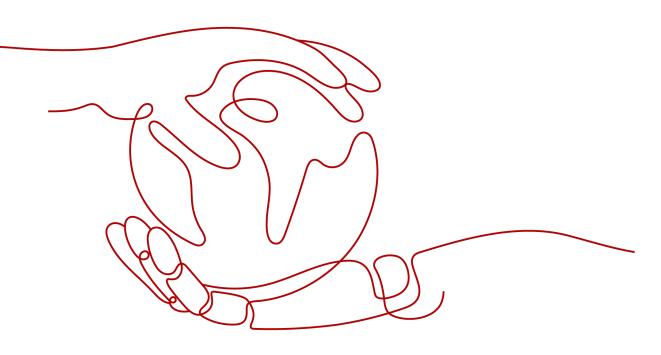
## Server Migration Service

## **User Guide**

 Issue
 20

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## **Contents**

1 Permissions Management	1
1.1 Creating a User and Assigning Permissions	
1.2 SMS Custom Policies	
2 Migration Management	5
2.1 Configuring a Target Server	5
2.2 Starting a Full Replication	
2.3 (Optional) Cloning a Target Server	
2.4 Launching a Target Server	
2.5 Viewing the Details of a Server	20
2.6 Synchronizing Incremental Data	21
2.7 Deleting a Target Server Configuration	22
2.8 (Optional) Deleting a Server Clone	23
2.9 Deleting a Server Record	23
2.10 Setting a Migration Rate	24
2.11 Unlocking a Target Server	25
2.12 Deleting an EVS Snapshot	
3 Template Management	28
3.1 Creating a Migration Template	
3.2 Modifying a Migration Template	32
3.3 Deleting a Migration Template	
3.4 Creating a Server Template	
4 Viewing CTS Traces	
4.1 SMS Operations Supported by CTS	
4.2 Querying Real-Time Traces	39
5 Change History	41

## 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**

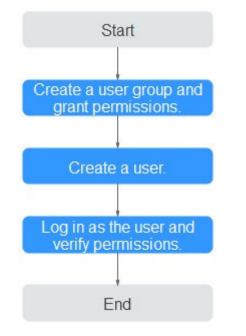
A Huawei Cloud account has all the permissions required for using SMS by default. If you use your Huawei Cloud account to perform migration, skip this chapter.

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.
- 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.

#### 

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 Log in to the management console as the created user.

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": [
"evs:snapshots:rollback", "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"
               ]
            }
        ]
      }
```

For details about policies supported by SMS, see Table 1-1.

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** Migration Management

## 2.1 Configuring a Target Server

#### Scenarios

Before starting the migration, you need to configure a target server for receiving data migrated from the source server. You can clone the target server for service testing, and then only launch the target server after you verify that your services can run properly on the clone.

#### Prerequisites

The migration task is in the **Ready** status.

#### Procedure

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

#### Figure 2-1 Server list

SMS	Servers	🕤 back to old edition . 👁 Process Flow 🛄 User Guide
Deshboerd	▲ If you encounter permissions issues when using SMS, contact the administrator to obtain permissions. Learn more	
Servers Agents	After you install and start the Agent on a source server, a record will be automatically generated.	
Templates Prony Servers		On Hose nettal Deta to intelle an non-metal synchronization. If synchronization is enabled for the lask, cloix Laurch
	Text bes 45         0 Averand 7         A. Mygste peeting 32         C. Running 2         0. Completed 4           Det         Paser         Launch Target         Byor         More           In Status 12 pagesty or Intel 12 Sevent         Byor         More         Byor         Byor           Status 12 pagesty or Intel 12 Sevent         Byor         More         Byor         Byor         Byor           Status 12 Averand 12 Sevent         Byor         Byor	- Mbis Start Dama Mara v

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

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

#### NOTICE

П

If you do not find your source server, check whether you have logged in to the account you are migrating to.

Total tasks 10 o Abnormal 1	A Migration pending 8	Running 0 o Completed	1					
Start Pause Launch	Target Sync Mo	xe ~ )						
Q Source Name	Add filter							× Q 0
Source Name/ID 🖯	Source OSIP Address ()	Target 🖯	Task Status $\Theta$	Migration Stage/ 🖯	Progress $\Theta$	Data Volume 💿 🖯	Migration Speed	d   Operation
<b>•</b>	UBUNTU_18_4_64BIT	**	A Migration pending	Migration Feasibility Chs Ready Configure Targe	Total progress • 1	- Elapsed Time:	Mb/s Remaining Time.	
Total Records: 1 10 🗸 < 1								View Delete Configure Target
								< Manage Target
								Delete Target Configuration
								Set Migration Rate
								< Manage Migration Settings

**Step 4** On the **Configure Basic Settings** page, configure parameters by referring to **Table 2-1**.

Parameter	Option	Description
Migration Template	N/A	After you select a migration template, the system populates <b>Network</b> , <b>Migration Rate Limit</b> , <b>Migration</b> <b>Method</b> , <b>Continuous Synchronization</b> , <b>Partition Resizing</b> , <b>Region</b> , and <b>Project</b> based on the template. You can choose the default template created by the system or any one you created. To learn how to create a migration template, see <b>Creating a Migration Template</b> .
