Red Hat Insights 2022

Client Configuration Guide for Red Hat Insights

Configuration options and use cases for the Insights client

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Configuration options and use cases for the Insights client

Legal Notice

Abstract

This guide is for Insights for RHEL users who want to configure Insights client features on their RHEL systems. The Insights client configuration settings on your system affect the interaction with Insights for RHEL.

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MAKING OPEN SOURCE MORE INCLUSIVE

Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see our CTO Chris Wright's message.

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We appreciate your feedback on our documentation. To provide feedback, highlight text in a document and add comments.

Prerequisites

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- In the Red Hat Customer Portal, the document is in the **Multi-page HTML** viewing format.

Procedure

To provide your feedback, perform the following steps:

1. Click the **Feedback** button in the top-right corner of the document to see existing feedback.

NOTE

The feedback feature is enabled only in the **Multi-page HTML** format.

2. Highlight the section of the document where you want to provide feedback.
3. Click the **Add Feedback** pop-up that appears near the highlighted text.
   A text box appears in the feedback section on the right side of the page.
4. Enter your feedback in the text box and click **Submit**.
   A documentation issue is created.
5. To view the issue, click the issue link in the feedback view.

CHAPTER 1. CLIENT CONFIGURATION GUIDE FOR RED HAT INSIGHTS

The Insights for RHEL client runs on your RHEL system and gathers management data that is uploaded to Insights for Red Hat Enterprise Linux and the suite of management applications available on Red Hat Hybrid Cloud Console. You control each instance of the Insights for RHEL client through configuration commands and settings.

1.1. INSIGHTS CLIENT CONFIGURATION OVERVIEW

With the **insights-client** command and associated configuration files, you can control how your system interacts with Insights for Red Hat Enterprise Linux.

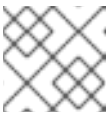
- General information and overviews of the Insights client features are covered in the first few chapters.
- How-to information on using the Insights client commands and configuration files to accomplish specific tasks follows the overview information.
- Command reference and configuration file reference information is at the end of this guide.

Navigation links help you quickly find what you are looking for.

1.2. CLIENT CONFIGURATION OVERVIEW

The Insights client collects information about your system and sends it to Insights for Red Hat Enterprise Linux, which is a cloud application. Command options for the CLI and configuration file options modify the information that is collected and shared with Insights for Red Hat Enterprise Linux. These options control the following:

- Data obfuscation
  - IP address obfuscation

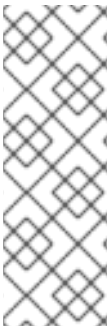
    NOTE

    IP address obfuscation is supported only for IPv4 addresses.

  - Host name obfuscation
- Data redaction
  - Specific files
  - Output of specific commands
  - Pattern-match deletions
  - Keyword replacement
- Insights client scheduling
- Insights for RHEL rule updates
- Insights client authentication method

    - Certificate-based
    - SSO-based, or Basic
- System tagging

The information collected by the Insights client is saved in a **tar** file, that file is referred to as an **archive file**.



NOTE

The Insights for Red Hat Enterprise Linux compliance service uses OpenSCAP tools to generate compliance reports based on information from the host system. The collaboration with OpenSCAP prevents the compliance service's ability to completely obfuscate or redact host name and IP address data. Also, host information is sent to Insights for RHEL when a compliance data collection job launches on the host system. Insights for Red Hat Enterprise Linux is working to improve obfuscation options for host information.

For information about how Insights for Red Hat Enterprise Linux handles data collection, see Red Hat Insights Data & Application Security.

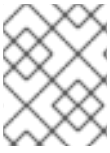
1.3. INSIGHTS CLIENT CLI AND CONFIGURATION FILE INTERACTIONS

The Insights client runs according to its scheduler, which by default is every 24 hours. The client also runs when you enter the **insights-client** command.

When the client runs, its behavior is controlled, in order, by the following:

1. The values, if any, provided when you enter the **insights-client** command. Values entered in the CLI override configuration file settings and system environment settings for that execution of the Insights client.
2. The settings in the configuration files (/**etc/insights-client/insights-client.conf** and /**etc/insights-client/remove.conf**) override system environment settings.
3. The values of any system environment variables (**printenv**) not affected by the CLI or the client configuration files are used.

Any options you provide in the **insights-client** command are used only for that execution. Those values can temporarily override values set in the configuration file or the environment variables.



NOTE

Using the **insights-client** command to set the display name takes effect immediately but does not run the Insights client.

NOTE

If you are using RHEL 6.9 or earlier, the client command is **redhat-access-insights**.

1.4. RED HAT INSIGHTS CLIENT DISTRIBUTION

Insights client is available on Red Hat Enterprise Linux (RHEL) as shown in the following table.

RHEL release	Comments
RHEL 8	Distributed with Insights client pre-installed, unless RHEL 8 was installed as a minimal installation.
RHEL 7	Distributed with the Insights client RPM package loaded but not installed.
RHEL 6.10 and later	You must download the Insights client RPM package and install it.

NOTE

Insights client installation on older versions

RHEL versions 6 and 7 do not come with the Insights client pre-installed. If you have one of these versions, run the following commands in your terminal:

```
[root@server ~]# yum install insights-client
```

Then, register the system to Insights for Red Hat Enterprise Linux:

```
[root@server ~]# insights-client --register
```

NOTE

Minimal Installation Configuration

The Insights client is not automatically installed on systems running the minimal installation of RHEL 8.

To create a minimal installation with the Insights client, select **Minimal Installation** from the RHEL Software Selection options in the Anaconda installer. Make sure to select the **Standard** checkbox in the **Additional Software for Selected Environment**section. The Standard option includes the insights-client package in the RHEL installation.

If you do not select the Standard checkbox, RHEL installs without the insights-client package. If that happens, you can use **dnf install** to install the Insights client at a later time.

For more information about minimal installations, see Configuring software selection in *Performing a standard RHEL installation* .

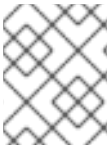
Additional resources

- Getting Started with Insights for Red Hat Enterprise Linux

CHAPTER 2. SETTING UP RHEL BASIC AUTHENTICATION FOR INSIGHTS FOR RED HAT ENTERPRISE LINUX

System access must be authenticated before your RHEL system can access Insights for Red Hat Enterprise Linux. The default authentication method is provided by Red Hat generated certificates.

The alternative to authentication provided by Red Hat generated certificates is to use single sign-on (SSO) credential authentication.



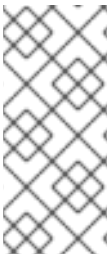
NOTE

SSO credential authentication for Insights for Red Hat Enterprise Linux access is also referred to as **basic authentication**.

2.1. WHEN TO USE BASIC AUTHENTICATION

You must use basic authentication in any of the following situations:

- Your RHEL system is not registered with Red Hat Subscription Manager (RHSM).
- Your Red Hat Enterprise Linux (RHEL) system is not managed by Red Hat Network Satellite services.
- Your RHEL system is provisioned through a Red Hat Certified Cloud and Service Provider and is updated by Red Hat Update Infrastructure (RHUI).
- Your RHEL system is from a cloud marketplace provider and not obtained through Red Hat Cloud Access program.



NOTE

If you have valid RHEL subscriptions for your system, you can switch between the default certificate-based authentication for Insights for RHEL and the basic authentication for Insights for RHEL. If you are configuring basic authentication on a new RHEL system, you must complete the basic authentication procedures before you can register the Insights for RHEL client application.

2.2. CONFIGURATION REQUIREMENTS FOR BASIC AUTHENTICATION

When you configure your system to use single sign-on (SSO) credentials for basic authentication instead of the default certificate-based authentication for Insights for Red Hat Enterprise Linux, you provide Red Hat SSO credentials. SSO credentials are a valid Red Hat Customer Portal user name and password.

To configure basic authentication, a plain-text username and password is stored in the configuration file. As a best practice, create a Red Hat Customer Portal account with SSO credentials that are used only for Insights for Red Hat Enterprise Linux basic authentication. This action avoids exposing the SSO credentials of individual users.

