Object Storage Migration Service

Quick Start

Issue 06

Date 2021-03-31



HUAWEI

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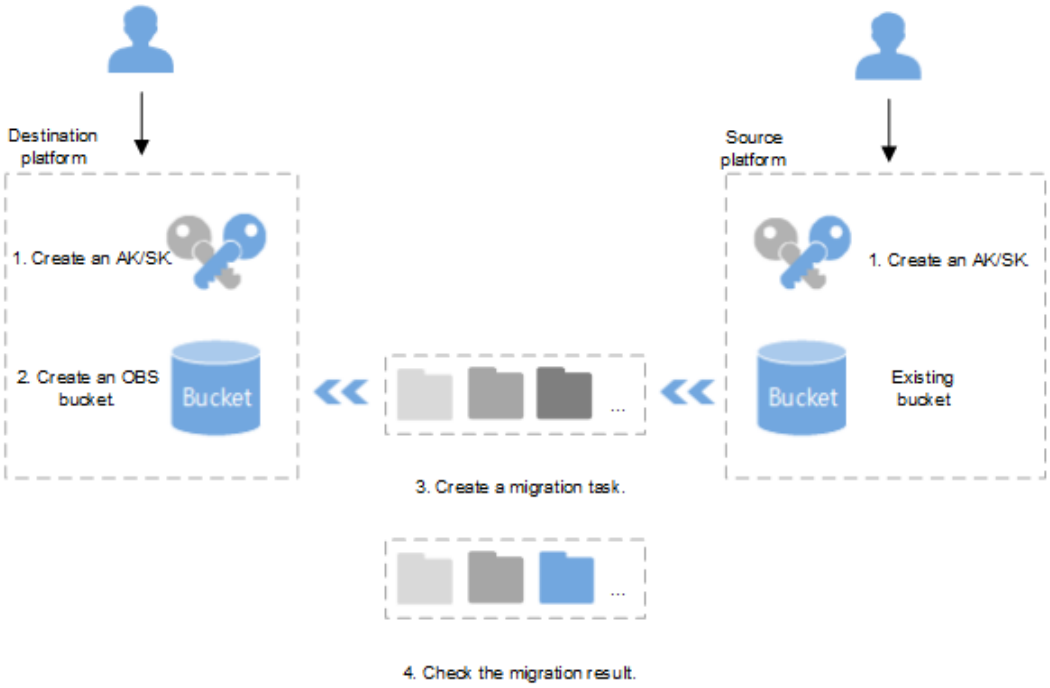
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1 Migration Process

You can log in to the management console to migrate source objects. **Figure 1-1** shows the migration process.

Figure 1-1 Migration process



Process:

1. Create AK/SK pairs for the source and destination platform accounts.
   - For instructions about how to create an AK/SK pair for the source platform account, see related documents provided by the source cloud service provider.
   - For instructions about how to create an AK/SK pair for the destination platform account, see **Creating Access Keys (AKs and SKs)**.
2. Create buckets for storing migrated data on OBS.

   For details, see **Creating a Bucket**.

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3. Create a migration task and start the task on the OMS console.

   For details, see **Creating a Migration Task**.

4. Check the migration result on the OMS console.
   - If the migration task succeeds, all source objects have been migrated to the specified OBS bucket.
   - If the migration task fails, review the failure details and restart the migration task.

     For details, see **Viewing a Migration Task** and **Managing a Migration Task**.

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2 Creating a Migration Task

Scenarios

This section describes how to create a task to migrate your source objects.

NOTE

The following uses the **File/Folder** migration method as an example.

Background

OMS supports the following migration sources:

- HUAWEI CLOUD
- AWS China
- Alibaba Cloud
- Microsoft Azure
- Tencent Cloud
- Qiniu Cloud
- QingCloud
- Baidu Cloud
- Kingsoft Cloud
- UCloud
- HTTP/HTTPS data source

OMS makes API calls to the object storage services on source platforms during migration. These API calls may generate fees on the source platforms and you will be responsible for those fees based on those source platform billing structures.

