

SecMaster

Best Practices

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Contents

1 Operation Guide to Data Transfer.....	1
1.1 Scenario.....	1
1.2 Constraints.....	1
1.3 Quick Data Access with the Default Parser in SecMaster.....	2
1.4 Data Access with a Custom Parser.....	10
A Change History.....	21

1 Operation Guide to Data Transfer

1.1 Scenario

SecMaster can access cloud service logs by default. Beyond that, SecMaster also provides log collection management. With this function, you can collect, parse, and transfer logs, query logs in a visualized manner, and build threat models.

During this process, you need to install an agent to enable the communication between SecMaster and the target ECS. You also need to install the Logstash component for data access, parsing, and transfer.

Currently, you can use either of the following methods for data access in SecMaster:

- [Quick Data Access with the Default Parser in SecMaster](#)
- [Data Access with a Custom Parser](#)

1.2 Constraints

There are some restrictions on using SecMaster log collection management:

- Currently, the data collection agent can run only on Linux servers running EulerOS of certain versions. For details, see [Supported OSs](#).
- During agent installation, only IAM accounts can be used for viewing information on the console.

Supported OSs

Currently, the data collection agent can run only on Linux ECSs on x86_64 architecture. ECSs support the following OSs: Huawei Cloud EulerOS 2.5, Huawei Cloud EulerOS 2.9, EulerOS 2.5, EulerOS 2.9, and CentOS 7.

1.3 Quick Data Access with the Default Parser in SecMaster

This chapter walks you through how to collect ECS logs in UDP mode, how to parse collected logs using the default parser configured for collectors, and how to send the parsed data to a SecMaster pipeline. After data access, you can query the information on the **Security Analysis** page.

Prerequisite

You have obtained the IAM account and its password for logging in to the console.

Step 1: Buy an ECS

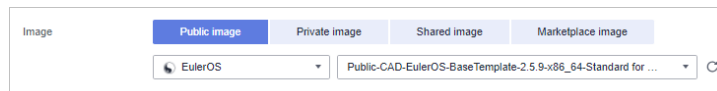
For details, see [Purchasing an ECS](#).

CAUTION

Currently, the data collection agent can run only on Linux ECSs on x86_64 architecture. ECSs support the following OSs: Huawei Cloud EulerOS 2.5, Huawei Cloud EulerOS 2.9, EulerOS 2.5, EulerOS 2.9, and CentOS 7.9.

Note that you need to select the proper OSs and versions when you make a purchase.

Figure 1-1 Selecting an OS version



Step 2: Install an Agent

The agent is a client software that maintains the communication between SecMaster and an ECS. It can deliver commands and report heartbeat data.

1. Pre-check before installing an agent.
 - a. Run the **ps -ef | grep salt** command to check whether the salt-minion process exists on the host.
 - If yes, stop it first.
 - If no, go to **1.b**.

Figure 1-2 Checking processes

```
[root@host-192-168-... ~]# ps -ef | grep salt
root      18749  18315  0 09:28 pts/0    00:00:00 grep --color=auto salt
root      58881      1  0 Apr11 ?        00:00:00 /usr/bin/python3 /usr/bin/salt-minion
isap-sa+  58888  58881  0 Apr11 ?        00:01:08 /usr/bin/python3 /usr/bin/salt-minion
```

- b. Before installing Logstash, run the **df -h** command to check whether there are at least 50 GB of disk space reserved for the **root** directory disk or **opt** disk, two CPU cores, and 4 GB of memory.

Figure 1-3 Disks

```
[root@ecs- ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/vda1       40G   1.7G   36G   5% /
devtmpfs        7.8G   0    7.8G   0% /dev
tmpfs           7.8G   0    7.8G   0% /dev/shm
tmpfs           7.8G  129M   7.7G   2% /run
tmpfs           7.8G   0    7.8G   0% /sys/fs/cgroup
/dev/vdb1       98G   8.9G   85G  10% /opt
/dev/vdb2      108G   61M  103G   1% /var/lib/docker
tmpfs           1.6G   0    1.6G   0% /run/user/0
```

If the memory is insufficient, stop some applications with high memory usage or expand the memory capacity before the installation. For details about capacity expansion, see [Modifying ECS Specifications](#).


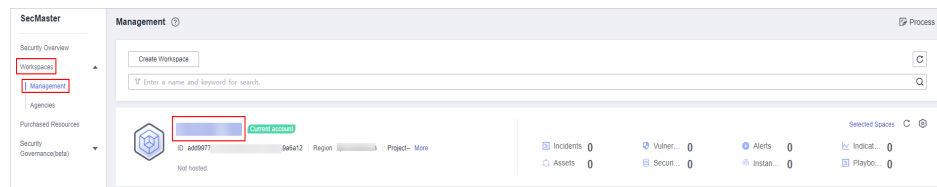
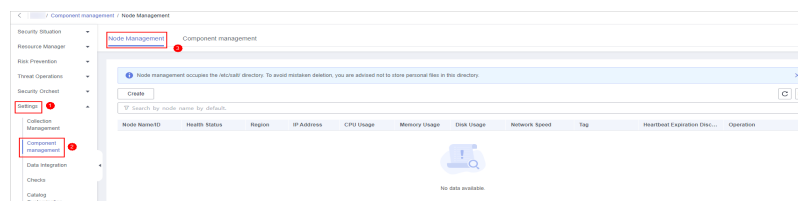
2. Log in to the management console.
3. Click  in the upper left corner of the page and choose **Security & Compliance > SecMaster**.
4. In the navigation pane, choose **Workspaces > Management**. In the workspace list, click the name of the target workspace.

