Server Migration Service

User Guide

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Permissions Management

1.1 Creating a User and Assigning Permissions

This section describes how to use **IAM** for fine-grained permissions control on your SMS resources. With IAM, you can:

- Create IAM users for employees based on the organizational structure of your enterprise. Each IAM user is assigned their own distinct security credentials for SMS.
- Assign only the minimum permissions required for users to perform a given task.
- Entrust a Huawei Cloud account or cloud service to perform professional and efficient O&M on your SMS resources.

NOTE

A Huawei Cloud account has all the permissions required for using SMS by default. If you use your Huawei Cloud account to perform migration, skip this chapter.

Figure 1-1 shows the process for assigning permissions.

Prerequisites

Before assigning permissions to user groups, you should learn about system policies supported by SMS and choose policies or roles based on service requirements. For more information about system policies supported by SMS, see **SMS Permissions**. For the permissions supported by other services, see **System-defined Permissions**.

Process Flow



Figure 1-1 Process for assigning SMS permissions

Procedure

Step 1 Create a user group and assign permissions to it.

- If the IAM users who will be added to this group need all SMS permissions, attach system-defined policies SMS FullAccess, OBS OperateAccess, ECS FullAccess, VPC FullAccess, and EVS FullAccess to the group. EVS KMSAccess must be attached if disk encryption is required.
- If the IAM users only need specific SMS permissions, create custom policies and attach these policies to the user group. For details, see SMS Custom Policies.

NOTE

Compared with system-defined policies, custom policies provide more fine-grained and secure permissions control.

Step 2 Create a user and add it to a user group.

Create a user on the IAM console and add the user to the group created in **Step 1**.

Step 3 Sign in as the created user and verify permissions.

In the authorized region, perform the following operations:

• Choose Service List > Server Migration Service. In the navigation pane on the left, choose Servers. In the server list, locate the server to be migrated, and click Configure in the Target column to configure the target server. If the target server can be configured, the permissions have taken effect.

• Choose a service other than SMS and its dependents services in the **Service List**. If a message appears indicating that you have insufficient permissions to access the service, the permissions have taken effect.

----End

1.2 SMS Custom Policies

You can create custom policies using the visual editor, or with a JSON file.

- Visual editor: Select cloud services, actions, resources, and request conditions. This does not require knowledge of policy syntax.
- JSON: Edit JSON policies from scratch or based on an existing policy.

For details, see **Creating a Custom Policy**. If you need to migrate source servers to a specific enterprise project, create a custom policy by referring to **Assigning Permissions to a User Group by Enterprise Project**.

The following are example SMS custom policies:

• Example SMS policy that contains permissions for project-level services

"Version": "1.1", "Statement": [
{	
"Action": [
"vnc:securityGrouns:create"	
"vpc:securityGroupRules:create"	
"vnc:vncs:create"	
"vpc:publicIns:create"	
"vpc:subnets:create"	
"ecs:cloudServers:create"	
"ecs:cloudServers:attach"	
"ecs:cloudServers:detachVolume"	
"ecs:cloudServers:ctart"	
"ecs:cloudServers:ston"	
"ecs:cloudServers:delete"	
"ecs:cloudServers:reboot"	
"ecs:cloudServers:undateMetadata"	
"ecs:serverPasswords:manage"	
"ecs:serverKeynairs:delete"	
"ecs:diskConfigs:use"	
"ecs:CloudServers:create"	
"ecs:servers:setMetadata".	
"ecs:serverVolumes:use".	
"ecs:serverKeypairs:create".	
"ecs:serverInterfaces:use".	
"ecs:serverGroups:manage".	
"ecs:securityGroups:use".	
"ecs:servers:unlock".	
"ecs:servers:rebuild".	
"ecs:servers:lock",	
"ecs:servers:reboot",	
"evs:volumes:use",	
"evs:volumes:create",	
"evs:volumes:update",	
"evs:volumes:delete",	
"evs:volumes:attach",	
"evs:volumes:detach",	
"evs:snapshots:create",	
"evs:snapshots:delete",	
"evs:snapshots:rollback",	
"kms:cmk:list",	
"kms:cmk:get",	

```
"kms:dek:create",
            "kms:dek:decrypt",
            "ecs:*:get*",
            "ecs:*:list*",
"evs:*:get*",
            "evs:*:list*",
            "vpc:*:list*",
           "vpc:*:get*",
"ims:*:get*",
"ims:*:list*"
        ],
"Effect": "Allow"
     }
  ]
}
Example SMS policy that contains permissions for global services
{
  "Version": "1.1",
   "Statement": [
      {
         "Effect": "Allow",
         "Action": [
             "sms:server:registerServer",
            "sms:server:migrationServer",
            "sms:server:queryServer"
        ]
     }
  ]
}
```



Table 1-1 Policy description

Policy	Permission Description
sms:server:queryServer	Read-only permission for viewing source servers
sms:server:registerServer	Read/write permissions for registering source servers
sms:server:migrationServer	Read/write permissions for migrating source servers

2 Installing the Agent on the Source Server

2.1 Installing the Agent on Windows

Scenarios

You need to install the Agent on the source server to be migrated. During the installation, you need to enter the AK/SK pair of the Huawei Cloud account you are migrating to. After the Agent is started, it automatically reports source server information to SMS. The information is used for migration only. For details, see What Information Does SMS Collect About Source Servers?

Before using SMS to migrate servers, you need to manually install and register the Agent on each server to be migrated. If there are more than 50 servers to migrate, you can **create a server migration workflow** on MgC to automate batch installation and registration of the Agent.

There are two options for Windows:

- GUI-based Windows Agent (Python 3): Windows Server 2019, Windows Server 2016, Windows Server 2012, Windows 10, and Windows 8.1
- CLI-based Windows Agent (Python 2): Windows Server 2008 and Windows 7

You must log in to the source server as user Administrator.

Prerequisites

- You have obtained an AK/SK pair for your Huawei Cloud account.
 - If you use an IAM user for migration, obtain an AK/SK pair by referring to How Do I Create an AK/SK Pair for an IAM User?

- If you use an account for migration, obtain an AK/SK pair by referring to How Do I Create an AK/SK Pair for an Account?
- You have obtained the administrator permissions for the source server.
- You have confirmed that the source server OS is supported by SMS. Learn more about supported Windows OSs.
- There is no antivirus software on the source server. Antivirus software may prevent the Agent from starting up.

If you encounter Agent startup failures due to antivirus software, refer to the instructions in How Do I Fix Error "Failed to start the I/O monitoring module" When I Start the Agent?

Downloading the Agent Installation File

Step 1 Sign in to the **SMS console**.

- **Step 2** In the navigation pane on the left, choose **Agents**.
- Step 3 Select the Windows card, locate the Agent that matches the source server OS,

and click the \perp icon next to **Agent**.

- GUI-based Windows Agent (Python 3): Windows Server 2019, Windows Server 2016, Windows Server 2012, Windows 10, and Windows 8.1
- CLI-based Windows Agent (Python 2): Windows Server 2008 and Windows 7

SMS	Agents	🗂 Us
Dashboard	Source OS	
Agents	🛆 Linux 🗱 Windows	
Proxy Servers	O Prepare O Obtain an AVOR pair for the target account. Obtain New C	
	O Download the Agent ①	
	Windows Agent (Python 3)	
	Size 69.2 MB Size 41.8 MB	
	Updated Jun 27, 2024, 02:49:03 GMT+08:00 Updated Jun 27, 2024, 02:47:51 GMT+0	8:00
	OS Windows Server 2019/Windows Server 2019/Windows Server 2012/Win OS Windows Server 2008/Windows	7
	Agent https://sms-agent-3-0.obs.c >huawel.com/SMS-Agent & Agent https://sms-agent-3-0.obs.c Py3.exe	.huawei.com/SMS-Agent-
	SHA256 File https://sms-agent-3-0.obs.c huavei.com/SMS-Agent- Ju SHA256 File https://sms-agent-3-0.obs Py3.exe.sha256 File Py2.exe.sha256	huawei.com/SMS-Agent- d.
	Verify File Integrity Verify File Integrity	

- **Step 4** Read and agree to the service disclaimer, and click **Yes** to download the Agent installation file.
- **Step 5** Click the icon next to **SHA256 File** to download the file that contains a hash value to a local directory. Verify the integrity of the Agent installation file. For details, see **How Do I Verify the Integrity of the Agent Installation File**?

0	Sownload the Agent			
	Windows Agent (Pyt	hon 3) ③	Windows Agent (Pyt	hon 2) 🕥
	Size	69.2 MB	Size	41.8 MB
	Updated	Jun 27, 2024, 02:49:03 GMT+08:00	Updated	Jun 27, 2024, 02:47:51 GMT+08:00
	os	Windows Server 2019/Windows Server 2016/Windows Server 2012/Windows 10/Windows 8.1	OS	Windows Server 2008/Windows 7
	Agent	https://sms-agent-3-0.obs.i - huavel.com/SMS-Agent-Py3.exe di-	Agent	https://sms-agent-3-0.obs.c huavel.com/SMS-Agent-Py2.exe du
	SHA256 File	https://sms-agent-3-0.obs.) huavel.com/SMS-Agent-Py3.exe.sha256 🗼	SHA256 File	https://sms-agent-3-0.obs.c > huavel.com/SMS-Agent-Py2.eve.sha256
	Verify File Integrity		Verify File Integrity	

----End

Installing the Windows Agent (Python 3)

Step 1 Transmit the SMS-Agent-Py3.exe file to the source server.

- Step 2 Log in to the source server as user Administrator and double-click the SMS-Agent-Py3.exe file.
- **Step 3** Click **Install** and wait for the installation to complete.
- Step 4 Click Finish. The SMS-Agent GUI is displayed.
- Step 5 Enter the AK/SK pair for the Huawei Cloud account and the SMS domain name for the region you are migrating to. You can obtain the SMS domain name on the Agents page of the SMS console, as shown in Figure 2-2.
 - If you do not need to use an HTTP/HTTPS proxy, select **Direct Connection**.
 - If you need to use an HTTP/HTTPS proxy, select Use Proxy and enter the IP address, port number, username, and password of the proxy server.

