

Migration Center User Guide

MgC Agent Usage Guide

Issue	01
Date	2025-02-26



Copyright © Huawei Technologies Co., Ltd. 2025. 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.

Huawei Technologies Co., Ltd.

Address: Huawei Industrial Base
Bantian, Longgang
Shenzhen 518129
People's Republic of China

Website: <https://www.huawei.com>

Email: support@huawei.com

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 Downloading and Installing the MgC Agent.....21**
 - 2.1 Installing the MgC Agent on Windows..... 21
 - 2.2 Installing the MgC Agent on Linux..... 23
- 3 Local Discovery and Collection..... 26**
- 4 Connecting the MgC Agent to MgC.....31**
 - 4.1 Connecting the MgC Agent to MgC..... 31
 - 4.2 Managing Huawei Cloud Credentials..... 33
- 5 Agent-based Discovery.....34**
 - 5.1 Adding Resource Credentials..... 34
 - 5.2 Configuring an OBS Bucket..... 38
 - 5.3 Managing MgC Agents..... 40
 - 5.4 Event Recording..... 41
- 6 Tool Discovery..... 43**
 - 6.1 Creating a Collection Task..... 43
 - 6.2 Managing Collectors..... 44
 - 6.3 Configuring Collector Parameters..... 45
 - 6.3.1 Kubernetes Static Collector (app-discovery-k8s)..... 45
 - 6.3.2 Kubernetes Contrack Collector (app-discovery-k8s-contrack)..... 46
 - 6.3.3 Kubernetes Pod Network Collector (app-discovery-k8s-pod-net)..... 48
 - 6.3.4 Process and Network Collector (app-discovery-process-netstat)..... 49
 - 6.3.5 Windows Process and Network Collector (app-discovery-process-netstat-win)..... 51
 - 6.3.6 RabbitMQ Collector (app-discovery-rabbitmq)..... 53
 - 6.3.7 Kafka Collector (app-discovery-kafka)..... 54
 - 6.3.8 Eureka Collector (app-discovery-eureka)..... 54
 - 6.3.9 Redis Collector (app-discovery-redis)..... 55
 - 6.3.10 MongoDB Collector (app-discovery-mongodb)..... 56
 - 6.3.11 MySQL-General Log Collector (app-discovery-mysql-generallog)..... 57
 - 6.3.12 MySQL-JDBC Collector (app-discovery-mysql-jdbc)..... 58
 - 6.3.13 Nginx Configuration Collector (app-discovery-nginx)..... 60
 - 6.3.14 Cloud VPC Log Collector (app-discovery-cloud-vpc-log)..... 61

6.3.15 Nacos Collector (app-discovery-nacos).....	61
6.3.16 Application Configuration Collector (app-discovery-application-config).....	62
7 Best Practices.....	64
7.1 Setting JVM Parameters for the MgC Agent.....	64
7.1.1 Setting JVM Parameters for the MgC Agent's Tomcat Server.....	64
7.1.2 Setting JVM Parameters for Collectors.....	67
8 FAQs.....	71
8.1 What Are the Requirements for the Server for Installing the MgC Agent?.....	71
8.2 How Do I Run the MgC Agent in Compatibility Mode?.....	71
8.3 What Can I Do If the MgC Agent Is Offline?.....	72
8.4 Why Can't the MgC Agent Start After Being Installed?.....	72
8.4.1 MgC Agent for Windows.....	72
8.4.2 MgC Agent for Linux.....	72
8.5 How Do I Upgrade the MgC Agent to the Latest Version?.....	73
8.5.1 Upgrading the MgC Agent for Windows.....	73
8.5.2 Upgrading the MgC Agent for Linux.....	74
8.6 How Do I Uninstall the MgC Agent?.....	74
8.6.1 Uninstalling the MgC Agent on Windows.....	74
8.6.2 Uninstalling the MgC Agent on Linux.....	75
8.7 How Do I Restart the MgC Agent?.....	75
8.8 How Do I Check the Current MgC Agent Version?.....	76
8.9 How Do I Obtain Run Logs of the MgC Agent on Linux?.....	77
8.10 How Do I Fix the Error "The collector is not installed" When a Discovery Task Fails?.....	78
8.11 How Do I Obtain the Hive Metastore Credential Files?.....	79
8.12 What Can I Do If the Port Required by the MgC Agent Is Occupied and the Installation Fails?.....	80
8.13 What Can I Do If AK/SK Verification Fails?.....	81
8.14 How Do I Configure WinRM and Troubleshoot WinRM Connection Problems?.....	83
8.15 What Do I Do If the Credential List Is Empty When I Create a Data Connection for Big Data Verification?.....	84

1 Overview

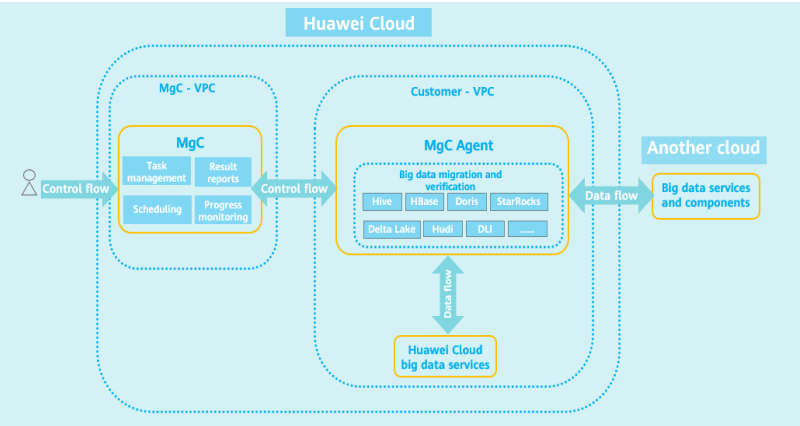
The MgC Agent is a tool that collects information about your source resources and executes migration commands from MgC.

Architecture

The MgC Agent can be deployed at the network edge of your cloud environment and is used to collect and migrate data. It frees you from these complex tasks. As a bridge between the MgC and your network, the MgC Agent ensures smooth, secure data migration.

Figure 1-1 shows the logical architecture of MgC Agent in big data migration and verification scenarios.

Figure 1-1 Logical architecture in big data scenarios



Required Public Addresses

The following table lists the public network addresses that the MgC Agent must be able to access.

Description	Value
The IoTDA service address	-

Description	Value
The MgC service address	https://mgc.eu-west-101.myhuaweicloud.eu
The SMS bucket address	https://sms-agent-2-0.obs.eu-west-101.myhuaweicloud.eu
The SMS domain name	sms.eu-west-101.myhuaweicloud.eu

Source servers must be able to access the domain names of cloud services listed in the following table.

Cloud Service	Domain Name
SMS	https://sms.eu-west-101.myhuaweicloud.eu:443
OBS	https://sms-agent-2-0.obs.eu-west-101.myhuaweicloud.eu:443, which is the address for downloading SMS-Agent.
IAM	iam.myhuaweicloud.eu and the IAM domain name for the target region. For details about the IAM domain name for each region, see Endpoints . For example: - EU-Dublin: https://iam.myhuaweicloud.eu:443 - EU-Paris: https://iam.eu-west-0.myhuaweicloud.com:443
ECS	The ECS domain name for the target region. For details about the ECS domain name for each region, see Endpoints . For example: EU-Dublin: https://ecs.eu-west-101.myhuaweicloud.com:443
IMS	The IMS domain name for the target region. For details about the IMS domain name for each region, see Endpoints . For example: EU-Dublin: https://ims.eu-west-101.myhuaweicloud.com:443
EVS	The EVS domain name for the target region. For details about the EVS domain name for each region, see Endpoints . For example: EU-Dublin: https://evs.eu-west-101.myhuaweicloud.com:443
VPC	The VPC domain name for the target region. For details about the VPC domain name for each region, see Endpoints . For example: EU-Dublin: https://vpc.eu-west-101.myhuaweicloud.com:443

Credentials Required for Data Collection

The MgC Agent can gather details of various resources, such as servers, databases, containers, VMware environments, and cloud platforms. You must provide the MgC Agent with the credentials for accessing your servers, databases, containers, VMware platforms, and cloud platforms (AK/SK pairs).

Communication Matrix

The communication matrix lists the ports used by the MgC Agent for different purposes, along with the transport layer protocols, authentication types, and encryption modes.

Table 1-1 MgC Agent communication matrix

Source Device	Source IP Address	Source Port	Destination Device	Destination IP Address	Destination Port (for Listening)	Protocol	Port Description	Listening Port Configurable	Authentication Method	Encryption Mode
-	-	-	MgC Agent server	IP address of the MgC Agent server	27080	HTTPS	The MgC Agent listening port, which is used for man-machine interaction.	No	Password	HTTPS

Source Device	Source IP Address	Source Port	Destination Device	Destination IP Address	Destination Port (for Listening)	Protocol	Port Description	Listening Port Configurable	Authentication Method	Encryption Mode
MgC Agent server	IP address of the MgC Agent server	-	MgC Agent server	IP address of the MgC Agent server	5678	TCP	The MgC Agent listening port, which is used for internal interaction between collectors and the MgC Agent.	No	None	None

Source Device	Source IP Address	Source Port	Destination Device	Destination IP Address	Destination Port (for Listening)	Protocol	Port Description	Listening Port Configurable	Authentication Method	Encryption Mode
		-	Server	IP address of the destination server	User input	TCP	SSH port, which is used for file transfer (over SCP and SFTP) and execution of collection scripts.	Yes	Password	SSL
		-	Server	IP address of the destination server	5985	TCP	WinRM port, which is used to remotely execute collection scripts.	No	Password	HT TPS

Source Device	Source IP Address	Source Port	Destination Device	Destination IP Address	Destination Port (for Listening)	Protocol	Port Description	Listening Port Configurable	Authentication Method	Encryption Mode
		8080	Platform	IP address of the destination server	443	TCP	Listening port used for collecting VMware platform information. The source port is the default port that is inherited from the Wus han framework and is not used by services.	No	Password	HT TPS

Source Device	Source IP Address	Source Port	Destination Device	Destination IP Address	Destination Port (for Listening)	Protocol	Port Description	Listening Port Configurable	Authentication Method	Encryption Mode
		8000	Database	IP address of the destination server	User input	TCP	Listening port of the database service. The source port is the default port that is inherited from the Wus han framework and is not used by services.	Yes	Password	SSL

Source Device	Source IP Address	Source Port	Destination Device	Destination IP Address	Destination Port (for Listening)	Protocol	Port Description	Listening Port Configurable	Authentication Method	Encryption Mode
		7050	Container	IP address of the destination server	User input	TCP	Listening port of the container service. The source port is the default port that is inherited from the Wus han framework and is not used by services.	Yes	Key file	HT TPS

Source Device	Source IP Address	Source Port	Destination Device	Destination IP Address	Destination Port (for Listening)	Protocol	Port Description	Listening Port Configurable	Authentication Method	Encryption Mode
		9977	Storage	IP address of the destination server	User input	TCP	Listening port of the object storage service. The source port is the default port that is inherited from the Wus han framework and is not used by services.	Yes	Password	SSL

Command Matrix

The command matrix lists the commands contained in the MgC Agent as well as the absolute paths, functions, and usage of the commands.

Table 1-2 MgC Agent command matrix

Nod e	Command	Absolute Path	Wh eth er Ca n Be Inv oke d Ind epe nd ent ly	Function	Usage	Risk	Cate gory
Edge	accountPer mission.ps 1	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/ powershell	Yes	Queries the roles assigne d to the adminis trator user group.	.\accountPer mission.ps1	None	Func tion
	basicInfo.p s1	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/ powershell	Yes	Queries the basic informa tion.	.\basicInfo.ps 1	None	Func tion
	checkBasic Objects.ps 1	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/ powershell	Yes	Checks basic system compon ents.	.\checkBasic Objects.ps1	None	Func tion
	checkPerfo rmanceObj ects.ps1	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/ powershell	Yes	Checks basic system perform ance compon ents.	.\checkPerfor manceObjec ts.ps1	None	Func tion

Node	Command	Absolute Path	Whether Can Be Invoked Independently	Function	Usage	Risk	Category
	diskInfo.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries basic disk information.	.\diskInfo.ps1	None	Function
	eachDiskPerformance.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries disk performance information.	.\eachDiskPerformance.ps1	None	Function
	fileSharingInfo.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries file system information.	.\fileSharingInfo.ps1	None	Function
	fireware.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries firmware information.	.\fireware.ps1	None	Function

Node	Command	Absolute Path	Whether Can Be Invoked Independently	Function	Usage	Risk	Category
	memorySize.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries memory information.	.\memorySize.ps1	None	Function
	netcardInfo.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries NIC information.	.\netcardInfo.ps1	None	Function
	netcardPerform.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries NIC bandwidth and PPS information.	.\netcardPerform.ps1	None	Function
	oemSystem.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Checks the OEM system.	.\oemSystem.ps1	None	Function

Node	Command	Absolute Path	Whether Can Be Invoked Independently	Function	Usage	Risk	Category
	osInfo.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries OS information.	.\osInfo.ps1	None	Function
	processInfo.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries process information.	.\processInfo.ps1	None	Function
	scheduledTasks.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries scheduled task information.	.\scheduledTasks.ps1	None	Function
	specialHardware.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries hardware information.	.\specialHardware.ps1	None	Function

Node	Command	Absolute Path	Whether Can Be Invoked Independently	Function	Usage	Risk	Category
	systemRoot.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries system directories.	.\systemRoot.ps1	None	Function
	systemService.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Checks the VSS service.	.\systemService.ps1	None	Function
	tcpNum.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries the number of connections.	.\tcpNum.ps1	None	Function
	utilInfo.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Queries performance information.	.\utilInfo.ps1	None	Function

Node	Command	Absolute Path	Whether Can Be Invoked Independently	Function	Usage	Risk	Category
	virtioDriver.ps1	/Edge/tools/plugins/collectors/designcenter-collector-server/powershell	Yes	Checks VirtIO drivers.	.\virtioDriver.ps1	None	Function
	getArchitecture.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries OS architecture.	sh getArchitecture.sh	None	Function
	getBootLoader.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries the system boot type.	sh getBootLoader.sh	None	Function
	getCPUCores.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries the number of CPUs.	sh getCPUCores.sh	None	Function

Nod e	Command	Absolute Path	Wh eth er Ca n Be Inv oke d Ind epe nd ent ly	Function	Usage	Risk	Cate gory
	getCpuFrequency.sh	/Edge/ tools/ plugins/ collectors/ designcenter-collector-server/shell	Yes	Queries the CPU dominant frequency.	sh getCpuFrequency.sh	None	Function
	getCPURate.sh	/Edge/ tools/ plugins/ collectors/ designcenter-collector-server/shell	Yes	Queries the CPU usage.	sh getCPURate.sh	None	Function
	getCPUtype.sh	/Edge/ tools/ plugins/ collectors/ designcenter-collector-server/shell	Yes	Queries the CPU type.	sh getCPUtype.sh	None	Function
	getDisk_each_read_write_info.sh	/Edge/ tools/ plugins/ collectors/ designcenter-collector-server/shell	Yes	Queries the disk throughput.	sh getDisk_each_read_write_info.sh	None	Function
	getDiskInfo.sh	/Edge/ tools/ plugins/ collectors/ designcenter-collector-server/shell	Yes	Queries the basic disk information.	sh getDiskInfo.sh	None	Function

Node	Command	Absolute Path	Whether Can Be Invoked Independently	Function	Usage	Risk	Category
	getDiskUtil.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries the disk usage.	sh getDiskUtil.sh	None	Function
	getFileSharingInfo.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries file system information.	sh getFileSharingInfo.sh	None	Function
	getFirmwareType.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries the firmware type.	sh getFirmwareType.sh	None	Function
	getGPUDevices.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries GPU devices.	sh getGPUDevices.sh	None	Function
	getHostname.sh	/Edge/tools/plugins/collectors/designcenter-collector-server/shell	Yes	Queries the hostname.	sh getHostname.sh	None	Function

