CWSI Installation Guide

CiscoWorks for Switched Internetworks (CWSI) is a set of three network management applications: CiscoView, VlanDirector, and TrafficDirector.

CiscoView is a device-management application that provides dynamic status, statistics, and comprehensive configuration information for Cisco internetworking products. It lets you display a graphical representation of each device, display configuration and performance information, perform minor troubleshooting tasks, and control and configure devices.

VlanDirector is a virtual-LAN-management application for Cisco's Catalyst switches. It provides configuration, monitoring, and error-reporting capabilities for switches connected as virtual LANs (VLANs). VlanDirector offers multiple windows for displaying configuration status and provides physical and logical views of interconnected switches.

TrafficDirector lets you monitor, troubleshoot, and record information about your network's operation. It helps you identify and isolate a wide variety of fault conditions in networks. It uses a central management console in conjunction with data-gathering agents located at various points on a network. It can collect wide-ranging statistical data, display

selectively captured network traffic, set user-defined alarm conditions, and obtain real-time updates from all segments of a network.

System and Network Requirements

Before you install CWSI, make sure that your system meets the general requirements shown in Tables 1 and 2.

Table 1 CWSI System Requirements

	Operating System	Available Disk Space	RAM
Sun	Solaris 1.x (SunOS 4.1.3, SunOS 4.1.3_U1, or SunOS 4.1.4)	112 MB for full installation	32 MB

Table 2 lists additional hardware and software information for CWSI.

Table 2 CWSI Hardware and Software Environments

	Sun
Hardware	Sun SPARCstation
	Color monitor
Software	
Windowing system	X11R4 or X11R5
	OpenWindows 3.0 or 3.3; and Motif 1.2
Network management software (not required)	SunNet Manager 2.2.2
	HP OpenView 3.3

Note You must also have a valid X server from which to perform the CWSI installation; it need not be the system on which the software is to be installed.

You can install CWSI on a local disk or a network mounted Network File System (NFS) disk to which you have root access.

If you are installing VlanDirector, be sure that you have the required disk space for your VlanDirector database. Table 3 shows the disk space required for various components.

Table 3 Disk Space Required for Various Components

Component	Disk Space
Base	400K
Each Switch	5K
Each Module per Switch	20K
Each VLAN	2K

If an example network contains 100 switches with 3 modules per switch and 500 VLANs, the following formula calculates the space required:

```
350K + (100 x 5K) + (300 x 20) + (500 x 2) = 7850K
```

Mounting the CWSI CD

This section describes how to mount the CWSI CD from a local or a remote CD-ROM drive.

Mounting from a Local CD-ROM Drive

Insert the CWSI CD-ROM into the CD-ROM drive and follow these steps:

1. Become the superuser by entering **su** and the root password at the command prompt, or log in as **root**.
2. Enter the following command to set the display variable:

   ```
   # setenv DISPLAY ip_address:0.0
   ```

   Use the IP address (or host name) of the system from which you are viewing the installation.
3. If the */cdrom* directory does not already exist, enter the following command to create it:

   ```
   # mkdir /cdrom
   ```

4 Mount the CD-ROM by entering the following command:

```
# mount -rt hsfs /dev/sr0 /cdrom
```

Proceed to “Installing CWSI” to perform your installation.

Mounting from a Remote CD-ROM Drive

On the *remote* machine, insert the CWSI CD-ROM into the CD-ROM drive and do the following:

1 Become the superuser by entering **su** and the root password at the command prompt, or log in as **root**.

2 Enter the following command to set the display variable:

```
# setenv DISPLAY ip_address:0.0
```

Use the IP address (or host name) of the system from which you are viewing the installation.

3 If the */etc/exports* file does not exist, use a text editor to create it.

4 Add the following line to the */etc/exports* file:

```
/cdrom -ro
```

5 To mount the CD-ROM, enter the following command:

```
# /mount -rt hsfs /dev/sr0 /cdrom
```

6 Run **exportfs -a** with the following command:

```
# exportfs -a
```

On the *local* machine, follow these steps:

1 Become the superuser by entering **su** and the root password at the command prompt, or log in as **root**.

2 If the */cdrom* directory does not already exist, create it by entering the following command:

```
# mkdir /cdrom
```

3 Mount the CD-ROM by entering the following command:

```
# /etc/mount remote_machine_name:/cdrom /cdrom
```

Installing CWSI

This section describes how to install CWSI on SunOS.

Before You Install

Before installing CWSI, you may wish to first remove any old versions of its components that might be present. This is not required, as a new CWSI installation will overwrite existing versions of its components, as well as any stand-alone installations of the individual products.

To remove CWSI, enter the following commands:

```
# cd /var/sadm/csco
# ./rmprod ciscoview
# ./rmprod vlandirector
# rm -rF /var/tmp/unbundled
# rm -rF install_directory
```

The default install directory is /usr/nms. Remember that the **rm - rF** command removes the entire directory tree and all the files in it.

