

Data Express Service

User Guide

Issue 01
Date 2019-04-30



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Contents

| | |
|--|-----------|
| 1 Detailed Instructions on Using Teleport..... | 1 |
| 1.1 Process..... | 1 |
| 1.2 Logging In to DES Console..... | 3 |
| 1.3 Creating a Bucket..... | 4 |
| 1.4 Creating a Teleport-based DES Order..... | 4 |
| 1.5 Receiving Teleport and Connecting Cables..... | 8 |
| 1.5.1 Unpacking Teleport..... | 8 |
| 1.5.2 Configuring the Management Network Connection..... | 12 |
| 1.5.3 Configuring the Service Network Connection..... | 12 |
| 1.5.4 Powering On the Device..... | 13 |
| 1.5.5 Modifying the Logical IP Address..... | 14 |
| 1.6 Copying Data..... | 16 |
| 1.7 Downloading and Importing the Signature File..... | 18 |
| 1.8 Powering Off and Packing Teleport..... | 18 |
| 1.9 Sending Back the Teleport..... | 19 |
| 1.10 Starting Data Transmission..... | 19 |
| 1.11 Viewing Data Transmission Results..... | 20 |
| 2 Detailed Instructions on Using Disks..... | 22 |
| 2.1 Process..... | 22 |
| 2.2 Logging In to DES Console..... | 24 |
| 2.3 Creating a Bucket..... | 25 |
| 2.4 Creating a Disk-based DES Order..... | 25 |
| 2.5 Copying Data..... | 29 |
| 2.6 Downloading and Importing the Signature File..... | 29 |
| 2.7 Mailing Disks..... | 30 |
| 2.8 Starting Data Transmission..... | 31 |
| 2.9 Viewing Data Transmission Results..... | 32 |
| 2.10 Receiving the Mailed-back Disk..... | 33 |
| 3 Managing DES Orders..... | 34 |
| 4 Change History..... | 37 |

1 Detailed Instructions on Using Teleport

1.1 Process

[Figure 1-1](#) and [Table 1-1](#) describe how to use Teleport-based DES.

Figure 1-1 Process of using Teleport-based DES

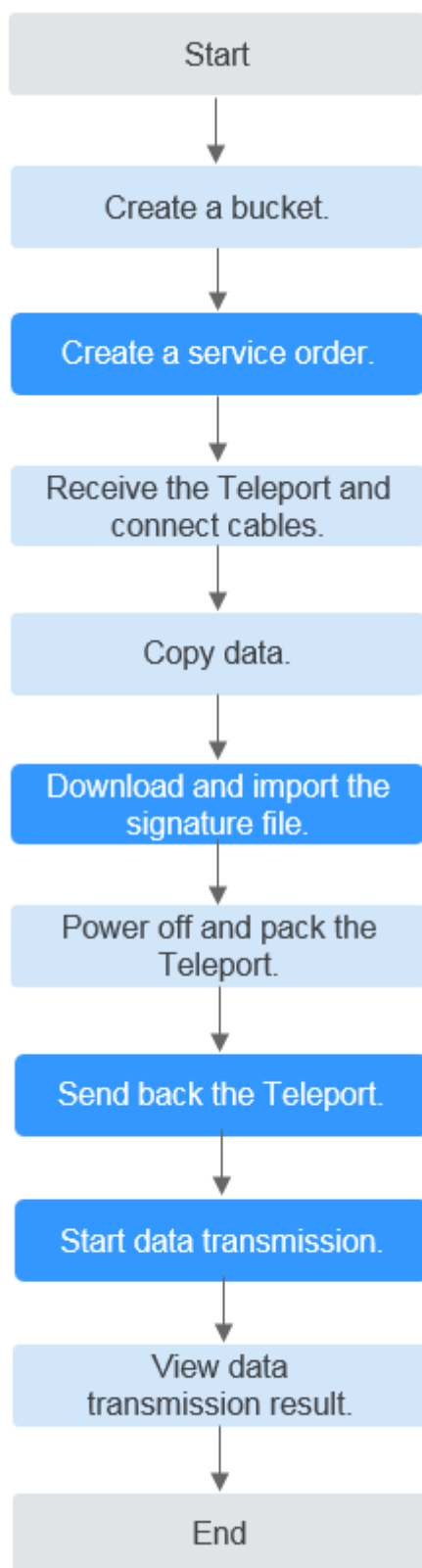


Table 1-1 Description for the process of using DES

| Procedure | Description |
|--|--|
| Logging in to DES Console | Register with HUAWEI CLOUD and subscribe to DES. |
| Creating a bucket | Data is stored in OBS buckets. You must create a bucket on OBS before using DES. |
| Creating a DES order | You are advised to select a Huawei DC nearby and create a Teleport-based order. |
| Receiving the Teleport and connecting cables | Unpack and configure the device after receiving the Teleport from a Huawei DC. |
| Copying data | Copy local data to the Teleport storage system. |
| Downloading and importing the signature file | A signature file is the unique identifier of the Teleport in a service order. Before returning the Teleport, you must store the signature file in the teleportshare root directory. |
| Powering off and packing the Teleport | After all local data has been transmitted to the Teleport, power it off and pack it. |
| Sending back the Teleport | Send the Teleport back to the Huawei DC. The Teleport storage system that is sent back must contain the signature file. |
| Starting data transmission | Data upload starts after the administrator mounts the Teleport to a server and after you input the AK and SK. |
| Viewing the data transmission result | After data transmission is complete, you can download the generated data transmission report to check whether all data is successfully uploaded. |

1.2 Logging In to DES Console

Background

To log in to DES Console, you need to register a HUAWEI CLOUD account, top up the account, and subscribe to DES.

Procedure

- Step 1** Open [HUAWEI CLOUD](#).
- Step 2** Register a HUAWEI CLOUD account. On the HUAWEI CLOUD home page, click **Register** and complete the registration as prompted. If you have a HUAWEI CLOUD account, go to [Step 3](#).
- Step 3** On the right of the top navigation bar, click **Log In**, and enter the username and password.

Step 4 Click **Console**.

The home page of the management console is displayed.

Step 5 Click **Top Up**.

The top-up page is displayed.

Step 6 Top up the account as prompted.

Step 7 After the top-up is successful, close the window and go back to the home page of the management console.

Step 8 Choose **Service List > Storage > Data Express Service** to access DES Console.

 **NOTE**

- To ensure smooth data transmission, you are advised to use DES when your balance is sufficient.
- If you are in arrears during the service, the data cannot be uploaded to OBS. Therefore, you are advised to check the account status regularly. If the account balance is insufficient, top up the account before you use the service.

----End

1.3 Creating a Bucket

Object Storage Service (OBS) is a stable, secure, efficient, and easy-to-use cloud storage service. It provides highly reliable storage capabilities at low costs. With OBS, you can easily create, modify, and delete buckets, as well as upload, download, and delete objects. An object is the basic unit of data storage on OBS. It consists of object data and object metadata that describes object properties. A bucket is a virtual container used to store objects on OBS.

Data transmitted through DES is stored as objects in buckets. Therefore, you need to create a bucket for storing data before using DES. For details about how to create a bucket, see [Creating a Bucket](#).