Nod e	Command	Absolute Path	Wh eth er Ca n Be Inv oke d Ind epe nd ent ly	Function	Usage	Risk	Cate gory
	getMem.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries memor y informa tion.	sh getMem.sh	None	Func tion
	getMemRa te.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries the memor y usage.	sh getMemRate .sh	None	Func tion
	getKernel.s h	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries the kernel informa tion.	sh getKernel.sh	None	Func tion
	getNetCar ds.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries NIC informa tion.	sh getNetCards. sh	None	Func tion
	getNetcard sInfo.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries NIC bandwi dth and PPS informa tion.	sh getNetcardsI nfo.sh	None	Func tion

Nod e	Command	Absolute Path	Wh eth er Ca n Be Inv oke d Ind epe nd ent ly	Functio n	Usage	Risk	Cate gory
	getOsDisk.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries system disk informa tion.	sh getOsDisk.sh	None	Func tion
	getOsInfo.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries OS informa tion.	sh getOsInfo.sh	None	Func tion
	getRawDe vices.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries raw device informa tion.	sh getRawDevic es.sh	None	Func tion
	getRsync.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Checks rsync.	sh getRsync.sh	None	Func tion
	getProcessI nfo.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries process informa tion.	sh getProcessIn fo.sh	None	Func tion

Nod e	Command	Absolute Path	Wh eth er Ca n Be Inv oke d Ind epe nd ent ly	Functio n	Usage	Risk	Cate gory
	getScheduledTasks.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries schedul ed task informa tion.	sh getSchedule dTasks.sh	None	Func tion
	getUSBDev ices.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries USB devices.	sh getUSBDevic es.sh	None	Func tion
	getTcpTota l.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries the number of connect ions.	sh getTcpTotal.s h	None	Func tion
	getVirtioDr iver.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Checks VirtIO drivers.	sh getVirtioDriv er.sh	None	Func tion
	getVirtualT ype.sh	/Edge/ tools/ plugins/ collectors/ designcente r-collector- server/shell	Yes	Queries the virtualiz ation type.	sh getVirtualTy pe.sh	None	Func tion

2 Downloading and Installing the MgC Agent

2.1 Installing the MgC Agent on Windows

Preparations

- Prepare a Windows server for installing the MgC Agent in the source intranet environment. The Windows server must:
 - Be able to access the Internet and the domain names of MgC, IoTDA, and other cloud services. For details about the domain names to be accessed, see [Domain Names](#).
 - Use PowerShell **3.0** or later.
 - Have at least 4 CPUs and 8 GB of memory.
 - Allow outbound traffic on port 8883 if the server is in a security group.
 - Not have any antivirus or protection software enabled. This type of software may stop the MgC Agent from executing migration commands, resulting in migration failures.

CAUTION

Do not install the MgC Agent on a source server to be migrated.

- **High resource consumption:** The MgC Agent consumes CPU and memory resources during collection and migration. If a large number of migration tasks are performed by the MgC Agent, services on the source server may be affected.
 - **Port occupation:** The MgC Agent occupies some ports on the server, which may affect services running on it.
-
- [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 the MgC Agent is installed must be able to access the 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 the MgC Agent is installed. For more information, see [How Do I Configure WinRM on a Windows Source Server and Troubleshoot WinRM Connection Problems?](#)
- You are advised to change your MgC Agent password every three to six months.

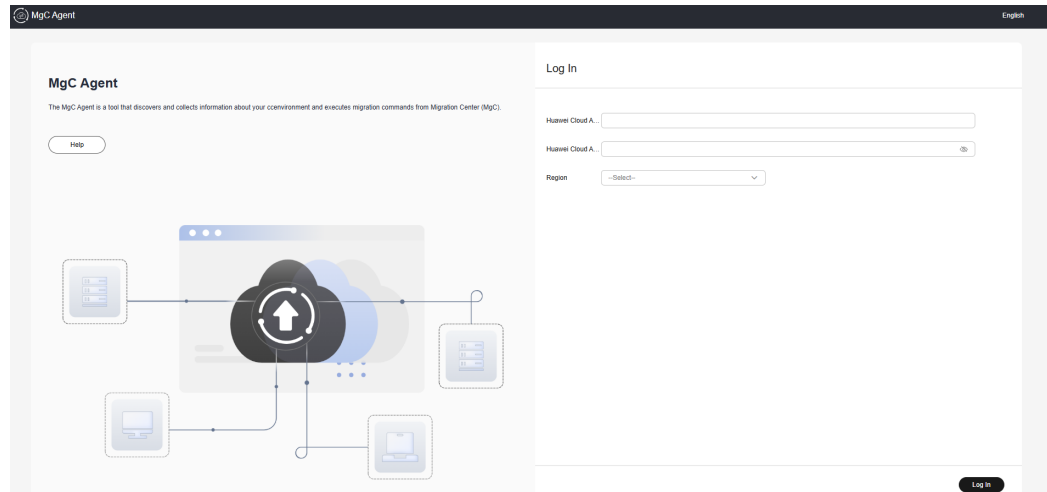
Procedure

- Step 1** Sign in to the [MgC console](#) from the Windows server you prepared.
- Step 2** In the navigation pane, choose **MgC Agents**.
- Step 3** In the **Windows** area, click **Download Installation Package** to download the MgC Agent installation package to the Windows server you prepared.
- Step 4** Decompress the downloaded the MgC Agent installation package, double-click the 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 the MgC Agent 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

The MgC Agent can only be installed in drive C. If you select another disk for installation, the MgC Agent may fail to start.

- Step 7** After the installation is complete, click **Finish**. Open the MgC Agent console, enter the AK/SK pair of your Huawei Cloud account, select a region, and click **Log In**.



----End

2.2 Installing the MgC Agent on Linux

Preparations

- Prepare a Linux server for installing the MgC Agent in the source intranet environment. The Linux server must:
 - Be able to access the Internet and the domain names of MgC, IoTDA, and other cloud services. For details about the domain names to be accessed, see [Domain Names](#).
 - Allow outbound traffic on port 8883 if the server is in a security group.
 - Run CentOS 8.X.
 - Have at least 4 CPUs and 8 GB of memory. If you want to use big data verification, the server must have at least 8 CPUs and 16 GB of memory.

CAUTION

Do not install the MgC Agent on a source server to be migrated.

- **High resource consumption:** The MgC Agent consumes CPU and memory resources during collection and migration. If a large number of migration tasks are performed by the MgC Agent, services on the source server may be affected.
 - **Port occupation:** The MgC Agent occupies some ports on the server, which may affect services running on it.
-
- Have rng-tools installed. To check whether this tool is installed, run the following command on the Linux server:

```
rpm -qa | grep rng-tools
```

If no rng-tools-related information is displayed, rng-tools is not installed on the server. Run the following command to install rng-tools:

```
yum -y install rng-tools
```

- Not have any antivirus or protection software enabled. This type of software may stop the MgC Agent from executing migration commands, resulting in migration failures.
- Allow TCP traffic on port 27080. You can do that by adding an inbound rule to the security group of the Linux server. For the rule, set **Source** to the IP address of the Windows server you use to remotely access the MgC Agent console.

- [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.

Procedure

- Step 1** Sign in to the [MgC console](#) from the Linux server you prepared.
- Step 2** In the navigation pane on the left, choose **MgC Agents**.
- Step 3** In the Linux area, click **Download Installation Package** or **Copy Download Command** to download the MgC Agent installation program to the Linux server.
- Step 4** Decompress the MgC Agent installation package.
- ```
tar zxvf Edge.tar.gz
```
- Step 5** Go to the **scripts** directory in the decompressed MgC Agent directory.
- ```
cd Edge/scripts/
```
- Step 6** Run the MgC Agent installation script.
- ```
./install.sh
```
- Step 7** Enter a private IP address of the Linux server. The IP address will be used for accessing the MgC Agent console. If the entered IP address is not used by the Linux server, the system will prompt you whether to use any public IP address of the Linux server as the MgC Agent access address.

```
Please enter the access address of the local server:1.1.1.1
The entered IP address is not in the local IP address list.
Do you want to allow access from all IP addresses?(y/n)
```

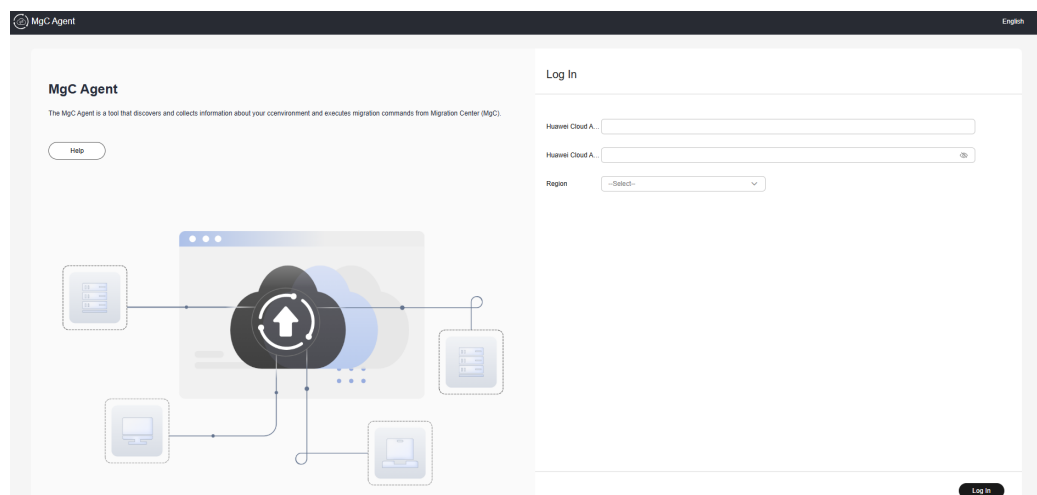
- Step 8** Check if the message shown in the following figure is displayed. If it is, the MgC Agent for Linux has been installed. The port in the following figure is for reference only. Note the actual port returned. Generally, the port is 27080.

```
mkdir: cannot create directory 'tmp': File exists
initializing SCC key..
warning: seccomponent-1.1.11b-release.x86_64.rpm: Header V4 RSA/SHA256 Signature, key ID c104368c: NOKEY
Verifying... ##### [100%]
Preparing... ##### [100%]
Updating / installing...
 1:seccomponent-1.1.11b-release ##### [100%]
groupadd: group 'edgegroup' already exists
useradd: user 'edge' already exists
Press enter to finish
current user id: 0
edge service user id: 1000
server not started yet.
current user id: 1000
edge service user id: 1000
server not started yet.
start success.
There are some variables appended into /opt/cloud/Edge/scripts/setenv.sh, if you want to make these available in current terminal, please run command: source /opt/cloud/Edge/scripts/setenv.sh
Open the Edge management console by accessing https://<Available IP of local host>:27080/ from the browser.
[root@mgc-wang-linux scripts]#
```

Update environment variables.

```
source /opt/cloud/Edge/scripts/setenv.sh
```

**Step 9** On the Windows server for which an inbound rule is added to the security group of the server where the MgC Agent is installed, open a browser and enter **https://<IP-address-entered-in-step-7>:<port-obtained-in-step-8>** in the address box. For example, if the IP address entered in step 7 is **192.168.x.x** and the port returned in step 8 is **27080**, the MgC Agent access address is **https://192.168.x.x:27080**. Open the MgC Agent console, enter the AK/SK pair of your Huawei Cloud account, select a region, and click **Log In**.



## NOTICE

If there are access problems, check the IP address entered in the address box and the inbound rule settings of the security group of the Linux server with the MgC Agent installed.

-----End

# 3 Local Discovery and Collection

---

The MgC Agent allows you to discover local servers and collect their details without the need of a connection to MgC.

## Notes

- If local collection is required, do not connect the MgC Agent to MgC, or local collection will be unavailable. After being connected to MgC, the MgC Agent can only execute tasks issued from MgC and can no longer execute local collection.
- You are advised to connect the MgC Agent to MgC after all necessary local collection tasks are complete.

## Methods for Discovering Servers

There are three methods for using the MgC Agent to discover servers locally.

- **VMware collection:** You provide the IP addresses and credentials of vCenter Servers to discover all VMs they manage.
- **RVTools data import:** You can import the report generated by RVTools to the MgC Agent. Then the MgC Agent can extract information about servers.
- **CIDR block scanning:** You can use the MgC Agent to scan for servers on a specific network range over the intranet.

## Prerequisites

You have [installed the MgC Agent](#) and registered an account.

## VMware Collection

Only VMware vSphere 5.0 to 7.0 are supported.

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console.
- Step 2** In the navigation pane, choose **Agent-based Discovery > Credentials**.
- Step 3** Click **Discover Servers** above the list.

- Step 4** Set **Discovery Mode** to **VMware collection** and set **Connection Address** to the IP address of your vCenter Server.
- Step 5** Select **Create** for **Credential** and enter the username and password for logging in to the vCenter Server.
- Step 6** Click **OK**. The MgC Agent starts to discover your server resources.
- Step 7** Click **View Task** in the upper right corner of the page. On the **Task List** page, view the task status. When the task is complete, you can view the discovered servers in the list.

If these servers need to be migrated, [perform a deep collection](#) for them.

---

#### NOTICE

The account provided in the credential must have sufficient permissions, so the MgC Agent can collect necessary server details. To perform a deep collection for the server to collect as much as details, the credential you provided must meet the following requirements:

- Linux: **root** and its password
- Windows: **administrator** and its password

---

----End

## RVTools Data Import

You need to [export resources details from RVTools](#).

Then import the RVTools data to the MgC Agent by following the requirements below:

- The supported RVTools versions include 4.4.1, 4.4.2, 4.4.3, 4.4.4, 4.4.5, 4.5.0, 4.5.1, and 4.6.1.
- The file to be imported must be in XLSX format.
- The file to be imported cannot be larger than 100 MB, and the compression ratio cannot be lower than 5%.

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console.
- Step 2** In the navigation pane, choose **Agent-based Discovery > Credentials**.
- Step 3** Click **Discover Servers** above the list.
- Step 4** Set **Discovery Mode** to **RVTools import**, click **Select File**, and select the file exported from RVTools.
- Step 5** Click **OK** to upload the file to the MgC Agent.
- Step 6** Click **View Task** in the upper right corner of the page. On the **Task List** page, view the task status. When the task is complete, you can view the imported servers in the list.

If these servers need to be migrated, [perform a deep collection](#) for them.



**NOTICE**

The account provided in the credential must have sufficient permissions, so the MgC Agent can collect necessary server details. To perform a deep collection for the server to collect as much as details, the credential you provided must meet the following requirements:

- Linux: **root** and its password
- Windows: **administrator** and its password

----End

## Network Range Scan

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console.
- Step 2** In the navigation pane, choose **Agent-based Discovery > Credentials**.
- Step 3** Click **Discover Servers** above the list.
- Step 4** Set **Discovery Mode** to **Network Range Scan** and set parameters based on [Table 3-1](#).

**Table 3-1** Parameters for scanning a network range

| Parameter     | Description                                                                                                                                                                                                 |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protocol      | Only TCP is available.                                                                                                                                                                                      |
| Network Range | Enter an IP address range which must fall within: <ul style="list-style-type: none"><li>• 10.0.0.0 – 10.255.255.255</li><li>• 172.16.0.0 – 172.31.255.255</li><li>• 192.168.0.0 – 192.168.255.255</li></ul> |
| Linux         | Enter the port used to scanning for Linux servers. If you do not need to scan for Linux servers, set the port number to <b>0</b> .                                                                          |
| Windows       | Enter the port used to scanning for Windows servers. If you do not need to scan for Windows servers, set the port number to <b>0</b> .                                                                      |

- Step 5** Click **OK**. The MgC Agent starts to discover your server resources.
- Step 6** Click **View Task** in the upper right corner of the page. On the **Task List** page, view the task status. When the task is complete, you can view the discovered servers in the list.

If these servers need to be migrated, [perform a deep collection](#) for them.

