

**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"><li>Added <b>obs.WithCustomHeader</b> that allows you to add custom headers in the requests of clients interacting with OBS.</li><li>Supported custom bucket domain names, with the <b>SetBucketCustomDomain</b>, <b>GetBucketCustomDomain</b>, and <b>DeleteBucketCustomDomain</b> APIs added.</li><li>Supported mirroring-based back to source, with the <b>SetBucketMirrorBackToSource</b>, <b>GetBucketMirrorBackToSource</b>, and <b>DeleteBucketMirrorBackToSource</b> APIs added.</li></ul>	-
3.23.3	New features	Added <b>obs.WithCallbackHeader</b> 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 <b>obs.WithTrafficLimitHeader</b> that limits the bandwidth for a single connection.	Yes

## 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 SDK features are available only in some regions. If you encountered the HTTP status code 405 during the use of OBS SDK for Go, check whether the region supports this feature. For details, refer to [Function Overview](#) or [submit a service ticket](#) to contact technical support.
- **obs** is used as the [namespace](#), which is compatible with earlier OBS 2.0 versions (2.2.x).
- 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
<a href="#">Creating a Bucket</a>	obsClient.CreateBucket	Creates a bucket.
<a href="#">Obtaining a Bucket List</a>	obsClient.ListBuckets	Returns a list of buckets in alphabetical order.
<a href="#">Checking Whether a Bucket Exists</a>	obsClient.HeadBucket	Determines whether a bucket exists.
<a href="#">Deleting a Bucket</a>	obsClient.DeleteBucket	Deletes an empty bucket.
<a href="#">Listing Objects in a Bucket</a>	obsClient.ListObjects	Returns some or all (up to 1,000) of the objects in a bucket.
<a href="#">Listing Object Versions in a Bucket</a>	obsClient.ListVersions	Lists some or all (up to 1,000) of the object versions in a bucket.
<a href="#">Obtaining Bucket Metadata</a>	obsClient.GetBucketMetadata	Returns the metadata information of a bucket.
<a href="#">Obtaining the Region of a Bucket</a>	obsClient.GetBucketLocation	Returns the region where the bucket is created.
<a href="#">Obtaining Storage Information of a Bucket</a>	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
<a href="#">Configuring a Storage Quota</a>	obsClient.SetBucketQuota	Sets a storage quota for a bucket.
<a href="#">Obtaining a Bucket Storage Quota</a>	obsClient.GetBucketQuota	Returns the storage quota of a bucket.
<a href="#">Configuring Storage Class for a Bucket</a>	obsClient.SetBucketStoragePolicy	Configures a storage class for a bucket.
<a href="#">Obtaining the Storage Class of a Bucket</a>	obsClient.GetBucketStoragePolicy	Returns the storage class of a bucket.
<a href="#">Configuring a Bucket ACL</a>	obsClient.SetBucketAcl	Configures the ACL for a bucket.
<a href="#">Obtaining the Bucket ACL</a>	obsClient.GetBucketAcl	Returns the bucket ACL.
<a href="#">Configuring Logging for a Bucket</a>	obsClient.SetBucketLoggingConfiguration	Configures logging for a bucket.
<a href="#">Obtaining the Logging Configuration of a Bucket</a>	obsClient.GetBucketLoggingConfiguration	Returns the logging configuration of a bucket.
<a href="#">Configuring a Bucket Policy</a>	obsClient.SetBucketPolicy	Configures a policy for a bucket.
<a href="#">Obtaining the Policy of a Bucket</a>	obsClient.GetBucketPolicy	Returns the policy of a bucket.
<a href="#">Deleting a Bucket Policy</a>	obsClient.DeleteBucketPolicy	Deletes the policy of a bucket.
<a href="#">Configuring Lifecycle Rules for a Bucket</a>	obsClient.SetBucketLifecycleConfiguration	Configure lifecycle rules for a bucket to periodically transition objects between storage classes and delete objects.
<a href="#">Obtaining the Lifecycle Configuration of a Bucket</a>	obsClient.GetBucketLifecycleConfiguration	Returns the lifecycle configuration of a bucket.
<a href="#">Deleting the Lifecycle Configuration of a Bucket</a>	obsClient.DeleteBucketLifecycleConfiguration	Deletes all lifecycle rules of a bucket.

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

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

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

# 3 Preparations (SDK for Go)

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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 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. The following describes how to obtain access keys of these two types.

- To get permanent access keys, do as follows:

- a. Log in to OBS 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 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 security credentials, refer to the following:  
Temporary security credentials are issued by the system and are only valid for 15 minutes to 24 hours. They follow the principle of least privilege. When using temporary security credentials, you must use an AK/SK pair and a security token together.  
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

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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 <b>go get</b> command.

## Method 1: Downloading an Installation Package and Creating a Go Project

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/obs
```

# 5 Getting Started with OBS SDK for Go

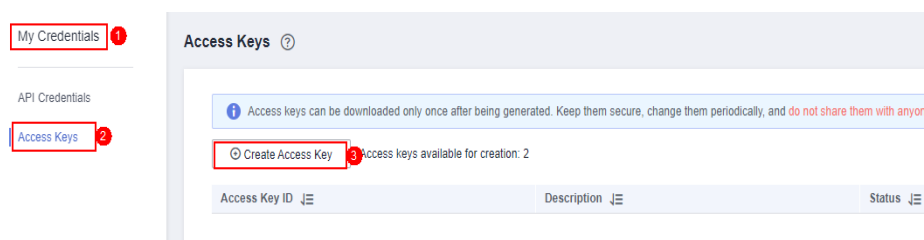
## Preparing Access Keys

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.

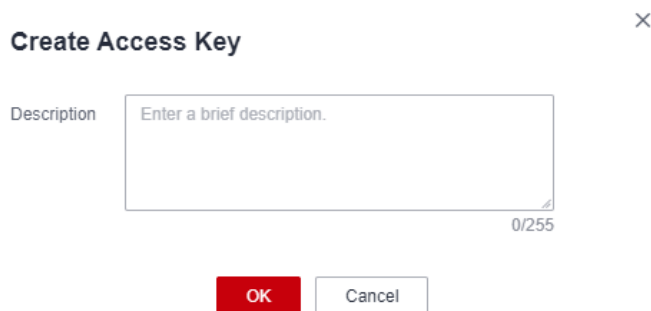
1. Log in to the [management console](#).
2. In the upper right corner, hover your cursor over the username and choose **My Credentials**.
3. On the **My Credentials** page, click **Access Keys** in the navigation pane.
4. On the **Access Keys** page, click **Create Access Key**.



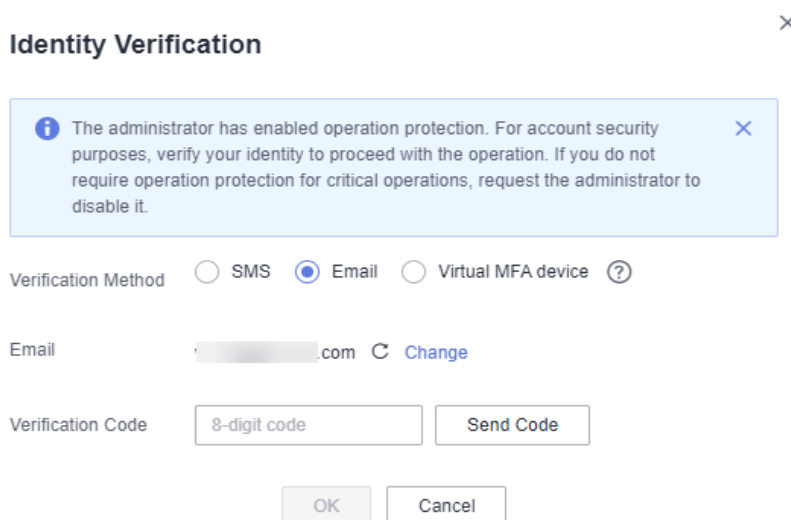
### NOTE

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

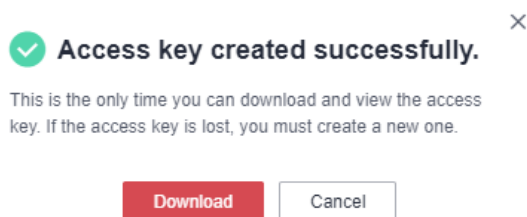
5. In the **Create Access Key** dialog box, enter a description (recommended), and click **OK**.



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 file **credentials.csv** to obtain the 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**.

```
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 Namespace (SDK for Go)

**obs** is the global namespace of OBS SDK for Go. 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**.

## 6.2 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)



Parameter	Type	Mandatory (Yes/No)	Description
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 <a href="#">Regions and Endpoints</a> .
securityToken	string	No	The security token in temporary security credentials.
configurers	configurer (private type contained in the <b>obs</b> package)	No	A group of parameters used to configure <b>ObsClient</b> , 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
WithSslVerifyAndPemCerts(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 <b>60</b> , 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 <b>60</b> .	[10, 60]

Configurer	Description	Recommended Value
WithSocketTimeout(socketTimeout int)	Specifies the timeout duration for transmitting data at the socket layer, in seconds. The default value is <b>60</b> .	[10, 60]
WithIdleConnTimeout(idleConnTimeout int)	Specifies the timeout period of an idle HTTP connection in the connection pool, in seconds. The default value is <b>30</b> .	Default
WithMaxRetryCount(maxRetryCount int)	Specifies the maximum number of retries when an HTTP/HTTPS connection is abnormal. The default value is <b>3</b> .	[1, 5]
WithProxyUrl(proxyUrl string)	Configures the HTTP proxy.	N/A
WithHttpTransport(transport *http.Transport)	Configures custom structs of the <b>Transport</b> type.	Default
WithRequestContext(ctx context.Context)	Configures the context for each HTTP request.	N/A
WithMaxRedirectCount(maxRedirectCount int)	Specifies the maximum number of times that the HTTP/HTTPS request is redirected. The default value is <b>3</b> .	[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`.
-

## 6.3 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	<a href="#">Level</a>	Yes	Log level
logToConsole	bool	Yes	Whether to print logs to the console Value options: <b>true</b> or <b>false</b> <b>true</b> : Logs are printed to the console. <b>false</b> : Logs are not printed to the console. Default value: <b>false</b>

**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.

Constant	Default Value	Description
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 <b>ObsClient</b> 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 <b>stringToSign</b> 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.



## 6.4 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
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 offers methods for all bucket-related APIs to access OBS using signed URLs. Such a method may contain a signed URL, headers included in a request, and data passed by 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	<b>Explanation:</b> Input parameters for creating a bucket. For details, see <a href="#">Table 7-2</a> .

**Table 7-2** CreateBucketInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> Region where a bucket will be created</p> <p><b>Restrictions:</b> If the used endpoint is <b>obs.myhuaweicloud.com</b>, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p><b>Value range:</b> To learn about valid regions and endpoints, see <a href="#">Regions and Endpoints</a>. 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><b>Default value:</b> If <b>obs.myhuaweicloud.com</b> is used as the endpoint and no region is specified, <b>cn-north-1</b> (the CN North-Beijing1 region) is used by default.</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Access control list (ACL) that can be pre-defined when a bucket is created. For details about ACLs, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 7-3</a>.</p> <p><b>Default value:</b> <b>private</b></p>
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> Bucket storage class that can be pre-defined during bucket creation</p> <p><b>Value range:</b> <a href="#">StorageClassType</a> lists the available value options.</p> <p><b>Default value:</b> <b>STANDARD</b></p>

Parameter	Type	Mandatory (Yes/No)	Description
Grant ReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can list objects, multipart uploads, and object versions in the bucket you are creating, and can obtain bucket metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
Grant WriteId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE</b> permission is granted to. The account with the <b>WRITE</b> 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><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
Grant ReadAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL information of the bucket you are creating.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

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

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



Parameter	Type	Mandatory (Yes/No)	Description
IsFSFileInterface	bool	No	<p><b>Explanation:</b> Whether a parallel file system is created</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> A parallel file system is created.</li> <li>• <b>false:</b> A bucket is created.</li> </ul> <p><b>Default value:</b> <b>false</b></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, merge parts, copy parts, and cancel 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><b>NOTE</b> <b>AclPublicReadDelivered</b> 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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <b>AclPublicReadWriteDelivered</b> 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 (&lt; 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	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-6</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-6** BaseModel

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

Parameter	Type	Description
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None

## Code Examples

This example creates a bucket named **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 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	* <a href="#">ListBucketInput</a>	No	<b>Explanation:</b> Input parameters for obtaining a bucket list. For details, see <a href="#">Table 7-8</a> .

**Table 7-8** ListBucketsInput

Parameter	Type	Mandatory (Yes/No)	Description
QueryLocation	bool	No	<p><b>Explanation:</b> Whether to query the bucket region</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li><b>true:</b> The bucket location is queried.</li> <li><b>false:</b> The bucket location is not queried.</li> </ul> <p><b>Default value:</b> false</p>
BucketType	<a href="#">BucketType</a>	No	<p><b>Explanation:</b> Type of buckets to list</p> <p><b>Value range:</b> See <a href="#">BucketType</a>.</p> <p><b>Default value:</b> If this parameter is not specified, all buckets and parallel file systems will be listed by default.</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	* <a href="#">ListBucketsOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-11</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 7-11** ListBucketsOutput

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

**Table 7-12** Owner

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

**Table 7-13** Bucket

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



Parameter	Type	Description
Location	string	<p><b>Explanation:</b> Region where a bucket is located</p> <p><b>Restrictions:</b> If the used endpoint is <b>obs.myhuaweicloud.com</b>, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p><b>Value range:</b> To learn about valid regions and endpoints, see <a href="#">Regions and Endpoints</a>. 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><b>Default value:</b> If <b>obs.myhuaweicloud.com</b> is used as the endpoint and no region is specified, <b>cn-north-1</b> (the CN North-Beijing1 region) is used by default.</p>
BucketType	string	<p><b>Explanation:</b> Bucket type</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>Object bucket: <b>OBJECT</b></li> <li>Parallel file system: <b>POSIX</b></li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-15** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-16</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-16** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-18** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-19</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-19** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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	<b>Explanation:</b> Input parameters for listing objects in a bucket. For details, see <a href="#">Table 7-21</a> .

**Table 7-21** ListObjectsInput

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

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

Parameter	Type	Mandatory (Yes/No)	Description
Delimiter	string	No	<p><b>Explanation:</b></p> <p>Object names are grouped by this parameter, which is often used with <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a bucket has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcde</b> 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 <b>[delimiter=/]</b> to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Encoding Type	string	No	<p><b>Explanation:</b> Encoding method that is applied to some elements in the response. If <b>Delimiter</b>, <b>Marker</b>, <b>Prefix</b>, <b>CommonPrefixes</b>, <b>NextMarker</b>, and <b>Key</b> contain control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to <b>url</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> 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	* <a href="#">ListObjectsOutput</a>	<p><b>Explanation:</b> Returned parameters for listing objects in a bucket. For details, see <a href="#">Table 7-23</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 7-23** ListObjectsOutput

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

Parameter	Type	Description
Location	string	<p><b>Explanation:</b> Region where a bucket is located</p> <p><b>Restrictions:</b> If the used endpoint is <b>obs.myhuaweicloud.com</b>, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p><b>Value range:</b> To learn about valid regions and endpoints, see <a href="#">Regions and Endpoints</a>. 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><b>Default value:</b> If <b>obs.myhuaweicloud.com</b> is used as the endpoint and no region is specified, <b>cn-north-1</b> (the CN North-Beijing1 region) is used by default.</p>



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

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

Parameter	Type	Description
Delimiter	string	<p><b>Explanation:</b></p> <p>Object names are grouped by this parameter, which is often used with <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a bucket has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcd</b> 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 <b>[delimiter=/]</b> to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p><b>Value range:</b></p> <p>The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b></p> <p>None</p>

Parameter	Type	Description
MaxKeys	int	<p><b>Explanation:</b> 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><b>Value range:</b> The value ranges from 1 to 1000. If the specified value is beyond this range, only 1,000 objects are returned.</p> <p><b>Default value:</b> 1000</p>
IsTruncated	bool	<p><b>Explanation:</b> 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><b>Value range:</b> <b>true:</b> Not all results are returned. <b>false:</b> All results are returned.</p> <p><b>Default value:</b> None</p>
NextMarker	string	<p><b>Explanation:</b> 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 <b>Marker</b> to the value of this parameter to list the remaining objects.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
Contents	<a href="#">[]Content</a>	<p><b>Explanation:</b> List of objects in the bucket. For details, see <a href="#">Content</a>.</p>

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

**Table 7-24** Content

Parameter	Type	Description
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
LastModified	time.Time	<p><b>Explanation:</b> Time (UTC) when an object was last modified</p> <p><b>Value range:</b> UTC time</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Size	int64	<p><b>Explanation:</b> Object size in bytes</p> <p><b>Value range:</b> The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b> None</p>
Owner	<b>Owner</b>	<p><b>Explanation:</b> Object owner. This parameter contains the domain ID and name of the object owner. For details, see <a href="#">Table 7-26</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
StorageClass	string	<b>Explanation:</b> Object storage class <b>Value range:</b> See <a href="#">Table 7-25</a> . <b>Default value:</b> 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	<b>Explanation:</b> Account (domain) ID of the owner <b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a> <b>Default value:</b> 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	<b>Explanation:</b> Input parameters for listing object versions in a bucket. For details, see <a href="#">Table 7-28</a> .

**Table 7-28** ListVersionsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
KeyMarker	string	No	<p><b>Explanation:</b> 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><b>Restrictions:</b> This parameter is only used for listing objects with multiple versions.</p> <p><b>Value range:</b> Value of <b>NextKeyMarker</b> in the response body of the last request</p> <p><b>Default value:</b> None</p>

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

Parameter	Type	Mandatory (Yes/No)	Description
MaxKeys	int	No	<p><b>Explanation:</b> The maximum number of objects returned in the response in alphabetical order</p> <p><b>Value range:</b> The value ranges from 1 to 1000. If the specified value is beyond this range, only 1,000 objects are returned.</p> <p><b>Default value:</b> 1000</p>
Delimiter	string	No	<p><b>Explanation:</b> Object names are grouped by this parameter, which is often used with <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a bucket has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcde</b> 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 <b>[delimiter=/]</b> to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
EncodingType	string	No	<p><b>Explanation:</b> Encoding type for some elements in the response. If <b>Delimiter</b>, <b>KeyMarker</b>, <b>Prefix</b>, <b>CommonPrefixes</b>, <b>NextKeyMarker</b>, and <b>Key</b> contain control characters that are not supported by the XML 1.0 standard, you can use <b>EncodingType</b> to encode <b>Delimiter</b>, <b>KeyMarker</b>, <b>Prefix</b>, <b>CommonPrefixes</b>, <b>NextKeyMarker</b>, and <b>Key</b> in the response.</p> <p><b>Value range:</b> Value option: <b>url</b></p> <p><b>Default value:</b> 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	* <a href="#">ListVersionsOutput</a>	<p><b>Explanation:</b> Returned parameters for listing object versions in a bucket. For details, see <a href="#">Table 7-30</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 7-30** ListVersionsOutput

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

Parameter	Type	Description
Name	string	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.)</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Value range:</b> The value must contain 3 to 63 characters.</p>
Prefix	string	<p><b>Explanation:</b> Object name prefix, which is consistent with that set in the request</p> <p>Assume that you have the following objects: <b>logs/day1</b>, <b>logs/day2</b>, <b>logs/day3</b>, and <b>ExampleObject.jpg</b>. If you specify <b>logs/</b> as the prefix, <b>logs/day1</b>, <b>logs/day2</b>, and <b>logs/day3</b> will be returned. If you leave this parameter blank, all objects in the bucket will be returned.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

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

Parameter	Type	Description
Delimiter	string	<p><b>Explanation:</b></p> <p>Object names are grouped by this parameter, which is often used with <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a bucket has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcde</b> 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 <b>[delimiter=/]</b> to list the content in the current directory, but not list subdirectories, thereby improving the listing efficiency.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
MaxKeys	int	<p><b>Explanation:</b></p> <p>Maximum number of objects to list The maximum number of objects returned in the response in alphabetical order</p> <p><b>Value range:</b></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><b>Default value:</b> 1000</p>

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

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

**Table 7-31** Version

Parameter	Type	Description
Key	string	<b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b> , the object name is <b>folder/test.txt</b> . <b>Value range:</b> The value must contain 1 to 1,024 characters. <b>Default value:</b> None

Parameter	Type	Description
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
LastModified	time.Time	<p><b>Explanation:</b> Time (UTC) when an object was last modified</p> <p><b>Value range:</b> UTC time</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Size	int64	<p><b>Explanation:</b> Object size in bytes</p> <p><b>Value range:</b> The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b> None</p>
Owner	<b>Owner</b>	<p><b>Explanation:</b> Object owner. For details, see <a href="#">Table 7-33</a>.</p>



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

**Table 7-32 DeleteMarker**

Parameter	Type	Description
Key	string	<b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b> , the object name is <b>folder/test.txt</b> . <b>Value range:</b> The value must contain 1 to 1,024 characters. <b>Default value:</b> None
VersionId	string	<b>Explanation:</b> Object version ID <b>Value range:</b> The value must contain 32 characters. <b>Default value:</b> None

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

**Table 7-33** Owner

Parameter	Type	Mandatory (Yes/No)	Description
ID	string	Yes if used as a request parameter	<p><b>Explanation:</b> Account (domain) ID of the owner</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> 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	<b>Explanation:</b> Request parameters for obtaining bucket metadata. For details, see <a href="#">Table 7-36</a> .

