

Object Storage Service

Go SDK Developer Guide (Ally Region)

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Huawei Cloud Computing Technologies Co., Ltd.

Address: Huawei Cloud Data Center Jiaoxinggong Road
Qianzhong Avenue
Gui'an New District
Gui Zhou 550029
People's Republic of China

Website: <https://www.huaweicloud.com/intl/en-us/>

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1 Before You Start (SDK for Go)

This section describes the important notes about Object Storage Service (OBS) SDK for Go.

Important Notes

- Some features are available only for some regions. If **405** HTTP status code is returned for a certain feature API, check whether the region supports that feature.
- Namespace: **obs** is used as the namespace to be compatible with earlier OBS 2.0 versions (2.2.x). All data types and API definitions contained in the SDK belong to this namespace. Before using OBS SDK for Go, you need to import **obs**.
- API functions are compatible with earlier OBS 2.0 versions (2.2.x).

2 API Overview of OBS SDK for Go

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

Table 2-1 APIs provided by OBS SDK for Go

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

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

API	Method	Function
Configuring Static Website Hosting for a Bucket	obsClient.SetBucketWebsiteConfiguration	Configures static website hosting for a bucket.
Obtaining the Static Website Hosting Configuration of a Bucket	obsClient.GetBucketWebsiteConfiguration	Returns the static website hosting configuration of a bucket.
Deleting the Static Website Hosting Configuration of a Bucket	obsClient.DeleteBucketWebsiteConfiguration	Deletes the static website hosting configuration of a bucket.
Configuring Versioning for a Bucket	obsClient.SetBucketVersioning	Configures versioning for a bucket.
Obtaining the Versioning Status of a Bucket	obsClient.GetBucketVersioning	Returns the versioning status of a bucket.
Configuring CORS for a Bucket	obsClient.SetBucketCors	Configures CORS for a bucket to allow cross-origin requests.
Obtaining the CORS Configuration of a Bucket	obsClient.GetBucketCors	Returns the CORS rules of a bucket.
Deleting the CORS Configuration of a Bucket	obsClient.DeleteBucketCors	Deletes the CORS configuration of a bucket.
Uploading an Object	obsClient.PutObject	Uploads an object to a bucket.
Uploading a File	obsClient.PutFile	Uploads a file or folder to a bucket.
Download an Object	obsClient.GetObject	Downloads an object from a bucket.
Copying an Object	obsClient.CopyObject	Creates a copy for a specified object.
Deleting an Object	obsClient.DeleteObject	Deletes a single object from a bucket.

API	Method	Function
Batch Deleting Objects	obsClient.DeleteObjects	Delete multiple objects from a bucket in a batch.
Obtaining Object Metadata	obsClient.GetObjectMetadata	Returns the object metadata.
Configuring Object Metadata	obsClient.SetObjectMetadata	Configures the metadata for an object.
Configuring an Object ACL	obsClient.SetObjectAcl	Configures the ACL for an object.
Obtaining Object ACL Information	obsClient.GetObjectAcl	Returns the ACL of an object.
Initiating a Multipart Upload	obsClient.InitiateMultipartUpload	Initiates a multipart upload in a bucket.
Uploading a Part	obsClient.UploadPart	Uploads parts to a bucket by specifying the multipart upload ID.
Copying a Part	obsClient.CopyPart	Copies a part to a specified bucket.
Listing Uploaded Parts	obsClient.ListParts	Returns the uploaded parts in a bucket by specifying the multipart upload ID.
Listing Multipart Uploads	obsClient.ListMultipartUploads	Returns the multipart uploads that are initiated but have not been assembled or aborted in a bucket.
Assembling Parts	obsClient.CompleteMultipartUpload	Completes a multipart upload based on the multipart upload ID and information (including PartNumber and ETag) about the uploaded parts.
Aborting a Multipart Upload	obsClient.AbortMultipartUpload	Aborts a multipart upload in a bucket by specifying the multipart upload ID.
Restoring a Cold Object	obsClient.RestoreObject	Restores a Cold object.
Creating a Signed URL	obsClient.CreateSignedUrl	Creates a signed URL based on the specified AK and SK, HTTP method, and request parameters.

API	Method	Function
Creating Parameters for Browser-based Upload	obsClient.CreateBrowserBasedSignature	Creates request parameters for authentication to enable browser-based upload with POST.
Uploading an Object - Resumable	obsClient.UploadFile	Enables resumable uploads of objects in the event of unstable network connections or program crashes.
Downloading an Object - Resumable	obsClient.DownloadFile	Enables resumable downloads of objects in the event of unstable network connections or program crashes.

3 Preparations (SDK for Go)

Before using OBS SDK for Go to access OBS, you need to prepare the service and development environments. To prepare the service environment, you must get an account 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 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. Access keys are explained as follows:

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

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

- To get permanent access keys, do as follows:
 - a. Log in to the management console.
 - b. In the upper right corner, hover over the username and choose **My Credentials**.
 - c. On the **My Credentials** page, click **Access Keys** in the navigation pane.
 - d. On the **Access Keys** page, click **Create Access Key**.
 - e. In the displayed dialog box, enter the login password and verification code.

 NOTE

- If you have not bound an email address or a mobile number yet, only the login password is required.
 - If you have bound both an email address and a mobile number, you can use either of them for verification.
- f. Click **OK**.
- g. Click **Download**. The access key file is automatically saved to your browser's default download path.
- h. Open the downloaded **credentials.csv** file to obtain the access keys (AK and SK).

 NOTE

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

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 an SDK (SDK for Go)

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

Downloading OBS SDK for Go

- [Latest version of OBS SDK for Go](#)

Downloading a Go SDK and Using GoLand to Compile It

This procedure uses the latest version as an example:

1. Download [the SDK package](#).
2. Decompress the package to obtain the following files: **src** (the SDK source code and 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
```

5 Getting Started (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**.
5. In the **Create Access Key** dialog box, enter a description (recommended), and click **OK**.
6. In the displayed dialog box, click **Download** to save the access keys to your browser's default download path.
7. Open the downloaded **credentials.csv** file to obtain the access keys (AK and SK).

 NOTE

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

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-sdk-go/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. 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 of the region where the bucket is located.
```

```
    endPoint := "https://your-endpoint"
```

```
    // Create an obsClient instance.
```

```
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken  
    method to specify a security token when creating an instance.
```

```
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
```

```
    obs.WithSecurityToken(securityToken)/*)
```

```
    if err == nil {
```

```
        // Use the obsClient to access OBS.
```

```
        // Close the obsClient.
```

```
        obsClient.Close()
```

```
    }
```

```
}
```

 NOTE

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

Creating a Bucket

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

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

```
package main
```

```
import (  
    "fmt"  
    "os"
```



```
"obs-sdk-go/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.
    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.
    endPoint := "https://your-endpoint"
    // 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.
    input.Location = "region"
    // Specify the bucket ACL. 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
    // 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 \(SDK for Go\)](#).

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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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 Initialization (SDK for Go)

6.1 ObsClient Initialization (SDK for Go)

Function

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

Initialization Method

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

Parameters

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

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

Available Configurers

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

Configurer	Description	Recommended Value
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 60 , in seconds.	[10, 60]
WithMaxConnections(maxIdleConns int)	Specifies the maximum number of idle HTTP connections. The default value is 1000.	N/A
WithConnectTimeout(connectTimeout int)	Specifies the timeout period for establishing an HTTP/HTTPS connection, in seconds. The default value is 60 .	[10, 60]
WithSocketTimeout(socketTimeout int)	Specifies the timeout duration for transmitting data at the socket layer, in seconds. The default value is 60 .	[10, 60]
WithIdleConnTimeout(idleConnTimeout int)	Specifies the timeout period of an idle HTTP connection in the connection pool, in seconds. The default value is 30 .	Default
WithMaxRetryCount(maxRetryCount int)	Specifies the maximum number of retries when an HTTP/HTTPS connection is abnormal. The default value is 3 .	[1, 5]

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

NOTE

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

Code Examples

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

```
// Import the dependency package.
import (
    "obs-sdk-go/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.  ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // Enter the endpoint of the region where the bucket is located.
    endPoint := "https://your-endpoint"
    // 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.  ak := os.Getenv("AccessKeyID")
    sk := os.Getenv("SecretAccessKey")
    // Enter the endpoint of the region where the bucket is located.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.  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 of the region where the bucket is located.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.  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 of the region where the bucket is located.
endPoint := "https://your-endpoint"
// 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-sdk-go/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. 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 of the region where the bucket is located.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.  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 of the region where the bucket is located.  
    endPoint := "https://your-endpoint"  
    // 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-sdk-go/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.  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 of the region where the bucket is located.  
    endPoint := "https://your-endpoint"  
    // Initialize the user-defined transport.  
    var maxIdleConns = 1000  
    var maxConnsPerHost = 1000  
    var idleConnTimeout = 30  
    var transport = &http.Transport{
```

```
MaxIdleConns:    maxIdleConns,
MaxIdleConnsPerHost: maxIdleConns,
MaxConnsPerHost:  maxConnsPerHost,
IdleConnTimeout:  time.Second * time.Duration(idleConnTimeout),
}
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the
obs.WithSecurityToken method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithHttpTransport(transport))

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

NOTICE

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

6.2 Log Initialization (SDK for Go)

Function

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

Initialization Method

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

Parameters

Parameter	Type	Mandatory (Yes/No)	Description
logFullPath	string	Yes	Full path to the log file
maxLogSize	int64	Yes	Log file size in bytes
backups	int	Yes	Maximum number of log files that can be retained
level	Level	Yes	Log level

Parameter	Type	Mandatory (Yes/No)	Description
logToConsole	bool	Yes	Whether to print logs to the console Value options: true or false true : Logs are printed to the console. false : Logs are not printed to the console. Default value: false

Table 6-1 Level

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

Code Examples

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

func main() {
    // Set a path for saving log files.
    var logFullPath string = "./logs/OBS-SDK.log"
```

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

NOTE

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

6.3 SDK Custom Errors (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 Bucket-Related APIs (SDK for Go)

7.1 Bucket API Overview (SDK for Go)

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

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

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

7.2 Creating a Bucket (SDK for Go)

Function

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

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

Restrictions

- To create a bucket, you must have the **obs:bucket:CreateBucket** permission.
- 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.

Method

func (obsClient ObsClient) CreateBucket(input *[CreateBucketInput](#)) (output *[BaseModel](#), err error)

Request Parameters

Table 7-1 List of request parameters

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

Table 7-2 CreateBucketInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Location	string	Yes if the region where the OBS service resides is not the default region	Explanation: Region where a bucket will be created
ACL	AclType	No	Explanation: ACL that can be pre-defined when a bucket is created. Value range: For details about the ACL options, see AclType. Default value: private

Parameter	Type	Mandatory (Yes/No)	Description
StorageClass	StorageClassType	No	Explanation: Bucket storage class that can be pre-defined during bucket creation Value range: StorageClassType lists the available value options. Default value: STANDARD
GrantReadId	string	No	Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can list objects, multipart uploads, and object versions in the bucket you are creating, and can obtain bucket metadata. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None
GrantWriteId	string	No	Explanation: ID (domain_id) of an account the WRITE permission is granted to. The account with the WRITE permission can create, delete, and overwrite objects in the bucket you are creating, and can initiate or abort multipart uploads, as well as upload, copy, and assemble parts. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None

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

Parameter	Type	Mandatory (Yes/No)	Description
GrantFullControlDelivered	string	No	Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission has full control over the bucket you are creating. By default, the FULL_CONTROL permission applies to all objects in the bucket. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None
Epid	string	No	Explanation: Enterprise project ID that can be specified during bucket creation. If you have enabled Enterprise Project Management Service (EPS), you can obtain the project ID from the EPS console. Restrictions: The value of Epid is a Universally Unique Identifier (UUID). Epid is not required if you have not enabled EPS yet. Example: 9892d768-2d13-450f-aac7-ed0e44c2585f Default value: None

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.

Constant	Default Value	Description
<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, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<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. NOTE <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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 7-4 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENT-TIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 7-5 List of returned results

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

Table 7-6 BaseModel

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

Code Examples

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

```
package main

import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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.
    endPoint := "https://your-endpoint"
    // 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.
input.Location = "region"
// Specify the bucket ACL. 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
// 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)
}
}
```

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.

Method

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

Request Parameters

Table 7-7 List of request parameters

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

Table 7-8 ListBucketsInput

Parameter	Type	Mandatory (Yes/No)	Description
QueryLocation	bool	No	Explanation: Whether to query the bucket region Value range: true: The bucket location is queried. false: The bucket location is not queried. Default value: false

Table 7-9 BucketType

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

Responses

Table 7-10 List of returned results

Parameter	Type	Description
output	* ListBucketsOutput	Explanation: Returned results. For details, see Table 7-11 .

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

Table 7-11 ListBucketsOutput

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

Table 7-12 Owner

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

Table 7-13 Bucket

Parameter	Type	Description
Name	string	Explanation: Bucket name Restrictions: • 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. Default value: None
CreationDate	time.Time	Explanation: Time when the bucket was created Default value: None

Parameter	Type	Description
Location	string	Explanation: Region where a bucket is located

Code Examples

This example lists all buckets.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-15 List of returned results

Parameter	Type	Description
output	*BaseModel	Explanation: Returned results. For details, see Table 7-16 .

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

Table 7-16 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
```

```
// 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)
}
}
```

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.

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-18 List of returned results

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

Table 7-19 BaseModel

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

Code Examples

This example deletes bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

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).

Method

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

Request Parameters

Table 7-20 List of request parameters

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

Table 7-21 ListObjectsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Marker	string	No	Explanation: Object name to start with when listing objects in a bucket. All objects following this parameter are listed in alphabetical order. Restrictions: This parameter is only used for listing objects with a single version. Value range: The value must contain 1 to 1,024 characters. Default value: None

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

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

Responses

Table 7-22 List of returned results

Parameter	Type	Description
output	* ListObjectsOutput	Explanation: Returned parameters for listing objects in a bucket. For details, see Table 7-23.

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

Table 7-23 ListObjectsOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Location	string	Explanation: Region where a bucket is located

Parameter	Type	Description
Name	string	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Value range: The value must contain 3 to 63 characters.

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

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

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

Parameter	Type	Description
CommonPrefixes	[]string	Explanation: List of object name prefixes grouped according to the Delimiter parameter (if specified) Value range: The value must contain 1 to 1,024 characters. Default value: None

Table 7-24 Content

Parameter	Type	Description
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
LastModified	time.Time	Explanation: Time (UTC) when an object was last modified Value range: UTC time Default value: None

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
Size	int64	Explanation: Object size in bytes Value range: The value ranges from 0 TB to 48.8 TB, in bytes. Default value: None
Owner	Owner	Explanation: Object owner. This parameter contains the domain ID and name of the object owner. For details, see Table 7-26. Default value: None
StorageClass	string	Explanation: Object storage class Value range: See Table 7-25. Default value: None

Table 7-25 StorageClassType

Constant	Default Value	Description
StorageClassStandard	STANDARD	OBS Standard Features low access latency and high throughput and is used for storing massive, frequently accessed (multiple times a month) or small objects (< 1 MB) requiring quick response.
StorageClassWarm	WARM	OBS Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Table 7-26 Owner

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

Listing Objects

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.
    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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
```

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).

Method

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

Request Parameters

Table 7-27 List of request parameters

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

Table 7-28 ListVersionsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
KeyMarker	string	No	Explanation: Object name to start with when listing object versions in a bucket. All object versions following the value specified by this parameter are listed in alphabetical order by object name. Restrictions: This parameter is only used for listing objects with multiple versions. Value range: Value of NextKeyMarker in the response body of the last request Default value: None
VersionIdMarker	string	No	Explanation: This parameter is used together with KeyMarker. Version ID you want to start listing from. All object versions following the value specified by this parameter are listed in alphabetical order by object name and version ID. KeyMarker specifies the object name, and VersionIdMarker specifies the version ID of the specified object. Restrictions: - This parameter is only used for listing objects with multiple versions. - If the object specified by KeyMarker does not have the version specified by VersionIdMarker, this parameter is invalid. Value range: Object version ID, that is, the value of NextVersionIdMarker in the response body of the last request Default value: None

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

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

Responses

Table 7-29 List of returned results

Parameter	Type	Description
output	* ListVersionsOutput	Explanation: Returned parameters for listing object versions in a bucket. For details, see Table 7-30.

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

Table 7-30 ListVersionsOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Location	string	Explanation: Region where a bucket is located

Parameter	Type	Description
Name	string	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Value range: The value must contain 3 to 63 characters.
Prefix	string	Explanation: Object name prefix, which is consistent with that set in the request Assume that you have the following objects: logs/day1, logs/day2, logs/day3, and ExampleObject.jpg. If you specify logs/ as the prefix, logs/day1, logs/day2, and logs/day3 will be returned. If you leave this parameter blank, all objects in the bucket will be returned. Value range: The value must contain 1 to 1,024 characters. Default value: None

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

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

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

Parameter	Type	Description
DeleteMarkers	[]DeleteMarker	Explanation: List of delete markers in the bucket. For details, see Table 7-32 .
CommonPrefixes	[]string	Explanation: List of object name prefixes grouped according to the Delimiter parameter (if specified) Value range: The value must contain 1 to 1,024 characters. Default value: None

Table 7-31 Version

Parameter	Type	Description
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None
LastModified	time.Time	Explanation: Time (UTC) when an object was last modified Value range: UTC time Default value: None

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
Size	int64	Explanation: Object size in bytes Value range: The value ranges from 0 TB to 48.8 TB, in bytes. Default value: None
Owner	Owner	Explanation: Object owner. For details, see Table 7-33.
StorageClass	StorageClassType	Explanation: Storage class of the object. For details, see Table 7-34.
IsLatest	bool	Explanation: Whether the object is of the current version Value range: • true: The object is the latest version. • false: The object is not the latest version. Default value: false

Table 7-32 DeleteMarker

Parameter	Type	Description
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None
IsLatest	bool	Explanation: Whether the object is of the current version Value range: true: The object is the latest version. false: The object is not the latest version. Default value: false
LastModified	time.Time	Explanation: Time (UTC) when an object was last modified Value range: UTC time Default value: None
Owner	Owner	Explanation: Object owner. This parameter contains the domain ID and name of the object owner. For details, see Table 7-33 .

Parameter	Type	Description
StorageClass	StorageClassType	Explanation: Object storage class Value range: For details about storage classes, see Table 7-34 . Default value: None

Table 7-33 Owner

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

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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
```

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).