NOTE

- Proxy Server IP: Follow the format https://your-proxy-addr.com. Use the protocol configured for your proxy server. HTTPS is recommended. Replace your-proxy-addr with the IP address of your proxy server, not that of the target server.
- **Port**: Enter the port used by the proxy server.
- Proxy user name: Enter the username required for using the proxy software. If no username is required, leave this parameter blank.
- Password: Enter the password corresponding to the proxy username. If no
 password is required, leave this parameter blank.

Figure 2-1 Starting the Agent

🐻 running		-	×
Enter an AK.	,		
Enter an SK.	*****		
Enter an sms_domain:	• • • • • •		
Ø Direct Connection	C Use Proxy		
Proxy server IP :			
Port :			
Proxy user name :			
Password :			
Run log			
Enterprise pro Collecting sour Uploading the s	ject selected rce information source information	^	
Upload success Waiting for the console for the	e SMS instruction, go to the SMS e next step	~	
start	hide		

SMS	Agents			C 11
Dashboard	Source OS			
Servers Agents	∆ Linux	Windows		
Templates Proxy Servers	Prepare Cottain an AXOIX pair for the target account.Obtain New C			
	Download the Agent ① Windows Agent (Python 3) ①		Windows Agent (Python 2) 🛞	
	Statu 82.2481 Optimist Just 23 (20,243) (20) (14) (20) Optimist Just 24 (20,243) (20) (14) (20) April Matter into a special date of Sec 202 (20) Matter into a special date of Sec 202 (20) Matter into a special date of Match (76) a special Just (20)	Nindous Server 2312/Windows 15/Windows 8.1 Names con 1985-Agent P(2) and ⊥ Names con 1985-Agent P(2) and sha255 ⊥	Dise 41.8 MB Upstand Jun 27, 2024, 42 47 51 0 km1 OS Webers Same 2004/miles, Apart Maps: Joint append 3 40 km1 Higgs: Joint append 3 40 km1 SHA251 File Higgs: Joint append 3 40 km1 Vetty File Integrity Vetty File Integrity	чбаю ма7 Гланоссолб03 Арлайр2 во А. Ланоссолб03 Арлайр2 во въ206 А
	Install and start the Agent Enter the AVCEX pair of the target account and the SMS domain name to a	tart the Agent. If the Agent tails to be started, see Solution		
	Enter AK/SK Otation Nove (2)	Enter the SMS domain SMS c	sarre Nawei.com	3 (Optional) Select an enterprise project Select the enterprise project where the target server is managed.

Figure 2-2 Obtaining the SMS domain name

- Step 6 If the EPS service has been enabled for the Huawei Cloud account, after you entered the AK/SK pair, the Agent will list all enterprise projects the account is allowed to access. You can select the enterprise project you would like to migrate the source server to. This enables you to isolate permissions, resources, and finance during the migration. For details, see Migrating Servers into an Enterprise Project.
- Step 7 Click start.
- **Step 8** Carefully review the **Privacy Statement** and click **Yes** if you want to continue.

When the message "Upload success. Waiting for the SMS instruction" is displayed, the Agent has been started. You can sign in to the SMS console and perform subsequent operations.

----End

Installing the Windows Agent (Python 2)

- Step 1 Transmit the SMS-Agent-Py2.exe file to the source server.
- Step 2 Log in to the source server as user Administrator and double-click the SMS-Agent-Py2.exe file.
- **Step 3** Click **Install** and wait for the installation to complete.
- **Step 4** Click **Finish**. The SMS-Agent CLI is displayed.

NOTE

If you need to rerun the Agent, double-click **agent-start.exe** in the **C:\SMS-Agent-Py2** directory where the Agent was installed.

Step 5 If you need to use an HTTP/HTTPS proxy, go to 6.

If you do not need to use an HTTP/HTTPS proxy, go to 7.

NOTE

- If your source server cannot access Huawei Cloud over the Internet, you can use a proxy server. You will need to configure the proxy server yourself.
- In a migration over a private line or VPN, a proxy server is used for registering the source server with SMS. It is not used for data migration.

Step 6 (Optional) Configure the HTTP/HTTPS proxy for the Agent.

Go to the directory where the Agent was installed (typically C:\SMS-Agent-Py2\config) and edit the **auth.cfg** file. Do not edit the **auth.cfg** file unless you need to use an HTTP/HTTPS proxy.

[proxy-config] enable = true proxy_addr = https://your-proxy-addr.com proxy_port = proxyport proxy_user = use_password = false

NOTE

- enable: To use a proxy, set this parameter to true.
- **proxy_addr**: Replace *your-proxy-addr* with the IP address of the proxy server, not that of the target server. Use the protocol configured for the proxy. HTTPS is recommended.
- **proxy_user**: Enter the username required for the proxy. If no username is required, leave it blank.
- **use_password**: If a password is required for the proxy, set it to **true**. If no password is required, set it to **false**.
- **Step 7** When prompted, enter the AK/SK pair for the Huawei Cloud account and the SMS domain name for the region you are migrating to. You can obtain the SMS domain name on the **Agents** page of the SMS console, as shown in **Figure 2-3**.

If the EPS service has been enabled for the Huawei Cloud account, after you entered the AK/SK pair, the Agent will list all enterprise projects the account is allowed to access. You can select the enterprise project you would like to migrate the source server to. This enables you to isolate permissions, resources, and finance during the migration. For details, see Migrating Servers into an Enterprise Project.

∆ Linux		Windows		
O Prepare ③				
Obtain an AKIS	pair for the target account. Obtain Now 🕑			
O Download the	gent ()			
Windows	pent (Python 3)		Windows Agent (Python 2)
524	69.2 MB		Size	41.0 MB
Updated	Jun 27, 2024, 02.49 03 GMT+98.00		Updated	Jun 27, 2024, 02:47:51 GMT+08:00
08	Windows Server 2019/Windows Server	2015/Windows Server 2012/Windows 10/Windows 8.1	08	Windows Server 2008/Windows 7
Agent	https://sms-agent-3-0.a	1 huavel.com/SNS-Agent Py3.exe 🔺	Agent	https://ons-agent-3-0.obs. huavel.com/SMS-Agent-Py2.exe 🔺
SHA256 FI	https://sms-agent-3-0.abs.c	huavel.com/SMS-Agent-Py3.eve.she255 ⊥	SHA255 File	https://sms-apent-3-0.obs. huavel.com/SMS-Agent-Py2.exe.sha256 🗼
Verity File	Ngrity		Verify File Integrity	e
 Install and sta 	the Agent			

Figure 2-3 Obtaining the SMS domain name

After the authentication succeeds, the Agent starts to report source server information to SMS, and the window is closed. You can go to the **Servers** page on the SMS console to view the record of the source server.

----End

Troubleshooting

- SMS.0202 AK/SK Authentication Failed
- Why Wasn't My Source Server Added to the SMS Console After I Configured the Agent?

2.2 Installing the Agent on Linux

Scenarios

You need to install the Agent on the source server to be migrated. During the installation, you need to enter the AK/SK pair of the Huawei Cloud account you are migrating to. After the Agent is started, it automatically reports source server information to SMS. The information is used for migration only. For details, see What Information Does SMS Collect About Source Servers?

NOTE

Before using SMS to migrate servers, you need to manually install and register the Agent on each server to be migrated. If there are more than 50 servers to migrate, you can **create a server migration workflow** on MgC to automate batch installation and registration of the Agent.

Prerequisites

- You have obtained an AK/SK pair for your Huawei Cloud account.
 - If you use an IAM user for migration, obtain an AK/SK pair by referring to How Do I Create an AK/SK Pair for an IAM User?
 - If you use an account for migration, obtain an AK/SK pair by referring to How Do I Create an AK/SK Pair for an Account?
- You have confirmed that the source server OS is supported by SMS. Learn more about **supported Linux OSs**.

Procedure

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane on the left, choose **Agents**.
- **Step 3** Select the **Linux** card, and in the **Linux Agent** area, click the □¹ icon next to **Agent** to copy the Agent download command. Run the command on the source server to download the Agent installation package.

entition publics Prepare ③ Windows Obtain an AVGK pair for the target account. Obtain Now ② Obtain an AVGK pair for the target account. Obtain Now ② Obtain an AVGK pair for the target account. Obtain Now ② Download the Agent ③ Linux Agent Size 108.3 MB Updated Dec 20, 2024, 02.42.51 GMT-08.00 Agent URL wget 4.3 -11 5https://sms-resource-(my/huaveicloud.com/SMS-Agen/pairs/smarkets/articles/	
Prepare ③ Obtain an AK/SK pair for the target account. Obtain Now [3] Obventiced the Agent ③ Linux Agent Size 108.3 MB Updated Dec 20, 2024 02.42.51 GMT+08.00 Agent URL wgH-1 3-15 https://sms-resource- my/huavelicioud.com/SMS-Agent	
Coltain an AKSIS part for the target account Obtain Nov [3] Covering of the Agent Size 108.3 MB Updated Dec 20, 2024, 02.42.51 GMT-08.00 Agent UPL wget +3 -T 15 https://tms-resource- nyhuawelcloud.com/SMS-Agen	
Downtoad the Agent Inux Agent Size 108.3 MB Updated Dec 20, 2024, 02.42.51 GMT+08.00 Agent URL wget +3 -1 15 https://mms-resource-	
Linux Agent Size 108.3 MB Updated Dec 20, 2024, 02.42.51 GMT-08.00 Agent URL wgel-t3 15 https://sms-resource-	
Size 108.3 MB Updated Dec 20, 2024, 02.42 51 GMT+08:00 Agent URL wgel-13 15 https://sms-resource- nyhuawelcloud.com/SMS-Agent	
< Updated Dec 20, 2024, 02 42 51 GMT+08 00 Apent URL wgel+3 -T 15 https://sms-resource-/ my/naavelcloud.com/SMS-Apent	
Agent URL wget -I 3 -T 15 https://sms-resource-< nyhuaweicloud.com/SMS-Agen	
	at tay or -
SHA256 File wget -t 3 -T 15 https://sms-resource-c .myhuaweicloud.com/SMS- Agent.tar.gz.sha256	

Step 4 Copy the command next to **SHA256 File** and run the command on the source server. Use the hash value contained in the SHA256 file to verify the integrity of

the Agent installation package. For details, see **How Do I Verify the Integrity of the Agent Installation File?**

Linux Agent		
Size	106.9 MB	
Updated	Jun 27, 2024, 02:40:26 GMT+08:00	
Agent URL	wget -t 3 -T 15 https://sms-agent-3-0.obs	huawei.com/SMS-Agent.tar.gz
SHA256 File	waet -t 3 -T 15 https://sms-agent-3-0.obs.).huawei.com/SMS-Agent.tar.gz.sha256

- Step 5 Decompress the Agent software package. tar -zxvf SMS-Agent.tar.gz
- Step 6 Switch to the SMS-Agent directory on the source server. cd SMS-Agent
- **Step 7** If you need to use an HTTP/HTTPS proxy, go to 8.