**Table 7-36** GetBucketMetadataInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-37** List of returned results

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

**Table 7-38** GetBucketMetadataOutput

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

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



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

Parameter	Type	Description
Epid	string	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value of <b>Epid</b> is a UUID. <b>Epid</b> is not required if you have not enabled EPS yet. Example: <b>9892d768-2d13-450f-aac7-ed0e44c2585f</b></p> <p><b>Value range:</b> To obtain the enterprise project ID, see <a href="#">How Do I Obtain an Enterprise Project ID?</a></p> <p><b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-41** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketLocationOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-42</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-42** GetBucketLocationOutput

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

Parameter	Type	Description
Location	string	<p><b>Explanation:</b> Region where a bucket is located</p> <p><b>Restrictions:</b> If the used endpoint is <b>obs.myhuaweicloud.com</b>, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p><b>Value range:</b> To learn about valid regions and endpoints, see <a href="#">Regions and Endpoints</a>. 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><b>Default value:</b> If <b>obs.myhuaweicloud.com</b> is used as the endpoint and no region is specified, <b>cn-north-1</b> (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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-44** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketStorageInfoOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-45</a>.</p>

Parameter	Type	Description
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-45** GetBucketStorageInfoOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
Size	int64	<b>Explanation:</b> Size of the space occupied by objects in the bucket <b>Value range:</b> 0 to $(2^{63} - 1)$ , in bytes
ObjectNumber	int	<b>Explanation:</b> Number of objects in the bucket <b>Value range:</b> An integer from 0 to $(2^{31} - 1)$ <b>Default value:</b> 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	<a href="#">*SetBucketQuotaInput</a>	Yes	<b>Explanation:</b> Input parameters for configuring a storage quota. For details, see <a href="#">Table 7-47</a> .

**Table 7-47** SetBucketQuotaInput

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

## Responses

**Table 7-48** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-49</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-49** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-51** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketQuota Output</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-52</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-52** GetBucketQuotaOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
Quota	int64	<b>Explanation:</b> Bucket storage quota <b>Value range:</b> 0 to $(2^{63} - 1)$ , in bytes <b>Default value:</b> <b>0</b> , 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 inherits 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	<a href="#">*SetBucketStoragePolicyInput</a>	Yes	<b>Explanation:</b> Input parameters for configuring a bucket storage class. For details, see <a href="#">Table 7-54</a> .

**Table 7-54** SetBucketStoragePolicyInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Value range:</b> The value must contain 3 to 63 characters.</p> <p><b>Default value:</b> None</p>
StorageClasses	<a href="#">StorageClassType</a>	Yes	<p><b>Explanation:</b> Storage class of the bucket</p> <p><b>Value range:</b> For details about storage classes, see <a href="#">Table 7-55</a>.</p> <p><b>Default value:</b> 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	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-57</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-57** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.)</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-59** List of returned results

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

**Table 7-60** GetBucketStoragePolicyOutput

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

### 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	* <a href="#">SetBucketAclInput</a>	Yes	<b>Explanation:</b> Input parameters for configuring a bucket ACL. For details, see <a href="#">Table 7-63</a> .

**Table 7-63** SetBucketAclInput

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

Parameter	Type	Mandatory (Yes/No)	Description
Grants	<a href="#">Grant</a>	No	<b>Explanation:</b> Grantees' permission information. For details, see <a href="#">Table 7-66</a> .

**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, merge parts, copy parts, and cancel 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. <b>NOTE</b> <b>AclPublicReadDelivered</b> 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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <b>AclPublicReadWriteDelivered</b> 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><b>Explanation:</b> Account (domain) ID of the owner</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>



**Table 7-66** Grant

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

**Table 7-67** Grantee

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

Parameter	Type	Mandatory (Yes/No)	Description
DisplayName	string	No if used as a request parameter	<p><b>Explanation:</b> Account name of the grantee</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>Starts with a letter.</li> <li>Contains 6 to 32 characters.</li> <li>Contains only letters, digits, hyphens (-), and underscores (_).</li> </ul> <p><b>Default value:</b> 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	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-71</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-71** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-73** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketAclOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-74</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-74** GetBucketAclOutput

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

**Table 7-75** Owner

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

**Table 7-76** Grant

Parameter	Type	Description
Grantee	<a href="#">Grantee</a>	<p><b>Explanation:</b> Grantee information. For details, see <a href="#">Table 7-77</a>.</p>
Permission	<a href="#">Permission Type</a>	<p><b>Explanation:</b> Granted permission. For details, see <a href="#">Table 7-80</a>.</p>

**Table 7-77** Grantee

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



Parameter	Type	Description
DisplayName	string	<p><b>Explanation:</b> Account name of the grantee</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Starts with a letter.</li> <li>• Contains 6 to 32 characters.</li> <li>• Contains only letters, digits, hyphens (-), and underscores (_).</li> </ul> <p><b>Default value:</b> None</p>
URI	<a href="#">GroupUriType</a>	<p><b>Explanation:</b> Authorized user group</p> <p><b>Value range:</b> See <a href="#">Table 7-79</a>.</p> <p><b>Default value:</b> 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.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	<a href="#">*SetBucketLoggingConfigurationInput</a>	Yes	<b>Explanation:</b> Input parameters for configuring bucket logging. For details, see <a href="#">Table 7-82</a> .

**Table 7-82** SetBucketLoggingConfigurationInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Agency	string	Yes if the parameter is in a request to enable bucket logging	<p><b>Explanation:</b> 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 <a href="#">Creating an IAM Agency</a>.</p> <p><b>Restrictions:</b> By default, the IAM agency only requires the <b>PutObject</b> permission to upload logs to the target bucket. If default encryption is enabled for the target bucket, the agency also requires the <b>KMS Administrator</b> permission in the region where the target bucket is located.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Name of the bucket for storing log files</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• This bucket must be in the same region as the bucket with logging enabled.</li> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> 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.	<b>Explanation:</b> Name prefix for log files stored in the log storage bucket <b>Value range:</b> The value must contain 1 to 1,024 characters. <b>Default value:</b> None
TargetGrants	[]Grant	No	<b>Explanation:</b> Permission information list of grantees, which defines grantees and their permissions for log files. For details, see <a href="#">Table 7-83</a> .

**Table 7-83** Grant

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



**Table 7-84** Grantee

Parameter	Type	Mandatory (Yes/No)	Description
Type	<a href="#">Grantee Type</a>	Yes	<b>Explanation:</b> Grantee type <b>Value range:</b> See <a href="#">Table 7-85</a> . <b>Default value:</b> None
ID	string	Yes if <b>Type</b> is set to <b>Grantee User</b>	<b>Explanation:</b> Account (domain) ID of the grantee <b>Value range:</b> To obtain an account ID, see <a href="#">Obtaining the Account ID</a> . <b>Default value:</b> None
DisplayName	string	No	<b>Explanation:</b> Account name of the grantee <b>Restrictions:</b> <ul style="list-style-type: none"> <li>Starts with a letter. Contains 6 to 32 characters.</li> <li>Contains only letters, digits, hyphens (-), and underscores (_).</li> </ul> <b>Default value:</b> None
URI	<a href="#">GroupUriType</a>	Yes if <b>Type</b> is set to <b>Grantee Group</b>	<b>Explanation:</b> Authorized user group <b>Value range:</b> See <a href="#">Table 7-86</a> . <b>Default value:</b> 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	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-89</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

Table 7-89 BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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.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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-91** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketLoggingConfigurationOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-92</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-92** GetBucketLoggingConfigurationOutput

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

Parameter	Type	Description
Agency	string	<p><b>Explanation:</b> 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 <a href="#">Creating an IAM Agency</a>.</p> <p><b>Restrictions:</b> By default, the IAM agency only requires the <b>PutObject</b> permission to upload logs to the target bucket. If default encryption is enabled for the target bucket, the agency also requires the <b>KMS Administrator</b> permission in the region where the target bucket is located.</p> <p><b>Default value:</b> None</p>
TargetBucket	string	<p><b>Explanation:</b> Name of the bucket for storing log files</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• This bucket must be in the same region as the bucket with logging enabled.</li> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.)</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

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

**Table 7-93** Grant

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

**Table 7-94** Grantee

Parameter	Type	Description
Type	GranteeType	<p><b>Explanation:</b> Grantee type</p> <p><b>Value range:</b> See <a href="#">Table 7-95</a>.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Description
ID	string	<p><b>Explanation:</b> Account (domain) ID of the grantee</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
DisplayName	string	<p><b>Explanation:</b> Account name of the grantee</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>Starts with a letter. Contains 6 to 32 characters.</li> <li>Contains only letters, digits, hyphens (-), and underscores (_).</li> </ul> <p><b>Default value:</b> None</p>
URI	<a href="#">GroupUriType</a>	<p><b>Explanation:</b> Authorized user group. For details, see <a href="#">Table 7-96</a>.</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.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	<a href="#">*SetBucketPolicyInput</a>	Yes	<b>Explanation:</b> Input parameters for configuring a bucket policy. For details, see <a href="#">Table 7-99</a> .

**Table 7-99** SetBucketPolicyInput

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

## Responses

**Table 7-100** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-101</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-101** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-103** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketPolicyOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-104</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-104** GetBucketPolicyOutput

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

Parameter	Type	Description
Policy	string	<p><b>Explanation:</b> Policy information in JSON format</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"><li>• The bucket name contained in the <b>Resource</b> parameter of the policy must be the one specified for the current bucket policy.</li><li>• For details about the policy format, see <a href="#">Bucket Policy Parameters</a>.</li></ul> <p><b>Default value:</b> 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.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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-106** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-107</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-107** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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	* <a href="#">SetBucketLifecycleConfigurationInput</a>	Yes	<b>Explanation:</b> Input parameters for lifecycle configuration. For details, see <a href="#">Table 7-109</a> .



**Table 7-109** SetBucketLifecycleConfigurationInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
LifecycleRules	[] <a href="#">LifecycleRule</a>	Yes	<p><b>Explanation:</b> Lifecycle rule information. For details, see <a href="#">Table 7-110</a>.</p>

**Table 7-110** LifecycleRule

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

Parameter	Type	Mandatory (Yes/No)	Description
Transitions	<code>[]Transition</code>	No if used as a request parameter	<p><b>Explanation:</b> Policies for storage class transition, including transition time and the storage class after transition. For details, see <a href="#">Table 7-112</a>.</p> <p><b>Restrictions:</b> This parameter applies only to the current object version.</p>
Expiration	<code>Expiration</code>	No if used as a request parameter	<p><b>Explanation:</b> Object expiration time. For details, see <a href="#">Table 7-114</a>.</p> <p><b>Restrictions:</b> This parameter applies only to the current object version.</p>
NoncurrentVersionTransitions	<code>[]NoncurrentVersionTransition</code>	No if used as a request parameter	<p><b>Explanation:</b> Policies for storage class transition, including transition time and the storage class after transition. For details, see <a href="#">Table 7-115</a>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>This parameter applies only to noncurrent object versions.</li> <li>Versioning is enabled (or suspended after being enabled) for the bucket.</li> </ul>
NoncurrentVersionExpiration	<code>NoncurrentVersionExpiration</code>	No if used as a request parameter	<p><b>Explanation:</b> Expiration time of noncurrent object versions. For details, see <a href="#">Table 7-116</a>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>This parameter applies only to noncurrent object versions.</li> <li>Versioning is enabled (or suspended after being enabled) for the bucket.</li> </ul> <p><b>CAUTION</b> 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	<a href="#">Storage Class Type</a>	Yes if used as a request parameter	<p><b>Explanation:</b> Storage class of the object after transition</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The Standard storage class is not supported.</li> <li>• Restrictions on storage class transitions: <ul style="list-style-type: none"> <li>– 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.</li> <li>– 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.</li> <li>– 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.</li> </ul> </li> </ul> <p><b>Value range:</b> See <a href="#">Table 7-113</a>.</p> <p><b>Default value:</b> None</p>

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

**Table 7-115** NoncurrentVersionTransition

Parameter	Type	Mandatory (Yes/No)	Description
StorageClass	StorageClassType	Yes if used as a request parameter	<p><b>Explanation:</b> Storage class of noncurrent object versions after transition</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The Standard storage class is not supported.</li> <li>• Restrictions on storage class transitions: <ul style="list-style-type: none"> <li>– 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.</li> <li>– 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.</li> <li>– 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.</li> </ul> </li> </ul> <p><b>Value range:</b> See <a href="#">Table 7-113</a>.</p> <p><b>Default value:</b> None</p>

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

**Table 7-116** NoncurrentVersionExpiration

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

## Responses

**Table 7-117** List of returned results

Parameter	Type	Description
output	*BaseModel	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-118</a>.</p>



Parameter	Type	Description
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-118** BaseModel

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

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

## Responses

**Table 7-120** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketLifecycleConfigurationOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-121</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-121** GetBucketLifecycleConfigurationOutput

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

**Table 7-122** LifecycleRule

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

Parameter	Type	Description
Expiration	<a href="#">Expiration</a>	<p><b>Explanation:</b> Object expiration time. For details, see <a href="#">Table 7-126</a>.</p> <p><b>Restrictions:</b> This parameter applies only to the current object version.</p>
NoncurrentVersionTransitions	<a href="#">[]NoncurrentVersionTransition</a>	<p><b>Explanation:</b> Policies for storage class transition, including transition time and the storage class after transition. For details, see <a href="#">Table 7-127</a>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• This parameter applies only to noncurrent object versions.</li> <li>• Versioning is enabled (or suspended after being enabled) for the bucket.</li> </ul>
NoncurrentVersionExpiration	<a href="#">NoncurrentVersionExpiration</a>	<p><b>Explanation:</b> Expiration time of noncurrent object versions. For details, see <a href="#">Table 7-128</a>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• This parameter applies only to noncurrent object versions.</li> <li>• Versioning is enabled (or suspended after being enabled) for the bucket.</li> </ul> <p><b>CAUTION</b> 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	<a href="#">StorageClass Type</a>	<p><b>Explanation:</b> Storage class of the object after transition</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The Standard storage class is not supported.</li> <li>• Restrictions on storage class transitions: <ul style="list-style-type: none"> <li>– 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.</li> <li>– 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.</li> <li>– 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.</li> </ul> </li> </ul> <p><b>Value range:</b> See <a href="#">Table 7-125</a>.</p> <p><b>Default value:</b> None</p>
Date	time.Time	<p><b>Explanation:</b> Date when an object will be transitioned</p> <p><b>Restrictions:</b> The value must conform with the ISO8601 standards and must be at 00:00 (UTC time). For example, <b>2018-01-01T00:00:00Z</b>, indicating only objects that were last modified before that time are transitioned to the specified storage class.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>



Parameter	Type	Description
Days	int	<p><b>Explanation:</b> Number of days (since the last update was made to the object) after which the lifecycle rule takes effect</p> <p><b>Restrictions:</b> This parameter applies only to the current object version.</p> <p><b>Value range:</b> 0 to <math>(2^{31} - 1)</math>, in days</p> <p><b>Default value:</b> 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 (&lt; 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 <b>Days</b> is absent	<p><b>Explanation:</b> OBS executes the lifecycle rule for objects that were modified before the specified date.</p> <p><b>Restrictions:</b> The value must conform with the ISO8601 standards and must be at 00:00 (UTC time). For example, <b>2018-01-01T00:00:00Z</b>, indicating only objects that were last modified before that time are deleted.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>
Days	int	Yes if this parameter is used as a request parameter and <b>Date</b> is absent	<p><b>Explanation:</b> Number of days (since the last update was made to the object) after which the lifecycle rule takes effect</p> <p><b>Restrictions:</b> This parameter applies only to the current object version.</p> <p><b>Value range:</b> 1 to <math>(2^{31} - 1)</math>, in days</p> <p><b>Default value:</b> None</p>

**Table 7-127** NoncurrentVersionTransition

Parameter	Type	Description
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Storage class of noncurrent object versions after transition</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The Standard storage class is not supported.</li> <li>• Restrictions on storage class transitions: <ul style="list-style-type: none"> <li>– 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.</li> <li>– 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.</li> <li>– 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.</li> </ul> </li> </ul> <p><b>Value range:</b> See <a href="#">Table 7-125</a>.</p> <p><b>Default value:</b> None</p>
NoncurrentDays	int	<p><b>Explanation:</b> Number of days an object is noncurrent before the specified rule takes effect</p> <p><b>Restrictions:</b> This parameter applies only to noncurrent object versions.</p> <p><b>Value range:</b> 0 to <math>(2^{31} - 1)</math>, in days</p> <p><b>Default value:</b> None</p>

**Table 7-128** NoncurrentVersionExpiration

Parameter	Type	Mandatory (Yes/No)	Description
NoncurrentDays	int	Yes if used as a request parameter	<b>Explanation:</b> Number of days an object is noncurrent before the specified rule takes effect <b>Restrictions:</b> This parameter applies only to noncurrent object versions. <b>Value range:</b> 0 to $(2^{31} - 1)$ , in days <b>Default value:</b> 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.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](#)
- [Lifecycle Management FAQ](#)

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

## Responses

**Table 7-130** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-131</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-131** BaseModel

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

## 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	<a href="#">*SetBucketWebsiteConfigurationInput</a>	Yes	<b>Explanation:</b> Input parameters for configuring static website hosting. For details, see <a href="#">Table 7-133</a> .

**Table 7-133** SetBucketWebsiteConfigurationInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Value range:</b> The value must contain 3 to 63 characters.</p>
RedirectAllRequestsTo	<a href="#">RedirectAllRequestsTo</a>	No	<p><b>Explanation:</b> Redirection rules for all requests. For details, see <a href="#">Table 7-134</a>.</p>
IndexDocument	<a href="#">IndexDocument</a>	No	<p><b>Explanation:</b> Default page configuration. For details, see <a href="#">Table 7-135</a>.</p>
ErrorDocument	<a href="#">ErrorDocument</a>	No	<p><b>Explanation:</b> Error page configuration. For details, see <a href="#">Table 7-136</a>.</p>

Parameter	Type	Mandatory (Yes/No)	Description
RoutingRules	<a href="#">[] RoutingRule</a>	No	<b>Explanation:</b> List of routing rules. For details, see <a href="#">Table 7-137</a> .

 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 <b>RedirectAllRequestsTo</b> is specified	<b>Explanation:</b> Host name used for redirection, for example, <b>www.example.com</b> <b>Restrictions:</b> The host name must comply with the host name rules. <b>Default value:</b> None
Protocol	<a href="#">ProtocolType</a>	No	<b>Explanation:</b> Protocol used for redirection <b>Value range:</b> See <a href="#">Table 7-140</a> . <b>Default value:</b> None

**Table 7-135** IndexDocument

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

**Table 7-136** ErrorDocument

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

**Table 7-137** RoutingRule

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

**Table 7-138** Condition

Parameter	Type	Mandatory (Yes/No)	Description
KeyPrefixEquals	string	No	<p><b>Explanation:</b> 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 <b>ExamplePage.html</b>, set the <b>KeyPrefixEquals</b> to <b>ExamplePage.html</b>.</p> <p><b>Restrictions:</b> This parameter cannot be used together with <b>HttpErrorCodeReturnedEquals</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
HttpErrorCodeReturnedEquals	string	No	<p><b>Explanation:</b> 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 <b>NotFound.html</b> when HTTP error code 404 is returned, set <b>HttpErrorCodeReturnedEquals</b> to <b>404</b> in <b>Condition</b>, and set <b>ReplaceKeyWith</b> to <b>NotFound.html</b> in <b>Redirect</b>.</p> <p><b>Restrictions:</b> This parameter cannot be used together with <b>KeyPrefixEquals</b>.</p> <p><b>Value range:</b> See <a href="#">Error Codes</a>.</p> <p><b>Default value:</b> None</p>

**Table 7-139** Redirect

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

Parameter	Type	Mandatory (Yes/No)	Description
ReplaceKeyPrefix- With	string	No if used as a request parameter	<b>Explanation:</b> Object name prefix used for redirection <b>Value range:</b> The value must contain 1 to 1,024 characters. <b>Default value:</b> None
ReplaceKeyWith	string	No if used as a request parameter	<b>Explanation:</b> Object name used for redirection <b>Restrictions:</b> This parameter cannot be used together with <b>replaceKeyPrefixWith</b> . <b>Value range:</b> The value must contain 1 to 1,024 characters. <b>Default value:</b> None
HttpRedirectCode	string	No if used as a request parameter	<b>Explanation:</b> HTTP status code in the response to the redirect request. For details, see <a href="#">Status Code</a> . <b>Default value:</b> 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	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-142</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-142** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-144** List of returned results

Parameter	Type	Description
output	<a href="#">*GetBucketWebsiteConfigurationOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-145</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-145** GetBucketWebsiteConfigurationOutput

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

Parameter	Type	Description
ErrorDocument	<a href="#">ErrorDocument</a>	<b>Explanation:</b> Error page configuration. For details, see <a href="#">Table 7-148</a> .
RoutingRules	<a href="#">[] RoutingRule</a>	<b>Explanation:</b> Redirection rule list For details, see <a href="#">Table 7-149</a> .

