

Migration Center

Quick Start

Issue 02
Date 2024-02-29



Copyright © Huawei Technologies Co., Ltd. 2024. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of Huawei Technologies Co., Ltd.

Trademarks and Permissions



HUAWEI and other Huawei trademarks are trademarks of Huawei Technologies Co., Ltd.

All other trademarks and trade names mentioned in this document are the property of their respective holders.

Notice

The purchased products, services and features are stipulated by the contract made between Huawei and the customer. All or part of the products, services and features described in this document may not be within the purchase scope or the usage scope. Unless otherwise specified in the contract, all statements, information, and recommendations in this document are provided "AS IS" without warranties, guarantees or representations of any kind, either express or implied.

The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.

Security Declaration

Vulnerability

Huawei's regulations on product vulnerability management are subject to the *Vul. Response Process*. For details about this process, visit the following web page:

<https://www.huawei.com/en/psirt/vul-response-process>

For vulnerability information, enterprise customers can visit the following web page:

<https://securitybulletin.huawei.com/enterprise/en/security-advisory>

Contents

1 Overview.....	1
2 Making Preparations.....	3
3 Creating a Migration Project.....	5
4 Installing Edge.....	7
4.1 Installing Edge for Windows.....	7
5 Creating an Application.....	10
6 Discovering Servers.....	11
6.1 Discovering Servers over the Internet.....	11
6.2 Discovering Servers over an Intranet.....	14
6.3 Manually Adding Servers to MgC.....	16
7 Grouping Servers as Applications.....	18
8 Creating an Application Assessment.....	19
9 Creating a Server Migration Workflow.....	24

1 Overview

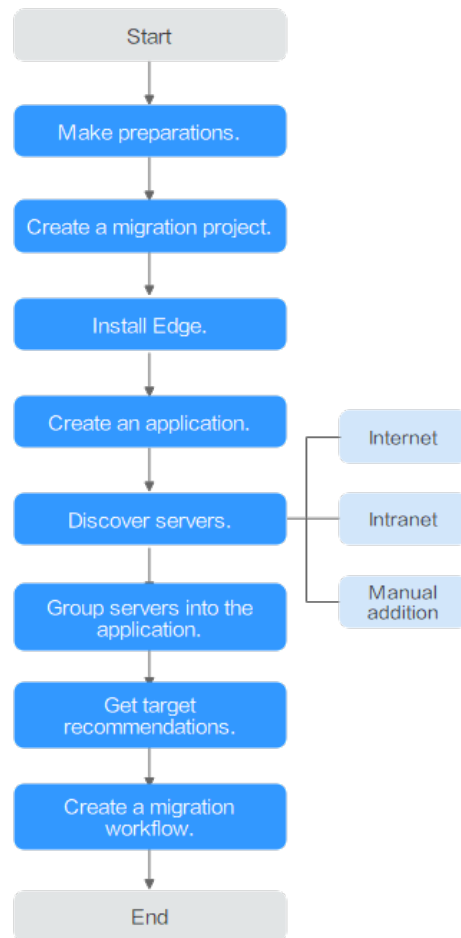
This section describes how to get started with MgC. Included are steps to introduce you to the process of using the server migration workflow of MgC.

MgC also supports cross-AZ ECS migration and storage migration. For details, see [Migrating Servers Across AZs on Huawei Cloud](#) and [Migrating Data from Other Clouds to Huawei Cloud](#).

Flowchart

[Figure 1-1](#) shows how to create a server migration workflow on MgC.

Figure 1-1 Process of creating a server migration workflow



2 Making Preparations

Before using MgC, you need to sign up for a HUAWEI ID or create an IAM user. This section describes how to sign up for a HUAWEI ID, enable Huawei Cloud services, complete real-name authentication, and create an IAM user.

Signing up for a HUAWEI ID, Enabling Huawei Cloud Services, and Completing Real-Name Authentication

If you already have a HUAWEI ID, skip this part.

1. Visit [Huawei Cloud](#) and click **Sign Up**.
2. [Sign up for a HUAWEI ID and enable Huawei Cloud services](#).
3. Complete real-name authentication.
 - If your account is an individual account, see [Individual Real-Name Authentication](#).
 - If your account is an enterprise account, see [Enterprise Real-Name Authentication](#).