Method

func (obsClient ObsClient) GetBucketMetadata(input *[GetBucketMetadataInput](#)) (output *[GetBucketMetadataOutput](#), err error)

Request Parameters

Table 7-35 List of request parameters

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

Table 7-36 GetBucketMetadataInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-37 List of returned results

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

Table 7-38 GetBucketMetadataOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Location	string	Explanation: Region where a bucket is located
Version	string	Explanation: OBS version of the bucket Value range: • 3.0 indicates the latest OBS version. • -- indicates any version earlier than 3.0. Default value: None
StorageClass	StorageClass Type	Explanation: Storage class of the bucket. For details, see Table 7-39 . Value range: If the storage class of the bucket is Standard, leave this parameter blank.

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

Parameter	Type	Description
ExposeHeader	string	Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers. Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed. Default value: None
MaxAgeSeconds	int	Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request. Restrictions: Each CORS rule can contain only one MaxAgeSeconds. Value range: 0 to ($2^{31} - 1$), in seconds Default value: 100
Epid	string	Explanation: Enterprise project ID that can be specified during bucket creation. If you have enabled EPS, you can obtain the project ID from the EPS console. Restrictions: The value of Epid is a UUID. Epid is not required if you have not enabled EPS yet. Example: 9892d768-2d13-450f-aac7-ed0e44c2585f Default value: None

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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-41 List of returned results

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

Table 7-42 GetBucketLocationOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Location	string	Explanation: Region where a bucket is located

Code Examples

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

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

```
"obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-44 List of returned results

Parameter	Type	Description
output	*GetBucketStorageInfoOutput	Explanation: Returned results. For details, see Table 7-45 .
err	error	Explanation: Error messages returned by the API

Table 7-45 GetBucketStorageInfoOutput

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

Parameter	Type	Description
ObjectNumber	int	Explanation: Number of objects in the bucket Value range: An integer from 0 to $(2^{31} - 1)$ Default value: None

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

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).

Method

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

Request Parameters

Table 7-46 List of request parameters

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

Table 7-47 SetBucketQuotaInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Quota	int64	Yes	Explanation: Bucket storage quota Value range: 0 to ($2^{63} - 1$), in bytes Default value: 0, indicating that there is no limit on the bucket quota.

Responses

Table 7-48 List of returned results

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

Table 7-49 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-51 List of returned results

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

Table 7-52 GetBucketQuotaOutput

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

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

Function

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

Restrictions

- To configure a storage class for a bucket, you must be the bucket owner or have the required permission (**obs:PutBucketStoragePolicy** in IAM or **PutBucketStoragePolicy** in a bucket policy).

Method

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

Request Parameters

Table 7-53 List of request parameters

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

Table 7-54 SetBucketStoragePolicyInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Value range: The value must contain 3 to 63 characters. Default value: None
StorageClasses	StorageClassType	Yes	Explanation: Storage class of the bucket Value range: For details about storage classes, see Table 7-55 . Default value: None

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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 7-56 List of returned results

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

Table 7-57 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-59 List of returned results

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

Table 7-60 GetBucketStoragePolicyOutput

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

Table 7-61 StorageClassType

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

Constant	Default Value	Description
StorageClassWarm	WARM	OBS Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENT_TIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
```

7.15 Configuring a Bucket ACL (SDK for Go)

Function

Access control lists (ACLs) allow resource owners to grant other accounts the permissions to access resources. By default, only the resource owner has full control over resources when a bucket or object is created. That is, the bucket creator has full control over the bucket, and the object uploader has full control over the object. Other accounts do not have the permissions to access resources. If resource owners want to grant other accounts the read and write permissions on resources, they can use ACLs. ACLs grant permissions to accounts. After an account is granted permissions, both the account and its IAM users can access the resources.

This API modifies a bucket ACL.

Restrictions

- A bucket can have up to 100 ACL rules.
- 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).

Method

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

Request Parameters

Table 7-62 List of request parameters

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

Table 7-63 SetBucketAclInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
ACL	AclType	No	Explanation: Pre-defined ACL. Value range: See Table 7-64 . Default value: None
Owner	Owner	No	Explanation: ID of the bucket owner. For details, see Table 7-65 . Restrictions: Owner and Grants must be used together and they cannot be used with ACL .

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

Table 7-64 AclType

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

Constant	Default Value	Description
AclPublicReadWriteDelivered	public-read-write-delivered	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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE AclPublicReadWriteDelivered does not apply to objects.
AclBucketOwnerFullControl	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 7-65 Owner

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

Table 7-66 Grant

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

Table 7-67 Grantee

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

Parameter	Type	Mandatory (Yes/No)	Description
DisplayName	string	No if used as a request parameter	Explanation: Account name of the grantee Restrictions: - Starts with a letter. - Contains 6 to 32 characters. - Contains only letters, digits, hyphens (-), or underscores (_). Default value: None

Table 7-68 GranteeType

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

Table 7-69 PermissionType

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

Responses

Table 7-70 List of returned results

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

Table 7-71 BaseModel

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

Code Examples

This example sets the ACL of bucket **examplebucket** to Private.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

7.16 Obtaining the Bucket ACL (SDK for Go)

Function

Access control lists (ACLs) allow resource owners to grant other accounts the permissions to access resources. By default, only the resource owner has full control over resources when a bucket or object is created. That is, the bucket creator has full control over the bucket, and the object uploader has full control over the object. Other accounts do not have the permissions to access resources. If resource owners want to grant other accounts the read and write permissions on resources, they can use ACLs. ACLs grant permissions to accounts. After an account is granted permissions, both the account and its IAM users can access the resources.

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-73 List of returned results

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

Table 7-74 GetBucketAclOutput

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

Table 7-75 Owner

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

Table 7-76 Grant

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

Table 7-77 Grantee

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

Parameter	Type	Description
DisplayName	string	Explanation: Account name of the grantee Restrictions: - Starts with a letter. - Contains 6 to 32 characters. - Contains only letters, digits, hyphens (-), or underscores (_). Default value: None
URI	GroupUriType	Explanation: Authorized user group Value range: See Table 7-79 . Default value: None

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 shows how to obtain the ACL of the **examplebucket** bucket.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket ACL.
    output, err := obsClient.GetBucketAcl(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s acl rules successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("Owner.ID:%s\n", output.Owner.ID)
        for index, grant := range output.Grants {
            fmt.Printf("Grant[%d]-Type:%s, ID:%s, URI:%s, Permission:%s\n",
            index, grant.Grantee.Type, grant.Grantee.ID, grant.Grantee.URI, grant.Permission)
        }
        return
    }
    fmt.Printf("Get bucket(%s)'s acl rules fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
```

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

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).

Method

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

Request Parameters

Table 7-81 List of request parameters

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

Table 7-82 SetBucketLoggingConfigurationInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

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

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.	Explanation: Name of the bucket for storing log files Restrictions: • This bucket must be in the same region as the bucket with logging enabled. • A bucket name must be unique across all accounts and regions. • A bucket name: – Must be 3 to 63 characters long and start with a digit or letter. Lowercase letters, digits, hyphens (-), and periods (.) are allowed. – Cannot be formatted as an IP address. – Cannot start or end with a hyphen (-) or period (.). – Cannot contain two consecutive periods (..), for example, my..bucket. – Cannot contain a period (.) and a hyphen (-) adjacent to each other, for example, my-.bucket or my.-bucket. • If you repeatedly create buckets of the same name in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

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

Table 7-83 Grant

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

Table 7-84 Grantee

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

Table 7-85 GranteeType

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

Table 7-86 GroupUriType

Constant	Default Value	Description
GroupAllUsers	AllUsers	All users

Table 7-87 PermissionType

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

Responses

Table 7-88 List of returned results

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

Table 7-89 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
}
```

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

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-91 List of returned results

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

Table 7-92 GetBucketLoggingConfigurationOutput

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

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

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

Table 7-93 Grant

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

Table 7-94 Grantee

Parameter	Type	Description
Type	GranteeType	Explanation: Grantee type Value range: See Table 7-95 . Default value: None

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

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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the logging configuration of the bucket.
    output, err := obsClient.GetBucketLoggingConfiguration(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s BucketLoggingConfiguration successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("TargetBucket:%s, TargetPrefix:%s\n", output.TargetBucket, output.TargetPrefix)
        for index, grant := range output.TargetGrants {
            fmt.Printf("Grant[%d]-Type:%s, ID:%s, URI:%s, Permission:%s\n",
                index, grant.Grantee.Type, grant.Grantee.ID, grant.Grantee.URI, grant.Permission)
        }
        return
    }
    fmt.Printf("Get bucket(%s)'s BucketLoggingConfiguration fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error")
    }
}
```

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

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.

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

- 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).

Method

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

Request Parameters

Table 7-98 List of request parameters

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

Table 7-99 SetBucketPolicyInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Policy	string	Yes	Explanation: Policy information in JSON format Restrictions: The bucket name contained in the Resource parameter of the policy must be the one specified for the current bucket policy. Default value: None

Responses

Table 7-100 List of returned results

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

Table 7-101 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

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.

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-103 List of returned results

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

Table 7-104 GetBucketPolicyOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Policy	string	Explanation: Policy information in JSON format Restrictions: The bucket name contained in the Resource parameter of the policy must be the one specified for the current bucket policy. Default value: None

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket policy.
    output, err := obsClient.GetBucketPolicy(bucketname)
    if err == nil {
        fmt.Printf("Get policy successful with bucket:%s!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("Policy:%s\n", output.Policy)
        return
    }
    fmt.Printf("Get policy fail with bucket:%s!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

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.

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-106 List of returned results

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

Table 7-107 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

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.

This API configures lifecycle rules for a bucket.

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).

Method

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

Request Parameters

Table 7-108 List of request parameters

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

Table 7-109 SetBucketLifecycleConfigurationInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
LifecycleRules	[] LifecycleRule	Yes	Explanation: Lifecycle rule information. For details, see Table 7-110.

Table 7-110 LifecycleRule

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

Parameter	Type	Mandatory (Yes/No)	Description
Transitions	[] Transition	No if used as a request parameter	Explanation: Policies for storage class transition, including transition time and the storage class after transition. For details, see Table 7-112. Restrictions: This parameter applies only to the current object version.
Expiration	Expiration	No if used as a request parameter	Explanation: Object expiration time. For details, see Table 7-114. Restrictions: This parameter applies only to the current object version.
NoncurrentVersionTransitions	[] NoncurrentVersionTransition	No if used as a request parameter	Explanation: Policies for storage class transition, including transition time and the storage class after transition. For details, see Table 7-115. Restrictions: - This parameter applies only to noncurrent object versions. - Versioning is enabled (or suspended after being enabled) for the bucket.
NoncurrentVersionExpiration	NoncurrentVersionExpiration	No if used as a request parameter	Explanation: Expiration time of noncurrent object versions. For details, see Table 7-116. Restrictions: - This parameter applies only to noncurrent object versions. - Versioning is enabled (or suspended after being enabled) for the bucket. CAUTION This parameter is not available for parallel file systems.

 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
StorageClass	StorageClassType	Yes if used as a request parameter	Explanation: Storage class of the object after transition Restrictions: • The Standard storage class is not supported. • Restrictions on storage class transitions: – Only transitions from the Standard storage class to the Warm storage class are supported. To transition objects from Warm to Standard, you must manually do it. – Only transitions from the Standard or Warm storage class to the Cold storage class are supported. To transition objects from Cold to Standard or Warm, you must restore the archived objects first and then manually transition their storage classes. Value range: See Table 7-113. Default value: None

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

Table 7-113 StorageClassType

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

Constant	Default Value	Description
StorageClassWarm	WARM	OBS Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Table 7-114 Expiration

Parameter	Type	Mandatory (Yes/No)	Description
Date	time. Time	Yes if this parameter is used as a request parameter and Days is absent	Explanation: OBS executes the lifecycle rule for objects that were modified before the specified date. Restrictions: The value must conform with the ISO8601 standards and indicate UTC 00:00. For example, 2018-01-01T00:00:00.000Z indicates only objects that were last modified before the specified time are deleted. Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Days	int	Yes if this parameter is used as a request parameter and Date is absent	Explanation: Number of days (since the last update was made to the object) after which the lifecycle rule takes effect Restrictions: This parameter applies only to the current object version. Value range: 1 to ($2^{31} - 1$), in days Default value: None

Table 7-115 NoncurrentVersionTransition

Parameter	Type	Mandatory (Yes/No)	Description
StorageClass	StorageClassType	Yes if used as a request parameter	Explanation: Storage class of noncurrent object versions after transition Restrictions: - The Standard storage class is not supported. - Restrictions on storage class transitions: - Only transitions from the Standard storage class to the Warm storage class are supported. To transition objects from Warm to Standard, you must manually do it. - Only transitions from the Standard or Warm storage class to the Cold storage class are supported. To transition objects from Cold to Standard or Warm, you must restore the archived objects first and then manually transition their storage classes. Value range: See Table 7-113. Default value: None
NoncurrentDays	int	Yes if used as a request parameter	Explanation: Number of days after the object becomes a noncurrent version, when the specified rule takes effect Restrictions: This parameter applies only to noncurrent object versions. Value range: 0 to $(2^{31} - 1)$, in days Default value: None

Table 7-116 NoncurrentVersionExpiration

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

Responses

Table 7-117 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 7-118 .
err	error	Explanation: Error messages returned by the API

Table 7-118 BaseModel

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.SetBucketLifecycleConfigurationInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Create a lifecycle rule for the bucket.
    input.LifecycleRules = []obs.LifecycleRule{
        {
            ID: "rule1",
            Prefix: "objectPrefix/",
            Status: obs.RuleStatusEnabled,
            Transitions: []obs.Transition{
                {Days: 30, StorageClass: obs.StorageClassCold},
            },
            Expiration: obs.Expiration{Days: 100},
            NoncurrentVersionExpiration: obs.NoncurrentVersionExpiration{NoncurrentDays: 20},
        },
    }
    // Configure a lifecycle rule for the bucket.
    output, err := obsClient.SetBucketLifecycleConfiguration(input)
    if err == nil {
```



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

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.

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-120 List of returned results

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

Table 7-121 GetBucketLifecycleConfigurationOutput

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

Table 7-122 LifecycleRule

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

Parameter	Type	Description
Expiration	Expiration	Explanation: Object expiration time. For details, see Table 7-126 . Restrictions: This parameter applies only to the current object version.
NoncurrentVersion-Transitions	[]NoncurrentVersionTransition	Explanation: Policies for storage class transition, including transition time and the storage class after transition. For details, see Table 7-127 . Restrictions: • This parameter applies only to noncurrent object versions. • Versioning is enabled (or suspended after being enabled) for the bucket.
NoncurrentVersionExpiration	NoncurrentVersionExpiration	Explanation: Expiration time of noncurrent object versions. For details, see Table 7-128 . Restrictions: • This parameter applies only to noncurrent object versions. • Versioning is enabled (or suspended after being enabled) for the bucket. CAUTION This parameter is not available for parallel file systems.

 NOTE

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

Table 7-123 RuleStatusType

Constant	Default Value	Description
RuleStatusEnabled	Enabled	Enabled
RuleStatusDisabled	Disabled	Disabled

Table 7-124 Transition

Parameter	Type	Description
StorageClass	StorageClass Type	Explanation: Storage class of the object after transition Restrictions: - The Standard storage class is not supported. - Restrictions on storage class transitions: - Only transitions from the Standard storage class to the Warm storage class are supported. To transition objects from Warm to Standard, you must manually do it. - Only transitions from the Standard or Warm storage class to the Cold storage class are supported. To transition objects from Cold to Standard or Warm, you must restore the archived objects first and then manually transition their storage classes. Value range: See Table 7-125. Default value: None
Date	time.Time	Explanation: Date when an object will be transitioned Restrictions: The value must conform with the ISO8601 standards and must be at 00:00 (UTC time). For example, 2018-01-01T00:00:00.000Z, indicating only objects that were last modified before that time are transitioned to the specified storage class. Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None

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

Table 7-125 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Table 7-126 Expiration

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

Table 7-127 NoncurrentVersionTransition

Parameter	Type	Description
StorageClass	StorageClassType	Explanation: Storage class of noncurrent object versions after transition Restrictions: • The Standard storage class is not supported. • Restrictions on storage class transitions: – Only transitions from the Standard storage class to the Warm storage class are supported. To transition objects from Warm to Standard, you must manually do it. – Only transitions from the Standard or Warm storage class to the Cold storage class are supported. To transition objects from Cold to Standard or Warm, you must restore the archived objects first and then manually transition their storage classes. Value range: See Table 7-125. Default value: None
NoncurrentDays	int	Explanation: Number of days an object is noncurrent before the specified rule takes effect Restrictions: This parameter applies only to noncurrent object versions. Value range: 0 to $(2^{31} - 1)$, in days Default value: None

Table 7-128 NoncurrentVersionExpiration

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"

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

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

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.