**Table 7-146** RedirectAllRequestsTo

Parameter	Type	Description
HostName	string	<b>Explanation:</b> Host name used for redirection, for example, <b>www.example.com</b> <b>Restrictions:</b> The host name must be in the standard host name format. <b>Default value:</b> None
Protocol	<a href="#">Protocol Type</a>	<b>Explanation:</b> Protocol used for redirection <b>Value range:</b> See <a href="#">Table 7-152</a> . <b>Default value:</b> None

**Table 7-147** IndexDocument

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

**Table 7-148** ErrorDocument

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

**Table 7-149** RoutingRule

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

**Table 7-150** Condition

Parameter	Type	Mandatory (Yes/No)	Description
KeyPrefixEquals	string	No	<p><b>Explanation:</b> 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 <b>ExamplePage.html</b>, set the <b>KeyPrefixEquals</b> to <b>ExamplePage.html</b>.</p> <p><b>Restrictions:</b> This parameter cannot be used together with <b>HttpErrorCodeReturnedEquals</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
HttpErrorCodeReturnedEquals	string	No	<p><b>Explanation:</b> 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 <b>NotFound.html</b> when HTTP error code 404 is returned, set <b>HttpErrorCodeReturnedEquals</b> to <b>404</b> in <b>Condition</b>, and set <b>ReplaceKeyWith</b> to <b>NotFound.html</b> in <b>Redirect</b>.</p> <p><b>Restrictions:</b> This parameter cannot be used together with <b>KeyPrefixEquals</b>.</p> <p><b>Value range:</b> See <a href="#">Error Codes</a>.</p> <p><b>Default value:</b> None</p>

**Table 7-151** Redirect

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



Parameter	Type	Description
ReplaceKeyPrefixWith	string	<p><b>Explanation:</b> Object name prefix used for redirection</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ReplaceKeyWith	string	<p><b>Explanation:</b> Object name used for redirection</p> <p><b>Restrictions:</b> This parameter cannot be used together with <b>replaceKeyPrefixWith</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
HttpRedirectCode	string	<p><b>Explanation:</b> HTTP status code in the response to the redirect request. For details, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-154** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-155</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-155** BaseModel

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

OBS keeps multiple versions of an object in a versioning-enabled bucket. That way you can quickly retrieve and restore every object version as needed, or recover data from both accidental actions and 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	<b>Explanation:</b> Input parameters for bucket versioning configuration. For details, see <a href="#">Table 7-157</a> .

**Table 7-157** SetBucketVersioningInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.)</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
Status	<a href="#">Versioning StatusType</a>	Yes	<p><b>Explanation:</b> Versioning status of the bucket</p> <p><b>Value range:</b> See <a href="#">Table 7-158</a>.</p> <p><b>Default value:</b> 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	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-160</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-160** BaseModel

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

OBS keeps multiple versions of an object in a versioning-enabled bucket. That way you can quickly retrieve and restore every object version as needed, or recover data from both accidental actions and 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-162** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketVersioningOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-163</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-163** GetBucketVersioningOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
Status	<a href="#">VersioningStatusType</a>	<b>Explanation:</b> Versioning status of the bucket <b>Value range:</b> See <a href="#">Table 7-164</a> . <b>Default value:</b> 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.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	<b>Explanation:</b> Input parameters for configuring CORS for a bucket. For details, see <a href="#">Table 7-166</a> .

**Table 7-166** SetBucketCorsInput

Parameter	Type	Man dato ry (Yes /No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
CorsRules	[] <a href="#">CorsRule</a>	Yes	<p><b>Explanation:</b> CORS rule list of the bucket. For details, see <a href="#">Table 7-167</a>.</p> <p><b>Restrictions:</b> 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><b>Explanation:</b> CORS rule ID</p> <p><b>Value range:</b> The value must contain 1 to 255 characters.</p> <p><b>Default value:</b> None</p>
AllowedMethod	string	Yes if used as a request parameter	<p><b>Explanation:</b> The allowed HTTP methods cross-origin request, same as the operation types of buckets and objects.</p> <p><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• PUT</li> <li>• HEAD</li> <li>• POST</li> <li>• DELETE</li> </ul> <p><b>Default value:</b> None</p>
AllowedOrigin	string	Yes if used as a request parameter	<p><b>Explanation:</b> The origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
AllowedHeader	[]string	No if used as a request parameter	<p><b>Explanation:</b> The allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
MaxAgeSeconds	int	No if used as a request parameter	<p><b>Explanation:</b> Time your client can cache the response for a cross-origin request</p> <p><b>Restrictions:</b> Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b> 0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b> 100</p>
ExposeHeader	[]string	No if used as a request parameter	<p><b>Explanation:</b> The CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b> Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 7-168** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-169</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-169** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-171** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketCorsOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-172</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-172** GetBucketCorsOutput

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

**Table 7-173 CorsRule**

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



Parameter	Type	Mandatory (Yes/No)	Description
AllowedHeader	[]string	No if used as a request parameter	<p><b>Explanation:</b> The allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
MaxAgeSeconds	int	No if used as a request parameter	<p><b>Explanation:</b> Time your client can cache the response for a cross-origin request</p> <p><b>Restrictions:</b> Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b> 0 to (2<sup>31</sup> - 1), in seconds</p> <p><b>Default value:</b> 100</p>
ExposeHeader	[]string	No if used as a request parameter	<p><b>Explanation:</b> The CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b> Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-175** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-176</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-176** BaseModel

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

If you add tags to a bucket, SDRs generated for the requests sent to this bucket will include these tags, so you can use the tags to classify SDRs for detailed cost analysis. For example, if you have an application that uploads its running data to a bucket, you can tag the bucket with the application name. In this manner, the costs on the application can be analyzed using tags in SDRs.

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	<b>Explanation:</b> Input parameters for configuring tags for a bucket. For details, see <a href="#">Table 7-178</a> .

**Table 7-178** SetBucketTaggingInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my.bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>



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

**Table 7-179** Tag

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

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

## Responses

**Table 7-180** List of returned results

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

**Table 7-181** BaseModel

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

Parameter	Type	Description
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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](#)
- [FAQ for Bucket Tags](#)

## 7.34 Obtaining Bucket Tags (SDK for Go)

### Function

If you add tags to a bucket, SDRs generated for the requests sent to this bucket will include these tags, so you can use the tags to classify SDRs for detailed cost analysis. For example, if you have an application that uploads its running data to a bucket, you can tag the bucket with the application name. In this manner, the costs on the application can be analyzed using tags in SDRs.

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

## Responses

**Table 7-183** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketTaggingOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-184</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-184** GetBucketTaggingOutput

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

**Table 7-185** Tag

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

## 7.35 Deleting Bucket Tags (SDK for Go)

### Function

If you add tags to a bucket, SDRs generated for the requests sent to this bucket will include these tags, so you can use the tags to classify SDRs for detailed cost analysis. For example, if you have an application that uploads its running data to a bucket, you can tag the bucket with the application name. In this manner, the costs on the application can be analyzed using tags in SDRs.

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	Mandatory (Yes/No)	Description
bucketName	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 7-187** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-188</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-188** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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](#)
- [FAQ for Bucket Tags](#)

## 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	<b>Explanation:</b> Input parameters for configuring bucket encryption. For details, see <a href="#">Table 7-190</a> .

**Table 7-190** SetBucketEncryptionInput

Parameter	Type	Man dato ry (Yes /No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
SSEAlgorithm	string	Yes	<p><b>Explanation:</b> Objects are encrypted using server-side SSE-KMS.</p> <p><b>Value range:</b> <b>kms</b></p> <p><b>Default value:</b> None</p>

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

## Responses

**Table 7-191** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-192</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-192** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Value range:</b> The value must contain 3 to 63 characters.</p>

## Responses

**Table 7-194** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketEncryptionOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-195</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-195** GetBucketEncryptionOutput

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

Parameter	Type	Description
KMSMasterKeyID	string	<p><b>Explanation:</b> ID of the KMS master key used for SSE-KMS</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b> If this parameter is not specified, the default master key will be used.</p>
ProjectID	string	<p><b>Explanation:</b> ID of the project where the KMS master key belongs in SSE-KMS</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The project ID must match <b>KMSMasterKeyID</b>.</li> <li>Leave the project ID blank if <b>KMSMasterKeyID</b> is not specified.</li> </ul> <p><b>Value range:</b> To obtain the enterprise project ID, see <a href="#">How Do I Obtain a Project ID?</a></p> <p><b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>



## Responses

**Table 7-197** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-198</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-198** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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	<a href="#">*SetBucketCustomDomainInput</a>	Yes	<b>Explanation:</b> Input parameters for configuring a custom domain name for the bucket. For details, see <a href="#">Table 7-200</a> .

**Table 7-200** SetBucketCustomDomainInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
CustomDomain	string	Yes	<p><b>Explanation:</b> Custom domain name to configure</p> <p><b>Restrictions:</b> The value must comply with the domain name rules.</p> <p><b>Default value:</b> The value can be up to 256 bytes.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 7-201** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-202</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-202** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"><li>• A bucket name must be unique across all accounts and regions.</li><li>• A bucket name:<ul style="list-style-type: none"><li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li><li>– Cannot be formatted as an IP address.</li><li>– Cannot start or end with a hyphen (-) or period (.).</li><li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li><li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li></ul></li><li>• 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.</li></ul> <p><b>Default value:</b> None</p>



## Responses

**Table 7-204** List of returned results

Parameter	Type	Description
output	* <a href="#">GetBucketCustomDomainOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-205</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-205** GetBucketCustomDomainOutput

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

**Table 7-206** Domain

Parameter	Type	Description
DomainName	string	<b>Explanation:</b> User-defined domain name <b>Restrictions:</b> The value must comply with the domain name rules. <b>Default value:</b> The value can be up to 256 bytes. <b>Default value:</b> None
CreateTime	string	<b>Explanation:</b> 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 bucket metadata.
    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	<b>Explanation:</b> Input parameters for deleting the custom domain name of a bucket. For details, see <a href="#">Table 7-208</a> .

**Table 7-208** DeleteBucketCustomDomainInput

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

## Responses

**Table 7-209** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 7-210</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 7-210** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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	<b>Explanation:</b> Input parameters for creating a PFS. For details, see <a href="#">Table 8-2</a> .

**Table 8-2** CreateBucketInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> PFS name.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A PFS name must be unique across all accounts and regions.</li> <li>• A PFS name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain periods (.) and hyphens (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> Region where the PFS is to be created.</p> <p><b>Restrictions:</b> If the specified endpoint is <b>obs.myhuaweicloud.com</b>, this parameter is not required. If any other endpoints are specified, this parameter is required.</p> <p><b>Value range:</b> To learn about valid regions and endpoints, see <a href="#">Regions and Endpoints</a>. 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><b>Default value:</b> If <b>obs.myhuaweicloud.com</b> is used as the endpoint and no region is specified, <b>cn-north-1</b> (the CN North-Beijing1 region) is used by default.</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Access control list (ACL) that can be pre-defined when a PFS is created. For details about ACLs, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 8-3</a>.</p> <p><b>Default value:</b> <b>private</b></p>
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> PFS storage class that can be specified at PFS creation.</p> <p><b>Value range:</b> See <a href="#">Table 8-4</a>.</p> <p><b>Default value:</b> <b>STANDARD</b></p>

Parameter	Type	Mandatory (Yes/No)	Description
Grant ReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can list objects, multipart uploads, and object versions in the PFS you are creating, and can obtain PFS metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
Grant WriteId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE</b> permission is granted to. The account with the <b>WRITE</b> 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><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
Grant ReadAcplId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the PFS you are creating.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

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

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

Parameter	Type	Mandatory (Yes/No)	Description
IsFSFileInterface	bool	No	<p><b>Explanation:</b> Whether a PFS is created</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> A PFS is created.</li> <li>• <b>false:</b> A bucket is created.</li> </ul> <p><b>Default value:</b> <b>false</b></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, merge parts, copy parts, and cancel 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><b>NOTE</b> <b>AclPublicReadDelivered</b> 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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <b>AclPublicReadWriteDelivered</b> 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 (&lt; 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	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 8-6</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 8-6** BaseModel

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

Parameter	Type	Description
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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	<b>Explanation:</b> Input parameters for listing PFSs. For details, see <a href="#">Table 8-8</a> .

**Table 8-8** ListBucketsInput

Parameter	Type	Mandatory (Yes/No)	Description
QueryLocation	bool	No	<p><b>Explanation:</b> Whether to query the PFS location.</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li><b>true:</b> The PFS location is queried.</li> <li><b>false:</b> The PFS location is not queried.</li> </ul> <p><b>Default value:</b> false</p>
BucketType	<a href="#">BucketType</a>	No	<p><b>Explanation:</b> Type of the buckets to be listed.</p> <p><b>Value range:</b> See <a href="#">Table 8-9</a>.</p> <p><b>Default value:</b> If this parameter is not specified, all buckets and parallel file systems will be listed by default.</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	<a href="#">*ListBucketsOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 8-11</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 8-11** ListBucketsOutput

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

**Table 8-12** Owner

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

**Table 8-13** Bucket

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

Parameter	Type	Description
Location	string	<p><b>Explanation:</b> Region where a bucket is located</p> <p><b>Restrictions:</b> If the used endpoint is <b>obs.myhuaweicloud.com</b>, this parameter is not required. If any other endpoint is used, this parameter is required.</p> <p><b>Value range:</b> To learn about valid regions and endpoints, see <a href="#">Regions and Endpoints</a>. 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><b>Default value:</b> If <b>obs.myhuaweicloud.com</b> is used as the endpoint and no region is specified, <b>cn-north-1</b> (the CN North-Beijing1 region) is used by default.</p>
BucketType	string	<p><b>Explanation:</b> Bucket type</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>Object bucket: <b>OBJECT</b></li> <li>Parallel file system: <b>POSIX</b></li> </ul> <p><b>Default value:</b> 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	<b>Explanation:</b> Input parameters for listing objects in a PFS. For details, see <a href="#">Table 8-15</a> .

**Table 8-15** ListObjectsInput

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

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

Parameter	Type	Mandatory (Yes/No)	Description
Delimiter	string	No	<p><b>Explanation:</b></p> <p>Object names are grouped by this parameter, which is often used with <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a PFS has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, files <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcde</b> 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 <b>[delimiter=/]</b> to list only the content in the current directory, without the content in subdirectories, to make the listing more efficient.</p> <p><b>Value range:</b> The value can contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
Encoding Type	string	No	<p><b>Explanation:</b></p> <p>Encoding type for some elements in the response. If <b>Delimiter</b>, <b>Marker</b>, <b>Prefix</b>, <b>CommonPrefixes</b>, <b>NextMarker</b>, and <b>Key</b> contain control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to <b>url</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied.</p>

## Responses

**Table 8-16** List of returned results

Parameter	Type	Description
output	* <a href="#">ListObjectsOutput</a>	<b>Explanation:</b> Response parameters for listing objects in a PFS. For details, see <a href="#">Table 8-17</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 8-17** ListObjectsOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None

Parameter	Type	Description
Location	string	<p><b>Explanation:</b> Region where the PFS is located.</p> <p><b>Restrictions:</b> If the specified endpoint is <b>obs.myhuaweicloud.com</b>, this parameter is not required. If any other endpoints are specified, this parameter is required.</p> <p><b>Value range:</b> To learn about valid regions and endpoints, see <a href="#">Regions and Endpoints</a>. 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><b>Default value:</b> If <b>obs.myhuaweicloud.com</b> is used as the endpoint and no region is specified, <b>cn-north-1</b> (the CN North-Beijing1 region) is used by default.</p>

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

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



Parameter	Type	Description
Delimiter	string	<p><b>Explanation:</b></p> <p>Object names are grouped by this parameter, which is often used with <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a PFS has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, files <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcd</b> 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 <b>[delimiter=/]</b> to list only the content in the current directory, without the content in subdirectories, to make the listing more efficient.</p> <p><b>Value range:</b></p> <p>The value can contain 1 to 1,024 characters.</p> <p><b>Default value:</b></p> <p>None</p>

Parameter	Type	Description
MaxKeys	int	<p><b>Explanation:</b> The maximum number of objects returned in the response in alphabetical order.</p> <p><b>Value range:</b> The value ranges from <b>1</b> to <b>1000</b>. If the specified value is greater than <b>1000</b>, only 1,000 objects are returned.</p> <p><b>Default value:</b> <b>1000</b></p>
IsTruncated	bool	<p><b>Explanation:</b> 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><b>Value range:</b> <b>true:</b> Not all results are returned. <b>false:</b> All results are returned.</p> <p><b>Default value:</b> None</p>
NextMarker	string	<p><b>Explanation:</b> 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 <b>Marker</b> to the value of this parameter to list the remaining objects.</p> <p><b>Value range:</b> The value can contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
Contents	[] <a href="#">Content</a>	<p><b>Explanation:</b> List of objects in the PFS. For details, see <a href="#">Table 8-18</a>.</p>

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

**Table 8-18** Content

Parameter	Type	Description
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value can contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
LastModified	time.Time	<p><b>Explanation:</b> Time when the object was last modified.</p> <p><b>Value range:</b> UTC time</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded and becomes <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Size	int64	<p><b>Explanation:</b> Object size in bytes</p> <p><b>Value range:</b> The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b> None</p>
Owner	<b>Owner</b>	<p><b>Explanation:</b> Object owner. This parameter contains the domain ID and name of the object owner. For details, see <a href="#">Table 8-20</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
StorageClass	string	<b>Explanation:</b> Object storage class <b>Value range:</b> See <a href="#">Table 8-19</a> . <b>Default value:</b> 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	<b>Explanation:</b> Account (domain) ID of the owner <b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a> <b>Default value:</b> 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 Setting Access Labels (SDK for Go)

### Function

This API sets access labels for a parallel file system (PFS) directory for permissions control.

### Restrictions

- Calling this API requires permissions, which can be granted by using IAM or policies. If IAM is used, the **obs:object:putAccessLabel** permission must be granted. 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 to PFSs. Object buckets do not support this API. For details about how to create a PFS, see [Creating a Parallel File System \(SDK for Go\)](#).
- Access labels can be set for directories in a PFS but cannot be set for the PFS itself or files in it.

### Method

```
func (obsClient ObsClient) SetDirAccesslabel(input *SetDirAccesslabelInput)  
(output *BaseModel, err error)
```

### Request Parameters

**Table 8-21** List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*SetDirAccesslabelInput	Yes	<b>Explanation:</b> Request parameters for setting access labels. For details, see <a href="#">Table 8-22</a> .

**Table 8-22** SetDirAccesslabelInput

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



Parameter	Type	Mandatory (Yes/No)	Description
Access Label	[]string	Yes	<p><b>Explanation:</b> The access label content of a directory.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>An access label can contain up to 52 characters. Only digits (0–9), letters (a to z and A to Z), and underscores (_) are allowed.</li> <li>A maximum of 256 access labels can be set for a directory.</li> </ul> <p><b>Default value:</b> None</p>

## Responses

**Table 8-23** List of returned results

Parameter	Type	Description
output	*BaseModel	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 8-24</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 8-24** BaseModel

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> 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 <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>

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

## Code Examples

This example sets access labels for the **Dirname** directory in a PFS named **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, 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.SetDirAccesslabelInput{}
    // Specify the name of the PFS.
    input.Bucket = "examplebucket"
    // Specify the directory name. Dirname is used as an example.
    input.Key = "Dirname"
    // Specify the access labels for the directory. role_label_01 and role_label_02 are used as examples.
    input.Accesslabel = []string{"role_label_01", "role_label_02"}
    // Set the access labels for the directory.
    output, err := obsClient.SetDirAccesslabel(input)
    if err == nil {
        fmt.Printf("Set dir(%s) accesslabel successful with bucket(%s)!\n", input.Key, input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Set dir(%s) accesslabel 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)
}
}
```

## 8.5 Obtaining Access Labels (SDK for Go)

### Function

This API returns access labels of a parallel file system (PFS) directory.

### Restrictions

- Calling this API requires permissions, which can be granted by using IAM or policies. If IAM is used, the **obs:object:getAccessLabel** permission must be granted. 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 to PFSs. Object buckets do not support this API. For details about how to create a PFS, see [Creating a Parallel File System \(SDK for Go\)](#).
- Access labels can be set for directories in a PFS but cannot be set for the PFS itself or files in it.

### Method

```
func (obsClient ObsClient) GetDirAccesslabelInput(input
*GetDirAccesslabelInput) (output *GetDirAccesslabelOutput, err error)
```

### Request Parameters

**Table 8-25** List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	* <a href="#">GetDirAccesslabelInput</a>	Yes	<b>Explanation:</b> Request parameters for obtaining access labels. For details, see <a href="#">Table 8-26</a> .

**Table 8-26** SetBucketAclInput

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

## Responses

**Table 8-27** List of returned results

Parameter	Type	Description
output	* <a href="#">GetDirAccesslabelOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 8-28</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 8-28** GetDirAccesslabelOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None

Parameter	Type	Description
AccessLabel	[]string	Yes <b>Explanation:</b> The access label content of a directory. <b>Restrictions:</b> <ul style="list-style-type: none"><li>• An access label can contain up to 52 characters. Only digits (0–9), letters (a to z and A to Z), and underscores (_) are allowed.</li><li>• A maximum of 256 access labels can be set for a directory.</li></ul> <b>Default value:</b> None

## Code Examples

This example returns the access labels of the **Dirname** directory in a PFS named **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, 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.GetDirAccesslabelInput{}
    // Specify the name of the PFS.
    input.Bucket = "examplebucket"
    // Specify the directory name. Dirname is used as an example.
    input.Key = "Dirname"
    // Obtain the access labels of the directory.
    output, err := obsClient.GetDirAccesslabel(input)
    if err == nil {
        fmt.Printf("Get dir(%s) accesslabel successful with bucket(%s)!\\n", input.Key, input.Bucket)
        fmt.Printf("RequestId:%s\\n", output.RequestId)
        return
    }
    fmt.Printf("Get dir(%s) accesslabel 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)
}
```

## 8.6 Deleting Access Labels (SDK for Go)

### Function

This API deletes access labels of a parallel file system (PFS) directory.

### Restrictions

- Calling this API requires permissions, which can be granted by using IAM or policies. If IAM is used, the **obs:object:deleteAccessLabel** permission must be granted. 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 to PFSs. Object buckets do not support this API. For details about how to create a PFS, see [Creating a Parallel File System \(SDK for Go\)](#).
- Access labels can be set for directories in a PFS but cannot be set for the PFS itself or files in it.