**NOTICE**

The account provided in the credential must have sufficient permissions, so the MgC Agent can collect necessary server details. To perform a deep collection for the server to collect as much as details, the credential you provided must meet the following requirements:

- Linux: **root** and its password
- Windows: **administrator** and its password

----End

## Performing a Deep Collection for Servers

After server resources are discovered, perform the following steps to perform a deep collection for them:

**Step 1** In the server list, click **Configure Credential** in the **Operation** column.

**Step 2** Configure the parameters listed in [Table 3-2](#).

**Table 3-2** Parameters for configuring a deep collection

| Parameter  | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type       | Set this parameter based on the source server OS type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| IP Address | Select the IP address for accessing the source server. It can be a public or private IP address.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Port       | <p>Enter the port on the source server that allows access from the MgC Agent.</p> <ul style="list-style-type: none"><li>• By default, port 5985 on Windows source servers must be opened to the MgC Agent. The port cannot be changed.</li><li>• By default, port 22 on Linux source servers must be opened to the MgC Agent. You can specify a different port if needed.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Credential | <p>Select the server credential.</p> <ul style="list-style-type: none"><li>• If the server credential has been added to the MgC Agent, select it from the drop-down list.</li><li>• If the server credential has not been added to the MgC Agent, click <b>Create Credential</b> and <a href="#">add the server credential</a>. Then select it from the drop-down list.</li></ul> <p><b>NOTICE</b></p> <p>The account provided in the credential must have sufficient permissions, so the MgC Agent can collect necessary server details. To perform a deep collection for the server to collect as much as details, the credential you provided must meet the following requirements:</p> <ul style="list-style-type: none"><li>• Linux: <b>root</b> and its password</li><li>• Windows: <b>administrator</b> and its password</li></ul> |

**Step 3** After the credential is configured, click **Deep Collection** in the **Operation** column. When **Collected** shows up in the **Deep Collection** column, the collection is complete.

----End

## Exporting Server Information

On the server list page, click **Export** in the upper right corner to export all server information to a CSV file and download the file to the local PC.

# 4 Connecting the MgC Agent to MgC

---

## 4.1 Connecting the MgC Agent to MgC

You need to connect the MgC Agent to MgC, so that the MgC Agent can receive commands from MgC for discovering resources and executing migration tasks.

After the connection is set up, you can perform the following operations on the MgC console:

- **Create resource discovery tasks** to discover multiple types of source resources over the Internet. You can also perform deep collection for the discovered resources, such as servers, containers, object storage, and databases.
- **Create server migration workflows** using the template provided by MgC. Before that, you can get target server recommendations based on the collected performance data of the source servers.
- **Create big data migration tasks.** Currently, migrating data from Alibaba Cloud MaxCompute to Huawei Cloud DLI is supported.
- **Create big data verification tasks** to verify data consistency.

### Prerequisites

You have [installed the MgC Agent](#) and registered an account.

### Procedure

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console.
- Step 2** On the **Overview** page, click **Connect** in the upper right corner. The **Connect to MgC** page is displayed on the right.

**Connect to MgC**

**Step 1: Enter Credential**

**Info:** A credential is required to connect Edge to MgC. To obtain the credential, choose **My Credentials > Access Keys** on the Huawei Cloud console. [Learn how](#)

Huawei Cloud Account AK

Huawei Cloud Account SK  
 [List Migration Projects](#)

☐ **Save as Target Credential**  
 This credential will be deleted by default after the connection is complete.  
 If you choose to save the credentials, they will be encrypted and saved locally and will be used for migrating source servers and uploading logs.  
 You can change the credentials later.

**Step 2: Select MgC Migration Project**

**Info:** If no project is found, you can create one on the Settings page of the MgC console.

Migration Project

**Step 3: Preset Display Name for Edge**

**Info:** This name uniquely identifies an Edge on the MgC console. It cannot be modified after the Edge is successfully connected to MgC.

Edge Name

[Connect](#)

**Step 3** In **Step 1: Enter Credential**, enter the AK/SK pair of the Huawei Cloud account used to access MgC and click **List Migration Projects**. After the MgC Agent is authenticated using the entered AK/SK pair, you can go to the next step. If the system displays a message indicating that the AK/SK pair is incorrect, try to rectify the fault by following the instructions in [What Can I Do if the AK/SK Verification Fails?](#)

## NOTICE

If your source servers need to be migrated, the entered AK/SK pair must have permissions to use SMS. For details, see [SMS Custom Policies](#).

Determine whether to save the entered AK/SK pair as the target credential which will be used for migrating your workloads to Huawei Cloud.

- If you select **No**, the entered AK/SK pair will be deleted after the MgC Agent is connected to MgC.
- If you select **Yes**, the entered AK/SK pair will be encrypted and saved locally after the connection to MgC is established. When you migrate workloads to Huawei Cloud, the AK/SK pair will be delivered to SMS-Agent on the source servers for executing the migration.

**Step 4** In **Step 2: Select MgC Migration Project**, select a [migration project](#) from the project drop-down list. The MgC Agent will report the collected information about your source resources to this project.

**Step 5** In **Step 3: Preset MgC Agent Name**, specify a name for the MgC Agent, which will be displayed on the MgC console, and click **Connect**. Confirm the connection to MgC, and click **OK**.



#### CAUTION

After the MgC Agent is connected to MgC, the name you specified here cannot be modified.

- Step 6** If **Connected** shows up on the overview page, the connection to MgC is successful.
- End

## 4.2 Managing Huawei Cloud Credentials

The Huawei Cloud credentials are delivered to SMS-Agent on source servers for executing migration. If they are missing, your migration workflows cannot run properly.

### Prerequisites

[The MgC Agent has been connected to MgC.](#)

### Adding Huawei Cloud Credentials

If you did not save the Huawei Cloud credentials used to [connect the MgC Agent to MgC](#) as the migration credentials, you can add those or other credentials by following the instructions below.

- Step 1** On the **Overview** page of the MgC Agent console, click **View Configuration** in the upper right corner
- Step 2** In the Huawei Cloud account box, click **Configure**.
- Step 3** In the displayed **Configure Huawei Cloud Credentials** dialog box, enter the AK/SK pair of the Huawei Cloud account you are migrating to and click **Confirm**.
- End

### Modifying Huawei Cloud Credentials

If you need to replace the saved Huawei Cloud credentials, you can delete them and add others.

- Step 1** Click **Delete** next to the saved credentials. In the displayed dialog box, click **Confirm**.
- Step 2** Add other Huawei Cloud credentials by referring to [Adding Huawei Cloud Credentials](#).
- End

# 5 Agent-based Discovery

---

## 5.1 Adding Resource Credentials

You need to provide the MgC Agent with the credentials for accessing your source resources, so it can collect information about them and migrate them to Huawei Cloud. After you connect the MgC Agent to MgC, only the attributes of source resources' credentials will be synchronized to MgC. The credentials themselves are encrypted and stored locally, and will not be synced to MgC.



### CAUTION

Credentials you add to the MgC Agent are valid for 60 days. After the validity period expires, you need to add the credentials to the MgC Agent again if you still want to discover or migrate the resources.

---

### Prerequisites

You have [installed the MgC Agent](#) in your source environment and [connected the MgC Agent to MgC](#).

### Authentication Methods

You can add credentials of the following types of resources to the MgC Agent: private clouds, servers, and containers. For details about the authentication methods supported for each resource type, see [Table 5-1](#).

**Table 5-1** Authentication methods

| Resource Type                     | Authentication Method                                                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Public cloud                      | <ul style="list-style-type: none"> <li>AK/SK</li> <li>ID/Secret</li> </ul> | <ul style="list-style-type: none"> <li>AK/SK pairs of cloud platforms, such as Huawei Cloud, Alibaba Cloud, AWS, Tencent Cloud, Qiniu Cloud, and Kingsoft Cloud</li> <li>IDs and secrets are Azure credentials. To learn how to obtain Azure credentials, see <a href="#">How Do I Obtain Azure Credentials?</a></li> </ul>                                                                                                                      |
| Private cloud                     | Username/Password                                                          | Enter the username and password for logging in to the source private cloud.                                                                                                                                                                                                                                                                                                                                                                      |
| Databases                         | Username/Password                                                          | Enter the username and password of the database.                                                                                                                                                                                                                                                                                                                                                                                                 |
| Big data - Executor               | Username/Password                                                          | <p>Enter the username and password for logging in to the server deployed as an executor. Then specify <b>Network Range</b>, which can be a single IP address or an IP address range.</p> <p>The value can be:</p> <ul style="list-style-type: none"> <li>A single IP address, for example, 192.168.10.10/32</li> <li>An IP address range, for example, 192.168.52.0/24</li> <li>All IP addresses. You need to enter <b>0.0.0.0/0</b>.</li> </ul> |
| Big data - Hive Metastore         | Username/Key                                                               | Upload the <b>core-site.xml</b> , <b>hivemetastore-site.xml</b> , <b>hive-site.xml</b> , <b>krb5.conf</b> , and <b>user.keytab</b> files. For details about how to obtain the certificate file, see <a href="#">How Do I Obtain the Hive Metastore Credential Files?</a>                                                                                                                                                                         |
| Big data - Data Lake Search (DLI) | AK/SK                                                                      | Enter the AK/SK pair of the Huawei Cloud account. For details about how to obtain an AK/SK pair, see <a href="#">How Do I Obtain the AK/SK and Project ID?</a>                                                                                                                                                                                                                                                                                   |
| Big Data - MaxCompute             | AK/SK                                                                      | Enter the AK/SK pair of the source Alibaba Cloud account. For details about how to obtain the key pair, see <a href="#">Viewing the Information About AccessKey Pairs of a RAM User</a> .                                                                                                                                                                                                                                                        |
| Big data - Doris                  | Username/Password                                                          | Enter the username and password of the Doris database.                                                                                                                                                                                                                                                                                                                                                                                           |



| Resource Type         | Authentication Method                                                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Big data - HBase      | Username/Key                                                                              | <ul style="list-style-type: none"> <li>For an unsecured cluster, upload the <b>core-site.xml</b>, <b>hdfs-site.xml</b>, <b>yarn-site.xml</b>, <b>mapred-site.xml</b>, and <b>hbase-site.xml</b> files.</li> <li>For a secured cluster, upload seven files, including <b>core-site.xml</b>, <b>hdfs-site.xml</b>, <b>yarn-site.xml</b>, <b>krb5.conf</b>, <b>user.keytab</b>, <b>mapred-site.xml</b>, and <b>hbase-site.xml</b>.</li> </ul> <p>The preceding configuration files are usually stored in the <b>conf</b> subdirectory of the Hadoop and HBase installation directories.</p>                                                                                                                                                                                            |
| Big data - ClickHouse | Username/Password                                                                         | Enter the username and password of the ClickHouse database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Windows server        | Username/Password                                                                         | <p>Enter the username and password for logging in to the server. Then specify <b>Network Range</b>, which can be a single IP address or an IP address range.</p> <p>The value can be:</p> <ul style="list-style-type: none"> <li>A single IP address, for example, 192.168.10.10/32</li> <li>An IP address range, for example, 192.168.52.0/24</li> <li>All IP addresses. You need to enter <b>0.0.0.0/0</b>.</li> </ul>                                                                                                                                                                                                                                                                                                                                                            |
| Linux server          | <ul style="list-style-type: none"> <li>Username/Password</li> <li>Username/Key</li> </ul> | <ul style="list-style-type: none"> <li>If you select <b>Username/Password</b>, enter the username and password for logging in to the server.</li> <li>If you select <b>Username/Key</b>, enter the username and the password of the key file for logging in to the server, and upload the key file in .pem format.</li> </ul> <p><b>NOTICE</b><br/>If the key file is not encrypted, you do not need to enter the password.</p> <p>Then specify <b>Network Range</b>, which can be a single IP address or an IP address range. The value can be:</p> <ul style="list-style-type: none"> <li>A single IP address, for example, 192.168.10.10/32</li> <li>An IP address range, for example, 192.168.52.0/24</li> <li>All IP addresses. You need to enter <b>0.0.0.0/0</b>.</li> </ul> |

| Resource Type | Authentication Method | Description                                           |
|---------------|-----------------------|-------------------------------------------------------|
| Container     | Configuration file    | The configuration file must be a .json or .yaml file. |

## Adding Credentials

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console.
- Step 2** In the navigation pane, choose **Agent-based Discovery > Credentials**.
- Step 3** Click **Create Certificate** above the list.
- Step 4** Select a resource type and authentication method as prompted. Specify a credential name, enter your credentials, and click **Confirm**.
- If the MgC Agent is not connected to MgC, the added resource credentials can be used for deep collection.
  - If the MgC Agent is connected to MgC, the added resource credentials will be automatically synchronized to MgC.

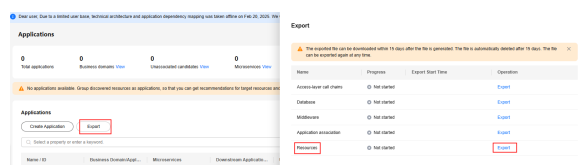
----End

## Importing Credentials

Only server and database credentials can be imported.

- Step 1** Sign in to the **MgC console**. In the navigation pane, under **Project**, choose a **project** from the drop-down list.
- Step 2** In the navigation pane, choose **Applications**.
- Step 3** Click **Export** above the application list.
- Step 4** Locate the **Resources** row and click **Export** in the **Operation** column. In the displayed dialog box, select **Servers** or **Databases** from the **Resource Type** drop-down list, and click **Confirm** to generate a file.

**Figure 5-1** Exporting resource information



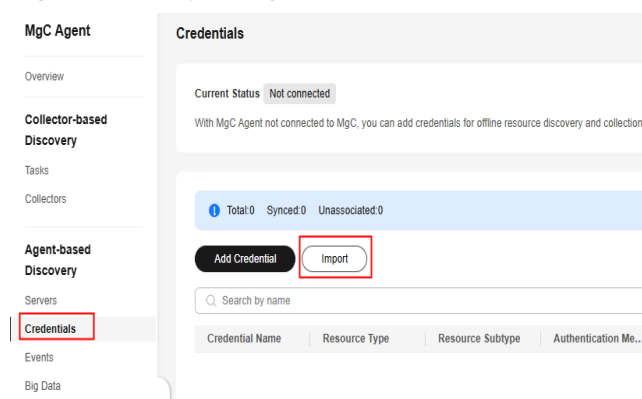
- Step 5** After the file is generated, click **Download** in the **Operation** column to download the resource list (in CSV format) to the local PC.
- Step 6** Open the exported CSV file, add columns **user\_name** and **password** to the end, and enter the username and password for each resource. Save the file.

**CAUTION**

Ensure that the saved CSV file is correct and has no incorrect configuration or garbled characters.

**Step 7** On the **Credentials** page of the MgC Agent console, click **Import** above the list.

**Figure 5-2** Importing credentials



**Step 8** Click **Select File** to upload the saved CSV file.

**NOTICE**

- A maximum of 1,000 complete credential records can be imported at a time. If there are any blanks or incomplete credentials, they will be ignored.
- Credential names are automatically generated based on the resource name and access address.
- Credentials can be imported repeatedly, but they will be named differently.

**Step 9** Click **OK** to complete the import. After the import is successful, the system automatically synchronizes the credentials to MgC and associate them with corresponding resources.

----End

## Synchronizing Credentials

If the MgC Agent is disconnected from MgC, you need to manually synchronize added credentials to MgC after the connection is restored. In the **Source Credentials** area, click **Sync**.

## 5.2 Configuring an OBS Bucket

You can upload big data verification logs and content verification results to OBS for saving local storage and effectively managing and analyzing logs and results. After an OBS bucket is configured, the task logs and content verification results will be automatically uploaded to the specified OBS bucket.

## Required Permissions

Ensure that the Huawei Cloud account that owns the added [credentials](#) have the following permissions for the log bucket:

- **obs:object:PutObject** (Uploading objects with PUT or POST, copying objects, appending content to objects, initiating a multipart upload, as well as uploading, copying, and assembling parts)
- **obs:bucket:ListAllMyBuckets** (Listing buckets)
- **obs:bucket:ListBucket** (Listing objects in a bucket)

For details about more permissions, see [Permissions Management](#).