Network Type	Public	An EIP must be bound to the target server. <b>Public</b> is the default value of <b>Network</b> <b>Type</b> .
	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.

Table 2-1 Basic parameter settings

Parameter	Option	Description
Migration Rate Limit	-	You can configure the rate limiting based on the source bandwidth and service requirements.
		If you do not want to limit the migration rate, set this parameter to <b>0</b> .
		NOTE For a Linux migration, traffic limiting is done with Traffic Control (TC). If TC is not installed on the source server, the migration rate limit you configured here will not be applied during the migration. Some Linux distributions do not support traffic limiting. For example, CentOS 8 and other CentOS 8-based distributions do not
		come with the TC module preinstalled.
CPU Limit	N/A	These options are only available for Linux migrations. For details, see <b>How</b>
Memory Limit	-	Do I Set Resource Limits for SMS-
Disk Throughput Limit	-	Agent During a Linux Server Migration?
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 available for Windows servers.
IP Address 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.
Continuous Synchronization	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 <b>Sync</b> in the <b>Operation</b> column.

Parameter	Option	Description
	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 <b>Launch Target</b> in the <b>Operation</b> column.
Partition Resizing	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 on the target server. For details, see <b>Resizing disks and partitions</b> .
Start Target Upon Launch	No	The target server will be stopped after the migration is complete.
	Yes	The target server will be started after the migration is complete.
Measure Network Performance	No	Network performance will not be measured.
	Yes	Before the full migration starts, the packet loss rate, network jitter, network latency, bandwidth, memory usage, and CPU usage will be measured. For details, see <b>How Do I Measure the Network</b> <b>Performance Before the Migration?</b>
Enable Concurrency	No	By default, one process is used for migration and synchronization.
	Yes	You need to set Max. Concurrent Migrations and Max. Concurrent Syncs, which determine the maximum number of processes the Agent can start concurrently to execute migration and synchronization. This parameter is available for Linux file-level migrations. To learn how to configure it, see How Do I Set the Number of Concurrent Processes for Linux File-Level Migrations?

• Resizing disks and partitions

1. Select **Yes** for **Partition Resizing** and click **Resize Partition**. In the displayed dialog box, resize the disks and partitions on the target server as needed.

Figure 2-2 Resizing	g disks and	partitions	(Windows)
---------------------	-------------	------------	-----------

Resize F	artition											×
				1 Confi	gure Disks	— (2 c	onfirm					
Source Dis	k	Target Disk	A In a block-level n	nigration, disk size c	an only be increase	d. ×						
Disk	Disk 0		Disk: Disk 0	Pa	irtition Style: MBF	t	Size	40 GIB 0 MB		Allocated:	39 GiB 10	22 MB
Size	40 GIB 0 MB	Partition	File System	Current Size	Used	Mount	Migrate	New Size				
Allocated	39 GIB 1022 MB	(Reserved)	NTFS	500 MB	392 MB		Yes 🗸	- 0	+ GiB	- 500	+	ИВ
		C:1	NTFS	39 GIB 522 MB	35 GIB 240 MB		Yes 🗸	- 39	+ GIB	- 522	+	ИВ
		Resize the disk	to fit the partition size.	Resize Disk								
Disk	Disk 1		Disk: Disk 1	Pa	ertition Style: MBF	t	Size:	19 GiB 1023 MB		Allocated:	19 GiB 10	21 MB
Size	19 GiB 1023 MB	Partition	File System	Current Size	Used	Mount	Migrate	New Size				
Allocated	19 GiB 1021 MB	D:\	NTFS	19 GiB 1021	539 MB		Yes v	- 19	+ GiB	- 1,021	+	ИВ
		Resize the dis	to fit the partition size.	Resize Disk								
Disk Overv	riew 😞											
Diek				Turrent Size				Now Cizo				
										Next	Confirm	Cancel

#### Figure 2-3 Resizing disks and partitions (Linux)

	Configure Voli	ime Groups 2 Configure Disks	(3) Confirm	
ource Disk	Target Disk	•		
Disk /dev/vda	Disk: /dev/vda	Partition Style: MBR	Size: 40 GiB 0 MB	Allocated: 39 GiB 1023 MB
Size 40 GiB 0 MB	Partition File System Curr	ent Size Used Mount	Migrate New Size	
Allocated 39 GiB 1023 MB	/dev/vda1 ext4 39 G	IB 1023 MB 5 GIB 26 MB /	Yes > - 39 +	GIB - 1,023 + MB
	Resize the disk to fit the partition size.	ize Disk		
Disk Overview 😞				
		Size	New Size	
Disk	Current			

#### **NOTE**

- You can choose whether to migrate source partitions and 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 increase the sizes of partitions, but you cannot decrease 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 configuring **Migrate All Volume Groups**.
- 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 increase the sizes of partitions, but you cannot decrease them.