Creating an IAM User

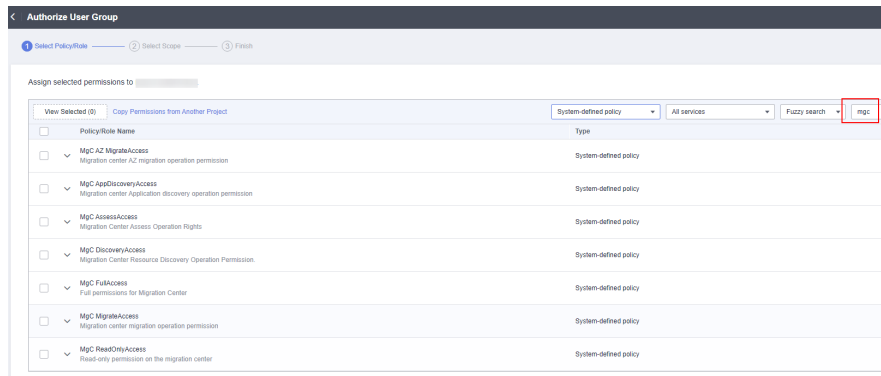
You can use your account to create IAM users to ensure the security of accounts and resources. For more information about IAM users, see [Creating an IAM User](#). This section describes how to create an IAM user with permissions to access MgC. If you do not need to use any IAM users, skip this part.

1. Visit [Huawei Cloud](#). Click **Console** in the upper right corner. Sign in to the console using the HUAWEI ID you signed up for.
2. Hover your cursor over the username in the upper right corner, and choose **Identity and Access Management** from the drop-down list.
3. [Create a user group and assign permissions](#) to it.

Create a user group. In the user group list, locate the user group you created and click **Authorize** in the **Operation** column. On the **Authorize User Group** page, search for **MgC** in the search box. Select the permissions to be assigned to the user group. For details about MgC permissions, see [Permissions Management](#).

 **NOTE**

A maximum of 20 user groups can be created.



4. **Create an IAM user and add it to the user group.**

Create a user and add it to the user group authorized with MgC permissions in [Step 3](#).

Obtaining Access Keys (AK/SK)

Access keys are identity credentials used to call APIs. The account administrator and IAM users can only use their own access keys to call APIs. For details about how to obtain the access keys, see [Access Keys](#).

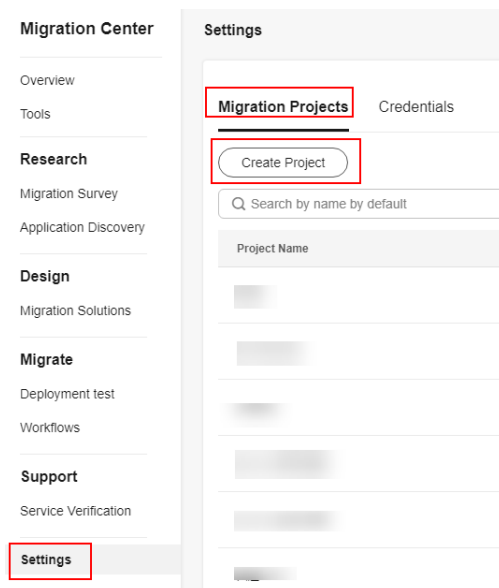
3 Creating a Migration Project

Using migration projects, you can easily isolate different migration resources. For example, you can create two different projects to isolate resources for migrations from Alibaba Cloud and AWS.

Procedure

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

Step 2 In the navigation pane on the left, choose **Settings**. Under **Migration Projects**, click **Create Project**.



Step 3 In the displayed dialog box, specify a project name, select a project type as required, and click **Confirm**. After the project is created, you can view it in the migration project list.

- **Simple:** suitable for migration of a small number of applications that have simple, clear dependencies. It is also a best choice for migration of ECSs across AZs on Huawei Cloud.
- **Complex:** suitable for migration of a large number of applications that have complex dependencies.

×

Project Name

Project Type

The project type cannot be modified after the project is created. You can manage this project on the Settings page.

<p>Simple</p> <p>Quick migration of simple applications</p> <hr/> <p>Scenarios</p> <ul style="list-style-type: none">· Migration of applications that do not use a lot of resources, such as less than 150 servers or 30 databases· Migration of applications with simple, clear dependencies· Migration of ECSs across AZs within a region on Huawei Cloud	<p>Complex</p> <p>Dependency mapping and migration of complex applications</p> <hr/> <p>Scenarios</p> <ul style="list-style-type: none">· Migration of applications that use more resources, such as more than 150 servers or 30 databases· Migration of applications with complex, unclear dependencies
--	--

Cancel Confirm

----End

4 Installing Edge

4.1 Installing Edge for Windows

Preparations

- Prepare a Windows server for installing Edge in the source intranet environment. The Windows server must:
 - Be able to access the Internet and the domain names of MgC and IoTDA. For details about the domain names to be accessed, see [How Do I Configure WinRM on a Windows Source Server and Troubleshoot WinRM Connection Problems?](#)
 - Use PowerShell **3.0** or later.
 - Have at least 4 CPUs and 8 GB of memory.
 - Allow outbound traffic on 8883 if the server is in a security group.
 - Disable any antivirus and protection software on the server. This type of software may stop Edge from executing migration commands, resulting in migration failures.