## Prerequisites

- You have [installed the MgC Agent](#) and registered an account.
- You have connected the MgC Agent to MgC. For details, see [Connecting the MgC Agent to MgC](#).

## Procedure

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console.
- Step 2** In the navigation pane, choose **Agent-based Discovery > Big Data**.
- Step 3** In the **Bucket Configuration** area, click **Configure**.
- Step 4** Configure a log bucket by referring to [Table 5-2](#).

**Table 5-2** Parameters for configuring a log bucket

| Parameter    | Configuration                                                                                                                                                             |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bucket Type  | Two types are supported: Parallel File System and Bucket.                                                                                                                 |
| OBS Endpoint | Enter the endpoint of the region where the log bucket is located. For details, see <a href="#">Regions and Endpoints</a> . Click <b>Verify</b> to obtain the bucket list. |
| Bucket       | Select the desired bucket from the drop-down list.                                                                                                                        |

| Parameter         | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (Optional) Folder | <p>Specify the folder for storing log files and content verification results in the bucket. The folder path must start with a slash (/). For example, if the bucket name is <b>mgc01</b> and the folder name is <b>/test</b>, the log file path is <b>obs://mgc01/test/bigdata/task/Date/Task execution ID/Log file</b>. The content verification result path is <b>obs://mgc01/test/bigdata/task/Task execution ID/Database name/Table name/Content verification result file</b>.</p> <ul style="list-style-type: none"> <li>If you do not specify a folder, the system automatically creates a folder named <b>bigdata</b> in the bucket. <ul style="list-style-type: none"> <li>Log files are stored in <b>obs://Bucket name/bigdata/task/Date/Task execution ID/Log file</b>.</li> <li>The path for storing the content verification result is <b>obs://Bucket name/bigdata/task/Task execution ID/Database name/Table name/Content verification result file</b>.</li> </ul> </li> <li>If the specified folder is not found, the system automatically creates the folder before uploading log files.</li> </ul> |

**Step 5** Click **OK**.

#### NOTICE

Deleting the bucket configuration does not delete the bucket itself or the files stored in it, but you cannot use the log upload function of MgC.

----End

## 5.3 Managing MgC Agents

You can monitor and manage the MgC agents you connected to MgC on the MgC console.

### Prerequisites

You have [installed the MgC Agent](#) in your source environment and [connected the MgC Agent to MgC](#).

### Viewing the MgC Agent

**Step 1** Sign in to the [MgC console](#). In the navigation pane, under **Project**, choose your [project](#) from the drop-down list.

**Step 2** In the navigation pane, choose **MgC Agents** to view all MgC agents in the current project.

The following table describes the device statuses.

**Table 5-3** Device status description

| Status   | Description                                                                 |
|----------|-----------------------------------------------------------------------------|
| Online   | The MgC Agent stays connected with the MgC console.                         |
| Offline  | The MgC Agent is disconnected from the MgC console for at least one minute. |
| Error    | The MgC Agent has been registered with but has not been connected to MgC.   |
| Abnormal | A backend error occurred. Contact Huawei Cloud technical support for help.  |
| Blocked  | A backend error occurred. Contact Huawei Cloud technical support for help.  |

----End

## Deleting an MgC Agent

Locate the agent and click **Delete** in the **Operation** column. In the displayed dialog box, click **OK**.



MgC agents that are collecting resource information cannot be deleted.

## 5.4 Event Recording

The MgC Agent offers comprehensive logging and event auditing. You can review operations, troubleshoot faults, and locate involved resources through the console and log files.

### Overview

- **Logging:** Operations are logged in *<MgC-Agent-installation-directory>/logs/audit/audit.log*.
- **Event recording:** On the MgC Agent console, you can view event records, which include event details such as the event source, involved resources, key behaviors, operation time, and operation result.
- **Filtering and search:** You can filter event records by key behavior or search for event records by keyword.

- **Troubleshooting:** If an operation fails, you can review the logs to learn what the cause is.
- **Key operation and resource display::**
  - For key actions such as changing passwords or credentials, the resource field displays the involved account name or credential ID.
  - For key actions such as MgC delivering instructions to the MgC Agent or the MgC Agent reporting data to MgC, the resource field displays the path of the file that stores the instructions or data. You can find the file using the following path:
    - Instructions received from MgC: *<MgC-Agent-installation-directory>/logs/audit/downlink\_command.txt*
    - Data reported to MgC: *<MgC-Agent-installation-directory>/logs/audit/uplink\_data.txt*
- **Periodic log archiving:** The system automatically compresses the **audit.log** file into a .zip package at the beginning of each month and saves the package to the *<MgC-Agent-installation-directory>/logs/audit/* directory. The package name is in the format of year-month.zip, for example, **2024-xx.zip**.

# 6 Tool Discovery

---

## 6.1 Creating a Collection Task

The MgC Agent provides multiple types of collectors for you to collect resource specifications and configuration information. This section describes how to use a collector to create a collection task.

### Prerequisites

- You have [installed the MgC Agent](#) and registered an account.
- The required [collectors](#) have been installed.

### Procedure

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console. In the navigation pane, choose **Tasks**.
- Step 2** Click **Create**. On the displayed **Create Task** page, select the collector based on the resources to be collected and click **Next**.
- Step 3** In the **Task Info** area, customize the task name. In the **Collector Settings** area, set collector parameters based on [Configuring Collector Parameters](#). Parameters with \* are mandatory.
- Step 4** After the configuration is complete, click **OK**. You can view the data source collection statuses in the task list.

After the data source is successfully collected, obtain the collection results in any of the following ways:

- Click **Download JSON** in the **Operation** column of the task to save the collection result as a JSON file. The file is used to import the collection result to the MgC for application association analysis. For details, see [Importing Discovery Results](#).
- Click **Download CSV** in the **Operation** column of the task to locally save the collection result as a CSV file.



- Click **View Storage Path** in the **Operation** column of a task to view the path for saving the discovery results.

----End

## 6.2 Managing Collectors

The MgC Agent installation package contains some collector installation packages. When the MgC Agent is installed, these collectors are also installed. This section describes how to upgrade a collector and add a collector.

### Scenarios

- Offline upgrade: used for updating installed collectors
- Manual upgrade: used for installing or modifying collectors

### Prerequisites

You have [installed the MgC Agent](#) and registered an account.

### Offline Upgrade

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console. In the navigation pane, choose **Collectors**.

You can view the types, versions, and installation paths of installed collectors.

- Step 2** Sign in to the [MgC console](#), and choose **MgC Agents** from the navigation pane. Download the latest MgC Agent installation package and save it to the root directory of the MgC Agent installation directory (for example, **C:\Edge**). Do not change the name of the installation package. Click **Upgrade**. The system automatically installs and upgrades the collector.

On the **Application Dependency Collectors** tab, if the version of the installed collector is the latest, the collector has been upgraded.

---

#### NOTICE

If the installation package contains multiple collectors, all collectors will be upgraded at a time.

---

----End

### Manual Upgrade

- Step 1** Use the AK/SK pair of your Huawei Cloud account to log in to the MgC Agent console. In the navigation pane, choose **Collectors**.

You can view the types, versions, and installation paths of installed collectors.

- Step 2** To add a collector, download the MgC Agent installation package from the **MgC Agents** page of the [MgC console](#), manually decompress the package and save the

installation file to the collector installation path (for example, **C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows**), and click **Refresh**. The system automatically installs the collector. On the **Application Dependency Collectors** tab, if the new collector is displayed, the collector is successfully added.

To modify the collector configuration file, copy and open the collector installation path, find the configuration file, and modify and save it. Then click **Refresh**. The system automatically updates the collector configuration information.

----End

## 6.3 Configuring Collector Parameters

### 6.3.1 Kubernetes Static Collector (app-discovery-k8s)

It collects Ingress, service, and ConfigMap information of a Kubernetes cluster. For details about the configuration parameters, see [Table 6-1](#).

**Table 6-1** Parameters for configuring the Kubernetes static collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-k8s-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\very-k8s\output\file\app-discovery-k8s-xxx.csv                                                                                                                                  |
| rules_path  | No        | Enter the storage path of the collection rule file (a .properties file). If this parameter is left blank, the path defaults to <i>&lt;collector-installation-path&gt;\config\rules.properties</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-k8s\config\rules.properties<br><b>NOTICE</b><br>You are advised to use the default rule file. If you need to customize collection rules, modify the default rule file. |

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_path | Yes       | <p>Enter the absolute path of the folder that stores the configuration files (in YAML format) of clusters to be collected.</p> <p><b>CAUTION</b><br/>This storage path stores only YAML configuration files of clusters to be collected. Irrelevant YAML files should not be stored here.</p> <p>To obtain the content of a cluster's configuration file, perform the following steps:</p> <p>On a cluster node, run the following command, and copy the returned information to a YAML file.</p> <pre>cat ~/.kube/config</pre> <p><b>NOTICE</b><br/>Only one configuration file can be stored for a Kubernetes cluster.</p> |

### 6.3.2 Kubernetes Conntrack Collector (app-discovery-k8s-conntrack)

The conntrack utility is used to collect the application association topology of a Kubernetes cluster. For details about the configuration parameters, see [Table 6-2](#).

**Table 6-2** Parameters for configuring the Kubernetes conntrack collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | <p>Enter the storage path of the collection result file (app-discovery-k8s-conntrack-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-k8s-conntrack\output\file\app-discovery-k8s-conntrack-xxx.csv</p>                                                                                                          |
| rules_path  | No        | <p>Enter the storage path of the collection rule file (a .properties file). If this parameter is left blank, the path defaults to <i>&lt;collector-installation-path&gt;\config\rules.properties</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-k8s-conntrack\config\rules.properties</p> <p><b>NOTICE</b><br/>You are advised to use the default rule file. If you need to customize collection rules, modify the default rule file.</p> |

| Parameter  | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| timeout    | No        | Specify the duration of a single collection, in seconds. The value is an integer ranging from 1 to the value of <b>period</b> . If this parameter is not set, half of the value of <b>period</b> is used by default.                                                                                                                                                                                                                                                                                                             |
| max_count  | No        | Specify the maximum number of traffic records that can be collected for a node each time. The value must be an integer greater than or equal to 1. If this parameter is not set, the default value <b>1,000</b> is used.                                                                                                                                                                                                                                                                                                         |
| period     | No        | Specify the collection interval, in minutes. The value is an integer ranging from 1 to 30. If this parameter is not set, the default value <b>1 m</b> is used.                                                                                                                                                                                                                                                                                                                                                                   |
| time       | Yes       | Specify the collection duration. If the collection duration exceeds the specified value, the collection stops. The unit can be <b>m</b> (minute), <b>h</b> (hour), or <b>d</b> (day). The value is an integer greater than or equal to 1.                                                                                                                                                                                                                                                                                        |
| nodes_path | No        | <p>Enter the storage path of the access configuration file of the nodes to be collected. If this parameter is left blank, the path defaults to <i>&lt;collector-installation-path&gt;\config\nodes.csv</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-k8s-contrack\config\nodes.csv</p> <p><b>NOTICE</b></p> <p>You are advised to use the default access configuration file. If you need to customize access information, modify the default file.</p> |

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| config_path | No        | <p>Enter the storage path of the cluster configuration file (.yaml). Alternatively, create a folder called <b>kube-config</b> in the <b>config</b> directory in the collector installation path and place the cluster configuration file in the folder. In this case, you do not need to set <b>config_path</b>, and the storage path defaults to <code>&lt;collector-installation-path&gt;\config\kube-config\xxx.yaml</code>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-k8s-contrack\config\kube-config\xxx.yaml</p> <p>To obtain the content of a cluster's configuration file, perform the following steps:</p> <p>On a cluster node, run the following command, and copy the returned information to a YAML file.</p> <pre>cat ~/.kube/config</pre> <p><b>NOTICE</b><br/>Only one configuration file can be stored for a Kubernetes cluster.</p> |

### 6.3.3 Kubernetes Pod Network Collector (app-discovery-k8s-pod-net)

This collector collects the network information of Kubernetes cluster pods to analyze associations between applications. For details about the configuration parameters, see [Table 6-3](#).

**Table 6-3** Parameters for configuring the Kubernetes pod network collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | <p>Enter the storage path of the collection result file (app-discovery-k8s-pod-net-xxx.csv). If this parameter is left blank, the storage path defaults to <code>&lt;collector-installation-path&gt;\output\file</code>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-k8s-pod-net\output\file\app-discovery-k8s-pod-net-xxx.csv</p> |

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rules_path  | Yes       | <p>Enter the storage path of the collection rule file (a .properties file). If this parameter is left blank, the preset rules are used and the path defaults to <code>&lt;collector-installation-path&gt;\config\rules.properties</code>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-k8s-pod-net\config\rules.properties</p> <p><b>NOTICE</b><br/>You are advised to use the default rule file. If you need to customize collection rules, modify the default rule file.</p>                   |
| period      | Yes       | <p>Specify the collection interval. The unit can be <b>s</b> (second) or <b>m</b> (minute). The value is an integer ranging from 1 to 30.</p>                                                                                                                                                                                                                                                                                                                                                                                                                          |
| time        | Yes       | <p>Specify the collection duration. If the collection duration exceeds the specified value, the collection stops. The unit can be <b>m</b> (minute), <b>h</b> (hour), or <b>d</b> (day). The value is an integer greater than or equal to 1.</p>                                                                                                                                                                                                                                                                                                                       |
| config_path | Yes       | <p>Enter the storage path of the cluster configuration file (.yaml).</p> <p><b>CAUTION</b><br/>This storage path stores only YAML configuration files of clusters to be collected. Irrelevant YAML files should not be stored here.</p> <p>To obtain the content of a cluster's configuration file, perform the following steps:</p> <p>On a cluster node, run the following command, and copy the returned information to a YAML file.</p> <pre>cat ~/.kube/config</pre> <p><b>NOTICE</b><br/>Only one configuration file can be stored for a Kubernetes cluster.</p> |

### 6.3.4 Process and Network Collector (app-discovery-process-netstat)

This collector collects process and network associations on a node. For details about the configuration parameters, see [Table 6-4](#).

**Table 6-4** Parameters for configuring the process and network collector

| Parameter   | Mandatory                                                                       | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No                                                                              | <p>Enter the storage path of the collection result file (app-discovery-process-netstat-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-process-netstat\output\file\app-discovery-process-netstat-xxx.csv</p>                                                                                                      |
| rules_path  | No                                                                              | <p>Enter the storage path of the collection rule file (a .properties file). If this parameter is left blank, the path defaults to <i>&lt;collector-installation-path&gt;\config\rules.properties</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-process-netstat\config\rules.properties</p> <p><b>NOTICE</b><br/>You are advised to use the default rule file. If you need to customize collection rules, modify the default rule file.</p> |
| interval    | No                                                                              | <p>Specify the collection interval, in minutes. The value is an integer ranging from 1 to 30. If this parameter is not set, the default value <b>1 m</b> is used.</p>                                                                                                                                                                                                                                                                                                                                                |
| time        | No<br>This parameter is mandatory when <b>app_only</b> is set to <b>false</b> . | <p>Specify the collection duration. If the collection duration exceeds the specified value, the collection stops. The unit can be <b>m</b> (minute), <b>h</b> (hour), or <b>d</b> (day). The value is an integer greater than or equal to 1.</p>                                                                                                                                                                                                                                                                     |
| app_only    | No                                                                              | <p>Specify whether to collect only process information. The options are <b>true</b> and <b>false</b>. <b>true</b> indicates only process information is collected. <b>false</b> indicates only network information is collected. The default value is <b>false</b>.</p> <p><b>CAUTION</b><br/>If this parameter is set to <b>false</b>, the <b>time</b> parameter is mandatory.</p>                                                                                                                                  |

| Parameter  | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| nodes_path | No        | <ul style="list-style-type: none"> <li>If you want to use the default configuration file provided by the collector, leave this parameter empty. Before data collection, you need to fill out the node information to be collected in the default configuration file <b>nodes.csv</b>. The path of file is <i>&lt;collector-installation-path&gt;\config\nodes.csv</i>.<br/>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-process-netstat\config\nodes.csv</li> <li>If you want to customize a configuration file, create a CSV file by referring to the default configuration file <b>nodes.csv</b>. Set this parameter to the path of the created CSV file.</li> </ul> <p><b>NOTICE</b><br/>You are advised to fill out your node information in the default configuration file <b>nodes.csv</b>. If you need to customize a configuration file, use the default file as a reference.</p> |

### 6.3.5 Windows Process and Network Collector (app-discovery-process-netstat-win)

This collector collects process and network associations on Windows servers. This collector can run only on Windows. The collector uses the Windows Management Instrumentation (WMI) and SMB protocols to communicate with the Windows servers to be collected. The following required ports must be enabled on the firewall of these Windows servers:

- WMI: TCP port 135 and a larger random port (default: 13475; recommended: 1024-65535)
- SMB: TCP port 445

#### NOTICE

The collector can collect only the associations between the processes that are identified by running the **netstat** command and have long-term network connections.