If you do not need to use an HTTP/HTTPS proxy, go to 9.

A CAUTION

- If your source server cannot access Huawei Cloud over the Internet, you can use a proxy server. You will need to configure the proxy server yourself.
- In a migration over a private line or VPN, a proxy server is used for registering the source server with SMS. It is not used for data migration.
- **Step 8** (Optional) Configure the HTTP/HTTPS proxy for the Agent.
 - 1. Go to the **config** directory. cd SMS-Agent/agent/config
 - Open and edit the auth.cfg file. Do not edit the auth.cfg file unless you need to use an HTTP/HTTPS proxy. vi auth.cfg

The values shown here are for reference only.

[proxy-config] enable = true proxy_addr = https://your-proxy-addr.com proxy_port = 3128 proxy_user = root use_password = true

NOTE

- enable: To use a proxy, set it to true.
- proxy_addr: Replace *your-proxy-addr* with the IP address of the proxy server, not that of the target server. Use the protocol configured for the proxy. HTTPS is recommended.
- proxy_user: Enter the username required for the proxy. If no username is required, leave it blank.
- **use_password**: If a password is required for the proxy, set it to **true**. If no password is required, set it to **false**.
- 3. Save the **auth.cfg** file and exit.
 - :wq

Step 9 Start the Agent.

./startup.sh

Step 10 Carefully review what information will be collected by the Agent, enter **y**, and press **Enter**.

Figure 2-4 Entering y



Step 11 Enter the AK/SK pair for the Huawei Cloud account and the SMS domain name for the region you are migrating to. You can obtain the SMS domain name on the Agents page of the SMS console, as shown in Figure 2-6.

Figure 2-5 Entering the AK/SK pair

fter being started, the migration Agent collects system configuration information	n and uploads th	ne information	to SMS for migra
on task creation. The information to be collected includes server IP address and	MAC address. Fo	or details, see	the Server Mig
ion Service User Guide. Are you sure you want to collect the information?(y/n)y			
lease input AK(Access Key ID) of Pulbic Cloud:			
lease input SK(Secret Access Key) of Pulbic Cloud:********			
lease input smsdomain of Public Cloud: sms.(.huawei.com			

Figure 2-6 Obtaining the SMS domain name

SMS	Agents
Dashboard Servers	Source OS
Agents	🔬 Linux 🗰 Windows
Proxy Servers	Ottain an AKGK pair for the target account. Oktain New []
	O Download the Agent
	Linux Agent Size 106.9 MB
	Updated Jun 27, 2024, 02:40:26 GMT+08:00 < Agent URL weet-13-7 15 https://sms-agent-3-0.obs husivei.com/SMS-Agent tar.oz (?)
	SHA256 File wget -1.3 -T.15 https://sms-agent-3-0.obs. > huawei.com/SMS-Agent.tar.gz.sha256 [])
	Verity File Integrity
	Install and start the Agent Enter the AVEX pair of the larget account and the SMS domain name to start the Agent. If the Agent tails to be started, see Solution
	There AK/SK Image: Contract of the SMS domain name Coldan Now ⊘ sms.c husevel.com

If the EPS service has been enabled for the Huawei Cloud account, after you entered the AK/SK pair, the Agent will list all enterprise projects the account is allowed to access. You can select the enterprise project you would like to migrate the source server to. This enables you to isolate permissions, resources, and finance during the migration. For details, see Migrating Servers into an Enterprise Project.

When the following information is displayed, the Agent has been started up and will automatically start reporting source server information to SMS. You can go to the **Servers** page on the SMS console to view the record of the source server.

Figure 2-7 Agent running



----End

Troubleshooting

- How Do I Resolve Error "No such file or directory: 'rsync':'rsync" When I Start the Linux Agent?
- SMS.0202 AK/SK Authentication Failed
- Why Wasn't My Source Server Added to the SMS Console After I Configured the Agent?

3 Migration Management

3.1 Configuring a Target Server

Scenarios

Before starting the migration, you need to configure the target server, which will receive data from the source server. You can clone the target server for service testing and launch it once you've confirmed that your services can run properly.

Prerequisites

You can configure the target server when:

- The source server is **Connected** to SMS.
- The migration task is in the **Migration Feasibility Check** stage.
- The migration task is in the **Pending target configuration** status.

Procedure

- **Step 1** Sign in to the **SMS console**.
- Step 2 In the navigation pane on the left, choose Servers.

Figure 3-1 Server list

SMS	Servers 🕤 do to duit Eation 🗢 Process Plow 🖸 User Guide
Dashboard	If you encounter permissions issues when using SMB, contact the administrator to cotain permissions. Lourn mice
Agents	After you install and start the Agent on a source server, a record will be automatically generated.
Provy Servers	Process Flow Configure Target Configure Configur
	Not Issis 13 A Franking larget complication 13 B Franking 3 C Compliant 6 Image: Image: Ima

Step 3 In the server list, locate the source server and click **Configure Target** in the **Migration Stage/Status** column.

You can also choose **More > Configure Target** in the **Operation** column.

NOTICE

If you do not find the record for your source server, check that the account you are currently using is the migration account.

Total tasks 14 o Abnormal 4	4 A Pending migration 0	A Pending target configuration 12	Running 3	o Completed 7			
Stat Pause La	unch Target Sync	More ~					
	Add filter						× O 6
Source Name/ID 🖯	Connection Θ	Source OS/IP Address ()	Target ⊖	Task Status 😣	Migration Stage/Status 😑	Progress Θ	Operation
	Connected	CENTOS_8_2_64BIT	-	A Pending target c	Migration Feasibility Check Pending larget configuration Configure Target	Total progress	10 ⁴ Start Pause Mate A
Total Records: 1							View Delete
							< Manage Target
							Delete Target Configuration Set Micration Rate
							< Manage Migration Settings

Step 4 On the **Configure Basic Settings** page, configure parameters by referring to **Table 3-1**.

Area	Parameter	Option	Description
Migration Template	Migration Template	-	You can use the default migration template provided by the system. You can also create a migration template . After you choose a migration template, the system will populate the settings for Network Type , Migration Rate Limit , Migration Method , Enable Continuous Synchronization , Resize Disks and Partitions , Region , and Project based on the template.
Network Settings	Network Type	Public	An EIP must be bound to the target server. Public is the default value of Network Type .
	F	Private	A Direct Connect connection, VPN connection, VPC peering connection, VPC subnet, or Cloud Connect connection must be provisioned. The private IP address of the target server will be used for migration.
	IP Version	IPv4	IPv4 can be used for data migration.
		IPv6	On a dual-stack network, IPv6 can be used for migration. For details about the preparations and precautions for migration over IPv6, see Migrating Servers over an IPv6 Network .

Table 3-1 Basic parameter settings

Area	Parameter	Option	Description
	Migration Rate Limit	-	 You can limit the migration rate based on the source bandwidth and service requirements. If you do not want to limit the migration rate, set this parameter to 0. Traffic limiting is unavailable if: The migration uses an IPv6 network. Traffic Control (TC) is missing from the source server
	Overrate Threshold (%)	-	 You can regulate how much the migration rate can exceed the configured limit. If the migration rate exceeds the threshold for multiple consecutive times, the migration task is automatically paused. For example, if the migration rate limit is set to 10 Mbit/s and the overrate threshold is set to 10%, the task is automatically paused when the migration rate exceeds 11 Mbit/s (110% of the limit) multiple times consecutively. CAUTION This option is only available for Linux migration. It will not be available or applied if: The migration uses an IPv6 network. Traffic Control (TC) is missing from the source server. The installed SMS-Agent version is earlier than 24.9.0.
Migration Settings (Optional)	Migration Method	Linux block-level	Migration and synchronization are performed by block. This method is efficient, but the compatibility is poor.
		Linux file- level	Migration and synchronization are performed by file. This method is inefficient, but the compatibility is excellent.
		Windows block-level	Migration and synchronization are performed by block. This method is very efficient and is the only migration method for Windows servers.

Area	Parameter	Option	Description
	Enable Continuous Synchronizat ion	No	After the full replication is complete, SMS will automatically launch the target server without synchronizing incremental data. To synchronize incremental data, you will need to click Sync in the Operation column.
		Yes	After the full replication is complete, the migration will enter the continuous synchronization stage. During this stage, incremental data will be periodically synchronized from the source server to the target server, and you will be unable to use the target server since it has not been launched yet. To finish this stage, you will need to click Launch Target in the Operation column.
	Resize Disks and Partitions	No	The disk and partition settings from the source server will be retained on the target server.
		Yes	You can resize the disks and partitions for the target server. For details, see Resizing disks and partitions .
	Start Target Upon	No	The target server will be stopped after the migration is complete.
	During this will be peri the source and you wi target serve launched you will need to the Operat Resize Disks and PartitionsNoThe disk and the source of the target serve launched you will need to the Operat Resize Disks and PartitionsNoThe disk and the source of the target serve the target serve the target serve the target serve the target serve the target serve the source of the target serve the target serve serve the target serve the migratiMeasure Network PerformanceNoThe target serve the migrati rate, networ bandwidth, usage for the serve	The target server will be started after the migration is complete.	
	Measure Network	No	Network performance will not be measured.
	Performance	Yes	Before the full migration starts, the system will measure the packet loss rate, network jitter, network latency, bandwidth, memory usage, and CPU usage for the source server. For details, see How Do I Measure the Network Performance Before the Migration?
	Enable Concurrency	No	By default, one process is used for migration and synchronization.

