in a PFS without the PFS name.</p> <p>For example, if the access path is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|--|
| NewObjectKey | string | Yes | <p>Explanation: Explanation: Name of the object after being renamed. An object is uniquely identified by an object name in a PFS. The object name does not contain the PFS name.</p> <p>For example, if the access path is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value can contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

Responses

Table 8-23 List of returned results

| Parameter | Type | Description |
|-----------|-------------------|--|
| output | *RenameFileOutput | <p>Explanation: Returned results. For details, see Table 8-24.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 8-24 RenameFileOutput

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits indicating the status of a response. It ranges from 2xx (indicating successes) to 4xx or 5xx (indicating errors). For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example renames object **folderName/originalObjectName** in the PFS **examplebucket** to **newFolderName/newObjectName**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding, which may result in information leakage. You can obtain an AK/SK pair using
    environment variables or import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the region where the bucket is located. CN-Hong Kong is used
    here as an example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
}
```

```
input := &obs.RenameFileInput{}
// Specify the name of the PFS.
input.Bucket = "examplebucket"
// Specify the source object name. folderName/originalObjectName is used as an example.
input.Key = "folderName/originalObjectName"
// Specify the new object name. newFolderName/newObjectName is used as an example.
input.NewObjectKey = "newFolderName/newObjectName"
// Rename the object.
output, err := obsClient.RenameFile(input)
if err == nil {
    fmt.Printf("Rename File(%s) successful with bucket(%s)!\n", input.Key, input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Rename File(%s) fail with bucket(%s)!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

9 Objects (SDK for Go)

9.1 Object API Overview (SDK for Go)

OBS SDK for Go provides methods for accessing OBS using object-related APIs (except for resumable transfer APIs) with signed URLs. Such methods may contain the following three parameters (except for **ObsClient.PutFileWithSignedUrl**):

- A signed URL
- Headers required in a request made by using a signed URL
- Data carried in a request (optional)

For details about how to generate a signed URL, see [Creating a Signed URL \(SDK for Go\)](#).

9.2 Object Upload Overview (SDK for Go)

In OBS, objects are basic data units that you can operate. OBS Go SDK provides abundant APIs for object upload in the following methods:

- [Uploading an Object - Streaming \(SDK for Go\)](#)
- [Uploading an Object - File-Based \(SDK for Go\)](#)
- [Uploading a Part \(SDK for Go\)](#)
- [Uploading an Object - Resumable \(SDK for Go\)](#)

SDK supports the upload of objects whose size ranges from 0 KB to 5 GB. If a file is smaller than 5 GB, streaming upload and file-based upload are applicable. If the file is larger than 5 GB, multipart upload (whose part size is smaller than 5 GB) is suitable.

If you grant anonymous users the read permission for an object during the upload, anonymous users can access the object through a URL after the upload is complete. The object URL is in the format of **https://bucket name.domain name/directory levels/object name**. If the object resides in the root directory of a bucket, its URL does not contain a directory level.

9.2.1 Uploading an Object - Streaming (SDK for Go)

Function

This API uploads a local file to OBS. You can upload text, videos, or any other types of files smaller than 5 GB.

Streaming upload uses `io.Reader` as the object data source. You can call `ObsClient.PutObject` to upload data streams to OBS.

Restrictions

- To upload an object, you must be the bucket owner or have the required permission (`obs:object:PutObject` in IAM or `PutObject` in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- The object size in a single upload ranges from 0 to 5 GB.
- To upload files larger than 5 GB, [multipart uploads](#) should be used.

Method

```
func (obsClient ObsClient) PutObject(input *PutObjectInput) (output *PutObjectOutput, err error)
```

Request Parameters

Table 9-1 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------|--------------------|---|
| input | *PutObjectInput | Yes | Explanation: Input parameters for uploading an object. For details, see Table 9-2 . |

Table 9-2 PutObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.) - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|-------------------------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ContentMD5 | string | No | <p>Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p>Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: n58IG6hfM7vqI4K0vnWpog==</p> <p>Default value: None</p> |
| ACL | AclType | No | <p>Explanation: Pre-defined access policy that can be specified during object creation. For details about the ACL, see ACLs.</p> <p>Value range: See Table 9-3.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to an object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--|--------------------|--|
| ContentType | string | No | <p>Explanation: Multipurpose Internet Mail Extension (MIME) type of the object to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display object files.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| ContentLength | int64 | No | <p>Explanation: Size of the object to be uploaded</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The object size in a single upload ranges from 0 to 5 GB. To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.</p> |
| SseHeader | SseCHeader or SseKmsHeader | No | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-4. If SSE-KMS is used, see Table 9-5.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|----------------------------------|--------------------|--|
| StorageClass | StorageClassType | No | <p>Explanation: Object storage class</p> <p>Value range: For available storage classes, see Table 9-6.</p> <p>Default value: If this parameter is not specified, the object inherits the storage class of the bucket.</p> |
| Metadata | map[string]string | No | <p>Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|-----------|--------------------|---|
| Body | io.Reader | No | <p>Explanation: Data stream of the object to be uploaded</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The object size in a single upload ranges from 0 to 5 GB. To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: None</p> |
| GrantReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantReadAcpld | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|--|
| GrantWriteAcpld | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can write the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantFullControlld | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Expires | int64 | No | <p>Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p>Value range: A positive integer, in days</p> <p>Default value: None</p> |

Table 9-3 AclType

| Constant | Default Value | Description |
|------------------------|-----------------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadWrite | public-read-write | Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadDelivered | public-read-delivered | Public read on a bucket as well as objects in the bucket If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket. NOTE AclPublicReadDelivered does not apply to objects. |

| Constant | Default Value | Description |
|-----------------------------|-----------------------------|---|
| AclPublicReadWriteDelivered | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadWriteDelivered does not apply to objects.</p> |
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 9-4 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-5 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Table 9-6 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 9-7 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------------|---|
| output | * PutObjectOutput | Explanation: Returned results. For details, see Table 9-8 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-8 PutObjectOutput

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range:</p> <ul style="list-style-type: none"> • If the storage class is Standard, leave this parameter blank. • For available storage classes, see Table 9-6. <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--|---|
| SseHeader | SseCHeader or SseKmsHeader | Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-10 . If SSE-KMS is used, see Table 9-11 . |

Table 9-9 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-10 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | Explanation: SSE-C used for encrypting objects Value range: AES256, indicating objects are encrypted using SSE-C Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-11 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example uses streaming to upload **example/objectname** to **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
```

```
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.PutObjectInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify the object (example/objectname as an example) to upload.
input.Key = "example/objectname"
fd, _ := os.Open("localfile")
input.Body = fd
// Upload you local file using streaming.
output, err := obsClient.PutObject(input)
if err == nil {
    fmt.Printf("Put object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
    fmt.Printf("StorageClass:%s, ETag:%s\n",
        output.StorageClass, output.ETag)
    return
}
fmt.Printf("Put object(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Uploading Objects - PUT.](#)
- [\(GitHub\) Sample Code for Uploading an Object](#)
- [OBS Error Codes](#)
- [FAQ for Object Upload Failure](#)

9.2.2 Uploading an Object - File-Based (SDK for Go)

Function

This API uploads local files to a specified bucket in OBS. These files can be texts, images, videos, or any other type of files.

Restrictions

- To upload an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

- The object size in a single upload ranges from 0 to 5 GB.
- To upload files larger than 5 GB, **multipart uploads** should be used.

Method

```
func (obsClient ObsClient) PutFile(input *PutFileInput) (output *PutObjectOutput, err error)
```

Request Parameters

Table 9-12 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------|--------------------|---|
| input | *PutFileInput | Yes | Explanation: Input parameters for uploading a file. For details, see Table 9-13 . |

Table 9-13 PutFileInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|-------------------------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ContentMD5 | string | No | <p>Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p>Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: n58IG6hfM7vqI4K0vnWpog==</p> <p>Default value: None</p> |
| ACL | AclType | No | <p>Explanation: Access control list (ACL) that can be pre-defined when an object is created. For details about ACLs, see ACLs.</p> <p>Value range: See Table 9-14.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to an object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |
| ContentType | string | No | <p>Explanation:</p> <p>MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value:</p> <p>If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--|--------------------|--|
| ContentLength | int64 | No | <p>Explanation: Size of the object to be uploaded</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The object size in a single upload ranges from 0 to 5 GB. To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.</p> |
| SseHeader | SseCHeader or SseKmsHeader | No | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-15. If SSE-KMS is used, see Table 9-16.</p> |
| StorageClass | StorageClassType | No | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-17.</p> <p>Default value: If this parameter is not specified, the object inherits the storage class of the bucket.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|-------------------|--------------------|--|
| Metadata | map[string]string | No | <p>Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. <p>Default value: None</p> |
| SourceFile | string | No | <p>Explanation: Source file path of the object</p> <p>Default value: None</p> |
| GrantReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|--|
| GrantReadAclId | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantWriteAclId | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can write the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantFullControlId | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------|--------------------|--|
| Expires | int64 | No | <p>Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p>Value range: 1 to $(2^{63} - 1)$, in days</p> <p>Default value: None</p> |

Table 9-14 AclType

| Constant | Default Value | Description |
|--------------------|-------------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadWrite | public-read-write | Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object. |

| Constant | Default Value | Description |
|-----------------------------|-----------------------------|---|
| AclPublicReadDelivered | public-read-delivered | <p>Public read on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadDelivered does not apply to objects.</p> |
| AclPublicReadWriteDelivered | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadWriteDelivered does not apply to objects.</p> |
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 9-15 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-16 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Table 9-17 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 9-18 List of returned results

| Parameter | Type | Description |
|-----------|------------------|--|
| output | *PutObjectOutput | Explanation: Returned results. For details, see Table 9-19 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-19 PutObjectOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| StorageClasses | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range:</p> <ul style="list-style-type: none"> • If the storage class is Standard, leave this parameter blank. • See Table 9-20. <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--|--|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-21. If SSE-KMS is used, see Table 9-22.</p> |

Table 9-20 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |
| StorageClassWarm | WARM | <p>OBS Infrequent Access</p> <p>Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.</p> |

| Constant | Default Value | Description |
|------------------|---------------|---|
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-21 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | Explanation: SSE-C used for encrypting objects Value range: AES256 , indicating objects are encrypted using SSE-C Default value: None |
| Key | string | Yes if used as a request parameter | Explanation: Key for encrypting the object when SSE-C is used Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw= . Default value: None |
| KeyMD5 | string | No if used as a request parameter | Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key. Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ== . Default value: None |

Table 9-22 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example uploads **localfile** to **examplebucket** as an object named **example/objectname**.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.PutFileInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to upload.
    input.Key = "example/objectname"
    // Specify a local file (localfile as an example).
    input.SourceFile = "localfile"
    // Perform the file-based upload.
    output, err := obsClient.PutFile(input)
    if err == nil {
        fmt.Printf("Put file(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s\n",
            output.StorageClass, output.ETag)
        return
    }
    fmt.Printf("Put file(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Uploading Objects - POST](#)
- [\(GitHub\) Sample Code for Object Upload](#)
- [OBS Error Codes](#)
- [FAQ for Object Upload Failure](#)

9.2.3 Uploading an Object - Append (SDK for Go)

Function

This API uploads a file or folder to an existing OBS bucket. You can upload texts, videos, or any other types of files.

The **AppendObject** operation adds data to the end of an object in a specified bucket. If there is no namesake object in the bucket, a new object is created.

Restrictions

- To upload an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- Uploaded objects are stored in buckets. Only the users who have the write permission can upload objects to buckets. The name of each object in a bucket must be unique.
- The last modification time of the object is updated each time an append upload is performed.
- If the server-side encryption (SSE-C) is used, the append upload is the same as the multipart initialization. The request header such as **x-obs-server-side-encryption** should be carried for each append upload.
- If the KMS server-side encryption (SSE-KMS) is used, the request header such as **x-obs-server-side-encryption** should be carried only when the object is uploaded for the first time and no object with the same name exists in the bucket.
- The length of each append upload cannot exceed the upper limit (5 GB) of the object length.
- The maximum number of append writes for each appendable object is 10,000.
- If the storage class is COLD (Archive), this API cannot be called.
- If cross-region replication is configured for a bucket, this API cannot be called.
- Object appending is not available for parallel file systems.

Method

```
func (obsClient ObsClient) AppendObject(input *AppendObjectInput) (output *AppendObjectOutput, err error)
```

Request Parameters

Table 9-23 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------------------|--------------------|---|
| input | * AppendObjectInput | Yes | Explanation: Request parameters for an append upload. For details, see Table 9-24 . |

Table 9-24 AppendObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Position | int64 | Yes | <p>Explanation: Position where the object data is appended</p> <p>Restrictions: For an object to be appended, the value of position must be set to 0 when the object is uploaded for the first time. For the second append upload, the value of position should be set to the value of NextAppendPosition returned in the response when the first upload is successful.</p> <p>Value range: 0 to $(2^{63} - 1)$, in bytes</p> <p>Default value: 0</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|-------------------------|--------------------|--|
| ContentMD5 | string | No | <p>Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p>Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: n58IG6hfM7vqI4K0vnWpog==</p> <p>Default value: None</p> |
| ACL | AclType | No | <p>Explanation: Pre-defined access policy that can be specified during object creation. For details about the ACL, see ACLs.</p> <p>Value range: See Table 9-25.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|---|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to an object anotherPage.html in the same bucket:</p> <p>WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/:</p> <p>WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value:</p> <p>None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--|--------------------|---|
| ContentType | string | No | <p>Explanation: MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| ContentLength | int64 | No | <p>Explanation: Size of the object to be uploaded</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The object size in a single upload ranges from 0 to 5 GB. To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.</p> |
| SseHeader | SseCHeader or SseKmsHeader | No | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-26. If SSE-KMS is used, see Table 9-27.</p> |
| StorageClass | StorageClassType | No | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-28.</p> <p>Default value: If you do not specify this header, the object inherits the storage class of the bucket.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------|--------------------|---|
| Metadata | map[string]string | No | <p>Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |
| Body | io.Reader | No | <p>Explanation: Data stream of the object to be uploaded</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The object size in a single upload ranges from 0 to 5 GB. • To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|--------|--------------------|---|
| GrantReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantReadAcpld | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantWriteAcpld | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can write the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|--|
| GrantFullControlId | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Expires | int64 | No | <p>Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p>Value range: 1 to $(2^{63} - 1)$, in days</p> <p>Default value: None</p> |

Table 9-25 AclType

| Constant | Default Value | Description |
|---------------|---------------|--|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |

| Constant | Default Value | Description |
|--|-----------------------------|---|
| <code>AclPublicReadWrite</code> | public-read-write | <p>Public read/write</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks.</p> <p>If it is granted on an object, anyone can read the content and metadata of the object.</p> |
| <code>AclPublicReadDelivered</code> | public-read-delivered | <p>Public read on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadDelivered</code> does not apply to objects.</p> |
| <code>AclPublicReadWriteDelivered</code> | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.</p> |
| <code>AclBucketOwnerFullControl</code> | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 9-26 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-27 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Table 9-28 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 9-29 List of returned results

| Parameter | Type | Description |
|-----------|---------------------|--|
| output | *AppendObjectOutput | Explanation: Returned results. For details, see Table 9-30 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-30 AppendObjectOutput

| Parameter | Type | Description |
|-----------------|---------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|--|--|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-31. If SSE-KMS is used, see Table 9-32.</p> |
| NextAppendPosition | int64 | <p>Explanation: Position from which the next append upload starts</p> <p>Restrictions: For an object to be appended, the value of position must be set to 0 when the object is uploaded for the first time. For the second append upload, the value of position should be set to the value of NextAppendPosition returned in the response when the first upload is successful.</p> <p>Value range: 0 to $(2^{63} - 1)$, in bytes</p> <p>Default value: 0</p> |

Table 9-31 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-32 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example appends content to `example/objectname` in `examplebucket`.

```
package main
import (
```



```
"fmt"
"os"
"strings"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    "
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.AppendObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to append content to.
    input.Key = "example/objectname"
    // Specify the position where content is appended. Position must be set to 0 for the first append upload.
    input.Position = 0
    // Specify data streams of the object to upload.
    input.Body = strings.NewReader("Hello OBS")
    // Append content to the object.
    output, err := obsClient.AppendObject(input)
    if err == nil {
        fmt.Printf("Append object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("ETag:%s, NextAppendPosition:%d\n", output.ETag, output.NextAppendPosition)
        return
    }
    fmt.Printf("Append objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Appending an Object](#)
- [\(GitHub\) Sample Code for Object Upload](#)
- [OBS Error Codes](#)
- [FAQ for Object Upload Failure](#)

9.2.4 Uploading an Object - Resumable (SDK for Go)

Function

The resumable upload is an encapsulated and enhanced version of the multipart upload used for dealing with possible upload failures of large files when the network connection is unstable or a program crashes. This API splits the file into multiple parts and uploads them individually. The upload result of each part is recorded in a checkpoint file in real time. A success message is returned only when all parts are uploaded. If any parts fail, an error message is returned telling you to call the API again to upload the failed parts. Since the checkpoint file contains the progress of each part, it saves you uploading all parts again in the event of an error.

You can call **ObsClient.UploadFile** to perform a resumable upload.

Restrictions

- To upload an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- The file uploaded by the resumable upload API must be larger than 100 KB in size.
- When the resumable upload API is used, this option should be enabled so that the progress of the last upload can be read for entering the process again.

Method

func (obsClient ObsClient) UploadFile(input *[UploadFileInput](#)) (output *[CompleteMultipartUploadOutput](#), err error)

Request Parameters

Table 9-33 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------------------|--------------------|---|
| input | * UploadFileInput | Yes | Explanation: Input parameters for a resumable upload. For details, see Table 9-34 . |

Table 9-34 UploadFileInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadFile | string | Yes | <p>Explanation: Local file path of the object to be uploaded</p> <p>Default value: None</p> |
| PartSize | int64 | Yes | <p>Explanation: Part size</p> <p>Value range: The value ranges from 100 KB to 5 GB, in bytes.</p> <p>Default value: 102400</p> |
| TaskNum | int | No | <p>Explanation: Maximum number of parts that can be uploaded concurrently</p> <p>Value range: An integer from 1 to 10000</p> <p>Default value: 1, indicating concurrent uploads are not used</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------|-------------------------|--------------------|--|
| EnableCheckpoint | bool | No | <p>Explanation: Whether to enable the resumable upload</p> <p>Value range: true: The resumable upload mode is enabled. false: The resumable upload mode is disabled.</p> <p>Default value: false</p> |
| CheckpointFile | string | No | <p>Explanation: File used to record the upload progress. This parameter is valid only in the resumable upload mode.</p> <p>Default value: If this parameter is left blank, the progress file will be in the same directory as the local file to be uploaded.</p> |
| ACL | AclType | No | <p>Explanation: Pre-defined access policy that can be specified during object creation. For details about the ACL, see ACLs.</p> <p>Value range: See Table 9-35.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|---|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |
| ContentType | string | No | <p>Explanation:</p> <p>MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value:</p> <p>If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|----------------------------|--------------------|--|
| SseHeader | SseCHeader or SseKmsHeader | No | Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-36 . If SSE-KMS is used, see Table 9-37 . |
| StorageClass | StorageClassType | No | Explanation: Object storage class Value range: See Table 9-38 . Default value: If this parameter is not specified, the object inherits the storage class of the bucket. |
| Metadata | map[string]string | No | Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: <ul style="list-style-type: none"> The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|--------|--------------------|---|
| Expires | int64 | No | <p>Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p>Value range: 1 to $(2^{63} - 1)$, in days</p> <p>Default value: None</p> |
| GrantReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantReadAcpId | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|--|
| GrantWriteAcpId | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can write the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantFullControlId | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| EncodingType | string | No | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 9-35 AclType

| Constant | Default Value | Description |
|------------------------|-----------------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadWrite | public-read-write | Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadDelivered | public-read-delivered | Public read on a bucket as well as objects in the bucket If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket. NOTE AclPublicReadDelivered does not apply to objects. |

| Constant | Default Value | Description |
|-----------------------------|-----------------------------|---|
| AclPublicReadWriteDelivered | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadWriteDelivered does not apply to objects.</p> |
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 9-36 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-37 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Table 9-38 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 9-39 List of returned results

| Parameter | Type | Description |
|-----------|---|--|
| output | * CompleteMultipartUploadOutput | Explanation: Returned results. For details, see Table 9-40 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-40 CompleteMultipartUploadOutput

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |
| ETag | string | Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None |

| Parameter | Type | Description |
|-----------|--------|---|
| Bucket | string | <p>Explanation: Bucket in which parts are assembled</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my.bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.bucket-. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Key | string | <p>Explanation: Object name obtained after part combination An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--|---|
| Location | string | <p>Explanation: URL of the generated object after part assembling Example: https://example-Bucket.obs.regions.myhuaweicloud.com/example-Object Default value: None</p> |
| VersionId | string | <p>Explanation: Version ID of the object obtained after part combination. If versioning is enabled for the bucket, the object version ID will be returned. Value range: The value must contain 32 characters. Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-41. If SSE-KMS is used, see Table 9-42.</p> |
| EncodingType | string | <p>Explanation: Encoding type for some elements in the response. If Key contains control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to url. Value range: url Default value: None. If you leave this parameter blank, encoding is not applied to elements.</p> |

Table 9-41 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-42 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example uploads **example/objectname** to **examplebucket** in a resumable upload.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.UploadFileInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to upload.
    input.Key = "example/objectname"
    // Specify your local file (/tmp/objectname as an example) to upload.
    input.UploadFile = "/tmp/objectname"
    // Specify whether to enable resumable upload (true as an example). The default value is false,
    indicating that resumable upload is disabled.
    input.EnableCheckpoint = true
    // Specify a part size, in bytes. This example sets each part to 9 MB.
    input.PartSize = 9 * 1024 * 1024
    // Specify the maximum number of parts that can be concurrently uploaded. 5 is used as an example.
    input.TaskNum = 5
    // Upload the object using resumable upload.
    output, err := obsClient.UploadFile(input)
    if err == nil {
        fmt.Printf("Upload file(%s) under the bucket(%s) successful!\n", input.UploadFile, input.Bucket)
        fmt.Printf("ETag:%s\n", output.ETag)
        return
    }
    fmt.Printf("Upload file(%s) under the bucket(%s) fail!\n", input.UploadFile, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [\(GitHub\) Sample Code for Object Upload](#)
- [OBS Error Codes](#)
- [FAQ for Object Upload Failure](#)

9.3 Object Download Overview (SDK for Go)

OBS Go SDK provides abundant APIs for object download in the following methods:

- [Downloading an Object - Streaming \(SDK for Go\)](#)
- [Downloading an Object - Range-Based \(SDK for Go\)](#)
- [Downloading an Object - Conditional \(SDK for Go\)](#)
- [Downloading an Object - Resumable \(SDK for Go\)](#)

9.3.1 Downloading an Object - Streaming (SDK for Go)

Function

This API downloads a file using streaming from OBS to your local computer.

Restrictions

- To download an object, you must be the bucket owner or have the required permission (**obs:object:GetObject** in IAM or **GetObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- Objects in the Archive storage class can be downloaded only when they are in the **Restored** status.

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput) (output *GetObjectOutput, err error)
```

Request Parameters

Table 9-43 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|----------------------------------|--------------------|---|
| input | * GetObjectInput | Yes | Explanation: Input parameters for a streaming download. For details, see Table 9-44 . |

Table 9-44 GetObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ResponseCacheControl | string | No | <p>Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| ResponseContentDisposition | string | No | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ResponseContentEncoding | string | No | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| ResponseContentLanguage | string | No | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ResponseContent-Type | string | No | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| ResponseExpires | string | No | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is obtained.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|---|
| ImageProcess | string | No | <p>Explanation: Image processing command or style. Example for resizing and rotating an image: image/resize,m_fixed,w_100,h_100/rotate,90</p> <p>Value range: Command format: image/commands Style format: style/style name For details about image processing parameters, see Processing Images.</p> <p>Default value: If no commands are entered, the original image is returned.</p> |
| RangeStart | int64 | No | <p>Explanation: Start position for object download</p> <p>Value range: 0 to the object length, in bytes.</p> <p>Default value: 0, indicating the download starts from the first byte of the object.</p> |
| RangeEnd | int64 | No | <p>Explanation: End position for object download</p> <p>Value range:</p> <ul style="list-style-type: none"> The value must be greater than that of RangeStart. The upper limit of the value is the object length minus 1, in bytes. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|-----------|--------------------|---|
| IfMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfNoneMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfModifiedSince | time.Time | No | <p>Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|------------------|--------------------|---|
| IfUnmodifiedSince | time.Time | No | <p>Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| SseHeader | SseHeader | No | <p>Explanation: Server-side decryption headers. For details, see Table 9-45.</p> <p>Restrictions: If the object uploaded to a server is encrypted with the key provided by the client, the key must also be provided in the message for downloading the object.</p> |

Table 9-45 SseCHheader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVAobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 9-46 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------------|---|
| output | * GetObjectOutput | <p>Explanation: Returned results. For details, see Table 9-47.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-47 GetObjectOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Body | io.ReadCloser | <p>Explanation: Object data stream to download</p> <p>Default value: None</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-48.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------|--------|---|
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| CacheControl | string | <p>Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|-----------|--|
| ContentDisposition | string | <p>Explanation: Content-Disposition header in the response</p> <p>Default value: None</p> |
| ContentEncoding | string | <p>Explanation: Content-Encoding header in the response</p> <p>Default value: None</p> |
| ContentLanguage | string | <p>Explanation: Content-Language header in the response</p> <p>Default value: None</p> |
| ContentType | string | <p>Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| Expires | string | <p>Explanation: Expires header in the response</p> <p>Default value: None</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: This parameter is only available for Archive objects.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------------------|--|--|
| Expiration | string | <p>Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-49. If SSE-KMS is used, see Table 9-50.</p> |
| WebsiteRedirectLocation | string | <p>Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|-------------------|---|
| Metadata | map[string]string | <p>Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-48 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-49 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-50 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example downloads **example/objectname** from **examplebucket** using streaming.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Download the object using streaming.
    output, err := obsClient.GetObject(input)
    if err == nil {
        // Close output.Body after using it, to avoid connection leakage.
        defer output.Body.Close()
        fmt.Printf("Get object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        // Read the object content.
        p := make([]byte, 1024)
        var readErr error
        var readCount int
        for {
            readCount, readErr = output.Body.Read(p)
            if readCount > 0 {
                fmt.Printf("%s", p[:readCount])
            }
            if readErr != nil {
                break
            }
        }
        return
    }
    fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

NOTICE

Readable streams obtained by **GetObjectOutput.Body** must be closed explicitly. Otherwise, resource leakage occurs.