Do not install Edge on a source server to be migrated.

- **High resource consumption:** Edge consumes CPU and memory resources during collection and migration. If a large number of migration tasks are performed by Edge, services on the source server may be affected.
 - **Port occupation:** Edge occupies some ports on the source server, which may affect services on the server.
-
- [Sign up for a HUAWEI ID and enable Huawei Cloud services](#), and obtain an AK/SK pair for the account.
 - [Create a migration project](#) on the MgC console.

Precautions

- The Windows server where Edge is installed must be able to access source servers you want to migrate over the following ports:
 - Windows: port 5985
 - Linux: port 22
- WinRM must be enabled on Windows source servers, and these source servers must be able to access the server where Edge is installed. For more information, see [How Do I Configure WinRM on a Windows Source Server and Troubleshoot WinRM Connection Problems?](#)

Procedure

- Step 1** Sign in to the [MgC console](#) from the Windows server you prepared.
- Step 2** In the navigation pane on the left, choose **Tools**.
- Step 3** In the **Windows** area, click **Download Installation Package** to download the Edge installation package to the Windows server you prepared.
- Step 4** Decompress the downloaded Edge installation package, double-click the Edge installation program, and click **Next**. If the installation program cannot be launched, try to run it in compatibility mode. For details, see [How Do I Run Edge in Compatibility Mode?](#)
- Step 5** On the **License Agreement** page, read the agreement carefully, select **I accept the terms of the License Agreement**, and click **Next**.
- Step 6** Select drive C as the installation directory and click **Install**.

 **CAUTION**

Edge can be installed only in drive C. If you select another disk for installation, Edge may fail to be started.

- Step 7** After the installation is complete, click **Finish** to open the Edge console and go to the [User Registration](#) page.

----End

Registering an Account

When you log in to the Edge console for the first time, you must set a username and password. Keep the username and password secure.

- Step 1** On the **Register** page, specify a username and password, confirm the password, and click **Privacy Statement**.

Register

Set a username and password upon the first login.

Username

Password

Confirm Pass...

I have read and agree to the [Privacy Statement](#).
You must first read the statement carefully

Step 2 Read the privacy statement carefully before selecting **I have read and agree to the Privacy Statement**, and click **Register**. Then you need to connect the Edge device to MgC. For details, see [Connecting the Edge Device to MgC](#).

----End

5 Creating an Application

You can group resources with a shared business purpose as an application. The application will be used for generating target resource recommendations and executing workflow-based migration.

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

Step 2 In the navigation pane on the left, choose **Research > Application Discovery**. Select the created **migration project** in the upper left corner of the page.

Step 3 If you are accessing the page for the first time, click **Create Application** in the procedure.

If you have created a discovery task before, click **Create Application** in the **Application** box.

Step 4 Enter an application name and description, select a business scenario and environment, select the region you are migrating to, and click **Create Application**. The application is created, and the page for adding resources to the application is displayed.

- If resources have been discovered, and you want to add the discovered resources to the created application, select the resources and click **Add Now**.
- If no resources have been discovered, click **Add Later**. You can add resources to the application later by referring to **Grouping Servers as Applications**.

----End

6 Discovering Servers

6.1 Discovering Servers over the Internet

This section describes how to discover servers running on clouds, such as Alibaba Cloud, Huawei Cloud, AWS, Tencent Cloud, Google Cloud, and Azure.

A simple migration project is used as an example. To learn the discovery process in a complex project, see [Discovering Resources over the Internet](#).

 **CAUTION**

After the servers are discovered over the Internet, you need to ensure all the servers pass the pre-migration check or perform a deep collection for them, so that you can create a migration workflow to migrate them.

Prerequisites

- You have [installed Edge](#) in the source intranet environment and have connected the Edge device to MgC.
- You have [added source server credentials](#) to Edge. The server credentials must meet the following requirements:
 - Linux: **root** and its password
 - Windows: **administrator** and its password

Procedure

Step 1 Sign in to the [MgC](#) console.

Step 2 In the navigation pane on the left, choose **Research > Application Discovery**. Select the created [migration project](#) in the upper left corner of the page.

Step 3 If this is your first time to create a discovery task, click **Discover Over Internet** in the **Cloud Discovery** area.

If this is not your first time to create a discovery task, choose **Discover > Over Internet** in the **Discovery Task** card.

Step 4 Configure the parameters listed in [Table 6-1](#).

