Alibaba Cloud

Server Migration Center

User Guide

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Document conventions

Style	Description	Example
⚠ Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	⚠ **Danger:** Resetting will result in the loss of user configuration data.
🔔 Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	🔔 **Warning:** Restarting will cause business interruption. About 10 minutes are required to restart an instance.
🔊 Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	🔊 **Notice:** If the weight is set to 0, the server no longer receives new requests.
？ Note	A note indicates supplemental instructions, best practices, tips, and other content.	？ **Note:** You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click **Settings**> **Network**> **Set network type**.
Bold	Bold formatting is used for buttons , menus, page names, and other UI elements.	Click **OK**.
Courier font	Courier font is used for commands	Run the `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

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1.Migration process

Server Migration Center (SMC) allows you to migrate one or more source servers to Alibaba Cloud. Source servers can be servers in data centers, virtual machines, hosts on other cloud platforms, or servers of other types. This topic describes the migration process of SMC.

Migration process

When you use SMC to migrate source servers to Alibaba Cloud, you must complete required settings on the source server and in the SMC console. You must run the SMC client on the source server, import the information of the source server to the SMC console, and then create and run a migration task in the SMC console. The following figure shows the procedure.

1. Before you begin

    Create an Alibaba Cloud account, complete real-name verification, activate Resource Access Management (RAM), authorize SMC to access your cloud resources, and obtain an AccessKey pair.

2. Step 1: Import the information of a migration source

    In the SMC console, download and decompress the SMC client. Upload the SMC client to the source server and run the SMC client. Then, import the information of the source server to the SMC console.

3. Step 2: Create and start a migration task

    Create and start a migration task in the SMC console. You can specify one of the following destination image types based on your business requirements:

    ○ ECS image: You can migrate the source server to an Elastic Compute Service (ECS) instance. The ECS instance is created from an ECS image.

    ○ Destination instance: You can migrate the source server to an ECS instance that you have purchased. The storage system and operating system of the source server must be compatible with those of the ECS instance.

    ○ Container image: You can migrate the source server to Container Registry. Then, you can deploy containerized applications in Container Registry at low costs.

Usage notes

Before you use SMC to perform migration, take note of the following information:

● Do not perform operations on the intermediate instance.

    To run a migration task, SMC creates a temporary intermediate instance named `No_Delete_SMC_Tran sition_Instance` within your Alibaba Cloud account. For more information, see What are the specifications available for intermediate instances? Do not stop, restart, or release the intermediate instance when a migration task is running. Otherwise, the migration task fails. After the migration task is completed, SMC automatically releases the intermediate instance.

● By default, the following data directories are migrated:

- Windows servers: Only the data on the C drive (including shared directories that are attached to the C drive) is migrated as a partition of the system disk. If you need to migrate the data from other partitions such as the D drive, you must select and configure the data disk when you create a migration task. For more information, see Step 2: Create and start a migration task.
- Linux servers:
  - Linux servers: If you do not enable block replication, the data in all subdirectories (including shared subdirectories) in the root directory is migrated as a partition of the system disk. If you need to migrate the data in other directories such as /disk1, you must select and configure the data disk when you create a migration task. For more information, see Migration task parameters. If you do not need to migrate the data of multiple directories, see Step 1: Import the information of a migration source.
  - If you enable block replication, only the subdirectories in the root partition of the system disk, such as /and /boot, are migrated by default. If you need to migrate data from other partitions, you must select and configure the data disk when you create a migration task. For more information, see Step 2: Create and start a migration task.

2.Before you begin

Before you use SMC to migrate a server, you must create an Alibaba Cloud account, complete real-name verification, activate Resource Access Management (RAM), authorize SMC to access your cloud resources, and obtain an AccessKey pair.

Procedure

To create an Alibaba Cloud account, perform the following steps:

1. On the Alibaba Cloud official website, create an Alibaba Cloud account.

2. Associate a credit card or PayPal account with your Alibaba Cloud account.

3. If you need to migrate the server to the Chinese mainland, complete real-name verification.

   Use one of the following verification methods:

   ○ Method 1: Go to the real-name verification page.

   ○ Method 2: Log on to the SMC console and complete real-name verification as prompted.

