



## CHAPTER 2

# Installing the Cisco NetFlow Collector

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This chapter describes how to install the Cisco NetFlow Collector (NFC) application.

This chapter includes the following sections:

- [NFC Requirements, page 2-1](#)
- [Installing NetFlow Collector, page 2-3](#)
- [Uninstalling NetFlow Collector, page 2-7](#)
- [Licensing, page 2-7](#)

## NFC Requirements

The following sections describe the Cisco NetFlow Collector, Release 6.0 requirements.

## System Requirements

The following requirements are new for Cisco NetFlow Collector, Release 6.0:

- The amount of system swap space must be greater than the amount of memory specified for the collection process in the file `/opt/CSCOnfc/config/nfcmem`. The configured amount of memory is now allocated at startup; sufficient swap space must now be available for creating child processes when the collection process starts.
- NFC is licensed per host. Refer to the “[Licensing](#)” section on [page 2-7](#) for information on obtaining a license.



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**Note** For licensing to function properly, the `/etc/hosts` file must contain separate entries for the loopback and host name address (by default, Red Hat Enterprise Linux configures only a loopback entry in `/etc/hosts` that is also associated with the hostname).

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## Hardware Requirements

Cisco NetFlow Collector, Release 6.0 has the following hardware requirements:

- Minimum: 2 GB RAM, 73 GB disk, dual processor on an entry-level server.
- Recommended: 4 to 8 GB RAM, two or more 15K SAS 146 GB or greater disks, dual 3 GHz dual-core (5160) processor entry-level server.

## Supported Operating Systems and Platforms

Cisco NetFlow Collector, Release 6.0 supports the following operating systems and platforms:

- Solaris 8, Solaris 9, or Solaris 10 on an entry-level server with dual 1 GHz or greater SPARC processors such as a Sun Fire V240.
- Red Hat Enterprise Linux 2.1, 3.0, or 4.0 (ES and AS) on an entry-level server, such as an IBM x3550 or x3650 with dual 2.8 GHz or greater Intel Xeon single-core processor or dual 3 GHz dual-core (5160) processors.

Note that the CPU, RAM, and disk space recommendations above are suggested, and that actual requirements are determined by your configuration and by the volume and uniqueness of NetFlow data that is received. Actual resource usage can vary greatly depending on these factors.



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**Note**

To prevent NetFlow data export packet loss, the workstation should be dedicated to the NetFlow Collector and should not be running other applications.

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Cisco NetFlow Collector generates output files containing aggregated data. The exact amount of disk space the output files require depends on the flow arrival rate, collection interval, number of aggregation schemes specified, use of compression or not, and data file retention policies.

For more information on planning and managing disk space usage, see the section “Memory Usage” in the *Cisco NetFlow Collector User Guide*.

Cisco NetFlow Collector, Release 6 supports the Stream Control Transmission Protocol (SCTP) as a message transport service. To use SCTP, you must be running NFC on either the Red Hat Enterprise Linux release 4 (Update3) or Solaris 10 platforms.

## Browser Requirements

The NetFlow Collector, Release 6.0 web-based user interface is compatible with Microsoft Internet Explorer 6 and Mozilla Firefox 1.5 or greater on Windows or UNIX. The web-based UI requires that the browser support a Java virtual machine (JVM) to run applets.



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**Note**

The Sun JVM must be used; the JVM version must be 1.5 or higher. You can download Sun JVM 1.5 from the website <http://java.sun.com/javase/downloads/index.jsp>.

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# Installing NetFlow Collector

The Cisco NetFlow Collector is distributed on CD-ROM. Updates are made available at <http://www.cisco.com>.

The Cisco NetFlow Collector installation script makes the installation process as easy as possible by automatically handling new and upgrade installation issues. The installation script searches for files from a previously installed version of the NFC. If it detects a previously installed version, it preserves existing data and configuration files. Preserving the configuration files retains any additions or changes to the NFC resource definitions or parameter settings that you might have made while using the previously installed version of Cisco NetFlow Collector.

**Note**

Automatic upgrade from Cisco NetFlow Collector Release 5.x or 6 is supported in Release 6. When upgrading from an earlier release, configuration based on earlier configuration files is not applied and must be created with the web-based interface.

Later in the installation process, the installation script allows you to specify whether you want to use the existing configuration files, or use the new configuration files. Depending on your choice, the unused files are saved in case you need them later. The installation script also saves existing log files before clearing the logs directory during an upgrade.

If you are installing Cisco NetFlow Collector for the first time, the installation is basically the same, but with fewer prompts from the installation script.