Helpful Links

- [Downloading Objects](#)
- [\(GitHub\) Sample Code for Object Download](#)
- [OBS Error Codes](#)
- [FAQ for Object Download Failure](#)

9.3.2 Downloading an Object - Range-Based (SDK for Go)

Function

This API downloads partial data of an object by specifying a range. If the specified range is from 0 to 1,000, data at the 0th to the 1,000th bytes, 1,001 bytes in total, will be returned. If the specified range is invalid, the whole object data will be returned.

Restrictions

- To download an object, you must be the bucket owner or have the required permission (**obs:object:GetObject** in IAM or **GetObject** in a bucket policy).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- Objects in the Archive storage class can be downloaded only when they are in the **Restored** status.
- If the specified range is invalid (for example, the start or end position is set to a negative integer or the range is larger than the object length), the whole object data will be returned.
- This download method also can be used to concurrently download parts of a large object. For details about the sample code, see [concurrent_download_object_sample](#).

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput) (output *GetObjectOutput, err error)
```

Request Parameters

Table 9-51 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------|--------------------|---|
| input | *GetObjectInput | Yes | Explanation: Input parameters for a partial download. For details, see Table 9-52 . |

Table 9-52 GetObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ResponseCacheControl | string | No | <p>Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| ResponseContentDisposition | string | No | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ResponseContentEncoding | string | No | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| ResponseContentLanguage | string | No | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ResponseContent-Type | string | No | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| ResponseExpires | string | No | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID. Example: G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is obtained.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|---|
| ImageProcess | string | No | <p>Explanation: Image processing command or style. Example for resizing and rotating an image: image/resize,m_fixed,w_100,h_100/rotate,90</p> <p>Value range: Command format: image/commands Style format: style/style name For details about image processing parameters, see Processing Images.</p> <p>Default value: If no commands are entered, the original image is returned.</p> |
| RangeStart | int64 | No | <p>Explanation: Start position for object download</p> <p>Value range: 0 to the object length, in bytes.</p> <p>Default value: 0, indicating the download starts from the first byte of the object.</p> |
| RangeEnd | int64 | No | <p>Explanation: End position for object download</p> <p>Value range:</p> <ul style="list-style-type: none"> The value must be greater than that of RangeStart. The upper limit of the value is the object length minus 1, in bytes. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|-----------|--------------------|---|
| IfMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfNoneMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfModifiedSince | time.Time | No | <p>Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|------------------|--------------------|---|
| IfUnmodifiedSince | time.Time | No | <p>Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| SseHeader | SseHeader | No | <p>Explanation: Server-side decryption headers. For details, see Table 9-53.</p> <p>Restrictions: If the object uploaded to a server is encrypted with the key provided by the client, the key must also be provided in the message for downloading the object.</p> |

Table 9-53 SseCHheader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 9-54 List of returned results

| Parameter | Type | Description |
|-----------|-------------------------|---|
| output | *GetObjectOutput | <p>Explanation: Returned results. For details, see Table 9-55.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-55 GetObjectOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Body | io.ReadCloser | <p>Explanation: Object data stream to download</p> <p>Default value: None</p> |
| DeleteMarker | bool | <p>Explanation: Whether the deleted object is a delete marker</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. <p>Default value: false</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-56.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------|--------|---|
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> ● GET ● PUT ● HEAD ● POST ● DELETE <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| CacheControl | string | <p>Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|-----------|--|
| ContentDisposition | string | <p>Explanation: Content-Disposition header in the response</p> <p>Default value: None</p> |
| ContentEncoding | string | <p>Explanation: Content-Encoding header in the response</p> <p>Default value: None</p> |
| ContentLanguage | string | <p>Explanation: Content-Language header in the response</p> <p>Default value: None</p> |
| ContentType | string | <p>Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| Expires | string | <p>Explanation: Expires header in the response</p> <p>Default value: None</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: This parameter is only available for Archive objects.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------------------|---|--|
| Expiration | string | <p>Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</p> <p>Default value: None</p> |
| SseHeader | SseHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-57. If SSE-KMS is used, see Table 9-58.</p> |
| WebsiteRedirectLocation | string | <p>Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|-------------------|---|
| Metadata | map[string]string | <p>Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-56 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-57 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-58 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example downloads part (length range: 0-1,000 bytes) of **example/objectname** from **examplebucket**.

```
package main
import (
```



```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Specify a range.
    input.RangeStart = 0
    input.RangeEnd = 1000
    // Download the specified part of the object.
    output, err := obsClient.GetObject(input)
    if err == nil {
        // Close output.Body after using it, to avoid connection leakage.
        defer output.Body.Close()
        fmt.Printf("Get object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        // Read the object content.
        p := make([]byte, 1024)
        var readErr error
        var readCount int
        for {
            readCount, readErr = output.Body.Read(p)
            if readCount > 0 {
                fmt.Printf("%s", p[:readCount])
            }
            if readErr != nil {
                break
            }
        }
    }
    return
}
fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
    response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
    attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Downloading Objects](#)
- [\(GitHub\) Sample Code for Object Download](#)
- [OBS Error Codes](#)
- [FAQ for Object Download Failure](#)

9.3.3 Downloading an Object - Conditional (SDK for Go)

Function

When downloading an object, you can specify one or more conditions. Only when the conditions are met, the object will be downloaded. Otherwise, an error code will be returned and the download will fail.

Restrictions

- To download an object, you must be the bucket owner or have the required permission (**obs:object:GetObject** in IAM or **GetObject** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- Objects in the Archive storage class can be downloaded only when they are in the **Restored** status.

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput) (output *GetObjectOutput, err error)
```

Request Parameters

Table 9-59 List of request parameters

| Parameter | Type | Man dato ry (Yes /No) | Description |
|-----------|-----------------|-----------------------------------|---|
| input | *GetObjectInput | Yes | Explanation: Input parameters for a conditional download. For details, see Table 9-60 . |

Table 9-60 GetObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ResponseCacheControl | string | No | <p>Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| ResponseContentDisposition | string | No | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ResponseContentEncoding | string | No | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| ResponseContentLanguage | string | No | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ResponseContentType | string | No | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| ResponseExpires | string | No | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID. Example: G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is obtained.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|---|
| ImageProcess | string | No | <p>Explanation: Image processing command or style. Example for resizing and rotating an image: image/resize,m_fixed,w_100,h_100/rotate,90</p> <p>Value range: Command format: image/commands Style format: style/style name For details about image processing parameters, see Processing Images.</p> <p>Default value: If no commands are entered, the original image is returned.</p> |
| RangeStart | int64 | No | <p>Explanation: Start position for object download</p> <p>Value range: 0 to the object length, in bytes.</p> <p>Default value: 0, indicating the download starts from the first byte of the object.</p> |
| RangeEnd | int64 | No | <p>Explanation: End position for object download</p> <p>Value range:</p> <ul style="list-style-type: none"> The value must be greater than that of RangeStart. The upper limit of the value is the object length minus 1, in bytes. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|-----------|--------------------|---|
| IfMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfNoneMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfModifiedSince | time.Time | No | <p>Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|------------------|--------------------|---|
| IfUnmodifiedSince | time.Time | No | <p>Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| SseHeader | SseHeader | No | <p>Explanation: Server-side decryption headers. For details, see Table 9-61.</p> <p>Restrictions: If the object uploaded to a server is encrypted with the key provided by the client, the key must also be provided in the message for downloading the object.</p> |

Table 9-61 SseCHheader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 9-62 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------------|---|
| output | * GetObjectOutput | <p>Explanation: Returned results. For details, see Table 9-63.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-63 GetObjectOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Body | io.ReadCloser | <p>Explanation: Object data stream to download</p> <p>Default value: None</p> |
| DeleteMarker | bool | <p>Explanation: Whether the deleted object is a delete marker</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. <p>Default value: false</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-64.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------|--------|---|
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| CacheControl | string | <p>Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|-----------|--|
| ContentDisposition | string | <p>Explanation: Content-Disposition header in the response</p> <p>Default value: None</p> |
| ContentEncoding | string | <p>Explanation: Content-Encoding header in the response</p> <p>Default value: None</p> |
| ContentLanguage | string | <p>Explanation: Content-Language header in the response</p> <p>Default value: None</p> |
| ContentType | string | <p>Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| Expires | string | <p>Explanation: Expires header in the response</p> <p>Default value: None</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: This parameter is only available for Archive objects.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------------------|---|--|
| Expiration | string | <p>Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</p> <p>Default value: None</p> |
| SseHeader | SseHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-65. If SSE-KMS is used, see Table 9-66.</p> |
| WebsiteRedirectLocation | string | <p>Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|-------------------|---|
| Metadata | map[string]string | <p>Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-64 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-65 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-66 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example downloads **example/objectname** from **examplebucket** based on a specific condition. In this example, **example/objectname** can be downloaded only when it is modified after 00:00:00 on December 31, 2022.

```
package main
import (
    "fmt"
    "os"
    "time"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    // coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    // to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    // import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    // with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    // method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Define the IfModifiedSince time.
    layout := "2006/01/02 15:04:05"
    t, err := time.Parse(layout, "2022/12/31 00:00:00")
    if err != nil {
        fmt.Printf("Parse time error, errMsg: %s", err.Error())
    }
    // The object can be downloaded only when it is modified after the specified time. Otherwise, a 304
    // response without a message subject is returned.
    input.IfModifiedSince = t
    // Download the object.
    output, err := obsClient.GetObject(input)
    if err == nil {
        // Close output.Body to avoid connection leakage.
        defer output.Body.Close()
        fmt.Printf("Get object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        return
    }
    fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Downloading Objects](#)
- [\(GitHub\) Sample Code for Object Download](#)

- [OBS Error Codes](#)
- [FAQ for Object Download Failure](#)

9.3.4 Downloading an Object - Resumable (SDK for Go)

Function

Downloading large files often fails due to poor network conditions or program breakdowns. It is a waste of resources to restart the download process upon a download failure, and the restarted download process may still suffer from the unstable network. To resolve such issues, the resumable download API splits the file to be downloaded into multiple parts and downloads them separately. The download result of each part is recorded in a checkpoint file in real time. Only when all parts are successfully downloaded, the result indicating a successful download is returned. Otherwise, an error message is returned to remind you of calling the API again for re-downloading. Based on the download status of each part recorded in the checkpoint file, the re-downloading will download the parts failed to be downloaded previously, instead of downloading all parts. By virtue of this, resources are saved and efficiency is improved.

This API calls **ObsClient.DownloadFile** to perform a resumable download.

Restrictions

- To download an object, you must be the bucket owner or have the required permission (**obs:object:GetObject** in IAM or **GetObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- The resumable download API, which is implemented based on [partial download](#), is an encapsulated and enhanced version of partial download.
- This API saves resources and improves efficiency upon the re-download, and speeds up the download process by concurrently downloading parts. Because this API is invisible to users, users are unaware of internal service details, such as the creation and deletion of checkpoint files, division of objects, and concurrent download of parts.
- **EnableCheckpoint**: The default value is **False**, indicating that resumable download is disabled. In this case, the resumable download API is a simple encapsulation of the partial download API, and no checkpoint file will be generated.
- **CheckpointFile**: This parameter is effective only when **EnableCheckpoint** is **True**.

Method

```
func (obsClient ObsClient) DownloadFile(input *DownloadFileInput) (output *GetObjectMetadataOutput, err error)
```

Request Parameters

Table 9-67 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------------------|--------------------|---|
| input | * DownloadFileInput | Yes | Explanation: Input parameters for a resumable download. For details, see Table 9-68 . |

Table 9-68 DownloadFileInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is obtained.</p> |
| DownloadFile | string | No | <p>Explanation: Full path of the local directory to which the object is downloaded.</p> <p>Default value: If the parameter is left blank, the downloaded object is saved in the directory where the program is executed.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------|--------|--------------------|---|
| PartSize | int64 | No | <p>Explanation: Part size</p> <p>Value range: The value must be greater than 0 but less than the object size, in bytes.</p> <p>Default value: 9437184, indicating 9 MB for each part</p> |
| TaskNum | int | No | <p>Explanation: Maximum number of parts that can be downloaded concurrently</p> <p>Value range: The value must be greater than 0 but not exceed the result of the file size divided by the part size (rounded up).</p> <p>Default value: 1, indicating concurrent downloads are not used.</p> |
| EnableCheckpoint | bool | No | <p>Explanation: Whether to enable the resumable download</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: The resumable download mode is enabled. • false: The resumable download mode is disabled. <p>Default value: false</p> |
| CheckpointFile | string | No | <p>Explanation: File used to record the download progress. This parameter is valid only in a resumable download.</p> <p>Default value: If the parameter is left blank, the file is in the same local directory as the downloaded object.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|---------------------------|--------------------|---|
| SseHeader | SseHeader | No | Explanation: Server-side decryption headers. For details, see Table 9-69 . |
| IfMatch | string | No | Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None |
| IfNoneMatch | string | No | Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None |
| IfModifiedSince | time.Time | No | Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned. Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z . Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|-----------|--------------------|---|
| IfUnmodifiedSince | time.Time | No | <p>Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

Table 9-69 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 9-70 List of returned results

| Parameter | Type | Description |
|-----------|--|---|
| output | *GetObjectMetadataOutput | <p>Explanation: Returned results. For details, see Table 9-71.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-71 GetObjectMetadataOutput

| Parameter | Type | Description |
|------------|------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------------|----------------------------------|---|
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-72.</p> <p>Default value: None</p> |
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--------|---|
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|-----------|--|
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| ContentType | string | <p>Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: This parameter is only available for Archive objects.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------------------|--|--|
| Expiration | string | <p>Explanation: Expiration details of the object. Example: <code>"expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</code></p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-73. If SSE-KMS is used, see Table 9-74.</p> |
| WebsiteRedirectLocation | string | <p>Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|-------------------|---|
| Metadata | map[string]string | <p>Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-72 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-73 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-74 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example downloads **example/objectname** from **examplebucket** in a resumable download.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.DownloadFileInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Specify a local full path (/tmp/objectname as an example) for the specified object. If the path is left
    blank, the current working directory will be used by default.
    input.DownloadFile = "/tmp/objectname"
    // Specify whether to enable resumable download. Value true is used as an example. The default value is
false, indicating that resumable download is disabled.
    input.EnableCheckpoint = true
    // Specify a part size, in bytes. This example sets each part to 9 MB.
    input.PartSize = 9 * 1024 * 1024
    // Specify the maximum number of parts that can be concurrently downloaded. 5 is used as an example.
    input.TaskNum = 5
    // Download the object using resumable download.
    output, err := obsClient.DownloadFile(input)
    if err == nil {
        fmt.Printf("Download file(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        return
    }
    fmt.Printf("Download file(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Downloading Objects](#)
- [\(GitHub\) Sample Code for Object Download](#)
- [OBS Error Codes](#)
- [FAQ for Object Download Failure](#)

9.4 Creating a Folder (SDK for Go)

Function

This API creates a folder in a bucket created to manage data in OBS.

OBS does not involve folders like in a file system. All elements in buckets are objects. To create a folder in OBS is essentially to create an object whose size is 0 and whose name ends with a slash (/). Such objects have no difference from other objects and can be downloaded and deleted, except that they are displayed as folders in OBS Console.

Restrictions

- To create a folder, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- To create a folder in OBS is essentially to create an object whose size is 0 and whose name ends with a slash (/).
- To create a multi-level folder, you only need to create the folder with the last level. For example, if you want to create a folder named **src1/src2/src3/**, create it directly, no matter whether the **src1/** and **src1/src2/** folders exist.

Method

```
func (obsClient ObsClient) PutObject(input *PutObjectInput) (output *PutObjectOutput, err error)
```

Request Parameters

Table 9-75 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------|--------------------|--|
| input | *PutObjectInput | Yes | Explanation: Input parameters for creating a folder. For details, see Table 9-76 . |

Table 9-76 PutObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.) - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Man dato ry (Yes /No) | Description |
|------------|----------------|-----------------------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ContentMD5 | string | No | <p>Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p>Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: n58IG6hfM7vqI4K0vnWpog==</p> <p>Default value: None</p> |
| ACL | AclType | No | <p>Explanation: Pre-defined access policy that can be specified during object creation. For details about the ACL, see ACLs.</p> <p>Value range: See Table 9-3.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to an object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|--|--------------------|--|
| ContentType | string | No | <p>Explanation: Multipurpose Internet Mail Extension (MIME) type of the object to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display object files.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| ContentLength | int64 | No | <p>Explanation: Size of the object to be uploaded</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The object size in a single upload ranges from 0 to 5 GB. To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.</p> |
| SseHeader | SseCHeader or SseKmsHeader | No | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-4. If SSE-KMS is used, see Table 9-5.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|----------------------------------|--------------------|--|
| StorageClass | StorageClassType | No | <p>Explanation: Object storage class</p> <p>Value range: For available storage classes, see Table 9-6.</p> <p>Default value: If this parameter is not specified, the object inherits the storage class of the bucket.</p> |
| Metadata | map[string]string | No | <p>Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|-----------|--------------------|---|
| Body | io.Reader | No | <p>Explanation: Data stream of the object to be uploaded</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The object size in a single upload ranges from 0 to 5 GB. To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: None</p> |
| GrantReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantReadAcpld | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|--|
| GrantWriteAcpld | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can write the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantFullControlld | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| Expires | int64 | No | <p>Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p>Value range: A positive integer, in days</p> <p>Default value: None</p> |

Table 9-77 AclType

| Constant | Default Value | Description |
|------------------------|-----------------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |
| AclPublicRead | public-read | Public read and private write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadWrite | public-read-write | Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object. |
| AclPublicReadDelivered | public-read-delivered | Public read on a bucket as well as objects in the bucket If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket. NOTE AclPublicReadDelivered does not apply to objects. |

| Constant | Default Value | Description |
|-----------------------------|-----------------------------|---|
| AclPublicReadWriteDelivered | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE AclPublicReadWriteDelivered does not apply to objects.</p> |
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 9-78 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-79 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Table 9-80 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 9-81 List of returned results

| Parameter | Type | Description |
|-----------|------------------|--|
| output | *PutObjectOutput | Explanation: Returned results. For details, see Table 9-82 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-82 PutObjectOutput

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|-----------------|---|---|
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| StorageClass | StorageClassType | <p>Explanation: See Table 9-83.</p> <p>Value range: If the storage class is Standard, leave this parameter blank.</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-84. If SSE-KMS is used, see Table 9-85.</p> |

Table 9-83 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-84 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | Explanation: SSE-C used for encrypting objects Value range: AES256 , indicating objects are encrypted using SSE-C Default value: None |
| Key | string | Yes if used as a request parameter | Explanation: Key for encrypting the object when SSE-C is used Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=. Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-85 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example creates a folder in **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways.
```

```
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.PutObjectInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify a folder (parent_directory as an example).
input.Key = "parent_directory/"
// Upload your local file using streaming.
output, err := obsClient.PutObject(input)
if err == nil {
    fmt.Printf("Put object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
    fmt.Printf("RequestId:%s, ETag:%s\n",
        output.RequestId, output.ETag)
    return
}
fmt.Printf("Put object(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [OBS Error Codes](#)

9.5 Copying an Object (SDK for Go)

Function

This API copies an object stored in OBS to another path, with a copy created during the process. You can create a copy of an object up to 5 GB in a single operation.

Restrictions

- To copy an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- The object copy request carries the information about the source bucket and object to be copied in the header field. The message body cannot be carried.
- The target object size ranges from 0 to 5 GB. If the source object size exceeds 5 GB, you can only copy some objects using [Multipart Uploads \(SDK for Go\)](#).

Method

```
func (obsClient ObsClient) CopyObject(input *CopyObjectInput) (output *CopyObjectOutput, err error)
```

Request Parameters

Table 9-86 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------|--------------------|--|
| input | *CopyObjectInput | Yes | Explanation: Input parameters for copying an object. For details, see Table 9-87 . |

Table 9-87 CopyObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Target object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------|--------|--------------------|---|
| CopySourceBucket | string | Yes | <p>Explanation: Source bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------------|-------------------------|--------------------|--|
| CopySourceKey | string | Yes | <p>Explanation: Source object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| CopySourceVersionId | string | No | <p>Explanation: Version ID of the source object, for example, G001117FCE89978B0000401205D5DC9A</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: If this parameter is left blank, the latest version of the source object is copied.</p> |
| ACL | AclType | No | <p>Explanation: ACL that can be pre-defined during the object copy. For details about the ACL, see ACLs.</p> <p>Value range: See Table 9-88.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------------------|-----------------------|--------------------|---|
| MetadataDirective | MetadataDirectiveType | No | <p>Explanation: Policy for copying the source object's properties</p> <p>Value range: See Table 9-89.</p> <p>Default value: None</p> |
| CopySourceIfMatch | string | No | <p>Explanation: Copies the source object if its ETag is the same as the one specified by this parameter; otherwise, an error is returned.</p> <p>Default value: None</p> |
| CopySourceIfNoneMatch | string | No | <p>Explanation: Copies the source object if its ETag is different from the one specified by this parameter; otherwise, an error is returned.</p> <p>Default value: None</p> |
| CopySourceIfUnmodifiedSince | time.Time | No | <p>Explanation: Copies the source object if it has not been modified since the specified time; otherwise, an exception is thrown.</p> <p>Default value: None</p> |
| CopySourceIfModifiedSince | time.Time | No | <p>Explanation: Copies the source object if it has been modified since the specified time; otherwise, an exception is thrown.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--|--------------------|---|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | No | <p>Explanation:</p> <p>Server-side header used for encrypting the target object. If SSE-C is used, see SseCHeader. If SSE-KMS is used, see SseKmsHeader.</p> |
| SourceSseHeader | SseCHeader | No | <p>Explanation:</p> <p>Server-side header used for decrypting the source object. For details, see SseCHeader.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|---|
| CacheControl | string | No | Explanation: Cache-Control is rewritten in the response. Default value: None |
| ContentDisposition | string | No | Explanation: Rewrites the Content-Disposition header in the response. Default value: None |
| ContentEncoding | string | No | Explanation: Rewrites the Content-Encoding header in the response. Default value: None |
| ContentLanguage | string | No | Explanation: Content-Language is rewritten in the response. Default value: None |
| ContentType | string | No | Explanation: Content-Type is rewritten in the response. Default value: None |
| Expires | string | No | Explanation: Expires is rewritten in the response. Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|----------------------------------|--------------------|--|
| StorageClass | StorageClassType | No | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-92.</p> <p>Default value: None. If this parameter is not specified, the storage class of the bucket is used as that of the object.</p> |
| Metadata | map[string]string | No | <p>Explanation: Custom metadata of the target object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|--------|--------------------|---|
| GrantReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the object to copy and obtain its metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantReadAcpld | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the object to copy.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantWriteAcpld | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can write the ACL of the object to copy.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------------|--------|--------------------|--|
| GrantFullControllId | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the object to copy, obtain its metadata, and obtain and write its ACL.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| SuccessActionRedirect | string | No | <p>Explanation: Address (URL) to which a successfully answered request is redirected</p> <p>If the value is valid and the request is successful, OBS returns status code 303. Location contains SuccessActionRedirect as well as the bucket name, object name, and object ETag.</p> <p>If the value is invalid, OBS ignores this parameter. In such case, the Location header is the object address, and OBS returns a status code based on whether the operation succeeds or fails.</p> <p>Default value: None</p> |

Table 9-88 AclType

| Constant | Default Value | Description |
|------------|---------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |

| Constant | Default Value | Description |
|--|-----------------------------|---|
| <code>AclPublicRead</code> | public-read | <p>Public read and private write</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket.</p> <p>If it is granted on an object, anyone can read the content and metadata of the object.</p> |
| <code>AclPublicReadWrite</code> | public-read-write | <p>Public read/write</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks.</p> <p>If it is granted on an object, anyone can read the content and metadata of the object.</p> |
| <code>AclPublicReadDelivered</code> | public-read-delivered | <p>Public read on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadDelivered</code> does not apply to objects.</p> |
| <code>AclPublicReadWriteDelivered</code> | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.</p> |

| Constant | Default Value | Description |
|---------------------------|---------------------------|--|
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 9-89 MetadataDirectiveType

| Constant | Default Value | Description |
|-----------------|---------------|--|
| CopyMetadata | COPY | When copying an object, the object's properties are also copied. |
| ReplaceMetadata | REPLACE | When copying an object, the object's properties are replaced. |

Table 9-90 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-91 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Table 9-92 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 9-93 List of returned results

| Parameter | Type | Description |
|-----------|-------------------|--|
| output | *CopyObjectOutput | Explanation: Messages returned by the API See Table 9-94 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-94 CopyObjectOutput

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|---------------------|---------------------|--|
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the target object</p> <p>Value range: UTC time</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: ETag of the target object. Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| CopySourceVersionId | string | <p>Explanation: Version ID of the source object</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|---|---|
| VersionId | string | <p>Explanation: Version ID of the target object</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-95. If SSE-KMS is used, see Table 9-96.</p> |

Table 9-95 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-96 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example copies an object from one bucket to another.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
```

```
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.CopyObjectInput{}
// Specify the source bucket name.
input.Bucket = "examplebucket"
// Specify a source object (example/objectname as an example).
input.Key = "example/objectname"
// Specify a source bucket (sourcebucketname as an example).
input.CopySourceBucket = "sourcebucketname"
// Specify an object to copy (sourceobjectkey as an example) in the source bucket.
input.CopySourceKey = "sourceobjectkey"
// Copy the object.
output, err := obsClient.CopyObject(input)
if err == nil {
    fmt.Printf("Copy part(bucket:%s, object: %s) successful from bucket:%s's object: %s!\n",
        input.Bucket, input.Key, input.CopySourceBucket, input.CopySourceKey)
    fmt.Printf("ETag:%s, LastModified:%s\n", output.ETag, output.LastModified)
    return
}
fmt.Printf("Copy part(bucket:%s, object: %s) fail from bucket:%s's object: %s!\n",
    input.Bucket, input.Key, input.CopySourceBucket, input.CopySourceKey)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Copying Objects](#)
- [\(GitHub\) Sample Code for Object Copy](#)
- [OBS Error Codes](#)
- [FAQ for Object Copy](#)

9.6 Deleting an Object (SDK for Go)

Function

This API deletes an object in the specified bucket to save space and costs.