Table 6-1 Parameters for creating an Internet-based discovery task

Area	Parameter	Description	Mandatory
Basic Settings	Task Name	Enter a task name.	Yes
	Task Description	Describe the task.	No
Task Settings	Source Platform	Select the source cloud platform. Currently, Alibaba Cloud, Huawei Cloud, AWS, Tencent Cloud, Google Cloud, and Azure are supported.	Yes
	Credential	<p>Select the credential for accessing the source cloud platform. If no credential is available, choose Create to add the credential to MgC by referring to Managing Credentials.</p> <ul style="list-style-type: none"> If the source cloud platform is Alibaba Cloud, Huawei Cloud, AWS, or Tencent Cloud, select AK/SK for Authentication and enter the AK/SK pair of your source cloud account. If the source cloud platform is Google Cloud, select Configuration File for Authentication and upload the configuration file that contains your Google Cloud service account credentials. The file must be in JSON format and cannot exceed 4 KB. If your source cloud platform is Azure, Select ID/Secret for Authentication. To learn how to obtain Azure credentials, see How Do I Obtain the Information for Adding Azure Credentials to MgC? 	Yes
	Region	Select the regions where your source services are running.	Yes

Step 5 Select **Servers** from the **Resource Type** drop-down list.

Step 6 Click **Confirm**. The Internet-based discovery task is created, and MgC starts collecting details about source servers.

On the **Application Discovery** page, in the **Discovery Task** card, click **View** next to **Total tasks**.

Step 7 Wait until the task status changes to **Succeeded**. Then perform the following steps to check whether the source servers are ready for migration.

1. Ensure that **Edge** has been installed in the source intranet environment and has been registered with MgC.
2. On the **Application Discovery** page, click the **Resources** tab and click the number in the **Server** row.
3. Select the servers to be migrated, click **Group as Application** above the list, select the **created application**, and click **OK**.
4. On the top of the server list, choose **Migration Scenario > Server migration**.
5. Click **Configure** in the **Migration Readiness** column.
6. Configure the parameters listed in **Table 6-2**.

Table 6-2 Parameters for configuring migration readiness

Parameter	Configuration
Type	Set this parameter based on the source server OS type.
Edge Device	Select the Edge device in the source environment.
IP Address	Select the IP address for accessing the source server. It can be a public or private IP address. After the pre-migration check is passed, the IP address you select here will be used for migration.
Port	Enter the port on the source server that allows access from the Edge device. <ul style="list-style-type: none"> - By default, port 5985 on Windows source servers must be opened to the Edge device. The port cannot be changed. - By default, port 22 on Linux source servers must be opened to the Edge device. You can specify a different port if needed.
Credential	Select the server credential. If the credential has not been added to MgC, go to the Edge console and add the server credential to Edge and synchronize it to MgC. <p>CAUTION</p> <p>The server credentials must meet the following requirements:</p> <ul style="list-style-type: none"> - Linux: root and its password - Windows: administrator and its password

7. Click **Confirm**. The system checks whether the source server can be accessed using the information you specify and whether the server can be migrated. If **Ready** shows up in the **Migration Readiness** column, the source server can be migrated.

----End

6.2 Discovering Servers over an Intranet

This section describes how to discover servers in on-premises environments. Before getting started, you need to install Edge in the source environment. Then you can discover servers by network range or VMware host.

Precautions

- Only VMs in VMware vSphere 5.0 to 7.0 can be discovered.
- When the system scans VMware VMs or scans servers on specified network ranges, it uses the servers' private IP addresses and the ID of the used Edge device to identify discovered servers. If a server's private IP address changes after a collection is complete, the server will be identified as a new one during the next collection, and the total number of discovered servers will increase. To avoid this, you are advised not to change private IP addresses of source servers before the migration is complete.

Prerequisites

- You have **installed Edge** in the source intranet environment and have connected the Edge device to MgC.
- You have **added source server credentials** to Edge. The server credentials must meet the following requirements:
 - Linux: **root** and its password
 - Windows: **administrator** and its password

Procedure

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

Step 2 In the navigation pane on the left, choose **Research > Application Discovery**. Select the created **migration project** in the upper left corner of the page.

Step 3 If this is your first time to create a discovery task, click **Discover over Intranet** in the **Edge Discovery** area.

If this is not your first time to create a discovery task, choose **Discover > Over Intranet** in the **Discovery Task** card.

Step 4 Configure the parameters listed in **Table 6-3**.

Table 6-3 Parameters for creating an intranet-based discovery task

Parameter	Description
Task Name	Enter a task name.

Parameter	Description
Task Description	Describe the task.
Device	Select the Edge device in the source intranet environment.

Step 5 Enable **Scan Network Range** or **Scan VMware VMs** to discover servers as needed.

- If **Scan Network Range** is enabled, configure parameters listed in [Table 6-4](#).