- In a Linux file-level migration, you can increase or decrease size of each partition. The new partition size must be at least 1 GB larger than the used partition space. If the current partition size is not 1 GB larger than the used partition space, the partition size cannot be decreased. 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 decrease the disk size as needed.

2. Click **Next: Configure Disks**. Resize the disks as needed. Then confirm the configurations and click **OK**.

#### 

After you click **OK**, the value of **Partition Resizing** cannot be changed from **Yes** to **No**. If you want to restore the disk partition settings as they were, locate the source server to be migrated and choose **More** > **Delete** in the **Operation** column. Then restart the Agent on the source server, configure the target server again, and set **Partition Resizing** to **No**.

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

#### Figure 2-4 Configure Target

configure Basic Settin	gs — 2 Config	gure Target				
* Region	•		~			
Project			~			
* Server	2.If you switch service	is over to a cloned tar	w CS will be created by default. You can chan get server, the target server will use the sar dy after migration, the target server will i	ne login credentials as the so	ource server.	
Name ~	For a global search, ente		Q For a search on the current p		Q (	Q
Name V Source: Name	For a global search, enter		Q For a search on the current p get: OS: CENTOS_7_6_64BIT   System D OS		Q W Disk	Q
Source:	For a global search, ente		rget: OS: CENTOS_7_6_64BIT   System D			Q
Source:	For a global search, entr		get: OS: CENTOS_7_6_64BIT   System D		Disk	Q
Source:	For a global search, ente		get: OS: CENTOS_7_6_64BiT   System D OS CentOS 7.9 64bit		Disk System Disk: 40 GiB	Q
Source:	For a global search, ente		OS: CENTOS_7_6_64BIT   System D OS CentOS 7.9 64bit Ubuntu 18.04 server 64bit		Disk System Disk: 40 GiB System Disk: 40 GiB	Q

**Step 6** On the **Configure Target** page, set parameters as prompted.

Parameter	Option	Operation
Region	-	Select a region where you want to provision the target server. Consider your service requirements when selecting a region.
Project	-	Select a project in the region from the drop- down list. You can select a project only after a region is selected.
Server	Use existing	Select an existing server based on the recommended specifications above the server list. For details, see <b>Use existing</b> .
	Create new	Configure VPC, Subnet, Security Group, and the parameters in Advanced Settings. For details, see Create new.

 Table 2-2 Parameters for configuring a target server

• Use existing

The target server must meet requirements listed below. If no existing server meets the requirements, click **Create Now** to create one based on the recommended specifications. For details, see **Purchasing an ECS**.

#### **NOTE**

Source servers can be migrated to pay-per-use or yearly/monthly ECSs. You can select ECSs of whichever billing mode is appropriate.

- A target server running Windows must have at least 2 GB of memory.
- A target server must have at least as many disks as the source server, and each disk on the target server must be at least the size recommended by the system.
- A target server must run the same OS as the source server, or there will be a server name conflict or other problems.
- A target server must be reachable by the source server. An EIP must be bound to the target server, or a VPN or Direct Connect connection must be established between the source and target.
- The security group of the target server must be correctly configured. It must be configured to allow access on TCP ports 8899, 8900, and 22 for a Windows migration, on ports 8900 and 22 for a Linux block-level migration, or on port 22 for a Linux file-level migration.

#### 

- For security purposes, you are advised to open these ports only to the source server.
- The firewall of the target server must allow traffic to these ports.

## For details, see **How Do I Configure Security Group Rules for Target Servers?**

- Create new
  - If you select **Recommended** for **Server Template**, a VPC, subnet, and security group will be automatically created based on source settings. You can change the recommended settings as needed.

Advanced options such as the server name, AZ, specifications, system disk, data disk and EIP are automatically configured. You can change the settings as needed.

#### Figure 2-5 Recommended

Configure Basic Settings	2 Configure	Target	- (3) Con	firm				
* Region	<b>Q</b>		~					
Project	· · ·		~					
* Server	Use existing	Create net	w					
	1.If you select Create new 2.If you switch services of To ensure that the targe	ver to a cloned targ	et server, th	ie target server wi	Il use the same I	ogin credentials	as the source	server.
Server Template	Recommen							
Server remplate	Recommen							
Server remplate	Recommen	te						
Server remplate	Recomment.	te te						
Server rempiate								
	N	te	~					
VPC	Ξ	te		Automatically as	sign IP address			

#### Figure 2-6 Advanced Settings

lame				
z	Random	AZ2	AZ1	AZ3
pecifications	VCPUs All	→ Memory	All	
	General computing	General computing-plus	Al-accelerated	Memory-optimize
			1 vCPUs   1 GiB	
	S7.small.1		1 vCPUs   1 GIB	
	S7n.small.1		1 vCPUs   1 GiB	
	st6.small.1		1 vCPUs   1 GiB	
	Sit3.medium.2		1 vCPUs   2 GiB	
	s3.medium.2		1 vCPUs   2 GIB	
	Selected General specifications	I computing   st6.medium.2   1 vCPU	Us   2 GiB	
nage	Public image	Private image Shared in	mage	
	CentOS	✓ CentOS 7.6 64bit for eu	r Tenant 20230516 (40	GiB) V Q
vstem Disk	High I/O	✓ - 40 + Gi	iB IOPS limit: 1.440.1	OPS burst limit: 5,000

#### 

- 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.