2.3. HOW TO KNOW IF YOU MUST CONFIGURE BASIC AUTHENTICATION

The following messages might appear when you attempt to register a system that does not have a Red Hat authentication certificate. If you see **=== End Upload URL Connection Test: FAILURE ===**, configure your system for basic authentication.

```
insights-client --register
Running connection test...
Connection test config:
=== Begin Certificate Chain Test ===
depth=1
verify error:num=0
verify return:1
depth=0
verify error:num=0
verify return:1
=== End Certificate Chain Test: SUCCESS ===

=== Begin Upload URL Connection Test ===
HTTP Status Code: 401
HTTP Status Text: Unauthorized
HTTP Response Text:
Connection failed
=== End Upload URL Connection Test: FAILURE ===

=== Begin API URL Connection Test ===
HTTP Status Code: 200
HTTP Status Text: OK
HTTP Response Text: lub-dub
Successfully connected to: https://cert-api.access.redhat.com/r/insights/
=== End API URL Connection Test: SUCCESS ===

Connectivity tests completed with some errors
See /var/log/insights-client/insights-client.log for more details.
```

2.4. CONFIGURING BASIC AUTHENTICATION

Insights client configuration is managed in **/etc/insights-client/insights-client.conf**. This file provides a configuration template for setting up basic authentication. The default configuration for certificate-based authentication is as follows:

```
auto_config=TRUE
authmethod=BASIC
username=<your customer portal username>
password=<your customer portal password>
```

Prerequisites

- You have a Red Hat SSO username and SSO password that can be stored in clear text.
- You have read/write permissions in the directory **/etc/insights-client/**.
- The **insights-client** package is installed on your system.

Procedure

1. Use a text editor to open the file **/etc/insights-client/insights-client.conf**
2. Change **auto_config=TRUE** value to **auto_config=FALSE**.
3. Replace **<your customer portal username>** with a Red Hat SSO username.
4. Replace **<your customer portal password>** with a Red Hat SSO password.
5. Save the configuration and exit the editor.
6. Register the system.

```
# insights-client --register
```

CHAPTER 3. CONFIGURING INSIGHTS CLIENT

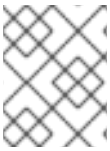
The procedures in this section show you how to configure the Insights client on your system.

Prerequisites

- You have root permissions or their equivalent. Making changes to configuration files or adding configuration files requires root permissions.
- The Insights client is deployed on your system.

3.1. REGISTERING YOUR SYSTEM WITH INSIGHTS FOR RED HAT ENTERPRISE LINUX

You must register your system with Insights for Red Hat Enterprise Linux before you can use its services. Optionally, you can assign a display name for your host when you register your system.



NOTE

If you do not assign a display name when you register the system, Insights for Red Hat Enterprise Linux uses the value in **/etc/hostname**.

Prerequisites

- Insights client is deployed on your system.
  Deploying Red Hat Insights on existing RHEL systems managed by Red Hat Cloud Access

  Deploying Red Hat Insights on existing RHEL systems managed by Red Hat Update Infrastructure
- You can access the cloud-based Insights for Red Hat Enterprise Linux services.
  Configuring Basic Authentication for Red Hat Insights

NOTE

Insights client installation on older versions

RHEL versions 6 and 7 do not come with the Insights client pre-installed. If you have one of these versions, run the following commands in your terminal:

```
[root@server ~]# yum install insights-client
```

Then, register the system to Insights for Red Hat Enterprise Linux:

```
[root@server ~]# insights-client --register
```

Procedure

1. Enter the **insights-client** command with the **--register** option.

```
[root@insights]# insights-client --register
```

2. Optionally, enter the **insights-client** command with the **--register** option and the **--display-name** option to specify the name you want to appear in the GUI.

```
[root@insights]# insights-client --register --display-name ITC-4
System display name changed from None to ITC-4
```

Verification steps

- Enter the **insights-client** command with the **--status** option.

```
[root@insights]# insights-client --status
System is registered locally via .registered file. Registered at 2019-08-20T12:56:48.356814
Insights API confirms registration.
```

3.2. UNREGISTERING YOUR SYSTEM WITH INSIGHTS FOR RED HAT ENTERPRISE LINUX

You can unregister your system with Insights for Red Hat Enterprise Linux. When you do so, your system information is no longer uploaded to Insights for RHEL.

Prerequisites

- Your system is registered with Insights for RHEL.

Procedure

1. Enter the **insights-client** command with the **--unregister** option.

```
[root@insights]# insights-client --unregister
Successfully unregistered from the Red Hat Insights Service
```

Verification steps

- Enter the **insights-client** command with the **--status** option.

```
[root@insights]# insights-client --status
System is NOT registered locally via .registered file. Unregistered at 2021-03-12T10:36:39.257300
Insights API says this machine was unregistered at 2021-03-12T00:36:39.000Z
```

3.3. CHANGING THE HOST DISPLAY NAME

You can change the host display name as it appears in the GUI. Make this change either when you register the system with Insights for Red Hat Enterprise Linux, or after registration. If you do not assign a display name when you register the system, Insights for Red Hat Enterprise Linux uses the value in **/etc/hostname**.

NOTE

If you obfuscate the host name, the **hostname** configured in **/etc/hostname** is obfuscated. Assign a **display name** so that you can identify hosts even when their **hostname** is obfuscated.

NOTE

The Insights for Red Hat Enterprise Linux compliance service uses OpenSCAP tools to generate compliance reports based on information from the host system. The collaboration with OpenSCAP prevents the compliance service's ability to completely obfuscate or redact host name and IP address data. Also, host information is sent to Insights for RHEL when a compliance data collection job launches on the host system. Insights for Red Hat Enterprise Linux is working to improve obfuscation options for host information.

For information about how Red Hat handles data collection, see Red Hat Insights Data & Application Security.

Prerequisites

This procedure is optional. Determine if you want to use a display name in addition to the default **hostname**.

Procedure

1. Enter the **insights-client** command with the **--display-name** option and specify a display name.

```
[root@insights]# insights-client --display-name ITC-4
System display name changed from None to ITC-4
```

2. To create a display name that contains spaces, use double quotes.

```
[root@insights]# insights-client --display-name "ITC-4 B9 4th floor"
System display name changed from None to ITC-4 B9 4th floor
```

Additional resources

- Section 4.3, "Obfuscating the hostname"
- Section 3.1, "Registering your system with Insights for Red Hat Enterprise Linux"

3.4. DISPLAYING THE CLIENT VERSION

You can display the client version and client core version.

Procedure

- Enter the **insights-client** command with the **--version** option.

```
[root@insights]# insights-client --version
Client: 3.0.6-0
Core: 3.0.121-1
```

Additional resources

These links provide client changelog information:

- Red Hat Insights Client Core Changelog
- Changelog file

CHAPTER 4. INSIGHTS CLIENT DATA OBFUSCATION

The Insights client provides IP address obfuscation and host name obfuscation. The obfuscation is controlled by settings in the **/etc/insights-client/insights-client.conf** configuration file.

In the configuration file you select whether or not to enable obfuscation. You can choose IP address obfuscation and add host name obfuscation. You cannot select only host name obfuscation.

Obfuscation works by using a Python SoS process that replaces the host name and IP address with preset values when it processes the Insights for RHEL client archive. The processed archive file is sent to Insights for Red Hat Enterprise Linux.

You cannot choose the obfuscation replacement values.

NOTE

The Insights for Red Hat Enterprise Linux compliance service uses OpenSCAP tools to generate compliance reports based on information from the host system. The collaboration with OpenSCAP prevents the compliance service's ability to completely obfuscate or redact host name and IP address data. Also, host information is sent to the Insights for RHEL when a compliance data collection launches on the host system. Insights for Red Hat Enterprise Linux is working to improve obfuscation options for host information.

For information about how Insights for Red Hat Enterprise Linux handles data collection, see Red Hat Insights Data & Application Security.

4.1. CONFIGURING INSIGHTS CLIENT OBFUSCATION

The following procedures show how to configure obfuscation options in the Insights client.