**Table 6-5** Parameters for configuring the Windows process and network collector

| Parameter | Mandatory                                                                       | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| host_path | Yes                                                                             | <p>Enter the path to the CSV file that contains Windows server authorization information, for example, <b>D:\nodes.csv</b>.</p> <p>You need to prepare the CSV file in advance. In the first row (table header) of the CSV file, enter the parameter names in the following sequence, and enter the parameter values of each Windows server to be collected in the rows below the table header. The <b>IP</b>, <b>USER</b>, and <b>PASSWORD</b> parameters are mandatory.</p> <ul style="list-style-type: none"> <li>• IP(REQUIRED)</li> <li>• PORT(REQUIRED)</li> <li>• USER(REQUIRED)</li> <li>• PASSWORD(SENSITIVE)</li> <li>• PRI_KEY_PATH(SENS_PATH)</li> <li>• CLUSTER</li> <li>• APPLICATION</li> <li>• BUSINESS_DOMAIN</li> <li>• PASSWORD(ENCRYPTED)</li> <li>• PRI_KEY_PATH(ENCRYPTED)</li> </ul> <p><b>CAUTION</b><br/>The provided accounts (username and password) must have the permission to run the <b>netstat</b> command on the server.</p> |
| app_only  | No                                                                              | <p>Specify whether to collect only process information. The options are <b>true</b> and <b>false</b>. <b>true</b> indicates only process information is collected. <b>false</b> indicates only network information is collected. The default value is <b>false</b>.</p> <p><b>CAUTION</b><br/>If this parameter is set to <b>false</b>, the <b>time</b> parameter is mandatory.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| time      | No<br>This parameter is mandatory when <b>app_only</b> is set to <b>false</b> . | <p>Specify the collection duration. If the collection duration exceeds the specified value, the collection stops. The unit can be <b>m</b> (minute), <b>h</b> (hour), or <b>d</b> (day). The value is an integer greater than or equal to 1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| interval    | No        | Specify the collection interval, in minutes. The value is an integer ranging from 1 to 30. If this parameter is not set, the default value <b>1 m</b> is used.                                                                                                                                                                                                                                                    |
| output_path | No        | Enter the storage path of the collection result file (app-discovery-process-netstat-win-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-process-netstat-win\output\file\app-discovery-process-netstat-win-xxx.csv |

### 6.3.6 RabbitMQ Collector (app-discovery-rabbitmq)

This collector connects to the RabbitMQ management plug-in to obtain the information about the RabbitMQ node list, version, queues, and consumer endpoints in queues. For details about the configuration parameters, see [Table 6-6](#).

**Table 6-6** Parameters for configuring the RabbitMQ collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-rabbitmq-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-rabbitmq\output\file\app-discovery-rabbitmq-xxx.csv |
| password    | Yes       | Enter the login password.                                                                                                                                                                                                                                                                                                                                                        |
| username    | Yes       | Enter the username for logging in to the RabbitMQ management plug-in.                                                                                                                                                                                                                                                                                                            |
| server_port | Yes       | Enter the RabbitMQ service port, for example, 5672.                                                                                                                                                                                                                                                                                                                              |
| plugin_port | Yes       | Enter the port of the RabbitMQ management plug-in, for example, 15672.                                                                                                                                                                                                                                                                                                           |
| host        | Yes       | Enter the IP address for connecting to RabbitMQ, for example, <b>127.0.0.1</b> .                                                                                                                                                                                                                                                                                                 |

## 6.3.7 Kafka Collector (app-discovery-kafka)

This collector connects to a Kafka node to obtain the IP address, version, and consumer information of the Kafka node. For details about the configuration parameters, see [Table 6-7](#).

**Table 6-7** Parameters for configuring the Kafka collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                               |
|-------------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-kafka-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br><br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-kafka\output\file\app-discovery-kafka-xxx.csv |
| cert_file   | No        | If <b>auth</b> is set to <b>3</b> , set this parameter to the absolute path of the <b>SSL cert_file</b> file.                                                                                                                                                                                                                                                               |
| ca_file     | No        | If <b>auth</b> is set to <b>3</b> , set this parameter to the absolute path of the <b>SSL ca_file</b> file.                                                                                                                                                                                                                                                                 |
| password    | No        | Enter the login password.                                                                                                                                                                                                                                                                                                                                                   |
| username    | No        | If <b>auth</b> is set to <b>2</b> or <b>3</b> , set this parameter to the username for logging in to Kafka.                                                                                                                                                                                                                                                                 |
| auth        | Yes       | Specify the Kafka authentication method. <ul style="list-style-type: none"><li>• <b>0</b>: indicates no authentication is required.</li><li>• <b>1</b>: indicates the PLAINTEXT authentication.</li><li>• <b>2</b>: indicates the SASL_PLAINTEXT authentication.</li><li>• <b>3</b>: indicates SASL_SSL authentication.</li></ul>                                           |
| endpoint    | Yes       | Enter the Kafka connection address, for example, 127.0.0.1:9092.                                                                                                                                                                                                                                                                                                            |

## 6.3.8 Eureka Collector (app-discovery-eureka)

This collector collects information about Eureka Servers and Eureka Clients through the development APIs provided by Eureka. For details about the configuration parameters, see [Table 6-8](#).

**Table 6-8** Parameters for configuring the Eureka collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-eureka-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-eureka\output\file\app-discovery-eureka-xxx.csv                                                                                                                                          |
| password    | No        | If user authentication is enabled, enter the passwords for accessing the Eureka servers. Separate multiple passwords with commas (,) based on the endpoint sequence. If a server does not require a password, enter a space. Example: password1, ,password2                                                                                                                                                                                                                                                         |
| endpoint    | Yes       | Enter the Eureka server addresses. If Eureka is deployed as a cluster of servers, separate the addresses with commas (,). Example: <i>http://IP address 1:Port 1,http://IP address 2:Port2</i><br><ul style="list-style-type: none"> <li>If user authentication is enabled, add the <i>Username@</i> before <i>IP address:Port</i>. Example: <i>http://Username@IP address 1:Port 1,http://IP address 2:Port2</i></li> <li>If HTTPS authentication is enabled, change <b>http://</b> to <b>https://</b>.</li> </ul> |

### 6.3.9 Redis Collector (app-discovery-redis)

This collector connects to a Redis node to obtain its IP address, version, and IP addresses of connected clients. For details about the configuration parameters, see [Table 6-9](#).

**Table 6-9** Parameters for configuring the Redis collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-redis-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-redis\output\file\app-discovery-redis-xxx.csv |
| password    | No        | If <b>auth</b> is set to <b>1</b> , set this parameter to the Redis node login password.                                                                                                                                                                                                                                                                                |
| mode        | Yes       | Specify the Redis deployment mode.<br><ul style="list-style-type: none"> <li>• <b>0</b>: single-node</li> <li>• <b>1</b>: cluster</li> </ul>                                                                                                                                                                                                                            |
| auth        | Yes       | Specify the Redis authentication method.<br><ul style="list-style-type: none"> <li>• <b>0</b>: indicates no authentication is required.</li> <li>• <b>1</b>: indicates password authentication.</li> </ul>                                                                                                                                                              |
| port        | Yes       | Enter the Redis port.                                                                                                                                                                                                                                                                                                                                                   |
| host        | Yes       | Enter the IP address of the Redis node.                                                                                                                                                                                                                                                                                                                                 |

### 6.3.10 MongoDB Collector (app-discovery-mongodb)

This collector collects a MongoDB server information and information about connected clients. For details about the configuration parameters, see [Table 6-10](#).

**Table 6-10** Parameters for configuring the MongoDB collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-mongodb-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-mongodb\output\file\app-discovery-mongodb-xxx.csv |

| Parameter                       | Mandatory | Configuration                                                                                                                                                                                                             |
|---------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ssl_ca_file                     | No        | If SSL is used for connection, enter the path of the CA certificate file (.pem). You are advised to use a specific set of CA certificates instead of a server certificate issued and signed by a well-known organization. |
| ssl_client_private_key_password | No        | If the private key contained in the certificate file has been encrypted, enter the password or passphrase.                                                                                                                |
| ssl_client_certificate_key_file | No        | Enter the path of the .pem file that concatenates the certificate and its private key. If the private key of the certificate is stored in a separate file, it should be concatenated with the certificate file.           |
| auth_source                     | No        | Enter the MongoDB authentication source.                                                                                                                                                                                  |
| times                           | Yes       | Set the number of collection times. The value ranges from 1 to 1,000.                                                                                                                                                     |
| interval                        | Yes       | Set the collection interval, in seconds. The value ranges from 1 to 60.                                                                                                                                                   |
| password                        | Yes       | Enter the login password.                                                                                                                                                                                                 |
| user                            | Yes       | Enter the name of the user who has the ClusterMonitor and ReadAnyDatabase permissions.                                                                                                                                    |
| endpoint                        | Yes       | Enter the connection endpoint of the MongoDB server, for example, 127.0.0.1:27017.                                                                                                                                        |

### 6.3.11 MySQL-General Log Collector (app-discovery-mysql-generallog)

This collector collects the host and port information of clients based on the general log of a MySQL database. For details about the configuration parameters, see [Table 6-11](#).

**Table 6-11** Parameters for configuring the MySQL-General Log collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-mysql-generallog-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-mysql-generallog\output\file\app-discovery-mysql-generallog-xxx.csv                                                                                                                                                                                                    |
| exclude_ip  | No        | Enter the IP addresses of the clients whose data does not need to be collected. Use commas (,) to separate multiple IP addresses. Example: 127.0.0.1,192.168.1.1                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| import      | Yes       | Enter the path of the general log, for example, <b>C:\data\logs</b> .<br>To enable MySQL general log, perform the following steps:<br><ol style="list-style-type: none"><li>1. Add the following configuration information to [mysqld] in the <b>my.ini</b> file:<br/>log-output=FILE<br/>general_log=1<br/>general_log_file="D:\mysqllog\mysql_general.log"<br/><b>general_log_file</b> indicates the log file path. In Linux, the example path is <b>/data/log/mysql_general.log</b>.</li><li>2. Run the following command to restart the MySQL service:<br/>net stop mysql<br/>net start mysql</li></ol> |

### 6.3.12 MySQL-JDBC Collector (app-discovery-mysql-jdbc)

This collector collects the host and port information of clients connected to a MySQL database by accessing the process list table of the MySQL database through JDBC. For details about the configuration parameters, see [Table 6-12](#).

**Table 6-12** Parameters for configuring the MySQL-JDBC collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | <p>Enter the storage path of the collection result file (app-discovery-mysql-jdbc-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-mysql-jdbc\output\file\app-discovery-mysql-jdbc-xxx.csv</p>                                           |
| ssl         | No        | <p>If the SSL connection using the CA certificate fails, enter the SSL parameters supported by PyMySQL for login in format of <i>Parameter name 1,Parameter value 1,Parameter name 2,Parameter value 2</i>. For details about the parameters, see <a href="#">Table 6-13</a>.</p> <p>Example: ca,/data/ca.pem,key,/data/client-key.pem,cert,/data/client-cert.pem,check_hostname,True</p>                                                  |
| ca          | No        | <p>If the SSL CA authentication is enabled, set this parameter to the path where the CA certificate is stored.</p> <p>In Linux, the default location of MySQL certificates depends on the MySQL installation mode and version. Generally, MySQL certificates are stored in the following directories:</p> <ul style="list-style-type: none"> <li>MySQL 5.6 or earlier: /etc/mysql/</li> <li>MySQL 5.7 or later: /var/lib/mysql/</li> </ul> |
| exclude_ip  | No        | <p>Enter the IP addresses of the clients whose data does not need to be collected. Use commas (,) to separate multiple IP addresses. Example: 127.0.0.1,192.168.1.1</p>                                                                                                                                                                                                                                                                    |
| password    | Yes       | Enter the login password.                                                                                                                                                                                                                                                                                                                                                                                                                  |
| user        | Yes       | <p>Enter the name of the user who has the PROCESS permissions.</p> <p>To check the permissions of your MySQL account, perform the following steps:</p> <p>Run the following command in the database and check whether <b>PROCESS</b> is set to <b>Y</b>:</p> <pre>SELECT * FROM mysql.user</pre>                                                                                                                                           |
| port        | Yes       | Enter the port used to connect to and communicate with the MySQL server, for example, 3306.                                                                                                                                                                                                                                                                                                                                                |



| Parameter | Mandatory | Configuration                                                         |
|-----------|-----------|-----------------------------------------------------------------------|
| endpoint  | Yes       | Enter the IP address of the MySQL server, for example, 192.168.1.100. |

**Table 6-13** PyMySQL SSL parameters

| Parameter      | Mandatory | Description                                                                                                                                                                            |
|----------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| disabled       | No        | The default value is <b>False</b> . If this parameter is set to <b>True</b> , SSL is disabled. If no certificate is specified, this parameter does not take effect.                    |
| ca             | Yes       | Path of the CA certificate file                                                                                                                                                        |
| cert           | Yes       | Path of the client certificate file                                                                                                                                                    |
| key            | Yes       | Path of the client private key file                                                                                                                                                    |
| cipher         | No        | Encryption algorithm to be used                                                                                                                                                        |
| check_hostname | No        | If this parameter is set to <b>True</b> , the hostname of the database server is verified during SSL connections. If no certificate is specified, this parameter does not take effect. |

### 6.3.13 Nginx Configuration Collector (app-discovery-nginx)

This collector parses the configuration file of Nginx to obtain the Nginx redirection information. For details about the configuration parameters, see [Table 6-14](#).

**Table 6-14** Parameters for configuring the Nginx configuration collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-nginx-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-nginx\output\file\app-discovery-nginx-xxx.csv |
| max_rewrite | No        | Specify the maximum number of rewrites to be queried. The value is an integer ranging from 1 to 20.                                                                                                                                                                                                                                                                     |

| Parameter | Mandatory | Configuration                                                            |
|-----------|-----------|--------------------------------------------------------------------------|
| filedir   | Yes       | Enter the path of the folder where the <b>nginx.conf</b> file is stored. |

### 6.3.14 Cloud VPC Log Collector (app-discovery-cloud-vpc-log)

This collector collects VPC traffic information from log files. For details about the configuration parameters, see [Table 6-15](#).

**Table 6-15** Parameters for configuring the cloud VPC log collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-cloud-vpc-log-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-cloud-vpc-log\output\file\app-discovery-cloud-vpc-log-xxx.csv |
| log_path    | Yes       | Enter the path of the VPC log file, for example, /data/logs/vpc_log.csv.                                                                                                                                                                                                                                                                                                                        |

### 6.3.15 Nacos Collector (app-discovery-nacos)

This collector collects the service management and configuration management information of the Nacos service, so that it can collect information about source service architectures, discover dynamic services, and parse service associations. For details about the configuration parameters, see [Table 6-16](#).

