

This section includes the minimal tasks involved in installing and configuring FACT. For details about these installation and configuration tasks, see [Obtaining and Installing FACT](#) and [Creating FACT Configuration Files](#).

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## Obtaining and Installing FACT Software

Before you obtain and install FACT, ensure that you are running the following software on your system: RedHat Enterprise Linux, Version 4 or 5, or SUSE Linux Enterprise Distribution, Version 9 or 10, and Python, Version 2.3 or later.

### Obtaining FACT Software

FACT is distributed as an RPM file. To obtain a copy of the FACT RPM, perform the following steps:

**Step 1** Navigate to the Cisco software download site at the following URL:  
<http://www.cisco.com/kobayashi/sw-center/index.shtml>

If you are not already a registered user, you must register at the above URL to gain access to software downloads.

**Step 2** Select the software product category by clicking the **Server Network and Virtualization** link.

**Step 3** Select a device by choosing **Server Fabric Software > InfiniBand Management Software > Cisco Fabric Analysis and Correlation Toolkit**.

### Installing FACT Software

To install the FACT software RPM, perform the following steps:

**Step 1** Log in to your console as a super user.

**Step 2** Install the RPM by entering the following command:

```
rpm -i cisco-fact-version .noarch.rpm
```

**Step 3** FACT installs the software without status messages. To verify that you have installed the correct version of FACT, enter the **fact -v** command, and verify the version number in the command output.

## Configuring FACT Software

To configure FACT software you must create the master configuration file and create the credentials file.

### Creating the Master Configuration File

For more information about master configuration files, see [About Master Configuration Files](#). To create the master configuration file, perform the following steps:

**Step 1** Log in to your host as a super user.

**Step 2** Using a text editor, create a master configuration file names `.fact.conf` in your home directory.

**Step 3** Enter the following line into the configuration file:

```
credential-file: ~/.fact-credentials
```

**Step 4** For each managed switch that is running SFS OS in your network, add a line to the master configuration file that specifies the hostname or IP address:

```
managed-nodes: SFSOS switch name
```

For information about managed nodes, see [About Managed Node Definitions Files](#).

**Step 5** For each managed OEM switch that is in your network (either a Cisco SFS 7012 or Cisco SFS 7024), add a line to the file that specifies the hostname or IP address:

```
managed-nodes: OEM switch name
```

**Step 6** If you are using the High-Performance Subnet Manager, specify each host that runs the High-Performance Subnet Manager in the master configuration file:

```
managed-nodes: host name
```

**Step 7** (Optional) FACT usually determines the names of hosts on the network without needing to log in to them. If FACT does not identify the hosts or if you want FACT to collect additional diagnostic information from the hosts, add each host in your network to the master configuration file:

```
managed-nodes: host name
```

**Step 8** (Optional) If you have unmanaged switches in your network, add a line to the master configuration file that specifies the GUID name and creates a name for the switch. (For more information about GUID names, see [About GUID Name Definitions](#).) You may use any name for the switch, but you must use the following format for the line that you add to the file:

```
guid-name: 00:1b:0d:00:00:ca:a6 switchA  
guid-name: 00:1b:0d:00:00:ca:aa switchB
```

## Creating the Credentials File

For more information about the credentials file, see [About Credentials Files](#). To create a credentials file, perform the following steps:

**Step 1** Using a text editor, create a file named `.fact-credentials` in your home directory.

**Step 2** For each managed node (switch or host) that you listed in the master configuration file, add a username and a password that FACT can use to log in to that managed node. Choose Case 1 or Case 2 from the following steps:

**Case 1**--If each switch or host in your network has a different username or password, create a separate stanza in the credentials file for each switch and each host, as shown in the following example:

```
SFSOS switch name

    user: username
    password: password

OEM switch name

    host myhost[1-8]
    user: username
    password: password

host name

    user: username
    password: password
```

**Case 2**--If all managed nodes of a given type (host, SFS OS switch, or OEM switch) have the same username and password, create one stanza for each node type, as shown in the following examples:

```
SFSOS switch *

    user: username
    password: password

OEM switch *

    user: username
    password: password

host *

    user: username
    password: password
```

**Step 3** Save the credentials file that you just created.

**Step 4** Verify the configuration by entering the **fact scan fabric** command, which scans the managed nodes in the master configuration file.

**Step 5** If FACT reports errors while scanning, see [Troubleshooting FACT Configuration](#).

## Troubleshooting FACT Configuration

If FACT reports errors while scanning, consult this section for common symptoms, possible causes, and recommended actions.

**Symptom:** FACT returns an error message indicating that permission is denied: "name: permission denied."

**Possible cause:** The credentials file is either missing or incorrect.

**Recommended action:** Correct the credentials file. (See [Creating the Credentials File](#).)

**Symptom:** FACT returns a time-out message: "ScanError: timeout scanning name."

**Possible cause:** The master configuration file has an incorrect host name or IP address, or the host is not reachable using the name that appears in the file.

**Recommended action:** Verify that you have entered the correct host name or IP address in the master configuration file. (See [Creating the Master Configuration File](#).) Also, verify that the managed node is reachable through SSH.

**Symptom:** When you attempt to scan the network, FACT returns a message saying that multiple master Subnet Managers are found: "ScanError: multiple Master Subnet Managers found."

**Possible cause:** The master configuration file contains managed nodes from multiple subnets. FACT can scan a single subnet only.

**Recommended action:** Enter the FACT **show subnet-managers** command to see all of the master and standby Subnet Managers that FACT found. From the master configuration file and from the credentials file, remove the Subnet Managers that are not in the subnet that you are scanning.

**Symptom:** FACT cannot find a master Subnet Manager: "ScanError: no Master Subnet Manager found."

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**Possible cause:** The node that is running the master Subnet Manager is not in the master configuration file. (See [Creating the Master Configuration File](#).)

**Recommended action:** Check the master configuration file, and add the node that is running the master Subnet Manager if it does not exist in the file.