- Section 4.2, "Obfuscating the IPv4 address"
- Section 4.3, "Obfuscating the hostname"

4.2. OBFUSCATING THE IPV4 ADDRESS

You can obfuscate the IPv4 host address in the archive file before it is sent to Insights for Red Hat Enterprise Linux.

NOTE

You must obfuscate the IP address if you want to obfuscate the host name.

Procedure

1. Open the **/etc/insights-client/insights-client.conf** file with an editor.
2. Locate the line that contains

```
#obfuscate=False
```

3. Remove the **#** and change **False** to **True**.

```
obfuscate=True
```

4. Save and close the the **/etc/insights-client/insights-client.conf** file.

When you choose IP address obfuscation, your host address in the archive file is changed to the value that is provided in the Python SoS file. The value provided for obfuscation is not configurable. You cannot mask or select which portion of the IPv4 host IP address to obfuscate.

Example

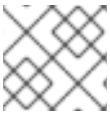
- Original host IP address

```
192.168.0.24
```

- Obfuscated host IP address as it appears in Insights for Red Hat Enterprise Linux

```
10.230.230.1
```

If you choose IP address obfuscation on another system, its IP address in the archive file is changed to the same obfuscated value, **10.230.230.1**. In the Insights for Red Hat Enterprise Linux GUI, you might see multiple systems with the same IP address as a result of obfuscation.

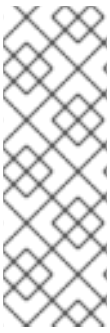


NOTE

IP address obfuscation is supported only for IPv4 addresses.

4.3. OBFUSCATING THE HOSTNAME

You can obfuscate the host name in the archive file before it is sent to Insights for Red Hat Enterprise Linux. The **hostname** in **/etc/hostname** changes to **host0** if you have a single host name assigned to your system. Additional host names change to **host1**, **host2**, up to the number of host names you configured for your system.



NOTE

The Insights for Red Hat Enterprise Linux compliance service uses OpenSCAP tools to generate compliance reports based on information from the host system. The collaboration with OpenSCAP prevents the compliance service's ability to completely obfuscate or redact host name and IP address data. Also, host information is sent to Insights for RHEL when a compliance data collection job launches on the host system. Insights for Red Hat Enterprise Linux is working to improve obfuscation options for host information.

For information about how Insights for Red Hat Enterprise Linux handles data collection, see Red Hat Insights Data & Application Security.

Prerequisites

- Section 4.2, "Obfuscating the IPv4 address"

Procedure

1. Open the **/etc/insights-client/insights-client.conf** file with an editor.
2. Locate the line that contains **obfuscate_hostname**.

```
#obfuscate_hostname=False
```

3. Remove the **#** and change **False** to **True**.

```
obfuscate_hostname=True
```

4. Save and close the the **/etc/insights-client/insights-client.conf** file.
5. (Optional) Use the **insights-client** command with the **--display-name** option to assign a display name for your system. The display name is not obfuscated.

```
[root@insights]# insights-client --display-name ITC-4
```

When you choose host name obfuscation, your **/etc/hostname** value in the archive file is changed to the value that is provided in the Python SoS file. The obfuscated host name is displayed in Insights for Red Hat Enterprise Linux application.

Example

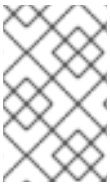
- Original **/etc/hostname**

```
RTP.data.center.01
```

- Obfuscated **/etc/hostname** as it appears in Insights for Red Hat Enterprise Linux

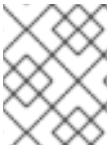
```
host0
```

In order to use host name obfuscation, you must also enable IP address obfuscation.



NOTE

If you configure host name obfuscation on another system, its name uses the same obfuscation values. In the Insights for Red Hat Enterprise Linux GUI, you might see multiple systems with the same **hostname** as a result of obfuscation.



NOTE

You can assign a display name to your system that is not obfuscated and will appear in Insights for Red Hat Enterprise Linux application. Only the **/etc/hostname** is obfuscated.

Additional resources

- Section 4.2, “Obfuscating the IPv4 address”
- Section 4.3, “Obfuscating the hostname”
- Section 3.3, “Changing the host display name”
- Python SoS Workflow System (*external link*)

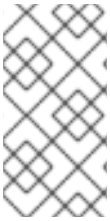
CHAPTER 5. INSIGHTS CLIENT DATA REDACTION

The Insights client provides data redaction options. Depending on your version of RHEL, there are two methods for controlling data redaction.

Table 5.1. Data redaction and RHEL versions

RHEL Version	Redaction method
RHEL 6.9, 7.8, 8.2, and earlier	Configuration file **remove.conf**
RHEL RHEL 6.10, 7.9, 8.3 and later	YAM files **file-redaction.yaml** **file-content-redaction.yaml**

You must create the **remove.conf** configuration file or YAML files. They are not installed by default.



NOTE

Insights for Red Hat Enterprise Linux collects a minimal amount of data, including data that might contain personally identifiable information (PII). Prevent PII (or other configuration data) from being collected by applying data redaction options. This chapter includes additional information about redaction options for the Insights client.

NOTE

The Insights for Red Hat Enterprise Linux compliance service uses OpenSCAP tools to generate compliance reports based on information from the host system. The collaboration with OpenSCAP prevents the compliance service's ability to completely obfuscate or redact host name and IP address data. Also, host information is sent to Insights for RHEL when a compliance data collection job launches on the host system. Insights for Red Hat Enterprise Linux is working to improve obfuscation options for host information.

For information about how Insights for Red Hat Enterprise Linux handles data collection, see Red Hat Insights Data & Application Security.

Additional resources

- Section 5.1, "Configuring Insights client redaction"

5.1. CONFIGURING INSIGHTS CLIENT REDACTION

The Insights client provides data redaction options. Depending on your version of RHEL, there are two methods for controlling data redaction.

- RHEL 6.9, 7.8, 8.2, and earlier
  Section 5.3, "Configuring Insights client redaction using **remove.conf**"

- RHEL 6.10, 7.9, 8.3 and later
  Section 5.5, “Configuring Insights client redaction using YAML files”

5.2. REDACTION AND REMOVE.CONF FILE USE

When you use a configuration file, redaction is controlled by the contents of **/etc/insights-client/remove.conf**. You can optionally configure the Insights client to use a different redaction configuration file.

Based on your entries in the redaction configuration file, you can specify one or more of the following actions:

- Eliminate specific files and their content from data collecting
- Eliminate selected command output from data collecting
- Eliminate information that matches a pattern
- Substitute specific strings with a default **keyword** string

When you configure redaction by elimination, the redacted information is never recorded in the archive file. Redaction is performed by preprocessing the data before it is captured in the archive file.

For redaction by string substitution, the archive file is processed by a Python SoS process before it is sent to Insights for Red Hat Enterprise Linux.

NOTE

Regular expression matching is not supported by the **remove.conf** file.

You can use command line options to control the archive file output. For example, you can generate the archive file but not send it to Insights for Red Hat Enterprise Linux. You can inspect and verify the redaction results before the archive is sent .

NOTE

When you redact files and command output, that information is not available to compare against the Insights for RHEL rules. These omissions might cause Insights for RHEL not to identify issues that apply to your system.

Additional resources

- Section 5.1, “Configuring Insights client redaction”

5.3. CONFIGURING INSIGHTS CLIENT REDACTION USING REMOVE.CONF

The **/etc/insights-client/remove.conf** file controls redaction. You must create this file before you can use Insights client redaction.

Procedure

1. Use an editor to create the **/etc/insights-client/remove.conf** file template.

```
[remove]
files=/etc/cluster/cluster.conf,/etc/hosts
commands=/bin/dmesg,/bin/hostname
```

```
patterns=password,username
keywords=super$ecret,ultra$ecret+
```

2. Optionally, delete any lines that you do not want to apply to archive redaction.
3. Verify the **remove.conf** file permissions are set for **root** owner only.

```
[root@insights]# ll remove.conf
-rw-------. 1 root root 145 Sep 25 17:39 remove.conf
```

4. See the additional for procedures on how to apply each available redaction option.

Additional resources

- Section 5.3.1, "Redacting specific file content"
- Section 5.3.2, "Redacting specific commands"
- Section 5.3.3, "Redacting string patterns"
- Section 5.3.4, "Redacting keywords"
- Section 5.3.5, "Validating the **remove.conf** file"

5.3.1. Redacting specific file content

You can select specific files that are redacted by using the **remove.conf** file. The files you select and their content are not included in the archive file.