Prerequisites

- You have obtained the AK/SK pairs and required permissions for the source and destination platform accounts.
  - The source platform account needs the following permissions:
    - Listing all buckets

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    - Obtaining bucket location
    - Listing objects
    - Obtaining object metadata
    - Obtaining object content

    For details about how to obtain these permissions, see **Source Permissions**.
  - The destination platform account needs the following permissions:
    - Listing all buckets
    - Obtaining bucket location
    - Listing objects
    - Obtaining object metadata
    - Obtaining object content
    - Listing uploaded parts
    - Restoring archive objects

    For details about how to obtain these permissions, see **Destination Permissions**.
- You have created at least one bucket on OBS.
- You have created less than 5,000 migration tasks during the past 24 hours.
- You have less than 5,000 migration tasks in the **Waiting to migrate** state.
- You have registered an account with HUAWEI CLOUD and completed real-name authentication.

Procedure

Step 1 Log in to the management console.

Step 2 Click  in the upper left corner and select the desired region.

Step 3 Click **Service List**. Under **Migration**, click **Object Storage Migration Service**.

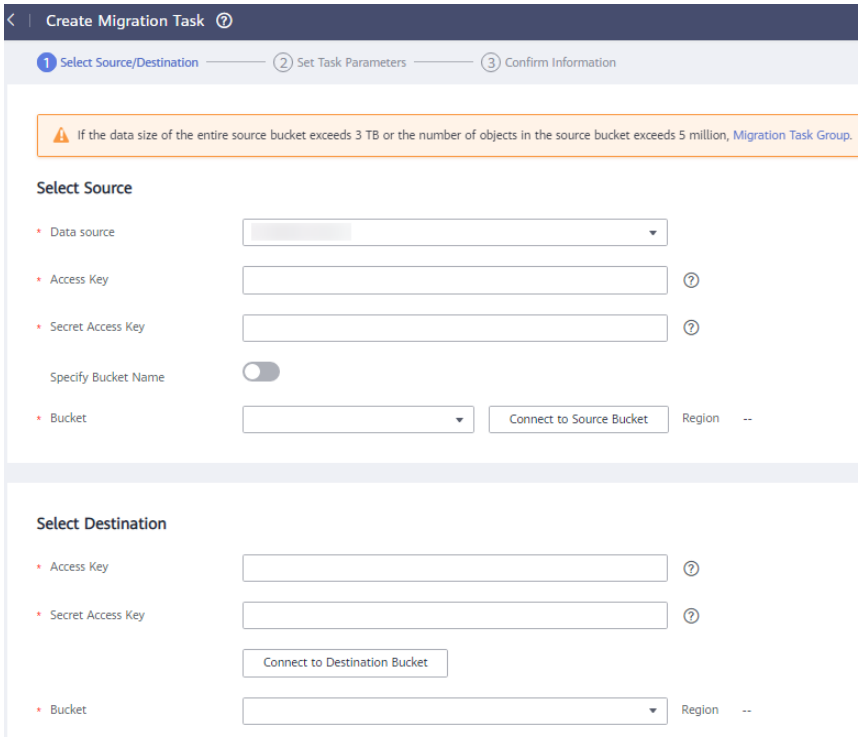
The **Object Storage Migration Service** page is displayed.

Step 4 In the upper right corner, click **Create Migration Task**.

Read the privacy statement, select **Agree to the above privacy agreements**, and click **OK**.

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Figure 2-1 Creating a task



Step 5 For step **Select Source/Destination**, you need to:

1. Configure source parameters. For details, see **Table 2-1**.

Table 2-1 Source parameters

Parameter	Description
Data Source	Specifies the source cloud service provider.
Access Key	Specifies the AK of the source platform account. Enter a maximum of 100 characters.
Secret Access Key	Specifies the SK of the source platform account. The SK matches with the AK. Enter a maximum of 100 characters.
Specify Bucket Name	If you do not have the permissions required to list buckets but have the permissions to list objects in buckets, obtain object metadata, and obtain objects, enable this parameter to specify the path of the source bucket for the migration. For details, see **Table 2-2**.