### Method

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

## Request Parameters

**Table 8-29** List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*DeleteDirAccessLabelInput	Yes	<b>Explanation:</b> Request parameters for deleting access labels. For details, see <a href="#">Table 8-30</a> .



**Table 8-30** DeleteDirAccesslabelInput

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

## Responses

**Table 8-31** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 8-32</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 8-32** BaseModel

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

## Code Examples

This example deletes the access labels of the **Dirname** directory in a PFS named **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, 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.DeleteDirAccesslabelInput{}
    // Specify the name of the PFS.
    input.Bucket = "examplebucket"
    // Specify the directory name. Dirname is used as an example.
    input.Key = "Dirname"
    // Delete the access labels of the directory.
    output, err := obsClient.DeleteDirAccesslabel(input)
    if err == nil {
        fmt.Printf("Delete dir(%s) accesslabel successful with bucket(%s)!\n", input.Key, input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Delete dir(%s) accesslabel 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)
    }
}
```

## 8.7 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 8-33** List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*RenameFileInput	Yes	<b>Explanation:</b> Request parameters for renaming an object. For details, see <a href="#">Table 8-34</a> .

**Table 8-34** RenameFileInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> PFS name.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A PFS name must be unique across all accounts and regions.</li> <li>• A PFS name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value can contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
NewObjectKey	string	Yes	<p><b>Explanation:</b>  <b>Explanation:</b>                      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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b>                      The value can contain 1 to 1,024 characters.</p> <p><b>Default value:</b>                      None</p>

## Responses

**Table 8-35** List of returned results

Parameter	Type	Description
output	*RenameFileOutput	<p><b>Explanation:</b>                      Returned results. For details, see <a href="#">Table 8-36</a>.</p>
err	error	<p><b>Explanation:</b>                      Error messages returned by the API</p>

**Table 8-36** RenameFileOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> 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 <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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 current 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 offers methods for object-related APIs (except for resumable transfer) to access OBS using signed URLs. Such a method may contain a signed URL, headers included in a request, and data passed by a request (optional), in addition to `ObsClient.PutFileWithSignedUrl`.

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 the uploaded object can be read by anonymous users, anonymous users can access the object data through the object URL after the upload succeeds. 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 over the Internet. You can upload texts, 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	Man dato ry (Yes/ No)	Description
input	*PutObjec tInput	Yes	<b>Explanation:</b> Input parameters for uploading an object. For details, see <a href="#">Table 9-2</a> .

**Table 9-2** PutObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Man dato ry (Yes /No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ContentMD5	string	No	<p><b>Explanation:</b> Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p><b>Value range:</b> <b>ContentMD5</b> contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: <b>n58IG6hfM7vqI4K0vnWpog==</b></p> <p><b>Default value:</b> None</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Pre-defined access policy that can be specified during object creation. For details about the ACL, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 9-3</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket:  <b>WebsiteRedirectLocation:/anotherPage.html</b></p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>:  <b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b> 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><b>Explanation:</b> Size of the object to be uploaded</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The object size in a single upload ranges from 0 to 5 GB.</li> <li>To upload files larger than 5 GB, <a href="#">multipart uploads</a> should be used.</li> </ul> <p><b>Default value:</b> If this parameter is not specified, the SDK automatically calculates the size of the object.</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	No	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-4</a>. If SSE-KMS is used, see <a href="#">Table 9-5</a>.</p>

Parameter	Type	Mandatory (Yes/No)	Description
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> For available storage classes, see <a href="#">Table 9-6</a>.</p> <p><b>Default value:</b> If this parameter is not specified, the object inherits the storage class of the bucket.</p>
Metadata	map[string]string	No	<p><b>Explanation:</b> Custom metadata of the object to be uploaded. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>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 or decoded in URL or Base64 on the client, because the server side does not perform any decoding.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Body	io.Reader	No	<p><b>Explanation:</b> Data stream of the object to be uploaded</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The object size in a single upload ranges from 0 to 5 GB.</li> <li>To upload files larger than 5 GB, <b>multipart uploads</b> should be used.</li> </ul> <p><b>Default value:</b> None</p>
GrantReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can read the current object and obtain its metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantReadAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
GrantWriteAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE_ACP</b> permission is granted to. The account with the <b>WRITE_ACP</b> permission can write the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantFullControlld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>FULL_CONTROL</b> permission is granted to. The account with the <b>FULL_CONTROL</b> permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
Expires	int64	No	<p><b>Explanation:</b> Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p><b>Value range:</b> A positive integer, in days</p> <p><b>Default value:</b> 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, merge parts, copy parts, and cancel 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. <b>NOTE</b> <b>AclPublicReadDelivered</b> 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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <b>AclPublicReadWriteDelivered</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

**Table 9-5** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

**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 (&lt; 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	* <a href="#">PutObjectOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-8</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-8** PutObjectOutput

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

Parameter	Type	Description
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• If the storage class is Standard, leave this parameter blank.</li> <li>• For available storage classes, see <a href="#">Table 9-6</a>.</li> </ul> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-10</a> . If SSE-KMS is used, see <a href="#">Table 9-11</a> .

**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	<b>Explanation:</b> SSE-C used for encrypting objects <b>Value range:</b> AES256, indicating objects are encrypted using SSE-C <b>Default value:</b> None



Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

**Table 9-11** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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 OBS over the Internet. 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	<b>Explanation:</b> Input parameters for uploading a file. For details, see <a href="#">Table 9-13</a> .

**Table 9-13** PutFileInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ContentMD5	string	No	<p><b>Explanation:</b> Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p><b>Value range:</b> <b>ContentMD5</b> contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: <b>n58IG6hfM7vqI4K0vnWpog==</b></p> <p><b>Default value:</b> None</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Access control list (ACL) that can be pre-defined when an object is created. For details about ACLs, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 9-14</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket:  <b>WebsiteRedirectLocation:/anotherPage.html</b></p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>:  <b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>
ContentType	string	No	<p><b>Explanation:</b></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><b>Value range:</b> See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b></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><b>Explanation:</b> Size of the object to be uploaded</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The object size in a single upload ranges from 0 to 5 GB.</li> <li>To upload files larger than 5 GB, <b>multipart uploads</b> should be used.</li> </ul> <p><b>Default value:</b> If this parameter is not specified, the SDK automatically calculates the size of the object.</p>
SseHeader	<b>SseCHeader</b> or <b>SseKmsHeader</b>	No	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-15</a>. If SSE-KMS is used, see <a href="#">Table 9-16</a>.</p>
StorageClass	<b>StorageClassType</b>	No	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 9-17</a>.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Custom metadata of the object to be uploaded. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server side does not perform any decoding.</li> </ul> <p><b>Default value:</b> None</p>
SourceFile	string	No	<p><b>Explanation:</b> Source file path of the object</p> <p><b>Default value:</b> None</p>
GrantReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can read the current object and obtain its metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantReadAclId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantWriteAclId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE_ACP</b> permission is granted to. The account with the <b>WRITE_ACP</b> permission can write the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantFullControlId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>FULL_CONTROL</b> permission is granted to. The account with the <b>FULL_CONTROL</b> permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Expires	int64	No	<p><b>Explanation:</b> Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p><b>Value range:</b> 1 to <math>(2^{63} - 1)</math>, in days</p> <p><b>Default value:</b> 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, merge parts, copy parts, and cancel 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><b>NOTE</b> <b>AclPublicReadDelivered</b> 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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <b>AclPublicReadWriteDelivered</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-16** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

**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	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-19</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-19** PutObjectOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
StorageClasses	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• If the storage class is Standard, leave this parameter blank.</li> <li>• See <a href="#">Table 9-20</a>.</li> </ul> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-21</a>. If SSE-KMS is used, see <a href="#">Table 9-22</a>.</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 (&lt; 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	<b>Explanation:</b> SSE-C used for encrypting objects <b>Value range:</b> <b>AES256</b> , indicating objects are encrypted using SSE-C <b>Default value:</b> None
Key	string	Yes if used as a request parameter	<b>Explanation:</b> Key for encrypting the object when SSE-C is used <b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b> . <b>Default value:</b> None
KeyMD5	string	No if used as a request parameter	<b>Explanation:</b> 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. <b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b> . <b>Default value:</b> None

Table 9-22 SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<b>Explanation:</b> SSE-KMS used for encrypting objects <b>Value range:</b> <b>kms</b> , indicating objects are encrypted using SSE-KMS <b>Default value:</b> None
Key	string	No if used as a request parameter	<b>Explanation:</b> ID of the KMS master key when SSE-KMS is used <b>Value range:</b> 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"><li>• <i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li><li>• <i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li><li>• <i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li></ul> <b>Default value:</b> <ul style="list-style-type: none"><li>• If this parameter is not specified, the default master key will be used.</li><li>• If there is no such a default master key, the system will create one and use it by default.</li></ul>

## 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	* <a href="#">AppendObjectInput</a>	Yes	<b>Explanation:</b> Request parameters for an append upload. For details, see <a href="#">Table 9-24</a> .

**Table 9-24** AppendObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
Position	int64	Yes	<p><b>Explanation:</b> Position where the object data is appended</p> <p><b>Restrictions:</b> For an object to be appended, the value of <b>position</b> must be set to <b>0</b> when the object is uploaded for the first time. For the second append upload, the value of <b>position</b> should be set to the value of <b>NextAppendPosition</b> returned in the response when the first upload is successful.</p> <p><b>Value range:</b> 0 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b> 0</p>



Parameter	Type	Mandatory (Yes/No)	Description
ContentMD5	string	No	<p><b>Explanation:</b> Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p><b>Value range:</b> <b>ContentMD5</b> contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: <b>n58IG6hfM7vqI4K0vnWpog==</b></p> <p><b>Default value:</b> None</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Pre-defined access policy that can be specified during object creation. For details about the ACL, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 9-25</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket:</p> <p><b>WebsiteRedirectLocation:/anotherPage.html</b></p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>:</p> <p><b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b></p> <p>None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b> 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><b>Explanation:</b> Size of the object to be uploaded</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The object size in a single upload ranges from 0 to 5 GB.</li> <li>To upload files larger than 5 GB, <a href="#">multipart uploads</a> should be used.</li> </ul> <p><b>Default value:</b> If this parameter is not specified, the SDK automatically calculates the size of the object.</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	No	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-26</a>. If SSE-KMS is used, see <a href="#">Table 9-27</a>.</p>
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 9-28</a>.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Custom metadata of the object to be uploaded. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> None</p>
Body	io.Reader	No	<p><b>Explanation:</b> Data stream of the object to be uploaded</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The object size in a single upload ranges from 0 to 5 GB.</li> <li>• To upload files larger than 5 GB, <b>multipart uploads</b> should be used.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can read the current object and obtain its metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantReadAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantWriteAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE_ACP</b> permission is granted to. The account with the <b>WRITE_ACP</b> permission can write the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantFullControlId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>FULL_CONTROL</b> permission is granted to. The account with the <b>FULL_CONTROL</b> permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
Expires	int64	No	<p><b>Explanation:</b> Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p><b>Value range:</b> 1 to <math>(2^{63} - 1)</math>, in days</p> <p><b>Default value:</b> 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, merge parts, copy parts, and cancel 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><b>NOTE</b> <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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>



**Table 9-27** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

**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	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-30</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-30** AppendObjectOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-31</a>. If SSE-KMS is used, see <a href="#">Table 9-32</a>.</p>
NextAppendPosition	int64	<p><b>Explanation:</b> Position from which the next append upload starts</p> <p><b>Restrictions:</b> For an object to be appended, the value of <b>position</b> must be set to <b>0</b> when the object is uploaded for the first time. For the second append upload, the value of <b>position</b> should be set to the value of <b>NextAppendPosition</b> returned in the response when the first upload is successful.</p> <p><b>Value range:</b> 0 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b> 0</p>

**Table 9-31** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-32** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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	<b>Explanation:</b> Input parameters for a resumable upload. For details, see <a href="#">Table 9-34</a> .



**Table 9-34** UploadFileInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Man dato ry (Yes /No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadFile	string	Yes	<p><b>Explanation:</b> Local file path of the object to be uploaded</p> <p><b>Default value:</b> None</p>
PartSize	int64	Yes	<p><b>Explanation:</b> Part size</p> <p><b>Value range:</b> The value ranges from 100 KB to 5 GB, in bytes.</p> <p><b>Default value:</b> 102400</p>
TaskNum	int	No	<p><b>Explanation:</b> Maximum number of parts that can be uploaded concurrently</p> <p><b>Value range:</b> An integer from 1 to 10000</p> <p><b>Default value:</b> 1, indicating concurrent uploads are not used</p>

Parameter	Type	Mandatory (Yes/No)	Description
EnableCheckpoint	bool	No	<p><b>Explanation:</b> Whether to enable the resumable upload</p> <p><b>Value range:</b> <b>true:</b> The resumable upload mode is enabled. <b>false:</b> The resumable upload mode is disabled.</p> <p><b>Default value:</b> false</p>
CheckpointFile	string	No	<p><b>Explanation:</b> File used to record the upload progress. This parameter is valid only in the resumable upload mode.</p> <p><b>Default value:</b> If this parameter is left blank, the progress file will be in the same directory as the local file to be uploaded.</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Pre-defined access policy that can be specified during object creation. For details about the ACL, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 9-35</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>
ContentType	string	No	<p><b>Explanation:</b></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><b>Value range:</b> See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b></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	<b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-36</a> . If SSE-KMS is used, see <a href="#">Table 9-37</a> .
StorageClass	StorageClassType	No	<b>Explanation:</b> Object storage class <b>Value range:</b> See <a href="#">Table 9-38</a> . <b>Default value:</b> If this parameter is not specified, the object inherits the storage class of the bucket.
Metadata	map[string]string	No	<b>Explanation:</b> Custom metadata of the object to be uploaded. You can add a header starting with <b>x-obs-meta-</b> 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. <b>Restrictions:</b> <ul style="list-style-type: none"><li>• 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.</li><li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li><li>• 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 or decoded in URL or Base64 on the client, because the server side does not perform any decoding.</li></ul> <b>Default value:</b> None

Parameter	Type	Mandatory (Yes/No)	Description
Expires	int64	No	<p><b>Explanation:</b> Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p><b>Value range:</b> 1 to <math>(2^{63} - 1)</math>, in days</p> <p><b>Default value:</b> None</p>
GrantReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can read the current object and obtain its metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantReadAcpId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantWriteAcpId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE_ACP</b> permission is granted to. The account with the <b>WRITE_ACP</b> permission can write the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantFullControlId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>FULL_CONTROL</b> permission is granted to. The account with the <b>FULL_CONTROL</b> permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
EncodingType	string	No	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</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, merge parts, copy parts, and cancel 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. <b>NOTE</b> <b>AclPublicReadDelivered</b> 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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <b>AclPublicReadWriteDelivered</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

**Table 9-37** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

**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 (&lt; 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	* <a href="#">CompleteMultipartUploadOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-40</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-40** CompleteMultipartUploadOutput

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

Parameter	Type	Description
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
ETag	string	<b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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. <b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. <b>Value range:</b> The value must contain 32 characters. <b>Default value:</b> None

Parameter	Type	Description
Bucket	string	<p><b>Explanation:</b> Bucket in which parts are assembled</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my.bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
Key	string	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Location	string	<p><b>Explanation:</b> URL of the generated object after part assembling Example: <b>https://example-Bucket.obs.regions.myhuaweicloud.com/example-Object</b></p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Version ID of the object obtained after part combination. If versioning is enabled for the bucket, the object version ID will be returned.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-41</a>. If SSE-KMS is used, see <a href="#">Table 9-42</a>.</p>
EncodingType	string	<p><b>Explanation:</b> Encoding type for some elements in the response. If <b>Key</b> contains control characters (special characters) that are not supported by the XML 1.0 standard, set this parameter to <b>url</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>



**Table 9-42** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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 \(SDK for Go\)](#)
- [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	* <a href="#">GetObjectInput</a>	Yes	<b>Explanation:</b> Input parameters for a streaming download. For details, see <a href="#">Table 9-44</a> .

**Table 9-44** GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ResponseCacheControl	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentDisposition	string	No	<p><b>Explanation:</b> <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentEncoding	string	No	<p><b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is downloaded.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	<p><b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContent-Type	string	No	<p><b>Explanation:</b> <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b> None</p>
ResponseExpires	string	No	<p><b>Explanation:</b> <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is downloaded.</p>

Parameter	Type	Mandatory (Yes/No)	Description
ImageProcess	string	No	<p><b>Explanation:</b> Image processing command or style. Example for resizing and rotating an image: <b>image/resize,m_fixed,w_100,h_100/rotate,90</b></p> <p><b>Value range:</b> Command format: <b>image/commands</b> Style format: <b>style/style name</b> For details about image processing parameters, see <a href="#">Processing Images</a>.</p> <p><b>Default value:</b> If no commands are entered, the original image will be returned.</p>
RangeStart	int64	No	<p><b>Explanation:</b> Start position for object download</p> <p><b>Value range:</b> 0 to the object length, in bytes.</p> <p><b>Default value:</b> <b>0</b>, indicating the download starts from the first byte of the object.</p>
RangeEnd	int64	No	<p><b>Explanation:</b> End position for object download</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>The value must be greater than that of <b>RangeStart</b>.</li> <li>The upper limit of the value is the object length minus 1, in bytes.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfNoneMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfModifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
IfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseHeader</b>	No	<p><b>Explanation:</b> Server-side decryption headers. For details, see <a href="#">Table 9-45</a>.</p> <p><b>Restrictions:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVAobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-46** List of returned results

Parameter	Type	Description
output	* <a href="#">GetObjectOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-47</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-47** GetObjectOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
Body	io.ReadCloser	<p><b>Explanation:</b> Object data stream to download</p> <p><b>Default value:</b> None</p>
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 9-48</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
AllowOrigin	string	<p><b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>
AllowHeader	string	<p><b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
AllowMethod	string	<p><b>Explanation:</b> <b>AllowedMethod</b> 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><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• PUT</li> <li>• HEAD</li> <li>• POST</li> <li>• DELETE</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>            Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>            0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>            100</p>
ContentLength	int64	<p><b>Explanation:</b>            Object size in bytes</p> <p><b>Value range:</b>            The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b>            None</p>
CacheControl	string	<p><b>Explanation:</b>  <b>Cache-Control</b> header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p><b>Default value:</b>            None</p>

Parameter	Type	Description
ContentDisposition	string	<p><b>Explanation:</b>  <b>Content-Disposition</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentEncoding	string	<p><b>Explanation:</b>  <b>Content-Encoding</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentLanguage	string	<p><b>Explanation:</b>  <b>Content-Language</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentType	string	<p><b>Explanation:</b>  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><b>Value range:</b>  See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b>  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><b>Explanation:</b>  <b>Expires</b> header in the response</p> <p><b>Default value:</b>  None</p>