Prerequisites

- You must create a **/etc/insights-client/remove.conf** file.
  Section 5.1, "Configuring Insights client redaction"

Procedure

1. Use an editor and open the **/etc/insights-client/remove.conf** file.

```
[remove]
files=/etc/cluster/cluster.conf,/etc/hosts
commands=/bin/dmesg,/bin/hostname
patterns=password,username
keywords=super$ecret,ultra$ecret+
```

2. On the **files=** line, add or remove the files that you want to redact from the archive file.

NOTE

Each file name is separated by a single comma. Do not use spaces.

3. To redact no files from the Insights client archive, remove the **files=** line.
4. Save and close the file.

5.3.2. Redacting specific commands

You can select specific commands that are redacted by using the **remove.conf** file. The output of these commands is not included in the archive file.

Prerequisites

- You must create a **/etc/insights-client/remove.conf** file.
  Section 5.1, "Configuring Insights client redaction"

Procedure

1. Use an editor and open the **/etc/insights-client/remove.conf** file.

```
[remove]
files=/etc/cluster/cluster.conf,/etc/hosts
commands=/bin/dmesg,/bin/hostname
patterns=password,username
keywords=super$ecret,ultra$ecret+
```

2. On the **commands=** line, add or remove the commands that you want to redact from the archive file.

NOTE

Each command name is separated by a single comma. Do not use spaces.

3. To redact no command from the Insights client archive, remove the **command=** line.

4. Save and close the file.

5.3.3. Redacting string patterns

You can select specific string patterns that are redacted by using the **remove.conf** file. The string pattern that you specify is redacted from the archive file by removing the entire line. For example, if the string pattern is **name**, that pattern matches and redacts **hostname**, **filename**, **username**.

NOTE

Regular expressions and wildcard matching (**egrep**) are not supported.

Prerequisites

- You must create a **/etc/insights-client/remove.conf** file.
  Section 5.1, "Configuring Insights client redaction"

Procedure

1. Use an editor and open the **/etc/insights-client/remove.conf** file.

```
[remove]
files=/etc/cluster/cluster.conf,/etc/hosts
commands=/bin/dmesg,/bin/hostname
```

```
patterns=password,username
keywords=super$ecret,ultra$ecret+
```

2. On the **patterns=** line, add any string patterns that you want to redact from the archive file.

NOTE

Each pattern is separated by a single comma. Do not use spaces.

3. To redact no patterns from the Insights client archive, remove the **patterns=** line.

4. Save and close the file.

5.3.4. Redacting keywords

You can select specific keywords that are redacted by using the **remove.conf** file. The keywords you specify are replaced with **keyword0**, **keyword1**, **keyword2**, etc., in the archive file.

Prerequisites

- You must create a **/etc/insights-client/remove.conf** file.
  Section 5.1, “Configuring Insights client redaction”

Procedure

1. Use an editor and open the **/etc/insights-client/remove.conf** file.

```
[remove]
files=/etc/cluster/cluster.conf,/etc/hosts
commands=/bin/dmesg,/bin/hostname
patterns=password,username
keywords=super$ecret,ultra$ecret+
```

2. On the **keywords=** line, add any keywords that you want to redact from the archive file.

NOTE

Each keyword is separated by a single comma. Do not use spaces.

3. To redact no keywords from the Insights client archive, remove the **keyword=** line.

4. Save and close the file.

5.3.5. Validating the remove.conf file

You can validate the **remove.conf** file to make sure its syntax is correct before using it for redaction.

Prerequisites

- You must create a **/etc/insights-client/remove.conf** file.
  Section 5.1, “Configuring Insights client redaction”

Procedure

Procedure

1. Enter the **insights-client** command with the **--validate** option.

```
[root@insights]# insights-client --validate
```

2. Correct any errors that the command displays.

5.4. REDACTION AND YAML FILE USE

When you use YAML files for redaction, two files control the redaction actions. You can use one or both files, depending on the content you want to redact. The specified content is redacted before it is captured in the archive file.

Table 5.2. Redaction and YAML files

YAML file	Description
/etc/insights-client/file-redaction.yaml	This file lists commands and files that you want redacted. The output of the listed commands or files is readacted.
/etc/insights-client/file-content-redaction.yaml	This file defines pattern redaction and keyword replacement. Pattern redaction is done by pattern match or regular expression match. Keyword replacement is done by a Python SoS process that replaces the keyword with a generic identifier.

Additional resources

- Section 5.5, "Configuring Insights client redaction using YAML files"

5.5. CONFIGURING INSIGHTS CLIENT REDACTION USING YAML FILES

Two YAML files control Insights client redaction. You must create each YAML file before you can use redaction in RHEL 6.10, 7.9, 8.3 and later.

- Section 5.5.1, "Configuring YAML command and file redaction"
- Section 5.5.2, "Configuring YAML pattern and keyword redaction"

5.5.1. Configuring YAML command and file redaction

The **/etc/insights-client/file-redaction.yaml** file is a YAML file. It lists the commands and system files that you want redacted. The output of the listed commands or files is not included in the uploaded archive file.

If you want to redact based on keyword replacement or pattern matching, see Section 5.5.2, "Configuring YAML pattern and keyword redaction".

Prerequisites

- You must be familiar with the basics of YAML syntax. Explaining YAML is beyond the scope of this procedure.
- You must have **root** permission or its equivalent to create files in **/etc/insights-client/**

Procedure

1. Use an editor to create the **/etc/insights-client/file-redaction.yaml** file.

   Example

```
# file-redaction.yaml
---
# Exclude the entire output of commands
#   Specify the full command path or the symbolic name in .cache.json

 commands:
- /bin/rpm -qa
- /bin/ls
- ethtool_i

# Exclude the entire output of files
#  Specify the full filename path or the symbolic name in .cache.json

files:
- /etc/audit/auditd.conf
- cluster_conf
```

2. Verify the **file-redaction.yaml** file permissions are set for **root** owner only.

```
[root@insights]# ll file-redaction.yaml
-rw-------. 1 root root 145 Sep 25 17:39 file-redaction.yaml
```

Additional resources

- Section 5.6, "Verifying the Insights client archive"

5.5.2. Configuring YAML pattern and keyword redaction

The **/etc/insights-client/file-content-redaction.yaml** file is a YAML file that defines redaction based on pattern redaction and keyword replacement. Pattern redaction is done by pattern match or regular expression match. Keyword replacement is done by a Python SoS process that replaces the keyword with a generic identifier.

If you want to redact based on command output or specific files, see Section 5.5.1, "Configuring YAML command and file redaction".

Prerequisites

- You must be familiar with the basics of YAML syntax. Explaining YAML is beyond the scope of this procedure.
- You must have **root** permission or its equivalent to create files in **/etc/insights-client/**

Procedure

1. Use an editor to create the **/etc/insights-client/file-content-redaction.yaml** file.

   #### Example

```
# file-content-redaction.yaml
---
# Pattern redaction per matching line
#  Lines that match a pattern are excluded from files and command output.
#  Patterns are processed in the order that they are listed.
# Example

patterns:
 - "a_string_1"
 - "a_string_2"

# Regular expression pattern redaction per line
#  Patterns with regular expressions (regex) are wrapped with "regex:"
# Example

patterns:
 regex:
 - "abc.*def"
 - "localhost[[:digit:]]"


# Keyword replacement redaction
#  Replace keywords in files and command output with generic identifiers
#  Keyword does not support regex
# Example

keywords:
- "1.1.1.1"
- "My Name"
- "a_name"
```

2. Make sure the **file-content-redaction.yaml** file permissions are set for **root** owner only.

```
[root@insights]# ll file-content-redaction.yaml
-rw-------. 1 root root 145 Sep 25 17:39 file-content-redaction.yaml
```

See the additional procedures on how to apply each available redaction option.