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-130 List of returned results

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

Table 7-131 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
// Specify a bucket name.
bucketname := "examplebucket"
// Delete lifecycle configurations of the bucket.
output, err := obsClient.DeleteBucketLifecycleConfiguration(bucketname)
if err == nil {
    fmt.Printf("Delete LifecycleConfiguration successful with bucket:%s!\n", bucketname)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete LifecycleConfiguration fail with bucket:%s!\n", bucketname)
if obsError, ok := err.(obs.ObsError); ok {
    fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
response.")
    fmt.Println(obsError.Error())
} else {
    fmt.Println("An Exception was found, which means the client encountered an internal problem when
attempting to communicate with OBS, for example, the client was unable to access the network.")
    fmt.Println(err)
}
}
```

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).

Method

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

Request Parameters

Table 7-132 List of request parameters

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

Table 7-133 SetBucketWebsiteConfigurationInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Value range: The value must contain 3 to 63 characters.
RedirectAllRequestsTo	RedirectAllRequestsTo	No	Explanation: Redirection rules for all requests. For details, see Table 7-134 .
IndexDocument	IndexDocument	No	Explanation: Default page configuration. For details, see Table 7-135 .
ErrorDocument	ErrorDocument	No	Explanation: Error page configuration. For details, see Table 7-136 .

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

 NOTE

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

Table 7-134 RedirectAllRequestsTo

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

Table 7-135 IndexDocument

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

Table 7-136 ErrorDocument

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

Table 7-137 RoutingRule

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

Table 7-138 Condition

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

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

Table 7-139 Redirect

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

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

Table 7-140 ProtocolType

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

Responses

Table 7-141 List of returned results

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

Table 7-142 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-144 List of returned results

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

Table 7-145 GetBucketWebsiteConfigurationOutput

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

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

Table 7-146 RedirectAllRequestsTo

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

Table 7-147 IndexDocument

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

Table 7-148 ErrorDocument

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

Table 7-149 RoutingRule

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

Table 7-150 Condition

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

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

Table 7-151 Redirect

Parameter	Type	Description
Protocol	Protocol Type	Explanation: Protocol used for redirection Value range: See Table 7-152 . Default value: None
HostName	string	Explanation: Host name used for redirection Default value: None
ReplaceKeyPrefixWith	string	Explanation: Object name prefix used for redirection Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Description
ReplaceKeyWith	string	Explanation: Object name used for redirection Restrictions: This parameter cannot be used together with replaceKeyPrefixWith . Value range: The value must contain 1 to 1,024 characters. Default value: None
HttpRedirectCode	string	Explanation: HTTP status code in the response to the redirect request. Default value: None

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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-154 List of returned results

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

Table 7-155 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

7.28 Configuring Versioning for a Bucket (SDK for Go)

Function

You can enable versioning to automatically maintain previous versions of an object. When versioning is enabled, you can access earlier versions of an object to recover your data in the event of accidental actions or application failures.

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).

Method

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

Request Parameters

Table 7-156 List of request parameters

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

Table 7-157 SetBucketVersioningInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Status	Versioning StatusType	Yes	Explanation: Versioning status of the bucket Value range: See Table 7-158. Default value: None

Table 7-158 VersioningStatusType

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

Responses

Table 7-159 List of returned results

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

Table 7-160 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.SetBucketVersioningInput{}
    // Specify a bucket name.
    input.Bucket = "bucketname"
    // Specify the versioning status (obs.VersioningStatusEnabled as an example) for the bucket.
    input.Status = obs.VersioningStatusEnabled
    // Configure versioning for the bucket.
    output, err := obsClient.SetBucketVersioning(input)
    if err == nil {
        fmt.Printf("Set bucket(%s)'s versioning status successful!\n", input.Bucket)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Set bucket(%s)'s versioning status fail!\n", input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

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

Function

You can enable versioning to automatically maintain previous versions of an object. When versioning is enabled, you can access earlier versions of an object to recover your data in the event of accidental actions or application failures.

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).

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	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-162 List of returned results

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

Table 7-163 GetBucketVersioningOutput

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

Table 7-164 VersioningStatusType

Constant	Default Value	Description
VersioningStatusEnabled	Enabled	Enabled
VersioningStatusSuspended	Suspended	Suspended

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the bucket's versioning status.
    output, err := obsClient.GetBucketVersioning(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s versioning status successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        fmt.Printf("VersioningStatus:%s\n", output.Status)
        return
    }
    fmt.Printf("Get bucket(%s)'s versioning status fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
        fmt.Println("An ObsError was found, which means your request sent to OBS was rejected with an error
        response.")
        fmt.Println(obsError.Error())
    } else {
        fmt.Println("An Exception was found, which means the client encountered an internal problem when
        attempting to communicate with OBS, for example, the client was unable to access the network.")
        fmt.Println(err)
    }
}
```

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).

Method

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

Request Parameters

Table 7-165 List of request parameters

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

Table 7-166 SetBucketCorsInput

Parameter	Type	Man dato ry (Yes /No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
CorsRules	[] CorsRule	Yes	Explanation: CORS rule list of the bucket. For details, see Table 7-167 . Restrictions: A list can have a maximum of 100 CORS rules.

Table 7-167 CorsRule

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

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

Responses

Table 7-168 List of returned results

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

Table 7-169 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-171 List of returned results

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

Table 7-172 GetBucketCorsOutput

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

Table 7-173 CorsRule

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

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "strings"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

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).

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	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-175 List of returned results

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

Table 7-176 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

7.33 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).

Method

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

Request Parameters

Table 7-177 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	* SetBucketCustomDomainInput	Yes	Explanation: Input parameters for configuring a custom domain name for the bucket. For details, see Table 7-178 .

Table 7-178 SetBucketCustomDomainInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
CustomDomain	string	Yes	Explanation: Custom domain name to configure Restrictions: The value must comply with the domain name rules. Default value: The value can be up to 256 bytes. Default value: None

Responses

Table 7-179 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 7-180 .
err	error	Explanation: Error messages returned by the API

Table 7-180 BaseModel

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

Code Examples

This example configures custom domain name **www.example.com** for bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

7.34 Obtaining the Custom Domain Names 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).

Method

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

Request Parameters

Table 7-181 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
bucketName	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-182 List of returned results

Parameter	Type	Description
output	* GetBucketCustomDomainOutput	Explanation: Returned results. For details, see Table 7-183 .
err	error	Explanation: Error messages returned by the API

Table 7-183 GetBucketCustomDomainOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Domains	[]Domain	Explanation: Domain information. For details, see Table 7-184 .

Table 7-184 Domain

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

Code Examples

This example returns the custom domain name of bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSecurityToken(securityToken))
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    // Specify a bucket name.
    bucketname := "examplebucket"
    // Obtain the custom domain name of the bucket.
    output, err := obsClient.GetBucketCustomDomain(bucketname)
    if err == nil {
        fmt.Printf("Get bucket(%s)'s customdomain successful!\n", bucketname)
        fmt.Printf("RequestId:%s\n", output.RequestId)
        return
    }
    fmt.Printf("Get bucket(%s)'s customdomain fail!\n", bucketname)
    if obsError, ok := err.(obs.ObsError); ok {
```

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

7.35 Deleting the Custom Domain Names 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).

Method

```
func (obsClient ObsClient) DeleteBucketCustomDomain(input *DeleteBucketCustomDomainInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-185 List of request parameters

Parameter	Type	Mandator y (Yes/No)	Description
input	*DeleteBucketCustomDomainInput	Yes	Explanation: Input parameters for deleting the custom domain name of a bucket. For details, see Table 7-186 .

Table 7-186 DeleteBucketCustomDomainInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: - 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
CustomDomain	string	Yes	Explanation: Custom domain name to be deleted Restrictions: The value must comply with the domain name rules. Default value: The value can be up to 256 bytes. Default value: None

Responses

Table 7-187 List of returned results

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

Table 7-188 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

7.36 Configuring BPA for a Bucket (SDK for Go)

Function

This API creates or modifies the public access block configuration of an OBS bucket by enabling or disabling the feature.

Restrictions

- To configure BPA for a bucket, you must be the bucket owner or have the required permission (**obs:bucket:PutBucketPublicAccessBlock** in IAM or **PutBucketPublicAccessBlock** in a bucket policy).
- If public access block is enabled, existing public access permissions are ignored and new public access permissions cannot be configured. If public access block is disabled, existing public access permissions continue to apply and new public access permissions can be configured.
- By default, BPA is disabled for new POSIX buckets but is enabled for new object buckets.

Method

```
func (obsClient ObsClient) PutBucketPublicAccessBlock(input  
*PutBucketPublicAccessBlockInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-189 List of request parameters

Parameter	Type	Mandator y (Yes/No)	Description
input	* PutBucketPublicAccessBlockInput	Yes	Explanation: Request parameters for setting the BPA configuration for a bucket. For details, see PutBucketPublicAccessBlockInput .

Table 7-190 PutBucketPublicAccessBlockInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name. Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
blockPublicAcls	bool	No	Explanation: Whether to block public ACLs. If this parameter is set to True , objects cannot be uploaded when the request includes a public ACL. Requests for modifying bucket or object ACLs fail if the requests include public ACLs. Restrictions: None Value range: • True: The public ACL is blocked. • False: The public ACL is not blocked. Default value: None
ignorePublicAcls	bool	No	Explanation: Whether to ignore public ACLs. If this parameter is set to True , the public ACL does not take effect during OpenAPI permissions checks. Restrictions: None Value range: • True: The public ACL is ignored. • False: The public ACL is not ignored. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
blockPublicPolicy	bool	No	Explanation: Whether to block the public policy. If this parameter is set to True , OBS rejects calls to modify bucket policies if the specified bucket policy allows public access. Restrictions: None Value range: • True: The public policy is blocked. • False: The public policy is not blocked. Default value: None
restrictPublicBuckets	bool	No	Explanation: Whether to restrict account access. If this parameter is set to True , only cloud service accounts and this account can access the bucket if a public bucket policy is found during the OpenAPI permissions check. Restrictions: None Value range: • True: The account access is restricted. • False: The account access is not restricted. Default value: None

Responses

Table 7-191 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 7-192 .

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

Table 7-192 BaseModel

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

Code Examples

This example configures PublicAccessBlock for bucket **examplebucket**.

```
package main

import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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.
```

```
endPoint := "https://your-endpoint"
// 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))
obsClient, err := "https://your-endpoint"
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.PutBucketPublicAccessBlockInput{}
// Specify the bucket name.
input.Bucket = "examplebucket"
// Specify the PublicAccessBlock configuration items of the bucket.
input.BlockPublicAcls = true
input.BlockPublicPolicy = true
input.IgnorePublicAcls = true
input.RestrictPublicBuckets = true
// Set PublicAccessBlock for the bucket.
output, err := obsClient.PutBucketPublicAccessBlock(input)
if err == nil {
    fmt.Printf("Set bucket(%s)'s PublicAccessBlock successful!\n", input.Bucket)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Set bucket(%s)'s PublicAccessBlock 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)
}
}
```

7.37 Obtaining the BPA Configuration of a Bucket (SDK for Go)

Function

This API returns the public access block configuration of an OBS bucket.

Restrictions

- To obtain the BPA configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketPublicAccessBlock** in IAM or **GetBucketPublicAccessBlock** in a bucket policy).

Method

```
func (obsClient ObsClient) GetBucketPublicAccessBlock(input
*GetBucketPublicAccessBlockInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-193 List of request parameters

Parameter	Type	Mandator y (Yes/No)	Description
input	*GetBucke tPublicAcc essBlockIn put	Yes	Explanation: Request parameters for obtaining the BPA configuration of a bucket. For details, see GetBucketPublicAccessBlockIn- put .

Table 7-194 GetBucketPublicAccessBlockInput

Parameter	Type	Mandatory (Yes/No)	Description
bucketName	String	Yes	Explanation: Bucket name. Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-195 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 7-196 .
err	error	Explanation: Error messages returned by the API

Table 7-196 BaseModel

Parameter	Type	Description
statusCode	int	Explanation: HTTP status code. Value range: A status code is a group of digits indicating the status of a response. It ranges from 2xx (indicating successes) to 4xx or 5xx (indicating errors). Default value: None
BlockPublicAcls	Boolean	Explanation: Whether to block public ACLs. If this parameter is set to True , objects cannot be uploaded when the request includes a public ACL. Requests for modifying bucket or object ACLs fail if the requests include public ACLs. Restrictions: None Value range: • True: The public ACL is blocked. • False: The public ACL is not blocked. Default value: None
IgnorePublicAcls	Boolean	Explanation: Whether to ignore public ACLs. If this parameter is set to True , the public ACL does not take effect during OpenAPI permissions checks. Restrictions: None Value range: • True: The public ACL is ignored. • False: The public ACL is not ignored. Default value: None

Parameter	Type	Description
BlockPublicPolicy	Boolean	Explanation: Whether to block the public policy. If this parameter is set to True , OBS rejects calls to modify bucket policies if the specified bucket policy allows public access. Restrictions: None Value range: • True: The public policy is blocked. • False: The public policy is not blocked. Default value: None
RestrictPublicBuckets	Boolean	Explanation: Whether to restrict account access. If this parameter is set to True , only cloud service accounts and this account can access the bucket if a public bucket policy is found during the OpenAPI permissions check. Restrictions: None Value range: • True: The account access is restricted. • False: The account access is not restricted. Default value: None

Code Examples

This example obtains the PublicAccessBlock configuration of bucket **examplebucket**.

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



```
endPoint := "https://your-endpoint"
// 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 the bucket name.
bucketName := "examplebucket"
// Obtain the PublicAccessBlock configuration of the bucket.
output, err := obsClient.GetBucketPublicAccessBlock(bucketName)
if err == nil {
    fmt.Printf("Get bucket(%s)'s PublicAccessBlock successful!\n", bucketName)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Get bucket(%s)'s PublicAccessBlock 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)
}
}
```

7.38 Deleting the BPA Configuration of a Bucket (SDK for Go)

Function

This API deletes the public access block configuration of an OBS bucket.

Restrictions

- To delete the BPA configuration of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:DeleteBucketPublicAccessBlock** in IAM or **DeleteBucketPublicAccessBlock** in a bucket policy).

Method

func (obsClient ObsClient) DeleteBucketPublicAccessBlock(input *DeleteBucketPublicAccessBlockInput) (output *BaseModel, err error)

Request Parameters

Table 7-197 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*DeleteBucketPublicAccessBlockInput	Yes	Explanation: Request parameters for deleting the BPA configuration of a bucket. For details, see DeleteBucketPublicAccessBlockInput .

Table 7-198 DeleteBucketPublicAccessBlockInput

Parameter	Type	Mandatory (Yes/No)	Description
bucketName	String	Yes	Explanation: Bucket name. Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-199 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 7-200 .
err	error	Explanation: Error messages returned by the API

Table 7-200 BaseModel

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

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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.
    endPoint := "https://your-endpoint"
    // 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 the bucket name.
    bucketName := "examplebucket"
```

```
// Delete the PublicAccessBlock configuration of the bucket.
output, err := obsClient.DeleteBucketPublicAccessBlock(bucketName)
if err == nil {
    fmt.Printf("Delete bucket(%s)'s PublicAccessBlock successful!\n", bucketName)
    fmt.Printf("RequestId:%s\n", output.RequestId)
    return
}
fmt.Printf("Delete bucket(%s)'s PublicAccessBlock 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)
}
}
```

7.39 Obtaining the Public Access Status of a Bucket Policy (SDK for Go)

Function

This API obtains the public access status of an OBS bucket policy.

Restrictions

- To obtain the public access status of a bucket policy, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketPolicyPublicStatus** in IAM or **GetBucketPolicyPublicStatus** in a bucket policy).

Method

```
func (obsClient ObsClient) GetBucketPolicyPublicStatus(input
*GetBucketPolicyPublicStatusInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-201 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*GetBucketPolicyPublicStatusInput	Yes	Explanation: Request parameters for obtaining the public access status of an OBS bucket policy. For details, see GetBucketPolicyPublicStatusInput .

Table 7-202 GetBucketPolicyPublicStatusInput

Parameter	Type	Mandatory (Yes/No)	Description
bucketName	String	Yes	Explanation: Bucket name. Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-203 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 7-204 .
err	error	Explanation: Error messages returned by the API

Table 7-204 BaseModel

Parameter	Type	Description
statusCode	int	Explanation: HTTP status code. Value range: A status code is a group of digits indicating the status of a response. It ranges from 2xx (indicating successes) to 4xx or 5xx (indicating errors). Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
IsPublic	Boolean	Explanation: Whether the bucket is public. Default value: False

7.40 Obtaining the Public Access Status of a Bucket (SDK for Go)

Function

This API obtains the public access status of an OBS bucket.

Restrictions

- To obtain the public access status of a bucket, you must be the bucket owner or have the required permission (**obs:bucket:GetBucketPublicStatus** in IAM or **GetBucketPublicStatus** in a bucket policy).

Method

```
func (obsClient ObsClient) GetBucketPublicStatus(input  
*GetBucketPublicStatusInput) (output *BaseModel, err error)
```

Request Parameters

Table 7-205 List of request parameters

Parameter	Type	Mandator y (Yes/No)	Description
input	* GetBucke tPublicSta tusInput	Yes	Explanation: Request parameters for obtaining the public access status of an OBS bucket. For details, see GetBucketPublicStatusInput .

Table 7-206 GetBucketPublicStatusInput

Parameter	Type	Mandatory (Yes/No)	Description
bucketName	String	Yes	Explanation: Bucket name. Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Responses

Table 7-207 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 7-208 .
err	error	Explanation: Error messages returned by the API

Table 7-208 BaseModel

Parameter	Type	Description
statusCode	int	Explanation: HTTP status code. Value range: A status code is a group of digits indicating the status of a response. It ranges from 2xx (indicating successes) to 4xx or 5xx (indicating errors). Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
IsPublic	Boolean	Explanation: Whether the bucket is public. Default value: False

8 Object-Related APIs (SDK for Go)

8.1 Object API Overview (SDK for Go)

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

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

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

8.2 Object Upload Overview (SDK for Go)

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

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

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

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

8.2.1 Uploading an Object - Streaming (SDK for Go)

Function

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

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

Restrictions

- To upload an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy).
- 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 8-1 List of request parameters

Parameter	Type	Man dato ry (Yes/ No)	Description
input	*PutObjec tInput	Yes	Explanation: Input parameters for uploading an object. For details, see Table 8-2 .

Table 8-2 PutObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Man dato ry (Yes /No)	Description
ContentMD5	string	No	Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity. Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864. Example: n58IG6hfM7vqI4K0vnWpog== Default value: None
ACL	AclType	No	Explanation: ACL that can be pre-defined during object creation. Value range: For details about the ACL options, see AclType . Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to an object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	Explanation: Multipurpose Internet Mail Extension (MIME) type of the object to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display object files. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
ContentLength	int64	No	Explanation: Size of the object to be uploaded Restrictions: - 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. Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.
StorageClass	StorageClassType	No	Explanation: Object storage class Value range: For available storage classes, see Table 8-4. Default value: If this parameter is not specified, the object inherits the storage class of the bucket.