LastModified	time.Time	<p><b>Explanation:</b>  Time when the last modification was made to the object</p> <p><b>Restrictions:</b>  The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b>  None</p>

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Restore	string	<p><b>Explanation:</b> Restore status of an object. For an Archive object that is being restored or has been restored, this header is returned. For example, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Expiration	string	<p><b>Explanation:</b> Expiration details of the object. Example: <b>"expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</b></p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-49</a>. If SSE-KMS is used, see <a href="#">Table 9-50</a>.</p>
WebsiteRedirectLocation	string	<p><b>Explanation:</b> 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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom object metadata. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-50** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<b>Explanation:</b> SSE-KMS used for encrypting objects <b>Value range:</b> <b>kms</b> , indicating objects are encrypted using SSE-KMS <b>Default value:</b> None
Key	string	No if used as a request parameter	<b>Explanation:</b> ID of the KMS master key when SSE-KMS is used <b>Value range:</b> 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"><li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li><li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li><li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li></ul> <b>Default value:</b> <ul style="list-style-type: none"><li>If this parameter is not specified, the default master key will be used.</li><li>If there is no such a default master key, the system will create one and use it by default.</li></ul>

## 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 (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	<b>Explanation:</b> Input parameters for a partial download. For details, see <a href="#">Table 9-52</a> .

**Table 9-52** GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ResponseCacheControl	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentDisposition	string	No	<p><b>Explanation:</b> <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentEncoding	string	No	<p><b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is downloaded.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	<p><b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContent-Type	string	No	<p><b>Explanation:</b> <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b> None</p>
ResponseExpires	string	No	<p><b>Explanation:</b> <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID. Example: <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is downloaded.</p>

Parameter	Type	Mandatory (Yes/No)	Description
ImageProcess	string	No	<p><b>Explanation:</b> Image processing command or style. Example for resizing and rotating an image: <b>image/resize,m_fixed,w_100,h_100/rotate,90</b></p> <p><b>Value range:</b> Command format: <b>image/commands</b> Style format: <b>style/style name</b> For details about image processing parameters, see <a href="#">Processing Images</a>.</p> <p><b>Default value:</b> If no commands are entered, the original image will be returned.</p>
RangeStart	int64	No	<p><b>Explanation:</b> Start position for object download</p> <p><b>Value range:</b> 0 to the object length, in bytes.</p> <p><b>Default value:</b> <b>0</b>, indicating the download starts from the first byte of the object.</p>
RangeEnd	int64	No	<p><b>Explanation:</b> End position for object download</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>The value must be greater than that of <b>RangeStart</b>.</li> <li>The upper limit of the value is the object length minus 1, in bytes.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfNoneMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfModifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseHeader</b>	No	<p><b>Explanation:</b> Server-side decryption headers. For details, see <a href="#">Table 9-53</a>.</p> <p><b>Restrictions:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVAobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-54** List of returned results

Parameter	Type	Description
output	<b>*GetObjectOutput</b>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-55</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-55** GetObjectOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
Body	io.ReadCloser	<p><b>Explanation:</b> Object data stream to download</p> <p><b>Default value:</b> None</p>
DeleteMarker	bool	<p><b>Explanation:</b> Whether the deleted object is a delete marker</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The deleted object is a delete marker.</li> <li>• <b>false:</b> The deleted object is not a delete marker.</li> </ul> <p><b>Default value:</b> false</p>
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 9-56</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
AllowOrigin	string	<p><b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> specified in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>
AllowHeader	string	<p><b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> specified in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
AllowMethod	string	<p><b>Explanation:</b> <b>AllowedMethod</b> 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><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>● GET</li> <li>● PUT</li> <li>● HEAD</li> <li>● POST</li> <li>● DELETE</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>            Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>            0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>            100</p>
ContentLength	int64	<p><b>Explanation:</b>            Object size in bytes</p> <p><b>Value range:</b>            The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b>            None</p>
CacheControl	string	<p><b>Explanation:</b>  <b>Cache-Control</b> header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p><b>Default value:</b>            None</p>



Parameter	Type	Description
ContentDisposition	string	<p><b>Explanation:</b>  <b>Content-Disposition</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentEncoding	string	<p><b>Explanation:</b>  <b>Content-Encoding</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentLanguage	string	<p><b>Explanation:</b>  <b>Content-Language</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentType	string	<p><b>Explanation:</b>  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><b>Value range:</b>  See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b>  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><b>Explanation:</b>  <b>Expires</b> header in the response</p> <p><b>Default value:</b>  None</p>
LastModified	time.Time	<p><b>Explanation:</b>  Time when the last modification was made to the object</p> <p><b>Restrictions:</b>  The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b>  None</p>

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Restore	string	<p><b>Explanation:</b> 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, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Expiration	string	<p><b>Explanation:</b> Expiration details of the object. Example: <b>"expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</b></p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-57</a>. If SSE-KMS is used, see <a href="#">Table 9-58</a>.</p>
WebsiteRedirectLocation	string	<p><b>Explanation:</b> 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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom object metadata. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-58** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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	<b>Explanation:</b> Input parameters for a conditional download. For details, see <a href="#">Table 9-60</a> .



**Table 9-60** GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ResponseCacheControl	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentDisposition	string	No	<p><b>Explanation:</b> <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentEncoding	string	No	<p><b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is downloaded.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	<p><b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContent-Type	string	No	<p><b>Explanation:</b> <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b> None</p>
ResponseExpires	string	No	<p><b>Explanation:</b> <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID. Example: <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is downloaded.</p>

Parameter	Type	Mandatory (Yes/No)	Description
ImageProcess	string	No	<p><b>Explanation:</b> Image processing command or style. Example for resizing and rotating an image: <b>image/resize,m_fixed,w_100,h_100/rotate,90</b></p> <p><b>Value range:</b> Command format: <b>image/commands</b> Style format: <b>style/style name</b> For details about image processing parameters, see <a href="#">Processing Images</a>.</p> <p><b>Default value:</b> If no commands are entered, the original image will be returned.</p>
RangeStart	int64	No	<p><b>Explanation:</b> Start position for object download</p> <p><b>Value range:</b> 0 to the object length, in bytes.</p> <p><b>Default value:</b> <b>0</b>, indicating the download starts from the first byte of the object.</p>
RangeEnd	int64	No	<p><b>Explanation:</b> End position for object download</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>The value must be greater than that of <b>RangeStart</b>.</li> <li>The upper limit of the value is the object length minus 1, in bytes.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfNoneMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfModifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseHeader</b>	No	<p><b>Explanation:</b> Server-side decryption headers. For details, see <a href="#">Table 9-61</a>.</p> <p><b>Restrictions:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-62** List of returned results

Parameter	Type	Description
output	* <a href="#">GetObjectOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-63</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-63** GetObjectOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
Body	io.ReadCloser	<p><b>Explanation:</b> Object data stream to download</p> <p><b>Default value:</b> None</p>
DeleteMarker	bool	<p><b>Explanation:</b> Whether the deleted object is a delete marker</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The deleted object is a delete marker.</li> <li>• <b>false:</b> The deleted object is not a delete marker.</li> </ul> <p><b>Default value:</b> false</p>
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 9-64</a>.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Description
AllowOrigin	string	<p><b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> specified in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>
AllowHeader	string	<p><b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> specified in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
AllowMethod	string	<p><b>Explanation:</b> <b>AllowedMethod</b> 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><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• PUT</li> <li>• HEAD</li> <li>• POST</li> <li>• DELETE</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>            Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>            0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>            100</p>
ContentLength	int64	<p><b>Explanation:</b>            Object size in bytes</p> <p><b>Value range:</b>            The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b>            None</p>
CacheControl	string	<p><b>Explanation:</b>  <b>Cache-Control</b> header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p><b>Default value:</b>            None</p>

Parameter	Type	Description
ContentDisposition	string	<p><b>Explanation:</b>  <b>Content-Disposition</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentEncoding	string	<p><b>Explanation:</b>  <b>Content-Encoding</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentLanguage	string	<p><b>Explanation:</b>  <b>Content-Language</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentType	string	<p><b>Explanation:</b>  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><b>Value range:</b>  See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b>  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><b>Explanation:</b>  <b>Expires</b> header in the response</p> <p><b>Default value:</b>  None</p>
LastModified	time.Time	<p><b>Explanation:</b>  Time when the last modification was made to the object</p> <p><b>Restrictions:</b>  The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b>  None</p>

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Restore	string	<p><b>Explanation:</b> 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, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Expiration	string	<p><b>Explanation:</b> Expiration details of the object. Example: <code>"expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</code></p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-65</a>. If SSE-KMS is used, see <a href="#">Table 9-66</a>.</p>
WebsiteRedirectLocation	string	<p><b>Explanation:</b> 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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom object metadata. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-66** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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	* <a href="#">DownloadFileInput</a>	Yes	<b>Explanation:</b> Input parameters for a resumable download. For details, see <a href="#">Table 9-68</a> .

**Table 9-68** DownloadFileInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is downloaded.</p>
DownloadFile	string	No	<p><b>Explanation:</b> Full path of the local directory to which the object is downloaded.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Part size</p> <p><b>Value range:</b> The value must be greater than 0 but less than the object size, in bytes.</p> <p><b>Default value:</b> <b>9437184</b>, indicating 9 MB for each part</p>
TaskNum	int	No	<p><b>Explanation:</b> Maximum number of parts that can be downloaded concurrently</p> <p><b>Value range:</b> 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><b>Default value:</b> <b>1</b>, indicating concurrent downloads are not used.</p>
EnableCheckpoint	bool	No	<p><b>Explanation:</b> Whether to enable the resumable download</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The resumable download mode is enabled.</li> <li>• <b>false:</b> The resumable download mode is disabled.</li> </ul> <p><b>Default value:</b> false</p>
CheckpointFile	string	No	<p><b>Explanation:</b> File used to record the download progress. This parameter is valid only in a resumable download.</p> <p><b>Default value:</b> 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	<a href="#">SseHeader</a>	No	<b>Explanation:</b> Server-side decryption headers. For details, see <a href="#">Table 9-69</a> .
IfMatch	string	No	<b>Explanation:</b> 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. <b>Value range:</b> The value must contain 32 characters. <b>Default value:</b> None
IfNoneMatch	string	No	<b>Explanation:</b> 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. <b>Value range:</b> The value must contain 32 characters. <b>Default value:</b> None
IfModifiedSince	time.Time	No	<b>Explanation:</b> The object is returned if it has been modified since the specified time; otherwise, an error is returned. <b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b> . Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b> <b>Default value:</b> None

Parameter	Type	Mandatory (Yes/No)	Description
IfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>

**Table 9-69** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-70** List of returned results

Parameter	Type	Description
output	<a href="#">*GetObjectMetadataOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-71</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-71** GetObjectMetadataOutput

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

Parameter	Type	Description
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
StorageClass	<a href="#">StorageClassType</a>	<b>Explanation:</b> Object storage class <b>Value range:</b> See <a href="#">Table 9-72</a> . <b>Default value:</b> None
AllowOrigin	string	<b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> specified in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket. <b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b> . <b>Default value:</b> None
AllowHeader	string	<b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> specified in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid. <b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed. <b>Default value:</b> None

Parameter	Type	Description
AllowMethod	string	<p><b>Explanation:</b>  <b>AllowedMethod</b> 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><b>Value range:</b>            The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• PUT</li> <li>• HEAD</li> <li>• POST</li> <li>• DELETE</li> </ul> <p><b>Default value:</b>            None</p>
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>

Parameter	Type	Description
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>  Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>  0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>  100</p>
ContentLength	int64	<p><b>Explanation:</b>  Object size in bytes</p> <p><b>Value range:</b>  The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b>  None</p>
ContentType	string	<p><b>Explanation:</b>  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><b>Value range:</b>  See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b>  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><b>Explanation:</b>  Time when the last modification was made to the object</p> <p><b>Restrictions:</b>  The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b>  None</p>

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Restore	string	<p><b>Explanation:</b> 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, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Expiration	string	<p><b>Explanation:</b> Expiration details of the object. Example: <code>"expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</code></p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-73</a>. If SSE-KMS is used, see <a href="#">Table 9-74</a>.</p>
WebsiteRedirectLocation	string	<p><b>Explanation:</b> 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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom object metadata. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>



**Table 9-74** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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.

There is no folder concept in OBS. 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	<b>Explanation:</b> Input parameters for creating a folder. For details, see <a href="#">Table 9-76</a> .

**Table 9-76** PutObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Man dato ry (Yes /No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ContentMD5	string	No	<p><b>Explanation:</b> Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p><b>Value range:</b> <b>ContentMD5</b> contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864.</p> <p>Example: <b>n58IG6hfM7vqI4K0vnWpog==</b></p> <p><b>Default value:</b> None</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Pre-defined access policy that can be specified during object creation. For details about the ACL, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 9-3</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket:  <b>WebsiteRedirectLocation:/anotherPage.html</b></p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>:  <b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b> 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><b>Explanation:</b> Size of the object to be uploaded</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The object size in a single upload ranges from 0 to 5 GB.</li> <li>To upload files larger than 5 GB, <a href="#">multipart uploads</a> should be used.</li> </ul> <p><b>Default value:</b> If this parameter is not specified, the SDK automatically calculates the size of the object.</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	No	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-4</a>. If SSE-KMS is used, see <a href="#">Table 9-5</a>.</p>

Parameter	Type	Mandatory (Yes/No)	Description
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> For available storage classes, see <a href="#">Table 9-6</a>.</p> <p><b>Default value:</b> If this parameter is not specified, the object inherits the storage class of the bucket.</p>
Metadata	map[string]string	No	<p><b>Explanation:</b> Custom metadata of the object to be uploaded. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>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.</li> <li>The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>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 or decoded in URL or Base64 on the client, because the server side does not perform any decoding.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
Body	io.Reader	No	<p><b>Explanation:</b> Data stream of the object to be uploaded</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The object size in a single upload ranges from 0 to 5 GB.</li> <li>To upload files larger than 5 GB, <b>multipart uploads</b> should be used.</li> </ul> <p><b>Default value:</b> None</p>
GrantReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can read the current object and obtain its metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantReadAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantWriteAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE_ACP</b> permission is granted to. The account with the <b>WRITE_ACP</b> permission can write the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantFullControlld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>FULL_CONTROL</b> permission is granted to. The account with the <b>FULL_CONTROL</b> permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
Expires	int64	No	<p><b>Explanation:</b> Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p><b>Value range:</b> A positive integer, in days</p> <p><b>Default value:</b> 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, merge parts, copy parts, and cancel 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. <b>NOTE</b> <b>AclPublicReadDelivered</b> 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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <b>AclPublicReadWriteDelivered</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

**Table 9-79** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

**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 (&lt; 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	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-82</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-82** PutObjectOutput

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

Parameter	Type	Description
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> See <a href="#">Table 9-83</a>.</p> <p><b>Value range:</b> If the storage class is Standard, leave this parameter blank.</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-84</a>. If SSE-KMS is used, see <a href="#">Table 9-85</a>.</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	<b>Explanation:</b> SSE-C used for encrypting objects <b>Value range:</b> <b>AES256</b> , indicating objects are encrypted using SSE-C <b>Default value:</b> None
Key	string	Yes if used as a request parameter	<b>Explanation:</b> Key for encrypting the object when SSE-C is used <b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b> <b>Default value:</b> None

Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-85** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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 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, 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. You can create a backup up to 5 GB for an object in a specified bucket by 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 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	<b>Explanation:</b> Input parameters for copying an object. For details, see <a href="#">Table 9-87</a> .

**Table 9-87** CopyObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
CopySourceBucket	string	Yes	<p><b>Explanation:</b> Source bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
CopySourceKey	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
CopySourceVersionId	string	No	<p><b>Explanation:</b> Version ID of the source object, for example, <b>G001117FCE89978B0000401205D5DC9A</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> If this parameter is left blank, the latest version of the object is copied.</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> ACL that can be pre-defined during the object copy. For details about the ACL, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 9-88</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
MetadataDirective	MetadataDirectiveType	No	<p><b>Explanation:</b> Policy for copying the source object's properties</p> <p><b>Value range:</b> See <a href="#">Table 9-89</a>.</p> <p><b>Default value:</b> None</p>
CopySourceIfMatch	string	No	<p><b>Explanation:</b> Copies the source object if its ETag is the same as the one specified by this parameter; otherwise, an error is returned.</p> <p><b>Default value:</b> None</p>
CopySourceIfNoneMatch	string	No	<p><b>Explanation:</b> Copies the source object if its ETag is different from the one specified by this parameter; otherwise, an error is returned.</p> <p><b>Default value:</b> None</p>
CopySourceIfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> Copies the source object if it has not been modified since the specified time; otherwise, an exception is thrown.</p> <p><b>Default value:</b> None</p>
CopySourceIfModifiedSince	time.Time	No	<p><b>Explanation:</b> Copies the source object if it has been modified since the specified time; otherwise, an exception is thrown.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	No	<p><b>Explanation:</b></p> <p>Server-side header used for encrypting the target object. If SSE-C is used, see <a href="#">SseCHeader</a>. If SSE-KMS is used, see <a href="#">SseKmsHeader</a>.</p>
SourceSseHeader	<a href="#">SseCHeader</a>	No	<p><b>Explanation:</b></p> <p>Server-side header used for decrypting the source object. For details, see <a href="#">SseCHeader</a>.</p>

Parameter	Type	Mandatory (Yes/No)	Description
CacheControl	string	No	<b>Explanation:</b> <b>Cache-Control</b> is rewritten in the response. <b>Default value:</b> None
ContentDisposition	string	No	<b>Explanation:</b> Rewrites the <b>Content-Disposition</b> header in the response. <b>Default value:</b> None
ContentEncoding	string	No	<b>Explanation:</b> Rewrites the <b>Content-Encoding</b> header in the response. <b>Default value:</b> None
ContentLanguage	string	No	<b>Explanation:</b> <b>Content-Language</b> is rewritten in the response. <b>Default value:</b> None
ContentType	string	No	<b>Explanation:</b> <b>Content-Type</b> is rewritten in the response. <b>Default value:</b> None
Expires	string	No	<b>Explanation:</b> <b>Expires</b> is rewritten in the response. <b>Default value:</b> None

Parameter	Type	Mandatory (Yes/No)	Description
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 9-92</a>.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Custom metadata of the target object. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server side does not perform any decoding.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can read the object to copy and obtain its metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantReadAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the object to copy.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantWriteAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE_ACP</b> permission is granted to. The account with the <b>WRITE_ACP</b> permission can write the ACL of the object to copy.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantFullControllId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>FULL_CONTROL</b> permission is granted to. The account with the <b>FULL_CONTROL</b> permission can read the object to copy, obtain its metadata, and obtain and write its ACL.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
SuccessActionRedirect	string	No	<p><b>Explanation:</b> 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. <b>Location</b> contains <b>SuccessActionRedirect</b> 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 <b>Location</b> header is the object address, and OBS returns a status code based on whether the operation succeeds or fails.</p> <p><b>Default value:</b> 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	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.