Additional resources

- Section 5.3.1, “Redacting specific file content”
- Section 5.3.2, “Redacting specific commands”
- Section 5.3.3, “Redacting string patterns”
- Section 5.3.4, “Redacting keywords”
- Section 5.3.5, “Validating the **remove.conf** file”

5.6. VERIFYING THE INSIGHTS CLIENT ARCHIVE

You can verify the contents of the archive file. By inspecting the archive file, you can confirm what data is sent to Insights for Red Hat Enterprise Linux.

- If you use obfuscation or redaction, you can inspect the archive before it is sent.
  Section 5.6.1, "Verifying the archive before upload"
- If you want to preserve the archive file, you can keep it on your system.
  Section 5.6.2, "Verifying the Insights client archive after upload"

5.6.1. Verifying the archive before upload

You can inspect the archive before it is sent to Insights for Red Hat Enterprise Linux by running the client and saving the file without uploading it. This allows you to view what information the client sends to Insights for RHEL, and to verify obfuscation or redaction settings.

The archive is stored in the **/var/tmp/** directory. The file name is displayed when **insights-client** completes.

Prerequisites

- If you use redaction, make sure the **/etc/insights-client/remove.conf** file is properly set up.
  Section 5.3.5, "Validating the **remove.conf** file"
- If you use obfuscation, make sure the **/etc/insights-client/insights-client.conf** file is properly set up.
  Section 4.1, "Configuring Insights client obfuscation"

Procedure

1. Enter the **insights-client** command with the **--no-upload** option.

```
[root@insights]# insights-client --no-upload
```

   The command displays informational messages when redaction or obfuscation is applied.

```
WARNING: Excluding data from files
Starting to collect Insights data for ITC-4
WARNING: Skipping patterns found in remove.conf
WARNING: Skipping command /bin/dmesg
WARNING: Skipping command /bin/hostname
WARNING: Skipping file /etc/cluster/cluster.conf
WARNING: Skipping file /etc/hosts
Archive saved at /var/tmp/qsINM9/insights-ITC-4-20190925180232.tar.gz
```

2. Navigate to the temporary storage directory as shown in the **Archive saved at** message.

```
[root@insights]# cd /var/tmp/qsINM9/
```

3. Unpack the compressed **tar.gz** file.

```
[root@insights]# tar -xzf insights-ITC-4-20190925180232.tar.gz
```

The result will be a new directory containing the files.

5.6.2. Verifying the Insights client archive after upload

You can keep the archive for inspection after it is sent to Insights for Red Hat Enterprise Linux by running the client and saving the file. This allows you to verify what information the client sends Insights for RHEL, and to verify obfuscation or redaction settings.

Prerequisites

- If you use redaction, make sure the **/etc/insights-client/remove.conf** file is properly set up.
  Section 5.3.5, "Validating the **remove.conf** file"
- If you use obfuscation, make sure the **/etc/insights-client/insights-client.conf** file is properly set up.
  Section 4.1, "Configuring Insights client obfuscation"

Procedure

1. Enter the **insights-client** command with the **--keep-archive** option.

   ```
   [root@insights]# insights-client --keep-archive
   ```

   The command displays informational messages.

   ```
   Starting to collect Insights data for ITC-4
   Uploading Insights data.
   Successfully uploaded report from ITC-4 to account 6229994.
   Insights archive retained in /var/tmp/ozM8bY/insights-ITC-4-20190925181622.tar.gz
   ```

2. Navigate to the temporary storage directory as shown in the **Insights archive retained in** message.

   ```
   [root@insights]# cd /var/tmp/ozM8bY/
   ```

3. Unpack the compressed **tar.gz** file.

   ```
   [root@insights]# tar -xzf insights-ITC-4-20190925181622.tar.gz
   ```

   The result will be a new directory containing the files.

CHAPTER 6. SYSTEM FILTERING AND GROUPS

Insights for Red Hat Enterprise Linux enables administrators to filter systems in inventory and in individual services. Groups are identified by the method of system data ingestion to Insights for RHEL. Insights for RHEL enables filtering groups of systems by those running SAP workloads, by Satellite host group, and by custom filters that are defined by system administrators with root access to configure the Insights client on the system.

NOTE

As of Fall 2020, inventory, advisor, vulnerability, patch, drift, and policies enable filtering by groups. Other services will follow.

Use the global, **Filter Results** box to filter by SAP workloads, Satellite host groups, or custom filters added to the Insights client configuration and file filters added to the Insights client configuration file.

Prerequisites

The following prerequisites and conditions must be met to use the filters features in Insights for Red Hat Enterprise Linux:

- The Insights client is installed and registered on each system.
- To create custom tags, root permissions, or their equivalent, are required to add to or change the **/etc/insights-client/tags.yaml** file.

6.1. SAP WORKLOADS

As Linux becomes the mandatory operating system for SAP ERP workloads in 2025, Red Hat Enterprise Linux and Insights for Red Hat Enterprise Linux are working to make Insights for RHEL the management tool of choice for SAP administrators.

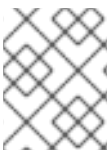
As part of this ongoing effort, Insights for RHEL automatically tags systems running SAP workloads and by SAP ID (SID), without any customization needed by administrators. Users can easily filter those workloads throughout the Insights for RHEL application by using the global **Filter Results** dropdown menu.

6.2. SATELLITE HOST GROUPS

Satellite host groups are configured in Satellite and recognized automatically by Insights.

6.3. CUSTOM SYSTEM TAGGING

By applying custom grouping and tagging to your systems, you can add contextual markers to individual systems, filter by those tags in the Insights for RHEL application, and more easily focus on related systems. This functionality can be especially valuable when deploying Insights for RHEL at scale, with many hundreds or thousands of systems under management.



NOTE

To create custom tags, root permissions, or their equivalent, you are required to add to or change the **/etc/insights-client/tags.yaml** file.

6.3.1. Filter structure

Filters use a **namespace/key=value** paired structure.

- **Namespace.** The namespace is the name of the ingestion point, *insights-client*, and cannot be changed. The **tags.yaml** file is abstracted from the namespace, which is injected by the client before upload.
- **Key.** The key can be a user-chosen key or a predefined key from the system. You can use a mix of capitalization, letters, numbers, symbols and whitespace.
- **Value.** Define your own descriptive string value. You can use a mix of capitalization, letters, numbers, symbols and whitespace.

6.3.2. Creating a custom group and the tags.yaml file

Create and add tags to **/etc/insights-client/tags.yaml** simply by using **insights-client --group=<name-you-choose>**, which performs the following actions:

- Creates the **etc/insights-client/tags.yaml** file
- Adds the **group=** key and **<name-you-choose>** value to **tags.yaml**
- Uploads a fresh archive from the system to the Insights for RHEL application so the new tag is immediately visible along with your latest results

After creating the initial **group** tag, add additional tags as needed by editing the **/etc/insights-client/tags.yaml** file.

The following procedure shows how to create the initial group, as well as the **/etc/insights-client/tags.yaml** file, then verify the tag exists in the Insights for RHEL inventory.

Procedure

1. Run the following command as root, adding your custom group name after **--group=**:

```
[root@server ~]# insights-client --group=<name-you-choose>
```

2. Navigate to Red Hat Insights > Inventory and log in if necessary.
3. Click the **Filter results** dropdown menu.
4. Scroll through the list or use the search function to locate the tag.
5. Click the tag to filter by it.
6. Verify that your system is among the results on the advisor systems list.
7. Navigate to Red Hat Insights > Inventory and log in if necessary.
8. Activate the **Name** filter and begin typing the system name until you see your system, then select it.
9. Verify that, next to the system name, the tag symbol is darkened and shows a number representing the correct number of tags applied.

6.3.3. Editing tags.yaml to add or change tags

After creating the **group** tag, you can edit the contents of **tags.yaml** to add or modify tags, as needed. You can add multiple, filterable tags to a system.