- If you select a custom template, the VPC, subnet, security group, AZ, and disk will be populated based on the template. You can change the settings as needed. To learn how to create a server template, see Creating a Server Template.

#### D NOTE

If you select Recommended for Server Template, SMS will automatically:

Create a VPC and subnet.

If the source IP address is 192.168.*X.X*, SMS creates a VPC and a subnet that both belong to the 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 the network range 172.16.0.0/12.

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

Create a security group and allow traffic to the target server over the ports required by SMS: ports 8899, 8900, and 22 for a Windows migration, ports 8900 and 22 for a Linux block-level migration, or port 22 for a Linux filelevel migration.

#### **Step 7** Click **Next: Confirm** in the lower right corner.

#### Figure 2-7 The configuration confirmation page

ource Server		Private IP Address		Added	33 days ago
arso		PTVER IP Address		A0003	11 DB/E 800
8	CENT08_7_6_648IT	Specifications	1 vCPUs   1.79 GIB	Disk	System Disk: 48 OiB
orfigure Basic Settings					
nterprise Project		Network Type	Public   IPv4	Migration Rate Limit	0 Molto
igration Method	File-level	Partition Residing	No	Continuous Synchronization	No
lart Target Upon Launch	Yes	Measure Network Performance	No	Special Configuration	No
etwork					
PC	abots	Sabret	abcd	Security Group	default
ivate IP Address		EP		Bandwidth	1 Moltis (5_g-wm)
inget Server					
egion		AZ	A21	Name	
8	CentOS 7.9 64bit	Specifications	General computing   SI2.small.1   1 vCPUs   1 GIB	Disk	System Disk (Common VO): 40 GiB

Step 8 (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 2-8 Create Server Template

Create Server Template						
	et, security group, and o s a new template.	disk attributes of th	e target server	×		
Template Name	Enter a template nam	I <del>C</del> .				
Configuration &						
Region/Project	Create during migration	on				
Subnet	Create during migration	on				
Security Group	Create during migration	on				
AZ	Random	AZ2				
	AZ1	AZ3				
Disk	High I/O					
		(	Cancel	ок		

**Step 9** 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**.

Figure 2-9 Saving the configuration

Are you sure you want to save the configuration and start migration? $\overset{\times}{}$
Migration Checklist     X
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 2-10** Saving the configuration and starting the migration

Are you sure you want to save the configuration and start migration?
1 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.
<ul> <li>Make sure that you select a target server with the same OS as the source server.</li> </ul>
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.
<ul> <li>Make sure that TCP ports 22, 8899, and 8900 are enabled for Windows target servers,</li> </ul>
and ports 22 and 8900 are enabled for Linux target servers.
<ul> <li>Before the migration is complete, do not perform any operations on the target</li> </ul>
server, such as changing or reinstalling the OS. Otherwise, the migration may fail and
additional pricing may apply. Learn more
ОК
D NOTE
If <sup>O</sup> is displayed in the <b>Migration Stage</b> column, the target server has bee
End

## 2.2 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**

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

#### Procedure

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

You can also select the source server to be migrated and click **Start** above the server list. In the displayed **Start Migration** dialog box, click **Yes**.

Figure 2-11 Starting a full replication

Total tasks 45 • Abnormal 7 • Migration pending 31 = Run Start Pause Launch Target Sync More ~	nning 2 O Completed 5					
Addition					×Q®	
Scurce Name/D   Source OSIP Address   Terge	rt () Task Status ()	Migration Stage 8 Progress 8	Data Volume 🕥 🖯	Migration Speed O	Operation	
UBUNTU_13_4_64617 -	▲ Migration pending	Pull Replication Ready Start Total progress • 2	- Elapsed Time -	- Mbs Demolstrate Time	Start Pause More -	
- New		KERDY DEPT	Explore the -	Nerraining Line, -		
Total Records: 1 10 🗸 (1) >						
Figure 2-12 Co	nfirmatio	n				
Figure 2-12 CO	minatio	1				
Start Migration						$\times$
Start Migration						
Are you sure you want to sta	art a full replication of	or continuous synchro	nization of t	he following	1 servers?	
To ensure smooth migration,	, your target server	will be automatically lo	ocked during	g migration a	and unlocked afte	er the
migration.	-			-		
Name	Statu	2		Remarks		
Hume	Statu	3		Remarks		
		(3 days ago)		Ready for s	start	
		(				
	ing in complete de					
<ul> <li>Before the migrati fail.</li> </ul>	ion is complete, do	not perform any opera	ations on the	e target serv	er, or the migration	on may
	ion a temperaty EV	S disk will be attache	d to the tare	at convor a	nd you need to p	av for
<ul> <li>During the migrate the disk</li> </ul>	ion, a temporary Ev	S uisk will be allaurie	u to the tary	el server, ar	na you need to p	ay ioi
	n is complete the t	irget server will use th	e come loni	n cradantial	e as the cource o	convor
<ul> <li>Fater are migration</li> </ul>	no complete, the t	inger server will use th	ie same iogi	in credentidi	5 05 010 500100 5	Jerver.