**Table 6-16** Parameters for configuring the Nacos collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | Enter the storage path of the collection result file (app-discovery-nacos-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i> .<br>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-nacos\output\file\app-discovery-nacos-xxx.csv |

| Parameter  | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rules_path | No        | <p>Enter the storage path of the collection rule file (a .properties file). If this parameter is left blank, the path defaults to <i>&lt;collector-installation-path&gt;\config\rules.properties</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-nacos\config\rules.properties</p> <p><b>NOTICE</b><br/>You are advised to use the default rule file. If you need to customize collection rules, modify the default rule file.</p> |
| password   | Yes       | Enter the login password.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| username   | Yes       | Enter the name of the login user who has the read permissions.                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| port       | Yes       | Enter the port for accessing Nacos, for example, 8848.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| IP         | Yes       | Enter the address for accessing Nacos, for example, http://127.0.0.1.                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### 6.3.16 Application Configuration Collector (app-discovery-application-config)

This collector collects application configuration information through application configuration files. For details about the configuration parameters, see [Table 6-17](#).

**Table 6-17** Parameters for configuring the application configuration collector

| Parameter   | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| output_path | No        | <p>Enter the storage path of the collection result file (app-discovery-application-config-xxx.csv). If this parameter is left blank, the storage path defaults to <i>&lt;collector-installation-path&gt;\output\file</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-application-config\output\file\app-discovery-application-config-xxx.csv</p> |

| Parameter  | Mandatory | Configuration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| rules_path | No        | <p>Enter the storage path of the collection rule file (a .properties file). If this parameter is left blank, the path defaults to <i>&lt;collector-installation-path&gt;\config\rules.properties</i>.</p> <p>Example: C:\Edge\tools\plugins\collectors\python\windows\mgc-app-discovery-collectors-windows\app-discovery-application-config\config\rules.properties</p> <p><b>NOTICE</b><br/>You are advised to use the default rule file. If you need to customize collection rules, modify the default rule file.</p> |
| path       | Yes       | Enter the storage path of application configuration files (.yaml).                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

# 7 Best Practices

---

## 7.1 Setting JVM Parameters for the MgC Agent

### 7.1.1 Setting JVM Parameters for the MgC Agent's Tomcat Server

#### Windows

The following procedure uses Windows 11 as an example.

**Step 1** Navigate to the location of the startup script.

Go to the MgC Agent installation directory (**C:\Edge** by default) and find **.\scripts\start.bat**.

**Step 2** Set the JVM parameters.

1. In the MgC Agent installation directory (**C:\Edge** by default), edit **.\scripts\start.bat**.

2. Find the following statement in the file:

```
start %mgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe %jvmOptions% -jar %mgcEdgeHome%\tools\SecAs-1.2.29\mgc-edge-server.1.0.0.jar --spring.config.location=%mgcEdgeHome%\config\application.yml
```

Replace the statement with the following:

```
start %mgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe -Xms512M -Xmx1024M %jvmOptions% -jar %mgcEdgeHome%\tools\SecAs-1.2.29\mgc-edge-server.1.0.0.jar --spring.config.location=%mgcEdgeHome%\config\application.yml
```

In the preceding information, **-Xms512M -Xmx1024M** are the JVM parameters to be configured. **-Xms512M** indicates that the initial heap memory allocated to the JVM is 512 MB. **-Xmx1024M** indicates that the maximum heap memory that can be allocated to the JVM is 1,024 MB. You can add other JVM parameters as required.

The statement appears twice in the file and needs to be modified twice, as shown in the following figure.

Figure 7-1 Modification 1

```
32 if "%ERRORLEVEL%"=="0" (
33 taskkill /f /im Edge_Tomcat.exe
34 echo "[INFO] Taskkill Edge_Tomcat.exe" >> %MgcEdgeHome%\logs\monitor.log
35 taskkill /f /im designcenter-collector-platform.exe
36 echo "[INFO] Taskkill designcenter-collector-platform.exe" >> %MgcEdgeHome%\logs\monitor.log
37 taskkill /f /im rda-collector-database.exe
38 echo "[INFO] Taskkill rda-collector-database.exe" >> %MgcEdgeHome%\logs\monitor.log
39 taskkill /f /im rda-collector-kubernetes.exe
40 echo "[INFO] Taskkill rda-collector-kubernetes.exe" >> %MgcEdgeHome%\logs\monitor.log
41 taskkill /f /im rda-storage-collector.exe
42 echo "[INFO] Taskkill rda-storage-collector.exe" >> %MgcEdgeHome%\logs\monitor.log
43 taskkill /f /im designcenter-collector-server.exe
44 echo "[INFO] Taskkill designcenter-collector-server.exe" >> %MgcEdgeHome%\logs\monitor.log
45 timeout /t 3
46 echo "[INFO] The mgcEdgeHome=%MgcEdgeHome%" >> %MgcEdgeHome%\logs\monitor.log"
47 del /f /q %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe
48 echo "[INFO] Del %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe" >> %MgcEdgeHome%\logs\monitor.log
49 echo "[INFO] Copy Edge_Tomcat.exe..." >> %MgcEdgeHome%\logs\monitor.log"
50 copy %MgcEdgeHome%\tools\jre\bin\javaw.exe %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe" /y
51 echo "[INFO] Start Edge_Tomcat..." >> %MgcEdgeHome%\logs\monitor.log"
52 for /l %i in (1,1,5) do (
53 ping -n 2 127.0.0.1 >nul
54 echo "[INFO] Starting Edge_Tomcat. Do not close the window until the startup is complete."
55)
56 set Mgc_EDGE_HOME=%MgcEdgeHome%
57 set RDA_JRE_HOME=%RdaJreHome%
58 start %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe -Xms512M -Xmx1024M %jvmOptions% -jar %MgcEdgeHome%\
59 \tools\SecAs-1.2.29\mgc-edge-server-1.0.0.jar --spring.config.location=%MgcEdgeHome%\config\application.yml
60 for /l %i in (1,1,30) do (
61 echo "[INFO] Starting Edge_Tomcat. Do not close the window until the startup is complete."
62 ping -n 2 127.0.0.1 >nul
63)
64 echo "This Program is starting....." >> %MgcEdgeHome%\logs\monitor.log
65 exit /B
66) else (
```

Figure 7-2 Modification 2

```
66) else (
67 echo "[INFO] The mgcEdgeHome=%MgcEdgeHome%" >> %MgcEdgeHome%\logs\monitor.log"
68 echo "[INFO] Del %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe"
69 echo "[INFO] Del %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe" >> %MgcEdgeHome%\logs\monitor.log
70 del /f /q %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe
71 echo "[INFO] Copy Edge_Tomcat.exe..."
72 echo "[INFO] Copy Edge_Tomcat.exe..." >> %MgcEdgeHome%\logs\monitor.log"
73 copy %MgcEdgeHome%\tools\jre\bin\javaw.exe %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe" /y
74 echo "[INFO] Start Edge_Tomcat..."
75 echo "[INFO] Start Edge_Tomcat..." >> %MgcEdgeHome%\logs\monitor.log"
76 for /l %i in (1,1,5) do (
77 ping -n 2 127.0.0.1 >nul
78 echo "[INFO] Starting Edge_Tomcat. Do not close the window until the startup is complete."
79)
80 set Mgc_EDGE_HOME=%MgcEdgeHome%
81 set RDA_JRE_HOME=%RdaJreHome%
82 start %MgcEdgeHome%\tools\jre\bin\Edge_Tomcat.exe -Xms512M -Xmx1024M %jvmOptions% -jar %MgcEdgeHome%\
83 \tools\SecAs-1.2.29\mgc-edge-server-1.0.0.jar --spring.config.location=%MgcEdgeHome%\config\application.yml
84 for /l %i in (1,1,30) do (
85 echo "[INFO] Starting Edge_Tomcat. Do not close the window until the startup is complete."
86 ping -n 2 127.0.0.1 >nul
87)
88 echo "[INFO] This Program is starting....."
89 echo "[INFO] This Program is starting....." >> %MgcEdgeHome%\logs\monitor.log"
90 exit /B
91)
```

3. Save and exit **start.bat**. The JVM parameters are configured for the Edge Tomcat server.

### Step 3 Restart the Edge Tomcat server.

If the MgC Agent is running, stop Tomcat and the pre-installed collectors. After that, restart the MgC Agent.

- Stop the Edge Tomcat server.  
Go to the MgC Agent installation directory (**C:\Edge** by default) and run **.\scripts\stop.bat**. The Edge Tomcat server and the pre-installed collectors will be stopped.
- Restart the MgC Agent.

Go to the MgC Agent installation directory (**C:\Edge** by default) and run **.\scripts\start.bat**. the MgC Agent's Tomcat server and the pre-installed collectors are restarted.

### Step 4 Query the JVM parameters of the MgC Agent's Tomcat server.

**CAUTION**

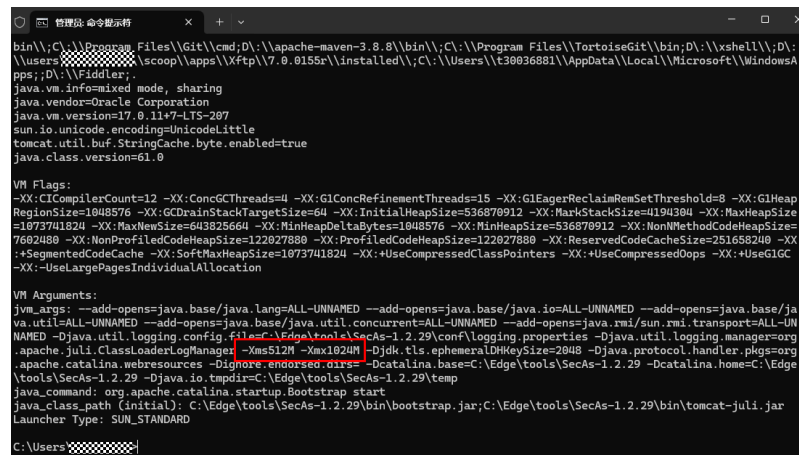
This step requires that the Java development environment be installed on Windows.

1. Press **Ctrl, Alt, and Delete** and select **Task Manager** on the displayed page to open it. Click the **Details** tab, find the **Edge\_Tomcat.exe** program, and note the PID of the program.
2. After obtaining the PID, open **Command Prompt** as the administrator, enter the following command, and press **Enter**:

```
jinfo PID
```

In the preceding command, **PID** indicates the PID of the MgC Agent program. You can view the effective JVM parameters in the command output.

Figure 7-3 Command prompt



```
bin\;C:\Program Files\Gif\cmd;D:\apache-maven-3.8.8\bin\;C:\Program Files\TortoiseGit\bin;D:\xshel\;D:\
\\users\X\scop\apps\Xftp\7.0.0155r\installed\;C:\Users\t30936881\AppData\Local\Microsoft\WindowsA
pps;D:\Fiddler;
java.vm.info=mixed mode, sharing
java.vendor=Oracle Corporation
java.vm.version=17.0.11v7-LTS-207
sun.io.unicode.encoding=UnicodeLittle
tomcat.util.buf.StringCache.byte.enabled=true
java.class.version=61.0

VM Flags:
-XX:CICompilerCount=12 -XX:ConcGCThreads=4 -XX:G1ConcRefinementThreads=15 -XX:G1EagerReclaimRwSetThreshold=8 -XX:G1Heap
RegionSize=1048576 -XX:GCDrainStackTargetSize=64 -XX:InitialHeapSize=536870912 -XX:MarkStackSize=1190304 -XX:MaxHeapSize
=1073741824 -XX:MaxNewSize=643825664 -XX:MinHeapDeltaBytes=1048576 -XX:MinHeapSize=536870912 -XX:NonMethodCodeHeapSize=
7602480 -XX:NonProfiledCodeHeapSize=122027880 -XX:ProfiledCodeHeapSize=122027880 -XX:ReservedCodeCacheSize=251658240 -XX
:+SegmentedCodeCache -XX:SoftMaxHeapSize=1073741824 -XX:+UseCompressedClassPointers -XX:+UseCompressedOops -XX:+UseG1GC
-XX:+UseLargePagesIndividualAllocation

VM Arguments:
jvm_flags: -add-opens=java.base/java.lang=ALL-UNNAMED -add-opens=java.base/java.io=ALL-UNNAMED -add-opens=java.base/ja
va.util=ALL-UNNAMED -add-opens=java.base/java.util.concurrent=ALL-UNNAMED -add-opens=java.rmi/sun.rmi.transport=ALL-UN
NAMED -Djava.util.logging.config.file=C:\Edge\tools\SecAs-1.2.29\conf\logging.properties -Djava.util.logging.manager=org
.apache.juli.ClassLoaderLogManager -Xms512M -Xmx1024M -Djdk.tls.ephemeralDHKeySize=2048 -Djava.protocol.handler.pkgs=org
.apache.catalina.webresources -Dignore.endorsed.dirs=C:\Edge\tools\SecAs-1.2.29 -Dcatalina.base=C:\Edge\tools\SecAs-1.2.29 -Dcatalina.home=C:\Edge
\tools\SecAs-1.2.29 -Djava.io.tmpdir=C:\Edge\tools\SecAs-1.2.29\temp
java_command: org.apache.catalina.startup.Bootstrap start
java_class_path (initial): C:\Edge\tools\SecAs-1.2.29\bin\bootstrap.jar;C:\Edge\tools\SecAs-1.2.29\bin\tomcat-juli.jar
Launcher Type: SUN_STANDARD

C:\Users\X\scop\apps\Xftp\7.0.0155r\installed\
```

----End

## Linux

The following uses CentOS 8 as an example.

- Step 1** Navigate to the location of the startup script.

Go to the MgC Agent installation directory (**/opt/cloud/Edge** by default) and find **./scripts/start.sh**.

- Step 2** Set the JVM parameters.

1. In the MgC Agent installation directory (**/opt/cloud/Edge** by default), edit **./scripts/start.sh**.
2. Find the following statement in the file:

```
nohup java $JVM_OPTIONS -jar $EDGE_APP_FILE --spring.config.location=${MgC_EDGE_HOME}/
config/application.yml >/dev/null 2>&1 &
```

Replace the statement with the following:

```
nohup java -Xms512M -Xmx1024M $JVM_OPTIONS -jar $EDGE_APP_FILE --spring.config.location=${
MgC_EDGE_HOME}/config/application.yml >/dev/null 2>&1 &
```

In the preceding information, **-Xms512M -Xmx1024M** are the JVM parameters to be configured. **-Xms512M** indicates that the initial heap memory allocated to the JVM is 512 MB. **-Xmx1024M** indicates that the

maximum heap memory that can be allocated to the JVM is 1,024 MB. You can add other JVM parameters as required.

```

71 if [-n "$STOMACH_PROCESS"]; then
72 systemctl restart rnpd
73 fi
74 if [$CURRENT_USER_ID -ne $EDGE_SERVICE_USER_ID]; then
75 nohup java -jar $EDGE_APP_FILE -Xms1024M -Xmx1024M --spring.config.location=$EDGE_HOME/config/application.yml >/dev/null 2>&1 &
76 echo_and_write_to_log "start success"
77 else
78 su - $EDGE_SERVICE_USER -c "$MgM_EDGE_HOME/scripts/start.sh"
79 fi

```

3. Save and exit **start.bat**. The JVM parameters are configured for the Edge Tomcat server.

### Step 3 Restart the Edge Tomcat server.

If the MgC Agent is running, stop Tomcat and the pre-installed collectors.

1. Go to the **.\script** directory in the MgC Agent installation directory (**/opt/cloud/Edge** by default).
2. Run the following command to stop the MgC Agent:  
`sh stop.sh`
3. Run the following command to start the MgC Agent:  
`sh start.sh`

#### Step 4 Query the JVM parameters of the MgC Agent's Tomcat server.

Run the **ps -ef|grep java** command to check the JVM parameters when the MgC Agent is running.

[illegible]

---End

### 7.1.2 Setting JVM Parameters for Collectors

## Windows

The following procedure uses Windows 11 and **designcenter-collector-server** as an example.

- Step 1** Navigate to the location of the startup script.

Go to the MgC Agent installation directory (C:\Edge by default) and find **.\tools\plugins\collectors\designcenter-collector-server\bin\start.bat**. **designcenter-collector-server** can be replaced with the collector you want to configure. The supported collectors include:

Database collector **rda-collector-database**

## Container collector **rda-collector-kubernetes**

Platform collector **designcenter-collector-platform**

Server collector **designcenter-collector-server**

## Big data collector **bigdata-migration**

## Storage collector **rda-storage-collector**

- Step 2** Set the JVM parameters.