1.4 Creating a Teleport-based DES Order

Background

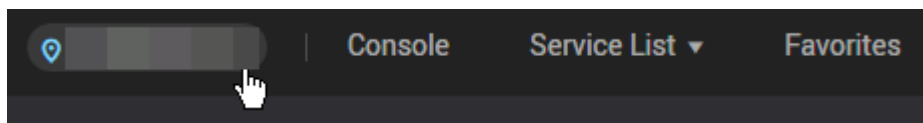
If a large amount of data (hundreds of TB or PB) needs to be transmitted, you can create a Teleport-based order. After you submit the order successfully, a Huawei DC sends a Teleport to you to transmit the local data to the cloud.

Procedure

Step 1 Log in to the management console.

Step 2 Choose **Service List > Storage > Data Express Service** to access DES Console.

Step 3 Select a DC based on your plan. You can select a DC nearby. See [Figure 1-2](#).

Figure 1-2 Selecting a DC for the Teleport-based DES

Step 4 Click **Buy DES**. The page for creating an order is displayed.

Step 5 Enter **Transmission Information**. Choose **By Teleport** as the transmission mode. Set mandatory parameters marked with an asterisk (*). See [Figure 1-3](#).

Figure 1-3 Setting transmission informationA screenshot of a web form titled 'Transmission Information'. The form has several sections:

- * Transmission Mode:** Two radio buttons, 'By Teleport' (selected) and 'By Disk'.
- * Teleport Specifications:** A dropdown menu showing '60 TB'. Below it, there is explanatory text: 'Only one Teleport is involved in each service order. Two 10GE high-speed ports are supported. NFS/CIFS, and FTP protocols are supported. Teleport has a built-in enterprise storage system. A single Teleport can hold either 60 or 120 TB of storage. A combination of multiple Teleports can handle even PB-level migration.'
- * Object Type:** Three radio buttons: 'Small file', 'Common file', and 'Ultra-large file'.
- * Object Quantity:** Four radio buttons: 'Level 1', 'Level 2', 'Level 3', and 'Level 4'.
- * Estimated Transmit Days:** A numeric input field with a value of '10' and minus/plus buttons.
- * Handling Duplicate Files:** Two radio buttons: 'Skip' (selected) and 'Overwrite'.
- Remarks:** A text area with a placeholder: 'If this service order has been discussed with customer service, you can describe the interaction here.' The character count '0/500' is shown at the bottom right.
- * Transmission Configuration:** A section with a note: 'For "Source Data", enter the name of the file or folder you will be backing up. For example, folder1, file1, or folder2/file2. This file or folder will be in the root directory of the Teleport. [Create Bucket](#) ?'. Below this are four input fields: 'Source Data' (with a file icon), 'Destination Bucket' (with a folder icon), 'Import Directory' (with a folder icon), and another 'Source Data' field (with a file icon).
- At the bottom, there is a '+ Add' button and the text 'You can add 9 more files or directories.'

- **Teleport Specifications:** The capacity of a single Teleport is 60 TB. If the data volume exceeds 60 TB, you can apply for more than one Teleport.
- **Object Type:** Select **Small file**, **Common file**, or **Ultra-large file** based on the size of data files to be transmitted.
- **Object Quantity:** Estimate the number of data files to be transmitted and select a level accordingly from **Level 1** to **Level 4**. The larger the number, the more files are to be transmitted.
- **Handling Duplicate Files:** Specify the method of handling duplicate files to be uploaded in the same bucket. If you select **Skip**, the original file is retained. If you select **Overwrite**, the original file is replaced by the file that is being transferred.
- (Optional) **Source Data:** Enter the file name or folder name to be copied to the root directory of the Teleport. If you enter a file name, the file is transmitted to the specified destination bucket. If you enter a folder name, all data in the folder is transmitted to the destination bucket. If you leave **Source**

Data blank, all files in the Teleport are transmitted to the destination bucket by default.

You can enter only one name in a text box. If you want to transmit more than one file or folder, click **Add** to add more text boxes. For example, if there are two folders, **file01** and **file02**, in the directory for storing data to be uploaded, you can enter the names of the two folders in two **Source Data** boxes and select different destination buckets for them. Later, you can copy the two folders to the Teleport for data classification.

 **NOTE**

A folder name cannot start with a dot (.) or contain any of the following characters:
\\:*? "<>|

- **Destination Bucket:** Click the folder icon next to **Destination Bucket** and select the destination bucket for Teleport-based data transmission. If there is no destination bucket, click **Create Bucket** to create one and refresh. You can also log in to **Console**, select **Object Storage Service** to create a bucket, and then refresh the destination bucket.
- (Optional) **Import Directory:** Click the folder icon next to **Import Directory** and select the directory to which the data is to be imported. You can also enter a custom directory name. The backstage saves the data in this directory. If this parameter is not specified, your data is directly imported to the destination bucket.

 **NOTE**

A maximum of 10 **Disk File** or **Import Directory** can be created.

- Step 6** Select a delivery address. When creating an order for the first time, you need to add a delivery address for receiving the Teleport sent by a Huawei DC. See **Figure 1-4**.

Figure 1-4 Adding a delivery address

Add Delivery Address ?

| | |
|--------------------------------|---|
| * Contact | <input type="text" value="Enter a contact."/> |
| * Country/Region | <input type="text" value="Enter the Country/Region name."/> |
| * Delivery Address | <input type="text" value="Enter a district or co"/> <input type="text" value="Enter a city."/> <input type="text" value="Enter a province or s"/> |
| * Address Details | <input type="text" value="Enter the detailed address, such as the street, gate number, campus,"/> |
| * Mobile Number ? | <input type="text" value="Enter a contact number."/> |
| * SMS Verification Code | <input type="text" value="Enter the SMS verification code."/> <input type="button" value="Get Code"/> |

- **Contact:** Enter the name of the contact person.
- **Country/Region:** Enter the country or region where the contact person is located.
- **Delivery Address:** Enter the district, city, and province of the contact person.
- **Address Details:** Enter more information about the address, such as the street name and house number.
- **Mobile Number:** Enter the mobile number of the contact person.
- **SMS Verification Code:** Click **Get Code** to obtain the verification code.

 **NOTE**

You can create up to five delivery addresses.

Cross-border transportation is not supported. A Teleport cannot be transferred to the address other than the country or region selected when the service order is created.

Step 7 Confirm the order information. Click **Buy Now** to confirm the delivery address and view details of the order. See [Figure 1-5](#).

Figure 1-5 Teleport-based DES order details

Order Details

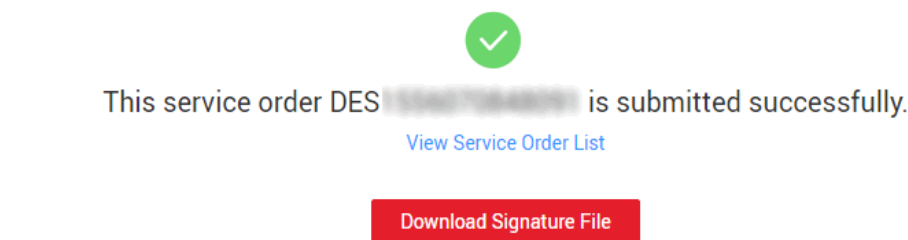
| Name | Details | Contact Details |
|----------------------|-----------------------------|--------------------------------|
| | Transmission Mode | Import by Teleport |
| | Region | |
| | Object Type | Small file |
| | Object Quantity | Level 1 |
| Data Express Service | Teleport Specifications | 60TB |
| | Estimated Transmit Duration | 10 |
| | Handling Duplicate Files | Skip |
| | Remarks | - |
| | Transmission Configuration | / |
| | | -----> Details |
| | Contact | |
| | Mobile Number | |
| | Customer Address | |

NOTE

Check the order details. If there is incorrect information, click **Previous** to modify it.