Figure 1-4 Workspace management page



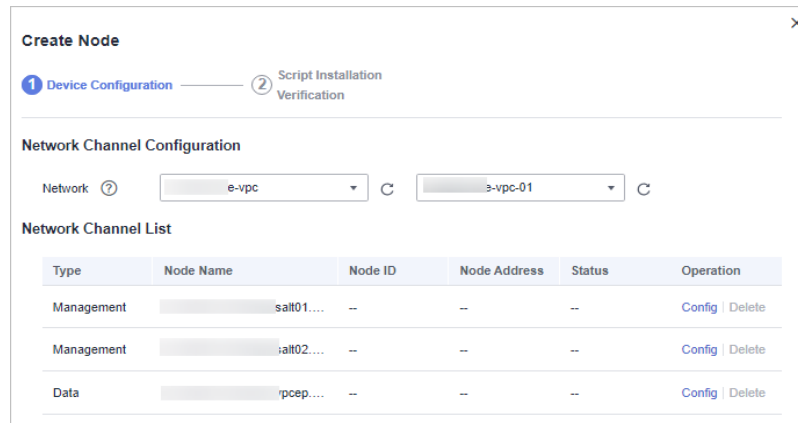
5. In the navigation tree on the left, choose **Settings > Components**.


Figure 1-5 Accessing the node management page



6. On the **Node Management** tab page, click **Create**.
7. On the **Create Node** page, set parameters.

Figure 1-6 Create Node



- a. In the **Network Channel Configuration** area, select the VPC and subnet the network channel belongs to.
 - b. In the network channel list, locate the row that contains the target channel and click **Config** in the **Operation** column. In the displayed confirmation dialog box, click **OK**.
8. Click **Next** in the lower right corner of the page. On the page for verifying the script installation, click  to copy the command for installing the Agent.
 9. Remotely log in to the ECS where you want to install the agent.
 - **Huawei Cloud servers**
 - Log in to the ECS console, locate the target server, and click **Remote Login** in the **Operation** column to log in to the server. For details, see [Login Using VNC](#).
 - If your server has an EIP bound, you can also use a remote management tool, such as PuTTY or Xshell, to log in to the server and install the agent on the server as user **root**.
 - **Non-Huawei Cloud servers**

Use a remote management tool (such as PuTTY or Xshell) to connect to the EIP of your server and remotely log in to your server.
 10. Run the **cd /opt/cloud** command to go to the installation directory.

 **CAUTION**

The recommended installation path is **/opt/cloud**. This section also uses this path as an example. If you want to install the Agent in another path, change the path based on site requirements.

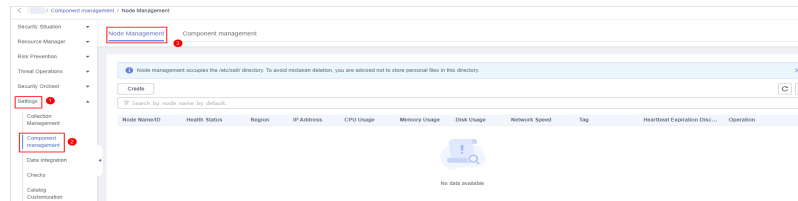
11. Run the command copied in **8** as user **root** to install the Agent on the ECS.
12. Enter the IAM username and password for logging in to the console when prompted.
13. If information similar to the following is displayed, the agent is successfully installed:

```
install isap-agent successfully
```

Step 3: Create a Node

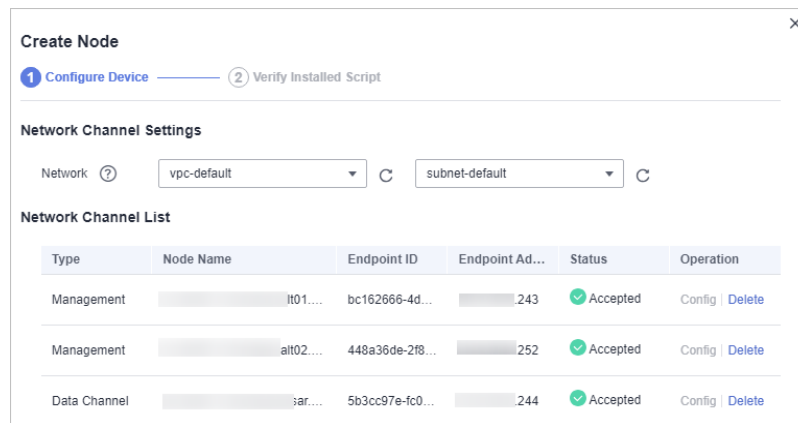
1. In the navigation tree on the left, choose **Settings > Components**.