Activate RAM and authorize SMC to access your cloud resources

To activate RAM and authorize SMC to access your cloud resources, use one of the following methods:

- Method 1: Log on to the RAM console, and click **Confirm Authorization Policy** to complete authorization.

- Method 2: Log on to the SMC console and complete the authorization as prompted.

RAM user authorization: Use your Alibaba Cloud account to log on to the RAM console, and grant the AliyunSMCFullAccess permission to the RAM user.

Obtain an AccessKey pair

Create and obtain the AccessKey pair of your Alibaba Cloud account or RAM user. For more information, see Obtain an AccessKey pair.

> ◁)) **Notice**   AccessKey pairs are credentials that you can use to access Alibaba Cloud API resources. Therefore, we recommend that you keep your AccessKey pair strictly confidential. To prevent your AccessKey pair from being exposed or misused, we recommend that you use a RAM user to create a temporary AccessKey pair, and then disable the AccessKey pair after the migration is complete.

Activate the ECS snapshot service

Activate the Alibaba Cloud ECS snapshot service. For more information, see Activate ECS Snapshot.

3.Step 1: Import the information of a migration source

Migration sources can be physical servers, VMware virtual machines (VMs), Xen, KVM, or Hyper-V VMs, and VMs that run in public clouds. Before you use Server Migration Center (SMC) for server migration, you must run the SMC client with your Alibaba Cloud account on the migration source, and import the migration source information. Then, you can log on to the SMC console to perform migration. This topic describes how to import the information of a migration source.

Prerequisites

The preparations for using SMC are completed. For more information, see Before you begin.

Procedure

1. Download and decompress the SMC client package.

    i. Download the SMC client package.

    If the migration source has access to the Internet, you can also download the SMC client package to the migration source.

    > ⑦ **Note**   You can log on to the SMC console. In the upper-right corner of the page, click **Download Latest SMC Client** to download the latest version of the SMC client.

    ii. Upload the SMC client package to the migration source.

    - You can build an FTP site to upload files. For more information, see Manually build an FTP site on a Windows instance or Manually build an FTP site on a CentOS 7 instance.

    - You can also use a remote connection tool that supports file transfer. This allows you to upload the SMC client package to the migration source.

iii. Decompress the SMC client package.

The SMC client is available for different operating systems and architectures. Select an SMC client version that is compatible with the migration source.

The following figure shows the decompressed client folders for Windows.

> ⑦ **Note**   For Linux systems, run the `unzip <name of the SMC client package>` command to decompress the SMC client package. Make sure that the `unzip` utility is installed on the source server. For example, you can run the `yum -y install unzip` command to install the unzip utility in CentOS 7.

🗜 go2aliyun_client2.5.8_linux_arm64.zip	2021/10/27 22:30
🗜 go2aliyun_client2.5.8_linux_i386.zip	2021/10/27 22:30
🗜 go2aliyun_client2.5.8_linux_x86_64.zip	2021/10/27 22:30
🗜 go2aliyun_client2.5.8_windows_i386....	2021/10/27 22:30
🗜 go2aliyun_client2.5.8_windows_x86_...	2021/10/27 22:30
📄 Release Note.txt	2021/10/27 19:34

SMC client packages

Client package	Architecture	Operating system	Bits	Supported destination image types
go2aliyun_client2.5.8_linux_arm64.zip	ARM	Linux	64	■ ECS image ■ ECS instance
go2aliyun_client2.5.8_linux_i386.zip	x86	Linux	32	■ ECS image ■ ECS instance ■ Container image
go2aliyun_client2.5.8_linux_x86_64.zip	x86	Linux	64	
go2aliyun_client2.5.8_windows_i386.zip	x86	Windows	32	■ ECS image ■ ECS instance
go2aliyun_client2.5.8_windows_x86_64.zip	x86	Windows	64	

> ⑦ **Note**
>
> ■ The version number 2.5.8 in the name of the client package is for reference only. The actual version number shall prevail.
>
> ■ SMC allows you to migrate Linux servers of the ARM64 architecture to ECS instances of the g6r or c6r instance family. For more information, see Instance families.

iv. Decompress the client package that is compatible with the operating system of your source server.