Step 8 Click **Buy Now** to submit the order. After the order is successfully submitted, **Figure 1-6** is displayed.

Figure 1-6 Successful submission of the Teleport-based DES order



NOTICE

You can download the signature file here by clicking **Download Signature File**, or you can download it in the service list of DES Console.

----End

NOTE

You only need to upload AK/SK once for an order. After the order is created, in the order list, click **More** > **Enter the access key (AK/SK)** in the **Operation** column.

1.5 Receiving Teleport and Connecting Cables

1.5.1 Unpacking Teleport

Checking Before Unpacking

After receiving a Teleport sent by a Huawei DC, check whether the appearance of the device is intact and ensure that the lock, handle, and pulley work normally.

Check whether the unpacking guide attached on the shell of the Teleport is complete and the characters are legible. If there is any damage, return the device to the Huawei DC. Confirm that the device is intact and then sign for acceptance.

Prerequisites

- You have obtained the username and password sent through an SMS message for opening the Teleport.
- You have received the Teleport. Determine the Teleport model based on the following figures. The unpacking method varies depending on the Teleport model.



Unpacking Teleport V1

- Step 1** Place the Teleport equipment container on the ground with the touchscreen facing upward. This ensures that the unlocking of the physical lock is not affected and the protective cover on the side of the box can be opened easily. [Figure 1-7](#) shows the Teleport equipment container.

Figure 1-7 Teleport equipment container



Step 2 Touch the screen to turn it on.

NOTE

If the touchscreen is off, charge it for several minutes through the USB port.

Step 3 Click **Unpacking** > **Password**, enter **user** account, and click **Finish**. Then, enter the password and click **Unpacking**. After hearing the sound of a short squeak, the container is unlocked successfully.

 **NOTE**

The account and password of the user is provided by SMS message. The password is the last six digits of the service order number by default.

Step 4 Open 6 latches on both ends of the equipment container, remove the covers from both ends. The unpacking is complete.

----End

Unpacking Teleport V2

Step 1 Obtain the unpacking passwords.

Step 2 Use the passwords to unlock locks A and B, and manually open the latches C and D.



Step 3 Open the latches E and F on the base.



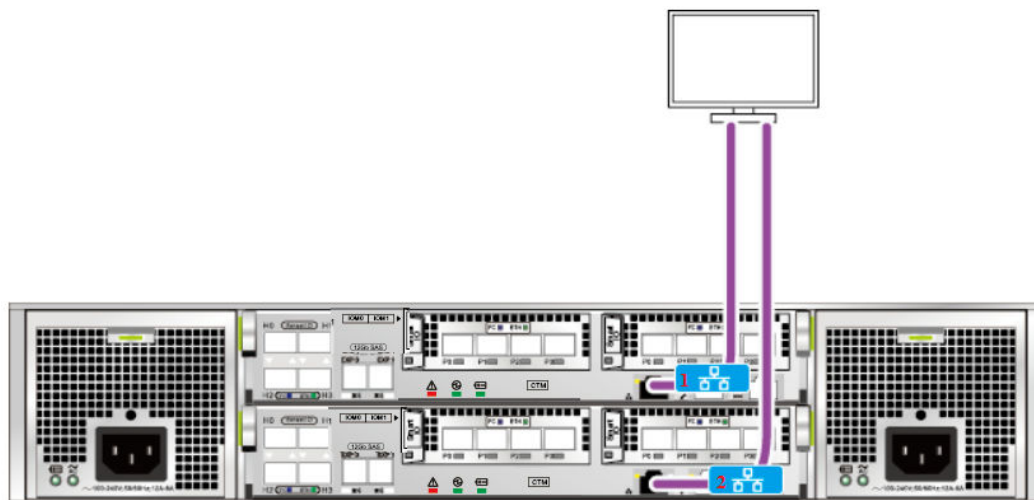
----End

1.5.2 Configuring the Management Network Connection

After the Teleport is unpacked, you can find the power button and indicators on the front and the cable ports for the controller enclosure on the rear. Connect the Teleport with the maintenance terminal through the management network port to build up the management channel. Then, you can manage and maintain the storage device using the maintenance terminal.

In [Figure 1-8](#), network port 1 is the management network port. Generally, you only need to connect the cable to the management network port for the management configuration.

Figure 1-8 Connecting a Teleport using the management network port



1.5.3 Configuring the Service Network Connection

Connect the GE or 10GE electrical ports on the controller enclosure to the application server with a common network cable or an optical fiber to build up a service channel. After the channel is established, the Teleport can exchange data with the application server.

[Figure 1-9](#) and [Figure 1-10](#) show the connections of GE electrical ports and 10GE electrical ports on the Teleport. You can use common network cables or optical fibers to connect a Teleport to your application server.

Figure 1-9 Connecting the GE electrical ports using common network cables

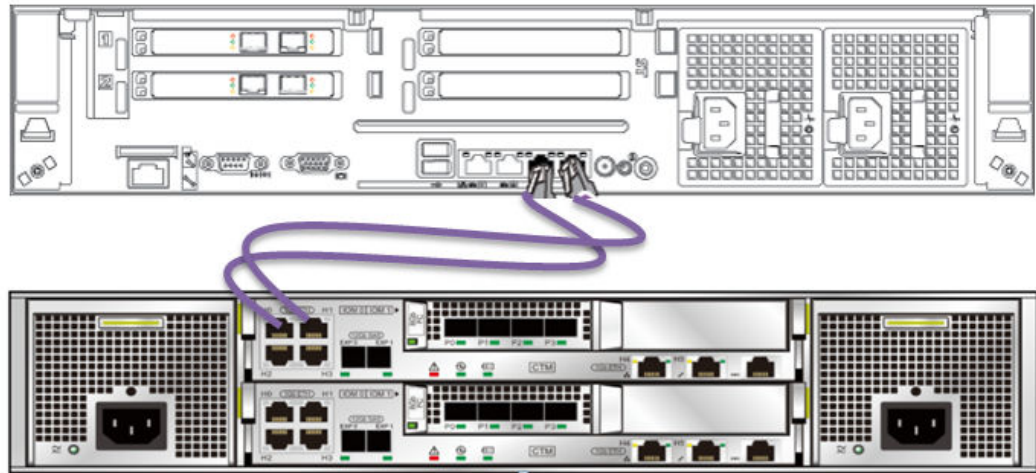
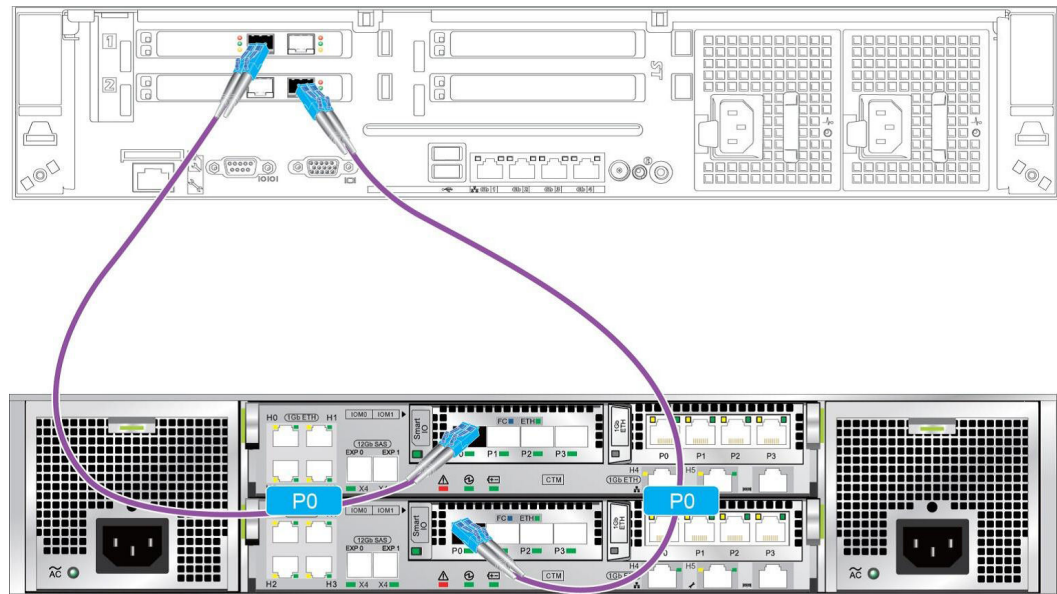