Figure 1-7 Accessing the node management page



2. On the **Node Management** tab page, click **Create**.
3. On the **Create Node** page, set parameters.

Figure 1-8 Create Node



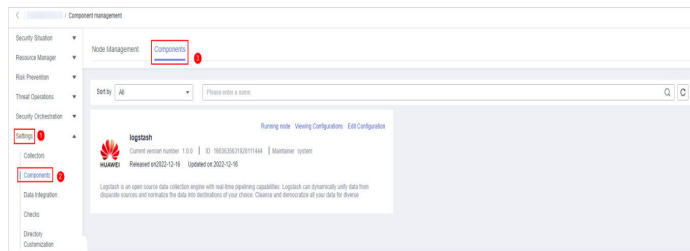
- a. In the **Network Channel Configuration** area, select the VPC and subnet the network channel belongs to.
 - b. In the network channel list, locate the row that contains the target channel and click **Config** in the **Operation** column. In the displayed confirmation dialog box, click **OK**.
4. Click **Next** in the lower right corner of the page to go to the **Script Installation Verification** page.
 5. After confirming that the installation is complete, click **Confirm** in the lower right corner of the page.

Step 4: Configure Components

Logstash is an open-source data collection engine that provides the real-time pipeline function. Logstash can dynamically collect data from different sources, convert the data, and output the data to different destinations.

1. In the navigation pane on the left, choose **Settings > Components** and click the **Components** tab.

Figure 1-9 Accessing the Components tab page



2. On the **Components** tab page, click **Edit Configuration** in the upper right corner of the component to be viewed. The configuration management page of the component is displayed on the right.
3. In the **Node Configuration** area, click **Add** in the upper left corner of the node list. In the **Add Node** dialog box displayed, select a node and click **OK**.
4. Click **Save and Apply** in the lower right corner of the page.

Step 5: (Optional) Create a Pipeline

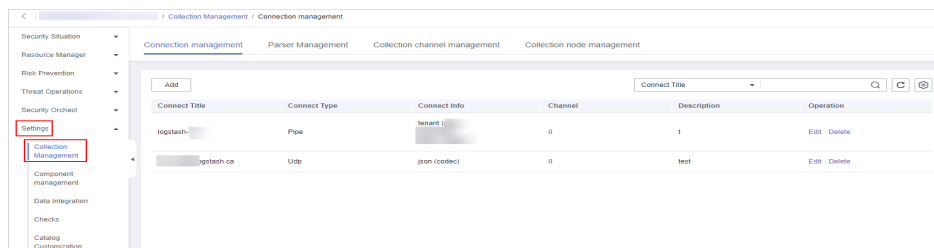
You need to add a pipeline for storing incoming data. For details, see [Creating a Pipeline](#).

Step 6: Create a Data Connection Source and Destination

Create a data connection, including the data source and the data destination where the parsed data is transferred to.

1. In the navigation pane on the left, choose **Settings > Collection Management**.

Figure 1-10 Collection Management



2. Add a data connection source.
 - a. On the **Connection management** page, click **Add**.
 - b. On the **Source** tab page, select **User data protocol UDP input** as the source of the data source type and set UDP parameters.

Figure 1-11 Data source

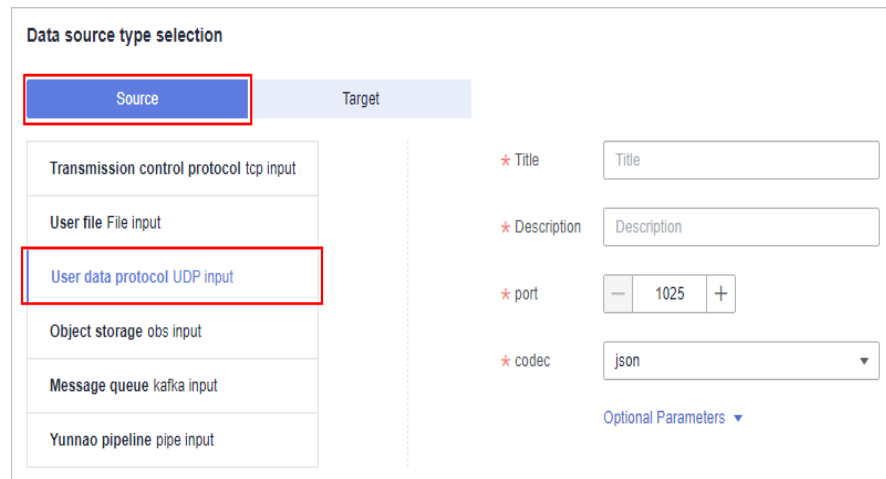


Table 1-1 Data source parameters

Parameter	Description
Title	Name of the data connection source.
Description	A brief description of the data connection source.
Port	Set the port over which you want to collect the data.
codec	Set the encoding format. You can select json or plain .
Optional Parameters	Customize other optional parameters.

- c. After the setting is complete, click **Confirm** in the lower right corner of the page.
3. Add a data connection destination.
 - a. On the **Collection Management** page, click the **Connection management** tab. On the displayed page, click **Add**.
 - b. Click the **Destination** tab. Then, select **Yunnao pipeline output** for the data source type and configure the pipeline information.