To install the Cisco NetFlow Collector, perform the following steps:

**Step 1** Log into the host as root.

**Step 2** The NFC software can only be installed in the directory `/opt/CSCOnfc`. Enter:

```
df -k /opt
```

to verify that `/opt` contains at least 1GB (1,000,000KB) of available space. Note that significantly more space may be required to hold output files.

Also verify that at least one gigabyte of swap space is configured on the system by running `swap -s` on the Solaris platform, or `swapon -s` on the Linux platform. Four gigabytes might be required if the memory settings in `/opt/CSCOnfc/nfcmem` are increased at a later time, which is common.



**Note** If you wish to install NFC in some other directory, create a symbolic link to `/opt/CSCOnfc` before installing the NFC software.

**Step 3** If NetFlow Collector is already installed on the system, you must stop all NetFlow Collector processes. Enter:

```
/opt/CSCOnfc/bin/nfcollector shutdown
```

**Step 4** When downloading the image over the web, download the image to a temporary directory such as `/tmp` with at least 400 MB of available space.

**Step 5** To untar the NFC image, enter:

```
tar xvf CSCOnfc-version.tar
```




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**Note** The image should not be untarred under the install directory **/opt/CSCOnfc**.

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The directory `CSCOnfc-version` is created in the current working directory.

**Step 6** Perform one of the following:

- a. When installing from CD-ROM, run `NFCsetup.sh` in the CD-ROM base directory.
- b. When downloading the image over the web, run `NFCsetup.sh` in `CSCOnfc-version` subdirectory created when the image was untarred.

The following example illustrates these steps. The installation script is invoked while logged in as root.

### Example

```
[root@nfc-lnx CSCOnfc-6.0.0-31-standard]# ./NFC_setup.sh
Fri Mar 23 16:10:14 EDT 2007

Using software package /var/tmp/nfc/dist/CSCOnfc-6.0.0-31-standard/./CSCOnfc.zip.

Checking platform version...

*****

Cisco NetFlow Collector 6.0.0 [standard image, build 26]
Copyright (c) 2003-2007 by Cisco Systems, Inc.
All rights reserved.

This product contains cryptographic features and is subject to
United States and local country laws governing import, export,
transfer and use. Delivery of Cisco cryptographic products does
not imply third-party authority to import, export, distribute
or use encryption. Importers, exporters, distributors and users
are responsible for compliance with U.S. and local country laws.

By using this product you agree to comply with applicable laws
and regulations. If you are unable to comply with U.S. and local
laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be
found at: http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email
to export@cisco.com.

*****

Press Return to continue...
```

**Step 7** Press return when prompted after the banner page is displayed.

**Step 8** As the owner of NFC installed files and processes, you must select an existing user ID. The account must already exist on the system. If it does not, an error is displayed and the install is terminated.

An existing userid must be selected as the owner of files and processes.

```
Enter userid: nfcuser
```

This will be installed and run with user id nfcuser; group id is eng.

- Step 9** The install script checks whether NFC is already installed and verifies that it is not running on the system. If NFC is running, an error is displayed and the install is terminated.

If NFC is already installed on the system all log, configuration, and output files are first moved under **/opt/CSCOnfc.save**. When the installation is almost complete, log files are automatically moved to the directory **/opt/CSCOnfc/logs/old**, and configuration files are moved to the directory **/opt/CSCOnfc/config/old**. Output files under **/opt/CSCOnfc/Data** and filesready files in the logs directory are preserved.

```
Checking for installed copy of NFC...
```

```
Found existing installation: 5.0.3 in /opt/CSCOnfc.
```

```
Verifying that existing NFC is not running...
```

```
Saving files from existing installation...
```

- Step 10** Solaris platform only—If a previous version of NFC prior to Release 6.0 is already installed on the system, the **pkgrm** program prompts whether to remove the previously installed package. Enter **y**.

The following package is currently installed:

```
CSCOnfc          Cisco CNS NetFlow Collection Engine
                  (Solaris2.8) 5.0.3 [standard image, build 2]
```

```
Do you want to remove this package? y
```

- Step 11** The Java Runtime Environment (JRE) is installed. On Red Hat Enterprise Linux, the 32-bit or 64-bit JRE is automatically selected depending on which operating system is running, x86 or EM64T. On Solaris, you are prompted to select the 32-bit or 64-bit JRE. Because for NetFlow Collector the 32-bit JRE stores data significantly more efficiently, it is recommended that you select 32-bit JRE.

```
Installing Java from jdk-1_5_0_10-linux-i586.bin...
```

- Step 12** If a previous installation is detected, you are prompted whether to use old configuration files or to install new configuration files:

```
Please choose one of the following..
```

```
(1) Clean install
    (Existing configuration and log files will be saved
     in */old should you want to refer to them later)
```

```
(2) Retain existing files
    (New default configuration will be saved in */new)
```

If you select option 1, previous files are stored in the **/opt/CSCOnfc/config/old** subdirectory as indicated. If you select option 2, new configuration files are saved with the new directory, and the previous installation's configuration files are retained.