Figure 1-10 Connecting the 10GE electrical ports using optical fibers



NOTE

- The connection method of 10GE electrical ports is the same as that of GE electrical ports. The only difference is that the hardware type of a 10GE electrical port is different from that of a GE electrical port.
- If a large amount of data needs to be transmitted, 10GE electrical ports are recommended. If the application server is not configured with a 10GE electrical port, connect in the network port binding mode.

1.5.4 Powering On the Device

After the cable connection, power on the Teleport to check the running status. To power on the storage system, press the power button. If the power indicator of the controller enclosure is blinking green, the storage system is powered on. [Figure 1-11](#) and [Table 1-2](#) describe the normal statuses of the indicators after the system has been powered on.

NOTICE

- Before powering on the storage system, ensure that all cables are correctly connected. The storage system may work improperly if the cable connections are changed after the storage system is powered on.
- For a storage system with two controllers, if you power on the system for the first time or power on the system after clearing the system configuration, ensure that controller A is in the controller enclosure and properly connected. Otherwise, the storage system will fail to be powered on.
- To avoid system data loss, do not remove or insert optical fibers, network cables, coffer disks, or interface modules when powering on the storage system.
- Do not press and hold the power button. If you hold down the power button for more than 5 seconds, the storage system will be powered off.
- It takes 15 to 30 minutes for the storage system to be powered on.

Figure 1-11 Teleport indicators (front view)

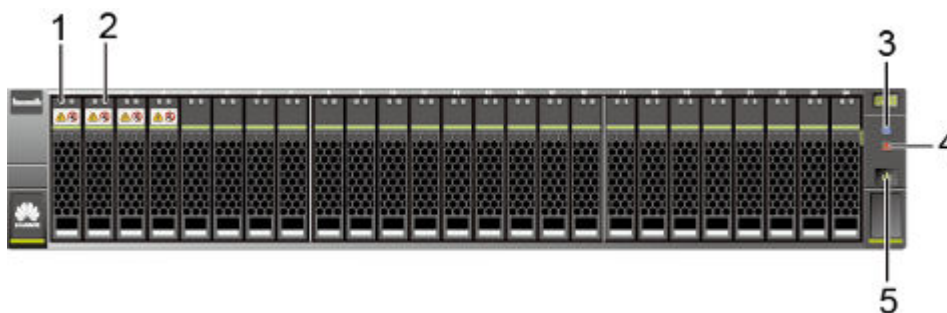


Table 1-2 Indicator status description

| No. | Description |
|-----|--|
| 1 | Disk module running indicator (steady green) |
| 2 | Disk module location/alarm indicator (off) |
| 3 | Controller enclosure location indicator (blinking blue) |
| 4 | Controller enclosure alarm indicator (off) |
| 5 | Controller enclosure power indicator/power button (steady green) |

1.5.5 Modifying the Logical IP Address

Teleport accesses a shared file system through logical ports. Logical ports are used to differentiate services. The Teleport storage system can communicate with your service network only when the logical IP address of the Teleport resides in the same network segment as your service IP address.

Before using the Teleport storage system, you need to change the logical IP address to be in the same network segment as your service IP address. Meanwhile, the new logical IP address cannot reside in the same network segment as the management IP address. Otherwise, the modification will fail. This section describes how to modify the logical port attributes.

Prerequisites

You have received the username and password for logging in to DeviceManager.

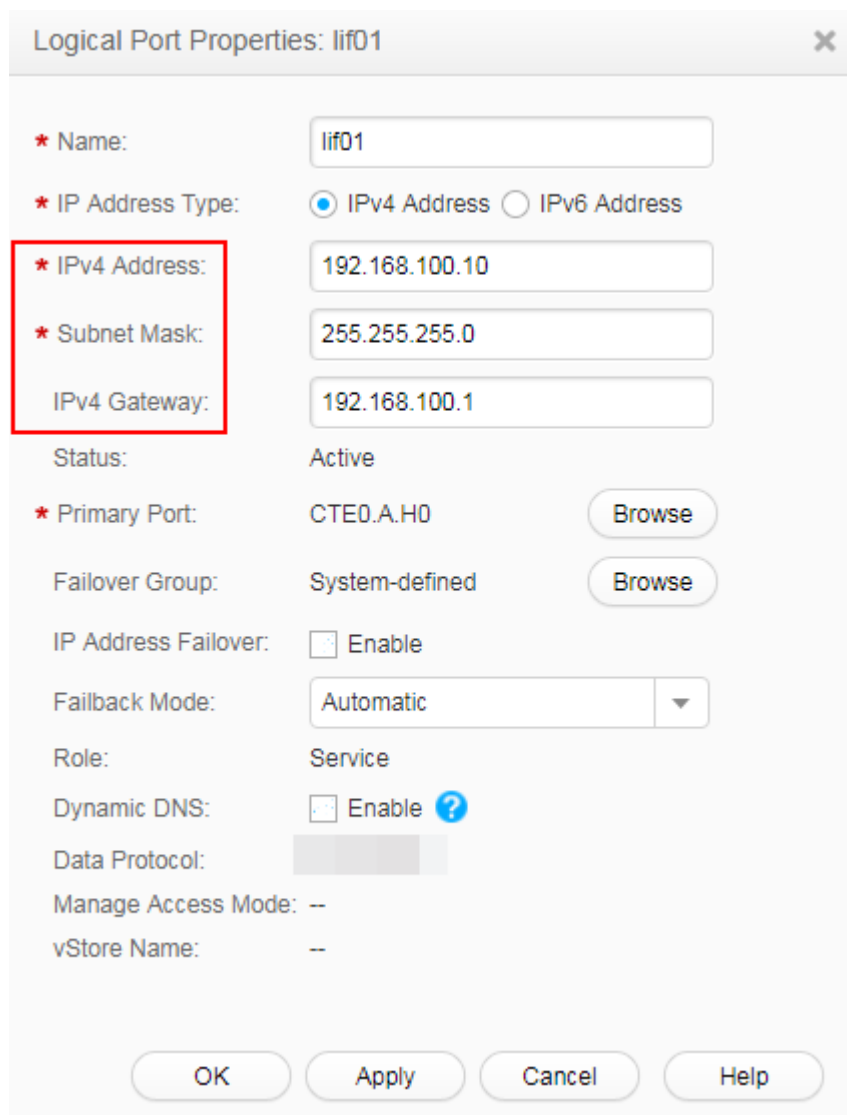
Procedure

- Step 1** In the address bar of the web browser, enter **https://IP address:8088** to log in to the DeviceManager of the Teleport. The default IP address is 192.168.128.101. *IP address* indicates the management IP address of DeviceManager.
- Step 2** Choose **Resource Provisioning > Port > Logical Port**. Select the built-in logical port of the system, and click **Properties**. The **Logical Port Properties** dialog box is displayed. See [Figure 1-12](#).