Figure 1-12 Data source access destination

Table 1-2 Data source access destination parameters

Parameter	Description
Title	Name of the data source destination.
Description	A brief description of the data connection destination.
type	Select tenant .
pipe	Select the name of the pipeline created in Step 5: (Optional) Create a Pipeline .
domain_name	Enter the account that creates the IAM user.
User_name	Enter the IAM username.
Password	Enter the password of the IAM user.
Optional Parameters	Customize other optional parameters.

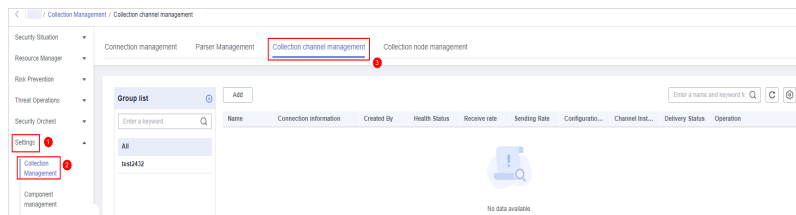
- c. After the setting is complete, click **Confirm** in the lower right corner of the page.

Step 7: Add a Collection Channel

A collection channel connects the input, parsing, and output to form a pipeline and delivers the pipeline to collection nodes where the agent and Logstash are installed. In doing this, the data access and transfer process can then start.

1. In the navigation pane on the left, choose **Settings > Collection Management**. On the **Collection Management** page, click the **Collection Channels** tab.

Figure 1-13 Collection channel management tab page





2. Add a channel group.
 - a. On the collection channel management page, click  on the right of the **Group list**.
 - b. Enter a group name and click .
3. On the right of the group list, click **Add**.
4. On the **Basic Configuration** page, configure basic information.

Table 1-3 Basic configuration parameters

Parameter		Description
Basic Information	Title	The collection channel name you customize.
	Channel grouping	Select the group created in 2 .
	Description	(Optional) Enter the description of the collection channel.
Source Configuration	Source Name	Select the source created in Step 6: Create a Data Connection Source and Destination .
Destination Configuration	Destination Name	Select the destination created in Step 6: Create a Data Connection Source and Destination .

5. After the basic configuration is complete, click **Next** in the lower right corner of the page.
6. On the **Parser Configuration** page, select **Fast access**.
In quick access mode, all raw logs are stored in the message field.
7. After the parser is configured, click **Next** in the lower right corner of the page.
8. On the **Select Node** page, click **Add**. In the **Add Node** dialog box displayed, select a node that has the agent and Logstash installed and click **Confirm**.
9. After the node is selected, click **Next** in the lower right corner of the page.
10. On the **Channel Details Preview** page, confirm the configuration and click **OK**.

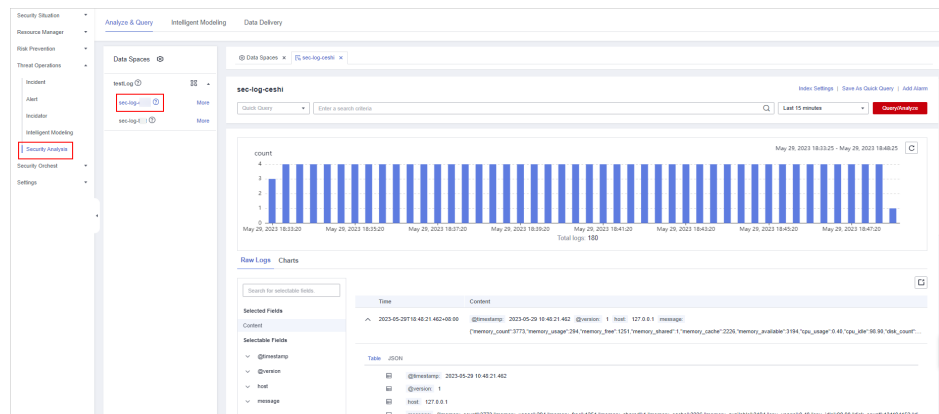
After the collection channel is added, the pipeline will be delivered. Refresh the page. If the health status is **Normal**, the delivery is complete.

Step 8: Query and Analyze

As logs are transferred to SecMaster, you can query logs in SecMaster after data access completes.

1. In the navigation pane on the left, choose **Threat Operations > Security Analysis**.
2. Select the SecMaster pipeline added in **Step 5: (Optional) Create a Pipeline**. Then, you can view the parsed log data on SecMaster.

Figure 1-14 Analyze & Query



1.4 Data Access with a Custom Parser

This chapter describes how to parse ECS logs SecMaster collects in UDP mode into JSON format and how to transfer the parsed data to a SecMaster pipeline. After the data access, you can query information on the **Security Analysis** page and build threat models based on parsed logs.

Prerequisites

You have obtained the IAM account and its password for logging in to the console.

Step 1: Buy an ECS

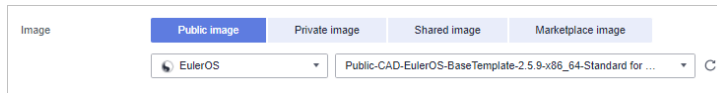
For details, see [Purchasing an ECS](#).

CAUTION

Currently, the data collection agent can run only on Linux ECSs on x86_64 architecture. ECSs support the following OSs: Huawei Cloud EulerOS 2.5, Huawei Cloud EulerOS 2.9, EulerOS 2.5, EulerOS 2.9, and CentOS 7.9.