Table 6-4 Parameters for scanning a network range

Parameter	Description
Protocol	Select the communication protocol TCP or ICMP .
Network Range	There are three supported IP address ranges: <ul style="list-style-type: none"> - 10.0.0.0 - 10.255.255.255 - 172.16.0.0 - 172.31.255.255 - 192.168.0.0 - 192.168.255.255
Linux	Enter the port for scanning Linux servers. This parameter is available only if you choose the TCP protocol. If you need to skip Linux servers during the scan, set this parameter to 0 .
Windows	Enter the port for scanning Windows servers. This parameter is available only if you choose the TCP protocol. If you need to skip Windows servers during the scan, set this parameter to 0 .

- If **Scan VMware VMs** is enabled, enter the IP address of a vCenter Server in the **IP Address** text box, and select the credential for accessing the vCenter Server. All VMs managed by the vCenter Server will be discovered. If the vCenter Server's credential has not been added, click **Create** to add it to MgC by referring to [Adding Resource Credentials](#). When adding the credential, enter the username and password for logging in to the vCenter Server.

Step 6 Click **Confirm**. The intranet-based discovery task is created, and MgC starts collecting details about source servers.

On the **Application Discovery** page, in the **Discovery Task** card, click **View** next to **Total tasks**.

Step 7 Wait until the task status changes to **Succeeded**, and perform a deep collection. Servers discovered on an intranet have an Edge device associated. You need to configure credentials for these servers before you can perform a deep collection.

1. On the **Application Discovery** page, click the **Resources** tab and click the number in the **Server** row.
2. Locate a server and click **Configure** in the **Credential** column.

3. Select the server credential. If the credential has not been added to MgC, go to the Edge console and **add the server credential** to Edge and synchronize it to MgC.
4. Click **OK**. MgC will check whether the server can be accessed using the associated credential and perform a deep collection. After the first deep collection is complete, you can click **Collect Again** in the **Deep Collection** column to perform a second deep collection if needed.

----End

6.3 Manually Adding Servers to MgC

This method is for discovering on-premises servers and cloud servers that cannot be discovered over the Internet or an intranet.

Prerequisites

- You have **installed Edge** in the source intranet environment and have connected the Edge device to MgC.
- You have **added source server credentials** to Edge. The server credentials must meet the following requirements:
 - Linux: **root** and its password
 - Windows: **administrator** and its password

Procedure

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

Step 2 In the navigation pane on the left, choose **Research > Application Discovery**. Select the created **migration project** in the upper left corner of the page.

Step 3 If you are adding a server to MgC for the first time, choose **Add > Server** in the **Edge Discovery** pane.

If you have added servers to MgC before, on the **Resources** page, under **Servers**, click **Add**.

Step 4 In the displayed dialog box, configure parameters listed in **Table 6-5** and click **Confirm**. MgC checks whether the server can be accessed using the specified credential and starting collecting the server details.

Table 6-5 Parameters for adding a server

Parameter	Description
Name	Enter a server name.
Edge Device	Select the Edge device in the source environment.
Type	Select the OS type of the source server.

Parameter	Description
IP Address	Enter the IP address of the server. If the server is in the same VPC as the Edge device, you can enter the private IP address of the server. Otherwise, you have to enter its public IP address.
Port	Enter the port on the source server that allows access from the Edge device. <ul style="list-style-type: none"> • By default, port 5985 on Windows source servers must be opened to the Edge device. The port cannot be changed. • By default, port 22 on Linux source servers must be opened to the Edge device. You can specify a different port if needed.
Credential	Select the server credential. If the credential has not been added to MgC, go to the Edge console and add the server credential to Edge and synchronize it to MgC.

Step 5 On the **Application Discovery** page, click the **Resources** tab and then click the number displayed in the **Server** row. On the **Servers** tab page, you can view the server added to MgC.

----End

7 Grouping Servers as Applications

You can group the discovered servers as an application, so that you can get target resource recommendations and create a migration workflow to migrate these servers.

Procedure

- Step 1** Sign in to the **MgC** console.
- Step 2** In the navigation pane on the left, choose **Research > Application Discovery**. Select the created **migration project** in the upper left corner of the page.
- Step 3** Click the **Resources** tab and click the number in the **Server** row.
- Step 4** Select the servers to be added to the same application and choose **Group as Application** in the upper left corner of the page.
- Step 5** Select the application from the drop-down list. If no applications are available, **create an application** by click **Create Application** in the displayed dialog box. Then enter an application name and description, select the business scenario, environment, and region, and click **Create**.
- Step 6** Click **OK**. You can see the application name in the **Application** column for these servers.

----End

8 Creating an Application Assessment

By assessing an application, you can get recommendations for most suitable Huawei Cloud resources based on the configuration, performance, and business scenario of the source resources added to the application, and your other requirements for, for example, cost, availability, performance, security, and compliance. You can export the assessment results as needed.

This section describes how to assess an application.