Restrictions

- To delete an object, you must be the bucket owner or have the required permission (**obs:object:DeleteObject** in IAM or **DeleteObject** in a bucket policy).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

- If versioning is not enabled for a bucket, deleted objects cannot be recovered.

Method

```
func (obsClient ObsClient) DeleteObject(input *DeleteObjectInput) (output *DeleteObjectOutput, err error)
```

Request Parameters

Table 9-97 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------|--------------------|---|
| input | *DeleteObjectInput | Yes | Request parameters for deleting an object |

Table 9-98 DeleteObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Target object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is deleted.</p> |

Responses

Table 9-99 List of returned results

| Parameter | Type | Description |
|-----------|---------------------|--|
| output | *DeleteObjectOutput | <p>Explanation: Returned results. For details, see Table 9-100.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-100 DeleteObjectOutput

| Parameter | Type | Description |
|-----------------|---------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| DeleteMarker | bool | <p>Explanation: Whether the deleted object is a delete marker</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. <p>Default value: false</p> |
| VersionId | string | <p>Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is deleted.</p> |

Code Examples

This example deletes object **example/objectname** from bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyId")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.DeleteObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to delete.
    input.Key = "example/objectname"
    // Delete the object.
    output, err := obsClient.DeleteObject(input)
    if err == nil {
        fmt.Printf("Delete object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Delete object(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Deleting an Object](#)
- [\(GitHub\) Sample Code for Object Deletion](#)
- [OBS Error Codes](#)

9.7 Batch Deleting Objects (SDK for Go)

Function

This API deletes objects in batches from a specific bucket. Deleted objects cannot be recovered.

In a batch delete operation, OBS concurrently deletes the specified objects and returns the deletion result of each object.

Restrictions

- To delete objects in a batch, you must be the bucket owner or have the required permission (**obs:object:DeleteObject** in IAM or **DeleteObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- If versioning is not enabled for a bucket, deleted objects cannot be recovered.
- A maximum of 1,000 objects can be deleted at a time. If you send a request for deleting more than 1,000 objects, OBS returns an error message.
- After concurrent tasks are assigned, OBS may encounter an internal error during cyclic deletion of multiple objects. In that case, the metadata still exists when the object index data is deleted, which means data inconsistency.

Method

```
func (obsClient ObsClient) DeleteObjects(input *DeleteObjectsInput) (output *DeleteObjectsOutput, err error)
```

Request Parameters

Table 9-101 List of request parameters

| Parameter | Type | Man dato ry (Yes/ No) | Description |
|-----------|--------------------------|-----------------------------------|--|
| input | *DeleteObjectsIn- put | Yes | Explanation: Input parameters for batch deleting objects. For details, see Table 9-102 . |

Table 9-102 DeleteObjectsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|------------------------------------|--------------------|---|
| Quiet | bool | No | <p>Explanation: Response to the request for deleting objects in a batch</p> <p>Value range:</p> <ul style="list-style-type: none"> false: The detailed mode. Results of both successful and failed deletions are returned. true: The quiet mode. Only results of failed deletions are returned. <p>Default value: false</p> |
| Objects | [] Object ToDelete | Yes | <p>Explanation: List of objects to be deleted. For details, see Table 9-103.</p> |
| EncodingType | string | No | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 9-103 ObjectToDelete

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Key | string | Yes | <p>Explanation: Object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is deleted.</p> |

Responses

Table 9-104 List of returned results

| Parameter | Type | Description |
|-----------|----------------------|--|
| output | *DeleteObjectsOutput | <p>Explanation: Returned results. For details, see Table 9-105.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-105 DeleteObjectsOutput

| Parameter | Type | Description |
|-----------------|----------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string] []string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| DeletedIds | []Deleted | <p>Explanation: List of objects that are successfully deleted. For details, see Table 9-106.</p> |
| Errors | []Error | <p>Explanation: List of objects that fail to be deleted. For details, see Table 9-107.</p> |
| EncodingType | string | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 9-106 Deleted

| Parameter | Type | Description |
|--------------|--------|--|
| Key | string | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is deleted.</p> |
| DeleteMarker | bool | <p>Explanation: Whether the deleted object is a delete marker</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. <p>Default value: false</p> |

| Parameter | Type | Description |
|-----------------------|--------|--|
| DeleteMarkerVersionId | string | <p>Explanation: Version ID of the delete marker to create or delete.</p> <p>If the request either creates or deletes a delete marker, OBS returns this element in response with the version ID of the delete marker. This element will be returned in either of the following cases:</p> <ul style="list-style-type: none"> You send a delete request with no version ID specified. In this case, OBS creates the delete marker and returns its version ID in the response. You send a delete request with an object name and a version ID specified, but this version ID represents a delete marker. In this case, OBS deletes the delete marker and returns its version ID in the response. <p>Default value: None</p> |

Table 9-107 Error

| Parameter | Type | Description |
|-----------|--------|--|
| Key | string | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| VersionId | string | Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is deleted. |
| Code | string | Explanation: Error code of the deletion failure. For details, see OBS Error Codes . |
| Message | string | Explanation: Error message of the deletion failure. For details, see OBS Error Codes . |

Code Examples

This example deletes objects **key1**, **key2**, and **key3** from bucket **examplebucket** in a batch.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.DeleteObjectsInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the list of objects to delete.
    var objects [3]obs.ObjectToDelete
    objects[0] = obs.ObjectToDelete{Key: "key1", VersionId: ""}
```



```
objects[1] = obs.ObjectToDelete{Key: "key2", VersionId: ""}  
objects[2] = obs.ObjectToDelete{Key: "key3", VersionId: ""}  
input.Objects = objects[:]  
// Batch delete the objects.  
output, err := obsClient.DeleteObjects(input)  
if err == nil {  
    fmt.Printf("Delete objects under the bucket(%s) successful!\n", input.Bucket)  
    for index, deleted := range output.Deleted {  
        fmt.Printf("Deleted[%d]-Key:%s, VersionId:%s\n", index, deleted.Key, deleted.VersionId)  
    }  
    for index, err := range output.Errors {  
        fmt.Printf("Error[%d]-Key:%s, Code:%s\n", index, err.Key, err.Code)  
    }  
    return  
}  
fmt.Printf("Delete objects under the bucket(%s) fail!\n", input.Bucket)  
if obsError, ok := err.(obs.ObsError); ok {  
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error  
response.")  
    fmt.Println(obsError.Error())  
} else {  
    fmt.Println("An Exception was found, which means the client encountered an internal problem when  
attempting to communicate with OBS, for example, the client was unable to access the network.")  
    fmt.Println(err)  
}
```

Helpful Links

- [Deleting Objects](#)
- [\(GitHub\) Sample Code for Object Batch Deletion](#)
- [OBS Error Codes](#)

9.8 Configuring Object Metadata (SDK for Go)

Function

Object metadata is a set of name-value pairs that describe the object and is used for object management.

Currently, only the metadata defined by the system is supported.

There are two kinds of metadata: system-controlled metadata and user-controlled metadata. For example, metadata such as **Last-Modified** is controlled by the system and cannot be modified. You can modify the metadata such as **ContentLanguage** through the API.

This API sends a HEAD request to configure the metadata of an object in a specified bucket.

Restrictions

- To configure object metadata, you must be the bucket owner or have the required permission (**obs:object:ModifyObjectMeta** in IAM or **ModifyObjectMeta** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

- When versioning is enabled for a bucket, you can set metadata for objects of the latest version, but cannot set metadata for objects of historical versions.
- You cannot set metadata for Archive objects.

Method

```
func (obsClient ObsClient) SetObjectMetadata(input *SetObjectMetadataInput)
(output *SetObjectMetadataOutput, err error)
```

Request Parameters

Table 9-108 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------|--------------------|---|
| input | *SetObjectMetadataInput | Yes | Explanation: Input parameters for configuring object metadata. For details, see Table 9-109 . |

Table 9-109 SetObjectMetadataInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| CacheControl | string | No | <p>Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p>Default value: None</p> |
| ContentDisposition | string | No | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|--------|--------------------|---|
| ContentEncoding | string | No | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded.</p> <p>Default value: None</p> |
| ContentLanguage | string | No | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ContentType | string | No | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| Expires | string | No | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|----------------------------------|--------------------|---|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |
| StorageClass | StorageClassType | No | <p>Explanation:</p> <p>Storage class of an object.</p> <p>Value range: See Table 9-110.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------|--------------------|--|
| Metadata | map[string]string | No | <p>Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-110 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 9-111 List of returned results

| Parameter | Type | Description |
|-----------|--------------------------|---|
| output | *SetObjectMetadataOutput | Explanation: Returned results. For details, see Table 9-112 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-112 SetObjectMetadataOutput

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|--------------------|--------------------------------|---|
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| MetadataDirective | Metadata Directive Type | Explanation: Policy for copying the source object's properties Value range: See Table 9-113 . Default value: None |
| CacheControl | string | Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded. Default value: None |
| ContentDisposition | string | Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None |
| ContentEncoding | string | Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded. Default value: None |
| ContentLanguage | string | Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded. Default value: None |

| Parameter | Type | Description |
|-------------------------|--------|--|
| ContentType | string | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| Expires | string | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| WebsiteRedirectLocation | string | <p>Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|----------------------------------|--|
| StorageClass | StorageClassType | <p>Explanation: Object storage class. If you do not specify this header, the object inherits the storage class of the bucket.</p> <p>Value range: See Table 9-114.</p> <p>Default value: None</p> |
| Metadata | map[string]string | <p>Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-113 MetadataDirectiveType

| Constant | Default Value | Description |
|-----------------|---------------|--|
| CopyMetadata | COPY | When copying an object, the object's properties are also copied. |
| ReplaceMetadata | REPLACE | When copying an object, the object's properties are replaced. |

Table 9-114 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Code Examples

This example configures metadata for object **example/objectname** in bucket **examplebucket**. The MIME type of the object is set to image/jpeg, the storage class is set to Archive, and custom metadata is also configured for the object.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint /*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.SetObjectMetadataInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object (example/objectname as an example).
    input.Key = "example/objectname"
```

```
// Specify a MIME type (image/jpeg as an example) for the object.
input.ContentType = "image/jpeg"
// Specify a storage class (obs.StorageClassCold as an example) for the object.
input.StorageClass = obs.StorageClassCold
// Specify custom metadata.
input.Metadata = map[string]string{"property1": "property-value1", "property2": "property-value2"}
// Configure metadata for the object.
output, err := obsClient.SetObjectMetadata(input)
if err == nil {
    fmt.Printf("Set Object(%s)'s metadata successful with bucket(%s)!\n", input.Key, input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set Object(%s)'s metadata fail with bucket(%s)!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Modifying Object Metadata](#)
- [\(GitHub\) Sample Code for Configuring Object Metadata](#)
- [OBS Error Codes](#)

9.9 Obtaining Object Metadata (SDK for Go)

Function

Object metadata is a set of name-value pairs that describe the object and is used for object management.

Currently, only the metadata defined by the system is supported. There are two kinds of metadata: system-controlled metadata and user-controlled metadata.

You can use this API to send a HEAD request to the object of a specified bucket to obtain its metadata.

Restrictions

- To obtain object metadata, you must be the bucket owner or have the required permission (**obs:object:GetObject** in IAM or **GetObject** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- Users with the read permission on an object can perform the HEAD operation to obtain the object metadata. The object metadata is included in the response.

Method

```
func (obsClient ObsClient) GetObjectMetadata(input *GetObjectMetadataInput)  
(output *GetObjectMetadataOutput, err error)
```

Request Parameters

Table 9-115 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------|--------------------|---|
| input | *GetObjectMetadataInput | Yes | Explanation: Input parameters for obtaining object metadata. For details, see Table 9-116 . |

Table 9-116 GetObjectMetadataInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseCHeader | No | <p>Explanation: Server-side decryption headers. For details, see Table 9-117.</p> |

Table 9-117 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 9-118 List of returned results

| Parameter | Type | Description |
|-----------|---------------------------------|--|
| output | *GetObjectMetadataOutput | <p>Explanation: Returned results. For details, see Table 9-119.</p> |

| Parameter | Type | Description |
|-----------|-------|---|
| err | error | Explanation: Error messages returned by the API |

Table 9-119 GetObjectMetadataOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| StorageClass | StorageClassType | Explanation: Object storage class. If you do not specify this header, the object inherits the storage class of the bucket. Value range: See Table 9-120 . Default value: None |

| Parameter | Type | Description |
|-------------|--------|---|
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> ● GET ● PUT ● HEAD ● POST ● DELETE <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: 0 to $(2^{63} - 1)$, in bytes</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|-----------|--|
| ContentType | string | <p>Explanation: MIME type of the object file. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: ETag of the object Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|------------|---|---|
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: This parameter is only available for Archive objects.</p> <p>Default value: None</p> |
| Expiration | string | <p>Explanation: Expiration details of the object. Example: "expiry-date="Mon, 11 Sep 2023 00:00:00 GMT"</p> <p>Default value: None</p> |
| SseHeader | SseHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 9-121. If SSE-KMS is used, see Table 9-122.</p> |

| Parameter | Type | Description |
|-------------------------|--------|--|
| WebsiteRedirectLocation | string | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value:</p> <p>None</p> |

| Parameter | Type | Description |
|-----------|-------------------|---|
| Metadata | map[string]string | <p>Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. <p>Default value: None</p> |

Table 9-120 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |
| StorageClassWarm | WARM | <p>OBS Infrequent Access</p> <p>Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.</p> |

| Constant | Default Value | Description |
|------------------|---------------|---|
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-121 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-122 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | Explanation: SSE-KMS used for encrypting objects Value range: kms , indicating objects are encrypted using SSE-KMS Default value: None |
| Key | string | No if used as a request parameter | Explanation: ID of the KMS master key when SSE-KMS is used Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i> In the preceding formats: <ul style="list-style-type: none"><i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints.<i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID?<i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. Default value: <ul style="list-style-type: none">If this parameter is not specified, the default master key will be used.If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example returns the metadata of object **example/objectname**.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectMetadataInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object (example/objectname as an example).
    input.Key = "example/objectname"
    // Obtain the custom metadata of the object.
    output, err := obsClient.GetObjectMetadata(input)
    if err == nil {
        fmt.Printf("Get object(%s)'s metadata successful with bucket(%s)!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        // Obtain the custom metadata of the object.
        fmt.Printf("Metadata:%v\n", output.Metadata)
        return
    }
    fmt.Printf("Get object(%s)'s metadata fail with bucket(%s)!\n", input.Key, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
}
```

Helpful Links

- [Querying Object Metadata](#)
- [\(GitHub\) Sample Code for Obtaining Object Metadata](#)
- [OBS Error Codes](#)

9.10 Configuring an Object ACL (SDK for Go)

Function

OBS supports the control of access permission for objects. By default, only the object creators have the read and write permissions on the object. You can set other access control policies for objects. For example, if an object is configured with the public access policy, all users are allowed to read the object. Even if the ACL is configured for an object encrypted in the SSE-KMS mode, the inter-tenant access is unavailable.

You can set an access control policy when uploading an object or make a call of an API operation to modify or obtain the object ACL.

Restrictions

- To configure object ACL, you must be the bucket owner or have the required permission (**obs:object:PutObjectAcl** in IAM or **PutObjectAcl** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- An object ACL supports a maximum of 100 grants.

Method

```
func (obsClient ObsClient) SetObjectAcl(input *SetObjectAclInput) (output *BaseModel, err error)
```

Request Parameters

Table 9-123 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------|--------------------|---|
| input | *SetObjectAclInput | Yes | Explanation: Input parameters for configuring an ACL for the object. For details, see Table 9-124 . |

Table 9-124 SetObjectAclInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| ACL | AclType | No | <p>Explanation: Pre-defined ACL</p> <p>Value range: See Table 9-125.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------|--------------------|--|
| Owner | Owner | No | <p>Explanation: Account ID of the object owner. For details, see Table 9-126.</p> <p>Restrictions: Owner and Grants must be used together and they cannot be used with ACL.</p> |
| Grants | []Grant | No | <p>Explanation: Grantees' permission information. For details, see Table 9-127.</p> <p>Default value: None</p> |

Table 9-125 AclType

| Constant | Default Value | Description |
|---------------|---------------|---|
| AclPrivate | private | <p>Private read/write</p> <p>A bucket or object can only be accessed by its owner.</p> |
| AclPublicRead | public-read | <p>Public read and private write</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket.</p> <p>If it is granted on an object, anyone can read the content and metadata of the object.</p> |

| Constant | Default Value | Description |
|--|-----------------------------|---|
| <code>AclPublicReadWrite</code> | public-read-write | <p>Public read/write</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks.</p> <p>If it is granted on an object, anyone can read the content and metadata of the object.</p> |
| <code>AclPublicReadDelivered</code> | public-read-delivered | <p>Public read on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadDelivered</code> does not apply to objects.</p> |
| <code>AclPublicReadWriteDelivered</code> | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.</p> |
| <code>AclBucketOwnerFullControl</code> | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 9-126 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 9-127 Grant

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------------------------------|------------------------------------|---|
| Grantee | Grantee | Yes if used as a request parameter | <p>Explanation: Grantee information. For details, see Table 9-128.</p> |
| Permission | PermissionType | Yes if used as a request parameter | <p>Explanation: Granted permission</p> <p>Value range: See Table 9-129.</p> <p>Default value: None</p> |

Table 9-128 Grantee

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|------------------------------|---|---|
| Type | Grantee Type | Yes if used as a request parameter | <p>Explanation: Grantee type</p> <p>Value range: See Table 9-130.</p> <p>Default value: None</p> |
| ID | string | Yes if this parameter is used as a request parameter and Type is set to Grantee User | <p>Explanation: Account (domain) ID of the grantee</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| DisplayName | string | No if used as a request parameter | <p>Explanation: Account name of the grantee</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • Starts with a letter. • Contains 6 to 32 characters. • Contains only letters, digits, hyphens (-), or underscores (_). <p>Default value: None</p> |
| URI | GroupUriType | Yes if this parameter is used as a request parameter and Type is set to Grantee Group | <p>Explanation: Authorized user group</p> <p>Value range: See Table 9-131.</p> <p>Default value: None</p> |

Table 9-129 PermissionType

| Constant | Default Value | Description |
|-----------------------|---------------|---|
| PermissionRead | READ | Read permission |
| PermissionWrite | WRITE | Write permission |
| PermissionReadAcp | READ_ACP | Permission to read ACL configurations |
| PermissionWriteAcp | WRITE_ACP | Permission to modify ACL configurations |
| PermissionFullControl | FULL_CONTROL | Full control access, including read and write permissions for a bucket and its ACL, or for an object and its ACL. |

Table 9-130 GranteeType

| Constant | Default Value | Description |
|--------------|---------------|-----------------|
| GranteeGroup | Group | User group |
| GranteeUser | CanonicalUser | Individual user |

Table 9-131 GroupUriType

| Constant | Default Value | Description |
|---------------|---------------|-------------|
| GroupAllUsers | AllUsers | All users |

Responses

Table 9-132 List of returned results

| Parameter | Type | Description |
|-----------|------------|---|
| output | *BaseModel | Explanation: Returned results. For details, see Table 9-133 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-133 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example sets the ACL of object **example/objectname** to be private.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
}
```

```
input := &obs.SetObjectAclInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify an object (example/objectname as an example).
input.Key = "example/objectname"
// Set the object ACL to be private.
input.ACL = obs.AclPrivate
// Configure the object ACL.
output, err := obsClient.SetObjectAcl(input)
if err == nil {
    fmt.Printf("Set Object(%s)'s acl successful with Bucket(%s)!\n", input.Key, input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set Object(%s)'s acl fail with Bucket(%s)!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Configuring an Object ACL](#)
- [\(GitHub\) Sample Code for Configuring Object ACL](#)
- [OBS Error Codes](#)

9.11 Obtaining Object ACL Information (SDK for Go)

Function

This API returns information about the ACL of an object.

Restrictions

- To obtain an object ACL, you must be the bucket owner or have the required permission (**obs:object:GetObjectAcl** in IAM or **GetObjectAcl** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- You can perform this operation to view the ACL of an object, as long as you have the **READ_ACP** permission for the object.