Note You do not need to enter a separate command to remove TrafficDirector.

If you use SunNet Manager, save your SNM maps before installing CiscoView.

Starting an Installation

The instructions in this guide assume you are installing all three components of CWSI. If you are not and you come to a step that doesn't appear on your screen, go on to the next step.

You can press **Ctrl-C** at any time to terminate the installation. If you terminate before the installation is complete, you must restart at step 1.

To install CWSI on a Sun workstation, follow these steps:

1. Become the superuser by entering **su** and the root password at the command prompt, or log in as **root**.
2. Install the files from the CD-ROM drive by entering the following commands at the system prompt:

   ```
   # cd /cdrom
   # ./extract_unbundled
   ```

   Make sure to include the **./** in the **extract_unbundled** command.

After you start the installation, a series of prompts are displayed. You can press **Return** to accept the default value (shown first in parentheses) for each prompt.

3 Respond to the program prompt:

```
Do you want to continue(y/n)?
```

If you answer **y** (the default), you are accepting the copyrights for the CWSI components and terms of the Cisco licensing agreement, and the installation begins.

4 You are asked which components of CWSI you wish to install. Enter the appropriate option and press **Return**.

CiscoView is installed first. The screen displays a series of prompts about the following variables:

- Installation location for CiscoView. The default destination is */usr/nms*. You can change this default when prompted.
- File owner and group.

- Installation location for app defaults.
- Device options. You can select which device packages you want to install by selecting the number of each package from the list. (The default is all devices.)

5 If everything is proceeding normally, enter **y** or press **Return** in response to each prompt to continue the installation. If not, entering **n** returns you to the CiscoView configuration prompts and allows you to change the variables you entered.

6 The installation program displays a summary of your answers before you confirm the CiscoView installation. This lets you review and check your responses to the installation prompts.

If the summary is correct, enter **y** or press **Return** to perform the installation. If not, entering **n** returns you to the CiscoView configuration prompts and allows you to change the variables you entered.

7 You are asked for your TrafficDirector serial number, password, and expiration date, which are found on a sheet in your CWSI package. Enter each of these items when prompted and press **Return** to continue.

8 You are asked to specify the database owner, group, and data file directory for VlanDirector. Enter the desired values or press **Return** to use the defaults. Make sure the user/group you enter is correct for the user or users who intend to use VlanDirector.

9 The installation program displays a summary of your answers before you confirm the VlanDirector installation. This lets you review and check your responses to the installation prompts.

If the summary is correct, enter **y** or press **Return** to begin the installation. If not, entering **n** returns you to the VlanDirector configuration prompts and allows you to change the variables you entered.

As the installation proceeds, filenames for the CiscoView, TrafficDirector, and VlanDirector files are listed on the screen as they are installed. Each product takes approximately 5 to 10 minutes to install, depending on your system speed. Each CiscoView device package takes approximately 3 to 5 minutes to install.

When the files are all installed, you are asked if you want to view the current CiscoView release note. Enter **y** to view this information. (It is also included in the CWSI release note in your CWSI package.)

10 After the installation is complete, this message appears on the screen:

```
INSTALLATION COMPLETE A complete logfile is located
in /tmp/ciscoinstall.log.  Update your PATH to
include /usr/nms/bin, etc.
================================================
=
========= Software Install Tool Completed. =========
================================================
=
```

11 Perform any tasks described in the installation script after completing the installation, such as making sure the installation directory is included in your path and any necessary environment variables are set. To set the path to the CWSI binaries, in the C shell, add the following line to the *.login* file or *.cshrc* file for each CWSI user:

```
set path=($path /usr/nms/bin)
```

Note If you installed the binaries in a directory other than /usr/nms/bin (the default), include that directory in the line above.

In the Bourne shell, add the following line to the *.profile* file for each CWSI user:

```
PATH=${PATH}:/usr/nms/bin export PATH
```

Unmounting the CD-ROM

1. To unmount and eject the CD from your machine, enter the following commands as superuser:

   ```
   # cd /
   # umount /cdrom
   ```

2. To eject the CD-ROM, either press the eject button on the CD-ROM drive or enter:

   ```
   # eject /dev/sr0
   ```

3. Remove the CD-ROM and store it in a safe place.

Note A complete log of the installation is in the */tmp/ciscoinstall.log* file. Save this file to help you troubleshoot future installation problems.

Starting the CWSI Components

To start CiscoView, see the instructions in “Starting CiscoView” in the next section.

To start VlanDirector or TrafficDirector, consult the appropriate User's Guide included in the CWSI package.

CiscoView Information

This section contains additional information about CiscoView.