Area	Parameter	Option	Description
		Yes	You can specify the maximum number of processes the Agent can start concurrently for migration and synchronization tasks, respectively. Enabling concurrency is only available for Linux file-level migrations. For more information, see How Do I Set the Number of Concurrent Processes for Linux File-Level Migrations?
	Transit IP Address	-	For a migration over a private line, you can configure the transit IP address.
Resource	CPU Limit	-	These options are only available for
Limits (Optional)	Memory Limit		Linux migrations. For details, see How Do I Limit Resource Allocation for the Agent in a Linux Migration?
	Disk Throughput Limit		

Area	Parameter	Option	Description					
Verify Data Consistenc y	If this option is enabled, the system will automatically verify data consistency after the full replication is complete. This is a quick verification, and only the file size and last modification time will be verified. You can modify the verification policy when you launch an incremental synchronization							
	• Enable Has will generat verified. Ha are large ar and disk I/C verification	Enable Hash Verification : If this option is enabled, the system will generate and compare hash values for each file to be verified. Hash verification is recommended when individual files are large and important. Enabling this option will increase CPU and disk I/O overheads for the source server and extend the verification time						
	CAUTION							
	– Hash va skipped	lues cannot be o during the verif	calculated for files in use, so these files will be ication.					
	– Enablin only file	g this option req es in the specified	uires you to specify the verification scope, and a scope will be verified.					
	Verification	Scope						
	- Under E x from the Use com data,/va	xclude paths , e verification. <i>A</i> mas (,) to sep or. Leaving it e	enter the paths you want to exclude A maximum of 30 paths can be entered. arate the paths. For example, /root/ mpty will initiate a full verification.					
	– Under In	clude paths,	enter the paths you want to verify.					
	NOTICE	-						
	 If the enter in the verifi 	ed paths are inco ication results.	prrect or empty, 0 will be displayed for them					
	 The more d take. It is w 	lata you need to vise to focus on v	verify, the longer the consistency check will verifying only key paths.					
	 The followi default: 	ng paths will be	excluded from consistency verification by					
	– Linux: / selinux,	bin, /boot, /dev, , /sys, /usr, /var,	/home, /etc, /lib, /media, /proc, /sbin, / /run, and /tmp					
	– Window	vs: top-level dire	ctories of partitions, for example, C:\ and D:\					
	If you need verification	to include any o , refer to Modify	of the preceding excluded paths in the ing the Default Excluded Paths .					

Step 5 Click **Next: Configure Target** in the lower right corner.

Step 6 In the **Basic Settings** area, select the region you are migrating to.

< 🗖	Configure Migration					
Basic Setting	S					
Select the red	ion for the target se	∼ _				

- Step 7 In the Target Server area, choose whether to use an existing cloud server or create a new one as the target server. For details about the requirements on target servers, see Target Server Requirements.
 - Use existing

In the list of existing servers, select one that meets the specifications requirements displayed in the **Recommended Target** row. If no existing server meets the requirements, click **Create ECS** and purchase an ECS with the required specifications. For details, see **Purchasing an ECS**.

NOTE

You can select a pay-per-use or yearly/monthly ECS.

Target Server				
Use existing beed an obting server as the target server. Is ensure that the target server can start properly when the After the singulation is consolid, the target server will use th	Recommended We Create new Automatically ones a payon registron a company, no delia will be itermediated and re elementated and source control of the source server.	use ECB as the target server, and the regality and network configure	tons will be modified. Before the migration, make sure you have backe	d up data on the larget server.
 After the migration is complete, you can change the year/vincetity; 	a billing mode for the target server, such as from pay-per-use to			
	Name	IP Advisa	os	Disk
Source			UBUNTU_10_4_548/T	System Deli: 49 OIB Dela Deli: 15 OIB
Recommended Target	Cinate ECS (2)		LINUX	System Disk: 43 Gill Data Disk: 15 Gill
Use Existing Server				
O, Search by name				
Name	05	Disk	Private IP Address	EIP .
	Lina	System Disk: 160 GiB		_

• Create new

The system automatically presets the name, AZ, specifications, disk specifications, EIP, VPC, subnet, and security group for the target server. You can also click **Expand and Modify** to manually modify the server settings.

Create New Server (Optional)	
You can modify the server settings as needed, and the price may ch	Expand and Modify
Item	Configuration
Server Name	
Instance Specifications	General computing Sit3.small.1 1 vCPUs 1 GiB
Disk	System Disk (High I/O): 40 GiB; Data Disk (High I/O)
Image	-
Network	VPC:Migrate-
EIP	-

 If you select Recommended for Server Template, the system will automatically create a VPC, subnet, and security group and select an AZ and disk type for the target server. You can also manually adjust the settings recommended by the system.

D NOTE

If Create during migration is selected for VPC, SMS automatically creates a VPC for the target server based on the following rules:

If the source server's IP address is 192.168.*X*.*X*, SMS creates a VPC and a subnet that both belong to network range 192.168.0.0/16.

If the source IP address is 172.16.*X.X*, SMS creates a VPC and a subnet that both belong to network range 172.16.0.0/12.

If the source server's IP address is 10.*X.X*, SMS creates a VPC and a subnet that both belong to network range 10.0.0.0/8.

If Create during migration is selected for Security Group, the system automatically creates a security group for the target server and allows traffic to the target server over certain ports:

Windows: ports 8899, 8900, and 22

Linux (file-level migration): port 22

Linux (block-level migration): ports 8900 and 22

- If you prefer, you can choose your own server template, and the VPC, subnet, security group, AZ, and disk settings will be preconfigured based on that template. You have the flexibility to adjust these preset settings as needed. To learn how to create a server template, see Creating a Server Template.
- Configure advanced disk settings.
 - Data disks must be either VBD or SCSI. VBD is the default device type for data disks. For details about disk device types, see Device Types and Usage Instructions.
 - Data disks can be created as shared disks. For details about shared disks, see Shared EVS Disks and Usage Instructions.
 - For target servers newly created by the system, system and data disks can be encrypted. For details about shared disks, see Shared EVS Disks and Usage Instructions. To enable disk encryption, you need to create an agency to authorize EVS to access KMS. After the authorization is successful, configure the following parameters:
 - Select an existing key

Select a key from the drop-down list. You can select one of the following keys:

Default keys: After the KMS access permissions have been granted to EVS, the system automatically creates a default key and names it **evs/default**.

Custom keys: You can choose an existing key or create a new one. For details about how to create a key, see **Creating a Key**.

• Enter a key ID

Enter the ID of a key shared from another user. Ensure that the key is in the target region. For details, see **Creating a Grant**.

NOTICE

- Before the migration is complete, do not disable or delete the key used, or the migration will fail.
- The encryption attribute of a disk cannot be modified after the disk is created.
- $\circ\;$ Keys can be shared with accounts, not users.
- If KMS encryption is used, you will be billed for what you use beyond the free quota given by KMS. For details, see **DEW Billing**.

Step 8 Click Next: Confirm in the lower right corner.

Figure 3-2 The configuration confirmation page

< 🛃 Configur	e Migration			<0.0010 OII E3801 (1) Cort	gun Excis Settings	
Source Server						
Name		Private IP Address		Added		
09	URUNTU_16_4_54BT	Specifications	1 vCPUs 0.96 GiR	Date	System Disk: 48 Gill; Data Disk: 15 Gill; Data Disk: 1	
Configure Basic Settings		National Prov	Annal Ann	Manufact Parts 1 and		
Cherrier Project	(in the second s	President Courses		Contract Contract		
ing alors we not		Parallel Parallel		Contracts opening	10	
our lege oper Leren		MEDDURE NEONOR, PERM.	10			
Network						
WV.		ousee.		Cecard Coup		
PTINER IP Address	Automatically applied	DP.	Hot required	Danasyun	1000	
Target Server (To be purch	tased)					
ce.	INCOME IN A RANK	nc.	PL2	Facto	Public Data (Sep 17): 45 OF Data Data (Sep 17)	
	-	Concerned and			Cystem date (high ho), we decide date of philoson	
Save as Sever Temps	•					

Step 9 (Optional) Click Save as Server Template. In the displayed Create Server
 Template dialog box, enter a template name and click OK to save the target server settings as a template.

NOTE

Save as Server Template is available only when you select Create new for Server.

Figure 3-3 Create Server Template

Create Server Template									
 The VPC, subm will be saved as 	et, security group, and o s a new template.	disk attributes of the	target server	×					
Template Name	Template Name Enter a template name.								
Configuration &									
Region/Project									
VPC	Create during migrati	on							
Subnet	Create during migrati	on							
Security Group	Create during migrati	on							
AZ	Random	AZ2							
	AZ1	AZ3							
Disk	High I/O								
		(Cancel	ок					

Step 10 Confirm the configuration and click **Save**. In the displayed dialog box, read the migration conditions and click **OK**.

If you want to start the migration immediately, click **Save and Start**. In the displayed dialog box, read the migration conditions and click **OK**.

 \geq

 \times

Figure 3-4 Saving the configuration

Are you sure you want to save the configuration and start migration? Migration Checklist \times The system automatically checks the migration feasibility of the source server, but you must check the following items manually: Do not restart the Agent during the migration. Make sure that you select a target server with the same OS as the source server. After the migration, make sure that you create a mirror for each target server disk. Note that after the migration, reinstalling or changing the target server OS or modifying its specifications may fail or make the server unavailable · Make sure that TCP ports 22, 8899, and 8900 are enabled for Windows target servers, and ports 22 and 8900 are enabled for Linux target servers. · Before the migration is complete, do not perform any operations on the target server, such as changing or reinstalling the OS. Otherwise, the migration may fail and additional pricing may apply. Learn more

Figure 3-5 Saving the configuration and starting the migration

start migration?
Migration Checklist ×
The system automatically checks the migration feasibility of the source server, but you must check the following items manually:
Do not restart the Agent during the migration.
Make sure that you select a target server with the same OS as the source server.
After the migration, make sure that you create a mirror for each target server disk. Note that after the migration, reinstalling or changing the target server OS or modifying its specifications may fail or make the server unavailable.
Make sure that TCP ports 22, 8899, and 8900 are enabled for Windows target servers, and ports 22 and 8900 are enabled for Linux target servers.
Before the migration is complete, do not perform any operations on the target server, such as changing or reinstalling the OS. Otherwise, the migration may fail and additional pricing may apply. Learn more

Are you sure you want to save the configuration and



If **Target Configuration** and **Ready** show up in the **Migration Stage/Status** column, the target server has been configured.

----End

Resizing Disks and Partitions

Step 1 When you create a migration task, on the Configuring Basic Settings tab page, expand Migration Settings (Optional), enable Resize Disks and Partitions, and click Resize Disks and Partitions. In the Resize Disks and Partitions dialog box, configure disks and partitions as needed.