Method

```
func (obsClient ObsClient) GetObjectAcl(input *GetObjectAclInput) (output *GetObjectAclOutput, err error)
```

Method (with a Signed URL Used)

```
func (obsClient ObsClient) GetObjectAclWithSignedUrl(signedUrl string, actualSignedRequestHeaders http.Header) (output *GetObjectAclOutput, err error)
```

Request Parameters

Table 9-134 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------------|--------------------|--|
| input | *GetObjectAcl input | Yes | Explanation: Input parameters for obtaining the ACL of an object. For details, see Table 9-135 . |

Table 9-135 GetObjectAclInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

Responses

Table 9-136 List of returned results

| Parameter | Type | Description |
|-----------|--------------------------------------|--|
| output | * GetObjectAclOutput | <p>Explanation: Returned results. For details, see Table 9-137.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-137 GetObjectAclOutput

| Parameter | Type | Description |
|-----------------|-------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Owner | Owner | <p>Explanation: Account ID of the object owner. For details, see Table 9-138.</p> <p>Restrictions: Owner and Grants must be used together and they cannot be used with ACL.</p> |
| Grants | []Grant | <p>Explanation: Grantees' permission information. For details, see Table 9-139.</p> <p>Default value: None</p> |

Table 9-138 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 9-139 Grant

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------------------------------|------------------------------------|---|
| Grantee | Grantee | Yes if used as a request parameter | <p>Explanation: Grantee information. For details, see Table 9-140.</p> |
| Permission | PermissionType | Yes if used as a request parameter | <p>Explanation: Granted permission</p> <p>Value range: See Table 9-141.</p> <p>Default value: None</p> |

Table 9-140 Grantee

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------------|------------------------------------|--|
| Type | GranteeType | Yes if used as a request parameter | <p>Explanation: Grantee type. For details, see Table 9-142.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|------------------------------|---|---|
| ID | string | Yes if this parameter is used as a request parameter and Type is set to Grantee User | <p>Explanation: Account (domain) ID of the grantee</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| DisplayName | string | No if used as a request parameter | <p>Explanation: Account name of the grantee</p> <p>Restrictions:</p> <ul style="list-style-type: none"> Starts with a letter. Contains 6 to 32 characters. Contains only letters, digits, hyphens (-), or underscores (_). <p>Default value: None</p> |
| URI | GroupUriType | Yes if this parameter is used as a request parameter and Type is set to Grantee Group | <p>Explanation: Authorized user group</p> <p>Value range: See Table 9-143.</p> <p>Default value: None</p> |

Table 9-141 PermissionType

| Constant | Default Value | Description |
|-----------------|---------------|------------------|
| PermissionRead | READ | Read permission |
| PermissionWrite | WRITE | Write permission |

| Constant | Default Value | Description |
|-----------------------|---------------|---|
| PermissionReadAcp | READ_ACP | Permission to read ACL configurations |
| PermissionWriteAcp | WRITE_ACP | Permission to modify ACL configurations |
| PermissionFullControl | FULL_CONTROL | Full control access, including read and write permissions for a bucket and its ACL, or for an object and its ACL. |

Table 9-142 GranteeType

| Constant | Default Value | Description |
|--------------|---------------|-----------------|
| GranteeGroup | Group | User group |
| GranteeUser | CanonicalUser | Individual user |

Table 9-143 GroupUriType

| Constant | Default Value | Description |
|---------------|---------------|-------------|
| GroupAllUsers | AllUsers | All users |

Code Examples

This example returns the ACL information of object **example/objectname**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
```

```
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.GetObjectAclInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify an object (example/objectname as an example).
input.Key = "example/objectname"
// Obtain the object ACL.
output, err := obsClient.GetObjectAcl(input)
if err == nil {
    fmt.Printf("Get object(%s)'s acl successful with bucket(%s)!\n", input.Key, input.Bucket)
    fmt.Printf("Owner.ID:%s\n", output.Owner.ID)
    for index, grant := range output.Grants {
        fmt.Printf("Grant[%d]-Type:%s, ID:%s, URI:%s, Permission:%s\n",
            index, grant.Grantee.Type, grant.Grantee.ID, grant.Grantee.URI, grant.Permission)
    }
    return
}
fmt.Printf("Get object(%s)'s acl fail with bucket(%s)!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectAclInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object (example/objectname as an example).
    input.Key = "example/objectname"
    // Obtain the object ACL.
    output, err := obsClient.GetObjectAcl(input)
    if err == nil {
        fmt.Printf("Get object(%s)'s acl successful with bucket(%s)!\n", input.Key, input.Bucket)
        fmt.Printf("Owner.ID:%s\n", output.Owner.ID)
        for index, grant := range output.Grants {
            fmt.Printf("Grant[%d]-Type:%s, ID:%s, URI:%s, Permission:%s\n",
                index, grant.Grantee.Type, grant.Grantee.ID, grant.Grantee.URI, grant.Permission)
        }
    }
}
```

```
    }
    return
  }
  fmt.Printf("Get object(%s)'s acl fail with bucket(%s)!\n", input.Key, input.Bucket)
  if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
  } else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
  }
}
```

Helpful Links

- [Obtaining Object ACL Configuration](#)
- [\(GitHub\) Sample Code for Obtaining Object ACL](#)
- [OBS Error Codes](#)

9.12 Rewriting Response Headers (SDK for Go)

Function

This API rewrites some HTTP/HTTPS response headers when downloading an object. The following table lists rewritable response headers.

| Parameter | Description |
|---|--|
| GetObjectInput.ResponseContentType | Rewrites Content-Type in HTTP/HTTPS responses. |
| GetObjectInput.ResponseContentLanguage | Rewrites Content-Language in HTTP/HTTPS responses. |
| GetObjectInput.ResponseExpires | Rewrites Expires in HTTP/HTTPS responses. |
| GetObjectInput.ResponseCacheControl | Rewrites Cache-Control in HTTP/HTTPS responses. |
| GetObjectInput.ResponseContentDisposition | Rewrites Content-Disposition in HTTP/HTTPS responses. |
| GetObjectInput.ResponseContentEncoding | Rewrites Content-Encoding in HTTP/HTTPS responses. |

Restrictions

- To rewrite response headers, you must have the **obs:object:GETObject** permission. For details, see [Typical Permission Control Scenarios](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput) (output *GetObjectOutput, err error)
```

Request Parameters

Table 9-144 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------|--------------------|--|
| input | *GetObjectInput | Yes | Explanation: Input parameters for rewriting object headers. For details, see Table 9-145 . |

Table 9-145 GetObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ResponseCacheControl | string | No | <p>Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| ResponseContentDisposition | string | No | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ResponseContentEncoding | string | No | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|---|
| ResponseContentLanguage | string | No | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ResponseContent-Type | string | No | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| ResponseExpires | string | No | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is specified.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|---|
| ImageProcess | string | No | <p>Explanation: Image processing command or style. Example for resizing and rotating an image: image/resize,m_fixed,w_100,h_100/rotate,90</p> <p>Value range: Command format: image/commands Style format: style/style name For details about image processing parameters, see Processing Images.</p> <p>Default value: If no commands are entered, the original image is returned.</p> |
| RangeStart | int64 | No | <p>Explanation: Start position for object download.</p> <p>Value range: 0 to the object length, in bytes.</p> <p>Default value: 0, indicating the download starts from the first byte of the object.</p> |
| RangeEnd | int64 | No | <p>Explanation: End position for object download</p> <p>Value range:</p> <ul style="list-style-type: none"> The value must be greater than that of RangeStart. The upper limit of the value is the object length minus 1, in bytes. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|-----------|--------------------|---|
| IfMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfNoneMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfModifiedSince | time.Time | No | <p>Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|-----------|--------------------|---|
| IfUnmodifiedSince | time.Time | No | <p>Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| Origin | string | No | <p>Explanation: Origin (usually a domain name) specified in the pre-request</p> <p>Restrictions: Each origin can contain only one wildcard character (*).</p> <p>Default value: None</p> |
| RequestHeader | string | No | <p>Explanation: HTTP headers in a cross-origin request. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------|--------------------|---|
| SseHeader | SseHeader | No | <p>Explanation: Server-side decryption header. For details, see Table 9-146.</p> <p>Restrictions: If the object uploaded to a server is encrypted with the key provided by the client, the key must also be provided in the message for downloading the object.</p> |

Table 9-146 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 9-147 List of returned results

| Parameter | Type | Description |
|-----------|------------------|--|
| output | *GetObjectOutput | <p>Explanation: Returned results. For details, see Table 9-148.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-148 GetObjectOutput

| Parameter | Type | Description |
|------------|------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Body | io.ReadCloser | <p>Explanation: Object data stream</p> <p>Restrictions:</p> <ul style="list-style-type: none"> The object size in a single upload ranges from 0 to 5 GB. To upload files larger than 5 GB, multipart uploads should be used. <p>Default value: None</p> |
| StorageClass | StorageClassType | <p>Explanation: Storage class of the object. For details, see Table 9-149.</p> <p>Value range: If the storage class is Standard, leave this parameter blank.</p> |
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------|--------|---|
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: 0 to $(2^{63} - 1)$, in bytes</p> <p>Default value: None</p> |
| CacheControl | string | <p>Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|--------|--|
| ContentDisposition | string | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ContentEncoding | string | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p>Default value: None</p> |
| ContentLanguage | string | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ContentType | string | <p>Explanation: MIME type of the object file. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify Content-Type when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to Content-Type.</p> |
| Expires | string | <p>Explanation: Expires header in the response</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|-----------|---|
| LastModified | time.Time | <p>Explanation: Last modification time of the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|------------|--|--|
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: If the object is not in the Archive storage class, leave this parameter blank.</p> <p>Default value: None</p> |
| Expiration | string | <p>Explanation: Expiration details of the object, for example, "expiry-date="Mon, 11 Sep 2023 00:00:00 GMT""</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header. If SSE-C is used, see Table 9-150. If SSE-KMS is used, see Table 9-151.</p> |

| Parameter | Type | Description |
|-------------------------|--------|---|
| WebsiteRedirectLocation | string | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none">• The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB.• OBS only supports redirection for objects in the root directory of a bucket. <p>Default value:</p> <p>None</p> |

| Parameter | Type | Description |
|-----------|-------------------|--|
| Metadata | map[string]string | <p>Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-149 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-150 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-151 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example rewrites response header **ContentType** to **image/jpeg** during an object download.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/
    intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Rewrite a response header (ContentType as an example).
    input.ResponseContentType = "image/jpeg"
    // Download the object using streaming.
    output, err := obsClient.GetObject(input)
    if err == nil {
        // Close output.Body after using it, to avoid connection leakage.
        defer output.Body.Close()
        fmt.Printf("Get object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        // Obtain the response header that was rewritten.
        fmt.Printf("ContentType:%s\n", output.ContentType)
        return
    }
    fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Downloading Objects](#)
- [\(GitHub\) Sample Code for Downloading an Object](#)
- [OBS Error Codes](#)
- [FAQ for Object Download Failure](#)

9.13 Processing an Image (SDK for Go)

Function

This API processes images in a stable, secure, efficient, easy to use, and cost-effective manner. If the object to be downloaded is an image, you can input the image processing parameters to process the image, including cutting and resizing it as well as putting a watermark and converting the format.

Restrictions

- To process images, you must have the **obs:object:PutObject** permission. For details, see [Typical Permission Control Scenarios](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- All image processing operations do not modify the original image.
- Archive storage does not support image processing.
- The processed image is directly returned to the browser for display. It is not stored in OBS, does not occupy storage space, and does not incur storage fees.

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput) (output *GetObjectOutput, err error)
```

Request Parameters

Table 9-152 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------|--------------------|---|
| input | *GetObjectInput | Yes | Explanation: Input parameters for processing images. For details, see Table 9-153 . |

Table 9-153 GetObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ResponseCacheControl | string | No | <p>Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| ResponseContentDisposition | string | No | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ResponseContentEncoding | string | No | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|---|
| ResponseContentLanguage | string | No | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ResponseContent-Type | string | No | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| ResponseExpires | string | No | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is specified.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|--|
| ImageProcess | string | No | <p>Explanation: Image processing command or style. Example for resizing and rotating an image: image/resize,m_fixed,w_100,h_100/rotate,90</p> <p>Value range: Command format: image/commands Style format: style/stylename For details about image processing parameters, see Processing Images.</p> <p>Default value: If no commands are entered, the original image is returned.</p> |
| RangeStart | int64 | No | <p>Explanation: Start position for object download</p> <p>Value range: 0 to the object length, in bytes</p> <p>Default value: 0, indicating the download starts from the first byte of the object</p> |
| RangeEnd | int64 | No | <p>Explanation: End position for object download</p> <p>Value range:</p> <ul style="list-style-type: none"> The value must be greater than that of RangeStart. The upper limit of the value is the object length minus 1, in bytes. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|-----------|--------------------|---|
| IfMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfNoneMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfModifiedSince | time.Time | No | <p>Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|------------------|--------------------|---|
| IfUnmodifiedSince | time.Time | No | <p>Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| SseHeader | SseHeader | No | <p>Explanation: Server-side decryption headers. For details, see Table 9-154.</p> <p>Restrictions: If the object uploaded to a server is encrypted with the key provided by the client, the key must also be provided in the message for downloading the object.</p> |

Table 9-154 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 9-155 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------------|--|
| output | * GetObjectOutput | <p>Explanation: Returned results. For details, see Table 9-156.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 9-156 GetObjectOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Body | io.ReadCloser | <p>Explanation: Object data stream to download</p> <p>Default value: None</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range: See Table 9-157.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------|--------|---|
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: 0 to $(2^{63} - 1)$, in bytes</p> <p>Default value: None</p> |
| CacheControl | string | <p>Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|--------|--|
| ContentDisposition | string | <p>Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ContentEncoding | string | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p>Default value: None</p> |
| ContentLanguage | string | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ContentType | string | <p>Explanation: MIME type of the object file. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| Expires | string | <p>Explanation: Expires header in the response</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|-----------|---|
| LastModified | time.Time | <p>Explanation: Last modification time of the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|------------|--|---|
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: This parameter is only available for Archive objects.</p> <p>Default value: None</p> |
| Expiration | string | <p>Explanation: Expiration details of the object, for example, "expiry-date="Mon, 11 Sep 2023 00:00:00 GMT""</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header. If SSE-C is used, see Table 9-158. If SSE-KMS is used, see Table 9-159.</p> |

| Parameter | Type | Description |
|-------------------------|--------|--|
| WebsiteRedirectLocation | string | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|-------------------|--|
| Metadata | map[string]string | <p>Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 9-157 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 9-158 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 9-159 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example processes the image `example/objectname` in `examplebucket`.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Resize and then rotate the image.
    input.ImageProcess = "image/resize,m_fixed,w_100,h_100/rotate,90"
    // Perform image processing.
    output, err := obsClient.GetObject(input)
    if err == nil {
        // Close output.Body to avoid connection leakage.
        defer output.Body.Close()
        fmt.Printf("Get object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("ContentType:%s\n", output.ContentType)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        return
    }
    fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

NOTE

- Use **GetObjectInput.ImageProcess** to specify the image processing parameters.
- Image processing parameters can be processed in cascading mode. This indicates that multiple commands can be performed on an image in sequence.

Helpful Links

- [Image Processing](#)
- [\(GitHub\) Sample Code for Image Processing](#)
- [OBS Error Codes](#)

- [FAQ for Image Processing](#)

9.14 Restoring an Archive Object (SDK for Go)

Function

To obtain the content of an object in the Archive storage class, you need to restore the object first and then you can download it. After an object is restored, a copy of the object is saved in the Standard storage class. By doing so, the object in the Archive storage class and its copy in the Standard storage class co-exist in the bucket. The copy will be automatically deleted once its retention period expires.

This API is used to restore Archive objects in a specified bucket.

Restrictions

- To restore an Archive object, you must be the bucket owner or have the required permission (**obs:object:RestoreObject** in IAM or **RestoreObject** in a bucket policy.) For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- To prolong the validity period of the Archive data restored, you can repeatedly restore the data, but you will be billed for each restore. After a second restore, the validity period of Standard object copies will be prolonged, and you need to pay for storing these copies during the prolonged period.

Method

```
func (obsClient ObsClient) RestoreObject(input *RestoreObjectInput) (output *BaseModel, err error)
```

Request Parameters

Table 9-160 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|---------------------|--------------------|---|
| input | *RestoreObjectInput | Yes | Explanation: Input parameters for restoring an Archive object. For details, see Table 9-161 . |

Table 9-161 RestoreObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|----------------------------------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Version Id | string | No | <p>Explanation: Version ID of the Archive object to be restored</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is specified.</p> |
| Days | int | Yes | <p>Explanation: After an object is restored, a Standard copy of it is generated. This parameter specifies how long the Standard copy can be retained, that is, the validity period of the restored object.</p> <p>Value range: The value ranges from 1 to 30, in days.</p> <p>Default value: None</p> |
| Tier | RestoreTier Type | No | <p>Explanation: Retrieval speed tiers. You can select a suitable tier based on your requirements for retrieval speed.</p> <p>Value range: For details, see Table 9-162.</p> <p>Default value: Standard</p> |

Table 9-162 RestoreTierType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| RestoreTierExpedited | Expedited | Objects can be quickly restored from Archive storage within 1 to 5 minutes. |
| RestoreTierStandard | Standard | Objects can be restored from Archive storage within 3 to 5 hours. |

Responses

Table 9-163 List of returned results

| Parameter | Type | Description |
|-----------|------------|---|
| output | *BaseModel | Explanation: Returned results. For details, see Table 9-164 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-164 BaseModel

| Parameter | Type | Description |
|------------|--------|--|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Examples

This example restores the Archive object **example/objectname** in bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyId")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.RestoreObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname in this example).
    input.Key = "example/objectname"
    // Specify the version ID of the object to be restored.
    input.VersionId = "G001117FCE89978B0000401205D5DC9A"
    // Specify how long the restored object will be retained, in days. 1 is used as an example, which can be
    any value from 1 to 30.
    input.Days = 1
    // Specify the restore speed (obs.RestoreTierExpedited as an example). By default, the object is restored
    at a standard speed.
    input.Tier = obs.RestoreTierExpedited
    // Restore the Archive object.
    output, err := obsClient.RestoreObject(input)
    if err == nil {
        fmt.Printf("Restore object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Restore object(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    }
}
```

```
} else {  
    fmt.Println("An Exception was found, which means the client encountered an internal problem when  
attempting to communicate with OBS, for example, the client was unable to access the network.")  
    fmt.Println(err)  
}  
}
```

 NOTE

- The object specified in **ObsClient.RestoreObject** must be in the Archive storage class. Otherwise, an error will be reported.
- **RestoreObjectInput.Days** is used to specify how long (1 to 30 days) the restored object will be retained and **RestoreObjectInput.Tier** is used to specify how fast the object will be restored.

Helpful Links

- [Restoring Archive Objects](#)
- [\(GitHub\) Sample Code for Restoring an Archive Object](#)
- [OBS Error Codes](#)

9.15 Modifying an Object (SDK for Go)

Function

This API modifies the content of an object in a parallel file system from the specified position.

Restrictions

- This API is currently available only for parallel file systems, not for object buckets. For details about how to create a parallel file system, see [Creating a Bucket \(SDK for Go\)](#).
- To modify an object, you must have the **obs:object:PutObject** permission. For details, see [Typical Permission Control Scenarios](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) ModifyObject(input *ModifyObjectInput) (output *ModifyObjectOutput, err error)
```

Request Parameters

Table 9-165 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------------------|--------------------|---|
| input | * ModifyObjectInput | Yes | Explanation: Input parameters for modifying an object. For details, see Table 9-166 . |

Table 9-166 ModifyObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|---------------|-----------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Position | int64 | Yes | <p>Explanation: Position from which the object is modified</p> <p>Value range: 1 to $(2^{63} - 1)$, in bytes</p> <p>Default value: 1, indicating the modification starts from the first byte of the object</p> |
| ContentLength | int64 | No | <p>Explanation: Size of the object to be modified</p> <p>Value range: 1 to $(2^{63} - 1)$, in bytes</p> <p>Default value: None</p> |
| Body | io.Reader | No | <p>Explanation: Data stream of the object to be modified</p> <p>Default value: None</p> |

Responses

Table 9-167 List of returned results

| Parameter | Type | Description |
|-----------|--------------------------------------|---|
| output | * ModifyObjectOutput | Explanation: Returned results. For details, see Table 9-168 . |
| err | error | Explanation: Error messages returned by the API |

Table 9-168 ModifyObjectOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|-----------|--------|---|
| ETag | string | <p>Explanation:</p> <p>Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions:</p> <p>If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range:</p> <p>The value must contain 32 characters.</p> <p>Default value:</p> <p>None</p> |

Code Examples

This example modifies object **example/objectname** in bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "strings"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
}
```



```
input := &obs.ModifyObjectInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify an object (example/objectname as an example).
input.Key = "example/objectname"
input.Position = 0
input.Body = strings.NewReader("Modify Hello OBS")
// Modify the object.
output, err := obsClient.ModifyObject(input)
if err == nil {
    fmt.Printf("Modify object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
    fmt.Printf("ETag:%s\n", output.ETag)
    return
}
fmt.Printf("Modify object(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Modifying an Object](#)
- [\(GitHub\) Sample Code for Modifying an Object](#)
- [OBS Error Codes](#)
- [FAQ for Object Modification](#)

10 Multipart Uploads (SDK for Go)

10.1 Multipart Upload Overview (SDK for Go)

You can upload large files using multipart upload. Multipart upload is applicable to many scenarios, including:

- Files to be uploaded are larger than 100 MB.
- The network condition is poor. Connection to the OBS server is constantly down.
- Sizes of files to be uploaded are uncertain.

A multipart upload consists of the following steps:

1. **Initiate a multipart upload** (`ObsClient.InitiateMultipartUpload`).
2. **Upload parts one by one or concurrently** (`ObsClient.UploadPart`).
3. **Assemble parts** (`ObsClient.CompleteMultipartUpload`) or **abort the multipart upload** (`ObsClient.AbortMultipartUpload`).

The following code shows how to perform a multipart upload:

```
// Import a dependency.
import (
    "fmt"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

// Obtain an AK/SK pair using environment variables or import the AK/SK pair in other ways. Using hard
// coding may result in leakage.
// Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html. ak := os.Getenv("AccessKeyID")
sk := os.Getenv("SecretAccessKey")
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not to
// use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
// import it in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
// with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
// method to specify a security token when creating an instance.
obsClient, _ := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
```

```
func main() {
    var uploadId = ""
    var eTag1 = ""
    var eTag2 = ""
    var partNumber1= 1
    var partNumber2= 2

    // Initiate a multipart upload.
    inputInit := &obs.InitiateMultipartUploadInput{}
    inputInit.Bucket = "bucketname"
    inputInit.Key = "objectkey"
    outputInit, err := obsClient.InitiateMultipartUpload(inputInit)
    if err == nil {
        fmt.Printf("RequestId:%s\n", outputInit.RequestId)
        fmt.Printf("UploadId:%s\n", outputInit.UploadId)
        uploadId = outputInit.UploadId
    } else {
        if obsError, ok := err.(obs.ObsError); ok {
            fmt.Println(obsError.Code)
            fmt.Println(obsError.Message)
        } else {
            fmt.Println(err)
        }
    }
}

// Upload a part.
inputUploadPart := &obs.UploadPartInput{}
inputUploadPart.Bucket = "bucketname"
inputUploadPart.Key = "objectkey"
inputUploadPart.UploadId = uploadId
inputUploadPart.PartNumber = partNumber1
inputUploadPart.SourceFile = "localFilePath"
outputUploadPart, err := obsClient.UploadPart(inputUploadPart)
if err == nil {
    fmt.Printf("RequestId:%s\n", outputUploadPart.RequestId)
    fmt.Printf("ETag:%s\n", outputUploadPart.ETag)
    eTag1 = outputUploadPart.ETag
} else {
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println(obsError.Code)
        fmt.Println(obsError.Message)
    } else {
        fmt.Println(err)
    }
}

inputUploadPart = &obs.UploadPartInput{}
inputUploadPart.Bucket = "bucketname"
inputUploadPart.Key = "objectkey"
inputUploadPart.UploadId = uploadId
inputUploadPart.PartNumber = partNumber2
inputUploadPart.SourceFile = "localFilePath"
outputUploadPart, err = obsClient.UploadPart(inputUploadPart)
if err == nil {
    fmt.Printf("RequestId:%s\n", outputUploadPart.RequestId)
    fmt.Printf("ETag:%s\n", outputUploadPart.ETag)
    eTag2 = outputUploadPart.ETag
} else {
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println(obsError.Code)
        fmt.Println(obsError.Message)
    } else {
        fmt.Println(err)
    }
}

// Assemble parts.
inputCompleteMultipart := &obs.CompleteMultipartUploadInput{}
inputCompleteMultipart.Bucket = "bucketname"
```

```
inputCompleteMultipart.Key = "objectkey"
inputCompleteMultipart.UploadId = uploadId
inputCompleteMultipart.Parts = []obs.Part{
    obs.Part{PartNumber: partNumber1, ETag: eTag1},
    obs.Part{PartNumber: partNumber2, ETag: eTag2},
}
outputCompleteMultipart, err := obsClient.CompleteMultipartUpload(inputCompleteMultipart)
if err == nil {
    fmt.Printf("RequestId:%s\n", outputCompleteMultipart.RequestId)
    fmt.Printf("Location:%s, Bucket:%s, Key:%s, ETag:%s\n", outputCompleteMultipart.Location,
outputCompleteMultipart.Bucket, outputCompleteMultipart.Key, outputCompleteMultipart.ETag)
} else {
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println(obsError.Code)
        fmt.Println(obsError.Message)
    } else {
        fmt.Println(err)
    }
}
}
```

Below lists other multipart upload operations:

- [Listing Multipart Uploads \(SDK for Go\)](#)
- [Listing Uploaded Parts \(SDK for Go\)](#)
- [Copying a Part \(SDK for Go\)](#)

10.2 Initiating a Multipart Upload (SDK for Go)

Function

This API initiates a multipart upload and returns a globally unique upload ID. You can use this upload ID in your subsequent requests including **UploadPart**, **CompleteMultipartUpload**, and **ListParts**. There can be more than one multipart upload for the same object. Each multipart upload initiation request can contain headers such as **Content-Type**, **Content-Encoding**, and the headers for ACL and user-defined metadata. These headers are recorded in the multipart upload metadata.

Restrictions

- To initiate a multipart upload, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- After initiating a multipart upload and uploading one or more parts, you must assemble the parts or abort the multipart upload. Only after that can OBS stop billing you for storing the uploaded parts.

Method

```
func (obsClient ObsClient) InitiateMultipartUpload(input
*InitiateMultipartUploadInput) (output *InitiateMultipartUploadOutput, err
error)
```

Request Parameters

Table 10-1 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------------------------------------|--------------------|--|
| input | *InitiateMultipartUploadInput | Yes | Explanation: Input parameters for initiating a multipart upload. For details, see Table 10-2 . |

Table 10-2 InitiateMultipartUploadInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ACL | AclType | No | <p>Explanation: Access control list (ACL) that can be pre-defined when a bucket is created. For details about ACLs, see ACLs.</p> <p>Value range: See Table 10-3.</p> <p>Default value: private</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| WebsiteRedirectLocation | string | No | <p>Explanation:</p> <p>If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--|--------------------|---|
| ContentType | string | No | <p>Explanation: MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| SseHeader | SseCHeader or SseKmsHeader | No | <p>Explanation: Server-side encryption header. If SSE-C is used, see Table 10-4. If SSE-KMS is used, see Table 10-5.</p> |
| StorageClass | StorageClassType | No | <p>Explanation: Object storage class If this parameter is not set, the object inherits the storage class of its bucket.</p> <p>Value range: StorageClassType lists the available value options.</p> <p>Default value: STANDARD</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|-------------------|--------------------|--|
| Metadata | map[string]string | No | <p>Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. <p>Default value: None</p> |
| GrantReadId | string | No | <p>Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------------|--------|--------------------|--|
| GrantReadAcpld | string | No | <p>Explanation: ID (domain_id) of an account the READ_ACP permission is granted to. The account with the READ_ACP permission can read the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantWriteAcpld | string | No | <p>Explanation: ID (domain_id) of an account the WRITE_ACP permission is granted to. The account with the WRITE_ACP permission can write the ACL of the current object.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |
| GrantFullControlld | string | No | <p>Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|---|
| Expires | int64 | No | <p>Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p>Restrictions: This parameter can be configured only during object upload and cannot be modified by calling a metadata API.</p> <p>Value range: 1 to $(2^{63} - 1)$, in days</p> <p>Default value: None</p> |
| EncodingType | string | No | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 10-3 AclType

| Constant | Default Value | Description |
|------------|---------------|---|
| AclPrivate | private | Private read/write A bucket or object can only be accessed by its owner. |

| Constant | Default Value | Description |
|--|-----------------------------|---|
| <code>AclPublicRead</code> | public-read | <p>Public read and private write</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket.</p> <p>If it is granted on an object, anyone can read the content and metadata of the object.</p> |
| <code>AclPublicReadWrite</code> | public-read-write | <p>Public read/write</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks.</p> <p>If it is granted on an object, anyone can read the content and metadata of the object.</p> |
| <code>AclPublicReadDelivered</code> | public-read-delivered | <p>Public read on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions, and read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadDelivered</code> does not apply to objects.</p> |
| <code>AclPublicReadWriteDelivered</code> | public-read-write-delivered | <p>Public read/write on a bucket as well as objects in the bucket</p> <p>If this permission is granted on a bucket, anyone can read the object list, multipart uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket.</p> <p>NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.</p> |

| Constant | Default Value | Description |
|---------------------------|---------------------------|--|
| AclBucketOwnerFullControl | bucket-owner-full-control | <p>If this permission is granted on an object, only the bucket and object owners have the full control over the object.</p> <p>By default, if you upload an object to a bucket of any other user, the bucket owner does not have the permissions on your object. After you grant this policy to the bucket owner, the bucket owner can have full control over your object.</p> |

Table 10-4 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 10-5 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Table 10-6 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Responses

Table 10-7 List of returned results

| Parameter | Type | Description |
|-----------|--|--|
| output | *InitiateMultipartUploadOutput | Explanation: Returned results. For details, see Table 10-8 . |
| err | error | Explanation: Error messages returned by the API |

Table 10-8 InitiateMultipartUploadOutput

| Parameter | Type | Description |
|------------|--------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |

| Parameter | Type | Description |
|-----------------|---------------------|---|
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| Bucket | string | <p>Explanation: Name of the bucket involved in the multipart upload</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my.bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.bucket-. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--|--|
| Key | string | <p>Explanation: Name of the object to be uploaded. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadId | string | <p>Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8</p> <p>Value range: The value must contain 1 to 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header. If SSE-C is used, see Table 10-9. If SSE-KMS is used, see Table 10-10.</p> |
| EncodingType | string | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 10-9 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 10-10 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example initiates a multipart upload.