The IP address, subnet mask, and gateway must be in the same network segment as your service network so that the client can access the shared file system in the Teleport through this logical IP address. Select the correct port for connecting the service cable. Retain the default values for other parameters. Click **OK**.

In the **Danger** dialog box that is displayed, select "I have read the previous information and understood consequences of operation." Click **OK**.

Figure 1-12 Modifying the IP address of the logical port



Step 3 The **Success** dialog box is displayed, indicating that the operation succeeded. Click **OK**.

NOTICE

When the client accesses the NFS/CIFS shared file system, the logical port address must be used.

----End

1.6 Copying Data

Before the Teleport is mailed to you, a CIFS or NFS shared file system has been created as required by the administrator.

A CIFS shared file system is mounted to a Windows client. An NFS shared file system is mounted to a Linux or Unix client. Copying data to the mounted shared path is to copy it to the Teleport.

Copying Data Using a CIFS Shared File System

This section describes how to copy data using a CIFS shared file system.

Prerequisites

- Your data to be uploaded is ready.
- The Teleport has been connected and configured.

Procedure

Step 1 Log in to the Windows client.

Step 2 Right-click **Computer** and choose **Map network drive...** The **Map Network Drive** dialog box is displayed.

Step 3 Mount the CIFS shared path.

Enter `\\192.168.100.10\teleportshare` in the **Folder** text box and click **Finish**.

NOTE

192.168.100.10 is the logical port IP address modified by you, and **teleportshare** is the name of the shared file system. The name is created by the vendor of Teleport, and you do not need to create it.

Step 4 Copy local data to the **teleportshare** directory.

----End

Copying Data Using an NFS Shared File System

This section describes how to copy data using an NFS shared file system.

Prerequisites

- Your data to be uploaded is ready.
- The Teleport has been connected and configured.

Procedure

Step 1 Log in to the Linux or Unix client.

Step 2 Mount the NFS shared file system.

Create a mount point, for example, `mkdir -p /mnt/folder`, in the local Linux/Unix system, and then run the `mount -t nfs 192.168.100.10:/teleportshare /mnt/folder` command.

NOTE

192.168.100.10 is the logical port IP address modified by you, and **teleportshare** is the name of the shared file system. The name is created by the vendor of Teleport, and you do not need to create it.

Step 3 Copy the local data to the `/mnt/folder` directory.

----End

1.7 Downloading and Importing the Signature File

Prerequisites

- You have submitted a Teleport-based DES service order.
- The Teleport has been connected and configured.

Procedure

Step 1 Log in to DES Console.

Step 2 Click **Download signature file** in the **Operation** column to download the signature file to the local host.

Step 3 Import the downloaded signature file to the root directory of **teleportshare**.

A signature file is the unique identifier for matching a DES order with a Teleport. One signature file is generated for one service order. After receiving the Teleport, the administrator mounts it to the server. The system automatically matches the Teleport with the service order to prevent mis-operations caused by manual intervention. [Table 1-3](#) shows the signature file information.

Table 1-3 Signature file

| Parameter | Description |
|-----------|---|
| version | Specifies the service version ID. |
| OrderURN | Includes the service name, service region, identification code, and service order number. |

----End

1.8 Powering Off and Packing Teleport

Prerequisites

- You have copied the data and signature file to the Teleport.
- You have received the username and password for logging in to DeviceManager.

Procedure

Step 1 Press and hold the power button on the front panel for more than 5 seconds. The power indicator blinks until the power-off is complete.

Step 2 Powering off Teleport



Step 3 Remove the power cable and network cables and insert them into the Teleport box.

Step 4 Close the covers on both ends of the box and fasten the 6 latches.

----End

1.9 Sending Back the Teleport

After the Teleport is powered off and packed, contact the nearby logistics provider to send the Teleport back to the selected HUAWEI CLOUD DC. Log in to DES Console to check the DC address, contact person, and phone number in the order details.

NOTE

- If the Teleport is damaged during its mail-back, you are liable for the compensation.
- If the Teleport is damaged by Huawei after it is received, Huawei is responsible for the fees generated during the second transmission. In addition, Huawei must ensure that your data is intactly transmitted to OBS.

1.10 Starting Data Transmission

Prerequisites

- You have submitted a Teleport-based DES order.

NOTE

If you have entered the access keys (AK/SK) after creating an order, you do not need to enter the keys again in this step. After the device is sent back, the administrator starts data upload directly.

Procedure

Step 1 Log in to DES Console.

Step 2 Find the order whose status is **Access key (AK/SK) to be entered** in the order list and click **More > Enter the access key (AK/SK)** in the **Operation** column.

Step 3 Fill in the dialog box with the AK/SK information used for uploading data to OBS buckets. See [Figure 1-13](#).

Figure 1-13 Entering access keys (Teleport-based DES)

Enter Access Key (AK/SK)

* Access Key ID (AK):

* Secret Access Key (SK):

- **Access Key ID (AK):** specifies the access key ID used when the back-end server uploads data to the OBS bucket. One AK maps to only one user.
- **Secret Access Key (SK):** specifies the secrete access key used when the back-end server uploads data to the OBS bucket. One SK maps to one AK, forming a key pair for accessing OBS and thereby ensuring access security.

 **NOTE**

If you do not have any AK/SK, click the username in the upper right corner of the homepage of the management console, and click [My Credentials](#) in the drop-down list. On the **My Credentials** page that is displayed, click **Add Access Key** in the lower part of the **Access Key** tab page.

- Step 4** Click **OK** to submit the AK/SK. After the AK and SK are successfully submitted and verified, data transmission starts.

----End

1.11 Viewing Data Transmission Results

Prerequisites

Data transmission is complete.

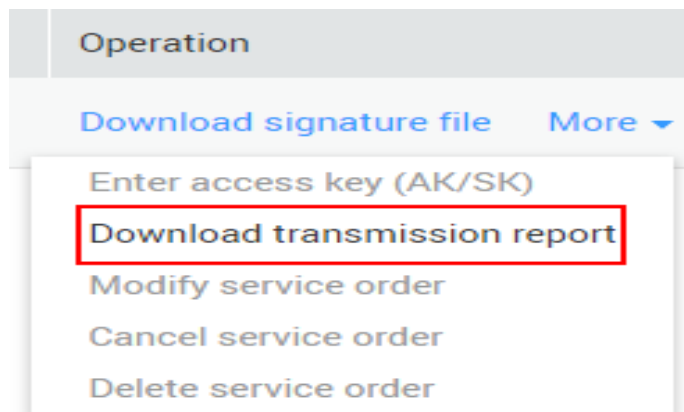
Background

After data transmission is complete, you can download the generated data transmission report to check whether all data is successfully uploaded.

Procedure

- Step 1** Log in to DES Console.
- Step 2** Select the order status **Service order completed** to filter service orders in the service order list and click **More > Download transmission report** in the **Operation** column. See [Figure 1-14](#).

Figure 1-14 Downloading the transmission report (Teleport mode)



Step 3 View the transmission report. [Table 1-4](#) specifies the parameters contained in the transmission report.