Figure 3-6 Resizing disks and partitions (Windows)

Resize Partition				
		1 Configure Disks	2 Confirm	
Source Disk	Target Disk In a block-level	nigration, disk size can only be increased.	×	
Disk Disk 0	Disk: Disk 0	Partition Style: MBR	Size: 40 GiB 0 MB	Allocated: 39 GiB 1022 MB
Size 40 GiB 0 MB	Partition File System	Current Size Used	Nount Migrate New Size	
Allocated 39 GiB 1022 MB	(Reserved) NTFS	500 MB 392 MB	Yes ~ 0	+ GiB - 500 + MB
	C:\ NTFS	39 GiB 522 MB 35 GiB 240 MB	Yes 🗸 – 39	+ GiB - 522 + MB
	Resize the disk to fit the partition size.	Resize Disk		
Disk Disk 1	Disk: Disk 1	Partition Style: MBR	Size: 19 GiB 1023 MB	Allocated: 19 GiB 1021 MB
Size 19 GiB 1023 ME	Partition File System	Current Size Used	Nount Migrate New Size	
Allocated 19 GIB 1021 Mb	D:\ NTFS	19 GiB 1021 539 MB	Yes 🗸 – 19	+ GiB - 1,021 + MB
	Resize the disk to fit the partition size.	Resize Disk		
Disk Överview 🗧				
Diek		Current Size	Now Siza	
				Next: Confirm Cancel

Figure 3-7 Resizing disks and partitions (Linux)

Resize Partition		×
Source Disk	📀 Configure Volume Groups 🚱 Configure Disks () Confirm Target Disk	
Disk /dev/vda	Disic /dev/vda Partition Style: MBR Size: 40 GiB 0 MB Allocated: 39 GiB 1023 MB	
Size 40 GiB 0 MB	Partition File System Current Size Used Mount Migrate New Size	٦
Allocated 39 GiB 1023 MB	/dev/vda1 ext4 39 GIB 1023 MB 5 GIB 26 MB / Yes V - 39 + GIB - 1,023 + MB	
	Resize the disk to fit the partition size Resize Disk	
Disk Overview 😞		
Disk	Current Size New Size	
/dev/vda	40 GIE 0 MB 40 GIE 0 MB	
	Next.Confirm Previous Cancel)

NOTE

- You can choose whether to migrate source partitions and then resize the paired target partitions.
- For a Linux server using LVM, you can choose whether to migrate physical or logical volumes and resize the paired target volumes.

- In a Windows migration, the system and boot partitions are migrated by default.
- In a Windows migration, you can upsize partitions, but you cannot downsize them.
- Partition resizing is not available for Btrfs partitions on Linux.
- In a Linux migration, the system and swap partitions are migrated by default.
- You can choose to migrate all or none volume groups by using the **Migrate All Volume Groups** option.
- If you choose to migrate none of the logical volumes in a volume group, their physical volumes will not be migrated by default.
- In a Linux block-level migration, you can upsize partitions, but you cannot downsize them.
- In a Linux file-level migration, you can upsize or downsize partitions. When downsizing a partition, the new partition size must be at least 1 GB larger than the used partition space. If the current size does not meet this condition, downsizing is not possible. If the current size does not meet this condition, downsizing is not possible. For details, see What Are the Rules for Resizing Volume Groups, Disks, and Partitions?
- If the total partition size after resizing is larger than the disk size, you need to expand the disk capacity to fit the partition size.
- If the total partition size after resizing is much smaller than the disk size, you can downsize the disk.
- **Step 2** Click **Next: Configure Disks**. Resize the disks as needed. Then confirm the configurations and click **OK**.

After you click **OK**, disk and partition resizing cannot be disabled in this task. If you want to restore the original disk and partition settings, locate the source server and choose **More** > **Delete** in the **Operation** column. Then restart the Agent on the source server, and configure the target server again.

----End

3.2 Starting a Full Replication

Scenarios

A full replication replicates all data from the source server to the target server. The replication speed depends on the outbound bandwidth of the source server or the inbound bandwidth of the target server, whichever is smaller.

Constraints

After a full replication starts, do not restart the source server or Agent, or the migration will fail.

Prerequisites

- The target server has been configured. For details, see **Configuring a Target Server**.
- The migration task is in the **Full Replication** stage and the status is **Ready**.

Procedure

- **Step 1** Sign in to the **SMS console**.
- Step 2 In the navigation pane on the left, choose Servers.
- Step 3 Locate the source server and click Start in the Migration Stage/Status or Operation column. In the displayed Start Migration window, click OK to start a full replication.

You can also select the source server and click **Start** above the server list. In the displayed **Start Migration** window, click **OK**.

Figure 3-8 Starting a full replication

Start Pause Launch	Tarpet Sync	Man v					
	× Add filter						× Q 🕘
Source Name ID 🖯	Connection 0	Source OS/IP Address 🛞	Target 🖯	Task Status 😣	Migration Stage/Status 🖯	Progress 🖯	Operation
	Connected	UBUNTU_24_4_64BIT	Existing	C Running	Full Replication Paused Start	Total progress65	Start Pause More ~
Total Records: 1							10 🗸 < 1 >

D NOTE

During the full replication, the target server is locked by default, and you are not allowed to perform any operations on it. After the migration is complete, the target server will be automatically unlocked. If you need to perform operations on the target server during the replication, **unlock the target server**.

- **Step 4** In the server list, click the name of the source server to view the migration progress.
- **Step 5** Wait for the full replication to complete.
 - If you set **Continuous Synchronization** to **No** when you configure the migration settings, after the full replication is complete, the system puts the migration to a **Target Launch** stage and launches the target server to complete the migration automatically.
 - If you set **Continuous Synchronization** to **Yes** when you configure the migration settings, after the full replication is complete, the system puts the migration to a **Continuous sync** status. You will need to manually launch the target server to complete the migration. For details, see **Launching a Target Server**.

After the migration and service cutover are complete, you need to adjust the configurations of the target server based on service requirements. For details, see

What Configuration Items Need to Be Manually Modified After a Server Is Migrated?

----End

3.3 Synchronizing Incremental Data

Scenarios

After the target server is launched, if there are data changes on your source server, you can synchronize the incremental data to the target server.

NOTE

You can synchronize data from a source server only when its migration status is **Finished**.

Procedure

- **Step 1** Sign in to the **SMS console**.
- Step 2 In the navigation pane on the left, choose Servers.
- **Step 3** In the server list, locate the source server you want to synchronize and click **Sync** in the **Operation** column.

Total tasks 11 O Abnormal	3 A Pending migration 0	A Pending target configuration	n 13 🗖 Running :	2 o Comp	liefed 6			
Start Pause L	aunch Target Sync	More ~						
	: Add filter							× Q 🛛
Source NamenD 🖯	Connection 0	Source OSIP Address ()	Target ()		Task Status 😑	Migration StagerStatus ()	Progress O	Operation
	Connected	WINDOW/S2016_64BIT	Existing	8	o Completed	Finished Go to ECS 🕐	Total progress 10/	Sync Pause More ~
Total Records: 1								10 ~ (1) >

Step 4 In the Sync Incremental Data dialog box, carefully read the tips, enable Verify Consistency if needed, and click OK. For details about this option, see How Do I Verify Data Consistency Between the Source and Target Servers?

onango nio oo to not	US.
Disabled	
Verify Data Cor	isistency
If selected, data consiste synchronization. This is policy when you launch	incy will be verified upon the completion of the full replication and every manually-initiated incremental a quick verification, and only the file size and last modification time will be verified. You can modify the verification a synchronization.
Enable Hash Verific	ation
In addition to comparing you specify in the box be CPU and disk I/O overhe files will be skipped during	The file size and last modification time, the system will generate and compare head values for each file in the plath size. Hash verification is recommended when individual files are large and important. Enabling this option will increase adds for the source server and extend the verification time. Hash values cannot be calculated for files in use, so these gr the verification.
Verification Scope	
Exclude paths	Include paths
, and	41 000 A
Leaving it empty will initi	ale a full verification. A maximum of 30 naths can be entered. Separate them with commas ()
Verify Inconsistensi	
If selected, the system v	vill only verify files that failed a previous verification. If not selected, a full verification will be performed.
If more than 100 verifying that fold	tiles in a specific folder fail verification, the system will stop fer and revertly it during the next verification.
	fication increases disk I/O overheads for the course server

3.4 Setting a Migration Rate

Scenarios

During a migration, a large amount of traffic is generated and bandwidth consumed. To reduce the impact of the migration on services, you can limit the migration rate.

Procedure

- **Step 1** Sign in to the **SMS console**.
- Step 2 In the navigation pane on the left, choose Servers.
- Step 3 Locate the server for which you want to set the migration rate, and choose More > Set Migration Rate in the Operation column.
- **Step 4** In the displayed **Set Migration Rate** dialog box, set migration rate limits for different periods of time and click **OK**.

Figure 3-9 Setting migration rate limits

Set Migra	ation Rate		×
i Set at The mi	least one time period. Y igration rate limit range	You can set up to five time periods without over s from 1 to 1000 Mbit/s.	erlaps.
Time Per Start Time	iods in Source End Time	e Time Zone Migration Rate Limit (Mbit/s)	۲
00:00	٤ 23:59	© 0	Û
		Cancel	ок

NOTE

A migration rate limit must be an integer from 0 to 1,000.

- You can enter **0** or leave this field blank to remove migration rate limits. Then data will be migrated at the speed of the network between the source and target servers.
- The migration rate is bottlenecked by the migration rate limit you configure or the actual network speed, whichever is smaller.

3.5 Deleting a Migration Task

Scenarios

You can delete a server migration task or record if it is no longer needed.

- After deleting a server migration record, if you want to register the source server again with SMS, restart the Agent on the source server.
- Deleting a migration record will not delete the involved source or target server.

Procedure

- **Step 1** Sign in to the **SMS console**.
- Step 2 In the navigation pane on the left, choose Servers.
- **Step 3** Locate the migration record you want to delete, and choose **More** > **Delete** in the **Operation** column.

You can also select the record and choose **More** > **Delete** in the upper left corner of the server list.

Step 4 In the displayed Delete Server dialog box, click OK.