1. In the MgC Agent installation directory (C:\Edge by default), edit **.\tools\plugins\collectors\designcenter-collector-server\bin\start.bat**.
2. Add the following JVM parameters after **-jar** in the second statement.  
-Xms512M -Xmx1024M

In the preceding information, **-Xms512M -Xmx1024M** are the JVM parameters to be configured. **-Xms512M** indicates that the initial heap memory allocated to the JVM is 512 MB. **-Xmx1024M** indicates that the maximum heap memory that can be allocated to the JVM is 1,024 MB. You can add other JVM parameters as required.

```
1 @echo off
2 copy "%RDA_JRE_HOME%\bin\javaw.exe" "%RDA_JRE_HOME%\bin\rda-collector-database.exe" /y
3 start %RDA_JRE_HOME%\bin\rda-collector-database -jar -Xms512M -Xmx1024M %RDA_JRE_HOME%\bin\rda-collector-database.jar
```

3. Save and exit **start.bat**. The JVM parameters are configured for the server collector.

### Step 3 Restart the collector.

The JVM parameters will be applied after the collector is restarted.

1. Go to the MgC Agent installation directory (C:\Edge by default) and run **.\tools\plugins\collectors\designcenter-collector-server\bin\stop.bat** as the administrator.
2. Run the collector startup script **start.bat** in the same directory.

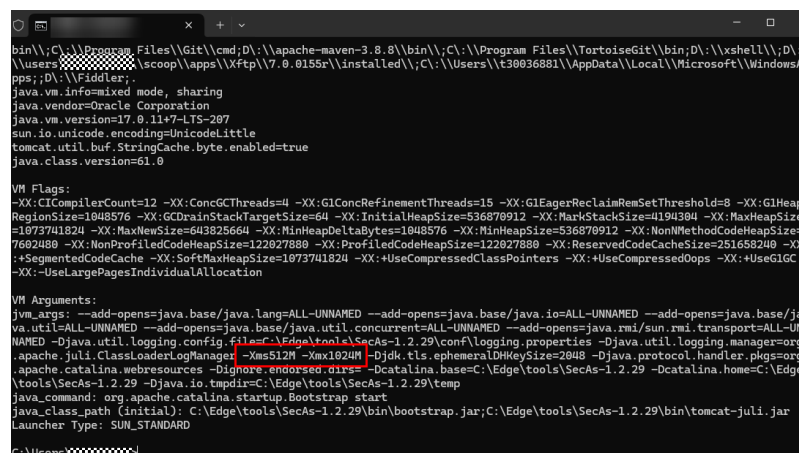
### Step 4 Query the JVM parameters of the collector.

1. Press **Ctrl, Alt, and Delete** and select **Task Manager** on the displayed page to open it. In the **Task Manager** dialog box, choose the **Details** tab.
2. Find **designcenter-collector-server.exe** and check its PID.
3. Open **Command Prompt** as the administrator, enter the following command, and press **Enter**:

```
jinfo <PID>
```

In the preceding command, **PID** indicates the PID of the MgC Agent program. You can view the effective JVM parameters in the command output.

Figure 7-4 Command prompt



```
bin\;C:\Program Files\Git\cmd;D:\apache-maven-3.8.8\bin\;C:\Program Files\TortoiseGit\bin;D:\xshe11\;D:\
\users\%username%\scoop\apps\Xftp\7.0.0155r\installed\;C:\Users\t30036881\AppData\Local\Microsoft\WindowsA
pps;D:\Fiddler;
java.vm.info=mixed mode, sharing
java.vendor=Oracle Corporation
java.vm.version=17.0.11+7-LTS-207
sun.io.unixcode.encoding=UnicodeLittle
tomcat.util.buf.StringCache.byte.enabled=true
java.class.version=61.0

VM Flags:
-XX:CICompilerCount=12 -XX:ConcGCThreads=4 -XX:G1ConcRefinementThreads=15 -XX:G1EagerReclaimRemSetThreshold=8 -XX:G1Heap
RegionSize=1048576 -XX:GCDrainStackTargetSize=64 -XX:InitialHeapSize=536870912 -XX:MarkStackSize=4194384 -XX:MaxHeapSize
=1873741824 -XX:MaxNewSize=603278688 -XX:MinHeapDeltaBytes=1048576 -XX:MinHeapSize=536870912 -XX:NonMethodCodeHeapSize=
7682480 -XX:NonProfiledCodeHeapSize=122027888 -XX:ProfiledCodeHeapSize=122027888 -XX:ReservedCodeCacheSize=251659200 -XX
:+SegmentedCodeCache -XX:SoftMaxHeapSize=1873741824 -XX:+UseCompressedClassPointers -XX:+UseCompressedOops -XX:+UseG1GC
-XX:+UseLargePagesIndividualAllocation

VM Arguments:
jvm_args: --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.base/ja
va.util=ALL-UNNAMED --add-opens=java.base/java.util.concurrent=ALL-UNNAMED --add-opens=java.rmi/sun.rmi.transport=ALL-UN
NAMED -Djava.util.logging.config.file=C:\Edge\tools\SecAs-1.2.29\conf\logging.properties -Djava.util.logging.manager=org
.apache.juli.ClassLoaderLogManager -Xms512M -Xmx1024M -Djdk.tls.ephemeralDHKeySize=2048 -Djava.protocol.handler.pkcs=org
.apache.catalina.webresources -Dignore.endorsements -Dcatalina.base=C:\Edge\tools\SecAs-1.2.29 -Dcatalina.home=C:\Edge
\tools\SecAs-1.2.29 -Djava.io.tmpdir=C:\Edge\tools\SecAs-1.2.29\temp
java_command: org.apache.catalina.startup.Bootstrap start
java_class_path (initial): C:\Edge\tools\SecAs-1.2.29\bin\bootstrap.jar;C:\Edge\tools\SecAs-1.2.29\bin\tomcat-juli.jar
Launcher Type: SUN_STANDARD

C:\Users\%username%\AppData\Local\Microsoft\Windows\CurrentVersion\Commands>
```

----End

## Linux

The following procedure uses CentOS 8 and **designcenter-collector-server** as an example.

**Step 1** Navigate to the location of the startup script.

Go to the MgC Agent installation directory. The default directory is **/opt/cloud/Edge**. Find **/tools/plugins/collectors/designcenter-collector-server**. **designcenter-collector-server** can be replaced with the collector you want to configure. The supported collectors include:

Database collector **rda-collector-database**

Container collector **rda-collector-kubernetes**

Platform collector **designcenter-collector-platform**

Server collector **designcenter-collector-server**

Storage collector **rda-storage-collector**

Big data collector **bigdata-migration**

**Step 2** Set the JVM parameters.

1. In the MgC Agent installation directory (**/opt/cloud/Edge** by default), edit **/tools/plugins/collectors/designcenter-collector-server**.
2. Create the **start.sh** file and add the following information to the file:  

```
nohup java -jar -Xms256M -Xmx512M designcenter-collector-server.jar >/dev/null 2>&1 &
```

In the preceding information, **-Xms512M -Xmx1024M** are the JVM parameters to be configured. **-Xms512M** indicates that the initial heap memory allocated to the JVM is 512 MB. **-Xmx1024M** indicates that the maximum heap memory that can be allocated to the JVM is 1,024 MB. You can add other JVM parameters as required.
3. Save and exit **start.sh**. The JVM parameters are configured for the server collector.

**Step 3** Restart the collector.

The JVM parameters will be applied after the collector is restarted.

1. Run the following command to view the PID of the collector:  

```
ps -ef|grep java
```
2. Enter the following command and press **Enter** to stop the collector.  

```
kill -9 PID
```
3. Enter the following command to run the new startup script **start.sh**:  

```
sh start.sh
```

**Step 4** Query the JVM parameters of the collector.

Run the following command to view the JVM parameters of the collector:

```
ps -ef|grep java
```

[illegible]

**----End**

# 8 FAQs

---

## 8.1 What Are the Requirements for the Server for Installing the MgC Agent?

The Windows server for installing the MgC Agent must:

- Be able to access the Internet and the domain names of MgC, IoTDA, and other cloud services. For details about the domain names to be accessed, see [Domain Names](#).
- 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.
- Not have any antivirus or protection software enabled. This type of software may stop the MgC Agent from executing migration commands, resulting in migration failures.

---

### CAUTION

Do not install the MgC Agent on a source server to be migrated.

- **High resource consumption:** The MgC Agent consumes CPU and memory resources during collection and migration. If a large number of migration tasks are performed by the MgC Agent, services on the source server may be affected.
  - **Port occupation:** The MgC Agent occupies some ports on the server, which may affect services running on it.
- 

## 8.2 How Do I Run the MgC Agent in Compatibility Mode?

- Step 1** Right-click the MgC Agent installation program and choose **Properties** from the shortcut menu.

**Step 2** Click the **Compatibility** tab. In the **Compatibility mode** area, select **Run this program in compatibility mode**.

**Step 3** Click **OK** and restart the MgC Agent installation program.

----End

## 8.3 What Can I Do If the MgC Agent Is Offline?

You can perform the following operations:

- Check whether the server where the MgC Agent is installed can access the Internet.
- Check whether the MgC Agent process is running properly.

## 8.4 Why Can't the MgC Agent Start After Being Installed?

### 8.4.1 MgC Agent for Windows

#### Symptom

After the MgC Agent for Windows was installed, the registration page could not show up.

#### Possible Causes

On the server where the MgC Agent was installed, there were too many background processes or the available CPUs were too small to run the MgC Agent.

#### Solution

Perform the following steps to manually start the MgC Agent:

1. Open the task manager of the server where the MgC Agent was installed.
2. Click the **Services** tab, right-click **Edge\_Tomcat**, and choose **Start** from the shortcut menu.
3. After the MgC Agent is started, go to the registration page.

### 8.4.2 MgC Agent for Linux

#### Symptom

After the MgC Agent for Linux was installed, it could not start.

#### Possible Causes

On the server where the MgC Agent was installed, there were too many background processes or the available CPUs were too small to run the MgC Agent.

## Solution

Perform the following steps to manually start the MgC Agent:

- Step 1** Go to the **scripts** directory in the MgC Agent installation directory.

```
cd /opt/cloud/Edge/scripts/
```

- Step 2** Run the following command to start the MgC Agent:

```
./start.sh
```

If the following information is displayed, the MgC Agent is started.

```
server not started yet.
Using CATALINA_BASE: /opt/cloud/Edge/tools/SecAs-1.2.29
Using CATALINA_HOME: /opt/cloud/Edge/tools/SecAs-1.2.29
Using CATALINA_TMPDIR: /opt/cloud/Edge/tools/SecAs-1.2.29/temp
Using JRE_HOME: /opt/cloud/Edge/tools/jre
Using CLASSPATH: /opt/cloud/Edge/tools/SecAs-1.2.29/bin/bootstrap.jar:/opt/cloud/Edge/tools/SecAs-1.2.29/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
```

- Step 3** Run the following command to view the MgC Agent process:

```
ps -ef |grep edge
```

If the following information is displayed, the MgC Agent process is started.

[illegible]

**---End**

## 8.5 How Do I Upgrade the MgC Agent to the Latest Version?

### 8.5.1 Upgrading the MgC Agent for Windows

## Symptom

If in the MgC agent list, **Upgrade available** is displayed in the **Installed Version** column of your agent, the installed agent is not the latest version. To use complete functions, you need to upgrade it to the latest version.

## Procedure

- Step 1** Sign in to the **MgC console** from the Windows server where the MgC Agent of an earlier version was installed.
- Step 2** In the navigation pane, choose **MgC Agents**.
- Step 3** In the **Windows** area, click **Download Installation Package** to download the newest version of MgC Agent to the Windows server you prepared.
- Step 4** Double-click the downloaded the MgC Agent installation package to start the installation and overwrite the earlier version. After the installation is complete, go to the MgC console and check that the version is the latest in the device list.

**---End**

## 8.5.2 Upgrading the MgC Agent for Linux

### Symptom

If in the MgC agent list, **Upgrade available** is displayed in the **Installed Version** column of your agent, the installed agent is not the latest version. To use complete functions, you need to upgrade it to the latest version.

### Procedure

- Step 1** Sign in to the [MgC console](#) from the Linux server where the MgC Agent of an earlier version was installed.
- Step 2** In the navigation pane, choose **MgC Agents**.
- Step 3** In the Linux area, click **Download Installation Package** or **Copy Download Command** to download the MgC Agent installation program to the Linux server.
- Step 4** Install the latest version of the MgC Agent. For details, see [Installing the MgC Agent on Linux](#).

----End

## 8.6 How Do I Uninstall the MgC Agent?

### 8.6.1 Uninstalling the MgC Agent on Windows

The uninstallation method depends on the Windows OS version.



You need to uninstall the MgC Agent application and MSI installer.

---

#### Method 1

- Step 1** Choose **Start > Control Panel**.
- Step 2** Click **Programs and Features** or **Uninstall a program**.
- Step 3** Enter **Edge** in the search box in the upper right corner of the page to find the installed the MgC Agent software. Right-click the software name and choose **Uninstall/Change** from the shortcut menu to uninstall the software.

----End

#### Method 2

- Step 1** Press **Win** and **I** to open **Windows Settings**, and then click **Applications**.

- Step 2** Enter **Edge** in the search box to find the installed the MgC Agent software. Click the software name and click **Uninstall** in the lower right corner to uninstall the software.

----End

## 8.6.2 Uninstalling the MgC Agent on Linux

The following describes how to uninstall the MgC Agent for Linux.

### Procedure

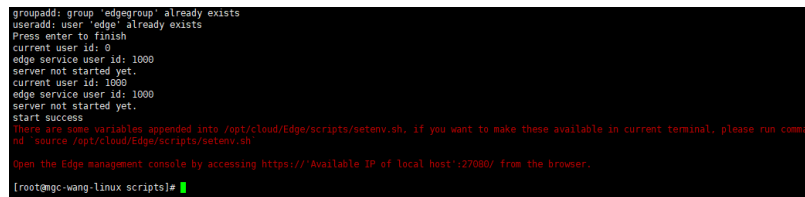
- Step 1** Go to the **scripts** directory in the MgC Agent installation directory.

```
cd /opt/cloud/Edge/scripts/
```

- Step 2** Run the MgC Agent uninstallation script.

```
./uninstall.sh
```

If the information shown in the following figure is displayed, the environment variables of the MgC Agent for Linux need to be updated.



```
groupadd: group 'edgegroup' already exists
useradd: user 'edge' already exists
Press enter to finish
current user id: 0
edge service user id: 1000
server not started yet.
current user id: 1000
edge service user id: 1000
server not started yet.
start success
there are some variables appended into /opt/cloud/Edge/scripts/setenv.sh, if you want to make these available in current terminal, please run command
'd source /opt/cloud/Edge/scripts/setenv.sh'
Open the Edge management console by accessing https://[Available IP of local host]:27080/ from the browser.
[root@mgc-wang-linux scripts]#
```

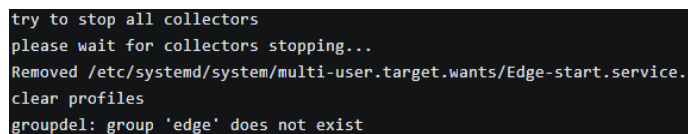
- Step 3** Update environment variables.

```
source /opt/cloud/Edge/scripts/setenv.sh
```

- Step 4** Run the MgC Agent uninstallation script.

```
./uninstall.sh
```

Check if the message shown in the following figure is displayed. If it is, the MgC Agent for Linux has been uninstalled.



```
try to stop all collectors
please wait for collectors stopping...
Removed /etc/systemd/system/multi-user.target.wants/Edge-start.service.
clear profiles
groupdel: group 'edge' does not exist
```

----End

## 8.7 How Do I Restart the MgC Agent?

### MgC Agent for Windows

1. Open the task manager of the server where the MgC Agent was installed.
2. Click the **Services** tab, right-click **Edge\_Tomcat**, and choose **Start** from the shortcut menu.