The following figure shows the directories and files in the decompressed folder.

📒 Excludes	2019/6/21 16:46
📒 Rsync	2019/6/11 17:42
📄 client_data	2019/6/19 20:17
📄 EULA	2019/5/15 15:09
🖼 go2aliyun_client	2019/6/21 17:23
🔲 go2aliyun_gui	2019/6/21 17:34
⊙ user_config	2019/6/19 19:15

SMC client folders and files

Folder or file	Description
go2aliyun_client.exe	The Windows CLI executable file.
go2aliyun_gui.exe	The Windows GUI executable file. For more information about the GUI version, see Use the Windows GUI version of an SMC client.
go2aliyun_client	The Linux CLI executable file.
user_config.json	The configuration file of the migration source and destination.
Excludes	The folder in which to add directories to exclude from migration.
client_data	The migration data file. This includes the intermediate instance information and migration progress.

2. (Optional)Optional. Exclude files or directories from migration. If you do not need some files or directories after migration, you can exclude them from migration. For more information, see How do I exclude files or directories from a migration task?.

> ② Note   If you enable the block replication feature, you cannot exclude files or directories from migration.

3. Run the SMC client to import the migration source information.

i. Enter the SMC client folder and run the SMC client.

■ For Windows servers, use one of the following methods to run the SMC client:

■ To run the Windows GUI version, double-click the *go2aliyun_gui.exe* file.

■ To run the Windows CLI version, double-click the *go2aliyun_client.exe* file.

> ⑦ **Note** When you run the program, you must click **OK** to confirm that you have the administrator privilege.

■ For Linux servers, run the SMC client as a root or sudo user.

■ In the directory of the *go2aliyun_client* file, run the following commands as the root user:

```
chmod +x go2aliyun_client
```

```
./go2aliyun_client
```

■ In the directory of the *go2aliyun_client* file, run the following commands with the sudo permission:

```
sudo chmod +x ./go2aliyun_client
```

```
sudo ./go2aliyun_client
```

If you have required permissions on the migration source system, you can also run the following commands to import the migration source information. In this case, you do not need to enter your AccessKey pair.

> ⑦ **Note** An AccessKey pair of an Alibaba Cloud account includes an AccessKey ID and AccessKey secret. If you have not created an AccessKey pair, create one first. For more information, see Obtain an AccessKey pair.

■ Run the following command as a root user:

```
./go2aliyun_client --accessid=<AccessKey ID> --secretkey=<AccessKey Secret>
```

■ Run the following command as a sudo user:

```
sudo ./go2aliyun_client --accessid=<AccessKey ID> --secretkey=<AccessKey Secret
>
```

ii. Enter the AccessKey pair of your Alibaba Cloud account.

> ⑦ **Note** If the AccessKey pair you entered is invalid, open the *user_config.json* file, delete the access_id and secret_key values, and then run the client again.

■ For Windows servers

■ If you use the Windows GUI version, enter the *AccessKey ID* in the **Access Id** field, enter the *AccessKey secret* in the **Secret Key** field, and then click **Start**. For more information, see Use the Windows GUI version of an SMC client.

■ If you use the Windows CLI version, enter the *AccessKey ID* and *AccessKey secret*, and then press `Enter`.

■ For Linux servers

Enter the *AccessKey ID* and *AccessKey secret*, and then press `Enter`.

```
[2019-06-27 18:51:58] [Info]  =========   Run In Daemon Mode   =========
[2019-06-27 18:51:58] [Info]  Goto Aliyun Begin...
[2019-06-27 18:51:58] [Info]  Load User Config...
Please Enter Access Id: I             f
Please Enter Secret Key: *****************************
```

The following prompts may appear:

■ If no snapshot dependency is installed on your source server, the following prompt appears, as shown in the following figure. Decide whether to install one based on whether you need to enable block replication.

■ If you need to enable block replication for the migration, enter *yes* to automatically install a snapshot dependency.

■ If you do not need to enable block replication for the migration, enter *no*.