A For EVS disks in DS	S storage pools, sn	apshots take up the sa	ame amouni	t of space in	the pool as the	disks.
You can delete these	snapshots as need	led.				
					(No)	Yes

#### **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, SMS automatically unlocks the target server. If you need to perform operations on the target server during the replication, unlock the target server first by referring to **Unlocking a 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**.

----End

## 2.3 (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.

#### **NOTE**

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** Log 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.

----End

## 2.4 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** Log 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 2-13 Launch Target

Total tasks 14 O Abnormal I	0 ▲ Migration pending 9	C Running 1 0	Completed 4					
Start Pause Launch Target Sync More -								
Q	dd filter							× Q 🛛
Source NamelID 🖯	Source OSIIP Address	Target 🕀	Task Status $\ominus$	Migration Stage/Status 😣	Progress 🖯	Data Volume 🕥 🖯	Migration Spe 🖯	Operation
•	WINDOWS2008_R2_64BIT	ecs-bd89TT 🕑 Existing	C Running	Continuous Synchronization Continuous sync Launch Target	Total progress	23.73 GB/23.73 GB Elapsed Time:1 hours 17 r	- Mb/s Remaining Time:	Sync Pause More ~

Step 4 In the displayed Launch Target dialog box, click Yes.

#### Figure 2-14 Confirmation

Launch Target						
Are you sure you want to launch	target servers for the following 1 serv	vers?				
Name	Status	Remarks				
	Continuous sync (9 minu	tes ago) Before launching target servers, s				
-	ervers, stop writing data to their sourd tal data to the target servers after the	ce servers for data consistency. If you fail to do ay are launched.				
		No Yes				

**Step 5** Check whether **Finished** is displayed in the **Migration Stage/Status** column. If it is, the target server has been launched and the migration is complete.

Figure 2-15 Migration completed

Source Name#D @	Source OS/IP Address 😑	Target 😔	Task Status 😣	Migration Stage/ ()	Progress ()	Data Volume 💿 😑	Migration Speed ()	Operation
	WINDOW92012_R2_64BIT	8	o Completed	Finished	Total progress	13.57 GB/13.57 GB	Mb/s	Sync Pause More ~
		Existing		Finished Go to ECS [2		Elapsed Time:	Remaining Time:	

----End

## 2.5 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 log 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** Log 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.



**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	© <sup>1</sup> OS UBUNTU_18_4_64BIT	Source IP Address	ð
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		
<ul> <li>Source Info</li> <li>Name</li> </ul>	os		Feasibility Check
Name	UBUNTU_18_4_	64BIT	Passed
IP	Connection Statu	15	Specifications
	Connected		2vCPUs   4 GiB   BIOS
IPv6	Agent Version		
	3.35.0		
✓ Source Check			
∨ Disks			
∨ NICs			

Figure 2-16 Viewing server details

----End

## 2.6 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** Log 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.



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?

Synchronize Incrementa	al Data		×
Are you sure you want to synchronize	incremental data of the following 1 serve	ers?	
To ensure smooth synchronization, you unlocked after the synchronization.	ur target server will be automatically lock	ed during the synchronization and	
Name	Status	Remarks	
	• Finished (5 minutes ago)	Ready for synchronization.	
Change to EulerOS ③			
Verify Consistency ③			
After the synchronization, your targ	he target server during the synchronizati et server will use the same login credent disk is created and attached to the target	ials as the source server. During the	
For EVS disks in DSS storage pool can delete these snapshots as nee	s, snapshots take up the same amount o ded.	of space in the pool as the disks. You	
During Linux incremental data sync Learn more	hronization, some source configurations	directories to are not synchronized.	
		No Yes	

----End

## 2.7 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 Log 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 2-17 Confirmation

Delete Target C	configuration	×
	o delete target configurations for the following 1 pshots will be deleted together with the target c	
Name \ominus	Status \ominus	Remarks
ecs-bd89	• Finished (6 days ago)	Ready for deletion.
		Cancel OK



## 2.8 (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 Log 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

## 2.9 Deleting a Server Record

#### Scenarios

You can delete a server record based on service requirements.

#### 

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

#### Procedure

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

You can also select the server 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 2-18	Confirmation		
Delete Server		×	ć
This operation only dele	o delete the following <b>1 servers</b> ? Hes these servers from the server list. It has no impers with SMS again, restart the Agent.	pact on both source and target servers. To	
Name \ominus	Status \ominus	Remarks	
ecs-bd89	• Finished (6 days ago)	Ready for deletion.	