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: - The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. - The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. - Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None
Body	io.Reader	No	Explanation: Data stream of the object to be uploaded Restrictions: - 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. Default value: None

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

Parameter	Type	Man dato ry (Yes /No)	Description
GrantFullControlId	string	No	Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None
Expires	int64	No	Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted. Value range: A positive integer, in days Default value: None

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.

Constant	Default Value	Description
<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, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<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. NOTE <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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 8-4 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 8-5 List of returned results

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

Table 8-6 PutObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
StorageClass	StorageClassType	Explanation: Object storage class Value range: - If the storage class is Standard, leave this parameter blank. - For available storage classes, see Table 8-4. Default value: None
VersionId	string	Explanation: Object version ID. If versioning is enabled for the bucket, the object version ID will be returned. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Table 8-7 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example uses streaming to upload **example/objectname** to **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
  }
}
```

8.2.2 Uploading an Object - File-Based (SDK for Go)

Function

This API uploads local files to a specified bucket in 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).
- 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 8-8 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*PutFileInput	Yes	Explanation: Input parameters for uploading a file. For details, see Table 8-9 .

Table 8-9 PutFileInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentMD5	string	No	Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity. Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864. Example: n58lG6hfM7vql4K0vnWpog== Default value: None
ACL	AclType	No	Explanation: Access control list (ACL) that can be pre-defined when an object is created. Value range: For details about the ACL options, see AclType. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to an object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None
ContentType	string	No	Explanation: MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.

Parameter	Type	Mandatory (Yes/No)	Description
ContentLength	int64	No	Explanation: Size of the object to be uploaded Restrictions: • 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. Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.
StorageClass	Storage ClassType	No	Explanation: Object storage class Value range: See Table 8-11 . Default value: If this parameter is not specified, the object inherits the storage class of the bucket.

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None
SourceFile	string	No	Explanation: Source file path of the object Default value: None
GrantReadId	string	No	Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None

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

Parameter	Type	Mandatory (Yes/No)	Description
Expires	int64	No	Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted. Value range: 1 to $(2^{63} - 1)$, in days Default value: None

Table 8-10 AclType

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

Constant	Default Value	Description
<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. NOTE AclPublicReadDelivered 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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE AclPublicReadWriteDelivered does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 8-11 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 8-12 List of returned results

Parameter	Type	Description
output	*PutObjectOutput	Explanation: Returned results. For details, see Table 8-13 .
err	error	Explanation: Error messages returned by the API

Table 8-13 PutObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
StorageClasses	StorageClassType	Explanation: Object storage class Value range: - If the storage class is Standard, leave this parameter blank. - See Table 8-14. Default value: None
VersionId	string	Explanation: Object version ID. If versioning is enabled for the bucket, the object version ID will be returned. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Table 8-14 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

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

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

8.2.3 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).
- 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 (Cold), this API cannot be called.

Method

```
func (obsClient ObsClient) AppendObject(input *AppendObjectInput) (output *AppendObjectOutput, err error)
```

Request Parameters

Table 8-15 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	* AppendObjectInput	Yes	Explanation: Request parameters for an append upload. For details, see Table 8-16 .

Table 8-16 AppendObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
Position	int64	Yes	Explanation: Position where the object data is appended Restrictions: For an object to be appended, the value of position must be set to 0 when the object is uploaded for the first time. For the second append upload, the value of position should be set to the value of NextAppendPosition returned in the response when the first upload is successful. Value range: 0 to $(2^{63} - 1)$, in bytes Default value: 0

Parameter	Type	Mandatory (Yes/No)	Description
ContentMD5	string	No	Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity. Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864. Example: n58IG6hfM7vqI4K0vnWpog== Default value: None
ACL	AclType	No	Explanation: ACL that can be pre-defined during object creation. Value range: For details about the ACL options, see AclType. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to an object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	Explanation: MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
ContentLength	int64	No	Explanation: Size of the object to be uploaded Restrictions: - 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. Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.
StorageClass	StorageClassType	No	Explanation: Object storage class Value range: See Table 8-18. Default value: If you do not specify this header, the object inherits the storage class of the bucket.

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None
Body	io.Reader	No	Explanation: Data stream of the object to be uploaded Restrictions: • 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. Default value: None

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

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

Table 8-17 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	Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<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. NOTE <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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 8-18 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 8-19 List of returned results

Parameter	Type	Description
output	* AppendObjectOutput	Explanation: Returned results. For details, see Table 8-20 .
err	error	Explanation: Error messages returned by the API

Table 8-20 AppendObjectOutput

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

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
NextAppendPosition	int64	Explanation: Position from which the next append upload starts Restrictions: For an object to be appended, the value of position must be set to 0 when the object is uploaded for the first time. For the second append upload, the value of position should be set to the value of NextAppendPosition returned in the response when the first upload is successful. Value range: 0 to ($2^{63} - 1$), in bytes Default value: 0

Code Examples

This example appends content to **example/objectname** in **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "strings"
    "obs-sdk-go/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.  
    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 of the region where the bucket locates.  
    endPoint := "https://your-endpoint"  
    // 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)  
    }  
}
```

8.2.4 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).
- 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 8-21 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*UploadFileInput	Yes	Explanation: Input parameters for a resumable upload. For details, see Table 8-22 .

Table 8-22 UploadFileInput

Parameter	Type	Man dato ry (Yes /No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
UploadFile	string	Yes	Explanation: Local file path of the object to be uploaded Default value: None
PartSize	int64	Yes	Explanation: Part size Value range: The value ranges from 100 KB to 5 GB, in bytes. Default value: 102400
TaskNum	int	No	Explanation: Maximum number of parts that can be uploaded concurrently Value range: An integer from 1 to 10000 Default value: 1, indicating concurrent uploads are not used
EnableCheckpoint	bool	No	Explanation: Whether to enable the resumable upload Value range: true: The resumable upload mode is enabled. false: The resumable upload mode is disabled. Default value: false
CheckpointFile	string	No	Explanation: File used to record the upload progress. This parameter is valid only in the resumable upload mode. Default value: If this parameter is left blank, the progress file will be in the same directory as the local file to be uploaded.

Parameter	Type	Mandatory (Yes/No)	Description
ACL	AclType	No	Explanation: ACL that can be pre-defined during object creation. Value range: For details about the ACL options, see AclType. Default value: None
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	Explanation: MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
StorageClass	StorageClassType	No	Explanation: Object storage class Value range: See Table 8-24. Default value: If this parameter is not specified, the object inherits the storage class of the bucket.

Parameter	Type	Man dato ry (Yes /No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None
Expires	int64	No	Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted. Value range: 1 to ($2^{63} - 1$), in days Default value: None

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

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

Table 8-23 AclType

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

Constant	Default Value	Description
<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. NOTE AclPublicReadDelivered 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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE AclPublicReadWriteDelivered does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 8-24 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 8-25 List of returned results

Parameter	Type	Description
output	* CompleteMultipartUploadOutput	Explanation: Returned results. For details, see Table 8-26 .
err	error	Explanation: Error messages returned by the API

Table 8-26 CompleteMultipartUploadOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of the object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
Bucket	string	Explanation: Bucket in which parts are assembled Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Explanation: Object name obtained after part combination An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
Location	string	Explanation: URL of the generated object after part assembling Default value: None

Parameter	Type	Description
VersionId	string	Explanation: Version ID of the object obtained after part combination. If versioning is enabled for the bucket, the object version ID will be returned. Value range: The value must contain 32 characters. Default value: None

Code Examples

This example uploads **example/objectname** to **examplebucket** in a resumable upload.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
  }
}
```

8.3 Object Download Overview (SDK for Go)

OBS Go SDK provides abundant APIs for object download in the following methods:

- [Downloading an Object - Streaming \(SDK for Go\)](#)
- [Downloading an Object - Range-Based \(SDK for Go\)](#)
- [Downloading an Object - Conditional \(SDK for Go\)](#)
- [Downloading an Object - Resumable \(SDK for Go\)](#)

8.3.1 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).
- Objects in the Cold 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 8-27 List of request parameters

Parame ter	Type	Ma n d a t o r y (Ye s/N o)	Description
input	* GetObjectInput	Yes	Explanation: Input parameters for a streaming download. For details, see Table 8-28 .

Table 8-28 GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
ResponseCacheControl	string	No	Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded. Default value: None
ResponseContentDisposition	string	No	Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None
ResponseContentEncoding	string	No	Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded. Default value: None
ResponseContent-Type	string	No	Explanation: Content-Type header in the response. It specifies the object file type. Default value: None
ResponseExpires	string	No	Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded. Default value: None
VersionId	string	No	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is obtained.
RangeStart	int64	No	Explanation: Start position for object download Value range: 0 to the object length, in bytes. Default value: 0 , indicating the download starts from the first byte of the object.

Parameter	Type	Mandatory (Yes/No)	Description
RangeEnd	int64	No	Explanation: End position for object download Value range: - The value must be greater than that of RangeStart. - The upper limit of the value is the object length minus 1, in bytes. Default value: None
IfMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None
IfNoneMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None

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

Responses

Table 8-29 List of returned results

Parameter	Type	Description
output	* GetObjectOutput	Explanation: Returned results. For details, see Table 8-30 .

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

Table 8-30 GetObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Body	io.ReadCloser	Explanation: Object data stream to download Default value: None
StorageClass	StorageClassType	Explanation: Object storage class Value range: See Table 8-31 . Default value: None

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

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

Parameter	Type	Description
ContentDisposition	string	Explanation: Content-Disposition header in the response Default value: None
ContentEncoding	string	Explanation: Content-Encoding header in the response Default value: None
ContentLanguage	string	Explanation: Content-Language header in the response Default value: None
ContentType	string	Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
Expires	string	Explanation: Expires header in the response Default value: None
LastModified	time.Time	Explanation: Time when the last modification was made to the object Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z . Default value: None

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None
Restore	string	Explanation: Restore status of an object. For a Cold object that is being restored or has been restored, this header is returned. For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires. Restrictions: This parameter is only available for Cold objects. Default value: None

Parameter	Type	Description
Expiration	string	Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\"" Default value: None
WebsiteRedirectLocation	string	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Description
Metadata	map[string]string	Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None

Table 8-31 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example downloads **example/objectname** from **examplebucket** using streaming.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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.

8.3.2 Downloading an Object - Range-Based (SDK for Go)

Function

This API downloads partial data of an object by specifying a range. If the specified range is from 0 to 1,000, data at the 0th to the 1,000th bytes, 1,001 bytes in total, will be returned. If the specified range is invalid, the whole object data will be returned.

Restrictions

- To download an object, you must be the bucket owner or have the required permission (**obs:object:GetObject** in IAM or **GetObject** in a bucket policy).
- Objects in the Cold 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.

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput) (output *GetObjectOutput, err error)
```

Request Parameters

Table 8-32 List of request parameters

Parameter	Type	Man dato ry (Yes /No)	Description
input	*GetObjectInp ut	Yes	Explanation: Input parameters for a partial download. For details, see Table 8-33 .

Table 8-33 GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
ResponseCacheControl	string	No	Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded. Default value: None
ResponseContentDisposition	string	No	Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None
ResponseContentEncoding	string	No	Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded. Default value: None
ResponseContent-Type	string	No	Explanation: Content-Type header in the response. It specifies the object file type. Default value: None
ResponseExpires	string	No	Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded. Default value: None
VersionId	string	No	Explanation: Object version ID. Example: G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is obtained.
RangeStart	int64	No	Explanation: Start position for object download Value range: 0 to the object length, in bytes. Default value: 0, indicating the download starts from the first byte of the object.

Parameter	Type	Mandatory (Yes/No)	Description
RangeEnd	int64	No	Explanation: End position for object download Value range: - The value must be greater than that of RangeStart. - The upper limit of the value is the object length minus 1, in bytes. Default value: None
IfMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None
IfNoneMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None

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

Responses

Table 8-34 List of returned results

Parameter	Type	Description
output	*GetObjectOutput	Explanation: Returned results. For details, see Table 8-35 .

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

Table 8-35 GetObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Body	io.ReadCloser	Explanation: Object data stream to download Default value: None
DeleteMarker	bool	Explanation: Whether the deleted object is a delete marker Value range: • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. Default value: false

Parameter	Type	Description
StorageClass	StorageClassType	Explanation: Object storage class Value range: See Table 8-36. Default value: None
AllowOrigin	string	Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket. Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com. Default value: None
AllowHeader	string	Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid. Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed. Default value: None

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

Parameter	Type	Description
ContentLength	int64	Explanation: Object size in bytes Value range: The value ranges from 0 TB to 48.8 TB, in bytes. Default value: None
CacheControl	string	Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded. Default value: None
ContentDisposition	string	Explanation: Content-Disposition header in the response Default value: None
ContentEncoding	string	Explanation: Content-Encoding header in the response Default value: None
ContentLanguage	string	Explanation: Content-Language header in the response Default value: None
ContentType	string	Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.

Parameter	Type	Description
Expires	string	Explanation: Expires header in the response Default value: None
LastModified	time.Time	Explanation: Time when the last modification was made to the object Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z . Default value: None
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
Restore	string	Explanation: Restore status of an object. For a Cold object that is being restored or has been restored, this header is returned. For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires. Restrictions: This parameter is only available for Cold objects. Default value: None
Expiration	string	Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\"" Default value: None

Parameter	Type	Description
WebsiteRedirectLocation	string	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Description
Metadata	map[string]string	Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None

Table 8-36 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example downloads part (length range: 0-1,000 bytes) of **example/objectname** from **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

8.3.3 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).
- Objects in the Cold 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 8-37 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*GetObjectInput	Yes	Explanation: Input parameters for a conditional download. For details, see Table 8-38 .

Table 8-38 GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
ResponseCacheControl	string	No	Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded. Default value: None
ResponseContentDisposition	string	No	Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None
ResponseContentEncoding	string	No	Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded. Default value: None
ResponseContent-Type	string	No	Explanation: Content-Type header in the response. It specifies the object file type. Default value: None
ResponseExpires	string	No	Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded. Default value: None
VersionId	string	No	Explanation: Object version ID. Example: G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is obtained.
RangeStart	int64	No	Explanation: Start position for object download Value range: 0 to the object length, in bytes. Default value: 0 , indicating the download starts from the first byte of the object.

Parameter	Type	Mandatory (Yes/No)	Description
RangeEnd	int64	No	Explanation: End position for object download Value range: - The value must be greater than that of RangeStart. - The upper limit of the value is the object length minus 1, in bytes. Default value: None
IfMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None
IfNoneMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None

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

Responses

Table 8-39 List of returned results

Parameter	Type	Description
output	* GetObjectOutput	Explanation: Returned results. For details, see Table 8-40 .

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

Table 8-40 GetObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Body	io.ReadCloser	Explanation: Object data stream to download Default value: None
DeleteMarker	bool	Explanation: Whether the deleted object is a delete marker Value range: • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. Default value: false

Parameter	Type	Description
StorageClass	StorageClassType	Explanation: Object storage class Value range: See Table 8-41. Default value: None
AllowOrigin	string	Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket. Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com. Default value: None
AllowHeader	string	Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid. Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed. Default value: None

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

Parameter	Type	Description
ContentLength	int64	Explanation: Object size in bytes Value range: The value ranges from 0 TB to 48.8 TB, in bytes. Default value: None
CacheControl	string	Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded. Default value: None
ContentDisposition	string	Explanation: Content-Disposition header in the response Default value: None
ContentEncoding	string	Explanation: Content-Encoding header in the response Default value: None
ContentLanguage	string	Explanation: Content-Language header in the response Default value: None
ContentType	string	Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.

Parameter	Type	Description
Expires	string	Explanation: Expires header in the response Default value: None
LastModified	time.Time	Explanation: Time when the last modification was made to the object Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z . Default value: None
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
Restore	string	Explanation: Restore status of an object. For a Cold object that is being restored or has been restored, this header is returned. For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires. Restrictions: This parameter is only available for Cold objects. Default value: None
Expiration	string	Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\"" Default value: None

Parameter	Type	Description
WebsiteRedirectLocation	string	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Description
Metadata	map[string]string	Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None

Table 8-41 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

8.3.4 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).
- 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 8-42 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*DownloadFileInput	Yes	Explanation: Input parameters for a resumable download. For details, see Table 8-43 .

Table 8-43 DownloadFileInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Man dato ry (Yes /No)	Description
VersionId	string	No	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is obtained.
DownloadFile	string	No	Explanation: Full path of the local directory to which the object is downloaded. Default value: If the parameter is left blank, the downloaded object is saved in the directory where the program is executed.
PartSize	int64	No	Explanation: Part size Value range: The value must be greater than 0 but less than the object size, in bytes. Default value: 9437184, indicating 9 MB for each part
TaskNum	int	No	Explanation: Maximum number of parts that can be downloaded concurrently Value range: The value must be greater than 0 but not exceed the result of the file size divided by the part size (rounded up). Default value: 1, indicating concurrent downloads are not used.

Parameter	Type	Mandatory (Yes/No)	Description
EnableCheckpoint	bool	No	Explanation: Whether to enable the resumable download Value range: true: The resumable download mode is enabled. false: The resumable download mode is disabled. Default value: false
CheckpointFile	string	No	Explanation: File used to record the download progress. This parameter is valid only in a resumable download. Default value: If the parameter is left blank, the file is in the same local directory as the downloaded object.
IfMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None
IfNoneMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None

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

Responses

Table 8-44 List of returned results

Parameter	Type	Description
output	*GetObjectMetadataOutput	Explanation: Returned results. For details, see Table 8-45 .
err	error	Explanation: Error messages returned by the API

Table 8-45 GetObjectMetadataOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
StorageClass	StorageClassType	Explanation: Object storage class Value range: See Table 8-46 . Default value: None
AllowOrigin	string	Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket. Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com . Default value: None

Parameter	Type	Description
AllowHeader	string	Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid. Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed. Default value: None
AllowMethod	string	Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects. Value range: The following HTTP methods are supported: • GET • PUT • HEAD • POST • DELETE Default value: None

Parameter	Type	Description
ExposeHeader	string	Explanation: ExposeHeader in the CORS rules of the bucket. It specifies the CORS-allowed additional headers in the response. These headers provide additional information to clients. By default, your browser can only access headers Content-Length and Content-Type. If your browser needs to access other headers, add them to a list of the allowed additional headers. Restrictions: Spaces, wildcard characters (*), ampersands (&), colons (:), and less-than signs (<) are not allowed. Default value: None
MaxAgeSeconds	int	Explanation: MaxAgeSeconds in the CORS rules of the bucket. It specifies the time your client can cache the response for a cross-origin request. Restrictions: Each CORS rule can specify only one value for MaxAgeSeconds. Value range: 0 to ($2^{31} - 1$), in seconds Default value: 100
ContentLength	int64	Explanation: Object size in bytes Value range: The value ranges from 0 TB to 48.8 TB, in bytes. Default value: None

Parameter	Type	Description
ContentType	string	Explanation: MIME type of the file to be downloaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
LastModified	time.Time	Explanation: Time when the last modification was made to the object Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z . Default value: None
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None
Restore	string	Explanation: Restore status of an object. For a Cold object that is being restored or has been restored, this header is returned. For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires. Restrictions: This parameter is only available for Cold objects. Default value: None
Expiration	string	Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\"" Default value: None

Parameter	Type	Description
WebsiteRedirectLocation	string	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. This parameter specifies the address the request for the object is redirected to. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Description
Metadata	map[string]string	Explanation: Custom object metadata. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None

Table 8-46 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example downloads **example/objectname** from **examplebucket** in a resumable download.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

8.4 Creating a Folder (SDK for Go)

Function

This API creates a folder in a bucket created to manage data in OBS.