> ⑦ **Note** If the snapshot dependency fails to be installed, do not enable block replication when you create a migration task. Otherwise, the migration may fail.

```
[2021-08-26 18:01:07] [Info]  Check System Info [Aliyun x86_64]...
OS Info: Alibaba Cloud Linux 3 (Soaring Falcon) (5.10.23-5.al8.x86_64)
CPU Info: Intel(R) Xeon(R) Platinum 8269CY CPU @ 2.50GHz
CPU Usage: 1 Cores (0.00%) Memory Usage: 0.77GB/1.00GB (77.00%)
Hostname: launch-advisor-20210826-test0421-Linux IP Address: 10.10.     Mac Address: 00163E19E
[2021-08-26 18:01:08] [Info]  Snapshot Check...
Install snapshot dependences(gcc/make/kernel-devel)? (yes/no): yes
```

■ The rsync tool is installed in most mainstream migration sources. If rsync is not installed on the migration source, the SMC client displays a prompt. Enter *yes* to install rsync, as shown in the following figure.

```
[2019-06-26 20:20:25] [Info]  Generate SSH Key...
[2019-06-26 20:20:25] [Info]  Import Source Server...
[2019-06-26 20:20:26] [Info]  Import Source Server [s-b            ] Successfully!
Need to install rsync, run 'apt-get -y install rsync' to continue? (yes/no): yes
```

■ If SELinux is enabled on the migration source, you are prompted to disable SELinux. Enter *yes* to disable SELinux, as shown in the following figure.

```
[2019-06-27 17:53:00] [Info]  Import Source Server...
[2019-06-27 17:53:00] [Info]  Import Source Server [s-b            gg] Successfully!
Need to disable SELINUX, run 'setenforce 0' to continue? (yes/no): yes
```

> ◁ **Notice** Do not close the client until the migration is complete. Otherwise, the migration source will be disconnected from the SMC console and the migration fails.

What's next

● If `Import Source Server [s-bxxxxxxxxxxxx] Successfully!` appears, the migration source

information has been imported to the SMC console. After you import the information of a migration source for the first time, the SMC console generates a migration source record. The migration source is in the Active state. The default migration source name is <Migration source hostname + Migration source IP address>, as shown in the following figure.

	Migration Source ID/Name	Status	IP Address	Migration Source Tag	Registration Time	Operating S
	s-▓▓▓▓▓ ss▓▓▓▓	⊘ Active	192.▓▓▓	🏷	Mar ▓▓▓ ▓06	CentOS

When the client-side program is running, log on to the SMC console to complete the migration. For more information, see Step 2: Create and start a migration task.

```
[2019-07-18 13:53:40] [Info]    Import Source Server...
[2019-07-18 13:53:40] [Info]    Import Source Server [s-▓▓▓▓▓▓▓▓▓] Successfully!
[2019-07-18 13:53:40] [Info]    Check Source Server Status...
[2019-07-18 13:53:40] [Info]    Check Replication Job Status...
Wait For New Job To Start, time: 0s    |
```

When you import a migration source, SMC collects information about the source server, such as CPU, memory, CPU utilization, memory usage, and private IP address. You can click the migration source ID to view the information, as shown in the following figure. After the migration task is completed, you can create an ECS instance by using the information of the source server.

Properties

Hostname	iZbp14kyqi4fdrd▓▓		IP Address	192.1▓
CPU	2Nuclear		CPU usage	1.50%
Memory	8.00 GiB		Memory Usage	2.80%
Operating system	CentOS		framework	x86_64
Startup mode	BIOS			

- If Error or Goto Aliyun Not Finished! appears, the migration source information has failed to be imported, as shown in the following figure. We recommend that you find the root cause of the issue, and then run the client again. For more information, see SMC FAQ.

```
[2019-07-17 18:13:33] [Error] Verify User RAM Role Authority Failed: Code: Inval
idAccessKeyId.NotFound Message: Specified access key is not found.
The Access Id Is Not Correct. Please Check It.
[2019-07-17 18:13:33] [Warn]  Goto Aliyun Not Finished! See Details Info In Log
File [/root/go2aliyun_client1.5.2.5_linux_x86_64/Logs/go2aliyun_client_20190717.
log].
```

4.Step 2: Create and start a migration task

After you import the information of a migration source, Server Migration Center (SMC) automatically generates a record for the migration source. You must create and start a migration task for the migration source in the SMC console. This topic describes how to create and start a migration task.