<code>AclPublicReadWrite</code>	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, merge parts, copy parts, and cancel multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<code>AclPublicReadDelivered</code>	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. <b>NOTE</b> <code>AclPublicReadDelivered</code> does not apply to objects.
<code>AclPublicReadWriteDelivered</code>	public-read-write-delivered	Public read/write 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 in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket. <b>NOTE</b> <code>AclPublicReadWriteDelivered</code> does not apply to objects.



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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> AES256, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-91** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

**Table 9-92** 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 (&lt; 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 9-93** List of returned results

Parameter	Type	Description
output	*CopyObjectOutput	<b>Explanation:</b> Messages returned by the API See <a href="#">Table 9-94</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-94** CopyObjectOutput

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

Parameter	Type	Description
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
LastModified	time.Time	<p><b>Explanation:</b> Time when the last modification was made to the target object</p> <p><b>Value range:</b> UTC time</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
CopySourceVersionId	string	<p><b>Explanation:</b> Version ID of the source object</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
VersionId	string	<p><b>Explanation:</b> Version ID of the target object</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-95</a>. If SSE-KMS is used, see <a href="#">Table 9-96</a>.</p>

**Table 9-95** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-96** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

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

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> ID of the object version to delete, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-100</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-100** DeleteObjectOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
DeleteMarker	bool	<p><b>Explanation:</b> Whether the deleted object is a delete marker</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The deleted object is a delete marker.</li> <li>• <b>false:</b> The deleted object is not a delete marker.</li> </ul> <p><b>Default value:</b> false</p>
VersionId	string	<p><b>Explanation:</b> ID of the object version to delete, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> 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	<b>Explanation:</b> Input parameters for batch deleting objects. For details, see <a href="#">Table 9-102</a> .

**Table 9-102** DeleteObjectsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
Quiet	bool	No	<p><b>Explanation:</b> Response to the request for deleting objects in a batch</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li><b>false:</b> The detailed mode. Results of both successful and failed deletions are returned.</li> <li><b>true:</b> The quiet mode. Only results of failed deletions are returned.</li> </ul> <p><b>Default value:</b> false</p>
Objects	[] <a href="#">Object ToDelete</a>	Yes	<p><b>Explanation:</b> List of objects to be deleted. For details, see <a href="#">Table 9-103</a>.</p>
EncodingType	string	No	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> url</p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>

**Table 9-103** ObjectToDelete

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> ID of the object version to delete, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-105</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-105** DeleteObjectsOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string] []string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
DeletedIds	[]Deleted	<p><b>Explanation:</b> List of objects that are successfully deleted. For details, see <a href="#">Table 9-106</a>.</p>
Errors	[]Error	<p><b>Explanation:</b> List of objects that fail to be deleted. For details, see <a href="#">Table 9-107</a>.</p>
EncodingType	string	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>

**Table 9-106 Deleted**

Parameter	Type	Description
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> ID of the object version to delete, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is deleted.</p>
DeleteMarker	bool	<p><b>Explanation:</b> Whether the deleted object is a delete marker</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> The deleted object is a delete marker.</li> <li>• <b>false:</b> The deleted object is not a delete marker.</li> </ul> <p><b>Default value:</b> false</p>

Parameter	Type	Description
DeleteMarkerVersionId	string	<p><b>Explanation:</b> 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"> <li>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.</li> <li>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.</li> </ul> <p><b>Default value:</b> None</p>

**Table 9-107** Error

Parameter	Type	Description
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
VersionId	string	<b>Explanation:</b> ID of the object version to delete, for example, <b>G001117FCE89978B0000401205D5DC9</b> <b>Value range:</b> The value must contain 32 characters. <b>Default value:</b> None. If this parameter is left blank, the latest version of the object is deleted.
Code	string	<b>Explanation:</b> Error code of the deletion failure. For details, see <a href="#">OBS Error Codes</a> .
Message	string	<b>Explanation:</b> Error message of the deletion failure. For details, see <a href="#">OBS Error Codes</a> .

## 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	<b>Explanation:</b> Input parameters for configuring object metadata. For details, see <a href="#">Table 9-109</a> .



**Table 9-109** SetObjectMetadataInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Value range:</b> The value must contain 3 to 63 characters.</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9A</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
CacheControl	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ContentDisposition	string	No	<p><b>Explanation:</b> <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ContentEncoding	string	No	<p><b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ContentLanguage	string	No	<p><b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ContentType	string	No	<p><b>Explanation:</b> <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b> None</p>
Expires	string	No	<p><b>Explanation:</b> <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> Storage class of an object.</p> <p><b>Value range:</b> See <a href="#">Table 9-110</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	<p><b>Explanation:</b> Custom metadata of the object. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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 (&lt; 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	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-112</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-112** SetObjectMetadataOutput

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

Parameter	Type	Description
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
MetadataDirective	<b>Metadata Directive Type</b>	<b>Explanation:</b> Policy for copying the source object's properties <b>Value range:</b> See <a href="#">Table 9-113</a> . <b>Default value:</b> None
CacheControl	string	<b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies cache behaviors of the web page when an object is downloaded. <b>Default value:</b> None
ContentDisposition	string	<b>Explanation:</b> <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded. <b>Default value:</b> None
ContentEncoding	string	<b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is downloaded. <b>Default value:</b> None
ContentLanguage	string	<b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded. <b>Default value:</b> None

Parameter	Type	Description
ContentType	string	<p><b>Explanation:</b>  <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b>  None</p>
Expires	string	<p><b>Explanation:</b>  <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b>  None</p>
WebsiteRedirectLocation	string	<p><b>Explanation:</b>  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 <b>anotherPage.html</b> in the same bucket:  WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>:  WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b>  None</p>



Parameter	Type	Description
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Object storage class. If you do not specify this header, the object inherits the storage class of the bucket.</p> <p><b>Value range:</b> See <a href="#">Table 9-114</a>.</p> <p><b>Default value:</b> None</p>
Metadata	map[string]string	<p><b>Explanation:</b> Custom metadata of the object. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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	<b>Explanation:</b> Input parameters for obtaining object metadata. For details, see <a href="#">Table 9-116</a> .

**Table 9-116** GetObjectMetadataInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9A</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseCHeader</b>	No	<p><b>Explanation:</b> Server-side decryption headers. For details, see <a href="#">Table 9-117</a>.</p>

**Table 9-117** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-118** List of returned results

Parameter	Type	Description
output	<b>*GetObjectMetadataOutput</b>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-119</a>.</p>

Parameter	Type	Description
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-119** GetObjectMetadataOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
StorageClass	<a href="#">StorageClassType</a>	<b>Explanation:</b> Object storage class. If you do not specify this header, the object inherits the storage class of the bucket. <b>Value range:</b> See <a href="#">Table 9-120</a> . <b>Default value:</b> None



Parameter	Type	Description
AllowOrigin	string	<p><b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> specified in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>
AllowHeader	string	<p><b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> specified in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
AllowMethod	string	<p><b>Explanation:</b> <b>AllowedMethod</b> 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><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>● GET</li> <li>● PUT</li> <li>● HEAD</li> <li>● POST</li> <li>● DELETE</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>            Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>            0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>            100</p>
ContentLength	int64	<p><b>Explanation:</b>            Object size in bytes</p> <p><b>Value range:</b>            0 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b>            None</p>

Parameter	Type	Description
ContentType	string	<p><b>Explanation:</b> 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><b>Value range:</b> See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b> 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><b>Explanation:</b> Time when the last modification was made to the object</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Restore	string	<p><b>Explanation:</b> 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, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>
Expiration	string	<p><b>Explanation:</b> Expiration details of the object. Example: <b>"expiry-date="Mon, 11 Sep 2023 00:00:00 GMT"</b></p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseHeader</b> or <b>SseKmsHeader</b>	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 9-121</a>. If SSE-KMS is used, see <a href="#">Table 9-122</a>.</p>

Parameter	Type	Description
WebsiteRedirectLocation	string	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: WebsiteRedirectLocation:http://www.example.com/</p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"><li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li><li>• OBS only supports redirection for objects in the root directory of a bucket.</li></ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom metadata of the object. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server side does not perform any decoding.</li> </ul> <p><b>Default value:</b> 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 (&lt; 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> AES256, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

**Table 9-122** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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.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	<b>Explanation:</b> Input parameters for configuring an ACL for the object. For details, see <a href="#">Table 9-124</a> .

**Table 9-124** SetObjectAclInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9A</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Pre-defined ACL</p> <p><b>Value range:</b> See <a href="#">Table 9-125</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Owner	<a href="#">Owner</a>	No	<p><b>Explanation:</b> Account ID of the object owner. For details, see <a href="#">Table 9-126</a>.</p> <p><b>Restrictions:</b> <b>Owner</b> and <b>Grants</b> must be used together and they cannot be used with <b>ACL</b>.</p>
Grants	<a href="#">[]Grant</a>	No	<p><b>Explanation:</b> Grantees' permission information. For details, see <a href="#">Table 9-127</a>.</p> <p><b>Default value:</b> 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, merge parts, copy parts, and cancel 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><b>NOTE</b> <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 tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket.</p> <p><b>NOTE</b> <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><b>Explanation:</b> Account (domain) ID of the owner</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

**Table 9-127** Grant

Parameter	Type	Mandatory (Yes/No)	Description
Grantee	<a href="#">Grantee</a>	Yes if used as a request parameter	<p><b>Explanation:</b> Grantee information. For details, see <a href="#">Table 9-128</a>.</p>
Permission	<a href="#">PermissionType</a>	Yes if used as a request parameter	<p><b>Explanation:</b> Granted permission</p> <p><b>Value range:</b> See <a href="#">Table 9-129</a>.</p> <p><b>Default value:</b> None</p>

**Table 9-128** Grantee

Parameter	Type	Mandatory (Yes/No)	Description
Type	<a href="#">Grantee Type</a>	Yes if used as a request parameter	<p><b>Explanation:</b> Grantee type</p> <p><b>Value range:</b> See <a href="#">Table 9-130</a>.</p> <p><b>Default value:</b> None</p>
ID	string	Yes if this parameter is used as a request parameter and <b>Type</b> is set to <b>Grantee User</b>	<p><b>Explanation:</b> Account (domain) ID of the grantee</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
DisplayName	string	No if used as a request parameter	<p><b>Explanation:</b> Account name of the grantee</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Starts with a letter.</li> <li>• Contains 6 to 32 characters.</li> <li>• Contains only letters, digits, hyphens (-), and underscores (_).</li> </ul> <p><b>Default value:</b> None</p>
URI	<a href="#">GroupUriType</a>	Yes if this parameter is used as a request parameter and <b>Type</b> is set to <b>Grantee Group</b>	<p><b>Explanation:</b> Authorized user group</p> <p><b>Value range:</b> See <a href="#">Table 9-131</a>.</p> <p><b>Default value:</b> 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	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-133</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-133** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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	*GetObjectAclInput	Yes	<b>Explanation:</b> Input parameters for obtaining the ACL of an object. For details, see <a href="#">Table 9-135</a> .

**Table 9-135** GetObjectAclInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Bucket name
Key	string	Yes	<b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b> , the object name is <b>folder/test.txt</b> .  <b>Value range:</b> The value must contain 1 to 1,024 characters.  <b>Default value:</b> None

Parameter	Type	Mandatory (Yes/No)	Description
VersionId	string	No	Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9A</b> <b>Default Value:</b> none

## Responses

**Table 9-136** List of returned results

Parameter	Type	Description
output	* <a href="#">GetObjectAclOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-137</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-137** GetObjectAclOutput

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

Parameter	Type	Description
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
VersionId	string	<b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9A</b> <b>Value range:</b> The value must contain 32 characters. <b>Default value:</b> None
Owner	<b>Owner</b>	<b>Explanation:</b> Account ID of the object owner. For details, see <a href="#">Table 9-138</a> . <b>Restrictions:</b> <b>Owner</b> and <b>Grants</b> must be used together and they cannot be used with <b>ACL</b> .
Grants	[] <b>Grant</b>	<b>Explanation:</b> Grantees' permission information. For details, see <a href="#">Table 9-139</a> . <b>Default value:</b> None

**Table 9-138** Owner

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

**Table 9-139** Grant

Parameter	Type	Mandatory (Yes/No)	Description
Grantee	<a href="#">Grantee</a>	Yes if used as a request parameter	<b>Explanation:</b> Grantee information. For details, see <a href="#">Table 9-140</a> .
Permission	<a href="#">PermissionType</a>	Yes if used as a request parameter	<b>Explanation:</b> Granted permission <b>Value range:</b> See <a href="#">Table 9-141</a> . <b>Default value:</b> None

**Table 9-140** Grantee

Parameter	Type	Mandatory (Yes/No)	Description
Type	<a href="#">GranteeType</a>	Yes if used as a request parameter	<b>Explanation:</b> Grantee type. For details, see <a href="#">Table 9-142</a> .
ID	string	Yes if this parameter is used as a request parameter and <b>Type</b> is set to <b>GranteeUser</b>	<b>Explanation:</b> Account (domain) ID of the grantee <b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a> <b>Default value:</b> None

Parameter	Type	Mandatory (Yes/No)	Description
DisplayName	string	No if used as a request parameter	<p><b>Explanation:</b> Account name of the grantee</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Starts with a letter.</li> <li>• Contains 6 to 32 characters.</li> <li>• Contains only letters, digits, hyphens (-), and underscores (_).</li> </ul> <p><b>Default value:</b> None</p>
URI	<b>GroupUriType</b>	Yes if this parameter is used as a request parameter and <b>Type</b> is set to <b>Grantee Group</b>	<p><b>Explanation:</b> Authorized user group</p> <p><b>Value range:</b> See <a href="#">Table 9-143</a>.</p> <p><b>Default value:</b> None</p>

**Table 9-141** 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 9-142** 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 <b>Content-Type</b> in HTTP/HTTPS responses.
GetObjectInput.ResponseContentLanguage	Rewrites <b>Content-Language</b> in HTTP/HTTPS responses.
GetObjectInput.ResponseExpires	Rewrites <b>Expires</b> in HTTP/HTTPS responses.
GetObjectInput.ResponseCacheControl	Rewrites <b>Cache-Control</b> in HTTP/HTTPS responses.
GetObjectInput.ResponseContentDisposition	Rewrites <b>Content-Disposition</b> in HTTP/HTTPS responses.
GetObjectInput.ResponseContentEncoding	Rewrites <b>Content-Encoding</b> 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	<b>Explanation:</b> Input parameters for rewriting object headers. For details, see <a href="#">Table 9-145</a> .

**Table 9-145** GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ResponseCacheControl	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentDisposition	string	No	<p><b>Explanation:</b> <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentEncoding	string	No	<p><b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	<p><b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContent-Type	string	No	<p><b>Explanation:</b> <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b> None</p>
ResponseExpires	string	No	<p><b>Explanation:</b> <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is specified by default.</p>

Parameter	Type	Mandatory (Yes/No)	Description
ImageProcess	string	No	<p><b>Explanation:</b> Image processing command or style. Example for resizing and rotating an image: <b>image/resize,m_fixed,w_100,h_100/rotate,90</b></p> <p><b>Value range:</b> Command format: <b>image/commands</b> Style format: <b>style/style name</b> For details about image processing parameters, see <a href="#">Processing Images</a>.</p> <p><b>Default value:</b> If no commands are entered, the original image will be returned.</p>
RangeStart	int64	No	<p><b>Explanation:</b> Start position for object download.</p> <p><b>Value range:</b> 0 to the object length, in bytes.</p> <p><b>Default value:</b> <b>0</b>, indicating the download starts from the first byte of the object.</p>
RangeEnd	int64	No	<p><b>Explanation:</b> End position for object download</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>The value must be greater than that of <b>RangeStart</b>.</li> <li>The upper limit of the value is the object length minus 1, in bytes.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
IfMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfNoneMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfModifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>
Origin	string	No	<p><b>Explanation:</b> Origin (usually a domain name) specified in the pre-request</p> <p><b>Restrictions:</b> Each origin can contain only one wildcard character (*).</p> <p><b>Default value:</b> None</p>
RequestHeader	string	No	<p><b>Explanation:</b> HTTP headers in a cross-origin request. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
SseHeader	SseHeader	No	<p><b>Explanation:</b> Server-side decryption header. For details, see <a href="#">Table 9-146</a>.</p> <p><b>Restrictions:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> AES256, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-147** List of returned results

Parameter	Type	Description
output	*GetObjectOutput	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-148</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-148** GetObjectOutput

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

Parameter	Type	Description
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
Body	io.ReadCloser	<p><b>Explanation:</b> Object data stream</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>The object size in a single upload ranges from 0 to 5 GB.</li> <li>To upload files larger than 5 GB, <b>multipart uploads</b> should be used.</li> </ul> <p><b>Default value:</b> None</p>
StorageClass	<b>StorageClassType</b>	<p><b>Explanation:</b> Storage class of the object. For details, see <a href="#">Table 9-149</a>.</p> <p><b>Value range:</b> If the storage class is Standard, leave this parameter blank.</p>
AllowOrigin	string	<p><b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> specified in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
AllowHeader	string	<p><b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> specified in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
AllowMethod	string	<p><b>Explanation:</b> <b>AllowedMethod</b> 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><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• PUT</li> <li>• HEAD</li> <li>• POST</li> <li>• DELETE</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>            Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>            0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>            100</p>
ContentLength	int64	<p><b>Explanation:</b>            Object size in bytes</p> <p><b>Value range:</b>            0 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b>            None</p>
CacheControl	string	<p><b>Explanation:</b>  <b>Cache-Control</b> header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p><b>Default value:</b>            None</p>

Parameter	Type	Description
ContentDisposition	string	<p><b>Explanation:</b>  <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b>  None</p>
ContentEncoding	string	<p><b>Explanation:</b>  <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p><b>Default value:</b>  None</p>
ContentLanguage	string	<p><b>Explanation:</b>  <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b>  None</p>
ContentType	string	<p><b>Explanation:</b>  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><b>Value range:</b>  See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b>  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><b>Explanation:</b>  <b>Expires</b> header in the response</p> <p><b>Default value:</b>  None</p>



Parameter	Type	Description
LastModified	time.Time	<p><b>Explanation:</b> Last modification time of the object</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Restore	string	<p><b>Explanation:</b> 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, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>
Expiration	string	<p><b>Explanation:</b> Expiration details of the object, for example, "<b>expiry-date="Mon, 11 Sep 2023 00:00:00 GMT"</b>"</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 9-150</a>. If SSE-KMS is used, see <a href="#">Table 9-151</a>.</p>

Parameter	Type	Description
WebsiteRedirectLocation	string	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket: <b>WebsiteRedirectLocation:/anotherPage.html</b></p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: <b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"><li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li><li>• OBS only supports redirection for objects in the root directory of a bucket.</li></ul> <p><b>Default value:</b></p> <p>None</p>

Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom metadata of the object. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 9-151** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<b>Explanation:</b> SSE-KMS used for encrypting objects <b>Value range:</b> <b>kms</b> , indicating objects are encrypted using SSE-KMS <b>Default value:</b> None
Key	string	No if used as a request parameter	<b>Explanation:</b> ID of the KMS master key when SSE-KMS is used <b>Value range:</b> 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"><li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li><li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li><li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li></ul> <b>Default value:</b> <ul style="list-style-type: none"><li>If this parameter is not specified, the default master key will be used.</li><li>If there is no such a default master key, the system will create one and use it by default.</li></ul>

## 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	<b>Explanation:</b> Input parameters for processing images. For details, see <a href="#">Table 9-153</a> .



**Table 9-153** GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ResponseCacheControl	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentDisposition	string	No	<p><b>Explanation:</b> <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentEncoding	string	No	<p><b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	<p><b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContent-Type	string	No	<p><b>Explanation:</b> <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b> None</p>
ResponseExpires	string	No	<p><b>Explanation:</b> <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> 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><b>Explanation:</b> Image processing command or style. Example for resizing and rotating an image: <b>image/resize,m_fixed,w_100,h_100/rotate,90</b></p> <p><b>Value range:</b> Command format: <b>image/commands</b> Style format: <b>style/stylename</b> For details about image processing parameters, see <a href="#">Processing Images</a>.</p> <p><b>Default value:</b> If no commands are entered, the original image will be returned.</p>
RangeStart	int64	No	<p><b>Explanation:</b> Start position for object download</p> <p><b>Value range:</b> 0 to the object length, in bytes</p> <p><b>Default value:</b> <b>0</b>, indicating the download starts from the first byte of the object</p>
RangeEnd	int64	No	<p><b>Explanation:</b> End position for object download</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>The value must be greater than that of <b>RangeStart</b>.</li> <li>The upper limit of the value is the object length minus 1, in bytes.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfNoneMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfModifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseHeader</b>	No	<p><b>Explanation:</b> Server-side decryption headers. For details, see <a href="#">Table 9-154</a>.</p> <p><b>Restrictions:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-155** List of returned results