NOTE

If you have [associated source servers with existing target servers](#), you can skip this step and create a workflow to migrate them.

Prerequisites

- You have [discovered servers](#).
- You have [created an application](#) and [associated the servers to be migrated with the application](#).

Procedure

Step 1 Sign in to the [MgC](#) console.

Step 2 In the navigation pane on the left, choose **Design > Migration Solutions**. Select the created [migration project](#) in the upper left corner of the page.

On the **Migration Solutions** page, you can view the total number of source resources, the number of source resources that have target configurations, and the list of applications in the current project.

Step 3 Click **Assess** in the **Target Configuration** card.

Step 4 In the **Select Application** drop-down list, select the application for which you want to assess.

Step 5 In the **Select Resources** area, select the servers to be assessed in the application.

Step 6 Configure the assessment policy based on [Table 8-1](#).

Table 8-1 Settings used for computing target recommendations

Parameter	Description
Target Region	Select the region where you want to purchase resources on Huawei Cloud. You are advised to select a region close to your target users for lower network latency and quick access.
Assessment Policy	<ul style="list-style-type: none"> ● Match source configuration MgC recommends the most appropriate Huawei Cloud resources based on source resource specifications. ● Match business scenario MgC recommends appropriate Huawei Cloud resources based on the business scenario of source resources and Huawei Cloud best practices. ● Cross-AZ migration This policy only applies to migration of ECSs between AZs on Huawei Cloud, and MgC only assesses servers in the application. You need to select the target AZ you want to migrate to. <p>For details about how the system recommends appropriate target resources for you, see How Does MgC Generate Target Recommendations?</p>
Priority	<ul style="list-style-type: none"> ● High performance MgC recommends target resources with optimal performance. ● Low cost MgC recommends the most cost-effective target resources that meet your demands.

Parameter	Description
Preferences	<p>For the container assessment, the servers that match your preferences are recommended first. For details about how the system recommends appropriate target resources for you, see How Does MgC Generate Target Recommendations?</p> <ul style="list-style-type: none"> • ECS Types Select the ECS types you prefer. • System Disk Select the system disk type you prefer. • Data Disk Select the data disk type you prefer. • Sizing Criteria Choose the criteria that the system will use to generate server recommendations. <ul style="list-style-type: none"> - If you select As-in on source, the system will recommend target servers with the same or as close CPU and memory capacity as the source servers. - If you select Performance-based, you need to perform a performance collection for the source servers, and then set assessment parameters. The system will then recommend target servers with your desired CPU and memory capacity. <p>NOTICE The more performance data is collected, the more accurate the recommendations are. The collection of server performance data should take no less than seven days.</p>
	<p>For the container assessment, configure parameters such as Cluster Type, Cluster Version, and Container Network Model for getting recommendations for container resources.</p>

Step 7 Click **Create Assessment**. After the assessment is complete, you can [review the target recommendations](#). You can also [view the performance data of source servers](#).

Step 8 (Optional) Perform the following operations:

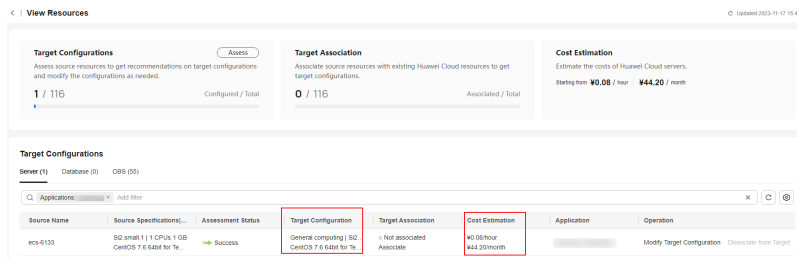
- [Modify target recommendations](#). You can modify the recommended specifications for target servers and their disks.
- [Associate source servers with existing target servers](#). If you already have servers that match your requirements on Huawei Cloud, you can associate them with source servers to receive migrated workloads and data.

----End

Viewing Target Recommendations

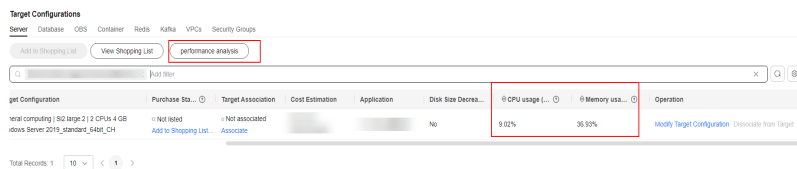
In the application list on the **Migration Solutions** page, click **View Target Configurations** in the **Operation** column.

In the **Target Configurations** area, you can view the specifications of Huawei Cloud resources recommended based on the source resource specifications and your preferences. It also gives you the ability to estimate what it will cost to run your services on Huawei Cloud.