## MgC Agent for Linux

- Step 1** Go to the **scripts** directory in the MgC Agent installation directory.

```
cd /opt/cloud/Edge/scripts/
```

- Step 2** Run the following command to start the MgC Agent:

```
./start.sh
```

If the following information is displayed, the MgC Agent is started.

```
server not started yet.
Using CATALINA_BASE: /opt/cloud/Edge/tools/Secas-1.2.29
Using CATALINA_HOME: /opt/cloud/Edge/tools/Secas-1.2.29
Using CATALINA_TMPDIR: /opt/cloud/Edge/tools/Secas-1.2.29/temp
Using JRE_HOME: /opt/cloud/Edge/tools/jre
Using CLASSPATH: /opt/cloud/Edge/tools/Secas-1.2.29/bin/bootstrap.jar:/opt/cloud/Edge/tools/Secas-1.2.29/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
```

- Step 3** Run the following command to view the MgC Agent process:

```
ps -ef |grep edge
```

If the following information is displayed, the MgC Agent process is started.

[illegible]

----End

## 8.8 How Do I Check the Current MgC Agent Version?

## MgC Agent for Windows

- Step 1** Go to the MqC Agent installation directory. The default directory is **C:\Edge**.

- Step 2** Double-click the **version.txt** file to view the MgC Agent version.

```
version # [REDACTED]
time # [REDACTED]
```

----End

## MgC Agent for Linux

- Step 1** Go to the MgC Agent installation directory.

```
cd /opt/cloud/Edge
```

- ### Step 2 View the MgC Agent version information.

```
cat version.txt
```

```
version
time #
```

-----End

## 8.9 How Do I Obtain Run Logs of the MgC Agent on Linux?

### Viewing the Log Files of the MgC Agent

- Step 1** Go to the log directory in the MgC Agent installation directory. This directory contains the log files generated during the running of the MgC Agent.

```
cd /opt/cloud/Edge/logs/edge-server
```

- Step 2** Run the **vi** command to view a specific log file.

```
vi <xxx.log>
```

Replace *<xxx.log>* with the log file you want to view. The following table lists the names and descriptions of different types of log files.

| Log File      | Description                                                                                  |
|---------------|----------------------------------------------------------------------------------------------|
| debug.log     | Debug logs recording the running of the MgC Agent.                                           |
| error.log     | Error logs generated when the MgC Agent is running.                                          |
| operation.log | Operation logs recording interactions between users and the interface.                       |
| plugins.log   | IoTDA logs, which record the messages exchanged between the MgC Agent and MgC through IoTDA. |
| run.log       | All logs generated during the running of the MgC Agent.                                      |
| warn.log      | Alarm logs generated during the running of the MgC Agent.                                    |
| user.log      | User audit logs.                                                                             |

- Step 3** If the log file has been archived, perform the following steps to view the archived log file:

1. Run the **cd** command to access the archived log directory. Replace *<xxx/>* with the actual directory of the archived log file.  

```
cd <xxx/>
```
2. Run the **gunzip** command to decompress the archived log file. For example, if the name of an archived log file is **archived\_log.gz**, you can run **gunzip archived\_log.gz** to decompress the file.

-----End

### Viewing Logs of the Big Data Plug-in

- Step 1** Go to the log directory in the MgC Agent installation directory. This directory contains various log files generated during the running of the big data plug-in.

```
cd /opt/cloud/Edge/tools/plugins/collectors/bigdata-migration/logs
```

**Step 2** Run the **vi** command to view a specific log file.

```
vi <xxx.log>
```

Replace <xxx.log> with the log file you want to view. The following table lists the names and descriptions of different types of log files.

| Log File         | Description                                                      |
|------------------|------------------------------------------------------------------|
| debug.log        | Debug logs generated during the running of the big data plug-in. |
| error.log        | Error logs generated during the running of the big data plug-in. |
| run.log          | All logs generated during the running of the big data plug-in.   |
| warn.log         | Alarm logs generated during the running of the big data plug-in. |
| rda_run.log      | Recording the plug-in startup command.                           |
| api.log/user.log | Deprecated. No content is recorded.                              |

**Step 3** If the log file has been archived, perform the following steps to view the archived log file:

1. Run the **cd** command to access the archived log directory. Replace <xxx/> with the actual directory of the archived log file.  

```
cd <xxx/>
```
2. Run the **gunzip** command to decompress the archived log file. For example, if the name of an archived log file is **archived\_log.gz**, you can run **gunzip archived\_log.gz** to decompress the file.

----End

## 8.10 How Do I Fix the Error "The collector is not installed" When a Discovery Task Fails?

### Symptom

After the MgC Agent and resource credential were associated, the deep collection failed, and the failure cause was "The collector is not installed."

### Possible Causes

Possible causes are:

- The MgC Agent server's capacity is too small to run the collector. The recommended specifications are 4 vCPUs and 8 GB of memory.
- The collector was offline even though the MgC Agent server's capacity was sufficient.

## Solutions

- **The MgC Agent server's capacity is too small.**

Upgrade the MgC Agent server's specifications or install the MgC Agent on a server with a larger capacity. Then perform a deep collection again.

- **The collector was offline.**

The following table lists the collectors integrated in the MgC Agent. The server collector is used as an example to explain the method, which applies to other collectors as well.

| Collector                       | Collected Resource                   | Process                             | Installation Directory                                |
|---------------------------------|--------------------------------------|-------------------------------------|-------------------------------------------------------|
| designcenter-collector-platform | VMware-based private cloud platforms | designcenter-collector-platform.exe | <installation-path><br>\Edge\tools\plugins\collectors |
| designcenter-collector-server   | Server                               | designcenter-collector-server.exe   |                                                       |
| rda-collector-kubernetes        | Container                            | rda-collector-kubernetes.exe        |                                                       |

- Go to the **bin** directory in the collector installation directory on the MgC Agent server, for example, **C:\Edge\tools\plugins\collectors\designcenter-collector-server\bin**.
- Double-click **start.bat** to start the server collector.
- Open Task Manager. On the details page, check the status of **designcenter-collector-server.exe**. If the status is **Running**, the collector is started.
- Return to the MgC console and click **Collect** in the **Status** column to collect the resource information again.

## 8.11 How Do I Obtain the Hive Metastore Credential Files?

**Step 1** Log in to FusionInsight Manager by referring to [Accessing FusionInsight Manager](#) and go to the **System** page.

**Step 2** In the navigation pane on the left, choose **Permission > User**.

**Step 3** In the user list, locate the user whose credential needs to be added to the MgC Agent and choose **More > Download Authentication Credential** in the **Operation** column. You can obtain the **krb5.conf** and **user.keytab** files in the credential file.

---

 **CAUTION**

When adding a credential on the MgC Agent, ensure that the entered username is paired with the credentials downloaded here.

---

- Step 4** On the menu bar, choose **Cluster > Hive**. On the **Hive** overview page that is displayed, choose **More > Download Client** in the upper right corner.
- Step 5** Set **Select Client Type** to **Configuration Files Only** and click **OK**.
- Step 6** Decompress the downloaded package to obtain the **core-site.xml**, **hivemetastore-site.xml**, and **hive-site.xml** credential files in the **/Hive/config** folder.

----End

## 8.12 What Can I Do If the Port Required by the MgC Agent Is Occupied and the Installation Fails?

### Symptom

When you tried to install the MgC Agent, the following message was displayed:  
Port used by the MgC Agent is occupied. Stop the process that occupies the port and try again.

### Possible Causes

The default port 27080 for installing the MgC Agent is occupied.

### Solution

Stop the application process that occupies port 27080.

---

 **WARNING**

Before stopping the application process, evaluate the risks by yourself.

---

#### Linux

- Step 1** Query the ID of the application that occupies the port.

```
netstat -tlnp | grep 27080
```

Assume that the queried application ID is 11083.

```
[root@rda-linux scripts]# netstat -tlnp | grep 27080
tcp6 0 0 :::27080 :::* LISTEN 11083/java
```

- Step 2** Query the application process based on the obtained application ID. The application ID is only an example. Replace it with the actual application ID.

```
ps -ef | grep 11083
```

- Step 3** Confirm that the application occupying the port can be stopped, and run the following command to stop the application process. Then reinstall the MgC Agent.

```
kill -9 11083
```

----End

## Windows

- Step 1** Open the CLI in Windows and run the following command to query the ID of the application that occupies the port.

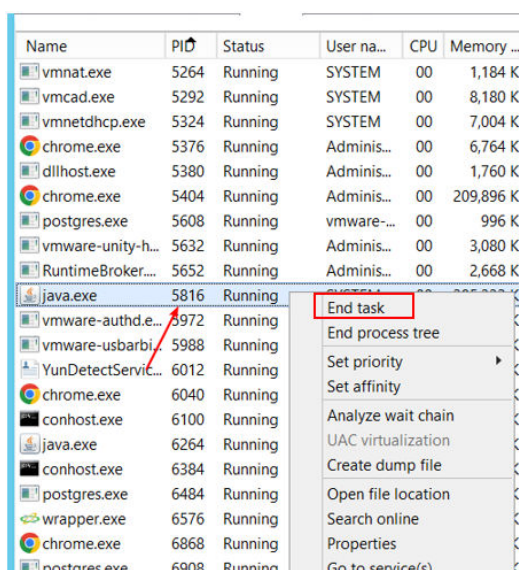
```
netstat -ano | findstr 27080
```

Assume that the queried application ID is 5816. The application ID is only an example. Replace it with the actual query result.

```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>netstat -ano | findstr 7080
TCP 0.0.0.0:7080 0.0.0.0:0 LISTENING 5816
TCP [::]:7080 [::]:0 LISTENING 5816
TCP [::1]:7080 [::1]:59011 TIME_WAIT 0
TCP [::1]:7080 [::1]:59057 TIME_WAIT 0
TCP [::1]:7080 [::1]:59103 TIME_WAIT 0
TCP [::1]:59027 [::1]:7080 TIME_WAIT 0
TCP [::1]:59032 [::1]:7080 TIME_WAIT 0
TCP [::1]:59077 [::1]:7080 TIME_WAIT 0
TCP [::1]:59080 [::1]:7080 TIME_WAIT 0
TCP [::1]:59088 [::1]:7080 TIME_WAIT 0
```

- Step 2** Open the **Task Manager**. On the **Details** tab, find the application process based on the queried application ID.
- Step 3** Confirm that the application occupying the port can be stopped, and right-click the application process and choose **End task** from the shortcut menu to stop the application process. Then reinstall the MgC Agent.



----End

## 8.13 What Can I Do If AK/SK Verification Fails?

### Symptom

When you tried to register the MgC Agent with MgC, a message was displayed indicating that the AK/SK authentication failed.

## Possible Causes

Possible causes are:

- The entered AK or SK is incorrect.
- The AK/SK pair has been deleted or disabled.
- The programmatic access mode is not enabled for the account that owns the AK/SK pair.
- The time on the server where the MgC Agent was installed is inconsistent with the local standard time.

## Solutions

- **The entered AK or SK is incorrect.**

Check whether the entered AK/SK pair of the Huawei Cloud account is correct, especially whether any spaces or characters are missed during the copy. Enter the AK/SK pair for authentication again.

- **The AK/SK pair has been deleted or disabled.**

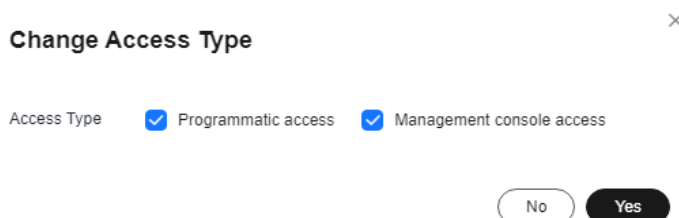
Choose **My Credentials > Access Keys** to check whether the AK is in the list.

- If it is not, use an AK/SK pair in the list for authentication or create an AK/SK pair.
- If it is, check whether it is disabled. If the AK is disabled, enable it.

- The programmatic access mode is not enabled for the account that owns the AK/SK pair.

- Sign in to the management console.
- Click the username in the upper right corner and choose **Identity and Access Management**.
- In the navigation pane on the left, choose **Users** and click the username you used for migration.
- Check whether **Programmatic access** is selected for **Access Type**. If it is

nor, click  next to **Access Type**, select **Programmatic Access**, and click **Yes**



- The time on the server where the MgC Agent was installed is inconsistent with the local standard time.
  - On the Windows server where the MgC Agent was installed, open **Date and Time**.
  - On the **Date and Time** page, enable **Set time automatically** and click **Sync now** to trigger time synchronization.

- c. Ensure that the time zone and time are the same as the local standard time, return to the MgC Agent console, and query MgC migration projects again.

## 8.14 How Do I Configure WinRM and Troubleshoot WinRM Connection Problems?

This section describes how to configure WinRM on a Windows source server and the solutions to connection problems.

### Configuring WinRM

**Step 1** Log in to the server as an administrator (for example, an administrator account or a local user account in the administrators group).

**Step 2** Run PowerShell as administrator.

**Step 3** Run the following command on PowerShell to start WinRM:

```
winrm quickconfig
Enable-PSRemoting
Set-ExecutionPolicy -ExecutionPolicy RemoteSigned
```

**Step 4** Log in to the server where the MgC Agent is installed as an administrator and run PowerShell as administrator. Perform steps 5 to 7 on the server with the MgC Agent installed.

**Step 5** Add the source server to the trusted host list.

Run the following command on PowerShell to add the source server to the trusted host list:

```
winrm set winrm/config/client '@{TrustedHosts="*"}
```

For security purposes, you are advised to use hostname or IP address of the source server to replace the asterisk (\*) in the **TrustedHosts** value. If it is not replaced, any host is trusted.

**Step 6** Remotely connect to the source server.

Run the following command to test the connection to the source server. Replace *Login account* and *Source server IP address* with the actual login account and IP address of the source server.

```
Enter-PSSession -Credential Login account -ComputerName Source server IP address
```

**Step 7** In the dialog box that is displayed, enter the username and password for logging in to source server and click **OK**.

- If the connection is successful, you can run any command to test the connectivity.
- If the connection fails, rectify the fault by referring to [WinRM Connection Failure Troubleshooting](#).

----End

### WinRM Connection Failure Troubleshooting

If the remote connection fails, check:



- **Port settings:** Use telnet to check whether port 5985 on the source server can be accessed. If the port cannot be accessed, check the settings of the firewall or security protection software on the source server to ensure that port 5985 is open.  
`telnet ip port`
- **Network settings:** Run the following command to check whether the network mode is set to Classic.  
`reg query "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa" /v forceguest`
  - If the value of **forceguest** is **REG\_DWORD 0x0**, the network mode is Classic
  - If the value of **forceguest** is not **REG\_DWORD 0x0**, run the following command to change it:  
`reg add "HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa" /v forceguest /t reg_dword /d 0x0`
- **Username and password:** Ensure that the username and password entered in the connection command are correct.

The preceding steps can rectify common connection problems. If the problem persists, contact technical support.

## 8.15 What Do I Do If the Credential List Is Empty When I Create a Data Connection for Big Data Verification?

### Symptom

When you tried to create a data connection for big data verification, the credential drop-down list was empty or your credential was not found in the list.

### Possible Causes

Possible causes are:

- Your credential was incorrect. Specifically, the credential you added to the MgC Agent did not match the required type for the new connection.
- The credential you added to the MgC Agent was not synchronized to MgC.

### Solutions

- If the credential is incorrect, go to the MgC Agent console and check whether the credential type is that required by the new connection. If the credential has not been added, add it by referring to [Adding Resource Credentials](#). After the credential is added, it will be automatically synchronized to MgC.
- If the credential fails to be synchronized, go to the MgC console and choose **Settings > Credentials** in the navigation pane, click the MgC Agent name, and check whether the credential added to the MgC Agent can be found in the list. If the credential cannot be found, go to the MgC Agent console to synchronize the credential again. Ensure that the credential is displayed on the **Credentials** page of the MgC console.