NOTE

Insights for Red Hat Enterprise Linux collects a minimal amount of data, including data that might contain personally identifiable information (PII). Prevent PII (or other configuration data) from being collected by applying data redaction options. For more information about data redaction options for some of your configuration files, see Insights client data redaction and Redaction and YAML file use.

For information about how Red Hat handles data collection, see Red Hat Insights Data & Application Security.

Procedure

1. Using the command line, open the tag configuration file for editing.

```
[root@server ~]# vi /etc/insights-client/tags.yaml
```

2. Edit content or add additional key=value pairs as needed. The following example shows how you can organize **tags.yaml** when adding multiple tags to a system.

```
# tags
---
group: _group-name-value_
location: _location-name-value_
description:
- RHEL8
- SAP
key 4: value
```

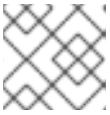
NOTE

Add as many key=value pairs as you need. Use a mix of capitalization, letters, numbers, symbols, and whitespace.

3. Save your changes and close the editor.
4. Generate an upload to Insights for RHEL.

```
[root@server ~]# insights-client
```

5. Navigate to inventory and log in if necessary.
6. Click the **Filters** dropdown menu and select **Tags**.
7. In the search box, click the down arrow and select one of the tags or enter the name of the tag and select it.



NOTE

You can search by the tag key or value.

8. Find your system among the results.
9. Verify that the tag icon is darkened and shows a number representing the number of tags applied to the system.
10. Click the tag to see each of the tags applied to that system.

6.4. ADDING FILTERS TO SYSTEMS

The easiest way to start adding tags to **tags.yaml** is by using **insights-client --group=<name-you-choose>**, which performs the following actions:

- Creates the **etc/insights-client/tags.yaml** file
- Adds the **group** key and <name-you-choose> value to **tags.yaml**
- Uploads a fresh archive from the system to Insights for Red Hat Enterprise Linux application so that the new tag is immediately visible along with your latest results

After creating the initial **group** tag, you can add additional tags as needed by editing **tags.yaml**.

The following procedure shows how to create the initial group, as well as the **tags.yaml** file, then verify the tag in the Insights for RHEL inventory.

Procedure

1. Run the following command, adding your group name after **--group=**:

```
[root@server ~]# insights-client --group=<name-you-choose>
```

2. Navigate to inventory and log in if necessary.
3. Click the **Filters** dropdown menu and select **Tags**.
4. In the search box, click the down arrow and select one of the tags or enter the name of the tag.

NOTE

You can search by the tag key or value.

5. Find your system among the results and verify that the tag icon is darkened and shows a number representing the number of tags applied to the system.
6. Click the tag to see each of the tags applied to that system.

CHAPTER 7. CHANGING THE INSIGHTS-CLIENT SCHEDULE

You can disable, enable, and modify the schedule that controls when the Insights client runs. By default, the Insights client runs every 24 hours. The timers in the default schedules vary so that all systems do not run the client at the same instant.

NOTE

The procedure you use for changing the **insights-client** schedule depends on the RHEL version as shown in **/etc/redhat-release**.

- Section 7.1, “Disabling the client schedule”
- Section 7.2, “Enabling the Insights client schedule”
- Section 7.3, “Modifying the client schedule”

7.1. DISABLING THE CLIENT SCHEDULE

You must disable the client schedule before you can change the default Insights client settings and create a new schedule.

Depending on which version of Insights client is installed and the RHEL version, you select the procedure steps as shown in the following table.

Table 7.1. Disabling the client schedule based on client version and RHEL release

RHEL version	Client version	Actions
RHEL 6 through RHEL 7.4	Client 1.x  **NOTE** Client 1.x is no longer supported.	Modify the configuration file **/etc/insights-client/insights-client.conf** and use the CLI
RHEL 7.5 and later	Client 1.x  **NOTE** Client 1.x is no longer supported.	Use the CLI
RHEL 6, RHEL 7, and later	Client 3.x	Use the CLI

Procedure to disable for RHEL 7.4 and earlier with Client 1.x

NOTE

Client 1.x is no longer supported.

1. Verify the client version by entering the **insights-client** command with the **--version** option.

```
[root@insights]# insights-client --version
Client: 1.0.2-0
Core: 1.0.76-1
```

2. Disable the client schedule by entering the **insights-client** command with the **--no-schedule** option. This command removes the symbolic link that is in **/etc/cron.daily**.

```
[root@insights]# insights-client --no-schedule
```

NOTE

The **--no-schedule** option is deprecated in Client 3.x and later.

3. Open the **/etc/insights-client/insights-client.conf** file with an editor and add the following line.

```
no_schedule=True
```

Procedure to disable for RHEL 7.5 and later with Client 1.x

NOTE

Client 1.x is no longer supported.

1. Verify the client version by entering the **insights-client** command with the **--version** option.

```
[root@insights]# insights-client --version
Client: 1.0.2-0
Core: 1.0.76-1
```

2. Disable the client schedule by entering the **insights-client** command with the **--no-schedule** option.

```
[root@insights]# insights-client --no-schedule
```

NOTE

The **--no-schedule** option is deprecated in Client 3.x and later.

Procedure to disable for RHEL 6, RHEL 7 and later with Client 3.x

1. Verify the client version by entering the **insights-client** command with the **--version** option.

```
[root@insights]# insights-client --version
Client: 3.0.6-0
Core: 3.0.121-1
```

2. Disable the client schedule by entering the **insights-client** command with the **--disable-schedule** option.

```
[root@insights]# insights-client --disable-schedule
```

7.2. ENABLING THE INSIGHTS CLIENT SCHEDULE

You can enable the client schedule so that it runs on its default settings. If you changed the schedule, those settings take precedence.

Prerequisites

- The client schedule is disabled.
  Section 7.1, “Disabling the client schedule”
- (Optional) You modified the default schedule.
  Section 7.3, “Modifying the client schedule”

Procedure to enable with RHEL 7.4 or earlier and Client 1.x

NOTE

Client 1.x is no longer supported.

1. Verify the client version by entering the **insights-client** command with the **--version** option.

```
[root@insights]# insights-client --version
Client: 1.0.2-0
Core: 1.0.76-1
```

2. Open the **/etc/insights-client/insights-client.conf** file with an editor and add change following line to **False**.

```
no_schedule=False
```

3. Enable the client schedule by entering the **insights-client** command with the **--register** option.

```
[root@insights]# insights-client --register
```

Procedure to enable with RHEL 7.5 or later and Client 1.x

NOTE

Client 1.x is no longer supported.

1. Verify the client version by entering the **insights-client** command with the **--version** option.

```
[root@insights]# insights-client --version
Client: 1.0.2-0
Core: 1.0.76-1
```

2. Enable the client schedule by entering the **insights-client** command with the **--register** option.

```
[root@insights]# insights-client --register
```

Procedure to enable with RHEL 7 or later and Client 3.x

1. Verify the client version by entering the **insights-client** command with the **--version** option.

```
[root@insights]# insights-client --version
Client: 3.0.6-0
Core: 3.0.121-1
```

2. Enable the client schedule by entering the **insights-client** command with the **--enable-schedule** option.

```
[root@insights]# insights-client --enable-schedule
```

7.3. MODIFYING THE CLIENT SCHEDULE

You can modify when the Insights client runs by modifying the schedule. Which method you use depends on which RHEL release and which client version your system is running. Select the procedure that matches your version of RHEL.

- RHEL 7.4 and earlier
  Section 7.3.1, "Scheduling **insights-client** with **cron**"
- RHEL 7.5 and later
  Section 7.3.2, "Scheduling **insights-client** with **systemd** settings"

Prerequisites

- Section 7.1, "Disabling the client schedule"

7.3.1. Scheduling insights-client with cron

You can change the default schedule for running **insights-client** by updating a system **cron** file.

NOTE

The procedure for modifying **insights-client** with **cron** applies to RHEL 7.4 releases and earlier that are running Client version 1.x.

Prerequisites

- Section 7.1, "Disabling the client schedule".
- Review the man pages for **crontab(1)** and **cron(8)** to understand the **cron** dependencies.