Note that you need to select the proper OSs and versions when you make a purchase.

Figure 1-15 Selecting an OS version



Step 2: Install an Agent

The agent is a client software that maintains the communication between SecMaster and an ECS. It can deliver commands and report heartbeat data.

1. Pre-check before installing an agent.
 - a. Run the **ps -ef | grep salt** command to check whether the salt-minion process exists on the host.
 - If yes, stop it first.
 - If no, go to **1.b**.

Figure 1-16 Checking processes

```
[root@host-192-168-... ~]# ps -ef | grep salt
root      18749  18315  0 09:28 pts/0    00:00:00 grep --color=auto salt
root      58881      1  0 Apr11 ?        00:00:00 /usr/bin/python3 /usr/bin/salt-minion
isap-sa+  58888  58881  0 Apr11 ?        00:01:08 /usr/bin/python3 /usr/bin/salt-minion
```

- b. Before installing Logstash, run the **df -h** command to check whether there are at least 50 GB of disk space reserved for the **root** directory disk or **opt** disk, two CPU cores, and 4 GB of memory.

Figure 1-17 Disks

```
[root@ecs-... ~]# df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/vda1       40G   1.7G   36G   5% /
devtmpfs        7.8G     0   7.8G   0% /dev
tmpfs           7.8G     0   7.8G   0% /dev/shm
tmpfs           7.8G  129M   7.7G   2% /run
tmpfs           7.8G     0   7.8G   0% /sys/fs/cgroup
/dev/vdb1        98G   8.9G   85G  10% /opt
/dev/vdb2       108G   61M  103G   1% /var/lib/docker
tmpfs           1.6G     0   1.6G   0% /run/user/0
```

If the memory is insufficient, stop some applications with high memory usage or expand the memory capacity before the installation. For details about capacity expansion, see [Modifying ECS Specifications](#).

2. Log in to the management console.


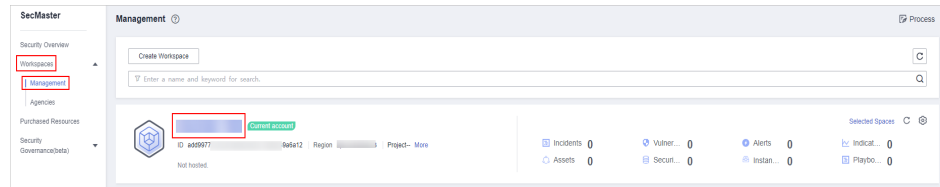
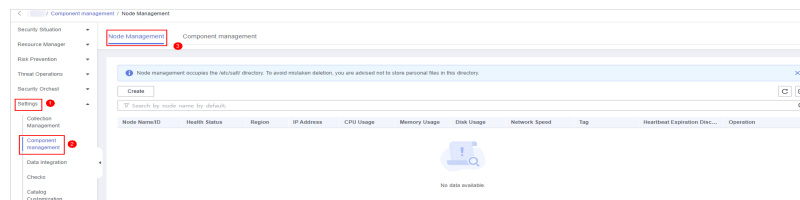
3. Click  in the upper left corner of the page and choose **Security & Compliance > SecMaster**.
4. In the navigation pane, choose **Workspaces > Management**. In the workspace list, click the name of the target workspace.

Figure 1-18 Workspace management page



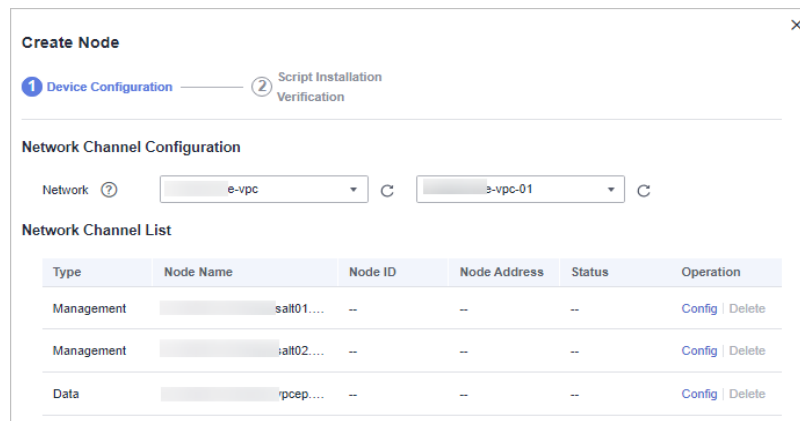
5. In the navigation tree on the left, choose **Settings > Components**.


Figure 1-19 Accessing the node management page



6. On the **Node Management** tab page, click **Create**.
7. On the **Create Node** page, set parameters.

Figure 1-20 Create Node



- a. In the **Network Channel Configuration** area, select the VPC and subnet the network channel belongs to.
- b. In the network channel list, locate the row that contains the target channel and click **Config** in the **Operation** column. In the displayed confirmation dialog box, click **OK**.
8. Click **Next** in the lower right corner of the page. On the page for verifying the script installation, click  to copy the command for installing the Agent.
9. Remotely log in to the ECS where you want to install the agent.
 - **Huawei Cloud servers**

- Log in to the ECS console, locate the target server, and click **Remote Login** in the **Operation** column to log in to the server. For details, see [Login Using VNC](#).
 - If your server has an EIP bound, you can also use a remote management tool, such as PuTTY or Xshell, to log in to the server and install the agent on the server as user **root**.
- **Non-Huawei Cloud servers**
- Use a remote management tool (such as PuTTY or Xshell) to connect to the EIP of your server and remotely log in to your server.
10. Run the **cd /opt/cloud** command to go to the installation directory.