OBS does not involve folders like in a file system. All elements in buckets are objects. To create a folder in OBS is essentially to create an object whose size is 0 and whose name ends with a slash (/). Such objects have no difference from other objects and can be downloaded and deleted, except that they are displayed as folders in OBS Console.

Restrictions

- To create a folder, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy).
- 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 8-47 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	* PutObjectInput	Yes	Explanation: Input parameters for creating a folder. For details, see Table 8-48 .

Table 8-48 PutObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
ContentMD5	string	No	Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity. Value range: ContentMD5 contains the Base64-encoded 128-bit MD5 digest calculated according to RFC 1864. Example: n58IG6hfM7vql4K0vnWpog== Default value: None
ACL	AclType	No	Explanation: ACL that can be pre-defined during object creation. Value range: For details about the ACL options, see AclType. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to an object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: - The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. - OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	Explanation: Multipurpose Internet Mail Extension (MIME) type of the object to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display object files. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
ContentLength	int64	No	Explanation: Size of the object to be uploaded Restrictions: - 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. Default value: If this parameter is not specified, the SDK automatically calculates the size of the object.
StorageClass	StorageClassType	No	Explanation: Object storage class Value range: For available storage classes, see Table 8-4. Default value: If this parameter is not specified, the object inherits the storage class of the bucket.

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: - The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. - The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. - Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None
Body	io.Reader	No	Explanation: Data stream of the object to be uploaded Restrictions: - 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. Default value: None

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

Parameter	Type	Man dato ry (Yes /No)	Description
GrantFullControlId	string	No	Explanation: ID (domain_id) of an account the FULL_CONTROL permission is granted to. The account with the FULL_CONTROL permission can read the current object, obtain its metadata, and obtain and write its ACL. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None
Expires	int64	No	Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted. Value range: A positive integer, in days Default value: None

Table 8-49 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	Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<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. NOTE <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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 8-50 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 8-51 List of returned results

Parameter	Type	Description
output	*PutObjectOutput	Explanation: Returned results. For details, see Table 8-52 .
err	error	Explanation: Error messages returned by the API

Table 8-52 PutObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
StorageClass	StorageClassType	Explanation: See Table 8-53 . Value range: If the storage class is Standard, leave this parameter blank.
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Table 8-53 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example creates a folder in **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

```
}  
}
```

8.5 Copying an Object (SDK for Go)

Function

This API copies an object stored in OBS to another path, with a copy created during the process. You can create a copy of an object up to 5 GB in a single operation.

Restrictions

- To copy an object, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy).
- The object copy request carries the information about the source bucket and object to be copied in the header field. The message body cannot be carried.
- The target object size ranges from 0 to 5 GB. If the source object size exceeds 5 GB, you can only copy some objects using [APIs Related to Multipart Upload \(SDK for Go\)](#).

Method

```
func (obsClient ObsClient) CopyObject(input *CopyObjectInput) (output *CopyObjectOutput, err error)
```

Request Parameters

Table 8-54 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*CopyObjectInput	Yes	Explanation: Input parameters for copying an object. For details, see Table 8-55 .

Table 8-55 CopyObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Target object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
CopySourceBucket	string	Yes	Explanation: Source bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
CopySourceKey	string	Yes	Explanation: Source object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
CopySourceVersionId	string	No	Explanation: Version ID of the source object, for example, G001117FCE89978B0000401205D5DC9A Value range: The value must contain 32 characters. Default value: If this parameter is left blank, the latest version of the source object is copied.
ACL	AclType	No	Explanation: ACL that can be pre-defined during object copying. Value range: For details about the ACL options, see AclType. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
MetadataDirective	MetadataDirectiveType	No	Explanation: Policy for copying the source object's properties Value range: See Table 8-57 . Default value: None
CopySourceIfMatch	string	No	Explanation: Copies the source object if its ETag is the same as the one specified by this parameter; otherwise, an error is returned. Default value: None
CopySourceIfNoneMatch	string	No	Explanation: Copies the source object if its ETag is different from the one specified by this parameter; otherwise, an error is returned. Default value: None
CopySourceIfUnmodifiedSince	time.Time	No	Explanation: Copies the source object if it has not been modified since the specified time; otherwise, an exception is thrown. Default value: None
CopySourceIfModifiedSince	time.Time	No	Explanation: Copies the source object if it has been modified since the specified time; otherwise, an exception is thrown. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: - The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. - OBS only supports redirection for objects in the root directory of a bucket. Default value: None
CacheControl	string	No	Explanation: Cache-Control is rewritten in the response. Default value: None
ContentDisposition	string	No	Explanation: Rewrites the Content-Disposition header in the response. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentEncoding	string	No	Explanation: Rewrites the Content-Encoding header in the response. Default value: None
ContentLanguage	string	No	Explanation: Content-Language is rewritten in the response. Default value: None
ContentType	string	No	Explanation: Content-Type is rewritten in the response. Default value: None
Expires	string	No	Explanation: Expires is rewritten in the response. Default value: None
StorageClass	StorageClassType	No	Explanation: Object storage class Value range: See Table 8-58 . Default value: None. If this parameter is not specified, the storage class of the bucket is used as that of the object.

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the target object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None
GrantReadId	string	No	Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the object to copy and obtain its metadata. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None

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

Parameter	Type	Mandatory (Yes/No)	Description
SuccessActionRedirect	string	No	Explanation: Address (URL) to which a successfully answered request is redirected If the value is valid and the request is successful, OBS returns status code 303. Location contains SuccessActionRedirect as well as the bucket name, object name, and object ETag. If the value is invalid, OBS ignores this parameter. In such case, the Location header is the object address, and OBS returns a status code based on whether the operation succeeds or fails. Default value: None

Table 8-56 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	Public read/write If this permission is granted on a bucket, anyone can read the object list, multipart tasks, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<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. NOTE <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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 8-57 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 8-58 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 8-59 List of returned results

Parameter	Type	Description
output	* CopyObjectOutput	Explanation: Messages returned by the API See Table 8-60 .
err	error	Explanation: Error messages returned by the API

Table 8-60 CopyObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string]string	Explanation: HTTP response headers Default value: None
LastModified	time.Time	Explanation: Time when the last modification was made to the target object Value range: UTC time Default value: None

Parameter	Type	Description
ETag	string	Explanation: ETag of the target object. Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
CopySourceVersionId	string	Explanation: Version ID of the source object Value range: The value must contain 32 characters. Default value: None
VersionId	string	Explanation: Version ID of the target object Value range: The value must contain 32 characters. Default value: None

Code Examples

This example copies an object from one bucket to another.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.  
    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 of the region where the bucket locates.  
    endPoint := "https://your-endpoint"  
    // 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)  
    }  
}
```

8.6 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).
- 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 8-61 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*DeleteObjectInput	Yes	Request parameters for deleting an object

Table 8-62 DeleteObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Target object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	No	Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is deleted.

Responses

Table 8-63 List of returned results

Parameter	Type	Description
output	*DeleteObjectOutput	Explanation: Returned results. For details, see Table 8-64 .
err	error	Explanation: Error messages returned by the API

Table 8-64 DeleteObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
DeleteMarker	bool	Explanation: Whether the deleted object is a delete marker Value range: • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. Default value: false
VersionId	string	Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is deleted.

Code Examples

This example deletes object **example/objectname** from bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

8.7 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).
- 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 8-65 List of request parameters

Parameter	Type	Man dato ry (Yes/ No)	Description
input	*DeleteObjectsIn- put	Yes	Explanation: Input parameters for batch deleting objects. For details, see Table 8-66 .

Table 8-66 DeleteObjectsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Quiet	bool	No	Explanation: Response to the request for deleting objects in a batch Value range: • false: The detailed mode. Results of both successful and failed deletions are returned. • true: The quiet mode. Only results of failed deletions are returned. Default value: false
Objects	[] ObjectToDelete	Yes	Explanation: List of objects to be deleted. For details, see Table 8-67 .

Table 8-67 ObjectToDelete

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
VersionId	string	No	Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is deleted.

Responses

Table 8-68 List of returned results

Parameter	Type	Description
output	*DeleteObjectsOutput	Explanation: Returned results. For details, see Table 8-69 .
err	error	Explanation: Error messages returned by the API

Table 8-69 DeleteObjectsOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None

Parameter	Type	Description
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string] []string	Explanation: HTTP response headers Default value: None
DeletedIds	[]Deleted	Explanation: List of objects that are successfully deleted. For details, see Table 8-70 .
Errors	[]Error	Explanation: List of objects that fail to be deleted. For details, see Table 8-71 .

Table 8-70 Deleted

Parameter	Type	Description
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is deleted.

Parameter	Type	Description
DeleteMarker	bool	Explanation: Whether the deleted object is a delete marker Value range: • true: The deleted object is a delete marker. • false: The deleted object is not a delete marker. Default value: false
DeleteMarkerVersionId	string	Explanation: Version ID of the delete marker to create or delete. 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: • You send a delete request with no version ID specified. In this case, OBS creates the delete marker and returns its version ID in the response. • You send a delete request with an object name and a version ID specified, but this version ID represents a delete marker. In this case, OBS deletes the delete marker and returns its version ID in the response. Default value: None

Table 8-71 Error

Parameter	Type	Description
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	Explanation: ID of the object version to delete, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is deleted.
Code	string	Explanation: Error code of the deletion failure.
Message	string	Explanation: Error message of the deletion failure.

Code Examples

This example deletes objects **key1**, **key2**, and **key3** from bucket **examplebucket** in a batch.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
```

```
// 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)
}
}
```

8.8 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).

- 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 Cold objects.

Method

```
func (obsClient ObsClient) SetObjectMetadata(input *SetObjectMetadataInput)  
(output *SetObjectMetadataOutput, err error)
```

Request Parameters

Table 8-72 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*SetObjectMetadataInput	Yes	Explanation: Input parameters for configuring object metadata. For details, see Table 8-73 .

Table 8-73 SetObjectMetadataInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Value range: The value must contain 3 to 63 characters.

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	No	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A Value range: The value must contain 32 characters. Default value: None
CacheControl	string	No	Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded. Default value: None
ContentDisposition	string	No	Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None

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

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: - The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. - OBS only supports redirection for objects in the root directory of a bucket. Default value: None
StorageClass	StorageClassType	No	Explanation: Storage class of an object. Value range: See Table 8-74. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None

Table 8-74 StorageClassType

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

Constant	Default Value	Description
StorageClassWarm	WARM	OBS Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 8-75 List of returned results

Parameter	Type	Description
output	*SetObjectMetadataOutput	Explanation: Returned results. For details, see Table 8-76 .
err	error	Explanation: Error messages returned by the API

Table 8-76 SetObjectMetadataOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
MetadataDirective	Metadata Directive Type	Explanation: Policy for copying the source object's properties Value range: See Table 8-77 . Default value: None
CacheControl	string	Explanation: Cache-Control header in the response. It specifies cache behaviors of the web page when an object is downloaded. Default value: None
ContentDisposition	string	Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None

Parameter	Type	Description
ContentEncoding	string	Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is downloaded. Default value: None
ContentLanguage	string	Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded. Default value: None
ContentType	string	Explanation: Content-Type header in the response. It specifies the object file type. Default value: None
Expires	string	Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded. Default value: None

Parameter	Type	Description
WebsiteRedirectLocation	string	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None
StorageClass	StorageClassType	Explanation: Object storage class. If you do not specify this header, the object inherits the storage class of the bucket. Value range: See Table 8-78. Default value: None

Parameter	Type	Description
Metadata	map[string]string	Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None

Table 8-77 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 8-78 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

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 Cold, and custom metadata is also configured for the object.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

8.9 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).
- 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 8-79 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*GetObjectMetadatalInput	Yes	Explanation: Input parameters for obtaining object metadata. For details, see Table 8-80 .

Table 8-80 GetObjectMetadataInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	No	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A Value range: The value must contain 32 characters. Default value: None

Responses

Table 8-81 List of returned results

Parameter	Type	Description
output	*GetObjectMetadataOutput	Explanation: Returned results. For details, see Table 8-82 .
err	error	Explanation: Error messages returned by the API

Table 8-82 GetObjectMetadataOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
StorageClass	StorageClassType	Explanation: Object storage class. If you do not specify this header, the object inherits the storage class of the bucket. Value range: See Table 8-83. Default value: None
AllowOrigin	string	Explanation: If Origin in the request meets the CORS rules of the bucket, AllowedOrigin specified in the CORS rules is returned. AllowedOrigin indicates the origin from which the requests can access the bucket. Restrictions: Domain name of the origin. Each origin can contain only one wildcard character (*), for example, https://*.vbs.example.com. Default value: None

Parameter	Type	Description
AllowHeader	string	Explanation: If RequestHeader in the request meets the CORS rules of the bucket, AllowedHeader specified in the CORS rules is returned. AllowedHeader indicates the allowed headers for cross-origin requests. Only CORS requests matching the allowed headers are valid. Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed. Default value: None
AllowMethod	string	Explanation: AllowedMethod in the CORS rules of the bucket. It specifies the HTTP method of cross-origin requests, that is, the operation type of buckets and objects. Value range: The following HTTP methods are supported: • GET • PUT • HEAD • POST • DELETE Default value: None

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

Parameter	Type	Description
ContentType	string	Explanation: MIME type of the object file. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
LastModified	time.Time	Explanation: Time when the last modification was made to the object Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z. Default value: None
ETag	string	Explanation: ETag of the object Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None
Restore	string	Explanation: Restore status of an object. For a Cold object that is being restored or has been restored, this header is returned. For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires. Restrictions: This parameter is only available for Cold objects. Default value: None
Expiration	string	Explanation: Expiration details of the object. Example: "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\"" Default value: None

Parameter	Type	Description
WebsiteRedirectLocation	string	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Description
Metadata	map[string]string	Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None

Table 8-83 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.

Constant	Default Value	Description
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example returns the metadata of object **example/objectname**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint, obs.WithSignature(obs.SignatureObs)/*,
    obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.GetObjectMetadataInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object (example/objectname as an example).
    input.Key = "example/objectname"
    // Obtain the custom metadata of the object.
    output, err := obsClient.GetObjectMetadata(input)
    if err == nil {
        fmt.Printf("Get object(%s)'s metadata successful with bucket(%s)!\n", input.Key, input.Bucket)
        fmt.Printf("StorageClass:%s, ETag:%s, ContentType:%s, ContentLength:%d, LastModified:%s\n",
            output.StorageClass, output.ETag, output.ContentType, output.ContentLength, output.LastModified)
        // Obtain the custom metadata of the object.
        fmt.Printf("Metadata:%v\n", output.Metadata)
        return
    }
    fmt.Printf("Get object(%s)'s metadata fail with bucket(%s)!\n", input.Key, input.Bucket)
    if obsError, ok := err.(obs.ObsError); ok {
```

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

8.10 Configuring an Object ACL (SDK for Go)

Function

Access control lists (ACLs) allow resource owners to grant other accounts the permissions to access resources. By default, only the resource owner has full control over resources when a bucket or object is created. That is, the bucket creator has full control over the bucket, and the object uploader has full control over the object. Other accounts do not have the permissions to access resources. If resource owners want to grant other accounts the read and write permissions on resources, they can use ACLs. ACLs grant permissions to accounts. After an account is granted permissions, both the account and its IAM users can access the resources. Even if an ACL is set for an object encrypted using SSE-KMS, the cross-tenant access is unavailable.

You can set an ACL when uploading an object or call an ACL API to modify or obtain the ACL of an existing object.

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).
- An object can have a maximum of 100 rules in its ACL.

Method

func (obsClient ObsClient) SetObjectAcl(input ***SetObjectAclInput**) (output ***BaseModel**, err error)

Request Parameters

Table 8-84 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	* SetObjectAclInput	Yes	Explanation: Input parameters for configuring an ACL for the object. For details, see Table 8-85 .

Table 8-85 SetObjectAclInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	No	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A Value range: The value must contain 32 characters. Default value: None
ACL	AclType	No	Explanation: Pre-defined ACL. Value range: See Table 8-86 . Default value: None
Owner	Owner	No	Explanation: Account ID of the object owner. For details, see Table 8-87 . Restrictions: Owner and Grants must be used together and they cannot be used with ACL .

Parameter	Type	Mandatory (Yes/No)	Description
Grants	[]Grant	No	Explanation: Grantees' permission information. For details, see Table 8-88 . Default value: None

Table 8-86 AclType

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

Constant	Default Value	Description
<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. NOTE AclPublicReadDelivered 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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE AclPublicReadWriteDelivered does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 8-87 Owner

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

Table 8-88 Grant

Parameter	Type	Mandatory (Yes/No)	Description
Grantee	Grantee	Yes if used as a request parameter	Explanation: Grantee information. For details, see Table 8-89 .
Permission	PermissionType	Yes if used as a request parameter	Explanation: Granted permission Value range: See Table 8-90 . Default value: None

Table 8-89 Grantee

Parameter	Type	Mandatory (Yes/No)	Description
Type	Grantee Type	Yes if used as a request parameter	Explanation: Grantee type Value range: See Table 8-91 . Default value: None
ID	string	Yes if this parameter is used as a request parameter and Type is set to Grantee User	Explanation: Account (domain) ID of the grantee Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None
DisplayName	string	No if used as a request parameter	Explanation: Account name of the grantee Restrictions: • Starts with a letter. • Contains 6 to 32 characters. • Contains only letters, digits, hyphens (-), or underscores (_). Default value: None
URI	GroupURIType	Yes if this parameter is used as a request parameter and Type is set to Grantee Group	Explanation: Authorized user group Value range: See Table 8-92 . Default value: None

Table 8-90 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 8-91 GranteeType

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

Table 8-92 GroupUriType

Constant	Default Value	Description
GroupAllUsers	AllUsers	All users

Responses

Table 8-93 List of returned results

Parameter	Type	Description
output	*BaseModel	Explanation: Returned results. For details, see Table 8-94 .
err	error	Explanation: Error messages returned by the API

Table 8-94 BaseModel

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

Code Examples

This example sets the ACL of object **example/objectname** to Private.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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 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(%)!\n", input.Key, input.Bucket)
    fmt.Printf("RequestId: %s\n", output.RequestId)
    return
}
fmt.Printf("Set Object(%)s's acl fail with Bucket(%)!\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)
}
}
```

8.11 Obtaining Object ACL Information (SDK for Go)

Function

Access control lists (ACLs) allow resource owners to grant other accounts the permissions to access resources. By default, only the resource owner has full control over resources when a bucket or object is created. That is, the bucket creator has full control over the bucket, and the object uploader has full control over the object. Other accounts do not have the permissions to access resources. If resource owners want to grant other accounts the read and write permissions on resources, they can use ACLs. ACLs grant permissions to accounts. After an account is granted permissions, both the account and its IAM users can access the resources.