Figure 3-10 Confirmation

Delete Server		^
Are you sure you want to de This operation only deletes register the source servers	elete the following 1 servers ? these servers from the server list. It has no im with SMS again, restart the Agent.	apact on both source and target servers. To
Name \ominus	Status \ominus	Remarks
ecs-bd89	• Finished (6 days ago)	Ready for deletion.
		Cancel

4 Target Server Management

4.1 (Optional) Cloning a Target Server

Scenarios

Before launching a target server, you can clone the target server for service testing, and only launch the target server after tests confirm there are no issues.

The cloned server must be in the same AZ as the target server but can be in a different VPC.

Prerequisites

The migration task is in the **Continuous sync** stage.

Procedure

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane on the left, choose **Servers**.
- Step 3 Locate the target server you want to clone, choose More > Manage Target >
 Clone Target in the Operation column.
- Step 4 Set the parameters and click Clone Target.
 - If you select **Recommended** for **Server Template**, the system automatically sets **VPC**, **Subnet**, **Security Group**, and parameters in **Advanced Settings** based on the current target server configuration. You can modify these parameters.
 - If you select an existing template for **Server Template**, parameters **VPC**, **Subnet**, **Security Group**, and those in **Advanced Settings** are determined by the template. You can modify these parameters.

4.2 Launching a Target Server

If you set **Continuous Synchronization** to **Yes** when configuring the migration settings, you need to manually launch the target server after the full replication is complete

NOTE

If you set **Continuous Synchronization** to **No**, skip this section as the system will automatically launch the target server after the full replication is complete.

Scenarios

You can launch a target server for a migration in the **Continuous sync** status, and the continuous synchronization will be interrupted. If you want to perform a continuous synchronization after you launch the target server, click **Sync** to synchronize the incremental data.

Before launching a target server, you can clone the target server for service testing, and only launch the target server after tests confirm there are no issues.

NOTE

The cloned server must be in the same AZ as the target server, but it can be in a different VPC.

Procedure

- **Step 1** Sign in to the **SMS console**.
- Step 2 In the navigation pane on the left, choose Servers.
- Step 3 Locate the target server you want to launch, and click Launch Target in the Migration Stage/Status column.

Alternatively, select the server you want to launch, and click **Launch Target** above the server list.

Figure 4-1 Launch Target

Total tasks 9 O Abnorr	mai 1 🔺 Pending migration 1	A Pending target configuration 4	Running 4	o Completed 3					
Stat Pause (Launch Target Sync	More v							
	Add Ster							×G	2 🐵
Source Name1D 🖯	Connection 0	Source OS/IP Address ()	Target ()		Task Status \varTheta	Migration StagerStatus 😑	Progress ⊖	Operation	
win2608	Connected	WINDOWS2006_R2_64BIT	Existing	C	C Running	Continuous Synchronization Continuous sync Launch Target	Total progress	Sync Pause More ~	
Total Records: 1								10 🗸 <	1 >

Step 4 In the displayed Launch Target window, click OK.

If **Finished** appears in the **Migration Stage/Status** column, the target server has been launched and the migration is complete.

Figure 4-2 Completed migration

Total tasks 9 • Abnorm	al 1 🔺 Pending migration 1	A Pending target configuration 4	C Running 3	o Completed 4				
Start Pause	Launch Target Sync	Mare ~						
Q II	Add titler						× Q 🛛	
Source Name1D 🖯	Connection 0	Source OS/IP Address @	Target ⊖	Task Status 😔	Migration Stage/Status ⊖	Progress ()	Operation	
	Connected	WINDOWS2016_64BIT		o Completed	Finished	Total concess	Same Paulos More V	
			Existing		Finished Go to ECS 🕑			
Total Records: 1							10 🗸 (1) >	

After the migration and service cutover are complete, you need to adjust the configurations of the target server based on service requirements. For details, see **What Configuration Items Need to Be Manually Modified After a Server Is Migrated?**

----End

4.3 Viewing the Details of a Server

Scenarios

After the Agent is installed and started on a source server, it automatically reports the source server information to SMS. All collected data is used for migration only. For details, see **What Information Does SMS Collect About Source Servers?** You can sign in to the SMS console to view the server information at any time. You can see source server details, target server configurations, migration status, and error messages if any.

Procedure

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane on the left, choose **Servers**.
- Step 3 In the server list, click the server name. The task details show up on the right.

You can also move the cursor to the migration stage and click **View Details** in the displayed window. The task details show up on the right.

Servers		🕑 back to old edition. 🕸 Process Flow 📋 User Guide
A If you encounter permissions issues when using SMS, contact the administrator to ob	ecs.bdt9 Task Status C Running Mgration Status Continuous sync	
After you install and start the Agent on a source server, a record will be automatically	Migration Stage	
	⊘ Migration Feasibility Check 🥝 Target Configuration 💮 Full Replication 🚯 Continuous Byr	
Start Pause Launch Target Sync More ~	Crogeng Subtrak Migrate Windows block-level data. ——— 100%	
Q Add filter	View Details	× Q @
Source NameID () Source OSIIP Address () Target ()	θ	Migration Speed Operation
Disting	C Continuous Synchronize Continuous Synchronize Continuous sync Lawnc	- Male Sync Pause More -

Step 4 Click the **Source Info** tab, and you can view the source server details, including the basic information, migration check results, disk and partition information, and NIC information.

Connection Status	ට OS UBUNTU_18_4_64BIT	Source IP Address	ď
Task Status	Migration Speed	Data Volume	Progress
▲ Migration pending	Mbit/s	GiB/5.86 GiB	10 % 🖕
Migration Status Ready	Remaining	Migrated/Total Data	Time Spent
Task Progress Task Info	Source Info		
∧ Source Info			
Name	OS	1017	Feasibility Check
	0B0N10_18_4_0	4611	Passed
IP	Connection Status	\$	Specifications
	Connected		2001 05 4 010 5100
1Pv6	Agent Version		
✓ Source Check			
∨ Disks			
V NICs			

Figure 4-3 Viewing server details

----End

4.4 Deleting a Target Server Configuration

Scenarios

If a target server is incorrectly configured or its configuration need to be modified, you can delete the configuration and reconfigure the target server.

After the target server configuration is deleted, the migration task is still in the list but cannot be performed. You can configure a new target server to perform the migration again.

Procedure

- Step 1 Sign in to the SMS console.
- Step 2 In the navigation pane on the left, choose Servers.
- **Step 3** Locate the server for which you want to delete the target server configuration, and choose **More** > **Delete Target Configuration** in the **Operation** column.

You can also choose **More** > **Delete Target Configuration** in the upper left corner of the server list.

Step 4 In the displayed Delete Target Configuration dialog box, click OK.

Figure 4-4 Confirmation

Delete Target Co	onfiguration		×
Are you sure you want to Migration tasks and snaps migrated again.	delete target configurations for the following 1 shots will be deleted together with the target co	servers? nfigurations. All source data needs to be	
Name \ominus	Status \ominus	Remarks	
ecs-bd89	• Finished (6 days ago)	Ready for deletion.	
		Cancel	ок

----End

4.5 (Optional) Deleting a Server Clone

Scenarios

You can delete a server clone when it is no longer needed or the service tests are complete.

NOTE

You can switch to the ECS console to check whether the deletion is successful.

Procedure

- **Step 1** Sign in to the **SMS console**.
- Step 2 In the navigation pane on the left, choose Servers.
- Step 3 Locate the server for which you want to delete the clone, and choose More > Manage Target > Delete Clone in the Operation column.
- Step 4 In the Delete Clone dialog box, click OK.

----End

4.6 Unlocking a Target Server

Scenarios

During a migration, the target server is locked by default and you are not allowed to perform any operations on it. After the migration is complete, the system automatically unlocks the target server. If you need to perform operations on the target server during the migration, unlock the target server first.

Procedure

Step 1 Sign in to the **SMS console**.

Step 2 In the navigation pane on the left, choose Servers.

- Step 3 Locate the server for which you want to unlock the target server, and choose More > Manage Target > Unlock Target in the Operation column.
- Step 4 In the displayed Unlock Target dialog box, click Yes.

Figure 4-5 Confirmation								
Unlock Target								
Are you sure you want to unlock the target server?								
A Before the migration is complete, do not attach disks to or detach disks from, reinstall the OS, or restart the target server, or the migration will fail.								
No Yes)							
Fud								

----End

4.7 Deleting an EVS Snapshot

Scenarios

SMS creates snapshots for EVS disks on each target server during the full replication, incremental synchronization, and target cloning. For EVS disks in DSS storage pools, snapshots take up the same amount of space in the pool as the disks. You can delete these snapshots as needed.

NOTE

If a migration task is deleted, the disk snapshots are also deleted.

Although snapshots themselves do not differ in a technical sense, SMS distinguishes between three types of snapshots, based on the events that trigger them:

• **Cutover snapshots**: After a migration is complete, SMS creates a snapshot for each target server disk. These snapshots are used for rollback if any service faults happen.

NOTE

You are advised to delete these snapshots after the service cutover is complete and your services run stably on the target server.

• **Synchronization snapshots**: For a Windows migration or Linux block-level migration, after the source data is migrated and synchronized and before the target server is launched, SMS creates a snapshot for each target server disk to ensure data consistency between the source and target.

After the snapshots are deleted, no further synchronization can be performed.

• **Clone snapshots**: When you clone a target server, SMS creates a snapshot for each target server disk. These snapshots are used to clone the target server and put the migration status back to continuous synchronization after the clone is complete.

Procedure

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane on the left, choose **Servers**.
- Step 3 In the server list, locate the server and choose More > Manage Target > Delete EVS Snapshot in the Operation column.

Cancel

ок

Step 4 In the displayed **Delete EVS Snapshot** dialog box, select the snapshots to be deleted and click **OK**.