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Table 2-2 Description of **Specify Bucket Name**

If You Need to...	Then...
Enable **Specify Bucket Name**	1. Select the region where the source bucket resides from the **Select Region** drop-down list. 2. In the **Bucket Name or Path** text box, enter the source bucket name or the source bucket path with the bucket name. 3. Click **Connect to Source Bucket**. OMS will check whether the source platform information is correct. If the entered information is correct, a message is displayed indicating that the source bucket is connected.
Disable **Specify Bucket Name** (This feature is disabled by default.)	1. Click **Connect to Source Bucket**. OMS will check whether the source platform information is correct. If the entered information is correct and your account has the permissions needed to list buckets, all buckets are listed in the **Bucket** drop-down list. 2. In the **Bucket** drop-down list, select the bucket where the objects to be migrated reside.

2. Configure destination parameters. For details, see **Table 2-3**.

Table 2-3 Destination parameters

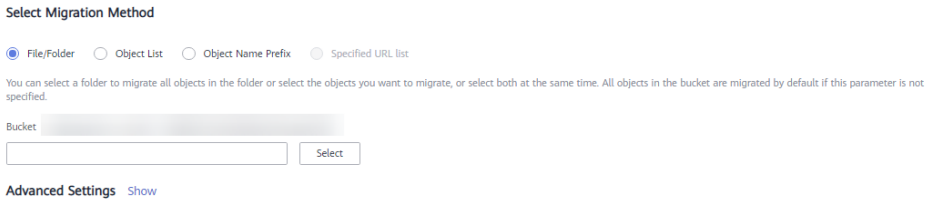
Parameter	Description
Access Key	Specifies the AK for accessing HUAWEI CLOUD. Enter a maximum of 100 characters.
Secret Access Key	Specifies the SK for accessing HUAWEI CLOUD. The SK matches with the AK. Enter a maximum of 100 characters. After entering the AK and SK, click **Connect to Destination Bucket**.
Bucket	Specifies the destination OBS bucket for storing the migrated data.

Step 6 Click **Next**.

The **Select Migration Method** page is displayed, as shown in **Figure 2-2**.