Prerequisites

- The information of the migration source is imported. For more information, see Step 1: Import the information of a migration source.

- The migration source is in the Active state. If the migration source is not in the Active state, you cannot create a migration task for the migration source. For more information about how to restore a migration source to the Active state, see the "What can I do if I cannot create a migration task because a migration source is not in the Active state?" section in SMC FAQ.

Context

SMC can obtain the partitioning scheme of a source disk used by the migration source and generate the same partitioning scheme for the destination disk. This also accelerate data transmission during migration.

Procedure

1. Log on to the SMC console.

2. Step 3: Create a migration job.

    i. In the left-side navigation pane, click **Migration Sources**.

    ii. Find the migration source, and click **Create Migration Task** in the **Actions** column.

    You can obtain the ID of the migration source from the SMC client, as shown in the following figure. Then, you can use the ID to find the migration source in the SMC console. For more information, see Step 1: Import the information of a migration source.

    ```
    [2019-06-24 10:42:13] [Info]  Generate SSH Key...
    [2019-06-24 10:42:14] [Info]  Import Source Server...
    [2019-06-24 10:42:15] [Info]  Import Source Server [s-                    v] Succ
    essfully!
    ```

    iii. In the **Create Migration Task** panel, read the instructions and set the parameters for the migration task.

    The **Basic Configuration** section includes the following parameters:

    - **Target Region**: Required. The ID of the destination region. For more information about Alibaba Cloud regions, see Regions and zones.

    - **Task name**: the name of the migration task.

        > ⓘ **Note**   The task name must be unique within an Alibaba Cloud region.

    - **Description**: the description of the migration task.

    - **Target Disk Size (GiB)**: the disk configuration of the destination server.

The following table describes the parameters.

Parameter	Requ ired	Description
Enable Block Replication	No	■ If you select **Enable Block Replication**, stable data transmission is ensured. The block replication feature also ensures that the source and destination disks use the same partitioning scheme. You cannot modify the size of each partition in the destination disk. After you select Enable Block Replication, the **Whether to enable block replication** switch appears next to **Partition <N>**. ■ If you clear **Enable Block Replication**, SMC uses the default method to migrate the migration source. You can modify the size of each partition in the destination disk. ⑦ **Note** If your source server runs Windows, block replication is enabled by default. Do not disable it.

Parameter	Required	Description

System Disk	Yes	■ **System Disk**: the system disk size of the destination ECS instance. Unit: GiB. Valid values: 20 to 500. The size of the destination system disk must be greater than the amount of data in the source system disk. For example, if the total size of the source system disk is 400 GiB but the size of data stored in this disk is only 100 GiB, you must set this parameter to a value greater than 100 GiB.
		
		   ⑦ **Note** The default value of this parameter is the size of the source system disk. We recommend that you retain the default value or specify a greater value.
		
		■ **Partition <N>**: SMC generates a partitioning scheme for the destination system disk based on that of the source system disk. Unit: GiB. Valid values: 0 to 98. `N` indicates the serial number of the partition. For example, if the system disk of the migration source has only one partition, **Partition 0** is generated.
		■ **Whether to enable block replication**: This switch is available only when you select **Enable Block Replication**. SMC allows or disallows you to turn on the switch based on whether the migration source supports block replication.
		  ■ If the migration source does not support block replication for partitions, you cannot turn on the switch.
		  ■ If the migration source supports block replication for partitions, you can turn on the switch to migrate disk data at the partition level.

Parameter	Requ ired	Description

Data Disk <N>	No	■ **Data Disk <N>**: the data disk size of the destination ECS instance. Unit: GiB. Valid values: 20 to 32768.
		
		  ■ If you select the **Data Disk <N>** check box, a destination data disk is generated.
		
		  ■ `N` indicates the serial number of the data disk.
		
		  ■ The size of the destination data disk must be greater than that of the existing data in the source data disk. For example, if the total size of the source data disk is 500 GiB but the size of data stored in the disk is only 100 GiB, you must set this parameter to a value greater than 100 GiB.
		