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).
- 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 8-95 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*GetObjectAcl input	Yes	Explanation: Input parameters for obtaining the ACL of an object. For details, see Table 8-96 .

Table 8-96 GetObjectAclInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
VersionId	string	No	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A Value range: The value must contain 32 characters. Default value: None

Responses

Table 8-97 List of returned results

Parameter	Type	Description
output	* GetObjectAclOutput	Explanation: Returned results. For details, see Table 8-98 .
err	error	Explanation: Error messages returned by the API

Table 8-98 GetObjectAclOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
VersionId	string	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9A Value range: The value must contain 32 characters. Default value: None
Owner	Owner	Explanation: Account ID of the object owner. For details, see Table 8-99 . Restrictions: Owner and Grants must be used together and they cannot be used with ACL .
Grants	[] Grant	Explanation: Grantees' permission information. For details, see Table 8-100 . Default value: None

Table 8-99 Owner

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

Table 8-100 Grant

Parameter	Type	Mandatory (Yes/No)	Description
Grantee	Grantee	Yes if used as a request parameter	Explanation: Grantee information. For details, see Table 8-101 .
Permission	PermissionType	Yes if used as a request parameter	Explanation: Granted permission Value range: See Table 8-102 . Default value: None

Table 8-101 Grantee

Parameter	Type	Mandatory (Yes/No)	Description
Type	GranteeType	Yes if used as a request parameter	Explanation: Grantee type. For details, see Table 8-103 .

Parameter	Type	Mandatory (Yes/No)	Description
ID	string	Yes if this parameter is used as a request parameter and Type is set to Grantee User	Explanation: Account (domain) ID of the grantee Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None
DisplayName	string	No if used as a request parameter	Explanation: Account name of the grantee Restrictions: - Starts with a letter. - Contains 6 to 32 characters. - Contains only letters, digits, hyphens (-), or underscores (_). Default value: None
URI	GroupUriType	Yes if this parameter is used as a request parameter and Type is set to Grantee Group	Explanation: Authorized user group Value range: See Table 8-104 . Default value: None

Table 8-102 PermissionType

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

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

Table 8-103 GranteeType

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

Table 8-104 GroupUriType

Constant	Default Value	Description
GroupAllUsers	AllUsers	All users

Code Examples

This example shows how to obtain the ACL of object **example/objectname** in bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
```

8.12 Rewriting Response Headers (SDK for Go)

Function

This API rewrites some HTTP/HTTPS response headers when downloading an object. The following table lists rewritable response headers.

Parameter	Description
GetObjectInput.ResponseContentType	Rewrites Content-Type in HTTP/HTTPS responses.
GetObjectInput.ResponseContentLanguage	Rewrites Content-Language in HTTP/HTTPS responses.
GetObjectInput.ResponseExpires	Rewrites Expires in HTTP/HTTPS responses.
GetObjectInput.ResponseCacheControl	Rewrites Cache-Control in HTTP/HTTPS responses.
GetObjectInput.ResponseContentDisposition	Rewrites Content-Disposition in HTTP/HTTPS responses.
GetObjectInput.ResponseContentEncoding	Rewrites Content-Encoding in HTTP/HTTPS responses.

Restrictions

- To rewrite response headers, you must have the **obs:object:GETObject** permission.

Method

```
func (obsClient ObsClient) GetObject(input *GetObjectInput) (output *GetObjectOutput, err error)
```

Request Parameters

Table 8-105 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*GetObjectInput	Yes	Explanation: Input parameters for rewriting object headers. For details, see Table 8-106 .

Table 8-106 GetObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
ResponseCacheControl	string	No	Explanation: Cache-Control header in the response. It specifies the cache behavior of the web page when the object is downloaded. Default value: None
ResponseContentDisposition	string	No	Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None
ResponseContentEncoding	string	No	Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is being downloaded. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ResponseContentLanguage	string	No	Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded. Default value: None
ResponseContent-Type	string	No	Explanation: Content-Type header in the response. It specifies the object file type. Default value: None
ResponseExpires	string	No	Explanation: Expires header in the response. It specifies the cache expiration time of the web page when the object is downloaded. Default value: None
VersionId	string	No	Explanation: Object version ID, for example, G001117FCE89978B0000401205D5DC9 Value range: The value must contain 32 characters. Default value: None. If this parameter is left blank, the latest version of the object is specified.
RangeStart	int64	No	Explanation: Start position for object download. Value range: 0 to the object length, in bytes. Default value: 0 , indicating the download starts from the first byte of the object.

Parameter	Type	Mandatory (Yes/No)	Description
RangeEnd	int64	No	Explanation: End position for object download Value range: - The value must be greater than that of RangeStart. - The upper limit of the value is the object length minus 1, in bytes. Default value: None
IfMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is the same as the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None
IfNoneMatch	string	No	Explanation: Preset ETag. If the ETag of the object to be downloaded is different from the preset ETag, the object is returned. Otherwise, an error is returned. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
IfModifiedSince	time.Time	No	Explanation: The object is returned if it has been modified since the specified time; otherwise, an error is returned. Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z. Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None
IfUnmodifiedSince	time.Time	No	Explanation: The object is returned if it has not been modified since the specified time; otherwise, an error is returned. Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z. Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None
Origin	string	No	Explanation: Origin (usually a domain name) specified in the pre-request Restrictions: Each origin can contain only one wildcard character (*). Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
RequestHeader	string	No	Explanation: HTTP headers in a cross-origin request. Only CORS requests matching the allowed headers are valid. Restrictions: Each header can contain only one wildcard character (*). Spaces, ampersands (&), colons (:), and less-than signs (<) are not allowed. Default value: None

Responses

Table 8-107 List of returned results

Parameter	Type	Description
output	* GetObjectOutput	Explanation: Returned results. For details, see Table 8-108 .
err	error	Explanation: Error messages returned by the API

Table 8-108 GetObjectOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string][]string	Explanation: HTTP response headers Default value: None
Body	io.ReadCloser	Explanation: Object data stream Restrictions: • 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. Default value: None
StorageClass	StorageClassType	Explanation: Storage class of the object. For details, see Table 8-109 . Value range: If the storage class is Standard, leave this parameter blank.

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

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

Parameter	Type	Description
ContentDisposition	string	Explanation: Content-Disposition header in the response. It specifies the name of the object when it is downloaded. Default value: None
ContentEncoding	string	Explanation: Content-Encoding header in the response. It specifies the content encoding format when an object is being downloaded. Default value: None
ContentLanguage	string	Explanation: Content-Language header in the response. It specifies the content language format when an object is downloaded. Default value: None
ContentType	string	Explanation: MIME type of the object file. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify Content-Type when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to Content-Type.
Expires	string	Explanation: Expires header in the response Default value: None

Parameter	Type	Description
LastModified	time.Time	Explanation: Last modification time of the object Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z. Default value: None
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if ETag value is A when an object is uploaded but changes to B when the object is downloaded, it indicates that the object content is changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded object or copied object has a unique ETag. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None
VersionId	string	Explanation: Object version ID Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
Restore	string	Explanation: Restore status of an object. For a Cold object that is being restored or has been restored, this header is returned. For example, ongoing-request="true" indicates that the object is being restored. ongoing-request="false", expiry-date="Wed, 7 Nov 2012 00:00:00 GMT" indicates that the object has been restored. expiry-date indicates when the restored object expires. Restrictions: This parameter is only available for Cold objects. Default value: None
Expiration	string	Explanation: Expiration details of the object, for example, "expiry-date=\"Mon, 11 Sep 2023 00:00:00 GMT\"" Default value: None

Parameter	Type	Description
WebsiteRedirectLocation	string	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: • The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. • OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Description
Metadata	map[string]string	Explanation: Custom metadata of the object. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are required, they must be encoded and decoded in URL or Base64 on the client, because the server does not perform such operations. Default value: None

Table 8-109 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.

Constant	Default Value	Description
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example rewrites response header **ContentType** to **image/jpeg** during an object download.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)  
}  
}
```

8.13 Restoring a Cold Object (SDK for Go)

Function

To obtain the content of an object in the Cold 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 Cold storage class and its copy in the Standard storage class co-exist in the bucket. The copy will be automatically deleted once its retention period expires.

This API is used to restore Cold objects in a specified bucket.

Restrictions

- To restore a Cold object, you must be the bucket owner or have the required permission (**obs:object:RestoreObject** in IAM or **RestoreObject** in a bucket policy.)
- To prolong the validity period of the Cold 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 8-110 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*RestoreObjectInput	Yes	Explanation: Input parameters for restoring a Cold object. For details, see Table 8-111 .

Table 8-111 RestoreObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Version Id	string	No	Explanation: Version ID of the Cold object to be restored Default value: None. If this parameter is left blank, the latest version of the object is specified.
Days	int	Yes	Explanation: After an object is restored, a Standard copy of it is generated. This parameter specifies how long the Standard copy can be retained, that is, the validity period of the restored object. Value range: The value ranges from 1 to 30, in days. Default value: None
Tier	RestoreTier Type	No	Explanation: Retrieval speed tiers. You can select a suitable tier based on your requirements for retrieval speed. Value range: For details, see Table 8-112 . Default value: Standard

Table 8-112 RestoreTierType

Constant	Default Value	Description
RestoreTierExpedited	Expedited	Objects can be quickly restored from Cold storage within 1 to 5 minutes.
RestoreTierStandard	Standard	Objects can be restored from Cold storage within 3 to 5 hours.

Responses

Table 8-113 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 8-114 .
err	error	Explanation: Error messages returned by the API

Table 8-114 BaseModel

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

Code Examples

This example restores the Cold object **example/objectname** in bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// Create an obsClient instance.
// If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
method to specify a security token when creating an instance.
obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
if err != nil {
    fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
}
input := &obs.RestoreObjectInput{}
// Specify a bucket name.
input.Bucket = "examplebucket"
// Specify the object (example/objectname in this example).
input.Key = "example/objectname"
// Specify the version ID of the object to be restored.
input.VersionId = "G001117FCE89978B0000401205D5DC9A"
// Specify how long the restored object will be retained, in days. 1 is used as an example, which can be
any value from 1 to 30.
input.Days = 1
// Specify the restore speed (obs.RestoreTierExpedited as an example). By default, the object is restored
at a standard speed.
input.Tier = obs.RestoreTierExpedited
// Restore the Cold 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 Cold storage class. Otherwise, an error will be reported.
- **RestoreObjectInput.Days** is used to specify how long (1 to 30 days) the restored object will be retained and **RestoreObjectInput.Tier** is used to specify how fast the object will be restored.

8.14 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.

Method

```
func (obsClient ObsClient) ModifyObject(input *ModifyObjectInput) (output *ModifyObjectOutput, err error)
```

Request Parameters

Table 8-115 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	* ModifyObjectInput	Yes	Explanation: Input parameters for modifying an object. For details, see Table 8-116 .

Table 8-116 ModifyObjectInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
Position	int64	Yes	Explanation: Position from which the object is modified Value range: 1 to $(2^{63} - 1)$, in bytes Default value: 1, indicating the modification starts from the first byte of the object
ContentLength	int64	No	Explanation: Size of the object to be modified Value range: 1 to $(2^{63} - 1)$, in bytes Default value: None
Body	io.Reader	No	Explanation: Data stream of the object to be modified Default value: None

Responses

Table 8-117 List of returned results

Parameter	Type	Description
output	* ModifyObjectOutput	Explanation: Returned results. For details, see Table 8-118 .
err	error	Explanation: Error messages returned by the API

Table 8-118 ModifyObjectOutput

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

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Code Examples

This example modifies object **example/objectname** in bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "strings"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

9 APIs Related to Multipart Upload (SDK for Go)

9.1 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-sdk-go/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.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 of the region where the bucket is located.
endPoint := "https://your-endpoint"
// 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 \(SDK for Go\)](#)

9.2 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).
- 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 9-1 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*InitiateMultipartUploadInput	Yes	Explanation: Input parameters for initiating a multipart upload. For details, see Table 9-2 .

Table 9-2 InitiateMultipartUploadInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
ACL	AclType	No	Explanation: ACL that can be pre-defined when a bucket is created. Value range: For details about the ACL options, see AclType. Default value: private

Parameter	Type	Mandatory (Yes/No)	Description
WebsiteRedirectLocation	string	No	Explanation: If the bucket is configured with website hosting, the request for obtaining the object can be redirected to another object in the bucket or an external URL. The request is redirected to object anotherPage.html in the same bucket: WebsiteRedirectLocation:/anotherPage.html The request is redirected to an external URL http://www.example.com/: WebsiteRedirectLocation:http://www.example.com/ OBS obtains the specified value from the header and stores it in the object metadata WebsiteRedirectLocation. Restrictions: - The value must start with a slash (/), http://, or https:// and cannot exceed 2 KB. - OBS only supports redirection for objects in the root directory of a bucket. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentType	string	No	Explanation: MIME type of the file to be uploaded. MIME type is a standard way of describing a data type and is used by the browser to decide how to display data. Value range: See What Is Content-Type (MIME)? Default value: If you do not specify this parameter when uploading an object, the SDK determines the object type based on the suffix of the specified object name and automatically assigns a value to this parameter.
StorageClass	StorageClassType	No	Explanation: Object storage class If this parameter is not set, the object inherits the storage class of its bucket. Value range: StorageClassType lists the available value options. Default value: STANDARD

Parameter	Type	Mandatory (Yes/No)	Description
Metadata	map[string]string	No	Explanation: Custom metadata of the object to be uploaded. You can add a header starting with x-obs-meta- in the request to define metadata. The custom metadata will be returned in the response when you retrieve the object or query the object metadata. Restrictions: • The custom metadata cannot exceed 8 KB. To measure the custom metadata, sum the number of bytes in the UTF-8 encoding of each key and value. • The custom metadata keys are case insensitive, but are stored in lowercase in OBS. The key values are case sensitive. • Both custom metadata keys and their values must conform to US-ASCII standards. If non-ASCII or unrecognizable characters are necessary, they must be encoded and decoded in URL or Base64 on the client, because the server side does not perform any decoding. Default value: None
GrantReadId	string	No	Explanation: ID (domain_id) of an account the READ permission is granted to. The account with the READ permission can read the current object and obtain its metadata. Value range: To obtain the account ID, see How Do I Get My Account ID and User ID? Default value: None

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

Parameter	Type	Mandatory (Yes/No)	Description
Expires	int64	No	Explanation: Expiration time of the object (calculated from the latest modification time of the object). Expired objects are automatically deleted. Restrictions: This parameter can be configured only during object upload and cannot be modified by calling a metadata API. Value range: 1 to $(2^{63} - 1)$, in days Default value: None

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.

Constant	Default Value	Description
<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, assemble parts, copy parts, and abort multipart upload tasks. If it is granted on an object, anyone can read the content and metadata of the object.
<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. NOTE <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 uploads, metadata, and object versions in the bucket, and can upload or delete objects, initiate multipart upload tasks, upload parts, assemble parts, copy parts, and abort multipart uploads. They can also read the content and metadata of objects in the bucket. NOTE <code>AclPublicReadWriteDelivered</code> does not apply to objects.
<code>AclBucketOwnerFullControl</code>	bucket-owner-full-control	If this permission is granted on an object, only the bucket and object owners have the full control over the object. 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 permission to the bucket owner, the bucket owner can have full control over your object.

Table 9-4 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Responses

Table 9-5 List of returned results

Parameter	Type	Description
output	*InitiateMultipartUploadOutput	Explanation: Returned results. For details, see Table 9-6 .
err	error	Explanation: Error messages returned by the API

Table 9-6 InitiateMultipartUploadOutput

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

Parameter	Type	Description
Bucket	string	Explanation: Name of the bucket involved in the multipart upload Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Explanation: Name of the object to be uploaded. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Description
UploadId	string	Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8 Value range: The value must contain 1 to 32 characters. Default value: None

Code Examples

This example initiates a multipart upload.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

```
}  
}
```

9.3 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).
- 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 9-7 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	* UploadPartInput	Yes	Explanation: Input parameters for uploading a part. For details, see Table 9-8 .