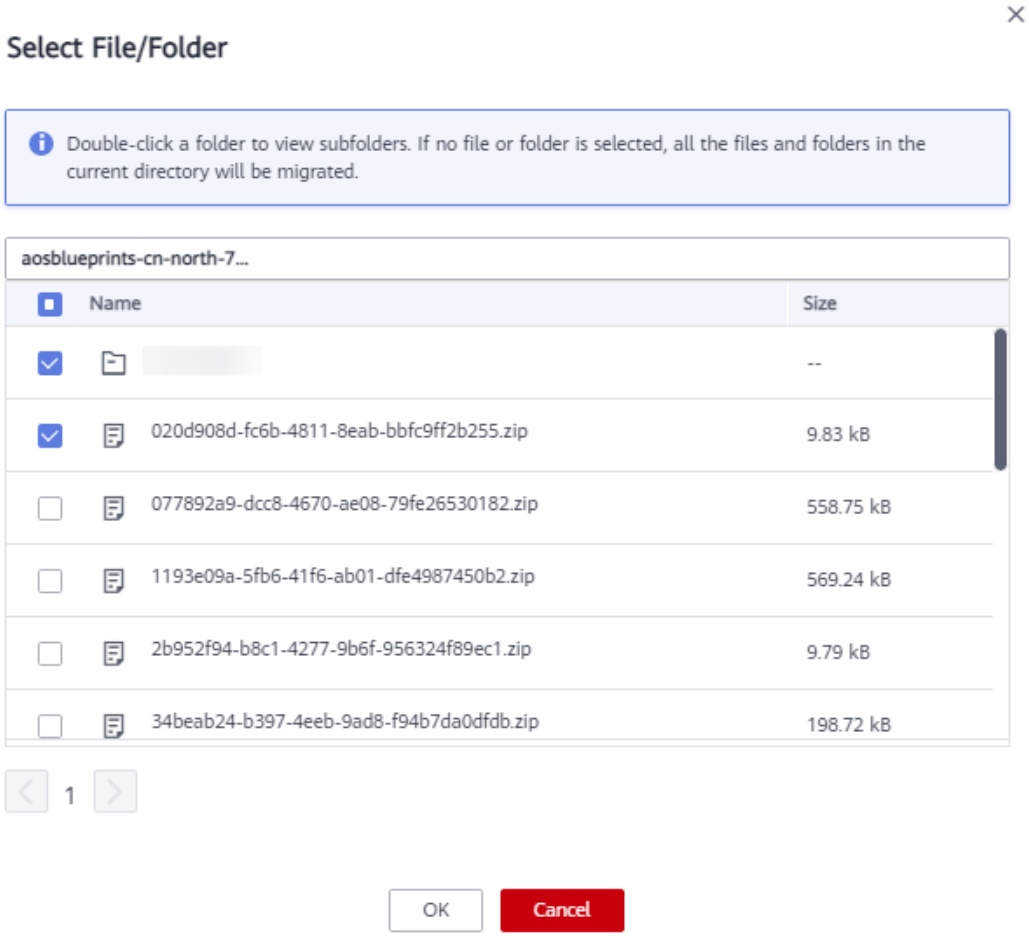
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Figure 2-2 Selecting a migration method



Step 7 Click **Select** on the left of the **Bucket** box. The **Select File/Folder** dialog box is displayed, as shown in **Figure 2-3**. Select the files or folders to be migrated and click **OK**.

Figure 2-3 Selecting files or folders



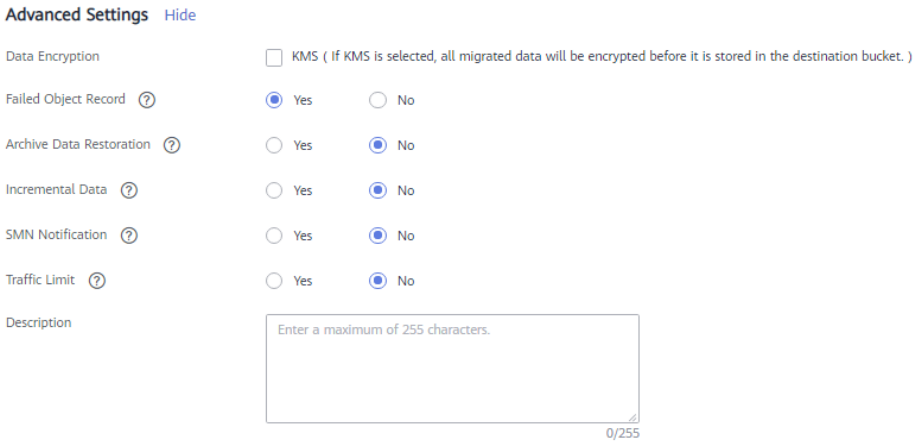
NOTE

- If you select **Qiniu Cloud** for **Data Source**, the **File/Folder** migration method is unavailable.
- If you do not select specific files or folders, all objects in the source bucket will be migrated.
- For each migration task, you can select up to 500 files and folders in a given directory.
- The name of any individual object on OBS cannot exceed 1,024 characters. If the name of a migrated object on OBS exceeds this limit, the migration task will fail.

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Step 8 (Optional) Click **Show** next to **Advanced Settings** to expand the advanced parameters.

Figure 2-4 Setting advanced options



Step 9 (Optional) Set **Advanced Settings** parameters. For details, see **Table 2-4**.