		■ **Partition <N>**: SMC generates a partitioning scheme for the destination system disk based on that of the source system disk. Unit: GiB. Valid values: 0 to 141. `N` indicates the serial number of the partition. For example, if a data disk of the migration source has only one partition, **Partition 0** is generated.
		
		■ **Whether to enable block replication**: This switch is available only when you select **Enable Block Replication**. SMC allows or disallows you to turn on the switch based on whether the migration source supports block replication.
		
		  ■ If the migration source does not support block replication for partitions, you cannot turn on the switch.
		
		  ■ If the migration source supports block replication for partitions, you can turn on the switch to migrate disk data at the partition level.
		
		(?) **Note** **Data Disk <N>** is available only if the migration source has a data disk. For more information, see SMC FAQ.

■ **Resource Type**: the type of the destination image. Valid values:

■ **ECS Image**. The following table describes the parameters.

Parameter	Required	Description
Image Name	No	The name of the destination ECS image generated by SMC for the migration source. ② **Note** The image name must be unique within an Alibaba Cloud region.
License Type	Yes	The license type. ■ **Alibaba Cloud**: the Microsoft license provided by Alibaba Cloud. For more information, see What Windows Server licenses does Alibaba Cloud support? ■ **BYOL**: SMC allows you to bring your own license (BYOL). You can bring your own Microsoft license or register with Red Hat Cloud Access. For more information, see Is bring your own license (BYOL) supported when I migrate servers by using SMC?
Automatic Incremental Synchronization	No	Specifies whether SMC automatically synchronizes incremental data of the migration source to Alibaba Cloud. ■ To enable this feature, you must set the following parameters: 　■ **Synchronization Interval**: the interval at which SMC automatically synchronizes incremental data to Alibaba Cloud. 　■ **Upperlimit of Reserved Images**: the maximum number of images that can be retained during incremental migration. SMC automatically synchronizes incremental data to Alibaba Cloud at the specified interval. For more information about best practices for incremental migration, see Migrate incremental data from a source server. ■ If you disable this feature, incremental data is not synchronized.

■ **ECS Instance**. The following table describes the parameters.

> ⑦ **Note** The storage and operating systems of the source server and destination instance must be compatible. For more information, see Migrate servers to ECS instances.

* Resource Type	○ ECS Image ◉ ECS Instance
* Destination Instance	[∨]

Parameter	Requ ired	Description
Destination Instance	Yes	The destination ECS instance.
License Type	Yes	The license type. ■ **Alibaba Cloud**: the Microsoft license provided by Alibaba Cloud. For more information, see What Windows Server licenses does Alibaba Cloud support? ■ **BYOL**: SMC allows you to bring your own license (BYOL). You can bring your own Microsoft license or register with Red Hat Cloud Access. For more information, see Is bring your own license (BYOL) supported when I migrate servers by using SMC?

Automatic Incremental Synchroniza tion	No	Specifies whether SMC automatically synchronizes incremental data of the migration source to Alibaba Cloud.
		
		■ To enable this feature, you must set the following parameters:
		
		  ■ **Synchronization Interval**: the interval at which SMC automatically synchronizes incremental data to Alibaba Cloud.
		
		  ■ **Upperlimit of Reserved Images**: the maximum number of images that can be retained during incremental migration.
		
		  SMC automatically synchronizes incremental data to Alibaba Cloud at the specified interval. For more information about best practices for incremental migration, see Migrate incremental data from a source server.
		
		■ If you disable this feature, incremental data is not synchronized.

■ **Container Image**. The following table describes the parameters.

> ⑦ *Note*
>
>   ■ Not all operating systems and architectures support migration to Container Registry. For more information, see Step 1: Import the information of a migration source.
>
>   ■ For information about how to migrate source servers to Container Registry, see Migrate source servers to Container Registry.

Parameter	Required	Description
Namespace	Yes	The namespace of the destination container image.
Repository Name	Yes	The name of the repository that stores the destination container image.
Version	No	The version of the destination container image.
RAM Role	Yes	The RAM role that is attached to the intermediate instance.

■ **Method to Run**: specifies whether to run the task immediately after it is created or automatically run the task.

  ■ **Run Now**: The migration task runs immediately after it is created.