CAUTION

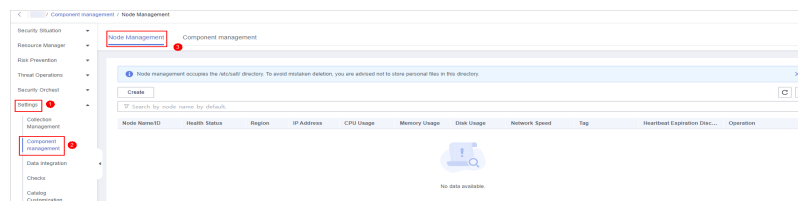
The recommended installation path is **/opt/cloud**. This section also uses this path as an example. If you want to install the Agent in another path, change the path based on site requirements.

11. Run the command copied in **8** as user **root** to install the Agent on the ECS.
12. Enter the IAM username and password for logging in to the console when prompted.
13. If information similar to the following is displayed, the agent is successfully installed:
install isap-agent successfully

Step 3: Create a Node

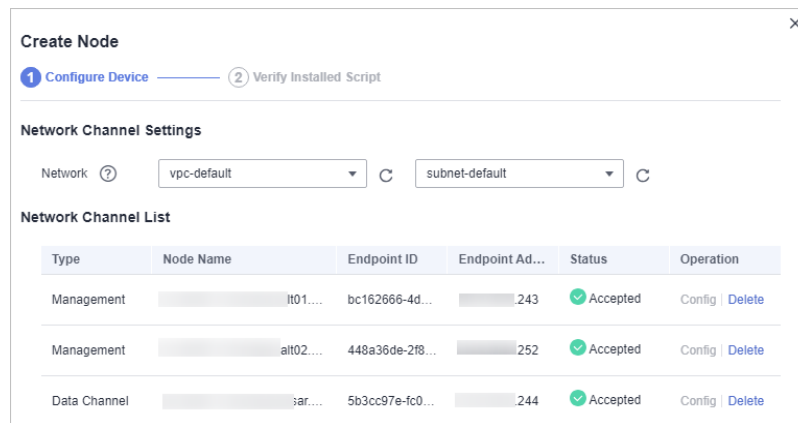
1. In the navigation tree on the left, choose **Settings > Components**.

Figure 1-21 Accessing the node management page



2. On the **Node Management** tab page, click **Create**.
3. On the **Create Node** page, set parameters.

Figure 1-22 Create Node



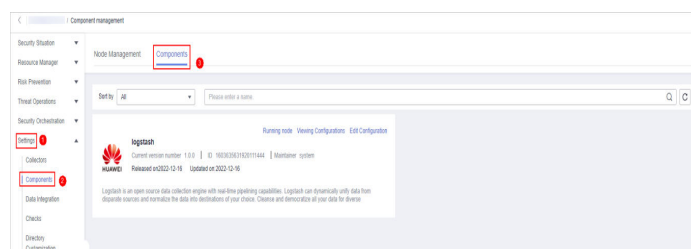
- a. In the **Network Channel Configuration** area, select the VPC and subnet the network channel belongs to.
- b. In the network channel list, locate the row that contains the target channel and click **Config** in the **Operation** column. In the displayed confirmation dialog box, click **OK**.
4. Click **Next** in the lower right corner of the page to go to the **Script Installation Verification** page.
5. After confirming that the installation is complete, click **Confirm** in the lower right corner of the page.

Step 4: Configure Components

Logstash is an open-source data collection engine that provides the real-time pipeline function. Logstash can dynamically collect data from different sources, convert the data, and output the data to different destinations.

1. In the navigation pane on the left, choose **Settings > Components** and click the **Components** tab.

Figure 1-23 Accessing the Components tab page



2. On the **Components** tab page, click **Edit Configuration** in the upper right corner of the component to be viewed. The configuration management page of the component is displayed on the right.
3. In the **Node Configuration** area, click **Add** in the upper left corner of the node list. In the **Add Node** dialog box displayed, select a node and click **OK**.
4. Click **Save and Apply** in the lower right corner of the page.

Step 5: (Optional) Create a Pipeline

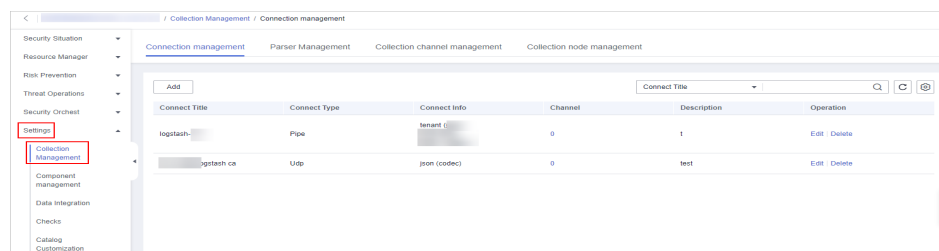
You need to add a pipeline for storing incoming data. For details, see [Creating a Pipeline](#).