```
package main
import (
    "fmt"
```

```
"os"
  obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.InitiateMultipartUploadInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object name (example/objectname as an example).
    input.Key = "example/objectname"
    // Initiate a multipart upload.
    output, err := obsClient.InitiateMultipartUpload(input)
    if err == nil {
        fmt.Printf("Initiate multipart upload successful with bucket(%s) and object(%s)!\n", input.Bucket,
input.Key)
        fmt.Printf("UploadId:%s\n", output.UploadId)
        return
    }
    fmt.Printf("Initiate multipart upload fail with bucket(%s) and object(%s)!\n", input.Bucket, input.Key)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
}
```

Helpful Links

- [Initiating a Multipart Upload](#)
- [\(GitHub\) Sample Code for Multipart Uploads](#)
- [OBS Error Codes](#)

10.3 Uploading a Part (SDK for Go)

Function

After a multipart upload is initiated, this API uploads a part to a specified bucket. In the upload request, the multipart upload ID must be included. Except for the part lastly being uploaded whose size ranges from 0 to 5 GB, sizes of the other

parts range from 100 KB to 5 GB. Part numbers can be any number from 1 to 10,000.

When uploading a part, you must specify its upload ID and part number. A part number uniquely identifies a part and its position in the object you are uploading. If you upload a new part with the same part number as that of a previous part, the previously uploaded part will be overwritten. Whenever you upload a part, OBS returns the ETag header in the response. For each part upload task, you must record the part number and ETag value. These values are required in subsequent requests for you to complete a multipart upload.

Restrictions

- To upload a part, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- After initiating a multipart upload and uploading one or more parts, you must assemble the parts or abort the multipart upload. Only after that can OBS stop billing you for storing the uploaded parts.
- **partNumber** in a multipart upload must be unique. When the same **partNumber** of the same object is concurrently uploaded, last write wins policy is applied. The time of last write is defined as the time when the part metadata is created. To ensure data accuracy, the client must be locked to ensure concurrent uploads of the same part of the same object. Concurrent uploads for different parts of the same object do not need to be locked.

Method

```
func (obsClient ObsClient) UploadPart(input *UploadPartInput) (output *UploadPartOutput, err error)
```

Request Parameters

Table 10-11 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|------------------|--------------------|--|
| input | *UploadPartInput | Yes | Explanation: Input parameters for uploading a part. For details, see Table 10-12 . |

Table 10-12 UploadPartInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| PartNumber | int | Yes | <p>Explanation: Part number</p> <p>Value range: An integer ranging from 1 to 10000</p> <p>Default value: None</p> |
| UploadId | string | Yes | <p>Explanation: Multipart upload ID which can be returned by initiating a multipart upload</p> <p>Restrictions:</p> <p>Value range: The value must contain 32 characters. Example: 000001648453845DBB78F2340DD460D8</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|---------------------------|--------------------|---|
| ContentMD5 | string | No | <p>Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p>Value range: Base64-encoded 128-bit MD5 value of the request body calculated according to RFC 1864</p> <p>Example: n58IG6hfM7vqI4K0vnWpog==</p> <p>Default value: None</p> |
| SseHeader | SseHeader | No | <p>Explanation: Server-side encryption header. If SSE-C is used, see Table 10-13.</p> |
| Body | io.Reader | No | <p>Explanation: Data stream of the object to be uploaded</p> <p>Value range: The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p>Default value: None</p> |
| SourceFile | string | No | <p>Explanation: Source file path of the object to be uploaded</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------|--------------------|--|
| Offset | int64 | No | <p>Explanation: Start offset of a part in the source file</p> <p>Value range: A non-negative integer smaller than the size of the object to be uploaded, in bytes</p> <p>Default value: 0</p> |
| PartSize | int64 | No | <p>Explanation: Part size</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • Except for the last uploaded part, all parts must be larger than 100 KB. Part sizes will not be verified during upload because whether an uploaded part is the last one cannot be determined. Their sizes will be verified when being assembled. • The minimum part size supported by an OBS 3.0 bucket is 100 KB, and that supported by an OBS 2.0 bucket is 5 MB. <p>Value range: The value ranges from 100 KB to 5 GB, in bytes.</p> <p>Default value: 102400</p> |

Table 10-13 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 10-14 List of returned results

| Parameter | Type | Description |
|-----------|------------------------------------|--|
| output | * UploadPartOutput | <p>Explanation: Returned results. For details, see Table 10-15.</p> |

| Parameter | Type | Description |
|-----------|-------|---|
| err | error | Explanation: Error messages returned by the API |

Table 10-15 UploadPartOutput

| Parameter | Type | Description |
|-----------------|---------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| PartNumber | int | Explanation: Part number Value range: An integer ranging from 1 to 10000 Default value: None |

| Parameter | Type | Description |
|-----------|--|---|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header. If SSE-C is used, see Table 10-16. If SSE-KMS is used, see Table 10-17.</p> |

Table 10-16 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|---|
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 10-17 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Example

This example uploads a part to bucket **examplebucket** by specifying a multipart upload ID.

```
package main
import (
    "fmt"
    "os"
    "strings"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
```



```
// (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
// to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
// import an AK/SK pair in other ways.
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
// with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
// method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.UploadPartInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify an object name (example/objectname as an example).
input.Key = "example/objectname"
// Specify the multipart upload ID (00000188677110424014075CC4A77xxx as an example).
input.UploadId = "00000188677110424014075CC4A77xxx"
// Specify the part number (1 as an example) of part to upload. The part number can be any integer
// from 1 to 10,000.
input.PartNumber = 1
// Specify the source file path (localfile as an example) of the part to upload.
input.SourceFile = "localfile"
// Upload the part.
output, err := obsClient.UploadPart(input)
if err == nil {
    fmt.Printf("Upload part(%d) successful with bucket(%s) and object(%s)!\n", input.PartNumber,
input.Bucket, input.Key)
    fmt.Printf("ETag:%s\n", output.ETag)
    return
}
fmt.Printf("Upload part(%d) fail with bucket(%s) and object(%s)!\n", input.PartNumber, input.Bucket,
input.Key)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Uploading a Part](#)
- [\(GitHub\) Sample Code for Multipart Uploads](#)
- [OBS Error Codes](#)

10.4 Assembling Parts (SDK for Go)

Function

This API assembles the uploaded parts to complete the multipart upload. Before performing this operation, you cannot download the uploaded data. When assembling parts, you need to copy the additional message header information recorded during the multipart upload initiation to the object metadata. Such information is processed the same way the information in a common object upload is processed. In the case of assembling parts concurrently, last write wins is

applied, but the time of last write is defined as the time when a multipart upload was initiated.

As long as the multipart upload is not aborted, all uploaded parts occupy the space. However, after you assembled the specified parts, those uploaded but not assembled will be deleted to free up space.

When assembling parts, OBS creates an object by putting part numbers in ascending order. If any object metadata is provided in the initiation of the multipart upload, OBS will associate the metadata with the object. After the multipart upload is complete, the parts will no longer exist. A part assembling request must contain the upload ID, part numbers, and a list of corresponding ETag values. In response to the request, the ETag that uniquely identifies the assembled parts is contained. This ETag is not the MD5 hash value of the entire object.

Restrictions

- To assemble parts, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- After a multipart upload is complete, the uploaded parts that are not assembled will be automatically deleted and cannot be recovered. Before assembling parts, use the API for listing uploaded parts to check all parts to ensure that no part is missed.

Method

```
func (obsClient ObsClient) CompleteMultipartUpload(input
*CompleteMultipartUploadInput) (output *CompleteMultipartUploadOutput,
err error)
```

Request Parameters

Table 10-18 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-------------------------------|--------------------|--|
| input | *CompleteMultipartUploadInput | Yes | Explanation: Input parameters for assembling parts. For details, see Table 10-19 . |

Table 10-19 CompleteMultipartUploadInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|-------------------------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadId | string | Yes | <p>Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Parts | [] Part | Yes | <p>Explanation: List of parts to be assembled. For details, see Table 10-20.</p> |
| EncodingType | string | No | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 10-20 Part

| Parameter | Type | Description |
|------------|--------|---|
| PartNumber | int | <p>Explanation: Part number</p> <p>Value range: An integer ranging from 1 to 10000</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Part ETag, which is a Base64-encoded, 128-bit MD5 value</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

Responses

Table 10-21 List of returned results

| Parameter | Type | Description |
|-----------|---|--|
| output | * CompleteMultipartUploadOutput | <p>Explanation: Returned results. For details, see Table 10-22.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 10-22 CompleteMultipartUploadOutput

| Parameter | Type | Description |
|-----------------|----------------------|---|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string] []string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: ETag calculated based on the ETags of all assembled parts, which is a Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| Bucket | string | <p>Explanation: Name of the bucket in which parts are assembled</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.) – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |
| Key | string | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|--|--|
| Location | string | <p>Explanation: URL of the generated object after part assembling</p> <p>Example: https://example-Bucket.obs.regions.myhuaweicloud.com/example-Object</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Version ID of the object obtained after part assembling. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| SseHeader | SseCHeader or SseKmsHeader | <p>Explanation: Server-side encryption header. If SSE-C is used, see Table 10-23. If SSE-KMS is used, see Table 10-24.</p> |
| EncodingType | string | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 10-23 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 10-24 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Example

This example assembles the parts previously uploaded to bucket **examplebucket**.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.CompleteMultipartUploadInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object name (example/objectname as an example).
    input.Key = "example/objectname"
    // Specify the multipart upload ID (00000188677110424014075CC4A77xxx as an example).
    input.UploadId = "00000188677110424014075CC4A77xxx"
    // Specify the list of parts to be assembled.
    input.Parts = []obs.Part{
        {PartNumber: 1, ETag: "etag1"},
        {PartNumber: 2, ETag: "etag2"},
        {PartNumber: 3, ETag: "etag3"},
    }
    // Complete the multipart upload.
    output, err := obsClient.CompleteMultipartUpload(input)
    if err == nil {
        fmt.Printf("Complete multipart upload successful with bucket(%s) and object(%s)!\n", input.Bucket,
        input.Key)
        fmt.Printf("Location:%s, Bucket:%s, Key:%s, ETag:%s\n", output.Location, output.Bucket, output.Key,
        output.ETag)
        return
    }
    fmt.Printf("Complete multipart upload(%s) fail with bucket(%s) and object(%s)!\n", input.Bucket,
    input.Key)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Completing a Multipart Upload](#)
- [\(GitHub\) Sample Code for Multipart Uploads](#)
- [OBS Error Codes](#)

10.5 Listing Multipart Uploads (SDK for Go)

Function

This API lists ongoing multipart uploads.

Ongoing multipart uploads are the multipart uploads that have been initiated but have not been completed or aborted. A maximum of 1,000 multipart uploads can be returned in a response. If there are over 1,000 ongoing tasks satisfying the list criteria, you need to send more requests to query additional multipart uploads.

Restrictions

- To list multipart uploads, you must be the bucket owner or have the required permission (**obs:bucket:ListBucketMultipartUploads** in IAM or **ListBucketMultipartUploads** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- To list ongoing multipart uploads in a bucket, you must have the **ListBucketMultipartUploads** permission.
- The bucket owner can grant others the **ListBucketMultipartUploads** permission.

Method

```
func (obsClient ObsClient) ListMultipartUploads(input
*ListMultipartUploadsInput) (output *ListMultipartUploadsOutput, err error)
```

Request Parameters

Table 10-25 List of request parameters

| Parameter | Type | Man dato ry (Yes /No) | Description |
|-----------|---|---------------------------------------|---|
| input | * ListMultipartUploadsInput | Yes | Explanation: Input parameters for listing multipart uploads. For details, see Table 10-26 . |

Table 10-26 ListMultipartUploadsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|---|
| Prefix | string | No | <p>Explanation: Name prefix that the objects in the multipart uploads to be listed must contain</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, the multipart uploads of logs/day1, logs/day2, and logs/day3 will be returned. If you leave this parameter blank, all multipart uploads in the bucket will be returned.</p> <p>Restrictions: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| MaxUploads | int | No | <p>Explanation: Maximum number of listed multipart uploads</p> <p>Restrictions: If the specified value is greater than 1000, only 1,000 multipart uploads are returned.</p> <p>Value range: An integer from 1 to 1000</p> <p>Default value: 1000</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Delimiter | string | No | <p>Explanation: Object names are grouped by this parameter, which is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a bucket has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| KeyMarker | string | No | <p>Explanation: Object name after which multipart upload listing begins</p> <p>Value range: Value of NextKeyMarker in the response body of the last request</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------|--------|--------------------|--|
| UploadIdMarker | string | No | <p>Explanation: Upload ID after which the multipart upload listing begins</p> <p>Restrictions: This parameter is valid only when used with KeyMarker. If both parameters are specified, multipart uploads with IDs greater than the specified UploadIdMarker for the specified KeyMarker are listed.</p> <p>Value range: The value of NextUploadIdMarker in the response body of the last request</p> <p>Default value: None</p> |
| EncodingType | string | No | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Responses

Table 10-27 List of returned results

| Parameter | Type | Description |
|-----------|------------------------------------|--|
| output | *ListMultipartUploadsOutput | <p>Explanation: Returned results. For details, see Table 10-28.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 10-28 ListMultipartUploadsOutput

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|----------------|--------|---|
| Bucket | string | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my.bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> |
| KeyMarker | string | <p>Explanation: Object name after which multipart upload listing begins. This parameter is consistent with that set in the request.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadIdMarker | string | <p>Explanation: Upload ID after which the multipart upload listing begins, which is consistent with that set in the request</p> <p>Value range: The value must contain 1 to 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|--------|--|
| NextKeyMarker | string | <p>Explanation: Object name to start with for the next multipart upload listing request. NextKeyMarker is returned when not all the objects are listed. You can set KeyMarker to this value in the next request to list the remaining multipart uploads.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| NextUploadIdMarker | string | <p>Explanation: Upload ID to start with for the next multipart upload listing request. This parameter is used together with NextKeyMarker. NextVersionIdMarker is returned when not all the objects are listed. You can set NextKeyMarker to this value in the next request to list the remaining multipart uploads.</p> <p>Value range: The value must contain 1 to 32 characters.</p> <p>Default value: None</p> |
| MaxUploads | int | <p>Explanation: Maximum number of listed multipart uploads, which is consistent with the same parameter in the request</p> <p>Restrictions: If the specified value is greater than 1000, only 1,000 multipart uploads are returned.</p> <p>Value range: An integer from 1 to 1000</p> <p>Default value: 1000</p> |

| Parameter | Type | Description |
|-------------|--------|---|
| IsTruncated | bool | <p>Explanation: Whether all results are returned in the response</p> <p>Value range:</p> <ul style="list-style-type: none">• true: Not all results are returned.• false: All results are returned. <p>Default value: None</p> |
| Prefix | string | <p>Explanation: Prefix that the object names in the multipart uploads to be listed must contain. This parameter is consistent with that set in the request.</p> <p>Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, the multipart uploads of logs/day1, logs/day2, and logs/day3 will be returned. If you leave this parameter blank, all multipart uploads in the bucket will be returned.</p> <p>Restrictions: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|----------------|----------|--|
| Delimiter | string | <p>Explanation:</p> <p>A character used to group object names in multipart uploads, which is consistent with that set in the request. This parameter is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes.</p> <p>Assume that a bucket has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix.</p> <p>Value range:</p> <p>The value must contain 1 to 1,024 characters.</p> <p>Default value:</p> <p>None</p> |
| Uploads | []Upload | <p>Explanation:</p> <p>List of multipart uploads. For details, see Table 10-29.</p> |
| CommonPrefixes | []string | <p>Explanation:</p> <p>List of object name prefixes grouped according to the Delimiter parameter (if specified)</p> <p>Value range:</p> <p>The value must contain 1 to 1,024 characters.</p> <p>Default value:</p> <p>None</p> |

| Parameter | Type | Description |
|--------------|--------|--|
| EncodingType | string | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Table 10-29 Upload

| Parameter | Type | Description |
|-----------|------------------|--|
| Key | string | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadId | string | <p>Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8</p> <p>Value range: The value must contain 1 to 32 characters.</p> <p>Default value: None</p> |
| Initiator | Initiator | <p>Explanation: Initiator of the multipart upload. For details, see Table 10-30.</p> |

| Parameter | Type | Description |
|--------------|----------------------------------|---|
| Owner | Owner | Explanation: Account ID of the object owner. For details, see Table 10-31 . |
| StorageClass | StorageClassType | Explanation: Storage class of the object to be uploaded Value range: See Table 10-32 . Default value: None |
| Initiated | time.Time | Explanation: Time when the multipart upload is initiated Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z . Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None |

Table 10-30 Initiator

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | Explanation: Account (domain) ID of the initiator Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|--|
| Display Name | string | No | <p>Explanation: Account name of the initiator</p> <p>Restrictions: The account name can contain 6 to 32 characters and must start with a letter. Only letters, digits, hyphens (-), and underscores (_) are allowed.</p> <p>Default value: None</p> |

Table 10-31 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 10-32 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |
| StorageClassWarm | WARM | <p>OBS Infrequent Access</p> <p>Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.</p> |

| Constant | Default Value | Description |
|------------------|---------------|---|
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Code Examples

This example lists all initiated multipart uploads (that have not yet been completed or aborted) in bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.ListMultipartUploadsInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the maximum number of multipart uploads that can be listed. 10 is used as an example.
    input.MaxUploads = 10
    // List initiated multipart uploads in the bucket.
    output, err := obsClient.ListMultipartUploads(input)
    if err == nil {
        fmt.Printf("List multipart uploads successful with bucket(%s) !\n", input.Bucket)
        for index, upload := range output.Uploads {
            fmt.Printf("Upload[%d]-OwnerId:%s, UploadId:%s, Key:%s, Initiated:%s\n",
                index, upload.Owner.ID, upload.UploadId, upload.Key, upload.Initiated)
        }
        return
    }
    fmt.Printf("List multipart uploads fail with bucket(%s) !\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [Listing Initiated Multipart Uploads in a Bucket](#)
- [\(GitHub\) Sample Code for Multipart Uploads](#)
- [OBS Error Codes](#)

10.6 Listing Uploaded Parts (SDK for Go)

Function

This API lists the uploaded parts in a specified bucket. This request must contain the multipart upload ID.

You can list the uploaded parts of a specified multipart upload or of all ongoing multipart uploads. A maximum of 1,000 uploaded parts can be returned in a response. If your multipart upload has more than 1,000 parts, you need to send multiple requests to list all uploaded parts. Assembled parts will not be listed.