Table 9-8 UploadPartInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
PartNumber	int	Yes	Explanation: Part number Value range: An integer ranging from 1 to 10000 Default value: None
UploadId	string	Yes	Explanation: Multipart upload ID which can be returned by initiating a multipart upload Restrictions: Value range: The value must contain 32 characters. Example: 000001648453845DBB78F2340DD460D8 Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
ContentMD5	string	No	Explanation: Base64-encoded MD5 value of the object data to be uploaded. It is provided for the OBS server to verify data integrity. Value range: Base64-encoded 128-bit MD5 value of the request body calculated according to RFC 1864 Example: n58IG6hfM7vqI4K0vnWpog== Default value: None
Body	io.Reader	No	Explanation: Data stream of the object to be uploaded Value range: The value ranges from 0 TB to 48.8 TB, in bytes. Default value: None
SourceFile	string	No	Explanation: Source file path of the object to be uploaded Default value: None
Offset	int64	No	Explanation: Start offset of a part in the source file Value range: A non-negative integer smaller than the size of the object to be uploaded, in bytes Default value: 0

Parameter	Type	Mandatory (Yes/No)	Description
PartSize	int64	No	Explanation: Part size Restrictions: • Except for the last uploaded part, all parts must be larger than 100 KB. Part sizes will not be verified during upload because whether an uploaded part is the last one cannot be determined. Their sizes will be verified when being assembled. • The minimum part size supported by an OBS 3.0 bucket is 100 KB, and that supported by an OBS 2.0 bucket is 5 MB. Value range: The value ranges from 100 KB to 5 GB, in bytes. Default value: 102400

Responses

Table 9-9 List of returned results

Parameter	Type	Description
output	* UploadPartOutput	Explanation: Returned results. For details, see Table 9-10 .
err	error	Explanation: Error messages returned by the API

Table 9-10 UploadPartOutput

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

Parameter	Type	Description
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Code Example

This example uploads a part to bucket **examplebucket** by specifying a multipart upload ID.

```
package main
import (
    "fmt"
    "os"
    "strings"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

9.4 Assembling Parts (SDK for Go)

Function

This API assembles the uploaded parts to complete the multipart upload. Before performing this operation, you cannot download the uploaded data. When assembling parts, you need to copy the additional message header information recorded during the multipart upload initiation to the object metadata. Such information is processed the same way the information in a common object upload is processed. In the case of assembling parts concurrently, last write wins is applied, but the time of last write is defined as the time when a multipart upload was initiated.

As long as the multipart upload is not aborted, all uploaded parts occupy the space. However, after you assembled the specified parts, those uploaded but not assembled will be deleted to free up space.

When assembling parts, OBS creates an object by putting part numbers in ascending order. If any object metadata is provided in the initiation of the multipart upload, OBS will associate the metadata with the object. After the multipart upload is complete, the parts will no longer exist. A part assembling request must contain the upload ID, part numbers, and a list of corresponding ETag values. In response to the request, the ETag that uniquely identifies the assembled parts is contained. This ETag is not the MD5 hash value of the entire object.

Restrictions

- To assemble parts, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy).
- 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 9-11 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*CompleteMultipartUploadInput	Yes	Explanation: Input parameters for assembling parts. For details, see Table 9-12 .

Table 9-12 CompleteMultipartUploadInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
UploadId	string	Yes	Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8 Value range: The value must contain 32 characters. Default value: None
Parts	[] Part	Yes	Explanation: List of parts to be assembled. For details, see Table 9-13 .

Table 9-13 Part

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

Responses

Table 9-14 List of returned results

Parameter	Type	Description
output	* CompleteMultipartUploadOutput	Explanation: Returned results. For details, see Table 9-15 .

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

Table 9-15 CompleteMultipartUploadOutput

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

Parameter	Type	Description
ETag	string	Explanation: ETag calculated based on the ETags of all assembled parts, which is a Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
Bucket	string	Explanation: Name of the bucket in which parts are assembled Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
Location	string	Explanation: URL of the generated object after part assembling Default value: None

Parameter	Type	Description
VersionId	string	Explanation: Version ID of the object obtained after part assembling. If versioning is enabled for the bucket, the object version ID will be returned. Value range: The value must contain 32 characters. Default value: None

Code Example

This example assembles the parts previously uploaded to bucket **examplebucket**.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // Create an obsClient instance.
    // If you use a temporary AK/SK pair and a security token to access OBS, use the obs.WithSecurityToken
    method to specify a security token when creating an instance.
    obsClient, err := obs.New(ak, sk, endPoint/*, obs.WithSecurityToken(securityToken)*/)
    if err != nil {
        fmt.Printf("Create obsClient error, errMsg: %s", err.Error())
    }
    input := &obs.CompleteMultipartUploadInput{}
    // Specify a bucket name.
    input.Bucket = "examplebucket"
    // Specify an object name (example/objectname as an example).
    input.Key = "example/objectname"
    // Specify the multipart upload ID (00000188677110424014075CC4A77xxx as an example).
    input.UploadId = "00000188677110424014075CC4A77xxx"
    // Specify the list of parts to be assembled.
    input.Parts = []obs.Part{
        {PartNumber: 1, ETag: "etag1"},
        {PartNumber: 2, ETag: "etag2"},
        {PartNumber: 3, ETag: "etag3"},
    }
    // Complete the multipart upload.
    output, err := obsClient.CompleteMultipartUpload(input)
    if err == nil {
        fmt.Printf("Complete multipart upload successful with bucket(%s) and object(%s)!\n", input.Bucket,
            input.Key)
        fmt.Printf("Location:%s, Bucket:%s, Key:%s, ETag:%s\n", output.Location, output.Bucket, output.Key,
            output.ETag)
```

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

9.5 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).
- 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 9-16 List of request parameters

Parameter	Type	Man dato ry (Yes /No)	Description
input	* ListMultipartUploadsInput	Yes	Explanation: Input parameters for listing multipart uploads. For details, see Table 9-17 .

Table 9-17 ListMultipartUploadsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None

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

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

Parameter	Type	Mandatory (Yes/No)	Description
UploadIdMarker	string	No	Explanation: Upload ID after which the multipart upload listing begins Restrictions: This parameter is valid only when used with KeyMarker . If both parameters are specified, multipart uploads with IDs greater than the specified UploadIdMarker for the specified KeyMarker are listed. Value range: The value of NextUploadIdMarker in the response body of the last request Default value: None

Responses

Table 9-18 List of returned results

Parameter	Type	Description
output	* ListMultipartUploadsOutput	Explanation: Returned results. For details, see Table 9-19 .
err	error	Explanation: Error messages returned by the API

Table 9-19 ListMultipartUploadsOutput

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

Parameter	Type	Description
Bucket	string	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Value range: The value must contain 3 to 63 characters.
KeyMarker	string	Explanation: Object name after which multipart upload listing begins. This parameter is consistent with that set in the request. Value range: The value must contain 1 to 1,024 characters. Default value: None
UploadIdMarker	string	Explanation: Upload ID after which the multipart upload listing begins, which is consistent with that set in the request Value range: The value must contain 1 to 32 characters. Default value: None

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

Parameter	Type	Description
IsTruncated	bool	Explanation: Whether all results are returned in the response Value range: • true: Not all results are returned. • false: All results are returned. Default value: None
Prefix	string	Explanation: Prefix that the object names in the multipart uploads to be listed must contain. This parameter is consistent with that set in the request. Assume that you have the following objects: logs/day1 , logs/day2 , logs/day3 , and ExampleObject.jpg . If you specify logs/ as the prefix, the multipart uploads of logs/day1 , logs/day2 , and logs/day3 will be returned. If you leave this parameter blank, all multipart uploads in the bucket will be returned. Restrictions: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Description
Delimiter	string	Explanation: A character used to group object names in multipart uploads, which is consistent with that set in the request. This parameter is often used with Prefix. If a prefix is specified, objects with the same string from the prefix to the first delimiter are grouped into one CommonPrefixes. If no prefix is specified, objects with the same string from the first character to the first delimiter are grouped into one CommonPrefixes. Assume that a bucket has objects abcd, abcde, and bbcde in it. If delimiter is set to d and prefix is set to a, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix. If only delimiter is set to d, objects abcd and abcde are grouped into a CommonPrefixes with abcd as the prefix, and bbcde is grouped separately into another CommonPrefixes with bbcde as the prefix. Value range: The value must contain 1 to 1,024 characters. Default value: None
Uploads	[] Upload	Explanation: List of multipart uploads. For details, see Table 9-20.
CommonPrefixes	[]string	Explanation: List of object name prefixes grouped according to the Delimiter parameter (if specified) Value range: The value must contain 1 to 1,024 characters. Default value: None

Table 9-20 Upload

Parameter	Type	Description
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None
UploadId	string	Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8 Value range: The value must contain 1 to 32 characters. Default value: None
Initiator	Initiator	Explanation: Initiator of the multipart upload. For details, see Table 9-21.
Owner	Owner	Explanation: Account ID of the object owner. For details, see Table 9-22.
StorageClass	StorageClassType	Explanation: Storage class of the object to be uploaded Value range: See Table 9-23. Default value: None

Parameter	Type	Description
Initiated	time.Time	Explanation: Time when the multipart upload is initiated Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z. Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None

Table 9-21 Initiator

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

Table 9-22 Owner

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

Table 9-23 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

9.6 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).

Method

```
func (obsClient ObsClient) ListParts(input *ListPartsInput) (output *ListPartsOutput, err error)
```

Request Parameters

Table 9-24 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*ListPartsInput	Yes	Explanation: Input parameters for listing uploaded parts. For details, see Table 9-25 .

Table 9-25 ListPartsInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
UploadId	string	Yes	Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8 Value range: The value must contain 1 to 32 characters. Default value: None
PartNumberMarker	int	No	Explanation: Part number after which uploaded parts listing begins Restrictions: OBS lists only parts with greater numbers than that specified by this parameter. Default value: None
MaxParts	int	No	Explanation: Maximum number of parts that can be listed per page Restrictions: If the specified value is greater than 1000 , only 1,000 parts are returned. Value range: The value ranges from 1 to 1000 . Default value: 1000

Responses

Table 9-26 List of returned results

Parameter	Type	Description
output	* ListPartsOutput	Explanation: Returned results. For details, see Table 9-27 .

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

Table 9-27 ListPartsOutput

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

Parameter	Type	Description
Bucket	string	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Value range: The value must contain 3 to 63 characters.
Key	string	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Description
UploadId	string	Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8 Value range: The value must contain 32 characters. Default value: None
Initiator	Initiator	Explanation: Initiator of the multipart upload. For details, see Table 9-28 .
Owner	Owner	Explanation: Owner of the multipart upload, which is consistent with Initiator
StorageClass	StorageClassType	Explanation: Object storage class Value range: See Table 9-31 . Default value: None
PartNumberMarker	int	Explanation: Part number to start with for listing parts, which is consistent with that set in the request Value range: A non-negative integer Default value: None
NextPartNumberMarker	int	Explanation: Part number to start with for the next part listing request. NextPartNumberMarker is returned when not all the parts are listed. You can set PartNumberMarker to this value in the next request to list the remaining parts. Value range: A non-negative integer Default value: None

Parameter	Type	Description
MaxParts	int	Explanation: Maximum number of listed parts that can be listed per page. This parameter is consistent with that set in the request. Restrictions: If the specified value is greater than 1000 , only 1,000 parts are returned. Value range: The value ranges from 1 to 1000 . Default value: 1000
IsTruncated	bool	Explanation: Whether all results are returned in the response Value range: • true: Not all results are returned. • false: All results are returned. Default value: None
Parts	[]Part	Explanation: List of uploaded parts. For details, see Table 9-30 .

Table 9-28 Initiator

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

Parameter	Type	Mandatory (Yes/No)	Description
Display Name	string	No	Explanation: Account name of the initiator Restrictions: The account name can contain 6 to 32 characters and must start with a letter. Only letters, digits, hyphens (-), and underscores (_) are allowed. Default value: None

Table 9-29 Owner

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

Table 9-30 Part

Parameter	Type	Description
PartNumber	int	Explanation: Part number Value range: An integer ranging from 1 to 10000 Default value: None

Parameter	Type	Description
ETag	string	Explanation: Part ETag, which is a Base64-encoded, 128-bit MD5 value Value range: The value must contain 32 characters. Default value: None

Table 9-31 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 Warm Used for storing data that is semi-frequently accessed (fewer than 12 times a year) but is instantly available when needed.
StorageClassCold	COLD	OBS Cold Used for storing rarely accessed (once a year) data.
StorageClassINTELLIGENTTIERING	INTELLIGENT_TIERING	Intelligent Tiering Is designed to optimize storage costs by automatically moving data to a more economical access tier when data access patterns change. This storage class is ideal for data with constantly changing or unpredictable access patterns.

Code Examples

This example lists the parts that have been uploaded for a multipart upload.

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

```
"obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

9.7 Copying a Part (SDK for Go)

Function

This API copies a part to a specified bucket. This request must contain the multipart upload ID.

After creating a multipart upload, you can specify the upload ID and upload parts for the multipart upload. Alternatively, you can call this API to copy all or part of an uploaded object as a part.

Assume that you copy a source object and save it as **part1**. If there is already a **part1** before the copy, the new **part1** will overwrite the existing **part1**. Then, only the new **part1** can be listed and the old **part1** is deleted. Therefore, when using

this API, ensure that the target part does not exist or is no longer used, to avoid accidental deletion. The source object keeps unchanged in the entire copy process.

Restrictions

- To copy a part, you must be the bucket owner or have the required permission (**obs:object:PutObject** in IAM or **PutObject** in a bucket policy).
- 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 9-32 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*CopyPartInput	Yes	Explanation: Input parameters for copying a part. For details, see Table 9-33 .

Table 9-33 CopyPartInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Target bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
PartNumber	int	Yes	Explanation: Part number Value range: An integer ranging from 1 to 10000 Default value: None
UploadId	string	Yes	Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8 Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
CopySourceBucket	string	Yes	Explanation: Source bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
CopySourceKey	string	Yes	Explanation: Source object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
CopySourceRangeStart	int64	No	Explanation: Start position from which a part copy begins Value range: A non-negative integer, in bytes Default value: 0
CopySourceRangeEnd	int64	No	Explanation: End position at which a part copy ends Restrictions: The value must be greater than that of RangeStart . The upper limit of the value is the object length minus 1, in bytes. Value range: A non-negative integer, in bytes Default value: None

Responses

Table 9-34 List of returned results

Parameter	Type	Description
output	* CopyPartOutput type CopyPartOutput struct	Explanation: Returned results. For details, see Table 9-35 .
err	error	Explanation: Error messages returned by the API

Table 9-35 CopyPartOutput

Parameter	Type	Description
StatusCode	int	Explanation: HTTP status code Value range: A status code is a group of digits that can be 2xx (indicating successes) or 4xx or 5xx (indicating errors). It indicates the status of a response. Default value: None
RequestId	string	Explanation: Request ID returned by the OBS server Default value: None
ResponseHeaders	map[string]string	Explanation: HTTP response headers Default value: None
ETag	string	Explanation: Base64-encoded, 128-bit MD5 value of an object. ETag is the unique identifier of the object content. It can be used to determine whether the object content is changed. For example, if the ETag value is A when an object is uploaded, but changes to B when the object is downloaded, it indicates that the object content has been changed. The ETag reflects changes to the object content, rather than the object metadata. An uploaded or copied object has a unique ETag after being encrypted using MD5. Restrictions: If an object is encrypted using server-side encryption, the ETag is not the MD5 value of the object. Value range: The value must contain 32 characters. Default value: None

Parameter	Type	Description
LastModified	time.Time	Explanation: Time when the last modification was made to the target object Restrictions: The time must be in the ISO8601 format, for example, 2018-01-01T00:00:00.000Z . Sample code: time.Now().Add(time.Duration(24) * time.Hour) Default value: None
PartNumber	int	Explanation: Part number Value range: An integer ranging from 1 to 10000 Default value: None

Code Example

This example copies parts from one bucket to another.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
}
```

9.8 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).

Method

```
func (obsClient ObsClient) AbortMultipartUpload(input
*AbortMultipartUploadInput) (output *BaseModel, err error)
```

Request Parameters

Table 9-36 List of request parameters

Parameter	Type	Man dato ry (Yes /No)	Description
input	* AbortMultipartU ploadInput	Yes	Explanation: Input parameters for aborting a multipart upload. For details, see Table 9-37 .

Table 9-37 AbortMultipartUploadInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	Yes	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	Yes	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
UploadId	string	Yes	Explanation: Multipart upload ID, for example, 000001648453845DBB78F2340DD460D8 Value range: The value must contain 32 characters. Default value: None

Responses

Table 9-38 List of returned results

Parameter	Type	Description
output	* BaseModel	Explanation: Returned results. For details, see Table 9-39 .
err	error	Explanation: Error messages returned by the API

Table 9-39 BaseModel

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

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

Code Example

This example aborts a multipart upload.

```
package main

import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
    }
}
```

10 Other APIs (SDK for Go)

10.1 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

- 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.
 - b. If the signatures do not match, check whether signature parameters are correct. 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 10-1 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*CreateSignedUrlInput	Yes	Explanation: Input parameters for creating a signed URL. For details, see Table 10-2 .

Table 10-2 CreateSignedUrlInput

Parameter	Type	Mandatory (Yes/No)	Description
Method	HttpMethodType	Yes	Explanation: HTTP method. For details, see Table 10-3 .

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	No	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	No	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
SubResource	SubResourceType	No	Explanation: Type of the subresource to access. For details, see Table 10-4 .
Expires	int	No	Explanation: Expiration time of the signed URL Value range: - The value of this parameter for temporary credentials ranges from 0 to 86400, in seconds. - The value of this parameter for permanent keys ranges from 0 to 630720000, in seconds. Default value: 300
Headers	map[string]string	No	Explanation: Headers in the request Default value: None
QueryParams	map[string]string	No	Explanation: Query parameters in the request Default value: None

Table 10-3 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 10-4 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.
SubResourceDelete	delete	Batch deletes objects.
SubResourceVersions	versions	Lists versioning objects in buckets.
SubResourceUploads	uploads	Lists or initializes multipart uploads in buckets.
SubResourceRestore	restore	Restores Cold objects.

Responses

Table 10-5 List of returned results

Parameter	Type	Description
output	* CreateSignedUrlOutput	Explanation: Returned results. For details, see Table 10-6 .
err	error	Explanation: Error messages returned by the API

Table 10-6 CreateSignedUrlOutput

Parameter	Type	Description
SignedUrl	string	Explanation: Signed URL Default value: None
ActualSignedRequestHeaders	http.Header	Explanation: Actual headers in the request initiated by using the signed URL Default value: None

Code Example

This example creates a signed URL for uploading an object.

```
package main
import (
    "fmt"
    "net/http"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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-sdk-go/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.
    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 of the region where the bucket locates.
    endPoint := "https://your-endpoint"
    // 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)
}
```

10.2 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).