		Cancel OK	

----End

### 2.10 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** Log 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 2-19 Setting migration rate limits

Set Migrat	tion Rate		×
-	ast one time period. You ration rate limit ranges f	I can set up to five time periods withou rom 1 to 1000 Mbit/s.	t overlaps.
Time Perio Start Time	ods in Source	Time Zone Migration Rate Limit (Mbit/s)	۲
00:00	<ul><li>23:59</li></ul>	© 0	Ē
		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.

----End

## 2.11 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 Log 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 2-20 Confirmation



## 2.12 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.

#### 

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 server migration or Linux blocklevel 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** Log 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.
- **Step 4** In the displayed **Delete EVS Snapshot** dialog box, select the snapshots to be deleted and click **OK**.

Figure 2-21 Confirming the deletion

Delete EVS Snapshot			×	
Snapsh	ot			
1	Before deleting the snapsho your services are stable on t After the snapshots created further synchronization can I	he target server. after data synchronization a		
<ul> <li>✓</li> </ul>	Type \ominus	Quantity \ominus	Size \ominus	
	Cutover snapshot	0	0 GB	
	Synchronization snap	6	180 GB	
	Clone snapshot	0	0 GB	



----End

## **3** Template Management

## 3.1 Creating a Migration Template

#### Scenarios

SMS allows you to create migration templates for quick configuration. You can use these templates to quickly configure the migration settings, such as **Network**, **Migration Rate Limit**, **Continuous Synchronization**, **Region**, and **Project**.

#### Procedure

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

SMS	Templates ⑦	
Dashboard Servers	Migration Templates	
Agents Templates	Enter a template name.	Q
Proxy Servers	SystemProject(default)	
	test	Û

Figure 3-1 Templates

**Step 3** In the upper right corner of the **Migration Templates** area, click **Create Migration Template**. In the displayed **Create Migration Template** dialog box, enter a name and description, and click **OK**.

Create Mig	ration Template	×
i You can c	onfigure a template after it is created. $ imes$	
* Name	Enter a name.	
Description	Enter a description.	
	0/255	
	Cancel	

#### Figure 3-2 Specifying the template name

#### 

A template name cannot be changed after the template is created.

**Step 4** In the **Migration Templates** area, on the left, click the name of the created template.

In the **Migration Templates** area, on the right, click 2 next to **Parameter Settings** to configure template parameters.

Figure 3-3 Parameter Settings

Migration Templates							Create Migr	ration Template
Enter a template name.	۹	Set as Default Template						
	8	Basic Information & Name 1208-11 Description						
	0	Parameter Settings						
	0	Region/Project •	volic Private	× _	Migration Method	File-level	Block-level Mbit/s	
1206-11	0		Yes No		Target Server	Use existing	Create durin	
1.00 11		Start Target Upon Launch	Yes No		Measure Network Performance	Yes	No	
		ОК	Cancel					

 Table 3-1 describes the parameters.

Table 3-	<b>1</b> Parameters
----------	---------------------

Parameter	Option	Description
Region	N/A	Consider your service requirements when selecting a region.
Project	N/A	You can select a project only after a region is selected.

Parameter	Option	Description
Migration Method	Block-level	<ul> <li>Migration and synchronization are performed by block.</li> <li>For Windows servers,</li> </ul>
		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.
		<b>Public</b> 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 <b>Private</b> .
Migration Rate Limit	N/A	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 <b>0</b> .
Continuous Synchronization	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 <b>Sync</b> in the <b>Operation</b> column.

Parameter	Option	Description
	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.
Target Server	Use existing	You need to select an existing server based on the recommended target server specifications when you configure the target server.
	Create during migration	You need to set parameters such as the VPC, subnet, and security group as required when you configure the target server.
Start Target Upon Launch	No	The target server will be stopped after the migration is complete.
	Yes	The target server will be started after the migration is complete.
Measure Network Performance	No	Network performance will not be measured.

Parameter	Option	Description
	Yes	Before the full migration starts, the packet loss rate, network jitter, network latency, bandwidth, memory usage, and CPU usage will be measured. For details, see How Do I Measure the Network Performance Before the Migration?

- Step 5 Click OK.
- **Step 6** (Optional) Click the name of the created template, and click **Set as Default Template** to set it as the default template.

Enter a template name.	Q	Set as Default Template	)		
		Basic Information $\mathscr{Z}$			
webUI-1709065877370	Û	Name 1206-11			
webUI-1709065798847	÷	Description			
vebUI-1709065523200	Ē	Description -			
unionsdk-migproject	Û	Parameter Settings 🖉			
est_lcs	Ê	Region/Project	c	Migration Method	File-level
systemProject	Ē	Network	Public	Migration Rate Limit	0 Mbit/s
olaywright_newserver	Û	Continuous Synchronization	No	Target Server	Create during migration
1206-11	Û	Start Target Upon Launch	Yes	Measure Network Performance	No

Figure 3-4 Set as Default Template

----End

## 3.2 Modifying a Migration Template

#### **Scenarios**

You can modify a migration template that does not meet your requirements.