Procedure

1. After disabling the Insights client schedule, set up **cron** to execute **insights-client** on a schedule you prefer.

2. Enable the **insights-client** schedule for RHEL 7.4 and earlier when you finish making changes.

Additional resources

- Section 7.2, "Enabling the Insights client schedule"
- What is **cron** and how is it used?

7.3.2. Scheduling insights-client with systemd settings

You can change the default schedule for running **insights-client** by updating the system **systemd** settings and the **insights-client-timer** file.

NOTE

The **systemd** procedure applies to RHEL 7.5 and later.

Prerequisites

- Section 7.1, "Disabling the client schedule"
- Review the man pages for **systemctl(1)**, **systemd.timer(5)**, and **systemd.time(7)** to understand **systemd** before proceeding.

Procedure

1. Enter the **systemctl** command to override the settings in the **insights-client.timer** systemd unit.

```
[root@insights]# systemctl edit insights-client.timer
```

   This action opens an empty file with the default system editor.

2. The following settings are default values for the **systemd** unit. Enter different settings to modify the schedule.

```
[Timer]
OnCalendar=daily
RandomizedDelaySec=14400
```

3. Enable the **insights-client** schedule by entering the **insights-client** command with the **--enable-schedule** option.

```
[root@insights]# insights-client --enable-schedule
```

CHAPTER 8. CHANGING INSIGHTS FOR RED HAT ENTERPRISE LINUX AUTOMATIC RULE UPDATES

The following procedures show how to change automatic rule update settings in the Insights client.

- Section 8.1, "Disabling automatic rule updates for Insights for Red Hat Enterprise Linux"
- Section 8.2, "Enabling automatic rule updates for Insights for Red Hat Enterprise Linux"

8.1. DISABLING AUTOMATIC RULE UPDATES FOR INSIGHTS FOR RED HAT ENTERPRISE LINUX

You can disable the automatic collection rule updates for Insights for Red Hat Enterprise Linux. If you do so, you risk using outdated rule definition files and not getting the most recent validation updates.

Procedure

1. Open the **/etc/insights-client/insights-client.conf** file with an editor.
2. Locate the line that contains

```
#auto_update=True
```

3. Remove the **#** and change **True** to **False**.

```
auto_update=False
```

4. Save and close the the **/etc/insights-client/insights-client.conf** file.

Additional resources

- Section 8.2, "Enabling automatic rule updates for Insights for Red Hat Enterprise Linux"

8.2. ENABLING AUTOMATIC RULE UPDATES FOR INSIGHTS FOR RED HAT ENTERPRISE LINUX

You can enable the automatic collection rule updates for Insights for Red Hat Enterprise Linux if you previously disabled updates. By default, automatic rule update is enabled.

Prerequisites

Automatic rule collection must be disabled.

Section 8.1, "Disabling automatic rule updates for Insights for Red Hat Enterprise Linux"

Procedure

1. Open the **/etc/insights-client/insights-client.conf** file with an editor.
2. Locate the line that contains

```
auto_update=False
```

3. Change **False** to **True**.

```
auto_update=True
```

4. Save and close the the **/etc/insights-client/insights-client.conf** file.

CHAPTER 9. SETTING THE AUTHENTICATION METHOD

Depending on how you use Insights for Red Hat Enterprise Linux, you must use one of two authentication methods:

- Certificate-based authentication (CERT)
  The default authentication method is through certificates. Certificates are generated when you register a system with Red Hat Subscription Manager (RHSM) or when your system is managed by Red Hat Satellite system management. No additional configuration changes are required.

- SSO credential-based Authentication (BASIC)
  The alternative authentication method is through SSO credentials. A valid Red Hat SSO credential is created when you have a valid Red Hat Customer Portal user name. To use SSO credentials with Insights for Red Hat Enterprise Linux, you must configure your system to use basic authentication.

Additional resources

- Configuring BASIC authentication for Red Hat Insights

CHAPTER 10. CREATING A DIAGNOSTIC LOG FOR SUPPORT

You can create a diagnostic log to share with the support team.

Procedure

1. Enter the **insights-client** command with the **--support** option.

```
[root@insights]# insights-client --support
```

The command displays informational messages while creating the support file.

```
Collecting logs...
Insights version: insights-core-3.0.121-1
Registration check:
status: True
unreachable: False
. . . .
Copying Insights logs to archive...
Support information collected in /var/tmp/H_Y43a/insights-client-logs-20190927144011.tar.gz
```

2. Navigate to the collection directory as shown in the **Support information collected in** message.

```
[root@insights]# cd /var/tmp/H_Y43a
```

3. Unpack the compressed **tar.gz** file.

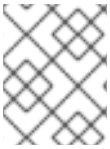
```
[root@insights]# tar -xzf insights-client-logs-20190927144011.tar.gz
```

The result will be a new directory containing the files. You can share the **tar.gz** file with the support team if requested.

CHAPTER 11. COMMAND OPTIONS FOR INSIGHTS-CLIENT

You can use the **insights-client** command and its options to control the Insights client operation on your system. Because the **insights-client.rpm** is updated less frequently than individual components in Insights for RHEL, the man page might not include the most recent information about **insights-client** command operation.

As a system administrator with root privileges, each time you enter the **insights-client** command the client collects data and sends it to Insights for RHEL.



NOTE

Using the **insights-client --display-name** command to set the display name takes effect immediately but does not run the Insights client.

Table 11.1. insights-client user command options

Option	Description
--help **-h**	Display help information
--register	Register the host to Insights for RHEL using the information in **/etc/hostname**. Will automatically enable the nightly cron job unless **--disable-schedule** is set.
--unregister	Unregister the host from Insights for RHEL.
--display-name=DISPLAY_NAME	Set or change the host display name in the GUI. Use with **--register** to set a display_name when the host is registered if you want a different name than is in **/etc/hostname**.
--group=GROUP	Add host to GROUP during registration. Group names are defined in **/etc/insights-client/tags.yaml**
--retry=RETRIES	Set the number of times to retry an upload. The default is 1. The retry interval is 180 seconds, which is how long the Insights client waits until retrying the upload. NOTE: In the scheduler, the number of retries is 3.
--validate	Validate the structure of the **/etc/insights-client/remove.conf** file.
--quiet	Only log error messages to console.

Option	Description
--silent	Log nothing to console.
--enable-schedule	Enable the job schedule. By default, the Insights client runs daily, at or near midnight. NOTE: If you are using Client 1.x, use the **--register** option to enable the schedule.
--disable-schedule	Disable the nightly job schedule.
--conf=CONF **-c=CONF**	Use a custom configuration file CONF instead of the default **/etc/insights-client/insights-client.conf** file.
--compressor	Select the compressor that is used when creating the archive. Available options are **gz, bz2, xz, none**. Defaults to **gz**. The **none** option creates a tar file with no compression.
--no-upload	Runs the client but does not upload the archive to Insights for Red Hat Enterprise Linux or CMSfR web application. The archive is stored in the **/var/tmp/** directory. The file name is displayed when **insights-client** completes.
--offline	Run the client without using network functionality. Implies **--no-upload**.
--logging-file=LOGFILE	Output the log data to the specified LOGFILE. The default log file is **/var/log/insights-client/insights-client.log**.
--diagnosis	Fetch diagnostic information from the API. The system must be registered and uploaded at least once before using **--diagnosis**.
--compliance	Scan the system with OpenSCAP and upload the report.
--payload=PAYLOAD	Upload a specific archive PAYLOAD file to Insights for Red Hat Enterprise Linux. Requires **--content-type**.
--content-type=TYPE	Set the content-type for the PAYLOAD file. Type can be gz, bz2, xz, and none. The TYPE must match the **--compressor** used with the PAYLOAD.

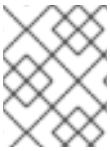
Option	Description
--check-results	Retrieve analysis results from Insights for Red Hat Enterprise Linux.
--show-results	Display analysis results fetched by **--check-results**.
--output-dir=DIR	Write collection to a specified directory instead of uploading.
--output-file=FILE	Write collection to a specified archive instead of uploading.

The **insights-client** command has several options that are useful when debugging its operation.