When upgrading to Release 6 from Release 5, configuration differences are automatically migrated. When upgrading from Release 4 or earlier, the previous configuration is not migrated; in this case the user must create configuration with the web-based user interface.

```
Please choose: 2
```

```
Existing files will be retained.
```

```
Migrating /opt/CSCOnfc/config/nfc-config.xml from NFC 5.0.x to 6.0 ...
```

```
Migrating /opt/CSCOnfc/config/nfcmem from 5.0.x to 6.0
```

- Step 13** Specify the default login name and password for accessing the web-based user interface. This is not a system account and password; the login name and password are stored in the NetFlow Collector configuration. The login name **nfcuser** is used by default if you press return without specifying a name. However you must enter and confirm the password.

```
Web UI login name: [nfcuser]
Web UI password for nfcuser:
Enter value again to confirm:
```

```
Setting file ownership...
```

```
Updating platform config...
```

- Step 14** Indicate whether NFC should be started automatically when the system initializes:

```
Would you like to start this when the system initializes? (y/n) y
```

```
CSCOnfc will be started automatically when the system initializes.
```

If you respond **y**, the following rc scripts are created for autostarting NetFlow Collector when the system initializes:

Solaris:

- /etc/init.d/cscso\_nfc
- /etc/rc2.d/K99cscso\_nfc
- /etc/rc3.d/S99cscso\_nfc

Linux:

- /etc/init.d/cscso\_nfc
- /etc/rc[01246].d/K01cscso\_nfc
- /etc/rc[35].d/S99cscso\_nfc

- Step 15** The NFC installation is completed and the following message displays:

```
Installation of Cisco NetFlow Collector 6.0.0 [standard image, build 22]
is complete.
```

- Step 16** For NetFlow Collector to run, a host-specific license must be obtained from Cisco.com. Copy the license file or license file contents with no alterations to **/opt/CSCOnfc/config/nfc.lic**. If you are upgrading from a previous version of Release 6 and retain the existing configuration, the existing license file is preserved. See the [“Licensing” section on page 2-7](#) for additional details about licensing.

Note: In order to use this product, you must first obtain a license from Cisco at <http://www.cisco.com/go/license> and copy it to **/opt/CSCOnfc/config/nfc.lic**

```
[root@nfc-lnx CSCOnfc-6.0.0-31-standard]#
```

The record of the installation session is saved in **/opt/CSCOnfc/logs/nfc\_install.log**.

- Step 17** Update time zone data in the Java Runtime Environment (JRE) packaged with NFC with the latest time zone data available. See the [“Updating JRE Time Zone Data” section on page 3-5](#) for details.
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# Uninstalling NetFlow Collector

To uninstall and remove all files for all files for NetFlow Collector Release 6, do the following:

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**Step 1** Enter the following to stop the NFC server :

```
/nfcollector shutdown
```

**Step 2** Log in as root and run the following:

```
/opt/CSCOnfc/bin/uninstall.sh
```

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## Licensing

A license file is required for each host running NetFlow Collector Release 6. The license is specific to the IP address of the host. You can obtain a limited-time demo license at the NetFlow Collector product page on Cisco.com, or a permanent license at <http://www.cisco.com/go/license>.

In both cases you must have the IP address of the host on which NetFlow Collector will run. To obtain a permanent license, you must also have the PAK you received after purchasing NetFlow Collector. After you enter the information, a license file is emailed to you. Copy the license file or its contents with no alterations to **/opt/CSCOnfc/config/nfc.lic**.

The first line of the license file contains either the demo expiration date or the word **permanent** for a permanent license, and the IP address of the host to which NetFlow Collector is licensed.

If the host running NetFlow Collector has more than one network card and IP address, specify the IP address associated with the hostname when licensing the product.



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**Note**

By default, Red Hat Enterprise Linux associates the system hostname with the loopback address **127.0.0.1** in **/etc/hosts**. However, for licensing to work, the hostname must be associated with the host's IP address. Edit **/etc/hosts**, remove the hostname from the loopback address entry, and add an entry for the licensed IP address.

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The file **/etc/nsswitch.conf** is normally configured so that hostname lookups are first obtained from files (**/etc/hosts**).



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**Note**

If a clean install is performed, the previous license file is not retained. The previous license file is saved at **/opt/CSCOnfc/config/old/nfc.lic**.

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