#### Procedure

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

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

Figure 3-5 Templates

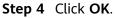
SMS	Templates ⑦	
Dashboard Servers	Migration Templates	
Agents Templates	Enter a template name.	Q
Proxy Servers	SystemProject(default)	
	test	Û

**Step 3** In the **Migration Templates** area, on the left, click the name of the template you want to modify.

In the **Migration Templates** area, on the right, click  $\checkmark$  next to **Basic Information** and **Parameter Settings** to modify the template description and parameters.

Figure 3-6 Modifying template parameters

Migration Templates								Create	Migration Template
Enter a template name.	Q	Set as Default Template	)						
	0	Basic Information &							
	8	Name 1206-11 Description							
	8								
	8	Parameter Settings d							
	8	Region/Project	0	× .	×	Migration Method	Filelevel	Block-level	
	8	Network	Public	Private		Migration Rate Limit	0	Motis	
1206-11		Continuous Synchronization	Yes	No		Target Server	Use existing	Create durin	
1208-11	0	Start Target Upon Launch	Yes	No		Measure Network Performance	Yes	No	
			OK Cancel						



----End

## **3.3 Deleting a Migration Template**

#### Scenarios

You can delete a migration template that is no longer needed.

#### Procedure

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

#### Figure 3-7 Templates

SMS	Templates ③	
Dashboard		
Servers	Migration Templates	
Agents		
Templates	Enter a template name.	
Proxy Servers	SystemProject(default)	
	test	Û

**Step 3** In the **Migration Templates** area, on the left, click <sup>1</sup>/<sub>U</sub> next to the name of the template you want to delete.

Q
Û
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値
Ê
Ċ
Ē
Û

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

----End

## 3.4 Creating a Server Template

#### Scenarios

SMS allows you to create server templates for quick configuration. You can use these templates to quickly configure target server settings, such as **VPC**, **Subnet**, and **Security Group**.

#### Procedure

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

#### Figure 3-8 Templates

SMS	Templates ③	
Dashboard Servers	Migration Templates	
Agents Templates	Enter a template name.	Q
Proxy Servers	SystemProject(default)	
	test	Û

Step 3 In the upper right corner of the Server Templates area, click Create Server Template.

Figure 3-9 Create Server Template				
Create Server	Template			×
· · · · · · · · · · · · · · · · · · ·	et, security group, and a new template.	disk attributes of th	ne target server	×
Template Name	Enter a template nar	ne.		
Configuration $\mathcal Z$				
Region/Project				
VPC	Create during migrat	lion		
Subnet	Create during migration			
Security Group	Create during migration			
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 3-2**.

Table 3-2	Parameters
-----------	------------

Parameter	Description
Region	<ul> <li>Select a region where you want to provision a target server.</li> <li>By default, the region is the one set in the default migration template, but you can change it as needed.</li> </ul>

Parameter	Description
Project	<ul> <li>Select a project in the region from the drop-down list.</li> </ul>
	• You can select a project only after a region is selected.
VPC	If you select <b>Create during migration</b> , SMS will create a VPC when you use this template to configure a target server.
	• If the source IP address is 192.168. <i>X.X</i> , 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 <b>Create during</b> <b>migration</b> , SMS will recommend a subnet when you use this template to configure a target server.
	<ul> <li>The subnet is in the same network segment as the VPC.</li> </ul>
Security Group	<ul> <li>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.</li> </ul>
	• Windows: ports 8899, 8900, and 22
	<ul> <li>Linux: port 22 for a file-level migration and ports 8900 and 22 for a block-level migration</li> <li>CAUTION</li> </ul>
	<ul> <li>For security purposes, you are advised to open these ports only to the source server.</li> </ul>
	<ul> <li>The firewall of the target server must allow traffic to these ports.</li> </ul>
AZ	The parameter is set to <b>Random</b> by default. You can also select another AZ.

Parameter	Description
	The value can be <b>Common I/O</b> , <b>High</b> I/O, or Ultra-high I/O.

#### Step 5 Click OK.

----End

### **Related Operations**

You can perform the following operations on a created server template.

Operation	Description
Modifying a server template	<ol> <li>Locate the server template and click Modify in the Operation column.</li> </ol>
	<ol> <li>In the displayed Modify Server Template dialog box, modify the parameters and click OK.</li> </ol>
Deleting a server template	1. Locate the server template and click <b>Delete</b> in the <b>Operation</b> column.
	<ol> <li>In the displayed <b>Delete</b> dialog box, click <b>OK</b>.</li> </ol>

## **4** Viewing CTS Traces

## 4.1 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 4-1 SMS operations recorded by CTS

## 4.2 Querying Real-Time Traces

#### 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 OBS buckets. CTS stores operation records generated in the last seven days.

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

• Viewing Real-Time Traces in the Trace List

#### Viewing Real-Time Traces in the Trace List

- 1. Log in to the management console.
- 2. Click in the upper left corner and choose **Management & Deployment** > **Cloud Trace Service**. The CTS console is displayed.