Parameter	Type	Description
output	* <a href="#">GetObjectOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-156</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-156** GetObjectOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
Body	io.ReadCloser	<p><b>Explanation:</b> Object data stream to download</p> <p><b>Default value:</b> None</p>
StorageClass	<a href="#">StorageClassType</a>	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 9-157</a>.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Description
AllowOrigin	string	<p><b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> specified in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>
AllowHeader	string	<p><b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> specified in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
AllowMethod	string	<p><b>Explanation:</b> <b>AllowedMethod</b> 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><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• PUT</li> <li>• HEAD</li> <li>• POST</li> <li>• DELETE</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>            Each CORS rule can specify only one value for <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>            0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>            100</p>
ContentLength	int64	<p><b>Explanation:</b>            Object size in bytes</p> <p><b>Value range:</b>            0 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b>            None</p>
CacheControl	string	<p><b>Explanation:</b>  <b>Cache-Control</b> header in the response. It specifies cache behaviors of the web page when an object is downloaded.</p> <p><b>Default value:</b>            None</p>

Parameter	Type	Description
ContentDisposition	string	<p><b>Explanation:</b>  <b>Content-Disposition</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b>  None</p>
ContentEncoding	string	<p><b>Explanation:</b>  <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is being downloaded.</p> <p><b>Default value:</b>  None</p>
ContentLanguage	string	<p><b>Explanation:</b>  <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b>  None</p>
ContentType	string	<p><b>Explanation:</b>  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><b>Value range:</b>  See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b>  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><b>Explanation:</b>  <b>Expires</b> header in the response</p> <p><b>Default value:</b>  None</p>

Parameter	Type	Description
LastModified	time.Time	<p><b>Explanation:</b> Last modification time of the object</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Restore	string	<p><b>Explanation:</b> 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, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>
Expiration	string	<p><b>Explanation:</b> Expiration details of the object, for example, "<b>expiry-date="Mon, 11 Sep 2023 00:00:00 GMT"</b>"</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 9-158</a>. If SSE-KMS is used, see <a href="#">Table 9-159</a>.</p>

Parameter	Type	Description
WebsiteRedirectLocation	string	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: <b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"><li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li><li>• OBS only supports redirection for objects in the root directory of a bucket.</li></ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom metadata of the object. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>



**Table 9-159** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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.

You can use this API to restore an Archive object 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	<b>Explanation:</b> Input parameters for restoring an Archive object. For details, see <a href="#">Table 9-161</a> .

**Table 9-161** RestoreObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
Version Id	string	No	<p><b>Explanation:</b> Version ID of the to-be-restored Archive object</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is specified by default.</p>
Days	int	Yes	<p><b>Explanation:</b> 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><b>Value range:</b> The value ranges from 1 to 30, in days.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Tier	<a href="#">RestoreTierType</a>	No	<p><b>Explanation:</b> Retrieval speed tiers. You can select a suitable tier based on your requirements for retrieval speed.</p> <p><b>Value range:</b> For details, see <a href="#">Table 9-162</a>.</p> <p><b>Default value:</b> 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	* <a href="#">BaseModel</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-164</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 9-164** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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 Archive object (example/objectname as an example) to restore.
input.Key = "example/objectname"
// Specify the version ID of the Archive 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 when you call this API.
- **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	* <a href="#">ModifyObjectInput</a>	Yes	<b>Explanation:</b> Input parameters for modifying an object. For details, see <a href="#">Table 9-166</a> .

**Table 9-166** ModifyObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
Position	int64	Yes	<p><b>Explanation:</b> Position from which the object is modified</p> <p><b>Value range:</b> 1 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b> 1, indicating the modification starts from the first byte of the object</p>
ContentLength	int64	No	<p><b>Explanation:</b> Size of the object to be modified</p> <p><b>Value range:</b> 1 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b> None</p>
Body	io.Reader	No	<p><b>Explanation:</b> Data stream of the object to be modified</p> <p><b>Default value:</b> None</p>

## Responses

**Table 9-167** List of returned results

Parameter	Type	Description
output	* <a href="#">ModifyObjectOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 9-168</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 9-168** ModifyObjectOutput

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

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b></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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b></p> <p>If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b></p> <p>The value must contain 32 characters.</p> <p><b>Default value:</b></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	<b>*InitiateMultipartUploadInput</b>	Yes	<b>Explanation:</b> Input parameters for initiating a multipart upload. For details, see <a href="#">Table 10-2</a> .

**Table 10-2** InitiateMultipartUploadInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ACL	<a href="#">AclType</a>	No	<p><b>Explanation:</b> Access control list (ACL) that can be pre-defined when a bucket is created. For details about ACLs, see <a href="#">ACLs</a>.</p> <p><b>Value range:</b> See <a href="#">Table 10-3</a>.</p> <p><b>Default value:</b> <b>private</b></p>

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	<p><b>Explanation:</b></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 <b>anotherPage.html</b> in the same bucket: WebsiteRedirectLocation:/anotherPage.html</p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: <b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b> 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	<a href="#">SseHeader</a> or <a href="#">SseKmsHeader</a>	No	<p><b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 10-4</a>. If SSE-KMS is used, see <a href="#">Table 10-5</a>.</p>
StorageClass	<a href="#">StorageClassType</a>	No	<p><b>Explanation:</b> Object storage class If this parameter is not set, the object inherits the storage class of its bucket.</p> <p><b>Value range:</b> <a href="#">StorageClassType</a> lists the available value options.</p> <p><b>Default value:</b> <b>STANDARD</b></p>

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	<p><b>Explanation:</b> Custom metadata of the object to be uploaded. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server side does not perform any decoding.</li> </ul> <p><b>Default value:</b> None</p>
GrantReadId	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ</b> permission is granted to. The account with the <b>READ</b> permission can read the current object and obtain its metadata.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
GrantReadAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>READ_ACP</b> permission is granted to. The account with the <b>READ_ACP</b> permission can read the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantWriteAcpld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>WRITE_ACP</b> permission is granted to. The account with the <b>WRITE_ACP</b> permission can write the ACL of the current object.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>
GrantFullControlld	string	No	<p><b>Explanation:</b> ID (domain_id) of an account the <b>FULL_CONTROL</b> permission is granted to. The account with the <b>FULL_CONTROL</b> permission can read the current object, obtain its metadata, and obtain and write its ACL.</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
Expires	int64	No	<p><b>Explanation:</b> Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted.</p> <p><b>Restrictions:</b> This parameter can be configured only during object upload and cannot be modified by calling a metadata API.</p> <p><b>Value range:</b> 1 to <math>(2^{63} - 1)</math>, in days</p> <p><b>Default value:</b> None</p>
EncodingType	string	No	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</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	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.
<code>AclPublicReadWrite</code>	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, merge parts, copy parts, and cancel multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<code>AclPublicReadDelivered</code>	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. <b>NOTE</b> <code>AclPublicReadDelivered</code> does not apply to objects.
<code>AclPublicReadWriteDelivered</code>	public-read-write-delivered	Public read/write 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 in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, merge parts, copy parts, and cancel multipart upload tasks. You can also obtain the content and metadata of objects in the bucket. <b>NOTE</b> <code>AclPublicReadWriteDelivered</code> does not apply to objects.

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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 10-5** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

**Table 10-6** 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 (&lt; 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 10-7** List of returned results

Parameter	Type	Description
output	<a href="#">*InitiateMultipartUploadOutput</a>	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 10-8</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 10-8** InitiateMultipartUploadOutput

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

Parameter	Type	Description
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
Bucket	string	<p><b>Explanation:</b> Name of the bucket involved in the multipart upload</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.)</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my.bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadId	string	<p><b>Explanation:</b> Multipart upload ID, for example, <b>00001648453845DBB78F2340DD460D8</b></p> <p><b>Value range:</b> The value must contain 1 to 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseCHeader</b> or <b>SseKmsHeader</b>	<p><b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 10-9</a>. If SSE-KMS is used, see <a href="#">Table 10-10</a>.</p>
EncodingType	string	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>



**Table 10-9** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 10-10** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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	* <a href="#">UploadPartInput</a>	Yes	<b>Explanation:</b> Input parameters for uploading a part. For details, see <a href="#">Table 10-12</a> .

**Table 10-12** UploadPartInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
PartNumber	int	Yes	<p><b>Explanation:</b> Part number</p> <p><b>Value range:</b> An integer ranging from 1 to 10000</p> <p><b>Default value:</b> None</p>
UploadId	string	Yes	<p><b>Explanation:</b> Multipart upload ID which can be returned by <a href="#">initiating a multipart upload</a></p> <p><b>Restrictions:</b> <b>Value range:</b> The value must contain 32 characters. Example: <b>000001648453845DBB78F2340DD460D8</b></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ContentMD5	string	No	<p><b>Explanation:</b> Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity.</p> <p><b>Value range:</b> Base64-encoded 128-bit MD5 value of the request body calculated according to RFC 1864</p> <p>Example: <b>n58IG6hfM7vqI4K0vnWpog==</b></p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseHeader</a>	No	<p><b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 10-13</a>.</p>
Body	io.Reader	No	<p><b>Explanation:</b> Data stream of the object to be uploaded</p> <p><b>Value range:</b> The value ranges from 0 TB to 48.8 TB, in bytes.</p> <p><b>Default value:</b> None</p>
SourceFile	string	No	<p><b>Explanation:</b> Source file path of the object to be uploaded</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Offset	int64	No	<p><b>Explanation:</b> Start offset of a part in the source file</p> <p><b>Value range:</b> A non-negative integer smaller than the size of the object to be uploaded, in bytes</p> <p><b>Default value:</b> 0</p>
PartSize	int64	No	<p><b>Explanation:</b> Part size</p> <p><b>Value range:</b> The value ranges from 100 KB to 5 GB, in bytes.</p> <p><b>Default value:</b> 102400</p>

**Table 10-13** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

## Responses

**Table 10-14** List of returned results

Parameter	Type	Description
output	* <a href="#">UploadPartOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 10-15</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 10-15** UploadPartOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
PartNumber	int	<b>Explanation:</b> Part number <b>Value range:</b> An integer ranging from 1 to 10000 <b>Default value:</b> None

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 10-16</a>. If SSE-KMS is used, see <a href="#">Table 10-17</a>.</p>

**Table 10-16** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=.</b></p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==.</b></p> <p><b>Default value:</b> None</p>

**Table 10-17** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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.

The uploaded parts occupy your storage as long as the multipart upload has not been aborted. You can assemble all or some of the uploaded parts to complete the multipart upload. Once the multipart upload is complete, the parts that are not assembled will be deleted and no longer occupy storage.

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	<b>Explanation:</b> Input parameters for assembling parts. For details, see <a href="#">Table 10-19</a> .

**Table 10-19** CompleteMultipartUploadInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadId	string	Yes	<p><b>Explanation:</b> Multipart upload ID, for example, <b>000001648453845DBB78F2340DD460D8</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Parts	[] <a href="#">Part</a>	Yes	<p><b>Explanation:</b> List of parts to be assembled. For details, see <a href="#">Table 10-20</a>.</p>
EncodingType	string	No	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>

**Table 10-20** Part

Parameter	Type	Description
PartNumber	int	<p><b>Explanation:</b> Part number</p> <p><b>Value range:</b> An integer ranging from 1 to 10000</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> Part ETag, which is a Base64-encoded, 128-bit MD5 value</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 10-21** List of returned results

Parameter	Type	Description
output	* <a href="#">CompleteMultipartUploadOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 10-22</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 10-22** CompleteMultipartUploadOutput

Parameter	Type	Description
StatusCode	int	<p><b>Explanation:</b> HTTP status code</p> <p><b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a>.</p> <p><b>Default value:</b> None</p>
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string] []string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Bucket	string	<p><b>Explanation:</b> Name of the bucket in which parts are assembled</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.)</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Location	string	<p><b>Explanation:</b> URL of the generated object after part assembling</p> <p>Example: <b>https://example-Bucket.obs.regions.myhuaweicloud.com/example-Object</b></p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
SseHeader	<a href="#">SseCHeader</a> or <a href="#">SseKmsHeader</a>	<p><b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 10-23</a>. If SSE-KMS is used, see <a href="#">Table 10-24</a>.</p>
EncodingType	string	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>

**Table 10-23** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 10-24** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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(%s) 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	* <a href="#">ListMultipartUploadsInput</a>	Yes	<b>Explanation:</b> Input parameters for listing multipart uploads. For details, see <a href="#">Table 10-26</a> .

**Table 10-26** ListMultipartUploadsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Prefix	string	No	<p><b>Explanation:</b> Name prefix that the objects in the multipart uploads to be listed must contain</p> <p>Assume that you have the following objects: <b>logs/day1</b>, <b>logs/day2</b>, <b>logs/day3</b>, and <b>ExampleObject.jpg</b>. If you specify <b>logs/</b> as the prefix, the multipart uploads of <b>logs/day1</b>, <b>logs/day2</b>, and <b>logs/day3</b> will be returned. If you leave this parameter blank, all multipart uploads in the bucket will be returned.</p> <p><b>Restrictions:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
MaxUploads	int	No	<p><b>Explanation:</b> Maximum number of listed multipart uploads</p> <p><b>Restrictions:</b> If the specified value is greater than <b>1000</b>, only 1,000 multipart uploads are returned.</p> <p><b>Value range:</b> An integer from <b>1</b> to <b>1000</b></p> <p><b>Default value:</b> <b>1000</b></p>

Parameter	Type	Mandatory (Yes/No)	Description
Delimiter	string	No	<p><b>Explanation:</b> Object names are grouped by this parameter, which is often used with <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a bucket has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcde</b> as the prefix.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
KeyMarker	string	No	<p><b>Explanation:</b> Object name after which multipart upload listing begins</p> <p><b>Value range:</b> Value of <b>NextKeyMarker</b> in the response body of the last request</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
UploadIdMarker	string	No	<p><b>Explanation:</b> Upload ID after which the multipart upload listing begins</p> <p><b>Restrictions:</b> This parameter is valid only when used with <b>KeyMarker</b>. If both parameters are specified, multipart uploads with IDs greater than the specified <b>UploadIdMarker</b> for the specified <b>KeyMarker</b> are listed.</p> <p><b>Value range:</b> The value of <b>NextUploadIdMarker</b> in the response body of the last request</p> <p><b>Default value:</b> None</p>
EncodingType	string	No	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>

## Responses

**Table 10-27** List of returned results

Parameter	Type	Description
output	<b>*ListMultipartUploadsOutput</b>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 10-28</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 10-28** ListMultipartUploadsOutput

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

Parameter	Type	Description
Bucket	string	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my.bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Value range:</b> The value must contain 3 to 63 characters.</p>
KeyMarker	string	<p><b>Explanation:</b> Object name after which multipart upload listing begins. This parameter is consistent with that set in the request.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadIdMarker	string	<p><b>Explanation:</b> Upload ID after which the multipart upload listing begins, which is consistent with that set in the request</p> <p><b>Value range:</b> The value must contain 1 to 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
NextKeyMarker	string	<p><b>Explanation:</b> Object name to start with for the next multipart upload listing request. <b>NextKeyMarker</b> is returned when not all the objects are listed. You can set <b>KeyMarker</b> to this value in the next request to list the remaining multipart uploads.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
NextUploadIdMarker	string	<p><b>Explanation:</b> Upload ID to start with for the next multipart upload listing request. This parameter is used together with <b>NextKeyMarker</b>. <b>NextVersionIdMarker</b> is returned when not all the objects are listed. You can set <b>NextKeyMarker</b> to this value in the next request to list the remaining multipart uploads.</p> <p><b>Value range:</b> The value must contain 1 to 32 characters.</p> <p><b>Default value:</b> None</p>
MaxUploads	int	<p><b>Explanation:</b> Maximum number of listed multipart uploads, which is consistent with the same parameter in the request</p> <p><b>Restrictions:</b> If the specified value is greater than <b>1000</b>, only 1,000 multipart uploads are returned.</p> <p><b>Value range:</b> An integer from <b>1</b> to <b>1000</b></p> <p><b>Default value:</b> <b>1000</b></p>



Parameter	Type	Description
IsTruncated	bool	<p><b>Explanation:</b> Whether all results are returned in the response</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"><li>• <b>true:</b> Not all results are returned.</li><li>• <b>false:</b> All results are returned.</li></ul> <p><b>Default value:</b> None</p>
Prefix	string	<p><b>Explanation:</b> 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: <b>logs/day1</b>, <b>logs/day2</b>, <b>logs/day3</b>, and <b>ExampleObject.jpg</b>. If you specify <b>logs/</b> as the prefix, the multipart uploads of <b>logs/day1</b>, <b>logs/day2</b>, and <b>logs/day3</b> will be returned. If you leave this parameter blank, all multipart uploads in the bucket will be returned.</p> <p><b>Restrictions:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Delimiter	string	<p><b>Explanation:</b></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 <b>Prefix</b>. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one <b>CommonPrefixes</b>. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one <b>CommonPrefixes</b>.</p> <p>Assume that a bucket has objects <b>abcd</b>, <b>abcde</b>, and <b>bbcde</b> in it. If <b>delimiter</b> is set to <b>d</b> and <b>prefix</b> is set to <b>a</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix. If only <b>delimiter</b> is set to <b>d</b>, objects <b>abcd</b> and <b>abcde</b> are grouped into a <b>CommonPrefixes</b> with <b>abcd</b> as the prefix, and <b>bbcde</b> is grouped separately into another <b>CommonPrefixes</b> with <b>bbcde</b> as the prefix.</p> <p><b>Value range:</b></p> <p>The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b></p> <p>None</p>
Uploads	[]Upload	<p><b>Explanation:</b></p> <p>List of multipart uploads. For details, see <a href="#">Table 10-29</a>.</p>
CommonPrefixes	[]string	<p><b>Explanation:</b></p> <p>List of object name prefixes grouped according to the <b>Delimiter</b> parameter (if specified)</p> <p><b>Value range:</b></p> <p>The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b></p> <p>None</p>

Parameter	Type	Description
EncodingType	string	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>

**Table 10-29** Upload

Parameter	Type	Description
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadId	string	<p><b>Explanation:</b> Multipart upload ID, for example, <b>000001648453845DBB78F2340DD460D8</b></p> <p><b>Value range:</b> The value must contain 1 to 32 characters.</p> <p><b>Default value:</b> None</p>
Initiator	<b>Initiator</b>	<p><b>Explanation:</b> Initiator of the multipart upload. For details, see <a href="#">Table 10-30</a>.</p>

Parameter	Type	Description
Owner	<a href="#">Owner</a>	<b>Explanation:</b> Account ID of the object owner. For details, see <a href="#">Table 10-31</a> .
StorageClass	<a href="#">StorageClassType</a>	<b>Explanation:</b> Storage class of the object to be uploaded <b>Value range:</b> See <a href="#">Table 10-32</a> . <b>Default value:</b> None
Initiated	time.Time	<b>Explanation:</b> Time when the multipart upload is initiated <b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b> . Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b> <b>Default value:</b> None

**Table 10-30** Initiator

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

Parameter	Type	Mandatory (Yes/No)	Description
Display Name	string	No	<p><b>Explanation:</b> Account name of the initiator</p> <p><b>Restrictions:</b> 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><b>Default value:</b> None</p>

**Table 10-31** Owner

Parameter	Type	Mandatory (Yes/No)	Description
ID	string	Yes if used as a request parameter	<p><b>Explanation:</b> Account (domain) ID of the owner</p> <p><b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a></p> <p><b>Default value:</b> 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 (&lt; 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	* <a href="#">ListPartsInput</a>	Yes	<b>Explanation:</b> Input parameters for listing uploaded parts. For details, see <a href="#">Table 10-34</a> .

**Table 10-34** ListPartsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadId	string	Yes	<p><b>Explanation:</b> Multipart upload ID, for example, <b>000001648453845DBB78F2340DD460D8</b></p> <p><b>Value range:</b> The value must contain 1 to 32 characters.</p> <p><b>Default value:</b> None</p>
PartNumberMarker	int	No	<p><b>Explanation:</b> Part number after which uploaded parts listing begins</p> <p><b>Restrictions:</b> OBS lists only parts with greater numbers than that specified by this parameter.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
MaxParts	int	No	<p><b>Explanation:</b> Maximum number of parts that can be listed per page</p> <p><b>Restrictions:</b> If the specified value is greater than <b>1000</b>, only 1,000 parts are returned.</p> <p><b>Value range:</b> The value ranges from <b>1</b> to <b>1000</b>.</p> <p><b>Default value:</b> <b>1000</b></p>
EncodingType	string	No	<p><b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b>.</p> <p><b>Value range:</b> <b>url</b></p> <p><b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b>.</p>

## Responses

**Table 10-35** List of returned results

Parameter	Type	Description
output	* <a href="#">ListPartsOutput</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 10-36</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 10-36** ListPartsOutput

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

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

Parameter	Type	Description
Key	string	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadId	string	<p><b>Explanation:</b> Multipart upload ID, for example, <b>000001648453845DBB78F2340DD460D8</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Initiator	<b>Initiator</b>	<p><b>Explanation:</b> Initiator of the multipart upload. For details, see <a href="#">Table 10-37</a>.</p>
Owner	<b>Owner</b>	<p><b>Explanation:</b> Owner of the multipart upload, which is consistent with <b>Initiator</b></p>
StorageClass	<b>StorageClassType</b>	<p><b>Explanation:</b> Object storage class</p> <p><b>Value range:</b> See <a href="#">Table 10-40</a>.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
PartNumberMarker	int	<p><b>Explanation:</b> Part number to start with for listing parts, which is consistent with that set in the request</p> <p><b>Value range:</b> A non-negative integer</p> <p><b>Default value:</b> None</p>
NextPartNumberMarker	int	<p><b>Explanation:</b> Part number to start with for the next part listing request. <b>NextPartNumberMarker</b> is returned when not all the parts are listed. You can set <b>PartNumberMarker</b> to this value in the next request to list the remaining parts.</p> <p><b>Value range:</b> A non-negative integer</p> <p><b>Default value:</b> None</p>
MaxParts	int	<p><b>Explanation:</b> Maximum number of listed parts that can be listed per page. This parameter is consistent with that set in the request.</p> <p><b>Restrictions:</b> If the specified value is greater than <b>1000</b>, only 1,000 parts are returned.</p> <p><b>Value range:</b> The value ranges from <b>1</b> to <b>1000</b>.</p> <p><b>Default value:</b> <b>1000</b></p>