Restrictions

- To list uploaded parts, you must be the bucket owner or have the required permission (**obs:object:ListMultipartUploadParts** in IAM or **ListMultipartUploadParts** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) ListParts(input *ListPartsInput) (output *ListPartsOutput, err error)
```

Request Parameters

Table 10-33 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------|--------------------|--|
| input | *ListPartsInput | Yes | Explanation: Input parameters for listing uploaded parts. For details, see Table 10-34 . |

Table 10-34 ListPartsInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadId | string | Yes | <p>Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8</p> <p>Value range: The value must contain 1 to 32 characters.</p> <p>Default value: None</p> |
| PartNumberMarker | int | No | <p>Explanation: Part number after which uploaded parts listing begins</p> <p>Restrictions: OBS lists only parts with greater numbers than that specified by this parameter.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|--|
| MaxParts | int | No | <p>Explanation: Maximum number of parts that can be listed per page</p> <p>Restrictions: If the specified value is greater than 1000, only 1,000 parts are returned.</p> <p>Value range: The value ranges from 1 to 1000.</p> <p>Default value: 1000</p> |
| EncodingType | string | No | <p>Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key.</p> <p>Value range: url</p> <p>Default value: None. If you leave this parameter blank, encoding is not applied to Key.</p> |

Responses

Table 10-35 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------------|--|
| output | * ListPartsOutput | <p>Explanation: Returned results. For details, see Table 10-36.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 10-36 ListPartsOutput

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

| Parameter | Type | Description |
|-----------|--------|--|
| Bucket | string | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none">• A bucket name must be unique across all accounts and regions.• A bucket name:<ul style="list-style-type: none">- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.- Cannot be formatted as an IP address.- Cannot start or end with a hyphen (-) or period (.).- Cannot contain two consecutive periods (..), for example, my..bucket.- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket.• If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Value range: The value must contain 3 to 63 characters.</p> |

| Parameter | Type | Description |
|--------------|-------------------------|--|
| Key | string | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadId | string | <p>Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Initiator | Initiator | <p>Explanation: Initiator of the multipart upload. For details, see Table 10-37.</p> |
| Owner | Owner | <p>Explanation: Owner of the multipart upload, which is consistent with Initiator</p> |
| StorageClass | StorageClassType | <p>Explanation: Object storage class</p> <p>Value range: See Table 10-40.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|----------------------|------|---|
| PartNumberMarker | int | <p>Explanation: Part number to start with for listing parts, which is consistent with that set in the request</p> <p>Value range: A non-negative integer</p> <p>Default value: None</p> |
| NextPartNumberMarker | int | <p>Explanation: Part number to start with for the next part listing request. NextPartNumberMarker is returned when not all the parts are listed. You can set PartNumberMarker to this value in the next request to list the remaining parts.</p> <p>Value range: A non-negative integer</p> <p>Default value: None</p> |
| MaxParts | int | <p>Explanation: Maximum number of listed parts that can be listed per page. This parameter is consistent with that set in the request.</p> <p>Restrictions: If the specified value is greater than 1000, only 1,000 parts are returned.</p> <p>Value range: The value ranges from 1 to 1000.</p> <p>Default value: 1000</p> |
| IsTruncated | bool | <p>Explanation: Whether all results are returned in the response</p> <p>Value range:</p> <ul style="list-style-type: none"> • true: Not all results are returned. • false: All results are returned. <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------|-------------------------|--|
| Parts | [] Part | Explanation: List of uploaded parts. For details, see Table 10-39 . |
| EncodingType | string | Explanation: Encoding type for Key in the response. If Key in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode Key . Value range: url Default value: None. If you leave this parameter blank, encoding is not applied to Key . |

Table 10-37 Initiator

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | Explanation: Account (domain) ID of the initiator Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None |
| Display Name | string | No | Explanation: Account name of the initiator Restrictions: The account name can contain 6 to 32 characters and must start with a letter. Only letters, digits, hyphens (-), and underscores (_) are allowed. Default value: None |

Table 10-38 Owner

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| ID | string | Yes if used as a request parameter | <p>Explanation: Account (domain) ID of the owner</p> <p>Value range: To obtain the account ID, see How Do I Get My Account ID and User ID?</p> <p>Default value: None</p> |

Table 10-39 Part

| Parameter | Type | Description |
|------------|--------|---|
| PartNumber | int | <p>Explanation: Part number</p> <p>Value range: An integer ranging from 1 to 10000</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Part ETag, which is a Base64-encoded, 128-bit MD5 value</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

Table 10-40 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | <p>OBS Standard</p> <p>Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.</p> |

| Constant | Default Value | Description |
|------------------|---------------|--|
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Code Examples

This example lists the parts that have been uploaded for a multipart upload.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.ListPartsInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object name (example/objectname as an example).
    input.Key = "example/objectname"
    // Specify the multipart upload ID (00000188677110424014075CC4A77xxx as an example).
    input.UploadId = "00000188677110424014075CC4A77xxx"
    // List the uploaded parts.
    output, err := obsClient.ListParts(input)
    if err == nil {
        fmt.Printf("List part successful with bucket(%s) and object(%s)!\n", input.Bucket, input.Object)
        for index, part := range output.Parts {
            fmt.Printf("Part[%d]-ETag:%s, PartNumber:%d, LastModified:%s, Size:%d\n", index, part.ETag,
                part.PartNumber, part.LastModified, part.Size)
        }
    }
    return
}
fmt.Printf("List part fail with bucket(%s) and object(%s)!\n", input.Bucket, input.Object)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error")
}
```

```
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Listing Uploaded Parts](#)
- [\(GitHub\) Sample Code for Multipart Uploads](#)
- [OBS Error Codes](#)

10.7 Copying a Part (SDK for Go)

Function

This API copies a part to a specified bucket. This request must contain the multipart upload ID.

After creating a multipart upload, you can specify the upload ID and upload parts for the multipart upload. Alternatively, you can call this API to copy all or part of an uploaded object as a part.

Assume that you copy a source object and save it as **part1**. If there is already a **part1** before the copy, the new **part1** will overwrite the existing **part1**. Then, only the new **part1** can be listed and the old **part1** is deleted. Therefore, when using this API, ensure that the target part does not exist or is no longer used, to avoid accidental deletion. The source object keeps unchanged in the entire copy process.

Restrictions

- To copy a part, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control, IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- You cannot determine whether a part copy is successful only based on **status_code** in the HTTP header returned. A **200** response indicates that the server has received the request and starts to process the request. Only when the response body contains ETag, the copy is successful, or the copy fails.

Method

```
func (obsClient ObsClient) CopyPart(input *CopyPartInput) (output *CopyPartOutput, err error)
```

Request Parameters

Table 10-41 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|----------------|--------------------|--|
| input | *CopyPartInput | Yes | Explanation: Input parameters for copying a part. For details, see Table 10-42 . |

Table 10-42 CopyPartInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Bucket | string | Yes | <p>Explanation: Target bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| PartNumber | int | Yes | <p>Explanation: Part number</p> <p>Value range: An integer ranging from 1 to 10000</p> <p>Default value: None</p> |
| UploadId | string | Yes | <p>Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------------|--------|--------------------|--|
| CopySourceBucket | string | Yes | <p>Explanation: Source bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (.), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------------|--------|--------------------|---|
| CopySourceKey | string | Yes | <p>Explanation: Source object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| CopySourceRangeStart | int64 | No | <p>Explanation: Start position from which a part copy begins</p> <p>Value range: A non-negative integer, in bytes</p> <p>Default value: 0</p> |
| CopySourceRangeEnd | int64 | No | <p>Explanation: End position at which a part copy ends</p> <p>Restrictions: The value must be greater than that of RangeStart. The upper limit of the value is the object length minus 1, in bytes.</p> <p>Value range: A non-negative integer, in bytes</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|------------|--------------------|---|
| SseHeader | SseCHeader | No | <p>Explanation: Server-side encryption header used for encrypting the target object. For details, see Table 10-43.</p> <p>Restrictions: If the object is encrypted with the key provided by you during the upload, that key must also be provided in the request message when downloading the object.</p> |
| SourceSseHeader | SseCHeader | No | <p>Explanation: Server-side decryption header used for decrypting the source object. For details, see Table 10-43.</p> |

Table 10-43 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Responses

Table 10-44 List of returned results

| Parameter | Type | Description |
|-----------|--|--|
| output | * CopyPartOutput type CopyPartOutput struct | <p>Explanation: Returned results. For details, see Table 10-45.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 10-45 CopyPartOutput

| Parameter | Type | Description |
|------------|------|--|
| StatusCode | int | <p>Explanation: HTTP status code</p> <p>Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------------|---------------------|---|
| RequestId | string | <p>Explanation: Request ID returned by the OBS server</p> <p>Default value: None</p> |
| ResponseHeaders | map[string][]string | <p>Explanation: HTTP response headers</p> <p>Default value: None</p> |
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the target object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|------------|--|---|
| SseHeader | SseCHeader or SseKmsHeader <code>struct SseCHeader</code> <code>type</code> <code>type</code> <code>SseKmsHeader</code> <code>struct</code> | Explanation: Server-side encryption header. If SSE-C is used, see Table 10-46 . If SSE-KMS is used, see Table 10-47 . |
| PartNumber | int | Explanation: Part number Value range: An integer ranging from 1 to 10000 Default value: None |

Table 10-46 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | Explanation: SSE-C used for encrypting objects Value range: AES256 , indicating objects are encrypted using SSE-C Default value: None |
| Key | string | Yes if used as a request parameter | Explanation: Key for encrypting the object when SSE-C is used Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVAobncnLht/rCB2o/9Cw= . Default value: None |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 10-47 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-KMS used for encrypting objects</p> <p>Value range: kms, indicating objects are encrypted using SSE-KMS</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|-----------------------------------|---|
| Key | string | No if used as a request parameter | <p>Explanation: ID of the KMS master key when SSE-KMS is used</p> <p>Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key key_id</i> 2. <i>key_id</i></p> <p>In the preceding formats:</p> <ul style="list-style-type: none"> <i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints. <i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID? <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. <p>Default value:</p> <ul style="list-style-type: none"> If this parameter is not specified, the default master key will be used. If there is no such a default master key, OBS will create one and use it by default. |

Code Example

This example copies parts from one bucket to another.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
```



```
// securityToken := os.Getenv("SecurityToken")
// Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
with the one currently in use.
endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.CopyPartInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify an object (example/objectname as an example).
input.Key = "example/objectname"
// Specify a source bucket (sourcebucketname as an example).
input.CopySourceBucket = "sourcebucketname"
// Specify an object to copy (example/sourceobjectname as an example) in the source bucket.
input.CopySourceKey = "example/sourceobjectname"
// Specify the number (1 as an example) of the part to upload.
input.PartNumber = 1
// Copy the part.
output, err := obsClient.CopyPart(input)
if err == nil {
    fmt.Printf("Copy part(bucket:%s, object: %s) successful from bucket:%s's object: %s!\n",
        input.Bucket, input.Key, input.CopySourceBucket, input.CopySourceKey)
    fmt.Printf("ETag:%s, LastModified:%s\n", output.ETag, output.LastModified)
    return
}
fmt.Printf("Copy part(bucket:%s, object: %s) fail from bucket:%s's object: %s!\n",
    input.Bucket, input.Key, input.CopySourceBucket, input.CopySourceKey)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Copying a Part](#)
- [\(GitHub\) Sample Code for Multipart Uploads](#)
- [OBS Error Codes](#)

10.8 Aborting a Multipart Upload (SDK for Go)

Function

This API aborts a multipart upload using the multipart upload ID.

After a multipart upload is aborted, the upload ID cannot be used to upload any part. The storage occupied by any uploaded parts will be released. If any part uploads are in progress, aborting the multipart upload might or might not make the uploads successful. To release the storage occupied by all uploaded parts, abort the multipart upload only after all parts have been uploaded.

Restrictions

- To abort a multipart upload, you must be the bucket owner or have the required permission (**obs:object:AbortMultipartUpload** in IAM or **AbortMultipartUpload** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) AbortMultipartUpload(input  
*AbortMultipartUploadInput) (output *BaseModel, err error)
```

Request Parameters

Table 10-48 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|----------------------------|--------------------|---|
| input | *AbortMultipartUploadInput | Yes | Explanation: Input parameters for aborting a multipart upload. For details, see Table 10-49 . |

Table 10-49 AbortMultipartUploadInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| UploadId | string | Yes | <p>Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |

Responses

Table 10-50 List of returned results

| Parameter | Type | Description |
|-----------|-----------------------------|--|
| output | * BaseModel | <p>Explanation: Returned results. For details, see Table 10-51.</p> |
| err | error | <p>Explanation: Error messages returned by the API</p> |

Table 10-51 BaseModel

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string] []string | Explanation: HTTP response headers Default value: None |

Code Example

This example aborts a multipart upload.

```
package main

import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
}
```

```
}
input := &obs.AbortMultipartUploadInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify the object (example/objectname as an example) to upload.
input.Key = "example/objectname"
// Specify the multipart upload ID (00000188677110424014075CC4A77xxx as an example).
input.UploadId = "00000188677110424014075CC4A77xxx"
// Abort the multipart upload.
output, err := obsClient.AbortMultipartUpload(input)
if err == nil {
    fmt.Printf("Abort multipart upload successful!\n")
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Abort multipart upload fail!\n")
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

Helpful Links

- [Aborting a Multipart Upload](#)
- [\(GitHub\) Sample Code for Multipart Uploads](#)
- [OBS Error Codes](#)

11 Other APIs (SDK for Go)

11.1 Creating a Signed URL (SDK for Go)

Function

This API creates a URL whose **Query** parameters are carried with authentication information by specifying the AK and SK, HTTP method, and request parameters. You can provide other users with this URL for temporary access. When generating a URL, you need to specify the validity period of the URL to restrict the access duration of visitors.

If you want to grant other users the permission to perform other operations on buckets or objects (for example, upload or download objects), generate a URL with the corresponding request (for example, to upload an object using the URL that generates the PUT request) and provide the URL for other users.

Restrictions

- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).
- If a CORS or signature mismatch error occurs, refer to the following steps to troubleshoot the issue:
 - a. If CORS is not configured, you need to configure CORS rules on OBS Console. For details, see [Configuring CORS](#).
 - b. If the signatures do not match, check whether signature parameters are correct. For details, see [Authentication of Signature in a URL](#). For example, during an object upload, the backend uses **Content-Type** to calculate the signature and generate an authorized URL, but if **Content-Type** is not set or is set to an incorrect value when the frontend uses the authorized URL, a CORS error occurs. To avoid this issue, ensure that **Content-Type** fields at both the frontend and backend are kept consistent.

Method

```
func (obsClient ObsClient) CreateSignedUrl(input *CreateSignedUrlInput)
(output *CreateSignedUrlOutput, err error)
```

Request Parameters

Table 11-1 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------------|--------------------|--|
| input | *CreateSignedUrlInput | Yes | Explanation: Input parameters for creating a signed URL. For details, see Table 11-2 . |

Table 11-2 CreateSignedUrlInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|----------------|--------------------|---|
| Method | HttpMethodType | Yes | Explanation: HTTP method. For details, see Table 11-3 . |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|---|
| Bucket | string | No | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.) – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------|---------------------------------|--------------------|--|
| Key | string | No | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| SubResource | SubResourceType | No | <p>Explanation: Type of the subresource to access. For details, see Table 11-4.</p> |
| Expires | int | No | <p>Explanation: Expiration time of the signed URL</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 300</p> |
| Headers | map[string]string | No | <p>Explanation: Headers in the request</p> <p>Default value: None</p> |
| QueryParams | map[string]string | No | <p>Explanation: Query parameters in the request</p> <p>Default value: None</p> |

Table 11-3 HttpMethodType

| Constant | Default Value | Description |
|-------------------|---------------|----------------------|
| HttpMethodGet | GET | HTTP GET request |
| HttpMethodPut | POST | HTTP POST request |
| HttpMethodPost | PUT | HTTP PUT request |
| HttpMethodDelete | DELETE | HTTP DELETE request |
| HttpMethodHead | HEAD | HTTP HEAD request |
| HttpMethodOptions | OPTIONS | HTTP OPTIONS request |

Table 11-4 SubResourceType

| Constant | Default Value | Applicable API |
|--------------------------|---------------|--|
| SubResourceStoragePolicy | storagePolicy | Sets or obtains bucket storage classes. |
| SubResourceQuota | quota | Sets or obtains bucket quotas. |
| SubResourceStorageInfo | storageinfo | Obtains bucket storage information. |
| SubResourceLocation | location | Obtains bucket locations. |
| SubResourceAcl | acl | Sets or obtains bucket ACLs or object ACLs. |
| SubResourcePolicy | policy | Sets, obtains, or deletes bucket policies. |
| SubResourceCors | cors | Sets, obtains, or deletes bucket CORS configurations. |
| SubResourceVersioning | versioning | Sets or obtains bucket version statuses. |
| SubResourceWebsite | website | Sets, obtains, or deletes bucket website configurations. |
| SubResourceLogging | logging | Sets or obtains bucket logging settings. |
| SubResourceLifecycle | lifecycle | Sets, obtains, or deletes lifecycle rules of buckets. |
| SubResourceNotification | notification | Sets or obtains the notification configuration of buckets. |

| Constant | Default Value | Applicable API |
|---------------------|---------------|--|
| SubResourceTagging | tagging | Sets, obtains, or deletes bucket tags. |
| SubResourceDelete | delete | Batch deletes objects. |
| SubResourceVersions | versions | Lists versioning objects in buckets. |
| SubResourceUploads | uploads | Lists or initializes multipart uploads in buckets. |
| SubResourceRestore | restore | Restores Archive objects. |

Responses

Table 11-5 List of returned results

| Parameter | Type | Description |
|-----------|------------------------|--|
| output | *CreateSignedUrlOutput | Explanation: Returned results. For details, see Table 11-6 . |
| err | error | Explanation: Error messages returned by the API |

Table 11-6 CreateSignedUrlOutput

| Parameter | Type | Description |
|----------------------------|-------------|---|
| SignedUrl | string | Explanation: Signed URL Default value: None |
| ActualSignedRequestHeaders | http.Header | Explanation: Actual headers in the request initiated by using the signed URL Default value: None |

Code Example

This example creates a signed URL for uploading an object.

```
package main
import (
    "fmt"
    "net/http"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    putObjectInput := &obs.CreateSignedUrlInput{}
    putObjectInput.Method = obs.HttpMethodPut
    putObjectInput.Bucket = "examplebucket"
    putObjectInput.Key = "example/objectname"
    putObjectInput.Expires = 3600
    // Create a signed URL for uploading an object.
    putObjectOutput, err := obsClient.CreateSignedUrl(putObjectInput)
    if err != nil {
        fmt.Println(err)
        return
    }
    fmt.Printf("SignedUrl:%s\n", putObjectOutput.SignedUrl)
    fmt.Printf("ActualSignedRequestHeaders:%v\n", putObjectOutput.ActualSignedRequestHeaders)
    // Call the signed URL.
    payload := strings.NewReader("hello OBS!")
    req, err := http.NewRequest("PUT", putObjectOutput.SignedUrl, payload)
    req.Header = putObjectOutput.ActualSignedRequestHeaders
    if err != nil {
        fmt.Printf("Create request error, errMsg: %s", err.Error())
        return
    }
    response, err := http.DefaultClient.Do(req)
    if err == nil {
        fmt.Printf("Use signed-url successful!\n")
        fmt.Printf("Status:%s,Etag:%s\n", response.Status, response.Header.Get("Etag"))
        return
    }
    fmt.Printf("Use signed-url successful!\n")
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
    attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
```

This example creates a signed URL for downloading an object.

```
package main
import (
    "fmt"
    "net/http"
```

```
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    getObjectInput := &obs.CreateSignedUrlInput{}
    getObjectInput.Method = obs.HttpMethodGet
    getObjectInput.Bucket = "examplebucket"
    getObjectInput.Key = "example/objectname"
    getObjectInput.Expires = 3600
    // Create a signed URL for downloading an object.
    getObjectOutput, err := obsClient.CreateSignedUrl(getObjectInput)
    if err != nil {
        fmt.Println(err)
        return
    }
    fmt.Printf("SignedUrl:%s\n", getObjectOutput.SignedUrl)
    fmt.Printf("ActualSignedRequestHeaders:%v\n", getObjectOutput.ActualSignedRequestHeaders)
    // Call the signed URL.
    req, err := http.NewRequest("GET", getObjectOutput.SignedUrl, nil)
    req.Header = getObjectOutput.ActualSignedRequestHeaders
    if err != nil {
        fmt.Printf("Create request error, errMsg: %s", err.Error())
        return
    }
    response, err := http.DefaultClient.Do(req)
    if err == nil {
        fmt.Printf("Use signed-url successful!\n")
        fmt.Printf("Status:%s,Etag:%s\n", response.Status, response.Header.Get("Etag"))
        p := make([]byte, 1024)
        var readErr error
        var readCount int
        // Read the object content.
        for {
            readCount, readErr = response.Body.Read(p)
            if readCount > 0 {
                fmt.Printf("%s", p[:readCount])
            }
            if readErr != nil {
                break
            }
        }
        return
    }
    fmt.Printf("Use signed-url successful!\n")
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
    attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
```

This example creates a signed URL for deleting an object.

```
package main
import (
    "fmt"
    "net/http"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Create a signed URL for deleting an object.
    deleteObjectInput := &obs.CreateSignedUrlInput{}
    deleteObjectInput.Method = obs.HttpMethodDelete
    deleteObjectInput.Bucket = "examplebucket"
    deleteObjectInput.Key = "example/objectname"
    deleteObjectInput.Expires = 3600
    deleteObjectOutput, err := obsClient.CreateSignedUrl(deleteObjectInput)
    if err != nil {
        fmt.Println(err)
        return
    }
    fmt.Printf("SignedUrl:%s\n", deleteObjectOutput.SignedUrl)
    fmt.Printf("ActualSignedRequestHeaders:%v\n", deleteObjectOutput.ActualSignedRequestHeaders)
    // Call the signed URL.
    req, err := http.NewRequest("DELETE", deleteObjectOutput.SignedUrl, nil)
    req.Header = deleteObjectOutput.ActualSignedRequestHeaders
    if err != nil {
        fmt.Printf("Create request error, errMsg: %s", err.Error())
        return
    }
    response, err := http.DefaultClient.Do(req)
    if err == nil {
        fmt.Printf("Use signed-url successful!\n")
        fmt.Printf("Status:%s\n", response.Status)
        return
    }
    fmt.Printf("Use signed-url successful!\n")
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
    attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
```

11.2 Creating Authentication Parameters for a Browser-based Upload (SDK for Go)

Function

This API generates parameters for authentication. The parameters can be used to upload data through POST operations based on a browser.

NOTE

There are two request parameters generated:

- **Policy**, which corresponds to the **policy** parameter in the form
- **Signature**, which corresponds to the **x-obs-signature** parameter in the form

Restrictions

- To upload an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) CreateBrowserBasedSignature(input
*CreateBrowserBasedSignatureInput) (output
*CreateBrowserBasedSignatureOutput, err error)
```

Request Parameters

Table 11-7 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--|--------------------|--|
| input | * CreateBrowserBasedSignatureInput | Yes | Explanation: Input parameters for creating authentication parameters for a browser-based upload. For details, see Table 11-8 . |

Table 11-8 CreateBrowserBasedSignatureInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | No | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> - Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. - Cannot be formatted as an IP address. - Cannot start or end with a hyphen (-) or period (.). - Cannot contain two consecutive periods (..), for example, my..bucket. - Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|-------------------|--------------------|--|
| Key | string | No | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| Expires | int | No | <p>Explanation: Expiration time of authentication for a browser-based upload</p> <p>Value range: 0 to $(2^{63} - 1)$, in seconds</p> <p>Default value: 300</p> |
| FormParams | map[string]string | No | <p>Explanation: Parameters of a browser-based upload, not including key, policy, and signature.</p> <p>Value range: acl, cache-control, content-type, content-disposition, content-encoding, and expires</p> <p>Default value: None</p> |

Responses

Table 11-9 List of returned results

| Parameter | Type | Description |
|-----------|------------------------------------|---|
| output | *CreateBrowserBasedSignatureOutput | Explanation: Returned results. For details, see Table 11-10 . |
| err | error | Explanation: Error messages returned by the API |

Table 11-10 CreateBrowserBasedSignatureOutput

| Parameter | Type | Description |
|--------------|--------|--|
| OriginPolicy | string | Explanation: policy not encoded by Base64. This parameter can only be used for verification. Example: <code>{"expiration":"2023-09-12T12:52:59Z","conditions":[{"content-type":"text/plain"}, {"bucket":"examplebucket"}, {"key":"example/objectname"}],}</code> Default value: None |
| Policy | string | Explanation: Base64-encoded value of policy in the form Example: <code>eyJleHBpcmF0aW9uljoiMjAyMy0wOS0xMlQxMj01Mj01OVoiLCJjb25kaXRpb25zljpbeyJjb250ZW50LXR5cGUiOiJ0ZXh0L3BsYWluIn0seyJidWNrZXQiOiJleGFtcGxlYnVja2V0In0seyJrZXkiOiJleGFtcGxlL29iamVjdG5hbWUifSxdfQ==</code> Default value: None |
| Signature | string | Explanation: signature in the form Example: <code>g0jQr4v9VWd1Q2FOFDG6LGfV9Cw=</code> Default value: None |

Code Example

This example creates a signed URL for uploading an object using POST.

```
package main
import (
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Create a signed URL for uploading an object.
    input := &obs.CreateBrowserBasedSignatureInput{}
    input.Bucket = "examplebucket"
    input.Key = "example/objectname"
    input.FormParams = map[string]string{
        "content-type": "text/plain",
        "success_action_redirect": "https://www.example.com",
    }
    output, err := obsClient.CreateBrowserBasedSignature(input)
    if err == nil {
        fmt.Printf("Policy:%s\n", output.Policy)
        fmt.Printf("Signature:%s\n", output.Signature)
    } else {
        fmt.Println(err)
        return
    }
    requestBody := &bytes.Buffer{}
    writer := multipart.NewWriter(requestBody)
    writer.WriteField("key", input.Key)
    writer.WriteField("AccessKeyID", ak)
    writer.WriteField("policy", output.Policy)
    writer.WriteField("signature", output.Signature)
    writer.WriteField("success_action_redirect", "https://www.example.com")
    // writer.WriteField("token", obs.WithSecurityToken(securityToken))
    writer.WriteField("Content-Type", "text/plain")
    formFile, _ := writer.CreateFormFile("file", "filename")
    io.Copy(formFile, strings.NewReader("hello OBS!"))
    writer.Close()
    url := "https://" + input.Bucket + "." + strings.Replace(endPoint, "https://", "", 1)
    request, err := http.NewRequest("POST", url, requestBody)
    if err != nil {
        fmt.Println(err)
        return
    }
    request.Header.Set("Content-Type", writer.FormDataContentType())
    client := &http.Client{}
    response, err := client.Do(request)
    if err != nil {
```

```
    fmt.Println(err)
    return
}
defer response.Body.Close()
if err == nil {
    fmt.Printf("Use signed-url successful!\n")
    fmt.Printf("Status:%s,Etag:%s\n", response.Status, response.Header.Get("Etag"))
    return
}
fmt.Printf("Use signed-url successful!\n")
fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
fmt.Println(err)
}
```

11.3 Server-Side Encryption (SDK for Go)

Function

This API configures server-side encryption for objects, so that they will be encrypted or decrypted when you upload them to or download them from a bucket.

The encryption and decryption happen on the server side.

There are different encryption methods for you to choose from. Available encryption methods include server-side encryption with KMS-managed keys (SSE-KMS) and server-side encryption with customer-provided keys (SSE-C). Both of the two methods use the AES-256 algorithm.

With SSE-KMS, OBS uses the keys provided by KMS for server-side encryption.

With SSE-C, OBS uses the keys and MD5 values provided by customers for server-side encryption.

When server-side encryption is used, the returned ETag value is not the object's MD5 value. OBS will verify the object's MD5 value as long as the upload request includes the **Content-MD5** header, no matter whether server-side encryption is used or not.

For more information, see [Server-Side Encryption](#).