Viewing Server Performance Data

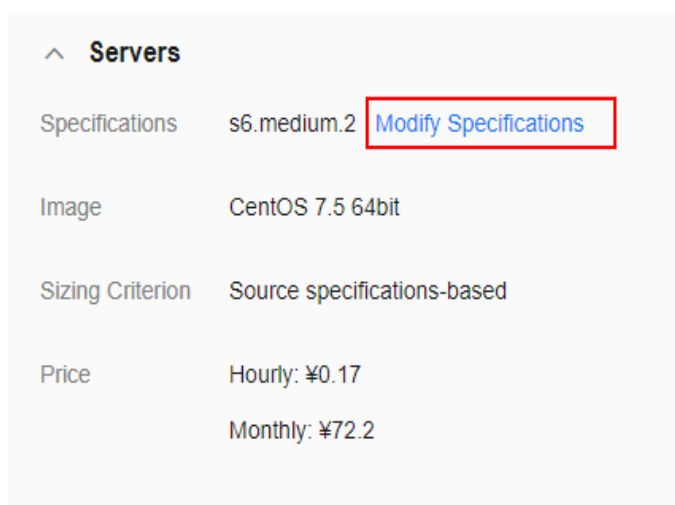
On the **Target Configurations** page, in the server list, you can view the average CPU and memory usage of each server over the last 7 or 30 days. Click **Performance Analysis** to view the performance statistics of all servers.



Modifying Target Recommendations

- Step 1** In the **Target Configurations** area, locate the server that you want to modify the recommended target configurations for and click **Modify Target Configuration** in the **Operation** column.
- Step 2** Modify the specifications and image for the target server.

Target Configuration

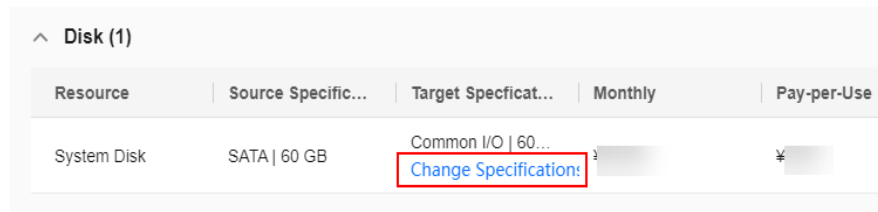


- Step 3** In the disk area, locate a disk and click **Modify Specifications** in the **Target Specifications** column. You can modify the disk type and capacity. You can

downsize disks for Linux target servers based on the disk usage of the source servers. If you downsize a disk for the target server, the system will set **Disk Downsized** to **Yes**. The reverse also applies.

NOTICE

- The system disk capacity ranges from 40 GB to 1,024 GB.
- The data disk capacity ranges from 10 GB to 32,768 GB.
- Disk downsizing is only available for Linux, and the decreased sizes must be larger than the used sizes of the source disks.
- In the cross-AZ migration scenario, only disk upsizing is supported. Even if you choose to downsize disks here, the settings will not be applied, and the system will create target disks as large as source disks.



^ Disk (1)				
Resource	Source Specific...	Target Specificat...	Monthly	Pay-per-Use
System Disk	SATA 60 GB	Common I/O 60... Change Specification!	¥	¥

----End

9 Creating a Server Migration Workflow

MgC provides a server migration workflow template crafted from best practices. You can customize workflows from this template by adding tasks and steps as needed. You can run all tasks in just one click and monitor the migration progress in real time.

Prerequisites

- You have [discovered servers](#).
- The servers to be migrated have been [grouped as an application](#).
- You have got target recommendations for source servers to be migrated by referring to [Creating an Application Assessment](#).

Procedure

- Step 1** Sign in to the [MgC](#) console.
- Step 2** In the navigation pane on the left, choose **Migrate > Workflows**. Select the created [migration project](#) in the upper left corner of the page.
- Step 3** Click **Create Workflow** in the upper right corner of the page.
- Step 4** In the **Server Migration** card, click **Preview Steps** to view the steps predefined in the template and the detailed description of each step. **Automated** steps are automatically performed by MgC. **Manual** steps need to be performed by you. Click **Configure Workflow** in the lower right corner.
- Step 5** Configure the workflow parameters based on [Table 9-1](#).

Table 9-1 Parameters for configuring a server migration workflow

Area	Parameter	Description
Workflow Details	Name	Enter a workflow name.
	Description	Describe the workflow.
Application	Application	Select the application which contains the servers to be migrated.