  ■ **Run Later**: The migration task automatically runs at the specified time after it is created.

  > ⑦ *Note*   The earliest time that you can specify to run a migration task is 10 minutes after its creation.

  ■ **Create Only**: After the task is created, you must manually start the task.

  Default value: **Run Now**.

Tag and Network (Optional):

■ **Migration Task Tag**: the tags that you specify for the migration task. Each tag contains a key and a value. You can use tags to query and manage migration tasks.

  > ⑦ *Note*   You can specify a maximum of 20 tags for a migration task.

■ **Network Type**: the type of the network that is used to migrate data to an intermediate instance. During migration, SMC creates an intermediate instance that connects to a vSwitch in a VPC. If you select Public Network, a public IP address is assigned to the intermediate instance.

The following table describes the parameters.

Parameter	Description
Public Network	SMC migrates data to the intermediate instance over the Internet. If you select Public Network, make sure that the migration source can access the Internet. You can choose whether to specify a VPC and a vSwitch based on your requirements. ■ If you specify a VPC and a vSwitch, SMC creates an intermediate instance that connects to the specified VPC and vSwitch. If you migrate multiple migration sources at a time, you can specify the same VPC and vSwitch for migration tasks. This improves the usage of VPC resources. You can migrate a maximum of 100 migration sources at a time. ■ If you do not specify a VPC or a vSwitch, SMC automatically creates a VPC and a vSwitch and creates an intermediate instance that connects to the VPC and the vSwitch. If you do not specify a VPC or a vSwitch before you migrate multiple migration sources at a time, SMC creates a VPC for each intermediate instance. ⑦ **Note** Each Alibaba Cloud account can have a maximum of 10 VPCs in a region, including the VPCs that you create and the VPCs that are automatically created by SMC. Therefore, you can migrate a maximum of 10 migration sources at a time. To raise the VPC quota, submit a ticket.

Parameter	Description
VPC	SMC migrates data to the intermediate instance over a VPC. If you select VPC, you must specify a VPC and a vSwitch and make sure that the migration source can connect to the VPC. ⑦ **Note** If your server in a data center, virtual machine, or cloud host can connect to a VPC, we recommend that you select this mode to migrate data. Compared with migration over the Internet, migration over a VPC is more efficient and stable. You can use VPN Gateway, Express Connect, and Smart Access Gateway to connect a migration source to a VPC. For more information, see Connect a data center to a VPC.

Advanced Settings (Optional):

- **Checksum**: This feature enhances the verification of data consistency between the migration source and the destination server. However, this may reduce the rate of data transmission.

  By default, this feature is disabled.

- **Transmission Speed Limit**: the maximum bandwidth for data transmission during migration. Unit: Mbit/s.

- **Compression Level**: the compression ratio of data to be migrated. Set the compression ratio based on your requirements.

  - If the bandwidth is limited, a high compression ratio improves the transmission efficiency.

  - If a high bandwidth is available, we recommend that you do not compress data. Data compression consumes CPU resources of the migration source.

  Valid values: 0 to 10. Default value: 7. The value 0 indicates that data is not compressed.

- **Intermediate Instance Type**: The type of the intermediate instance. Select an intermediate instance type based on your needs. The parameter takes effect only when **Resource Type** is set to **ECS Image** or **Container Image**.

  - If you specify the parameter, SMC creates an intermediate instance based on the specified instance type. If the specified instance type is unavailable, you cannot create the migration task.

  - If you do not specify the parameter, SMC automatically creates an intermediate instance.

  iv. After the configuration is complete, click **OK**.

3. Start the migration task.

   ⑦ **Note** If you set the Method to Run parameter to **Run Now**, skip this step. If you set the Method to Run parameter to **Create Only** or **Run Later**, you can perform the following steps to start the migration task:

   i. In the left-side navigation pane, click **Migration Tasks**.

ii. Find the migration task and click **Start** in the Actions column.

- To start multiple migration tasks at a time, select the tasks and click **Start/Retry** in the lower part of the Migration Tasks page. The selected tasks must be in the **Ready**, **Stopped**, or **Error** state.

- To suspend a migration task in the **Syncing** state, click **Pause** in the **Actions** column.