Restrictions

- To upload an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy). For details, see [Introduction to OBS Access Control](#), [IAM Custom Policies](#), and [Configuring an Object Policy](#).
- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) PutFile(input *PutFileInput) (output *PutObjectOutput, err error)
```

Supported APIs

The following table lists APIs related to server-side encryption:

| Method in OBS SDK for Go | Description | Supported Encryption Method |
|-----------------------------------|--|-----------------------------|
| ObsClient.PutObject | Sets the encryption algorithm and key during object upload to enable server-side encryption. | SSE-KMS SSE-C |
| ObsClient.PutFile | Sets the encryption algorithm and key during file upload to enable server-side encryption. | SSE-KMS SSE-C |
| ObsClient.GetObject | Sets the decryption algorithm and key during object download to decrypt the object. | SSE-C |
| ObsClient.CopyObject | <ol style="list-style-type: none"> 1. Sets the decryption algorithm and key for decrypting the source object during object copy. 2. Sets the encryption algorithm and key during object copy to enable the encryption algorithm for the target object. | SSE-KMS SSE-C |
| ObsClient.GetObjectMetadata | Sets the decryption algorithm and key when obtaining the object metadata to decrypt the object. | SSE-C |
| ObsClient.InitiateMultipartUpload | Sets the encryption algorithm and key when initializing a multipart upload task to enable server-side encryption for the final object generated. | SSE-KMS SSE-C |
| ObsClient.UploadPart | Sets the encryption algorithm and key during multipart upload to enable server-side encryption for parts. | SSE-C |
| ObsClient.CopyPart | <ol style="list-style-type: none"> 1. Sets the decryption algorithm and key for decrypting the source object during multipart copy. 2. Sets the encryption algorithm and key during multipart copy to enable the encryption algorithm for the target part. | SSE-C |

Code Examples

This example encrypts object **example/objectname** that is uploaded using streaming.

```
package main
import (
    "crypto/md5"
    "encoding/base64"
    "fmt"
    "os"
    "strings"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.PutObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to upload.
    input.Key = "example/objectname"
    // Specify the content to upload.
    input.Body = strings.NewReader("Hello OBS")
    // Specify a server-side encryption header (obs.SseCHeader as an example).
    key := os.Getenv("Key")
    digest := md5.New()
    digest.Write([]byte(key))
    bodyHash := digest.Sum(nil)
    input.SseHeader = obs.SseCHeader{
        Encryption: "AES256",
        Key:         base64.StdEncoding.EncodeToString([]byte(key)), // 32byteslongsecretkeymustprovided
        KeyMD5:     base64.StdEncoding.EncodeToString(bodyHash),
    }
    // Upload you local file using streaming.
    output, err := obsClient.PutObject(input)
    if err == nil {
        fmt.Printf("Put object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("StorageClass:%s, ETag:%s\n",
            output.StorageClass, output.ETag)
        return
    }
    fmt.Printf("Put object(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
    }
}
```

```
    fmt.Println(err)
  }
}
```

This example downloads the encrypted object **example/objectname** using streaming.

```
package main
import (
    "crypto/md5"
    "encoding/base64"
    "fmt"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    // coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    // to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    // import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    // with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    // method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Specify a server-side encryption header (obs.SseCHeader as an example).
    key := os.Getenv("Key")
    digest := md5.New()
    digest.Write([]byte(key))
    bodyHash := digest.Sum(nil)
    input.SseHeader = obs.SseCHeader{
        Encryption: "AES256",
        Key:         base64.StdEncoding.EncodeToString([]byte(key)), // 32byteslongsecretkeymustprovided
        KeyMD5:     base64.StdEncoding.EncodeToString(bodyHash),
    }
    // Download the object using streaming.
    output, err := obsClient.GetObject(input)
    if err == nil {
        // Close output.Body after using it, to avoid connection leakage.
        defer output.Body.Close()
        fmt.Printf("Get object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        // Read the object content.
        p := make([]byte, 1024)
        var readErr error
        var readCount int
        for {
            readCount, readErr = output.Body.Read(p)
            if readCount > 0 {
                fmt.Printf("%s", p[:readCount])
            }
            if readErr != nil {
                break
            }
        }
    }
}
```



```
    }  
  }  
  return  
}  
fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)  
if obsError, ok := err.(obs.ObsError); ok {  
  fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error  
response.")  
  fmt.Println(obsError.Error())  
} else {  
  fmt.Println("An Exception was found, which means the client encountered an internal problem when  
attempting to communicate with OBS, for example, the client was unable to access the network.")  
  fmt.Println(err)  
}  
}
```

Helpful Links

- [Server-Side Encryption](#)
- [\(GitHub\) Sample Code for Server-Side Encryption](#)
- [OBS Error Codes](#)

12 Single-Connection Bandwidth Throttling (SDK for Go)

Function

A client will use a large amount of bandwidth when it accesses OBS objects. This impacts the normal use of other applications. To resolve this problem, you can use the single-connection bandwidth throttling.

NOTICE

This API currently supports only the **GetObject** method.

Restrictions

- The mapping between OBS regions and endpoints must comply with what is listed in [Regions and Endpoints](#).

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput,
obs.WithTrafficLimitHeader(traffic *int64)) (output *GetObjectOutput, err error)
```

Request Parameters

Table 12-1 List of request parameters

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|-----------------|--------------------|--|
| input | *GetObjectInput | Yes | Explanation: Input parameters for downloading an object. For details, see Table 12-2 . |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| traffic | *int64 | Yes | Explanation: Bandwidth limit for a download request Value range: 819200 to 838860800, in bit/s Default value: None |

Table 12-2 GetObjectInput

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|--------------------|--|
| Bucket | string | Yes | <p>Explanation: Bucket name</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • A bucket name must be unique across all accounts and regions. • A bucket name: <ul style="list-style-type: none"> – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|----------------------------|--------|--------------------|--|
| Key | string | Yes | <p>Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name.</p> <p>For example, if the address for accessing the object is examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt, the object name is folder/test.txt.</p> <p>Value range: The value must contain 1 to 1,024 characters.</p> <p>Default value: None</p> |
| ResponseCacheControl | string | No | <p>Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| ResponseContentDisposition | string | No | <p>Explanation: Cache-Control header in the response. It specifies the name of the object when it is downloaded.</p> <p>Default value: None</p> |
| ResponseContentEncoding | string | No | <p>Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------------|--------|--------------------|--|
| ResponseContentLanguage | string | No | <p>Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded.</p> <p>Default value: None</p> |
| ResponseContent-Type | string | No | <p>Explanation: Content-Type header in the response. It specifies the object file type.</p> <p>Default value: None</p> |
| ResponseExpires | string | No | <p>Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p>Default value: None</p> |
| VersionId | string | No | <p>Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None. If this parameter is left blank, the latest version of the object is obtained.</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|--------------|--------|--------------------|---|
| ImageProcess | string | No | <p>Explanation: Image processing command or style. Example for resizing and rotating an image: image/resize,m_fixed,w_100,h_100/rotate,90</p> <p>Value range: Command format: image/commands Style format: style/style name For details about image processing parameters, see Processing Images.</p> <p>Default value: If no commands are entered, the original image is returned.</p> |
| RangeStart | int64 | No | <p>Explanation: Start position for object download</p> <p>Value range: 0 to the object length, in bytes</p> <p>Default value: 0, indicating the download starts from the first byte of the object</p> |
| RangeEnd | int64 | No | <p>Explanation: End position for object download</p> <p>Value range:</p> <ul style="list-style-type: none"> The value must be greater than that of RangeStart. The upper limit of the value is the object length minus 1, in bytes. <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------------|-----------|--------------------|---|
| IfMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 16 bytes.</p> <p>Default value: None</p> |
| IfNoneMatch | string | No | <p>Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| IfModifiedSince | time.Time | No | <p>Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-------------------|------------------|--------------------|---|
| IfUnmodifiedSince | time.Time | No | <p>Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Sample code: time.Now().Add(time.Duration(24) * time.Hour)</p> <p>Default value: None</p> |
| SseHeader | SseHeader | No | <p>Explanation: Server-side decryption headers. For details, see Table 12-7.</p> <p>Restrictions: If the object uploaded to a server is encrypted with the key provided by the client, the key must also be provided in the message for downloading the object.</p> |

Table 12-3 SseCHheader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |

| Parameter | Type | Mandatory (Yes/No) | Description |
|-----------|--------|------------------------------------|--|
| Key | string | Yes if used as a request parameter | Explanation: Key for encrypting the object when SSE-C is used Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVAobn cnLht/rCB2o/9Cw= . Default value: None |
| KeyMD5 | string | No if used as a request parameter | Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key. Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ== . Default value: None |

List of returned results

Table 12-4 List of returned results

| Parameter | Type | Description |
|-----------|-------------------------|--|
| output | *GetObjectOutput | Explanation: Returned results. For details, see Table 12-5 . |
| err | error | Explanation: Error messages returned by the API |

Table 12-5 GetObjectOutput

| Parameter | Type | Description |
|-----------------|----------------------------------|---|
| StatusCode | int | Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. For more information, see Status Code . Default value: None |
| RequestId | string | Explanation: Request ID returned by the OBS server Default value: None |
| ResponseHeaders | map[string][]string | Explanation: HTTP response headers Default value: None |
| Body | io.ReadCloser | Explanation: Object data stream to download Default value: None |
| StorageClass | StorageClassType | Explanation: Object storage class Value range: See Table 12-6 . Default value: None |

| Parameter | Type | Description |
|-------------|--------|---|
| AllowOrigin | string | <p>Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket.</p> <p>Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com.</p> <p>Default value: None</p> |
| AllowHeader | string | <p>Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p>Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| AllowMethod | string | <p>Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects.</p> <p>Value range: The following HTTP methods are supported:</p> <ul style="list-style-type: none"> • GET • PUT • HEAD • POST • DELETE <p>Default value: None</p> |

| Parameter | Type | Description |
|---------------|--------|---|
| ExposeHeader | string | <p>Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p>Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed.</p> <p>Default value: None</p> |
| MaxAgeSeconds | int | <p>Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p>Restrictions: Each CORS rule can contain only one MaxAgeSeconds.</p> <p>Value range: 0 to $(2^{31} - 1)$, in seconds</p> <p>Default value: 100</p> |
| ContentLength | int64 | <p>Explanation: Object size in bytes</p> <p>Value range: 0 to $(2^{63} - 1)$, in bytes</p> <p>Default value: None</p> |
| CacheControl | string | <p>Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when an object is downloaded.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|--------------------|-----------|--|
| ContentDisposition | string | <p>Explanation: Content-Disposition header in the response</p> <p>Default value: None</p> |
| ContentEncoding | string | <p>Explanation: Content-Encoding header in the response</p> <p>Default value: None</p> |
| ContentLanguage | string | <p>Explanation: Content-Language header in the response</p> <p>Default value: None</p> |
| ContentType | string | <p>Explanation: MIME type of the object file. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data.</p> <p>Value range: See What Is Content-Type (MIME)?</p> <p>Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.</p> |
| Expires | string | <p>Explanation: Expires header in the response</p> <p>Default value: None</p> |
| LastModified | time.Time | <p>Explanation: Time when the last modification was made to the object</p> <p>Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|--------|---|
| ETag | string | <p>Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5.</p> <p>Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| VersionId | string | <p>Explanation: Object version ID</p> <p>Value range: The value must contain 32 characters.</p> <p>Default value: None</p> |
| Restore | string | <p>Explanation: Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned.</p> <p>For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires.</p> <p>Restrictions: If the object is not in the Archive storage class, leave this parameter blank.</p> <p>Default value: None</p> |

| Parameter | Type | Description |
|-------------------------|---------------------------|--|
| Expiration | string | <p>Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</p> <p>Default value: None</p> |
| SseHeader | SseHeader or SseKmsHeader | <p>Explanation: Server-side encryption header information. If SSE-C is used, see Table 12-7. If SSE-KMS is used, see Table 12-8.</p> |
| WebsiteRedirectLocation | string | <p>Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to.</p> <p>The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. <p>Default value: None</p> |

| Parameter | Type | Description |
|-----------|-------------------|---|
| Metadata | map[string]string | <p>Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata.</p> <p>Restrictions:</p> <ul style="list-style-type: none"> • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. <p>Default value: None</p> |

Table 12-6 StorageClassType

| Constant | Default Value | Description |
|----------------------|---------------|---|
| StorageClassStandard | STANDARD | OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response. |
| StorageClassWarm | WARM | OBS Infrequent Access Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed. |
| StorageClassCold | COLD | OBS Archive Used for storing rarely accessed (once a year) data. |

Table 12-7 SseCHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|---|
| Encryption | string | Yes if used as a request parameter | <p>Explanation: SSE-C used for encrypting objects</p> <p>Value range: AES256, indicating objects are encrypted using SSE-C</p> <p>Default value: None</p> |
| Key | string | Yes if used as a request parameter | <p>Explanation: Key for encrypting the object when SSE-C is used</p> <p>Restrictions: The value is a Base64-encoded 256-bit key, for example, K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</p> <p>Default value: None</p> |
| KeyMD5 | string | No if used as a request parameter | <p>Explanation: MD5 value of the key for encrypting objects when SSE-C is used. This value is used to check whether any error occurs during the transmission of the key.</p> <p>Restrictions: The value is encrypted by MD5 and then encoded by Base64, for example, 4XvB3tbNTN+tIEVa0/fGaQ==.</p> <p>Default value: None</p> |

Table 12-8 SseKmsHeader

| Parameter | Type | Mandatory (Yes/No) | Description |
|------------|--------|------------------------------------|--|
| Encryption | string | Yes if used as a request parameter | Explanation: SSE-KMS used for encrypting objects Value range: kms , indicating objects are encrypted using SSE-KMS Default value: None |
| Key | string | No if used as a request parameter | Explanation: ID of the KMS master key when SSE-KMS is used Value range: Valid value formats are as follows: 1. <i>regionID.domainID:key/key_id</i> 2. <i>key_id</i> In the preceding formats: <ul style="list-style-type: none"><i>regionID</i> indicates the ID of the region where the key is used. You can obtain it from Regions and Endpoints.<i>domainID</i> indicates the ID of the account where the key is used. To obtain it, see How Do I Get My Account ID and User ID?<i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see Viewing a CMK. Default value: <ul style="list-style-type: none">If this parameter is not specified, the default master key will be used.If there is no such a default master key, OBS will create one and use it by default. |

Code Examples

This example downloads **example/objectname** from **examplebucket** at a limited rate.

```
package main
import (
```

```
"fmt"
"os"
obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func main() {
    // Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    // Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    // securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify the object (example/objectname as an example) to download.
    input.Key = "example/objectname"
    // Define a download limit rate, in bit/s. 819200 is used as an example, indicating that the download
    request is limited to 100 KB/s.
    var traffic int64 = 819200
    // Limit the object download rate using obs.WithTrafficLimitHeader.
    output, err := obsClient.GetObject(input, obs.WithTrafficLimitHeader(traffic))
    if err == nil {
        fmt.Printf("Get object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        // Close output.Body after using it, to avoid connection leakage.
        defer output.Body.Close()
        // Read the object content.
        p := make([]byte, 1024)
        var readErr error
        var readCount int
        for {
            readCount, readErr = output.Body.Read(p)
            if readCount > 0 {
                fmt.Printf("%s", p[:readCount])
            }
            if readErr != nil {
                break
            }
        }
        return
    }
    fmt.Printf("List objects under the bucket(%s) fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

Helpful Links

- [OBS Error Codes](#)

13 Troubleshooting (SDK for Go)

13.1 OBS Server-Side Error Codes

If the OBS server encounters an error when processing a request, a response containing the error code and error description is returned. The following table lists details about each error code and HTTP status code:

| HTTP Status Code | Error Code | Error Message | Solution |
|-----------------------|-------------------|---|---|
| 301 Moved Permanently | PermanentRedirect | The requested bucket can be accessed only through the specified address. Send subsequent requests to the address. | Send the request to the returned redirection address. |
| 301 Moved Permanently | WebsiteRedirect | The website request lacks bucketName . | Put the bucket name in the request and try again. |
| 307 Moved Temporarily | TemporaryRedirect | Temporary redirection. If the DNS is updated, the request is redirected to the bucket. | The system automatically redirects the request or sends the request to the redirection address. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------|--------------------------|---|---|
| 400 Bad Request | BadDigest | The specified value of Content-MD5 does not match the value received by OBS. | Check whether the MD5 value carried in the header is the same as that calculated by the message body. |
| 400 Bad Request | BadDomainName | Invalid domain name. | Use a valid domain name. |
| 400 Bad Request | BadRequest | Invalid request parameter. | Modify the parameter according to the error details returned in the message body. |
| 400 Bad Request | CustomDomainAlreadyExist | The configured domain already exists. | It has been configured and does not need to be configured again. |
| 400 Bad Request | CustomDomainNotExist | Delete the domain that does not exist. | It is not configured or has been deleted. You do not need to delete it. |
| 400 Bad Request | EntityTooLarge | The size of the object uploaded using the POST method exceeds the upper limit. | Modify the conditions specified in the policy when posting the object or reduce the object size. |
| 400 Bad Request | EntityTooSmall | The size of the object uploaded using the POST method does not reach the lower limit. | Modify the conditions specified in the policy when posting the object or increase the object size. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------|-------------------------------------|--|---|
| 400 Bad Request | IllegalLocation-ConstraintException | A request without Location is sent for creating a bucket in a non-default region. | Send the bucket creation request to the default region, or send the request with the Location of the non-default region. |
| 400 Bad Request | IncompleteBody | No complete request body is received due to network or other problems. | Upload the object again. |
| 400 Bad Request | IncorrectNumberOfFilesInPostRequest | Each POST request must contain one file to be uploaded. | Carry a file to be uploaded. |
| 400 Bad Request | InvalidArgument | Invalid parameter. | Modify the parameter according to the error details returned in the message body. |
| 400 Bad Request | InvalidBucket | The bucket to be accessed does not exist. | Try another bucket name. |
| 400 Bad Request | InvalidBucketName | The bucket name specified in the request is invalid, which may have exceeded the maximum length, or contain special characters that are not allowed. | Try another bucket name. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------|---------------------------------|--|---|
| 400 Bad Request | InvalidEncryptionAlgorithmError | Incorrect encryption algorithm. The object cannot be decrypted due to incorrect encryption header carried when downloading the SSE-C encrypted object. | Carry the correct encryption header when downloading the object. |
| 400 Bad Request | InvalidLocationConstraint | The specified Location in the bucket creation request is invalid or does not exist. | Correct the Location in the bucket creation request. |
| 400 Bad Request | InvalidPart | One or more specified parts are not found. The parts may not be uploaded or the specified entity tags (ETags) do not match the parts' ETags. | Specify the correct parts and entity tags. |
| 400 Bad Request | InvalidPartOrder | Parts are not listed in ascending order by part number. | Sort the parts in ascending order and merge them again. |
| 400 Bad Request | InvalidPolicyDocument | The content of the form does not meet the conditions specified in the policy document. | Modify the policy in the constructed form according to the error details in the message body and try again. |
| 400 Bad Request | InvalidRedirectLocation | Invalid redirect location. | Specify the correct IP address. |
| 400 Bad Request | InvalidRequest | Invalid request. | Modify the parameter according to the error details returned in the message body. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------|-------------------------------|---|---|
| 400 Bad Request | InvalidRequestBody | The request body is invalid. The request requires a message body but no message body is uploaded. | Upload the message body in the correct format. |
| 400 Bad Request | InvalidTargetBucketForLogging | The delivery group has no ACL permission for the target bucket. | Configure the target bucket ACL and try again. |
| 400 Bad Request | KeyTooLongError | The provided key is too long. | Use a shorter key. |
| 400 Bad Request | KMS.DisabledException | The master key is disabled in the SSE-KMS mode. | Replace the key and try again, or contact the technical support. |
| 400 Bad Request | KMS.NotFoundException | The customer master key (CMK) does not exist in SSE-KMS mode. | Retry with the correct master key. |
| 400 Bad Request | MalformedACLError | The provided XML file has syntax errors or does not meet the format requirements. | Use the correct XML format to retry. |
| 400 Bad Request | MalformedError | The XML format in the request is incorrect. | Use the correct XML format to retry. |
| 400 Bad Request | MalformedLoggingStatus | The XML format of Logging is incorrect. | Use the correct XML format to retry. |
| 400 Bad Request | MalformedPolicy | The bucket policy does not pass. | Modify the bucket policy according to the error details returned in the message body. |
| 400 Bad Request | MalformedQuotaError | The Quota XML format is incorrect. | Use the correct XML format to retry. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------|--------------------------|---|--|
| 400 Bad Request | MalformedXML | An XML file of a configuration item is in incorrect format. | Use the correct XML format to retry. |
| 400 Bad Request | MaxMessageLengthExceeded | Copying an object does not require a message body in the request. | Remove the message body and retry. |
| 400 Bad Request | MetadataTooLarge | The size of the metadata header has exceeded the upper limit. | Reduce the size of the metadata header. |
| 400 Bad Request | MissingRegion | The region information is missing in the request, and the default region is required in the system. | Carry the region information in the request. |
| 400 Bad Request | MissingRequestBodyError | This error code is returned after you send an empty XML file. | Provide the correct XML file. |
| 400 Bad Request | MissingRequired-Header | A required header is missing in the request. | Provide the required header. |
| 400 Bad Request | MissingSecurity-Header | A required header is missing in the request. | Provide the required header. |
| 400 Bad Request | TooManyBuckets | You have attempted to create more buckets than allowed. | Delete some buckets and try again. |
| 400 Bad Request | TooManyCustomDomains | Too many user accounts are configured. | Delete some user accounts and try again. |
| 400 Bad Request | TooManyWrongSignatures | The request is rejected due to high-frequency errors. | Replace AK and try again. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------|-------------------------------|---|--|
| 400 Bad Request | UnexpectedContent | The request requires a message body which is not carried by the client, or the request does not require a message body but the client carries the message body. | Try again according to the instruction. |
| 400 Bad Request | UserKeyMustBeSpecified | This operation is only available to special users. | Contact the technical support. |
| 403 Forbidden | AccessDenied | Access denied, because the request does not carry a date header or the header format is incorrect. | Provide a correct date header in the request. |
| 403 Forbidden | AccessForbidden | Insufficient permissions. No CORS rule is configured for the bucket, or the CORS rule is not matched. | Modify the CORS configuration of the bucket or send the matched OPTIONS request based on the CORS configuration of the bucket. |
| 403 Forbidden | AllAccessDisabled | The user has no permission to perform a specific operation. The bucket name is forbidden. | Try another bucket name. |
| 403 Forbidden | DeregisterUserId | The user has been deregistered. | Top up or re-register. |
| 403 Forbidden | InArrearOrInsufficientBalance | The user account is in arrears, or the account balance insufficient. | Top up the account. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------|--------------------------|---|---|
| 403 Forbidden | InsufficientStorageSpace | Insufficient storage space. | If the quota is exceeded, increase quota or delete some objects. |
| 403 Forbidden | InvalidAccessKeyId | The access key ID provided by the customer does not exist in the system. | Provide correct access key ID. |
| 403 Forbidden | NotSignedUp | You have not registered with the system. | Register OBS. |
| 403 Forbidden | RequestTimeTooSkewed | The request time and the server's time differ a lot. | Check whether the difference between the client time and the current time is too large. |
| 403 Forbidden | SignatureDoesNotMatch | The provided signature in the request does not match the signature calculated by OBS. | Check your secret access key and signature calculation method. |
| 403 Forbidden | Unauthorized | You have not been authenticated in real name. | Authenticate your real name and try again. |
| 404 Not Found | NoSuchBucket | The bucket does not exist. | Create a bucket and perform the operation again. |
| 404 Not Found | NoSuchBucketPolicy | No bucket policy exists. | Configure a bucket policy. |
| 404 Not Found | NoSuchCORSConfiguration | No CORS configuration exists. | Configure CORS first. |
| 404 Not Found | NoSuchCustomDomain | The requested user domain does not exist. | Set a user domain first. |
| 404 Not Found | NoSuchKey | The specified key does not exist. | Upload the object first. |

| HTTP Status Code | Error Code | Error Message | Solution |
|------------------------|-------------------------------|--|--|
| 404 Not Found | NoSuchLifecycle-Configuration | The requested Lifecycle does not exist. | Configure a lifecycle rule first. |
| 404 Not Found | NoSuchUpload | The specified multipart upload does not exist. The upload ID does not exist or the multipart upload has been aborted or completed. | Use the existing part or reinitialize the part. |
| 404 Not Found | NoSuchVersion | The specified version ID does not match any existing version. | Use a correct version ID. |
| 404 Not Found | NoSuchWebsiteConfiguration | The requested website does not exist. | Configure the website first. |
| 405 Method Not Allowed | MethodNotAllowed | The specified method is not allowed against the requested resource. The message "Specified method is not supported." is returned. | The method is not allowed. |
| 408 Request Timeout | RequestTimeout | The socket connection to the server has no read or write operations within the timeout period. | Check the network and try again, or contact technical support. |
| 409 Conflict | BucketAlreadyExists | The requested bucket name already exists. The bucket namespace is shared by all users of OBS. Try again with another bucket name. | Try another bucket name. |

| HTTP Status Code | Error Code | Error Message | Solution |
|--|-------------------------|--|--|
| 409 Conflict | BucketAlreadyOwnedByYou | Your previous request for creating the named bucket succeeded and you already own it. | You do not need to create the bucket again. |
| 409 Conflict | BucketNotEmpty | The bucket that you tried to delete is not empty. | Delete the objects in the bucket and then delete the bucket. |
| 409 Conflict | InvalidBucketState | Invalid bucket status. After cross-region replication is configured, bucket versioning cannot be disabled. | Enable bucket versioning or cancel cross-region replication. |
| 409 Conflict | OperationAborted | A conflicting operation is being performed on this resource. Try again later. | Try again later. |
| 409 Conflict | ServiceNotSupported | The request method is not supported by the server. | Not supported by the server. Contact technical support. |
| 411 Length Required | MissingContentLength | The HTTP header Content-Length is not provided. | Provide the Content-Length header. |
| 412 Precondition Failed | PreconditionFailed | At least one of the specified preconditions is not met. | Modify according to the condition prompt in the returned message body. |
| 416 Client Requested Range Not Satisfiable | InvalidRange | The requested range cannot be obtained. | Replace the range value and try again. |
| 500 Internal Server Error | InternalServerError | An internal error occurs. Try again later. | Contact the technical support. |

| HTTP Status Code | Error Code | Error Message | Solution |
|-------------------------|-----------------------|--|---|
| 501 Not Implemented | ServiceNotImplemented | The request method is not implemented by the server. | Not supported currently. Contact the technical support. |
| 503 Service Unavailable | ServiceUnavailable | The server is overloaded or has internal errors. | Try again later or contact the technical support. |
| 503 Service Unavailable | SlowDown | Reduce your request frequency. | Reduce your request frequency. |

13.2 SDK Custom Errors

Each time you fail to call an **ObsClient** API, an SDK custom error — containing an HTTP status code, OBS error code, and error message — is returned, to help you locate and rectify the fault. The struct is defined as follows:

Type Definition