Table 2-4 Advanced Settings parameters

Parameter	Description
Data Encryption	If you select **KMS**, migrated data is encrypted before being transferred to the destination OBS buckets. **NOTE** Using KMS to encrypt migrated data may decrease the migration speed by about 10%. This option is only available if KMS encryption is supported in the current region.

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Parameter	Description
Failed Object Record	Specifies whether to record the objects that fail to be migrated. • Set to **No** The system does not record the objects that fail to be migrated. If the migration fails and needs to be retried, all objects in the source bucket need to be transmitted again. • Set to **Yes** The system will record the objects that failed to be migrated. If the migration fails and needs to be retried, only the failed objects need to be migrated again. **NOTE** The objects that fail to be migrated are recorded in an object list file named by the task name and uploaded to the **oms/failed_object_lists** directory of the destination bucket. This file contains information about the failed migration tasks, including the failure causes, occurrence time (local UTC), URL-encoded names of failed objects, non-URL-encoded names of failed objects, and error codes returned by source SDKs. This file is stored in the destination bucket after the objects in the file are successfully retransmitted. If you do not need the file, delete it manually.

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Parameter	Description
Archive Data Restoration	Only restored archive data can be migrated. You can select this option if your source cloud service provider supports automatic restoration of archive data. • If you select this option, the system automatically restores and migrates archive objects in the migration task. If an archive object fails to be restored, the system records it in the list of objects that failed to be migrated and continues to migrate other objects in the migration task. • If you do not select this option, the system directly records archive objects in the list of objects that failed to be migrated and continues to migrate other objects in the migration task. **NOTE** • Currently, the following cloud service providers can automatically restore archive objects: HUAWEI CLOUD, Alibaba Cloud, Kingsoft Cloud, and Tencent Cloud. • It takes at least a minute to restore an archive object. The larger the archive object is, the longer it takes to restore it, but if an archive object cannot be restored within three minutes, the restoration fails. The time needed depends on the cloud service provider. For details, see related documents of the specific cloud service provider. • Two types of fees are generated during archive data restoration: fees for API calls and fees for archive object restoration. These fees are billed by the source cloud service provider. • After restoration, archive objects will be in restored state for a certain period of time. During this period, objects can be downloaded or read. After this period expires, archive objects need to be restored again for migration. For details about how long they stay in the restored state, see related documents from the cloud service provider. • After objects are migrated from the source platform to HUAWEI CLOUD, the storage class of the migrated objects is the same as that of the destination bucket.
Incremental Data	Specifies whether to filter source objects to be migrated by time. • If this option is set to **No**, source objects are not filtered by time. • If this option is set to **Yes**, only the source objects that are modified or added after the specified time are migrated. You need to click  to specify the time.

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Parameter	Description
SMN Notification	Specifies whether to use SMN to notify you of migration results. • Set to **No** No SMN message is sent after the migration. • Set to **Yes** You will receive an SMN message informing you of the migration results. Perform the following steps to set SMN parameters: 1. Click **Add** next to the **Select SMN Topic** area. The **Select SMN Topic** dialog box is displayed. 2. Select a topic for receiving SMN messages and click **OK**. If OMS is not authorized to publish messages to the selected SMN topic, a **Warning** dialog box will display after you click **OK**. If you need the authorization, click **OK** to authorize OMS. Otherwise, click **Cancel** to return to the **Select SMN Topic** page and select another SMN topic. 3. Configure **Trigger Condition**. You can select one of the following options or both: – **Migration succeeded** An SMN message will be sent after the migration task succeeds. – **Migration failed** An SMN message will be sent after the migration task fails. **NOTE** If you experience trouble in using SMN, see **What Can I Do If the SMN Function Works Improperly?**

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Parameter	Description
Traffic Limit	Set the maximum bandwidth for the migration task during a specified period of time. • If you do not need to limit migration traffic, select **No**. • If you need to limit migration traffic, select **Yes**. Perform the following steps to set traffic limits: 1. Click **Add Rule**. A traffic limiting rule is displayed. 2. Specify **Start Time**, **End Time**, and **Maximum Bandwidth**. The value range of the maximum bandwidth is 1 MB/s to 200 MB/s. 3. Repeat **Step 9.a** and **Step 9.b** to add another traffic limiting rule. You can click  in the **Operation** column to delete a rule. **NOTE** You can create a maximum of five rules. You can set traffic limiting rules in the task details even after the task is created.
Description	In the **Description** area, enter a maximum of 255 characters to briefly describe the migration task.