- 3. Choose **Trace List** in the navigation pane on the left.
- 4. Set filters to search for your desired traces, as shown in **Figure 4-1**. The following filters are available:

#### Figure 4-1 Filters

Trace List 🌝		Last 1 hour Last 1 day	Last 1 week Custon	nize 2023-08-23 10:09:16 - 2023-08-30 10:09:16	ËC
Procedure for Using CTS $\sim$					
Trace Type Management + Trace Source All to	ace sources • Resource Type All resource types	<ul> <li>Search By All filters</li> </ul>	Ŧ		
Operator Operator	Trace Status   All trace statuses  Normal  Wan	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: You can query traces generated during any time range in the last seven days.
- Click Export to export all traces in the query result as a CSV file. The file can contain up to 5000 records.
- 5. Click **Query**.
- 6. 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 5000 records.

×

- Click  $^{\mathbb{C}}$  to view the latest information about traces.
- 7. Click  $\checkmark$  on the left of a trace to expand its details.

		Resource Type	Trace Source	Resource ID (?)	Resource Name (?	D Trac	e Status 🕐	Operator (?)	Operation Time	Op
createDockerCor	nfig	dockerlogincmd	SWR		dockerlogincmd	📀 n	ormal		Nov 16, 2023 10:54:04 GMT+08:00	View
iest										
e_id										
	200									
e_name	createDockerConfig									
	dockerlogincmd									
ce_rating i	normal									
i_version										
essage	createDockerConfig,	Method: POST Url=/v	2/manage/utils/secre	et, Reason:						
urce_ip										
omain_id										
	ApiCall									
Trace Na				rsource ID ③	Resource Name	Trace Stat	Operator @			
~ login				7						
∼ login ace_id	ct									
~ login race_id ode	c! 302			7						
~ login race_id race_name	ct			7						
<ul> <li>login</li> <li>race_id</li> <li>race_name</li> <li>esource_type</li> <li>race_rating</li> </ul>	c! 302 login user norma	user I.	AM 3c	7						
<ul> <li>login</li> <li>trace_id</li> <li>code</li> <li>trace_name</li> <li>rezource_type</li> <li>trace_raiting</li> <li>message</li> </ul>	c! 302 login user norma	user I.	AM 3c	7						
<pre>c login trace_id code trace_name trace_rating message source_ip</pre>	c! 302 login user norma ("login	user I.	AM 3c	7						
login race_id code race_name race_rating nessage source_ip race_type rervice_type	c! 302 login user norma ('login Conso IAM	user L	AM 3c	7						
login race_id oode race_name resource_type race_rating nessage source_ip race_type source_type service_type sovent_type	et 302 login uzer norma C'iogin Conzo IAM global	user I. I ":("user_type":" leAction	AM 3c	Z 3						
<ul> <li>login</li> <li>race_id</li> <li>code</li> <li>race_rame</li> <li>resource_type</li> <li>race_rsting</li> <li>nessage</li> <li>rource_type</li> <li>race_type</li> <li>resource_type</li> <li>resource_type</li> <li>rource_type</li> <li>rource_type</li> <li>rource_type</li> </ul>	c! 302 login user norma ("login Lam global	user L	AM 3c	Z						
<ul> <li>login</li> <li>race_id</li> <li>sode</li> <li>race_name</li> <li>race_rating</li> <li>nescape</li> <li>source_ip</li> <li>race_type</li> <li>aevice_type</li> <li>aevice_type</li> <li>aevice_type</li> <li>aevice_id</li> <li>racker_name</li> </ul>	ct 302 Iogin user norma Clogin Lom global system	user t	AM 3c	3						
<ul> <li>login</li> <li>race_id</li> <li>ode</li> <li>race_name</li> <li>esource_type</li> <li>esource_ip</li> <li>race_rating</li> <li>mossage</li> <li>source_ip</li> <li>race_type</li> <li>service_type</li> <li>avent_type</li> <li>oroject_id</li> <li>esource_id</li> <li>race_rame</li> <li>ime</li> </ul>	ci 302 login user norma ('login IAM globat globat a 	user L	AM 3c	3						
<ul> <li>login</li> <li>trace_id</li> <li>code</li> <li>trace_name</li> <li>resource_ip</li> <li>trace_type</li> <li>service_type</li> <li>service_type</li> <li>project_id</li> <li>rescource_id</li> <li>tracker_name</li> <li>tracker_name</li> </ul>	ci 302 login user norma (Togin Conso IAM global 2 a system Nov 22 0	user L	AM 3c	3		normal	In provide the second s	Nov 25, 2022		
	ci 302 login user norma (Togin Conso IAM global 2 a system Nov 22 0	user L	AM 3c	3			In provide the second s	Nov 25, 2022		

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

#### 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",
	"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": "

9. For details about key fields in the trace structure, see section "Trace References" > "Trace Structure" and section "Trace References" > "Example Traces" in the *CTS User Guide*.

# **5** Change History

Released On	What's New
2023-09-30	This issue is the first official release.