Figure 4-6 Confirming the deletion

Snapshot A Before deleting the snapshots created before service cutover, make sure your services are stable on the target server. After the snapshots created after data synchronization are deleted, no further synchronization can be performed. × ✓ Type Quantity Size Cutover snapshot 0 0 GB ✓ Synchronization snap 6 180 GB Clone snapshot 0 0 GB	Dele	te EVS Snapshot			
▲ Before deleting the snapshots created before service cutover, make sure your services are stable on the target server. × After the snapshots created after data synchronization are deleted, no further synchronization can be performed. Size ✓ Type Quantity Size Cutover snapshot 0 0 GB ✓ Synchronization snap 6 180 GB Clone snapshot 0 0 GB	Snapsh	ot			
✓ Type ⊕ Quantity ⊕ Size ⊕ Cutover snapshot 0 0 GB ✓ Synchronization snap 6 180 GB Clone snapshot 0 0 GB	A	Before deleting the snapsho your services are stable on 1 After the snapshots created further synchronization can 1	ts created before service cu he target server. after data synchronization a be performed.	utover, make sure 🛛 🗙	
Cutover snapshot 0 0 GB Synchronization snap 6 180 GB Clone snapshot 0 0 GB	~	Туре \ominus	Quantity 🖨	Size \ominus	
Synchronization snap 6 180 GB Clone snapshot 0 0 GB		Cutover snapshot	0	0 GB	
Clone snapshot 0 0 GB	~	Synchronization snap	6	180 GB	
		Clone snapshot	0	0 GB	

5 Template Management

5.1 Managing a Migration Template

What Is a Migration Template?

A migration template defines the settings for **Network**, **Migration Rate Limit**, **Enable Continuous Synchronization**, **Region/Project**, and other migration parameters.

You can modify your migration template at any time.

Creating a Migration Template

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane, choose **Templates**.
- **Step 3** In the upper left corner of the **Migration Templates** area, click **Create Migration Template**.

Figure 5-1 Creating a migration template

SMS	Templates 💿
Dashboard Servers	Migration Templates
Agents Templates	Create Migration Template
Proxy Servers	Enter a template name. Q

- Step 4 Set Name and Description and click OK.
- **Step 5** In the template list on the left of the **Migration Templates** area, click the created template and click **Parameter Settings** to configure the template.

Figure 5-2 Parameter settings

SMS	Templates 💿							
Dishboard Servers Apents Templates	vof Hyprikon Tenpikles							
Prorp Servers	Entire a template name.	Q	SystemProject22			(§ Set as Default Template 22 Parameter Settings		
	System	e	Plegian Project	Migration Method Elizari-level	Network Private	Migration Rate Limit © Mills		
	_	0	Target Server Use wishing	Continuous Synchronization 🛞	Start Target Upon Launchildes Yes	Measure Network Performance Yes		
	SystemProject22	default	Description					
		ė						
		8						
	-	^						
	Tatal Records: 25							

Table 5-1 describes the parameters.

Table 5-1 Parameters

Parameter	Option	Description
Name	-	User-defined
Description	-	User-defined
Region/Project	-	Select the target region and project you want to migrate to.
Migration Method	Block-level	 Migration and synchronization are performed by block.
		 For Windows servers, SMS only supports block-level migration.
	File-level	Migration and synchronization are performed by file. This method is inefficient, but the compatibility is excellent.
Network	Public	An EIP must be bound to the target server. Public is the default value.
	Private	You need to create a Direct Connect or VPN connection between the source and the VPC subnet you are migrating to. If the source and target servers are in the same VPC, select Private .

Parameter	Option	Description
Migration Rate Limit	-	You can configure the rate limits based on the source bandwidth and service requirements. If you do not want to limit the migration rate, set this parameter to 0 .
Target Server	Use existing	When you apply this template to a source server migration, you can select an existing server as the target server. The chosen server must meet at least the system- recommended specifications.
	Create new	When you apply this template to a source server migration, you need to configure environment settings for the target server, such as VPC, subnet, and security group.

-	 If you do not enable this option, after the full replication is complete, SMS will
	the target server without synchronizing incremental data. To synchronize incremental data, you will need to click Sync in the Operation column.
	 If you enable this option, after the full replication is complete, the migration will enter the continuous synchronization stage. During this stage, incremental data will be periodically synchronized from the source server to the target server, and you will be unable to use the target server since it has not been launched yet. To finish this stage, you will need to click Launch Target in the Operation column.
-	 If you enable this option, the target server will be started after the migration is complete. If you do not enable this option, the target server will be stopped

Parameter	Option	Description
Measure Network Performance		If you enable this option, before the full migration starts, the system will measure the packet loss rate, network jitter, network latency, bandwidth, memory usage, and CPU usage for the source server. For details, see How Do I Measure the Network Performance Before the Migration?
		If you do not enable this option, network performance will not be measured.

Step 6 Click OK.

Step 7 (Optional) Click the name of the created template, and click Set as Default Template to set it as the default template.

Figure 5	5-3 Set	as Default	Template
----------	----------------	------------	----------

e5	Migration Templater	Migration Templates							
ta	Create Higration Tempi	10							
y Servers	Drier a template name	Q	SystemProject22			(8) Set as Default Templates 🖉 Parameter Set			
	System	e	Region/Project	Migration Method Black-level	Network Private	Migration Rate Limit 0 Mits			
		0	Tarpit Server Use existing	Continuous Synchronization 🕚 No	Start Target Upon LaunchViss Viss	Measure Network Performance Yes			
	SystemProject22	default.	Description						
		0							
	5	0							
		^							
	Tatal Records: 25								

----End

Modifying a Migration Template

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane, choose **Templates**.
- **Step 3** In the template list on the left of the **Migration Templates** area, click the name of the template to be modified and click **Parameter Settings**.

Figure 5-4 Modifying template parameters

into	ten	panes (c)							
enhoard enves gents	Mgration Semplates Cross logism Sensis								
1077 Servers		Enter a template name.	Q	SystemProject22		() Set	s Default Template 🦧 Parameter Settings		
			8	Region/Project	Migration Method Ripck-level	Network Private	Migration Rate Limit 9 Mats		
			ß	Target Server Use existing	Continuous Synchronization ③ No	Start Target Upon Launch Yes	Measure Network Performance Yes		
		SystemProject22	default	Description					
			â						
		- C	Ċ.						
			~						
		Total Records: 35							

Step 4 Modify the template settings and click OK.

----End

Deleting a Migration Template

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane, choose **Templates**.
- **Step 3** In the **Migration Templates** area, on the left, click ¹/_U next to the name of the template you want to delete.

Figure 5-5 Deleting a migration template

SMS	Templates ⑦	
Dashboard Servers	Migration Templates	
Agents	Create Migration Template	
Templates		
Proxy Servers	Enter a template name.	Q
	SystemProje	1
		伧
	SystemProject22	default

Step 4 In the displayed **Delete Migration Template** dialog box, click **OK**.

----End

5.2 Managing a Server Template

What Is a Server Template?

A server template defines the environment settings for servers, such as VPC, subnet, and security group settings.

You can modify your server templates at any time.

Procedure

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane, choose **Templates**.
- Step 3 In the upper right corner of the Server Templates area, click Create Server Template.

Figure 5-6 Create Server Template

Create Server Template										
$\ensuremath{}$ The VPC, subnet, security group, and disk attributes of the target server $\qquad\times$ will be saved as a new template.										
Template Name	Enter a template nar	ne.								
Configuration \mathcal{Q}										
Region/Project										
VPC	Create during migrat	tion								
Subnet	Create during migrat									
Security Group	Create during migrat									
AZ	Random	AZ2								
	AZ1	AZ3								
Disk	High I/O									
			Cancel	ок						

Step 4 Enter a template name, click ∠ next to **Configuration**, and set parameters listed in Table 5-2.

Table 5-2 Parameters

Parameter	Description
Region	 Select a region where you want to provision a target server.
	• By default, the region is the one set in the default migration template, but you can change it as needed.
Project	• Select a project in the region from the drop-down list.
	• You can select a project only after a region is selected.

Parameter	Description
VPC	If you select Create during migration , SMS will create a VPC when you use this template to configure a target server.
	• If the source IP address is 192.168.XX, SMS will create a VPC and a subnet that both belong to network range 192.168.0.0/16.
	• If the source IP address is 172.16. <i>X.X</i> , SMS will create a VPC and a subnet that both belong to network range 172.16.0.0/12.
	• If the source IP address is 10.X.X, SMS will create a VPC and a subnet that both belong to network range 10.0.0.0/8.
Subnet	• If you select Create during migration , SMS will recommend a subnet when you use this template to configure a target server.
	• The subnet is in the same network segment as the VPC.
Security Group	• If you select Create during migration , SMS will create a security group and enable the required ports when you use this template to configure a target server.
	 Windows: ports 8899, 8900, and 22 Linux: port 22 for file-level
	for block-level migration
	 For security purposes, you are advised to only allow traffic from the source server to the ECS over these ports.
	 The firewall of the target server must allow traffic to these ports.
AZ	The parameter is set to Random by default. You can also select another AZ.
Disk Type	The value can be Common I/O , High I/O , or Ultra-high I/O .

Step 5 Click OK.

----End

Modifying a Server Template

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane, choose **Templates**.
- **Step 3** Locate the server template to be modified and click **Modify** in the **Operation** column.

Figure 5-7 Modifying a server template

Server Templates							Oneile Server Templete
Dulete							
C. Select a property or entit	er a keyword.						00
None 0	Reportingent é	AZ 0	Disk @	WC 0	Subret ()	Security Group (b)	Operation
				Create new	Create new	Create new	Modify Delete
				Create new	Create new	Create new	Modify Delete

Step 4 Modify the template settings and click OK.

----End

Deleting a Server Template

- **Step 1** Sign in to the **SMS console**.
- **Step 2** In the navigation pane, choose **Templates**.
- **Step 3** Locate the server template to be deleted and click **Delete** in the **Operation** column. If multiple templates need to be deleted, select them and click **Delete** above the list.

Figure 5-8 Deleting server templates

Server Templates							Create Server	Tomplete
Delete								
								10010
Name ()	Region/Project ()	AZ 0	Disk ()	Abc 0	Sabret ()	Security Group ()	Operation	
				Create new	Create new	Create new	Modily Delete	
				Create new	Create new	Create new	Modily Delete	

Step 4 Click OK.