Table 1-4 Parameters in a transmission report

| Parameter | Description |
|-------------------|---|
| CapacityByteSize | Total bytes to be transmitted |
| SuccessByteSize | Bytes that have been successfully transmitted |
| FailByteSize | Bytes that failed to be transmitted |
| TotalWrittenFiles | Number of files that are successfully transmitted |
| TotalFiles | Total number of files to be transmitted |

NOTE

The prefix of *xxx/deshare/DES service order/data source directory* is generated as a transmission key when the Teleport is mounted for data upload. It is two levels deeper than the data source directory level. However, the directory structure on OBS is not affected. The data source directory structure in the Teleport is retained.

----End

2 Detailed Instructions on Using Disks

2.1 Process

[Figure 2-1](#) and [Table 2-1](#) describe how to use disk-based DES.

Figure 2-1 Process of using disk-based DES

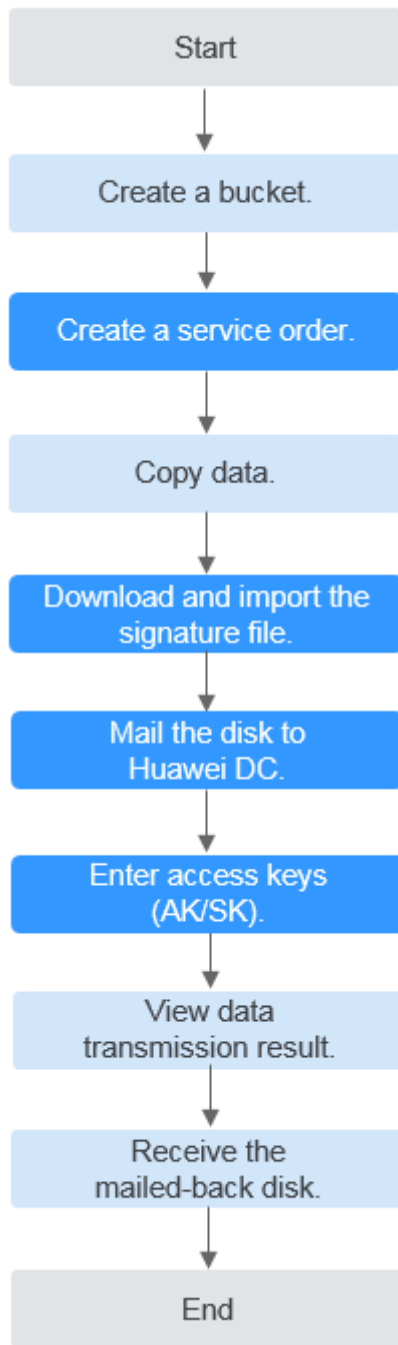


Table 2-1 Description for the process of using disk-based DES

| Procedure | Description |
|---------------------------|--|
| Logging in to DES Console | Register with HUAWEI CLOUD and subscribe to DES. |
| Creating a bucket | Data is stored in OBS buckets. You must create a bucket on OBS before using DES. |

| Procedure | Description |
|---|---|
| Creating a DES order | You are advised to select a Huawei DC nearby and create a disk-based order. |
| Copying data | Copy data from the local computer to the disk. |
| Downloading the signature file | A signature file is the unique identifier for your disk in the order. Therefore, you need to place the file in the root directory of the disk. |
| Sending the disk to your selected Huawei DC | The disk must contain the signature file in its root directory. |
| Entering the access keys (AK/SK) | After receiving the disk, the administrator mounts the disk to a server. Then, you will receive an SMS message sent by Huawei, which notifies you of uploading the AK and SK to start data uploading. |
| Viewing the data transmission result | After data transmission is complete, you can download the generated data transmission report to check whether all data is successfully uploaded. |
| Receiving the mailed-back disk | After your confirmation, you will receive the disk mailed back by the administrator. |

2.2 Logging In to DES Console

Background

To log in to DES Console, you need to register a HUAWEI CLOUD account, top up the account, and subscribe to DES.

Procedure

- Step 1** Open [HUAWEI CLOUD](#).
- Step 2** Register a HUAWEI CLOUD account. On the HUAWEI CLOUD home page, click **Register** and complete the registration as prompted. If you have a HUAWEI CLOUD account, go to [Step 3](#).
- Step 3** On the right of the top navigation bar, click **Log In**, and enter the username and password.
- Step 4** Click **Console**.
The home page of the management console is displayed.
- Step 5** Click **Top Up**.
The top-up page is displayed.
- Step 6** Top up the account as prompted.

Step 7 After the top-up is successful, close the window and go back to the home page of the management console.

Step 8 Choose **Service List > Storage > Data Express Service** to access DES Console.

 **NOTE**

- To ensure smooth data transmission, you are advised to use DES when your balance is sufficient.
- If you are in arrears during the service, the data cannot be uploaded to OBS. Therefore, you are advised to check the account status regularly. If the account balance is insufficient, top up the account before you use the service.

----End

2.3 Creating a Bucket

Object Storage Service (OBS) is a stable, secure, efficient, and easy-to-use cloud storage service. It provides highly reliable storage capabilities at low costs. With OBS, you can easily create, modify, and delete buckets, as well as upload, download, and delete objects. An object is the basic unit of data storage on OBS. It consists of object data and object metadata that describes object properties. A bucket is a virtual container used to store objects on OBS.

Data transmitted through DES is stored as objects in buckets. Therefore, you need to create a bucket for storing data before using DES. For details about how to create a bucket, see [Creating a Bucket](#).

 **NOTE**

The number of required buckets depends on the number of data directories to be transmitted. A service order allows up to 10 buckets to be created.

2.4 Creating a Disk-based DES Order

Background

If the data to be transmitted has been stored in the disk which is ready to be sent to a Huawei DC, you can create a disk-based order. For the types of disks supported by Huawei DCs, see [Table 2-2](#).

 **NOTE**

An order supports a maximum of 12 disks, and each disk must have only one partition.

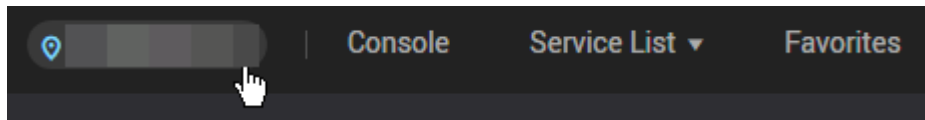
Table 2-2 Disk compatibility

| Item | Specifications |
|-------------|--|
| Size | SATA: 2.5 or 3.5 inches; SAS: 3.5 inches |
| Interface | USB2.0, USB3.0, SAS, and SATA |
| File system | EXT2, EXT3, EXT4, FAT32, EXFAT, and NTFS |

Procedure

- Step 1** Log in to the management console.
- Step 2** Choose **Service List > Storage > Data Express Service** to access DES Console.
- Step 3** Select a DC based on your plan. You can select a DC nearby. See [Figure 2-2](#).

Figure 2-2 Selecting a DC for the disk service



- Step 4** Click **Buy DES**. The page for creating an order is displayed.
- Step 5** Enter **Transmission Information**. Choose **By Disk** as the transmission mode. Set mandatory parameters marked with an asterisk (*). See [Figure 2-3](#).