Area	Parameter	Description
Migration Network	Network	If you select Public , ensure that all target servers have EIPs bound. These EIPs will be used for the migration.
		<p>If you select Private, configure Direct Connect connections, VPN connections, VPC peering connections, or subnets in the target VPC in advance to connect the source environment to the target environment.</p> <ul style="list-style-type: none"> • If the source environment cannot access the Internet, enter the private IP address of the source proxy server and the port used by the proxy software. • If the source proxy server cannot access the Internet, put the SMS-Agent installation package at a location where the source servers can access directly or over a proxy. You can download the SMS-Agent installation package from the SMS console.
Target Environment	Region	Select the region you selected when you assessed the application.
	Project	Select a project in the region where the target resources are provisioned.
	VPC	<ul style="list-style-type: none"> • If the source IP address is 192.168.X.X, you are advised to 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.X.X, you are advised to 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, you are advised to create a VPC and a subnet that both belong to network range 10.0.0.0/8.
	Subnet	The subnet must be in the same network range as the VPC.

Area	Parameter	Description
	Security Group	<ul style="list-style-type: none"> • If there are Windows source servers, the security group must be configured to allow access on ports 8899, 8900, and 22. • If there are Linux source servers, the security group must be configured to allow access on port 22. <p>CAUTION</p> <ul style="list-style-type: none"> - For security purposes, you are advised to only allow traffic from the source servers on these ports. - The firewall of the target servers must allow traffic to these ports.
Advanced Settings	Start Target After Migration	<ul style="list-style-type: none"> • If you select No, the target servers will be stopped after the migration is complete. • If you select Yes, the target servers will be started after the migration is complete.
	Set Bandwidth Limit	<ul style="list-style-type: none"> • If you select No, the migration traffic is not limited. • If you select Yes, you can limit the bandwidth that can be used for migration based on the source bandwidth and service requirements.
	Install rsync on Source	<ul style="list-style-type: none"> • If you select No, rsync will not be installed on the source servers. • If you select Yes, rsync will be automatically installed on the source servers as long as it is not found on these servers. <p>CAUTION Linux migrations depend on rsync. If rsync is not installed on a source server, the server will fail to be migrated.</p>
	Enterprise Project	Select the enterprise project you want to migrate to. The enterprise project default is selected by default.

Step 6 Click **Next: Confirm**.

Step 7 Confirm the workflow settings, and click **Confirm**. The **Run Workflow** dialog box is displayed, which indicates that the workflow has been created.

- If you want to start the migration immediately, click **Confirm** to run the workflow.
- If you want to **add stages** and **add steps** to the workflow, click **Cancel**. The workflow enters a **Waiting** state, and the migration has not started yet. To start the migration, click **Run** in the **Operation** column.

- Step 8** On the migration workflow details page, view the workflow settings and the migration progress. After the step for starting the migration Agent is completed, a migration task is automatically created on the SMS console. For details about the server information mapping between MgC and SMS, see [What Are the Information Mappings Between MgC and SMS?](#)
- Move the cursor to the migration progress bar. In the box that is displayed, view more migration details.
 - When the migration progress bar reaches a step that requires manual confirmation, move the cursor to the progress bar and click **Confirm** next to the step status in the displayed window, so that the subsequent migration steps can be executed.
 - When the workflow reaches the **ResizeDiskPartition** step, the system identifies whether disk capacity reduction has been performed on the target server.
 - If yes, go to [SMS console](#) and resize disks and partitions for the target server. For details, see the **Partition Resizing** parameter in [Configuring a Target Server](#). After the adjustment is complete, go back to the MgC console and click **Confirm** next to the step status so that the workflow can continue.
 - If no, skip this step.
 - The **StartSynchronization** step is repeated before you verify your services on the target server.
 - When the progress bar reaches **Cutover**, the migration is complete. You need check whether your service systems are running properly on the target server. If they are, manually switch services to the target server. After the switchover is complete, click **Confirm** in the workflow. The system automatically performs the following steps **SourceClear** and **MigrationTaskClear**.

----End

Adding a Stage

- Step 1** On the migration workflow details page, move the cursor to the migration stage before or after which you want to add a stage. In the displayed window, choose **Add Stage Before** or **Add Stage After**.
- Step 2** Enter a stage name and description, click **Add Step**, select a step type, enter a step name and description, and click **Confirm**. Multiple steps can be added.
- Step 3** Click **Confirm**.

NOTICE

Manually added stages can be modified or deleted, but pre-defined stages cannot.

----End

Adding a Step

- Step 1** On the migration workflow details page, move the cursor to the step before or after which you want to add a step. In the displayed window, choose **Add Step Before** or **Add Step After**.
- Step 2** Select a step type based on [Table 9-2](#), enter a step name and description, and click **Confirm**.

Table 9-2 Step types

Type	Description
Checkpoint	You need to manually confirm this type of steps, so that the workflows can continue.

- Step 3** Go back to the migration stage and view the added step.

NOTICE

Manually added steps can be modified or deleted, but pre-defined steps cannot.

----End