6 Viewing CTS Traces

6.1 SMS Operations Supported by CTS

Operation	Resource Type	Trace Name
Adding a source	sourceServer	addSource
Deleting a source	sourceServer	removeSource
Updating a source name	sourceServer	updateSourceName
Creating a task	addTask	addTask
Deleting a task	deleteTask	deleteTask
Starting a task	updateTask	task-start
Stopping a task	updateTask	task-stop
Synchronizing a task	updateTask	task-sync
Updating the task progress	updateTaskProgress	updateTaskProgress
Saving a template	addTemplate	addTemplate
Modifying a template	updateTemplate	update
Deleting a template	deleteTemplate	deleteTemplate
Deleting templates in batches	deleteTemplates	deleteTemplates
Response results of operations	TaskCommand	processCommandResult

Table 6-1 SMS operations recorded by CTS

6.2 Viewing CTS Traces in the Trace List

Scenarios

After you enable CTS and the management tracker is created, CTS starts recording operations on cloud resources. After a data tracker is created, the system starts recording operations on data in Object Storage Service (OBS) buckets. Cloud Trace Service (CTS) stores operation records (traces) generated in the last seven days.

NOTE

These operation records are retained for seven days on the CTS console and are automatically deleted upon expiration. Manual deletion is not supported.

This section describes how to query or export operation records of the last seven days on the CTS console.

- Viewing Real-Time Traces in the Trace List of the New Edition
- Viewing Real-Time Traces in the Trace List of the Old Edition

Constraints

- Traces of a single account can be viewed on the CTS console. Multi-account traces can be viewed only on the **Trace List** page of each account, or in the OBS bucket or the **CTS/system** log stream configured for the management tracker with the organization function enabled.
- You can only query operation records of the last seven days on the CTS console. To store operation records for longer than seven days, you must configure transfer to OBS or Log Tank Service (LTS) so that you can view them in OBS buckets or LTS log groups.
- After performing operations on the cloud, you can query management traces on the CTS console one minute later and query data traces five minutes later.
- Data traces are not displayed in the trace list of the new version. To view them, you need to go to the old version.

Viewing Real-Time Traces in the Trace List of the New Edition

- 1. Log in to the management console.
- Click in the upper left corner and choose Management & GovernanceManagement & Deployment > Cloud Trace Service. The CTS console is displayed.
- 3. Choose **Trace List** in the navigation pane on the left.
- 4. On the **Trace List** page, use advanced search to query traces. You can combine one or more filters.
 - Trace Name: Enter a trace name.
 - **Trace ID**: Enter a trace ID.
 - Resource Name: Enter a resource name. If the cloud resource involved in the trace does not have a resource name or the corresponding API

operation does not involve the resource name parameter, leave this field empty.

- **Resource ID**: Enter a resource ID. Leave this field empty if the resource has no resource ID or if resource creation failed.
- **Trace Source**: Select a cloud service name from the drop-down list.
- **Resource Type**: Select a resource type from the drop-down list.
- **Operator**: Select one or more operators from the drop-down list.
- Trace Status: Select normal, warning, or incident.
 - **normal**: The operation succeeded.
 - warning: The operation failed.
 - incident: The operation caused a fault that is more serious than the operation failure, for example, causing other faults.
- Enterprise Project ID: Enter an enterprise project ID.
- Access Key: Enter a temporary or permanent access key ID.
- Time range: Select **Last 1 hour**, **Last 1 day**, or **Last 1 week**, or specify a custom time range within the last seven days.
- 5. On the **Trace List** page, you can also export and refresh the trace list, and customize columns to display.
 - Enter any keyword in the search box and press Enter to filter desired traces.
 - Click Export to export all traces in the query result as an .xlsx file. The file can contain up to 5,000 records.
 - Click $^{
 m C}$ to view the latest information about traces.
 - Click 🥺 to customize the information to be displayed in the trace list. If

Auto wrapping is enabled (), excess text will move down to the next line; otherwise, the text will be truncated. By default, this function is disabled.

- For details about key fields in the trace structure, see Trace Structuresection "Trace References" > "Trace Structure" and Example Tracessection "Trace References" > "Example Traces".
- 7. (Optional) On the **Trace List** page of the new edition, click **Go to Old Edition** in the upper right corner to switch to the **Trace List** page of the old edition.

Viewing Real-Time Traces in the Trace List of the Old Edition

- 1. Log in to the management console.
- Click in the upper left corner and choose Management & GovernanceManagement & Deployment > Cloud Trace Service. The CTS console is displayed.
- 3. Choose **Trace List** in the navigation pane on the left.
- 4. Each time you log in to the CTS console, the new edition is displayed by default. Click **Go to Old Edition** in the upper right corner to switch to the trace list of the old edition.

5. Set filters to search for your desired traces, as shown in **Figure 6-1**. The following filters are available.

Figure 6-1 Filters		
Trace List ⑦	Last 1 hour Last 1 day Last 1 week	Customize 2023-08-23 10.09:16 - 2023-08-30 10.09:16
Procedure for Using CTS ~ Trace Source All trace sources * Resource Type All resource types	 Search By All filters 	
Operator Al trace Status Al trace Statuses Normal Wat	ning 🔿 Incident	Cuery Reset Export

- Trace Type, Trace Source, Resource Type, and Search By: Select a filter from the drop-down list.
 - If you select **Resource ID** for **Search By**, specify a resource ID.
 - If you select **Trace name** for **Search By**, specify a trace name.
 - If you select **Resource name** for **Search By**, specify a resource name.
- **Operator**: Select a user.
- Trace Status: Select All trace statuses, Normal, Warning, or Incident.
- Time range: Select **Last 1 hour**, **Last 1 day**, or **Last 1 week**, or specify a custom time range within the last seven days.
- 6. Click **Query**.
- 7. On the **Trace List** page, you can also export and refresh the trace list.
 - Click **Export** to export all traces in the query result as a CSV file. The file can contain up to 5,000 records.
 - Click $^{\mathbb{C}}$ to view the latest information about traces.
- 8. Click $\stackrel{\checkmark}{}$ on the left of a trace to expand its details.

Trace Name		Resource Type	Trace Source	Resource ID (?)	Resource Name ⑦	Trace Status (?)	Operator ⑦	Operation Time	Operation
createDockerC	onfig	dockerlogincmd	SWR		dockerlogincmd	📀 normal		Nov 16, 2023 10:54:04 GMT+08:00	View Trace
request									
trace id									
code	200								
trace_name	createDockerConfig								
resource_type	dockerlogincmd								
trace_rating	normal								
api_version									
message	createDockerConfig	Method: POST Url=/v2	/manage/utils/secret	Reason:					
source_ip									
domain_id									
trace_type	ApiCall								
Trace Name		Resource Type	Trace Source	Resource ID (?)	Resource Name ③	Trace Status 💿	Operator (?)	Operation Time	Operation
∧ login		user	IAM	179b57d1690441269fc74a8d58		📀 normal		Jul 3, 2024 11:26:32 GMT+08:00	View Trace
trace_id	0b4e8ff1-38ec-11et	-929c-81039bt65029							
code	302								
trace_name	login								
resource_type	user								
trace_rating	normal								
message	{"login":{"mode":"pa	issword","user_type":"c	Iomain owner","logir	_protect":{"status":"off"}}}					
source_ip									
domain_id	38e0								
trace_type	ConsoleAction								
Trace Name		Resource Type	Trace Source	Resource ID (?)	Resource Name (?)	Trace Status (?)	Operator (2)	Operation Time	Operation
				170-57-4500-440504-74-0-450					Mar Tana
iogin		user	14M	1/900/0109044120910/480000		ormai		3013, 2024 11:20:32 GM1+08:00	view trace
trace id	0b4e8#1-38ec-11e	(-929c-81039b/65029							
code	302								
trace name	login								
resource type	1150F								
trace ratios	oomal								
message	Closin' Coort-1-1-	annund lunar track	domaio overer! !!-	ala protect" ("status" (off")))					
message	(wgm .(mode : p	eservard , user_type :	woman owner", 10	an protect (status ; on))					
source_ip	00.0								
domain_id	38eUccaUU8/								
trace_type	ConsoleAction								

9. Click **View Trace** in the **Operation** column. The trace details are displayed.

```
View Trace
ł
    "request": "",
    "trace_id": "
    "code": "200",
    "trace_name": "createDockerConfig",
    "resource_type": "dockerlogincmd",
    "trace_rating": "normal",
    "api_version": ""
    "message": "createDockerConfig, Method: POST Url=/v2/manage/utils/secret, Reason:",
   "source_ip": " ",
"domain_id": "
                                  "
    "trace_type": "ApiCall",
    "service_type": "SWR",
    "event_type": "system",
    "project_id": "
    "response": "".
    "resource_id": "",
    "tracker_name": "system",
    "time": "Nov 16, 2023 10:54:04 GMT+08:00",
    "resource_name": "dockerlogincmd",
    "user": {
        "domain": {
           "name": "____",
           "id": "
```

- For details about key fields in the trace structure, see Trace Structuresection "Trace References" > "Trace Structure" and Example Tracessection "Trace References" > "Example Traces" in the CTS User Guide.
- 11. (Optional) On the **Trace List** page of the old edition, click **New Edition** in the upper right corner to switch to the **Trace List** page of the new edition.

6.3 Viewing Traces

Scenarios

After you enable CTS, it records key operations performed on SMS. You can view the operation records of the last seven days on the CTS console.

Procedure

- 1. Sign in to the console.
- 2. Choose Service List > Management & Governance > Cloud Trace Service.
- 3. In the navigation pane on the left, choose Trace List
- 4. In the upper right corner of the trace list, click **Filter** to set the search criteria. The following filters are available:
 - Trace Type, Trace Source, Resource Type, and Search By: Select a filter from the drop-down list.

When you select **Resource ID** for **Search By**, you also need to select or enter a resource ID.

- Operator: Select a specific operator from the drop-down list.
- Trace Status: Available options include All trace statuses, Normal, Warning, and Incident.
- Time range: In the upper right corner of the page, you can query traces in the last one hour, last one day, last one week, or within a customized period.

- 5. Click **Query**.
- 6. On the right of the filter box, click **Export**. CTS exports a CSV file which lists query results.
- 7. Click \leq on the left of the required trace to expand its details. Figure 6-2 shows an example.

Figure 6-2 Expanding trace details

Trace !	Name	Resource Type	Trace Source	Resource ID 💮	Resource Name 💮	Trace Status 🕐	Operator 💮	Operation Time	Operation
 remove 	Source	sourceServer	SMS			😔 normal		Oct 24, 2018 06:31:39 GMT+08:00	View Trace
Trace ID Trace Type	ConsoleAct	ion			Source Genera	e IP Address ated Oct	24, 2018 06:31:39	GMT+08:00	

8. Click **View Trace** in the **Operation** column. The trace structure details are displayed.