Figure 2-3 Setting transmission information for disk-based DES

A screenshot of the 'Transmission Information' form for disk-based DES. The form includes several sections: 'Transmission Mode' with 'By Disk' selected; 'Object Type' with 'Common file' selected; 'Object Quantity' with 'Level 2' selected; 'Number of Devices' set to 1; 'Handling Duplicate Files' with 'Skip' selected; a 'Remarks' text area containing 'The content has been confirmed with customer service'; and 'Transmission Configuration' with input fields for 'Disk File' and 'Destination Bucket', and an 'Add' button. A note at the bottom states 'You can add 9 files or directories.'

- **Object Type:** Select **Small file**, **Common file**, or **Ultra-large file** based on the size of data files to be transmitted.
- **Object Quantity:** Estimate the number of data files to be transmitted and select a level accordingly from **Level 1** to **Level 4**. The larger the number, the more files are to be transmitted.
- **Number of Devices:** Number of disks for storing data to be transmitted. Each disk-based order supports a maximum of 12 disks.
- **Handling Duplicate Files:** Specify the method of handling duplicate files in the same directory. If you select **Skip**, the original file is retained. If you select **Overwrite**, the original file is replaced by the file that is being transferred.

- (Optional) **Disk File:** Enter the file name or folder name under the root directory of the disk. If you enter a file name, the file is transmitted to the specified destination bucket. If you enter a folder name, all data in the folder is transmitted to the destination bucket. If you leave **Disk File** blank, all files in the disk are transmitted to the destination bucket by default.

You can enter only one name in a text box. If you want to transmit more than one file or folder, click **Add** and type them into the newly added text boxes. For example, there are folders **test01** and **test02** in the root directory of a disk. You can enter them into two input boxes under **Disk File** and select two different destination buckets for data classification.

 **NOTE**

A folder name cannot start with a dot (.) or contain any of the following characters:
\\:*? "<>|

- **Destination Bucket:** Click the folder icon next to **Destination Bucket** and select the destination bucket for disk-based data transmission. If there is no destination bucket, click **Create Bucket** to create one and refresh. You can also log in to [Console](#), select **Object Storage Service** to create a bucket, and then refresh the destination bucket.
- (Optional) **Import Directory:** Click the folder icon next to **Import Directory** and select the directory to which the data is to be imported. You can also enter a custom directory name. The backstage saves the data in this directory. If this parameter is not specified, your data is directly imported to the destination bucket.

 **NOTE**

A maximum of 10 disk files or import directories can be created.

- Step 6** Select a delivery address. When creating an order for the first time, you need to add a delivery address for receiving the disk mailed back by a Huawei DC. See [Figure 2-4](#).

Figure 2-4 Adding a delivery address

Add Delivery Address ?

* Contact

* Country/Region

* Delivery Address

* Address Details

* Mobile Number ?

* SMS Verification Code

- **Contact:** Enter the name of the contact person.
- **Country/Region:** Enter the country or region where the contact person is located.
- **Delivery Address:** Enter the district, city, and province of the contact person.
- **Address Details:** Enter more information about the address, such as the street name and house number.
- **Mobile Number:** Enter the mobile number of the contact person.
- **SMS Verification Code:** Click **Get Code** to obtain the verification code.

NOTE

You can create up to five delivery addresses.
Cross-border transportation is not supported.

Step 7 Confirm the order information. Click **Buy Now** to confirm the delivery address and view details of the order. See [Figure 2-5](#).

Figure 2-5 Disk-based DES order details

Order Details

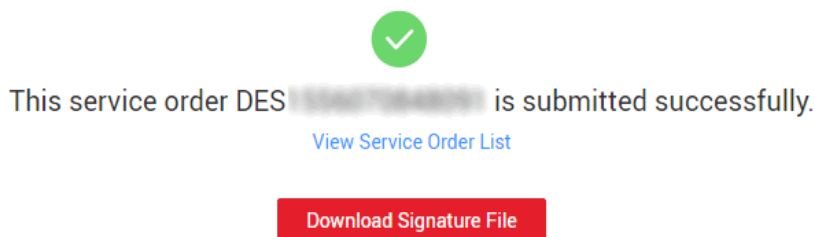
| Name | Details | Contact Details |
|----------------------|----------------------------|------------------|
| Data Express Service | Transmission Mode | Import by Disk |
| | Region | |
| | Object Type | Small file |
| | Object Quantity | Level 1 |
| | Number of Devices | 1 |
| | Handling Duplicate Files | Skip |
| | Remarks | - |
| | Transmission Configuration | / |
| | | |
| | | Mobile Number |
| | | Customer Address |

 NOTE

Check the order details. If there is incorrect information, click **Previous** to modify it.

Step 8 Click **Buy Now**. The order is successfully created. The page shown as **Figure 2-6** is displayed.

Figure 2-6 Successful submission of the disk-based DES order

**NOTICE**

You can download the signature file here by clicking **Download Signature File**, or you can download it in the service list of DES Console.

----End

 NOTE

You only need to upload AK/SK once for an order. After the order is created, in the order list, click **More** > **Enter the access key (AK/SK)** in the **Operation** column.

2.5 Copying Data

Copy the data from the user server to the disk that meets the requirements.

Table 2-3 Disk compatibility

| Item | Specifications |
|-------------|--|
| Size | SATA: 2.5 or 3.5 inches; SAS: 3.5 inches |
| Interface | USB2.0, USB3.0, SAS, and SATA |
| File system | EXT2, EXT3, EXT4, FAT32, EXFAT, and NTFS |

2.6 Downloading and Importing the Signature File

Before sending a disk to a Huawei DC, you need to save the signature file to the disk.

Prerequisites

- You have created a DES order.
- You have copied the data.

Procedure

Step 1 Log in to DES Console.

Step 2 Click **Download signature file** in the **Operation** column to download the signature file to the local host.

Step 3 Import the signature file to the root directory of the disk.

A signature file is the unique identifier for matching a DES order with disks in an order. One signature file is generated for one service order. After receiving the disk, the administrator mounts the disk to a server. The system automatically matches the disk with the service order to prevent mis-operations caused by manual intervention. [Table 2-4](#) shows the signature file information.

Table 2-4 Signature file

| Parameter | Description |
|-----------|---|
| version | Specifies the service version ID. |
| OrderURN | Includes the service name, service region, identification code, and service order number. |

NOTICE

- Copy the downloaded signature file to the root directory of the disk.
- When a service order has multiple disks, you need to copy the signature file to each disk.

----End

2.7 Mailing Disks

After the signature file and the data are copied to the disk, contact the nearby logistics provider to mail the well-packed disk to the selected Huawei DC. Log in to DES Console to check the DC address, contact person, and phone number.

NOTE

- You are liable to the disk damage caused by the disk delivery.
- If the disk damage is caused by Huawei after it is received, Huawei is responsible for all fees generated for the second transmission. In this case, Huawei may deliver free new disks to you and ensures that data is intactly transmitted to OBS.

2.8 Starting Data Transmission

After receiving the disk, a Huawei DC administrator mounts the disk to a server. Then, you will receive an SMS message which notifies you to input AK/SK. Once the verification is successful, the data uploading starts.

Prerequisites

You have received an SMS message for inputting AK/SK.

Procedure

- Step 1** Log in to DES Console.
- Step 2** Find the order whose status is **Access key (AK/SK) to be entered** in the order list and click **More > Enter the access key (AK/SK)** in the **Operation** column.
- Step 3** Fill in the dialog box with the AK/SK required for uploading data to OBS buckets. See [Figure 2-7](#).