What's next

On the **Migration Tasks** page, wait until the migration task is completed. You can view the migration speed and remaining synchronization time. .
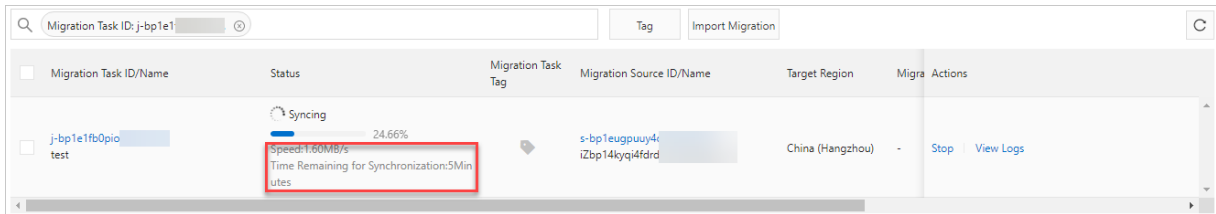

If the task enters the **Completed** state, the migration is successful.
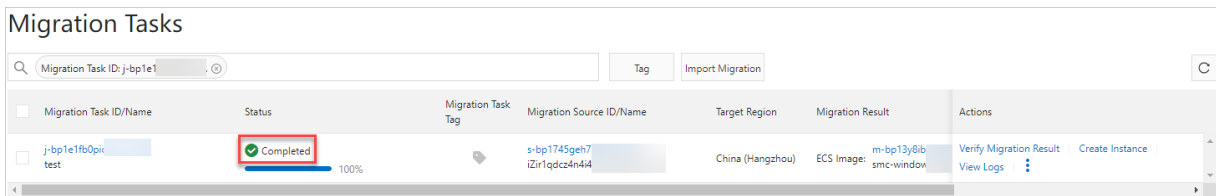
- If you set Resource Type to ECS Image, you can perform the following steps to create an ECS instance by using an image:

i. (Optional)Verify the migration result. This feature verifies whether the image generated by the migration task can create and start instances. This verification is based on the Operation Orchestration Service (OOS) template named **ACS-SMC-CreateAndVerifyInstance** provided by Alibaba Cloud.

a. Click **Verify Migration Result** in the Actions column.

b. In the dialog box that appears, read the verification process, and click **Verify Now**.

You can also click **Custom Verification Script** to set the parameters.

c. View the verification result in the **Last Migration Result** column.

- **Successful**: indicates that the migration is successful. You can click **View Output Parameter** to check the details.

- **Failed**: indicates that the migration failed. You can click **View Cause** to view the cause of failure and troubleshoot errors.

You can also click the ⋮ icon in the Actions column, and then click **Check Verification History in the OOS Console** to view the template history.

ii. Find the migration task and click **Create Instance** in the **Actions** column.
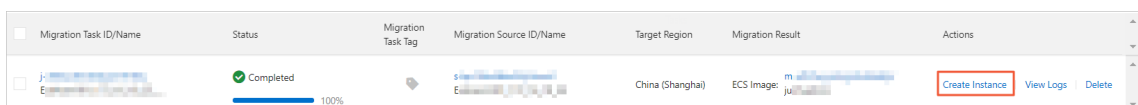
iii. Set the parameters to create the destination instance. For more information, see Create an ECS instance by using a custom image.

iv. Connect to the instance and check the system of the destination server. For more information, see How can I check my system after migrating a Windows server? or How can I check my system after migrating a Linux server?

- If you set Resource Type to ECS Instance, you can click **View Destination Instance** in the Actions column to go to the Destination Instance page.

- If you set Resource Type to Container Image, you can use a container image to deploy applications. For more information, see Migrate source servers to Container Registry.

If the migration task enters the **Error** state, the migration failed. You must perform the following steps:

1. Click **View Logs** in the **Actions** column to fix errors. For information about common errors and solutions, see SMC FAQ.

2. On the **Migration Tasks** page, restart the migration task. The migration task resumes from the point where it was suspended.

> ⑦ **Note** If the intermediate instance is released, you must create another migration task. For more information, see the "What can I do if I have released an intermediate instance by mistake?" section in SMC FAQ.