Step 10 Click **Next** to enter the confirmation page.

Step 11 Confirm the settings of the migration task and start the migration.

1. Check whether the settings of migration parameters are correct.

   If the settings are incorrect, click **Previous** to return to the previous page for modification.

2. Click **Migrate Now**.

   A message is displayed, indicating that the migration task is successfully created. The migration task is displayed in the migration task list.

   For details about migration task statuses, see **Viewing a Migration Task**.

   NOTE

   After the task is created, a task ID is generated for you for quick identification. It is displayed in the upper left corner of the task list. It is composed of the source bucket name, destination bucket name, and time sequence ID.

----End

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3 Change History

Released On	Description
2021-03-31	This issue is the twelfth official release. Optimized **Creating a Migration Task**.
2021-03-10	This issue is the eleventh official release. Optimized **Creating a Migration Task**.
2020-08-06	This issue is the tenth official release. Optimized **Prerequisites**.
2020-03-30	This issue is the ninth official release. Optimized the description of parameter **Failed Object Record** in **Creating a Migration Task**.
2019-10-15	This issue is the eighth official release. Added Microsoft Azure to the source cloud service provider options.
2019-08-31	This issue is the seventh official release. • Optimized the flowchart in **Migration Process**. • Added the description about the privacy statement in **Creating a Migration Task**. • Updated the source parameters described in **Creating a Migration Task**. • Added descriptions about the traffic limit function in **Creating a Migration Task**. • Added the task status and ID description for confirming the migration information in **Creating a Migration Task**.

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Released On	Description
2019-04-29	This issue is the sixth official release. • Added links to the content in **Migration Process**. • Deleted sections "Creating Access Key (AK/SK)" and "Creating a Bucket". • Adjust the operation sequence of selecting service region in **Creating a Migration Task**. • Added option **Archive Data Restoration** to **Source Parameters** in **Creating a Migration Task**.
2019-04-17	This issue is the fifth official release. • Updated the description in **Migration Process**. • Added the step for selecting the region where the service is located before creating a task in **Creating a Migration Task**. • Added description to the step of selecting objects that fail to be migrated in **Creating a Migration Task**. • Update the text selected before click **Migrate Now** in **Creating a Migration Task**. • Optimized overall content layout in **Creating a Migration Task**. • Updated **Table 2-2** in **Creating a Migration Task**. • Added HUAWEI CLOUD to the migration region table in **Creating a Migration Task**.
2018-12-21	This issue is the fourth official release. • Updated the migration regions supported by AWS in **Creating a Migration Task**. • Added the description of the bucket where the specified object list file is located in **Creating a Migration Task**. • Added the description of the **Specify Bucket Name** in **Creating a Migration Task**. • Updated names and description of source parameters in **Creating a Migration Task**.

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Released On	Description
2018-09-30	This issue is the third official release. ● Added **Kingsoft Cloud** to the source cloud service provider options. ● Added source CDN parameter to the migration task parameters. ● Added option for recording objects that fail to be migrated to the migration task parameters. ● Added the description that the object list file must be in UTF-8 format to the migration task parameters. ● Deleted the description that the object name prefix function supports only Qiniu from the migration task parameters. ● Added the description that invalid spaces cannot be added in an object list file to the migration task parameters.
2018-08-09	This issue is the second official release. Modified the document based on the changes made to the console.
2018-04-09	This issue is the first official release.

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