Table 11.2. **insights-client** debug options

Option	Description
--version	Print the versions of **insights-client** Client and Core.
--test-connection	Test connectivity to the Insights for Red Hat Enterprise Linux services.
--force-reregister	Re-register the system with Insights for RHEL and use a new ID. This action duplicates an already-registered system.
--verbose	Log all debug output to the console.
--no-upload	Runs the client but does not upload the archive. The archive is stored in the **/var/tmp/** directory. The file name is displayed when **insights-client** completes.
--keep-archive	Keep the archive after uploading.
--support	Generate a diagnostic log for support.
--status	Display host registration status.
--net-debug	Log network calls to the console.

CHAPTER 12. OPTIONS FOR INSIGHTS CLIENT REMOVE.CONF REDACTION CONFIGURATION FILE



NOTE

As of RHEL RHEL 6.10, 7.9, 8.3 and later, using **remove.conf** is deprecated and replaced by two YAML files.

A configuration file, **/etc/insights-client/remove.conf**, controls how data is redacted. The Insights client performs redaction on the archive file based on the information in **remove.conf**. Most redaction activity occurs before the archive file is generated and sent to the Insights for Red Hat Enterprise Linux service.

File name and location

The suggested name is **/etc/insights-client/remove.conf** for the redaction configuration file. You must have root permission in order to create this file. It is not created automatically as part of the Insights client deployment.

NOTE

The **/etc/insights-client/insights-client.conf** configuration file specifies the name and location of the redaction configuration file. See Chapter 13, *Options for the Insights client configuration file*.

File template for remove.conf

The following is an example template for the **remove.conf** file:

```
[remove]
files=/etc/cluster/cluster.conf,/etc/hosts
commands=/bin/dmesg,/bin/hostname
patterns=password,username
keywords=super$ecret,ultra$ecret+
```

- A single comma with no space separates each entered value.
- Do not include the line for data you do not want redacted.
- Regular expressions and wildcard matching (**egrep**) are not supported.
- All entries are case-sensitive.

Table 12.1. remove.conf configuration options

Option	Description
[remove]	This must be the first line of the **remove.conf** file.
files=	The listed files are excluded from data collecting.

Option	Description
commands=	The output from commands listed here is excluded from data collecting. The command names must exactly match the command names in the collection rules.
patterns=	Any line in the archive file that matches all or part of a **pattern** is deleted.
keywords=	The keyword is replaced with an actual value of **keyword** and a number. For example, if you define two keywords, **keywords=host,domain**, each instance of **host** is replaced with the string **keyword0** and each instance of **domain** is replaced with **keyword1**. Each additional keyword you define is replaced with an incremental **keywordn**.

Insights client YAML redaction configuration files

NOTE

As of RHEL RHEL 6.10, 7.9, 8.3 and later, Insights client uses YAML files to configure redaction. In earlier releases a **remove.conf** file controls redaction.

Table 12.2. File redaction example for file-redaction.yaml

Content	Description
`# file-redaction.yaml` `---`	An optional comment containing the file name.

`# Exclude the entire output of commands`
`#  Specify the full command path or the symbolic name in .cache.json`
 	
`commands:`
`- /bin/rpm -qa`
`- /bin/ls`
`- ethtool_i`
	The entire output from **/bin/rpm -qa** and **bin/ls** are excluded from the archive file.
	
	In the **.cache.json** file, the full command **/sbin/ethtool -i** is mapped to the symbolic name **ethtool_i**.

Content	Description
# Exclude the entire output of files # Specify the full filename path or the symbolic name in .cache.json files: - /etc/audit/auditd.conf - cluster_conf	For the specified files, the file name and the file content are excluded from the archive file. In the **.cache.json** file, the full file path **/etc/cluster/cluster.conf** is mapped to the symbolic name **cluster_conf.**

Table 12.3. Content redaction example for file-content-redaction.yaml

Content	Description
# file-content-redaction.yaml ---	An optional comment containing the file name.
# Pattern redaction per matching line # Lines that match a pattern are excluded from files and command output. # Patterns are processed in the order that they are listed. # Example patterns: - "a_string_1" - "a_string_2"	When the patterns match exactly any lines that contain **a_string_1** or **a_string_2** are excluded from files and command output. Enclose the pattern string in quotes.
# # Regular expression pattern redaction per line # Patterns with regular expressions (regex) are wrapped with "regex:" # Example patterns: regex: - "abc.*def" - "localhost[[:digit:]]" #	Regular expressions are wrapped with **regex**. You can use any regular expression (regex) recognized by the **egrep** command. Enclose the regex in quotes.

Content	Description
# Lines matching these regular expressions are excluded # from output. patterns: regex: - "*\.conf" - "^include"	The **egrep** expressions are enclosed in quotes to make sure the regex characters are properly recognized. In this example, lines are redacted from the archive file if any string contains **.conf** or if any line begins with**include**.
# Replace keywords in files and command output with generic identifiers by the Python soscleaner module keywords: - "1.1.1.1" - "My Name" - "a_name"	The strings in the **keywords:** array are replaced with the actual value **keyword** and a number. For example, each instance of the string **1.1.1.1** is replaced with **keyword0**. All instances of the string **My Name** are replaced with **keyword1**. The **a_name** is replaced with **keyword3** Each additional keyword you define is replaced with an incremental **keywordn** The value of the substituted **keywordn** is determined by a Python SoS process and cannot be changed. The strings that you define in the **keywords:** array are case sensitive.

CHAPTER 13. OPTIONS FOR THE INSIGHTS CLIENT CONFIGURATION FILE

You can use the settings in the **/etc/insights-client/insights-client.conf** configuration file to change how the Insights client operates on your system.

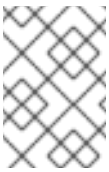
Where the configuration file and the CLI have similar options, the CLI option is executed when you enter the **insights-client** command. When the scheduler runs the client, the configuration file options are executed.

NOTE

All choices must be entered as shown. **True** and **False** use initial capital letters.

To enable an option in the configuration file, remove the **#** as the first character of the line and provide a value. The changes take effect either at the next scheduled run, or when you enter the **insights-client** command.

Table 13.1. insights-client.conf configuration options

Option	Description
[insights-client]	Required first line of the configuration file, even if you specify a different location or name for the client configuration file.
#loglevel=DEBUG	Change the log level. Options are: DEBUG, INFO, WARNING, ERROR, CRITICAL. The default is DEBUG. The default log file location is **/var/log/insights-client/insights-client.log**.
#auto_config=True	Attempt to auto configure with Satellite server. Values can be **True** (default) or **False**.  NOTE When **auto_config=True** (default), the authentication method used is **CERT**.
#authmethod=BASIC	Set the authentication method. Valid options BASIC, CERT. The default value is BASIC even though CERT is used when **auto_config=True**.
#username=	**username** to use when authmethod is BASIC. The **username** is stored in clear text.
#password=	**password** to use when authmethod is BASIC. The **password** is stored in clear text.

Option	Description
#base_url=cert-api.access.redhat.com:443/r/insights	Base URL for the API.
#proxy=	URL for your proxy. Example: http://user:pass@192.168.100.50:8080
#auto_update=True	Automatically update the dynamic configuration. The default is **True** Change to **False** if you do not want to automatically update.
#obfuscate=False	Obfuscate IPv4 addresses. The default is **False**. Change to **True** to enable address obfuscation.
#obfuscate_hostname=False	Obfuscate hostname. You must set **obfuscate=True** to obfuscate the host name, which enables IPv4 address obfuscation. You cannot obfuscate only the host name.
#display_name=	Display name for registration. The default is to use **/etc/hostname**. NOTE: This value interacts with the **insights-client --display-name** command. If you use the CLI to change the display name but a different display name is enabled in the configuration file, the display name reverts to the configuration file value when the scheduler runs the Insights client.
#cmd_timeout=120	Timeout for commands run during collection, in seconds. The command processes are terminated when the timeout value is hit.
#http_timeout=120	Timeout for HTTP calls, in seconds
#remove_file=/etc/insights-client/remove.conf	Location of redaction file