Starting CiscoView

These instructions describe how to start CiscoView from SunNet Manager, HP OpenView, or the UNIX command prompt on a Sun system.

If you are using HP OpenView, go to “Starting CiscoView from HP OpenView.” To start CiscoView from the UNIX command line, go to “Starting CiscoView from the Command Line.”

Starting CiscoView from SunNet Manager

You can start CiscoView from the SunNet Manager Tools menu. To access this menu, you need to restart SunNet Manager as follows. (This procedure assumes that the CiscoView directory has been added to your path, which occurs during the CWSI installation procedure.)

1 Save your existing SunNet Manager database.

2 Restart SunNet Manager by entering the following command at the system prompt:

```
hostname% snm -i
```

The SunNet Manager main window appears.

3 To start CiscoView, select **Tools>CW - CiscoView**.

Starting CiscoView from a Device Icon Popup Menu

To start CiscoView from a device icon, follow these steps:

1 In the SunNet Manager Properties sheet for the device, enter the Read Community string for the device you want to view.

2 In the SunNet Manager network map, display the popup menu for the device by clicking on the device.

3 Choose **CiscoView** from the popup menu.

The CiscoView window is displayed with a graphical representation of the specified device (also referred to as a *panel*).

Starting CiscoView from HP OpenView

To start CiscoView from HP OpenView, follow these steps:

1. Launch HP OpenView (if necessary) by entering **ovw** on the UNIX command line.
2. Select **Monitor>CiscoView** from the HP OpenView main window.

Starting CiscoView from the Command Line

To start CiscoView from the UNIX command line, enter the following at the system prompt:

```
hostname% nmcview -host device_name -rd
read_community_string
```

For example, the following command starts CiscoView and displays the device named “charlie” with the read-only community string “over.”

```
hostname% nmcview -host charlie -rd over
```

The CiscoView window is displayed with a graphical representation of the specified device (also referred to as a *panel*).

Make sure that the PATH environment variable includes the path to the CiscoView executables.

Loading MIB Files

You can load Management Information Base (MIB) files as part of the CWSI installation; these instructions describe how to load MIB files after installation.

HP OpenView MIBs

If you are using HP OpenView, you need to load MIBs into the HP OpenView Simple Network Management Protocol (SNMP) MIB database after installation. This allows CiscoView to query devices for information.

To load the MIBs, enter:

```
$ NMSROOT/bin/cvinstall -f
```

Note that the system takes 15 to 20 minutes to load all 57 MIBs.

SunNet Manager MIBs

If you are using SunNet Manager (SNM), MIBs are automatically copied into the correct SNM directory.

After CiscoView is installed, run **snm -i** so that all MIB schema, the CiscoView application registration, and the device registration information are taken into account.

Optionally, the -*q* option (**snm -i -q**) displays information about each schema as it loads.

Using the CiscoView Online Help System

Use the help system to get information about using the CiscoView interface, navigating within the product, finding information on a specific topic, and viewing device, port, and card information.

Table 4 shows the different ways of accessing online help.

Table 4 Accessing Online Help Information

For information about	Do this
The help system for specific products	Select **Help>Contents**
How to use the help system	Select **Help>Using Help**
How to use CiscoView features	Select **Help>Using CiscoView**
The current CiscoView version	Select **Help>About CiscoView**

For information about	Do this
How to view Configuration and Performance (dashboard) windows and field descriptions	Click the **Help** button in the window or search within the help system
How to change a component value	Press the **Help** button over the field

Displaying a Device with CiscoView

After you start CiscoView, you see the CiscoView main window. To display a device, follow these steps:

1. Select **File>Open Device**. (You do not need to open a device if you selected the device icon from a network map.)

   The Open Device window is displayed.

2. Complete the fields in the Open Device window as follows:

   In the **Host** field, enter the host name or IP address of the device you want to display.

   In the **Read Community** field, enter the read-only community string specified by your network administrator (unless *Public* has already been specified).

In the **Write Community** field, enter the read-write community string specified by your network administrator (unless *Public* has already been specified). The correct read-write community string allows you to change some device settings.

3 Click **OK** to display the panel of the specified device.

Troubleshooting

If you cannot open a device in CiscoView, you receive a message indicating that the device is unmanageable. This message indicates one of the following conditions:

- There is no SNMP agent on the device. You can still ping the device from the management station.
- You have entered an incorrect Read community string in the Open Device window.
- There is no response from the device within the timeout period.
- The management station cannot reach the device and cannot successfully ping the device within the timeout period.

Adding New Device Support

To add devices to CiscoView (incremental installations), access Cisco Connection Online (CCO). CCO, formerly Cisco Information Online (CIO), is the Cisco Systems online support channel. Instructions on how to download additional devices for CiscoView using the **cvinstall** command are in the Network Management section on CCO or on the anonymous ftp server.

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