Step 6: Create a Data Connection Source and Destination

Create a data connection, including the data source and the data destination where the parsed data is transferred to.

1. In the navigation pane on the left, choose **Settings > Collection Management**.

Figure 1-24 Collection Management



2. Add a data connection source.
 - a. On the **Connection management** page, click **Add**.
 - b. On the **Source** tab page, select **User data protocol UDP input** as the source of the data source type and set UDP parameters.

Figure 1-25 Data source parameters

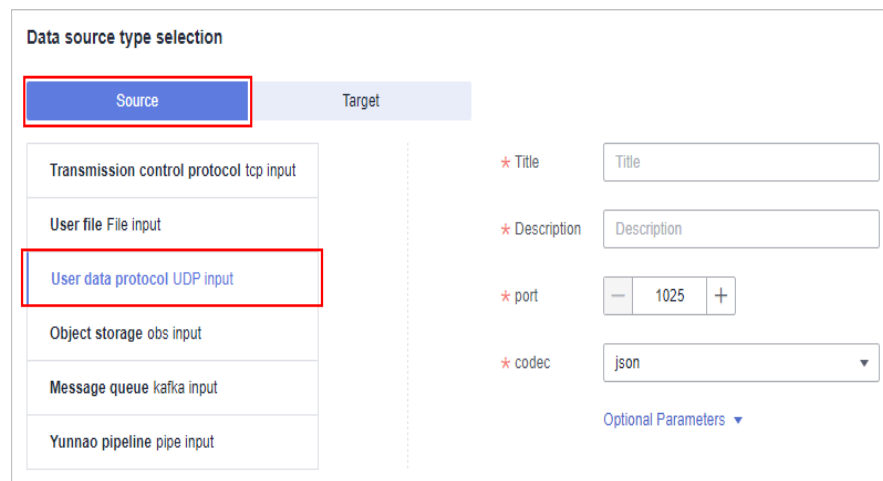


Table 1-4 Data source parameters

Parameter	Description
Title	Name of the data connection source.
Description	A brief description of the custom data connection source.

Parameter	Description
Port	Set the port over which you want to collect the data.
codec	Set the encoding format. You can select json or plain .
Optional Parameters	Customize other optional parameters.

- c. After the setting is complete, click **Confirm** in the lower right corner of the page.
3. Add a data connection destination.
 - a. On the **Collection Management** page, click the **Connection management** tab. On the displayed page, click **Add**.
 - b. Click the **Destination** tab. Then, select **Yunnao pipeline output** for the data source type and configure the pipeline information.

Figure 1-26 Data source access destination

Table 1-5 Data source access destination parameters

Parameter	Description
Title	Name of the data source destination.
Description	A brief description of the data connection destination.
type	Select tenant .
pipe	Select the name of the pipeline created in Step 5: (Optional) Create a Pipeline .

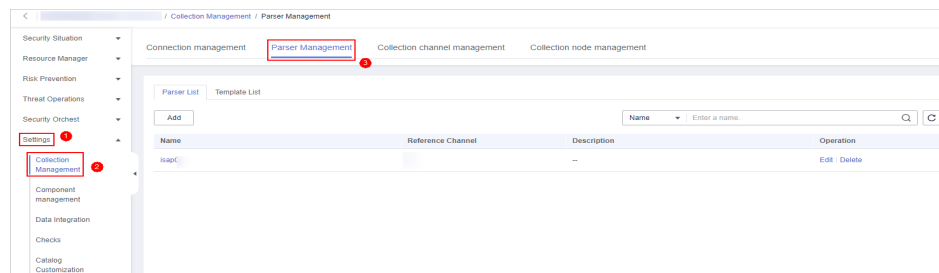
Parameter	Description
domain_name	Enter the account that creates the IAM user.
User_name	Enter the IAM username.
Password	Enter the password of the IAM user.
Optional Parameters	Customize other optional parameters.

- c. After the setting is complete, click **Confirm** in the lower right corner of the page.

Step 7: Configure a Parser

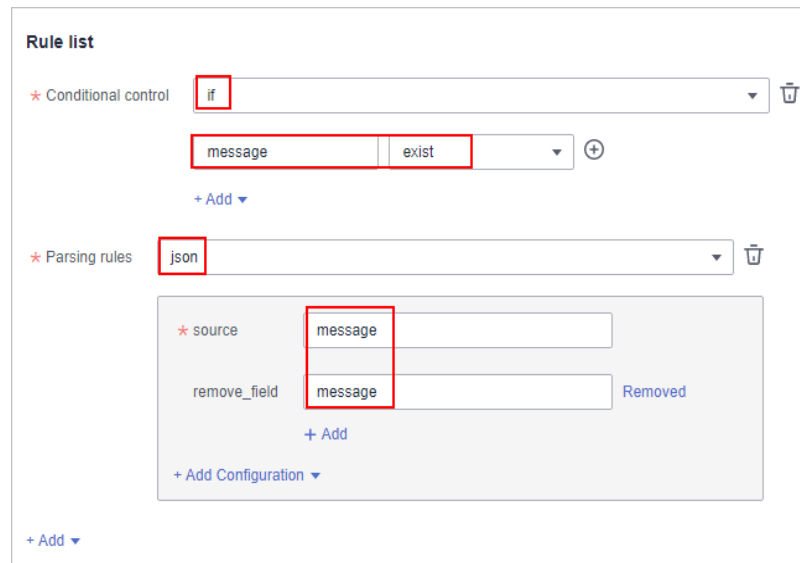
1. In the navigation pane on the left, choose **Settings > Collection Management > Parser Management** tab.