IsTruncated	bool	<p><b>Explanation:</b> Whether all results are returned in the response</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>• <b>true:</b> Not all results are returned.</li> <li>• <b>false:</b> All results are returned.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Parts	[] <a href="#">Part</a>	<b>Explanation:</b> List of uploaded parts. For details, see <a href="#">Table 10-39</a> .
EncodingType	string	<b>Explanation:</b> Encoding type for <b>Key</b> in the response. If <b>Key</b> in the response contains control characters that are not supported by the XML 1.0 standard, you can specify this parameter to encode <b>Key</b> . <b>Value range:</b> <b>url</b> <b>Default value:</b> None. If you leave this parameter blank, encoding is not applied to <b>Key</b> .

**Table 10-37** Initiator

Parameter	Type	Mandatory (Yes/No)	Description
ID	string	Yes if used as a request parameter	<b>Explanation:</b> Account (domain) ID of the initiator <b>Value range:</b> To obtain the account ID, see <a href="#">How Do I Get My Account ID and User ID?</a> <b>Default value:</b> None
Display Name	string	No	<b>Explanation:</b> Account name of the initiator <b>Restrictions:</b> The account name can contain 6 to 32 characters and must start with a letter. Only letters, digits, hyphens (-), and underscores (_) are allowed. <b>Default value:</b> None

**Table 10-38** Owner

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

**Table 10-39** Part

Parameter	Type	Description
PartNumber	int	<p><b>Explanation:</b> Part number</p> <p><b>Value range:</b> An integer ranging from 1 to 10000</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> Part ETag, which is a Base64-encoded, 128-bit MD5 value</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> 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 (&lt; 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 add a part (part of an object or the whole object).

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	<b>Explanation:</b> Input parameters for copying a part. For details, see <a href="#">Table 10-42</a> .

**Table 10-42** CopyPartInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Target bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
PartNumber	int	Yes	<p><b>Explanation:</b> Part number</p> <p><b>Value range:</b> An integer ranging from 1 to 10000</p> <p><b>Default value:</b> None</p>
UploadId	string	Yes	<p><b>Explanation:</b> Multipart upload ID, for example, <b>000001648453845DBB78F2340DD460D8</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
CopySourceBucket	string	Yes	<p><b>Explanation:</b> Source bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (.), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
CopySourceKey	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
CopySourceRangeStart	int64	No	<p><b>Explanation:</b> Start position from which a part copy begins</p> <p><b>Value range:</b> A non-negative integer, in bytes</p> <p><b>Default value:</b> 0</p>
CopySourceRangeEnd	int64	No	<p><b>Explanation:</b> End position at which a part copy ends</p> <p><b>Restrictions:</b> The value must be greater than that of <b>RangeStart</b>. The upper limit of the value is the object length minus 1, in bytes.</p> <p><b>Value range:</b> A non-negative integer, in bytes</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
SseHeader	SseCHeader	No	<p><b>Explanation:</b> Server-side encryption header used for encrypting the target object. For details, see <a href="#">Table 10-43</a>.</p> <p><b>Restrictions:</b> 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>
SourceSseHeader	SseCHeader	No	<p><b>Explanation:</b> Server-side decryption header used for decrypting the source object. For details, see <a href="#">Table 10-43</a>.</p>

**Table 10-43** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> AES256, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVAobn cnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 10-44** List of returned results

Parameter	Type	Description
output	* <a href="#">CopyPartOutput</a> type CopyPartOutput struct	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 10-45</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 10-45** CopyPartOutput

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

Parameter	Type	Description
RequestId	string	<p><b>Explanation:</b> Request ID returned by the OBS server</p> <p><b>Default value:</b> None</p>
ResponseHeaders	map[string][]string	<p><b>Explanation:</b> HTTP response headers</p> <p><b>Default value:</b> None</p>
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
LastModified	time.Time	<p><b>Explanation:</b> Time when the last modification was made to the target object</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
SseHeader	<b>SseCHeader</b> or <b>SseKmsHeader</b> <code>struct SseCHeader</code> <code>type</code> <code>type</code> <code>SseKmsHeader</code> <code>struct</code>	<b>Explanation:</b> Server-side encryption header. If SSE-C is used, see <a href="#">Table 10-46</a> . If SSE-KMS is used, see <a href="#">Table 10-47</a> .
PartNumber	int	<b>Explanation:</b> Part number <b>Value range:</b> An integer ranging from 1 to 10000 <b>Default value:</b> None

**Table 10-46** SseCHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<b>Explanation:</b> SSE-C used for encrypting objects <b>Value range:</b> <b>AES256</b> , indicating objects are encrypted using SSE-C <b>Default value:</b> None
Key	string	Yes if used as a request parameter	<b>Explanation:</b> Key for encrypting the object when SSE-C is used <b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVAobn cnLht/rCB2o/9Cw=</b> . <b>Default value:</b> None

Parameter	Type	Mandatory (Yes/No)	Description
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

**Table 10-47** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<p><b>Explanation:</b> SSE-KMS used for encrypting objects</p> <p><b>Value range:</b> <b>kms</b>, indicating objects are encrypted using SSE-KMS</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No if used as a request parameter	<p><b>Explanation:</b> ID of the KMS master key when SSE-KMS is used</p> <p><b>Value range:</b> 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"> <li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li> <li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li> <li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li> </ul> <p><b>Default value:</b></p> <ul style="list-style-type: none"> <li>If this parameter is not specified, the default master key will be used.</li> <li>If there is no such a default master key, the system will create one and use it by default.</li> </ul>

## 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	* <a href="#">AbortMultipartUploadInput</a>	Yes	<b>Explanation:</b> Input parameters for aborting a multipart upload. For details, see <a href="#">Table 10-49</a> .

**Table 10-49** AbortMultipartUploadInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>



Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
UploadId	string	Yes	<p><b>Explanation:</b> Multipart upload ID, for example, <b>000001648453845DBB78F2340DD460D8</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>

## Responses

**Table 10-50** List of returned results

Parameter	Type	Description
output	* <a href="#">BaseModel</a>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 10-51</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 10-51** BaseModel

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string] []string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> 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	<b>Explanation:</b> Input parameters for creating a signed URL. For details, see <a href="#">Table 11-2</a> .

**Table 11-2** CreateSignedUrlInput

Parameter	Type	Mandatory (Yes/No)	Description
Method	HttpMethodType	Yes	<b>Explanation:</b> HTTP method. For details, see <a href="#">Table 11-3</a> .

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	No	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
SubResource	<a href="#">SubResourceType</a>	No	<p><b>Explanation:</b> Type of the subresource to access. For details, see <a href="#">Table 11-4</a>.</p>
Expires	int	No	<p><b>Explanation:</b> Expiration time of the signed URL</p> <p><b>Value range:</b> 0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b> 300</p>
Headers	map[string]string	No	<p><b>Explanation:</b> Headers in the request</p> <p><b>Default value:</b> None</p>
QueryParams	map[string]string	No	<p><b>Explanation:</b> Query parameters in the request</p> <p><b>Default value:</b> 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 an object from Archive storage.

## Responses

**Table 11-5** List of returned results

Parameter	Type	Description
output	*CreateSignedUrlOutput	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 11-6</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 11-6** CreateSignedUrlOutput

Parameter	Type	Description
SignedUrl	string	<b>Explanation:</b> Signed URL <b>Default value:</b> None
ActualSignedRequestHeaders	http.Header	<b>Explanation:</b> Actual headers in the request initiated by using the signed URL <b>Default value:</b> 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	* <a href="#">CreateBrowserBasedSignatureInput</a>	Yes	<b>Explanation:</b> Input parameters for creating authentication parameters for a browser-based upload. For details, see <a href="#">Table 11-8</a> .

**Table 11-8** CreateBrowserBasedSignatureInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	No	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>- Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>- Cannot be formatted as an IP address.</li> <li>- Cannot start or end with a hyphen (-) or period (.).</li> <li>- Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>- Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	No	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
Expires	int	No	<p><b>Explanation:</b> Expiration time of authentication for a browser-based upload</p> <p><b>Value range:</b> 0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b> 300</p>
FormParams	map[string]string	No	<p><b>Explanation:</b> Parameters of a browser-based upload, not including <b>key</b>, <b>policy</b>, and <b>signature</b>.</p> <p><b>Value range:</b> <b>acl</b>, <b>cache-control</b>, <b>content-type</b>, <b>content-disposition</b>, <b>content-encoding</b>, and <b>expires</b></p> <p><b>Default value:</b> None</p>

## Responses

**Table 11-9** List of returned results

Parameter	Type	Description
output	*CreateBrowserBasedSignatureOutput	<b>Explanation:</b> Returned results. For details, see <a href="#">Table 11-10</a> .
err	error	<b>Explanation:</b> Error messages returned by the API

**Table 11-10** CreateBrowserBasedSignatureOutput

Parameter	Type	Description
OriginPolicy	string	<b>Explanation:</b> <b>policy</b> 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> <b>Default value:</b> None
Policy	string	<b>Explanation:</b> Base64-encoded value of <b>policy</b> in the form Example: <code>eyJleHBpcmF0aW9uljoiMjAyMy0wOS0xMlQxMj01Mj01OVoiLCJjb25kaXRpb25zljpbeYJjb250ZW50LXR5cGUiOiJ0ZXh0L3BsYWluIn0seyJidWNRZXQiOiJleGFtcGxlYnVja2V0In0seyJrZXkiOiJleGFtcGxlL29iamVjdG5hbWUifSxdfQ==</code> <b>Default value:</b> None
Signature	string	<b>Explanation:</b> <b>signature</b> in the form Example: <code>g0jQr4v9VWd1Q2FOFDG6LGfV9Cw=</code> <b>Default value:</b> 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"> <li>1. Sets the decryption algorithm and key for decrypting the source object during object copy.</li> <li>2. Sets the encryption algorithm and key during object copy to enable the encryption algorithm for the target object.</li> </ol>	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"> <li>1. Sets the decryption algorithm and key for decrypting the source object during multipart copy.</li> <li>2. Sets the encryption algorithm and key during multipart copy to enable the encryption algorithm for the target part.</li> </ol>	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	<b>Explanation:</b> Input parameters for downloading an object. For details, see <a href="#">Table 12-2</a> .

Parameter	Type	Mandatory (Yes/No)	Description
traffic	*int64	Yes	<b>Explanation:</b> Bandwidth limit for a download request <b>Value range:</b> 819200 to 838860800, in bit/s <b>Default value:</b> None



**Table 12-2** GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	<p><b>Explanation:</b> Bucket name</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• A bucket name must be unique across all accounts and regions.</li> <li>• A bucket name: <ul style="list-style-type: none"> <li>– Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed.</li> <li>– Cannot be formatted as an IP address.</li> <li>– Cannot start or end with a hyphen (-) or period (.).</li> <li>– Cannot contain two consecutive periods (..), for example, <b>my..bucket</b>.</li> <li>– Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, <b>my-.bucket</b> or <b>my.-bucket</b>.</li> </ul> </li> <li>• 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.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	<p><b>Explanation:</b> 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 <b>examplebucket.obs.ap-southeast-1.myhuaweicloud.com/folder/test.txt</b>, the object name is <b>folder/test.txt</b>.</p> <p><b>Value range:</b> The value must contain 1 to 1,024 characters.</p> <p><b>Default value:</b> None</p>
ResponseCacheControl	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies the cache behavior of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentDisposition	string	No	<p><b>Explanation:</b> <b>Cache-Control</b> header in the response. It specifies the name of the object when it is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContentEncoding	string	No	<p><b>Explanation:</b> <b>Content-Encoding</b> header in the response. It specifies the content encoding format when an object is downloaded.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	<p><b>Explanation:</b> <b>Content-Language</b> header in the response. It specifies the content language format when an object is downloaded.</p> <p><b>Default value:</b> None</p>
ResponseContent-Type	string	No	<p><b>Explanation:</b> <b>Content-Type</b> header in the response. It specifies the object file type.</p> <p><b>Default value:</b> None</p>
ResponseExpires	string	No	<p><b>Explanation:</b> <b>Expires</b> header in the response. It specifies the cache expiration time of the web page when the object is downloaded.</p> <p><b>Default value:</b> None</p>
VersionId	string	No	<p><b>Explanation:</b> Object version ID, for example, <b>G001117FCE89978B0000401205D5DC9</b></p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None. If this parameter is left blank, the latest version of the object is downloaded.</p>

Parameter	Type	Mandatory (Yes/No)	Description
ImageProcess	string	No	<p><b>Explanation:</b> Image processing command or style. Example for resizing and rotating an image: <b>image/resize,m_fixed,w_100,h_100/rotate,90</b></p> <p><b>Value range:</b> Command format: <b>image/commands</b> Style format: <b>style/style name</b> For details about image processing parameters, see <a href="#">Processing Images</a>.</p> <p><b>Default value:</b> If no commands are entered, the original image will be returned.</p>
RangeStart	int64	No	<p><b>Explanation:</b> Start position for object download</p> <p><b>Value range:</b> 0 to the object length, in bytes</p> <p><b>Default value:</b> <b>0</b>, indicating the download starts from the first byte of the object</p>
RangeEnd	int64	No	<p><b>Explanation:</b> End position for object download</p> <p><b>Value range:</b></p> <ul style="list-style-type: none"> <li>The value must be greater than that of <b>RangeStart</b>.</li> <li>The upper limit of the value is the object length minus 1, in bytes.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 16 bytes.</p> <p><b>Default value:</b> None</p>
IfNoneMatch	string	No	<p><b>Explanation:</b> 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><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
IfModifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
IfUnmodifiedSince	time.Time	No	<p><b>Explanation:</b> The object is returned if it has not been modified since the specified time; otherwise, an error is returned.</p> <p><b>Restrictions:</b> The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p>Sample code: <b>time.Now().Add(time.Duration(24) * time.Hour)</b></p> <p><b>Default value:</b> None</p>
SseHeader	<b>SseHeader</b>	No	<p><b>Explanation:</b> Server-side decryption headers. For details, see <a href="#">Table 12-7</a>.</p> <p><b>Restrictions:</b> 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><b>Explanation:</b> SSE-C used for encrypting objects</p> <p><b>Value range:</b> <b>AES256</b>, indicating objects are encrypted using SSE-C</p> <p><b>Default value:</b> None</p>

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes if used as a request parameter	<p><b>Explanation:</b> Key for encrypting the object when SSE-C is used</p> <p><b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVAobncnLht/rCB2o/9Cw=</b>.</p> <p><b>Default value:</b> None</p>
KeyMD5	string	No if used as a request parameter	<p><b>Explanation:</b> 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><b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b>.</p> <p><b>Default value:</b> None</p>

## List of returned results

**Table 12-4** List of returned results

Parameter	Type	Description
output	<b>*GetObjectOutput</b>	<p><b>Explanation:</b> Returned results. For details, see <a href="#">Table 12-5</a>.</p>
err	error	<p><b>Explanation:</b> Error messages returned by the API</p>

**Table 12-5** GetObjectOutput

Parameter	Type	Description
StatusCode	int	<b>Explanation:</b> HTTP status code <b>Value range:</b> A status code is a group of digits that can be <b>2xx</b> (indicating successes) or <b>4xx</b> or <b>5xx</b> (indicating errors). It indicates the status of a response. For more information, see <a href="#">Status Code</a> . <b>Default value:</b> None
RequestId	string	<b>Explanation:</b> Request ID returned by the OBS server <b>Default value:</b> None
ResponseHeaders	map[string][]string	<b>Explanation:</b> HTTP response headers <b>Default value:</b> None
Body	io.ReadCloser	<b>Explanation:</b> Object data stream to download <b>Default value:</b> None
StorageClass	<a href="#">StorageClassType</a>	<b>Explanation:</b> Object storage class <b>Value range:</b> See <a href="#">Table 12-6</a> . <b>Default value:</b> None



Parameter	Type	Description
AllowOrigin	string	<p><b>Explanation:</b> If <b>Origin</b> in the request meets the CORS rules of the bucket, <b>AllowedOrigin</b> specified in the CORS rules is returned. <b>AllowedOrigin</b> indicates the origin from which the requests can access the bucket.</p> <p><b>Restrictions:</b> Domain name of the origin. Each origin can contain only one wildcard character (*), for example, <b>https://*.vbs.example.com</b>.</p> <p><b>Default value:</b> None</p>
AllowHeader	string	<p><b>Explanation:</b> If <b>RequestHeader</b> in the request meets the CORS rules of the bucket, <b>AllowedHeader</b> in the CORS rules is returned. <b>AllowedHeader</b> indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid.</p> <p><b>Restrictions:</b> Each header can contain only one wildcard character (*). Spaces, ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b> None</p>
AllowMethod	string	<p><b>Explanation:</b> <b>AllowedMethod</b> 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><b>Value range:</b> The following HTTP methods are supported:</p> <ul style="list-style-type: none"> <li>• GET</li> <li>• PUT</li> <li>• HEAD</li> <li>• POST</li> <li>• DELETE</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
ExposeHeader	string	<p><b>Explanation:</b>  <b>ExposeHeader</b> 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 <b>Content-Length</b> and <b>Content-Type</b>. If your browser needs to access other headers, add them to a list of the allowed additional headers.</p> <p><b>Restrictions:</b>            Spaces, wildcard characters (*), ampersands (&amp;), colons (:), and less-than signs (&lt;) are not allowed.</p> <p><b>Default value:</b>            None</p>
MaxAgeSeconds	int	<p><b>Explanation:</b>  <b>MaxAgeSeconds</b> in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request.</p> <p><b>Restrictions:</b>            Each CORS rule can contain only one <b>MaxAgeSeconds</b>.</p> <p><b>Value range:</b>            0 to <math>(2^{31} - 1)</math>, in seconds</p> <p><b>Default value:</b>            100</p>
ContentLength	int64	<p><b>Explanation:</b>            Object size in bytes</p> <p><b>Value range:</b>            0 to <math>(2^{63} - 1)</math>, in bytes</p> <p><b>Default value:</b>            None</p>
CacheControl	string	<p><b>Explanation:</b>  <b>Cache-Control</b> header in the response. It specifies the cache behavior of the web page when an object is downloaded.</p> <p><b>Default value:</b>            None</p>

Parameter	Type	Description
ContentDisposition	string	<p><b>Explanation:</b>  <b>Content-Disposition</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentEncoding	string	<p><b>Explanation:</b>  <b>Content-Encoding</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentLanguage	string	<p><b>Explanation:</b>  <b>Content-Language</b> header in the response</p> <p><b>Default value:</b>  None</p>
ContentType	string	<p><b>Explanation:</b>  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><b>Value range:</b>  See <a href="#">What Is Content-Type (MIME)?</a></p> <p><b>Default value:</b>  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><b>Explanation:</b>  <b>Expires</b> header in the response</p> <p><b>Default value:</b>  None</p>
LastModified	time.Time	<p><b>Explanation:</b>  Time when the last modification was made to the object</p> <p><b>Restrictions:</b>  The time must be in the ISO8601 format, for example, <b>2018-01-01T00:00:00.000Z</b>.</p> <p><b>Default value:</b>  None</p>

Parameter	Type	Description
ETag	string	<p><b>Explanation:</b> 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 <b>A</b> when an object is uploaded, but changes to <b>B</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><b>Restrictions:</b> If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object.</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
VersionId	string	<p><b>Explanation:</b> Object version ID</p> <p><b>Value range:</b> The value must contain 32 characters.</p> <p><b>Default value:</b> None</p>
Restore	string	<p><b>Explanation:</b> 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, <b>ongoing-request="true"</b> indicates that the object is being restored. <b>ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT"</b> indicates that the object has been restored. <b>expiry-date</b> indicates when the restored object expires.</p> <p><b>Restrictions:</b> If the object is not in the Archive storage class, leave this parameter blank.</p> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Expiration	string	<p><b>Explanation:</b> Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\""</p> <p><b>Default value:</b> None</p>
SseHeader	SseHeader or SseKmsHeader	<p><b>Explanation:</b> Server-side encryption header information. If SSE-C is used, see <a href="#">Table 12-7</a>. If SSE-KMS is used, see <a href="#">Table 12-8</a>.</p>
WebsiteRedirectLocation	string	<p><b>Explanation:</b> 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 <b>anotherPage.html</b> in the same bucket: <b>WebsiteRedirectLocation:/anotherPage.html</b></p> <p>The request is redirected to an external URL <b>http://www.example.com/</b>: <b>WebsiteRedirectLocation:http://www.example.com/</b></p> <p>OBS obtains the specified value from the header and stores it in the object metadata <b>WebsiteRedirectLocation</b>.</p> <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• The value must start with a slash (/), <b>http://</b>, or <b>https://</b> and cannot exceed 2 KB.</li> <li>• OBS only supports redirection for objects in the root directory of a bucket.</li> </ul> <p><b>Default value:</b> None</p>

Parameter	Type	Description
Metadata	map[string]string	<p><b>Explanation:</b> Custom object metadata. You can add a header starting with <b>x-obs-meta-</b> 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><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive.</li> <li>• 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 or decoded in URL or Base64 on the client, because the server does not perform such operations.</li> </ul> <p><b>Default value:</b> 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	<b>Explanation:</b> SSE-C used for encrypting objects <b>Value range:</b> <b>AES256</b> , indicating objects are encrypted using SSE-C <b>Default value:</b> None
Key	string	Yes if used as a request parameter	<b>Explanation:</b> Key for encrypting the object when SSE-C is used <b>Restrictions:</b> The value is a Base64-encoded 256-bit key, for example, <b>K7QkYpBkM5+hca27fsNkUnNVaobn cnLht/rCB2o/9Cw=</b> . <b>Default value:</b> None
KeyMD5	string	No if used as a request parameter	<b>Explanation:</b> 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. <b>Restrictions:</b> The value is encrypted by MD5 and then encoded by Base64, for example, <b>4XvB3tbNTN+tIEVa0/fGaQ==</b> . <b>Default value:</b> None

**Table 12-8** SseKmsHeader

Parameter	Type	Mandatory (Yes/No)	Description
Encryption	string	Yes if used as a request parameter	<b>Explanation:</b> SSE-KMS used for encrypting objects <b>Value range:</b> <b>kms</b> , indicating objects are encrypted using SSE-KMS <b>Default value:</b> None
Key	string	No if used as a request parameter	<b>Explanation:</b> ID of the KMS master key when SSE-KMS is used <b>Value range:</b> 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"><li><i>regionID</i> indicates the ID of the region where the key belongs. You can obtain it from <a href="#">Regions and Endpoints</a>.</li><li><i>domainID</i> indicates the ID of the account where the key belongs. To obtain it, see <a href="#">How Do I Get My Account ID and User ID?</a></li><li><i>key_id</i> indicates the ID of the key created on Data Encryption Workshop (DEW). To obtain it, see <a href="#">Viewing a CMK</a>.</li></ul> <b>Default value:</b> <ul style="list-style-type: none"><li>If this parameter is not specified, the default master key will be used.</li><li>If there is no such a default master key, the system will create one and use it by default.</li></ul>

## 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. For details about error codes, their descriptions, and HTTP status codes, see [OBS API Error Codes](#).

## 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 <b>ObsClient</b> 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 <b>stringToSign</b> information calculated by authentication algorithm will be printed.

## 13.4 Resources Cannot Be Released

If OBS Go SDK is disconnected from the OBS server after you use it, check whether **ObsClient.Close** is properly called to release resources.

## 13.5 Unmatched Signatures

If the status code obtained from the custom error is **403** and the OBS server-side error code obtained from the **Code** field is **SignatureDoesNotMatch**, check whether the AK/SK is correct.

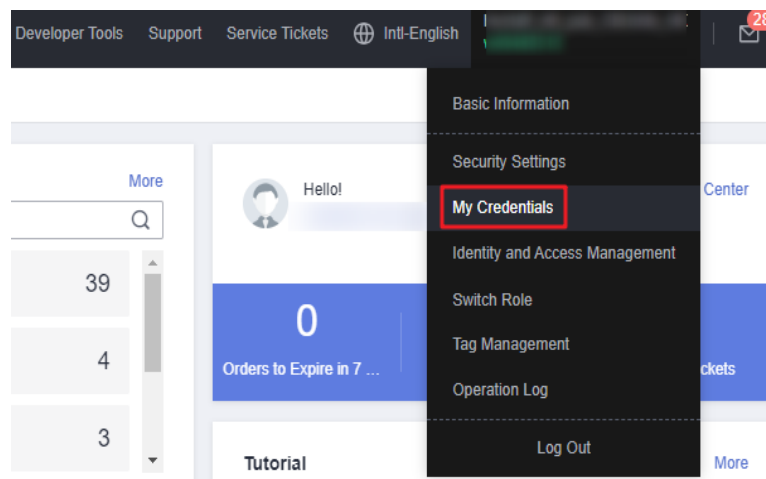
# 14 FAQ (SDK for Go)

## 14.1 How Do I Get My Account ID and User ID?

### Obtaining Account, IAM User, and Project Information

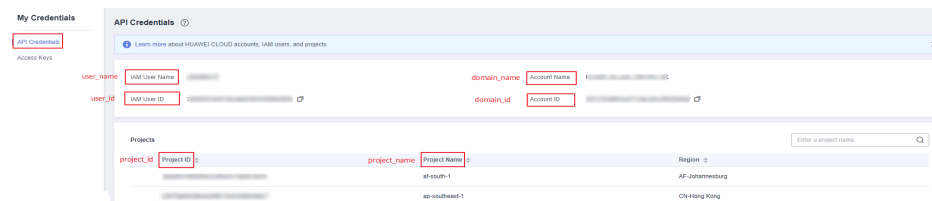
- Using the console
  - a. On the Huawei Cloud homepage, click **Console** in the upper right corner.
  - b. In the upper right corner, hover over the username and choose **My Credentials** from the drop-down list.

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 user 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-realpixmap	.rpm	audio/x-pn-realaudio-plugin
.rsml	application/vnd.rn-rsml	.rt	text/vnd.rn-realtxt
.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
.sisx	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 source code of OBS SDK for Go contains the **acs.amazonaws.com** keyword. The SDK only takes this keyword as a constant and does not process or access it. 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)
}
```

# A Change History

Release Date	What's New
2024-05-07	This is the seventh official release. Added the following section: <a href="#">Parallel File System APIs (SDK for Go)</a> .
2023-11-03	This is the sixth official release. Optimized the API parameter description of OBS SDK for Go.
2023-09-21	This is the fifth official release. Added the following sections: <a href="#">Configuring a Custom Domain Name for a Bucket (SDK for Go)</a> . <a href="#">Obtaining the Custom Domain Name of a Bucket (SDK for Go)</a> . <a href="#">Deleting the Custom Domain Name of a Bucket (SDK for Go)</a> .
2023-8-29	This is the fourth official release. Optimized the document and sample code of OBS SDK for Go.
2023-8-26	This is the third official release. Added the following sections: <a href="#">How Do I Specify Content-SHA256?</a> <a href="#">Why Does the SDK Source Code Contain acs.amazonaws.com?</a>
2021-6-30	This is the second official issue. Adjusted the document structure.
2020-2-29	This is the first official release.