Figure 2-7 Entering access keys (disk-based DES)

- **Access Key ID (AK):** specifies the access key ID used when the back-end server uploads data to the OBS bucket. One AK maps to only one user.
- **Secret Access Key (SK):** specifies the secrete access key used when the back-end server uploads data to the OBS bucket. One SK maps to one AK, forming a key pair for accessing OBS and thereby ensuring access security.

- **NOTE**

If you do not have any AK/SK, click the username in the upper right corner of the homepage of the management console, and click [My Credentials](#) in the drop-down list. On the **My Credentials** page that is displayed, click **Add Access Key** in the lower part of the **Access Key** tab page.

- Step 4** Click **OK** to submit the AK/SK. After the AK and SK are successfully submitted and verified, data transmission starts.

----End

2.9 Viewing Data Transmission Results

Prerequisites

Data transmission is complete.

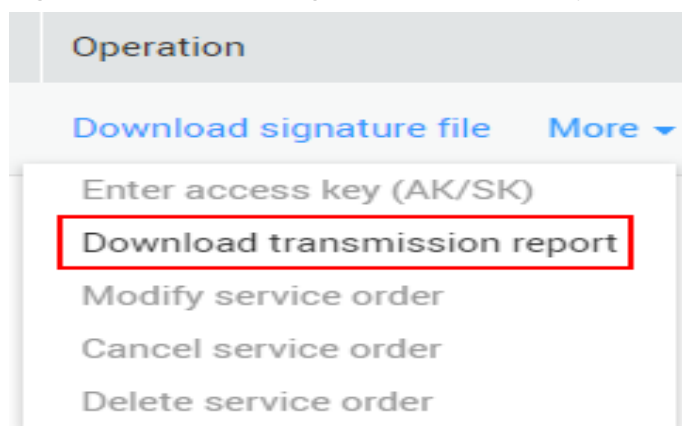
Background

After data transmission is complete, you will receive an SMS notification from HUAWEI CLOUD. After you view the transmission report and confirm the data transmission, the administrator sends the disk back to you.

Procedure

- Step 1** Log in to DES Console.
- Step 2** Find the order whose status is **Service order completed** in the service order list and click **More** > **Download transmission report** in the **Operation** column. See [Figure 2-8](#).

Figure 2-8 Downloading the transmission report (disk-based DES)



- Step 3** View the transmission report. [Table 2-5](#) specifies the parameters contained in the transmission report.

Table 2-5 Parameters in a transmission report

| Parameter | Description |
|-------------------|---|
| CapacityByteSize | Total bytes to be transmitted |
| SuccessByteSize | Bytes that have been successfully transmitted |
| FailByteSize | Bytes that failed to be transmitted |
| TotalWrittenFiles | Number of files that are successfully transmitted |
| TotalFiles | Total number of files to be transmitted |

 NOTE

The prefix of *xxx/deshare/DES service order/data source directory* is generated as a transmission key when your disk is mounted for data upload. It is two levels deeper than the data source directory level. However, the directory structure on OBS is not affected. The data source directory structure in the disk is retained.

----End

2.10 Receiving the Mailed-back Disk

After you check the transmission report and confirm the transmission, an administrator sends back the disk to you.

 NOTE

Huawei is responsible for returning the intact disk to you. After receiving the disk, ensure that the disk is not damaged and then sign for the delivery.

3 Managing DES Orders

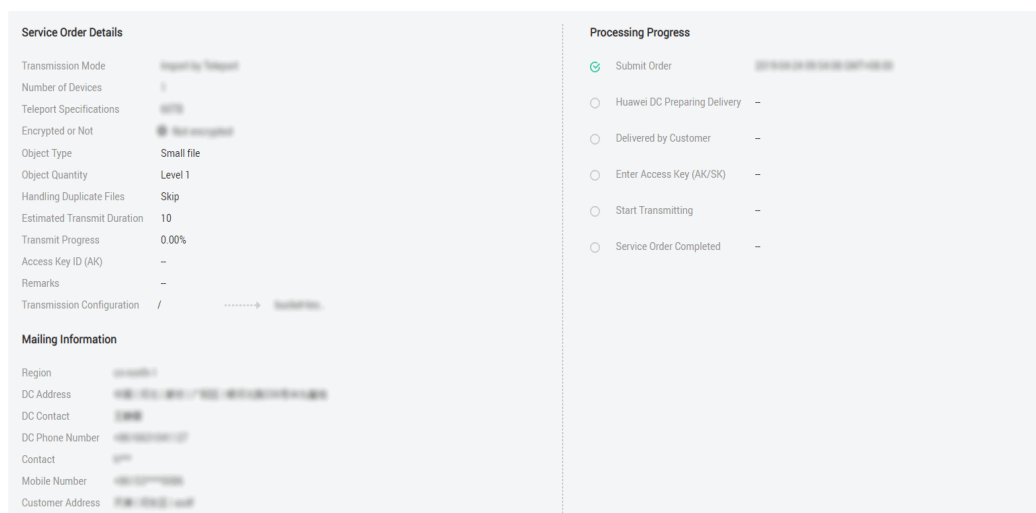
When using DES, you can log in to DES Console to view the statuses of service orders at any time and track the status of data transmission. You can also modify, cancel, and delete created service orders.

Viewing Order Details

- Step 1** Log in to DES Console.
- Step 2** Click the drop-down arrow next to the service order number to view the **Service Order Details**, **Mailing Information**, and **Processing Progress**.

Service Order Details includes transmission configuration details and **Access Key ID**. **Mailing Information** includes detailed contact information of the data center and the user. **Processing Progress** includes the time information, such as the time of submitting the service order, starting transmission data, and completing the service order. See [Figure 3-1](#).

Figure 3-1 Viewing order details



----End

Modifying a DES Order

You can modify your order if it is in any of the following statuses: **Order under review** for a Teleport-base service order; **Disk to be sent** and **Transmission failed** for a disk-based service order.

- If the service order to be modified is in the status of **Order under review** or **Disk to be sent**, the modified service order will be executed based on the normal service order processing flow.
- If the status of the order to be modified is **Transmission failed**, and stays unchanged after the successful submission of the modification, re-enter the AK/SK. After the verification is successful and data upload starts, the service order status changes from **Transmission failed** to **Data transmitting**.

Step 1 Log in to DES Console.

Step 2 In the row of the service order to be modified, choose **More > Modify service order** in the **Operation** column.

Step 3 On the **Modify service order** page (the same as the page for creating a DES order), modify the information according to the actual situation.

Step 4 Click **Buy Now**, confirm the details of the service order, and submit the order.

----End

Canceling a DES Order

- You can cancel a created Teleport-based service order if it is in any of the following statuses: **Order under review**, **Preparing device**, and **Device to be sent**.
- For disk-based DES, if you have created your order, but have not sent your disk to a Huawei DC, namely, the service order status is **Disk to be sent**, you can cancel your order.

Step 1 Log in to DES Console.

Step 2 In the row of the service order to be canceled, choose **More > Cancel service order** in the **Operation** column.

Step 3 On the page for canceling the service order, click **OK**.

Step 4 The status of your order then becomes **Service order canceled**.

----End

Deleting a DES Order

- For Teleport-based DES, you can delete a service order when its status is **Order under review** or **Service order canceled**.
- For disk-based DES, you can delete a service order when its status is **Disk to be sent**, **Service order canceled**, or **Service order expired**.

Step 1 Log in to DES Console.

Step 2 Choose **More > Delete service order** in the **Operation** column.

----End

4 Change History

| Release Date | What's New |
|--------------|-------------------------------------|
| 2019-04-30 | This is the first official release. |