```
type ObsError struct
```

Parameter Description

| Field | Type | Description |
|-----------------|---------------------|--|
| StatusCode | int | HTTP status code |
| RequestId | string | Request ID returned by the OBS server |
| ResponseHeaders | map[string][]string | HTTP response headers |
| Status | string | Reason description |
| Code | string | Error code returned by the OBS server |
| Message | string | Error description returned by the OBS server |
| Resource | string | Bucket and object related to the error |
| HostId | string | Requested server ID |

13.3 Log Analysis

Log Configuration

OBS Go SDK provides the logging function based on the **log** standard library. You can use **InitLog** to enable logging, **CloseLog** to disable logging, and synchronize log information in the cache to log files. Sample code:

```
// Import the dependency package.
import (
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)

func main() {
    // Set the path for saving log files.
    var logFullPath string = "./logs/OBS-SDK.log"
    // Set the size (in bytes) for each log file.
    var maxLogSize int64 = 1024 * 1024 * 10
    // Set the number of retained log files.
    var backups int = 10
    // Set the log level.
    var level = obs.LEVEL_INFO
    // Specify whether to print logs to the console.
    var logToConsole bool = false

    // Enable logging.
    obs.InitLog(logFullPath, maxLogSize, backups, level, logToConsole)
    // Disable logging.
    obs.CloseLog()
}
```

NOTE

- The logging function is disabled by default. You need to enable it manually.
- By default, logs are written to the cache (then written to log files after logs are accumulated to a certain amount). You can call **obs.CloseLog()** to forcibly synchronize the log information from the cache to log files.

Log Format

The SDK log format is: Log time|file saving the printed log: row number|log level|log content The following are example logs:

```
2018/03/13 16:21:50 [INFO]: http.go:79|Enter method ListBuckets...
2018/03/13 16:21:52 [INFO]: http.go:287|Do http request cost 2597 ms
```

Log Levels

When current logs cannot be used to troubleshoot system faults, you can change the log level to obtain more information. The following table lists the enumeration constants provided by OBS Go SDK of supported log levels:

| Constant | Default Value | Description |
|-----------|---------------|--|
| LEVEL_OFF | 500 | Close level. If this level is set, logging will be disabled. |

| Constant | Default Value | Description |
|-------------|---------------|--|
| LEVEL_ERROR | 400 | Error level. If this level is set, only error information will be printed. |
| LEVEL_WARN | 300 | Warning level. If this level is set, information about logs at the error level and information about partial critical events will be printed. |
| LEVEL_INFO | 200 | Information level. If this level is set, information about logs of the warning level, time consumed for each HTTP/HTTPS request, and time consumed for calling the ObsClient API will be printed. |
| LEVEL_DEBUG | 100 | Debugging level. If this level is set, information about logs at the information level, HTTP/HTTPS request and response headers, and stringToSign information calculated by authentication algorithm will be printed. |

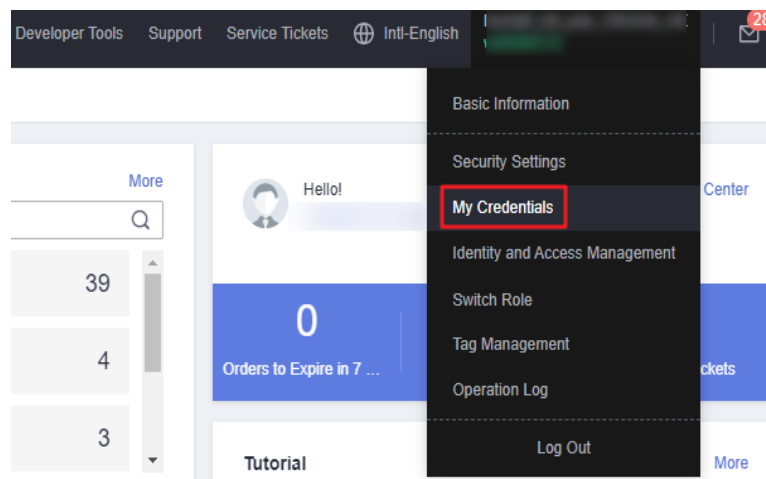
14 FAQ (SDK for Go)

14.1 How Do I Get My Account ID and User ID?

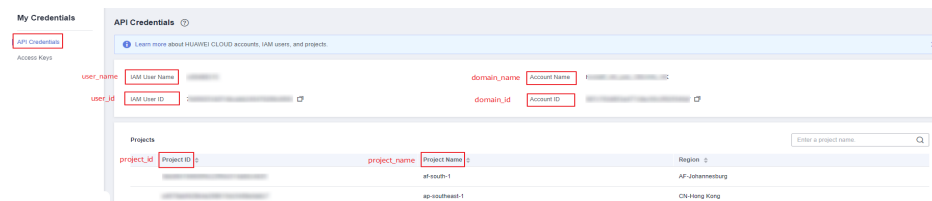
Obtaining Account, IAM User, and Project Information

- Using the console
 - a. On the Huawei Cloud homepage, click **Console** in the upper right corner.
 - b. In the upper right corner, hover over the username and choose **My Credentials** from the drop-down list.

Figure 14-1 My Credentials



- c. On the **API Credentials** page, view the account name, account ID, IAM user name, IAM user ID, project name, and project ID.
The project ID varies depending on the region where your service is located.

Figure 14-2 Viewing the account, user, and project information

- **Calling an API**
 - To obtain a user ID, see [Listing IAM Users](#).
 - To obtain a project ID, see [Querying Project Information](#).

Obtaining User Group Information

Step 1 Log in to the Huawei Cloud console, access the IAM console, and choose **User Groups** in the navigation pane.

Step 2 Expand the details of the desired user group and view its name and ID.

----End

Obtaining Region Information

Step 1 Log in to the Huawei Cloud console, access the IAM console, and choose **Projects** in the navigation pane.

Step 2 View the content in the **Project Name** column. The content in this column indicates the ID of the region where the project belongs.

----End

Obtaining Agency Information

Step 1 Log in to the Huawei Cloud console, access the IAM console, and choose **Agencies** in the navigation pane.

Step 2 Hover over the desired agency to view its name (in the first line) and ID (in the second line) in the dark pop-up box.

----End

14.2 What Is Content-Type (MIME)?

Multipurpose Internet Mail Extensions (MIME) type is a standard way of describing a data type. The MIME type is passed in the Content-Type header.

NOTE

If you do not specify Content-Type when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to Content-Type.

Content-Type

Content-Type indicates the type of data to send or receive and determine the form and encoding method browsers will use to display data (mainly custom

client files or media files). If no content type is specified, the type will be generated based on the file name extension. If there is no extension, the content type is **application/octet-stream** by default.

Common Content Types

The commonly used content types are given in the table below.

Table 14-1 List of common content types

| File Name Extension | Content-Type (Mime-Type) | File Name Extension | Content-Type (Mime-Type) |
|---------------------------------------|--------------------------------|---------------------|---|
| .* (binary stream, unknown file type) | application/octet-stream | .tif | image/tiff |
| .a11 | application/x-a11 | .acp | audio/x-mei-aac |
| .ai | application/postscript | .aif | audio/aiff |
| .aifc | audio/aiff | .aiff | audio/aiff |
| .anv | application/x-anv | .apk | application/vnd.android.package-archive |
| .asa | text/asa | .asf | video/x-ms-asf |
| .asp | text/asp | .asx | video/x-ms-asf |
| .au | audio/basic | .avi | video/avi |
| .awf | application/vnd.adobe.workflow | .biz | text/xml |
| .bmp | application/x-bmp | .bot | application/x-bot |
| .c4t | application/x-c4t | .c90 | application/x-c90 |
| .cal | application/x-cals | .cat | application/vnd.ms-pki.seccat |
| .cdf | application/x-netcdf | .cdr | application/x-cdr |
| .cel | application/x-cel | .cer | application/x-x509-ca-cert |
| .cg4 | application/x-g4 | .cgm | application/x-cgm |
| .cit | application/x-cit | .class | java/ |
| .cml | text/xml | .cmp | application/x-cmp |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|---|---------------------|----------------------------|
| .cmx | application/x-cmx | .cot | application/x-cot |
| .crl | application/pkix-crl | .crt | application/x-x509-ca-cert |
| .csi | application/x-csi | .css | text/css |
| .csv | text/csv | .cut | application/x-cut |
| .dbf | application/x-dbf | .dbm | application/x-dbm |
| .dbx | application/x-dbx | .dcd | text/xml |
| .dcx | application/x-dcx | .der | application/x-x509-ca-cert |
| .dgn | application/x-dgn | .dib | application/x-dib |
| .dll | application/x-msdownload | .doc | application/msword |
| .docx | application/vnd.openxmlformats-officedocument.wordprocessingml.document | .dot | application/msword |
| .dotx | application/vnd.openxmlformats-officedocument.wordprocessingml.template | .drw | application/x-drw |
| .dtd | text/xml | .dwf | Model/vnd.dwf |
| .dwf | application/x-dwf | .dwg | application/x-dwg |
| .dxb | application/x-dxb | .dxf | application/x-dxf |
| .edn | application/vnd.adobe.edn | .emf | application/x-emf |
| .eml | message/rfc822 | .ent | text/xml |
| .epi | application/x-epi | .eps | application/x-ps |
| .eps | application/postscript | .etd | application/x-ebx |
| .exe | application/x-msdownload | .fax | image/fax |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|-------------------------------|---------------------|--------------------------|
| .fdf | application/vnd.fdf | .fif | application/fractals |
| .fo | text/xml | .frm | application/x-frm |
| .g4 | application/x-g4 | .gbr | application/x-gbr |
| . | application/x- | .gif | image/gif |
| .gl2 | application/x-gl2 | .gp4 | application/x-gp4 |
| .hgl | application/x-hgl | .hmr | application/x-hmr |
| .hpg | application/x-hpgl | .hpl | application/x-hpl |
| .hqx | application/mac-binhex40 | .hrf | application/x-hrf |
| .hta | application/hta | .htc | text/x-component |
| .htm | text/html | .html | text/html |
| .htt | text/webviewhtml | .htx | text/html |
| .icb | application/x-icb | .ico | image/x-icon |
| .ico | application/x-ico | .iff | application/x-iff |
| .ig4 | application/x-g4 | .igs | application/x-igs |
| .iii | application/x-iphone | .img | application/x-img |
| .ins | application/x-internet-signup | .ipa | application/vnd.iphone |
| .isp | application/x-internet-signup | .IVF | video/x-ivf |
| .java | java/* | .jfif | image/jpeg |
| .jpe | image/jpeg | .jpe | application/x-jpe |
| .jpeg | image/jpeg | .jpg | image/jpeg |
| .jpg | application/x-jpg | .js | application/x-javascript |
| .jsp | text/html | .la1 | audio/x-liquid-file |
| .lar | application/x-laplayer-reg | .latex | application/x-latex |
| .lavs | audio/x-liquid-secure | .lbm | application/x-lbm |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|-------------------------------|---------------------|----------------------------|
| .lmsff | audio/x-la-lms | .ls | application/x-javascript |
| .ltr | application/x-ltr | .m1v | video/x-mpeg |
| .m2v | video/x-mpeg | .m3u | audio/mpegurl |
| .m4e | video/mpeg4 | .mac | application/x-mac |
| .man | application/x-troff-man | .math | text/xml |
| .mdb | application/msaccess | .mdb | application/x-mdb |
| .mfp | application/x-shockwave-flash | .mht | message/rfc822 |
| .mhtml | message/rfc822 | .mi | application/x-mi |
| .mid | audio/mid | .midi | audio/mid |
| .mil | application/x-mil | .mml | text/xml |
| .mnd | audio/x-musicnet-download | .mns | audio/x-musicnet-stream |
| .mocha | application/x-javascript | .mov | video/quicktime |
| .movie | video/x-sgi-movie | mp1 | audio/mp1 |
| .mp2 | audio/mp2 | .mp2v | video/mpeg |
| .mp3 | audio/mp3 | .mp4 | video/mp4 |
| .mpa | video/x-mpg | .mpd | application/vnd.ms-project |
| .mpe | video/x-mpeg | .mpeg | video/mpg |
| .mpg | video/mpg | .mpga | audio/rn-mpeg |
| .mpp | application/vnd.ms-project | .mps | video/x-mpeg |
| .mpt | application/vnd.ms-project | .mpv | video/mpg |
| .mpv2 | video/mpeg | .mpw | application/vnd.ms-project |
| .mpx | application/vnd.ms-project | .mtx | text/xml |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|----------------------------------|---------------------|---|
| .mxd | application/x-mxd | .net | image/pnetvue |
| .nrf | application/x-nrf | .nws | message/rfc822 |
| .odc | text/x-ms-odc | .out | application/x-out |
| .p10 | application/pkcs10 | .p12 | application/x-pkcs12 |
| .p7b | application/x-pkcs7-certificates | .p7c | application/pkcs7-mime |
| .p7m | application/pkcs7-mime | .p7r | application/x-pkcs7-certreqresp |
| .p7s | application/pkcs7-signature | .pc5 | application/x-pc5 |
| .pci | application/x-pci | .pcl | application/x-pcl |
| .pcx | application/x-pcx | .pdf | application/pdf |
| .pdb | chemical/x-pdb | .pdx | application/vnd.adobe.pdx |
| .pfx | application/x-pkcs12 | .pgl | application/x-pgl |
| .pic | application/x-pic | .pko | application/vnd.ms-pki.pko |
| .pl | application/x-perl | .plg | text/html |
| .pls | audio/scpls | .plt | application/x-plt |
| .png | image/png | .png | application/x-png |
| .pot | application/vnd.ms-powerpoint | .potx | application/vnd.openxmlformats-officedocument.presentationml.template |
| .ppa | application/vnd.ms-powerpoint | .ppm | application/x-ppm |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|---|---------------------|---|
| .pps | application/vnd.ms-powerpoint | .ppsx | application/vnd.openxmlformats-officedocument.presentationml.slide-show |
| .ppt | application/vnd.ms-powerpoint | .ppt | application/x-ppt |
| .pptx | application/vnd.openxmlformats-officedocument.presentationml.presentation | .pr | application/x-pr |
| .prf | application/pics-rules | .prn | application/x-prn |
| .prt | application/x-prt | .ps | application/x-ps |
| .ps | application/postscript | .ptn | application/x-ptn |
| .pwz | application/vnd.ms-powerpoint | .r3t | text/vnd.rn-realtex3d |
| .ra | audio/vnd.rn-realaudio | .ram | audio/x-pn-realaudio |
| .ras | application/x-ras | .rat | application/rat-file |
| .rdf | text/xml | .rec | application/vnd.rn-recording |
| .red | application/x-red | .rgb | application/x-rgb |
| .rjs | application/vnd.rn-realsystem-rjs | .rjt | application/vnd.rn-realsystem-rjt |
| .rlc | application/x-rlc | .rle | application/x-rle |
| .rm | application/vnd.rn-realmedia | .rmf | application/vnd.adobe.rmf |
| .rmi | audio/mid | .rmj | application/vnd.rn-realsystem-rmj |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|--|---------------------|-------------------------------------|
| .rmm | audio/x-pn-realaudio | .rmp | application/vnd.rn-rn_music_package |
| .rms | application/vnd.rn-realmedia-secure | .rmvb | application/vnd.rn-realmedia-vbr |
| .rmx | application/vnd.rn-realsystem-rmx | .rnx | application/vnd.rn-realplayer |
| .rp | image/vnd.rn-realpik | .rpm | audio/x-pn-realaudio-plugin |
| .rsml | application/vnd.rn-rsml | .rt | text/vnd.rn-realtex |
| .rtf | application/msword | .rtf | application/x-rtf |
| .rv | video/vnd.rn-realvideo | .sam | application/x-sam |
| .sat | application/x-sat | .sdp | application/sdp |
| .sdw | application/x-sdw | .sis | application/vnd.symbian.install |
| .sixx | application/vnd.symbian.install | .sit | application/x-stuffit |
| .slb | application/x-slb | .sld | application/x-sld |
| .sldx | application/vnd.openxmlformats-officedocument.presentationml.slide | .slk | drawing/x-slk |
| .smi | application/smil | .smil | application/smil |
| .smk | application/x-smk | .snd | audio/basic |
| .sol | text/plain | .sor | text/plain |
| .spc | application/x-pkcs7-certificates | .spl | application/futuresplash |
| .spp | text/xml | .ssm | application/streamingmedia |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|----------------------------------|---------------------|-------------------------------|
| .sst | application/vnd.ms-pki.certstore | .stl | application/vnd.ms-pki.stl |
| .stm | text/html | .sty | application/x-sty |
| .svg | image/svg+xml | .swf | application/x-shockwave-flash |
| .tdf | application/x-tdf | .tg4 | application/x-tg4 |
| .tga | application/x-tga | .tif | image/tiff |
| .tif | application/x-tif | .tiff | image/tiff |
| .tld | text/xml | .top | drawing/x-top |
| .torrent | application/x-bittorrent | .tsd | text/xml |
| .txt | text/plain | .uin | application/x-icq |
| .uls | text/iuls | .vcf | text/x-vcard |
| .vda | application/x-vda | .vdx | application/vnd.visio |
| .vml | text/xml | .vpg | application/x-mpeg005 |
| .vsd | application/vnd.visio | .vsd | application/x-vsdx |
| .vss | application/vnd.visio | .vst | application/vnd.visio |
| .vst | application/x-vst | .vsw | application/vnd.visio |
| .vsx | application/vnd.visio | .vtx | application/vnd.visio |
| .vxml | text/xml | .wav | audio/wav |
| .wax | audio/x-ms-wax | .wb1 | application/x-wb1 |
| .wb2 | application/x-wb2 | .wb3 | application/x-wb3 |
| .wbmp | image/vnd.wap.wbmp | .wiz | application/msword |
| .wk3 | application/x-wk3 | .wk4 | application/x-wk4 |
| .wkq | application/x-wkq | .wks | application/x-wks |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|---|---------------------|--|
| .wm | video/x-ms-wm | .wma | audio/x-ms-wma |
| .wmd | application/x-ms-wmd | .wmf | application/x-wmf |
| .wml | text/vnd.wap.wml | .wmv | video/x-ms-wmv |
| .wmx | video/x-ms-wmx | .wmz | application/x-ms-wmz |
| .wp6 | application/x-wp6 | .wpd | application/x-wpd |
| .wpg | application/x-wpg | .wpl | application/vnd.ms-wpl |
| .wq1 | application/x-wq1 | .wr1 | application/x-wr1 |
| .wri | application/x-wri | .wrk | application/x-wrk |
| .ws | application/x-ws | .ws2 | application/x-ws |
| .wsc | text/scriptlet | .wsdl | text/xml |
| .wvx | video/x-ms-wvx | .xap | application/x-silverlight-app |
| .x_b | application/x-x_b | .xdp | application/vnd.adobe.xdp |
| .xdr | text/xml | .xfd | application/vnd.adobe.xfd |
| .xdf | application/vnd.adobe.xfdf | .xhtml | text/html |
| .xls | application/vnd.ms-excel | .xls | application/x-xls |
| .xlsx | application/vnd.openxmlformats-officedocument.spreadsheetml.sheet | .xltx | application/vnd.openxmlformats-officedocument.spreadsheetml.template |
| .xlw | application/x-xlw | .xml | text/xml |
| .xpl | audio/scpls | .xq | text/xml |
| .xql | text/xml | .xquery | text/xml |
| .xsd | text/xml | .xsl | text/xml |
| .xslt | text/xml | .xwd | application/x-xwd |

| File Name Extension | Content-Type(Mime-Type) | File Name Extension | Content-Type(Mime-Type) |
|---------------------|-------------------------|---------------------|-------------------------|
| .x_t | application/x-x_t | .yaml | text/vnd.yaml |
| .yaml | text/vnd.yaml | .webp | image/webp |
| .tar | application/x-tar | .zip | application/zip |

14.3 How Do I Specify Content-SHA256?

You can upload the **x-obs-content-sha256** header when uploading an object or a part. The value of this header is the hexadecimal value converted from the SHA256 value of the request body and is calculated from **Hex(SHA256Hash(<payload>))**. The server calculates and verifies the SHA256 value of the message body in the request with **x-obs-content-sha256** included, which may make performance deteriorate, but is recommended for security purposes. Sample code is as follows:

This example deletes the asynchronous fetch policy of bucket **examplebucket**.

```
package main
import (
    "crypto/sha256"
    "fmt"
    "io"
    "os"
    obs "github.com/huaweicloud/huaweicloud-sdk-go-obs/obs"
)
func sha256File(path string) string {
    file, err := os.Open(path) // Open the file for reading
    if err != nil {
        panic(err)
    }
    defer file.Close() // Be sure to close your file!
    hash := sha256.New() // Use the Hash in crypto/sha256
    if _, err := io.Copy(hash, file); err != nil {
        panic(err)
    }
    return fmt.Sprintf("%x", hash.Sum(nil))
}
func main() {
    //Obtain an AK/SK pair using environment variables or import an AK/SK pair in other ways. Using hard
    coding may result in leakage.
    //Obtain an AK/SK pair on the management console. For details, see https://support.huaweicloud.com/intl/en-us/usermanual-ca/ca\_01\_0003.html.
    ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // (Optional) If you use a temporary AK/SK pair and a security token to access OBS, you are advised not
    to use hard coding to reduce leakage risks. You can obtain an AK/SK pair using environment variables or
    import an AK/SK pair in other ways.
    securityToken := os.Getenv("SecurityToken")
    // Enter the endpoint corresponding to the bucket. CN-Hong Kong is used here as an example. Replace it
    with the one currently in use.
    endPoint := "https://obs.ap-southeast-1.myhuaweicloud.com"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken),
    obs.WithSignature(obs.SignatureObs))
}
```

```
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.PutObjectInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify the object (example/objectname as an example) to download.
input.Key = "example/objectname"
filePath := "localfile"
fd, _ := os.Open(filePath)
defer fd.Close()
input.Body = fd
// Upload you local file using streaming.
output, err := obsClient.PutObject(input, obs.WithCustomHeader("x-obs-content-sha256",
sha256File(filePath)))
if err == nil {
    fmt.Printf("Put object(%s) under the bucket(%s) successful!\n", input.Key, input.Bucket)
    fmt.Printf("StorageClass:%s, ETag:%s\n",
        output.StorageClass, output.ETag)
    return
}
fmt.Printf("Put object(%s) under the bucket(%s) fail!\n", input.Key, input.Bucket)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

NOTICE

OBS SDK for Go supports integrity check with both MD5 and SHA256 (SHA256 is recommended for security purposes).

14.4 Why Does the SDK Source Code Contain **acs.amazonaws.com**?

To be compatible with AWS S3, the OBS SDK source code contains **acs.amazonaws.com** as a fixed format.

The SDK neither processes nor accesses this keyword and only takes it as a constant.

You can ignore this keyword. The figure below gives an example. For details, see [SDK for Go](#).

```
func prepareGrantURI(grant Grant) string {
    if grant.Grantee.URI == GroupAllUsers || grant.Grantee.URI == GroupAuthenticatedUsers {
        return fmt.Sprintf("<URI>%s</URI>", "http://acs.amazonaws.com/groups/global/", grant.Grantee.URI)
    }
    if grant.Grantee.URI == GroupLogDelivery {
        return fmt.Sprintf("<URI>%s</URI>", "http://acs.amazonaws.com/groups/s3/", grant.Grantee.URI)
    }
    return fmt.Sprintf("<URI>%s</URI>", grant.Grantee.URI)
}
```