Figure 1-27 Accessing the parser management page



2. On the **Parser Management** page, click **Add**. On the displayed page, set parameters and add a collection channel.
 - **Name:** Set a parser name.
 - (Optional) **Description:** Enter the parser description.
 - **Rule list:** Set parsing rules for the parser. Click **Add** and select a rule type.
 - **Conditional control:** Select the **if** condition to check whether the log exists.
 - **Parsing rules:** Select **json** to remove the original field (message).

Figure 1-28 Rule list



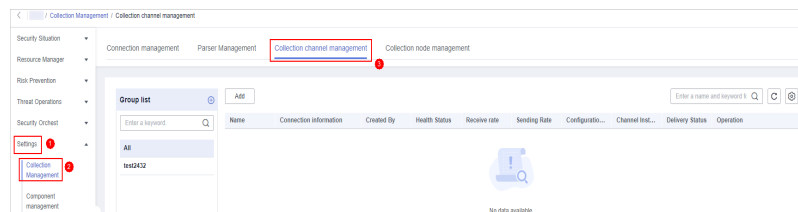
3. Click **OK** in the lower right corner of the page.

Step 8: Add a Collection Channel

A collection channel connects the input, parsing, and output to form a pipeline and delivers the pipeline to collection nodes where the agent and Logstash are installed. In doing this, the data access and transfer process can then start.

1. In the navigation pane on the left, choose **Settings > Collection Management**. On the **Collection Management** page, click the **Collection Channels** tab.

Figure 1-29 Collection channel management tab page





2. Add a channel group.
 - a. On the collection channel management page, click  on the right of the **Group list**.
 - b. Enter a group name and click .
3. On the right of the group list, click **Add**.
4. On the **Basic Configuration** page, configure basic information.

Table 1-6 Basic configuration parameters

Parameter		Description
Basic Information	Title	The collection channel name you customize.
	Channel grouping	Select the group created in 2 .
	Description	(Optional) Enter the description of the collection channel.
Source Configuration	Source Name	Select the source created in Step 6: Create a Data Connection Source and Destination .
Destination	Destination Name	Select the name of the data destination created in Step 6: Create a Data Connection Source and Destination .

5. After the basic configuration is complete, click **Next** in the lower right corner of the page.
6. On the parser configuration page, select the parser configured in [Step 7: Configure a Parser](#).
7. After the parser is configured, click **Next** in the lower right corner of the page.
8. On the **Select Node** page, click **Add**. In the **Add Node** dialog box displayed, select a node that has the agent and Logstash installed and click **Confirm**.
9. After the node is selected, click **Next** in the lower right corner of the page.
10. On the **Channel Details Preview** page, confirm the configuration and click **OK**.

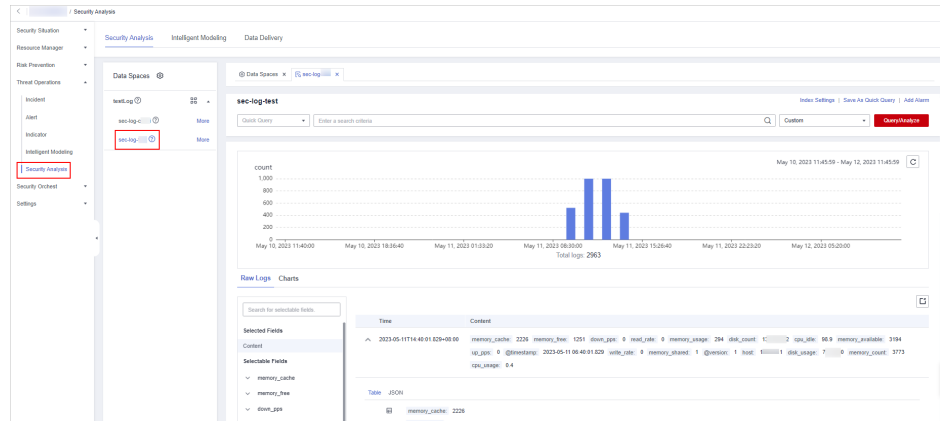
After the collection channel is added, the pipeline will be delivered. Refresh the page. If the health status is **Normal**, the delivery is complete.

Step 9: Query and Analyze

As logs are transferred to SecMaster, you can query logs in SecMaster after data access completes.

1. In the navigation pane on the left, choose **Threat Operations > Security Analysis**.
2. Select the SecMaster pipeline added in [Step 5: \(Optional\) Create a Pipeline](#). Then, you can view the parsed log data on SecMaster.

Figure 1-30 Security Analysis



A Change History

Released On	Description
2023-12-30	This issue is the first official release.