Method

```
func (obsClient ObsClient) CreateBrowserBasedSignature(input
*CreateBrowserBasedSignatureInput) (output
*CreateBrowserBasedSignatureOutput, err error)
```

Request Parameters

Table 10-7 List of request parameters

Parameter	Type	Mandatory (Yes/No)	Description
input	*CreateBrowserBased-SignatureInput	Yes	Explanation: Input parameters for creating authentication parameters for a browser-based upload. For details, see Table 10-8 .

Table 10-8 CreateBrowserBasedSignatureInput

Parameter	Type	Mandatory (Yes/No)	Description
Bucket	string	No	Explanation: Bucket name Restrictions: • 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 in the same region, no error will be reported and the bucket attributes comply with those set in the first creation request. Default value: None
Key	string	No	Explanation: Object name. An object is uniquely identified by an object name in a bucket. An object name is a complete path that does not contain the bucket name. Value range: The value must contain 1 to 1,024 characters. Default value: None

Parameter	Type	Mandatory (Yes/No)	Description
Expires	int	No	Explanation: Expiration time of authentication for a browser-based upload Value range: 0 to ($2^{63} - 1$), in seconds Default value: 300
FormParams	map[string]string	No	Explanation: Parameters of a browser-based upload, not including key , policy , and signature . Value range: acl , cache-control , content-type , content-disposition , content-encoding , and expires Default value: None

Responses

Table 10-9 List of returned results

Parameter	Type	Description
output	* CreateBrowserBasedSignatureOutput	Explanation: Returned results. For details, see Table 10-10 .
err	error	Explanation: Error messages returned by the API

Table 10-10 CreateBrowserBasedSignatureOutput

Parameter	Type	Description
OriginPolicy	string	Explanation: policy not encoded by Base64. This parameter can only be used for verification. Example: <code>{"expiration":"2023-09-12T12:52:59Z","conditions":[{"content-type":"text/plain"}, {"bucket":"examplebucket"}, {"key":"example/objectname"}],}"</code> Default value: None
Policy	string	Explanation: Base64-encoded value of policy in the form Example: <code>eyJleHBpcmF0aW9uIjoiMjAyMy0wOS0xMlQxMjo1Mjo1OVoiLCJjb25kaXRpb25zIjpbeyJjb250ZW50LXR5cGUiOiJ0ZXh0L3BsYWVuln0seyJidWNrZXQiOiJleGFtcGxlYnVja2V0In0seyJrZXkiOiJleGFtcGxlL29iamVjdG5hbWUifSxdfQ==</code> Default value: None
Signature	string	Explanation: signature in the form Example: <code>g0jQr4v9VWd1Q2FOFDG6LGfV9Cw=</code> Default value: None

Code Example

This example creates a signed URL for uploading an object using POST.

```
package main
import (
    "fmt"
    "os"
    "obs-sdk-go/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.
    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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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",
    "x-obs-acl": "public-read",
}
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)
}
```

10.3 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.

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).

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

Method in OBS SDK for Go	Description	Supported Encryption Method
ObsClient.GetObject	Sets the decryption algorithm and key during object download to decrypt the object.	SSE-C
ObsClient.CopyObject	1. Sets the decryption algorithm and key for decrypting the source object during object copy. 2. Sets the encryption algorithm and key during object copy to enable the encryption algorithm for the target object.	SSE-KMS SSE-C
ObsClient.GetObjectMetadata	Sets the decryption algorithm and key when obtaining the object metadata to decrypt the object.	SSE-C
ObsClient.InitiateMultipartUpload	Sets the encryption algorithm and key when initializing a multipart upload task to enable server-side encryption for the final object generated.	SSE-KMS SSE-C
ObsClient.UploadPart	Sets the encryption algorithm and key during multipart upload to enable server-side encryption for parts.	SSE-C
ObsClient.CopyPart	1. Sets the decryption algorithm and key for decrypting the source object during multipart copy. 2. Sets the encryption algorithm and key during multipart copy to enable the encryption algorithm for the target part.	SSE-C

Code Examples

This example encrypts object **example/objectname** that is uploaded using streaming.

```
package main
import (
    "crypto/md5"
    "encoding/base64"
    "fmt"
    "os"
    "strings"
    "obs-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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-sdk-go/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.
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 of the region where the bucket locates.
endPoint := "https://your-endpoint"
// 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)
}
}
```

11 Troubleshooting (SDK for Go)

11.1 OBS Server-Side Error Codes

If the OBS server encounters an error when processing a request, a response containing the error code and error description is returned. The following table lists details about each error code and HTTP status code:

HTTP Status Code	Error Code	Error Message	Solution
301 Moved Permanently	PermanentRedirect	The requested bucket can be accessed only through the specified address. Send subsequent requests to the address.	Send the request to the returned redirection address.
301 Moved Permanently	WebsiteRedirect	The website request lacks bucketName .	Put the bucket name in the request and try again.
307 Moved Temporarily	TemporaryRedirect	Temporary redirection. If the DNS is updated, the request is redirected to the bucket.	The system automatically redirects the request or sends the request to the redirection address.

HTTP Status Code	Error Code	Error Message	Solution
400 Bad Request	BadDigest	The specified value of Content-MD5 does not match the value received by OBS.	Check whether the MD5 value carried in the header is the same as that calculated by the message body.
400 Bad Request	BadDomainName	Invalid domain name.	Use a valid domain name.
400 Bad Request	BadRequest	Invalid request parameter.	Modify the parameter according to the error details returned in the message body.
400 Bad Request	CustomDomainAlreadyExist	The configured domain already exists.	It has been configured and does not need to be configured again.
400 Bad Request	CustomDomainNotExist	Delete the domain that does not exist.	It is not configured or has been deleted. You do not need to delete it.
400 Bad Request	EntityTooLarge	The size of the object uploaded using the POST method exceeds the upper limit.	Modify the conditions specified in the policy when posting the object or reduce the object size.
400 Bad Request	EntityTooSmall	The size of the object uploaded using the POST method does not reach the lower limit.	Modify the conditions specified in the policy when posting the object or increase the object size.

HTTP Status Code	Error Code	Error Message	Solution
400 Bad Request	IllegalLocation-ConstraintException	A request without Location is sent for creating a bucket in a non-default region.	Send the bucket creation request to the default region, or send the request with the Location of the non-default region.
400 Bad Request	IncompleteBody	No complete request body is received due to network or other problems.	Upload the object again.
400 Bad Request	IncorrectNumberOfFilesInPostRequest	Each POST request must contain one file to be uploaded.	Carry a file to be uploaded.
400 Bad Request	InvalidArgument	Invalid parameter.	Modify the parameter according to the error details returned in the message body.
400 Bad Request	InvalidBucket	The bucket to be accessed does not exist.	Try another bucket name.
400 Bad Request	InvalidBucketName	The bucket name specified in the request is invalid, which may have exceeded the maximum length, or contain special characters that are not allowed.	Try another bucket name.
400 Bad Request	InvalidLocation-Constraint	The specified Location in the bucket creation request is invalid or does not exist.	Correct the Location in the bucket creation request.

HTTP Status Code	Error Code	Error Message	Solution
400 Bad Request	InvalidPart	One or more specified parts are not found. The parts may not be uploaded or the specified entity tags (ETags) do not match the parts' ETags.	Specify the correct parts and entity tags.
400 Bad Request	InvalidPartOrder	Parts are not listed in ascending order by part number.	Sort the parts in ascending order and merge them again.
400 Bad Request	InvalidPolicyDocument	The content of the form does not meet the conditions specified in the policy document.	Modify the policy in the constructed form according to the error details in the message body and try again.
400 Bad Request	InvalidRedirectLocation	Invalid redirect location.	Specify the correct IP address.
400 Bad Request	InvalidRequest	Invalid request.	Modify the parameter according to the error details returned in the message body.
400 Bad Request	InvalidRequestBody	The request body is invalid. The request requires a message body but no message body is uploaded.	Upload the message body in the correct format.
400 Bad Request	InvalidTargetBucketForLogging	The delivery group has no ACL permission for the target bucket.	Configure the target bucket ACL and try again.
400 Bad Request	KeyTooLongError	The provided key is too long.	Use a shorter key.

HTTP Status Code	Error Code	Error Message	Solution
400 Bad Request	MalformedACLError	The provided XML file has syntax errors or does not meet the format requirements.	Use the correct XML format to retry.
400 Bad Request	MalformedError	The XML format in the request is incorrect.	Use the correct XML format to retry.
400 Bad Request	MalformedLoggingStatus	The XML format of Logging is incorrect.	Use the correct XML format to retry.
400 Bad Request	MalformedPolicy	The bucket policy does not pass.	Modify the bucket policy according to the error details returned in the message body.
400 Bad Request	MalformedQuotaError	The Quota XML format is incorrect.	Use the correct XML format to retry.
400 Bad Request	MalformedXML	An XML file of a configuration item is in incorrect format.	Use the correct XML format to retry.
400 Bad Request	MaxMessageLengthExceeded	Copying an object does not require a message body in the request.	Remove the message body and retry.
400 Bad Request	MetadataTooLarge	The size of the metadata header has exceeded the upper limit.	Reduce the size of the metadata header.
400 Bad Request	MissingRegion	The region information is missing in the request, and the default region is required in the system.	Carry the region information in the request.
400 Bad Request	MissingRequestBodyError	This error code is returned after you send an empty XML file.	Provide the correct XML file.

HTTP Status Code	Error Code	Error Message	Solution
400 Bad Request	MissingRequired-Header	A required header is missing in the request.	Provide the required header.
400 Bad Request	MissingSecurity-Header	A required header is missing in the request.	Provide the required header.
400 Bad Request	TooManyBuckets	You have attempted to create more buckets than allowed.	Delete some buckets and try again.
400 Bad Request	TooManyCustomDomains	Too many user accounts are configured.	Delete some user accounts and try again.
400 Bad Request	TooManyWrongSignatures	The request is rejected due to high-frequency errors.	Replace AK and try again.
400 Bad Request	UnexpectedContent	The request requires a message body which is not carried by the client, or the request does not require a message body but the client carries the message body.	Try again according to the instruction.
400 Bad Request	UserKeyMustBeSpecified	This operation is only available to special users.	Contact the technical support.
403 Forbidden	AccessDenied	Access denied, because the request does not carry a date header or the header format is incorrect.	Provide a correct date header in the request.

HTTP Status Code	Error Code	Error Message	Solution
403 Forbidden	AccessForbidden	Insufficient permissions. No CORS rule is configured for the bucket, or the CORS rule is not matched.	Modify the CORS configuration of the bucket or send the matched OPTIONS request based on the CORS configuration of the bucket.
403 Forbidden	AllAccessDisabled	The user has no permission to perform a specific operation. The bucket name is forbidden.	Try another bucket name.
403 Forbidden	DeregisterUserId	The user has been deregistered.	Top up or re-register.
403 Forbidden	InArrearOrInsufficientBalance	The user account is in arrears, or the account balance is insufficient.	Top up the account.
403 Forbidden	InsufficientStorageSpace	Insufficient storage space.	If the quota is exceeded, increase quota or delete some objects.
403 Forbidden	InvalidAccessKeyId	The access key ID provided by the customer does not exist in the system.	Provide correct access key ID.
403 Forbidden	RequestTimeTooSkewed	The request time and the server's time differ a lot.	Check whether the difference between the client time and the current time is too large.
403 Forbidden	SignatureDoesNotMatch	The provided signature in the request does not match the signature calculated by OBS.	Check your secret access key and signature calculation method.

HTTP Status Code	Error Code	Error Message	Solution
403 Forbidden	Unauthorized	You have not been authenticated in real name.	Authenticate your real name and try again.
404 Not Found	NoSuchBucket	The bucket does not exist.	Create a bucket and perform the operation again.
404 Not Found	NoSuchBucketPolicy	No bucket policy exists.	Configure a bucket policy.
404 Not Found	NoSuchCORSConfiguration	No CORS configuration exists.	Configure CORS first.
404 Not Found	NoSuchCustomDomain	The requested user domain does not exist.	Set a user domain first.
404 Not Found	NoSuchKey	The specified key does not exist.	Upload the object first.
404 Not Found	NoSuchLifecycleConfiguration	The requested Lifecycle does not exist.	Configure a lifecycle rule first.
404 Not Found	NoSuchUpload	The specified multipart upload does not exist. The upload ID does not exist or the multipart upload has been aborted or completed.	Use the existing part or reinitialize the part.
404 Not Found	NoSuchVersion	The specified version ID does not match any existing version.	Use a correct version ID.
404 Not Found	NoSuchWebsiteConfiguration	The requested website does not exist.	Configure the website first.

HTTP Status Code	Error Code	Error Message	Solution
405 Method Not Allowed	MethodNotAllowed	The specified method is not allowed against the requested resource. The message "Specified method is not supported." is returned.	The method is not allowed.
408 Request Timeout	RequestTimeout	The socket connection to the server has no read or write operations within the timeout period.	Check the network and try again, or contact technical support.
409 Conflict	BucketAlreadyExists	The requested bucket name already exists. The bucket namespace is shared by all users of OBS. Try again with another bucket name.	Try another bucket name.
409 Conflict	BucketAlreadyOwnedByYou	Your previous request for creating the named bucket succeeded and you already own it.	You do not need to create the bucket again.
409 Conflict	BucketNotEmpty	The bucket that you tried to delete is not empty.	Delete the objects in the bucket and then delete the bucket.
409 Conflict	OperationAborted	A conflicting operation is being performed on this resource. Try again later.	Try again later.

HTTP Status Code	Error Code	Error Message	Solution
409 Conflict	ServiceNotSupported	The request method is not supported by the server.	Not supported by the server. Contact technical support.
411 Length Required	MissingContentLength	The HTTP header Content-Length is not provided.	Provide the Content-Length header.
412 Precondition Failed	PreconditionFailed	At least one of the specified preconditions is not met.	Modify according to the condition prompt in the returned message body.
416 Client Requested Range Not Satisfiable	InvalidRange	The requested range cannot be obtained.	Replace the range value and try again.
500 Internal Server Error	InternalServerError	An internal error occurs. Try again later.	Contact the technical support.
501 Not Implemented	ServiceNotImplemented	The request method is not implemented by the server.	Not supported currently. Contact the technical support.
503 Service Unavailable	ServiceUnavailable	The server is overloaded or has internal errors.	Try again later or contact the technical support.
503 Service Unavailable	SlowDown	Reduce your request frequency.	Reduce your request frequency.

11.2 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

Field	Type	Description
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

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

12 FAQs (SDK for Go)

12.1 How Do I Get My Account ID and User ID?

Obtaining the Account ID and User ID

When calling APIs, you may need to specify the account ID (**DomainID**) and user ID (**UserID**) in some requests. You need to obtain them from the console in advance. To obtain them from the console, do as follows:

Step 1 Log in to the management console.

Step 2 Hover the mouse pointer over the username and choose **My Credentials** from the drop-down list.

On the **My Credentials** page, view the account ID and user ID.

----End

12.2 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.

File Name Extension	Content-Type	File Name Extension	Content-Type
.* (binary stream, unknown file type)	application/octet-stream	.7z	application/x-7z-compressed
.001	application/x-001	.301	application/x-301
.323	text/h323	.906	application/x-906
.907	drawing/907	.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
.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
.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

File Name Extension	Content-Type	File Name Extension	Content-Type
.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	.dot	application/msword
.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	.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

File Name Extension	Content-Type	File Name Extension	Content-Type
.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
.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
.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

File Name Extension	Content-Type	File Name Extension	Content-Type
.mil	application/x-mil	.mml	text/xml
.mnd	audio/x-musicnet-download	.mns	audio/x-musicnet-stream
.mocha	application/x-javascript	.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	.mxp	application/x-mmxp
.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	.pdf	application/pdf

File Name Extension	Content-Type	File Name Extension	Content-Type
.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
.ppa	application/ vnd.ms- powerpoint	.ppm	application/x-ppm
.pps	application/ vnd.ms- powerpoint	.ppt	application/ vnd.ms- powerpoint
.ppt	application/x-ppt	.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- realtext3d
.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

File Name Extension	Content-Type	File Name Extension	Content-Type
.rm	application/ vnd.rn-realmedia	.rmf	application/ vnd.adobe.rmf
.rmi	audio/mid	.rmj	application/ vnd.rn- realsystem-rmj
.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- realpix	.rpm	audio/x-pn- realaudio-plugin
.rsml	application/ vnd.rn-rsml	.rt	text/vnd.rn- realtext
.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	.sit	application/x- stuffit
.slb	application/x-slb	.sld	application/x-sld
.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	.sst	application/ vnd.ms- pki.certstore

File Name Extension	Content-Type	File Name Extension	Content-Type
.stl	application/vnd.ms-pki.stl	.stm	text/html
.sty	application/x-sty	.svg	text/xml
.swf	application/x-shockwave-flash	.tdf	application/x-tdf
.tg4	application/x-tg4	.tga	application/x-tga
.tif	image/tiff	.tiff	image/tiff
.ttf	font/otf	.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-vpeg005	.vsd	application/vnd.visio
.vsd	application/x-vsd	.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	.wm	video/x-ms-wm

File Name Extension	Content-Type	File Name Extension	Content-Type
.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
.xdp	application/vnd.adobe.xdp	.xdr	text/xml
.xfd	application/vnd.adobe.xfd	.xfdf	application/vnd.adobe.xfdf
.xhtml	text/html	.xlsx	application/vnd.openxmlformats-officedocument.spreadsheetml.sheet
.xls	application/x-xls	.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	.x_b	application/x-x_b
.sis	application/vnd.symbian.install	.sisx	application/vnd.symbian.install
.x_t	application/x-x_t	.ipa	application/vnd.iphone

File Name Extension	Content-Type	File Name Extension	Content-Type
.apk	application/vnd.android.package-archive	.xap	application/x-silverlight-app
.zip	application/zip	.rar	application/x-rar-compressed