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CiscoWorks Release 1.0(3) Getting Started Guide Addendum

This document provides instructions for installing and configuring CiscoWorks Release 1.0(3) from a CD-ROM. It supplements Chapter 2 and replaces Chapter 3 in the *CiscoWorks Getting Started Guide*. You do not need your tape drive for CiscoWorks installation.

It also includes installation-related information that has changed since the release of CiscoWorks Release 1.0. If you are installing CiscoWorks Release 1.0(3) for the first time or upgrading from either NetCentral Release 1.3 or CiscoWorks Release 1.0 or 1.0(2), read this document and the *CiscoWorks Getting Started Guide*.

This document contains the following sections:

Installing and configuring CiscoWorks Release 1.0(3) for the first time or upgrading from NetCentral Release 1.3 or earlier versions of CiscoWorks includes the following procedures:

1 Prepare for CiscoWorks Release 1.0(3) installation and configuration: refer to Chapter 2, ”Preparing to Install CiscoWorks,” in the *CiscoWorks Getting Started Guide* and the section “Preparing to Install and Configure CiscoWorks Release 1.0(3)” in this addendum. (Note that you cannot use a 1/4-inch tape drive.) You need a CD-ROM drive because CiscoWorks Release 1.0(3) software is provided only on CD-ROM.

2 Install and configure CiscoWorks Release 1.0(3): refer to this document. This document replaces Chapter 3 in the *CiscoWorks Getting Started Guide* and provides instructions for installing CiscoWorks Release 1.0(3) for the first time or for upgrading from CiscoWorks Release 1.0 or 1.0(2) or NetCentral Release 1.3.

3 Copy the CiscoWorks documentation from the CD-ROM to your hard disk (optional).

4 Validate the CiscoWorks Release 1.0(3) installation as described in Chapter 4, "Validating CiscoWorks Installation," in the *CiscoWorks Getting Started Guide*.

Preparing to Install and Configure CiscoWorks Release 1.0(3)

This section provides installation and configuration information about CiscoWorks Release 1.0(3) that has changed since the release of CiscoWorks Release 1.0 software.

System Requirements

CiscoWorks Release 1.0(3) requires the following:

- CD-ROM drive
- Sun OS 4.1.2 or 4.1.3
- Expanded disk space requirements for upgrade installations

These requirements are described in the following sections.

SunOS Requirements

CiscoWorks runs on SunOS 4.1.2 and later. This includes SunOS 4.1.3. CiscoWorks does not run on Solaris 2.x.

Expanded Disk Space Required for CiscoWorks Release 1.0 or 1.0(2) or NetCentral Release 1.3 Upgrades

The new Sybase server that is installed with CiscoWorks Release 1.0(3) needs extra disk space to store your current database during the upgrade. Depending on which release your are upgrading from, refer to the following procedures for calculating CiscoWorks or NetCentral upgrade requirements.

Caution Cisco recommends that you back up your Sybase database before you perform the upgrade procedure. This precaution is strongly recommended because the Sybase upgrade writes over your existing database and may corrupt your data if the upgrade is unsuccessful.

CiscoWorks Release 1.0 or 1.0(2) Upgrade

If you are upgrading from CiscoWorks Release 1.0 or 1.0(2) to 1.0(3), your system must have a minimum of 70 megabytes (MB) of disk space to perform the upgrade. The upgrade procedure requires this additional space for the old Sybase database server to continue running while the new Sybase server is installed into a separate directory. In addition to the 70 MB, you should also have at least 1 MB of free space in the database for the upgrade.

Use the following procedure to calculate disk space before you perform the installation upgrade.

Calculating Disk Space Requirements

The disk space required is displayed during installation, but we recommend that you calculate the space ahead of time to ensure its availability. To calculate disk space use the following formula: Disk Space Required = 45 MB + the amount of disk space used in $SYBASE/data

To estimate the disk space required, perform the following steps at the UNIX prompt (%):

Step 1 Enter the following command:

```
% du -s $SYBASE/data.
```

This command reports the total number of kilobytes used by the *$SYBASE/data* directory.

Step 2 Divide the number of kilobytes in the *$SYBASE/data* directory by 1000.

This calculation gives you an approximate number of megabytes used in the *$SYBASE/data* directory.

Step 3 Add 45 MB to the number of megabytes calculated in step 2.

This is the disk space you will need to perform your installation upgrade.

The CiscoWorks upgrade also requires at least 1 MB of swap space in the database when it upgrades the database.

NetCentral Release 1.3 Upgrade

To calculate the required disk space before you perform the installation, refer to Chapter 8, "Database Administration," in the *CiscoWorks User Guide*. The section "Verifying Available Disk Space" provides instructions on how to use the **checkalloc** command to find out how much disk space is being used by your database.

CiscoWorks Installation Worksheet

The CiscoWorks Installation Worksheet located on page 2-5 of the *CiscoWorks Getting Started Guide* specifies a 1/4-inch tape, but you cannot use a 1/4-inch tape. Instead, you need a CD-ROM drive.

You may also want to calculate the amount of disk space your system has in order to ensure an uninterrupted installation. For more information, refer to the section "Expanded Disk Space Required for CiscoWorks Release 1.0 or 1.0(2) or NetCentral Release 1.3 Upgrades" on page 2.

NIS Installation Support

The CiscoWorks Release 1.0(3) configuration script detects the presence of Network Information Service (NIS) if your workstation is set up for NIS. If you are using NIS, the configuration script saves the data to be added to your NIS Master in the following files: */usr/tmp/CW.group*, */usr/tmp/CW.prod*, and */usr/tmp/CW.sybase*. After configuring CiscoWorks Release 1.0(3), add the information in the files to your NIS Master.

Installing from a Local or Remote CD-ROM

CiscoWorks software is distributed on a CD-ROM. To install CiscoWorks from a CD-ROM drive attached to your system or from a drive attached to a remote system, do the following:

- Attach a CD-ROM drive either to your workstation or to a remote workstation.
- Acquire the appropriate login account to mount the CD-ROM remotely, if you plan to install from a remote host.
- Have the CiscoWorks CD-ROM with you.
- Log in as a superuser. For instructions, refer to page 22 in Chapter 2 of the *CiscoWorks Getting Started Guide*.

Caution Avoid exposing the CiscoWorks Release 1.0(3) CD-ROM to direct sunlight because it might harm the contents.

Before beginning the installation procedure, place the CiscoWorks CD-ROM into its caddy and insert it into the CD-ROM drive. If you are using a CD-ROM drive that is connected to your workstation, refer to the following section, "Mounting from a Local CD-ROM." If you are using a CD-ROM drive that is connected to a remote workstation, refer to the section "Mounting from a Remote CD-ROM." These instructions are also provided in the CiscoWorks Release 1.0(3) CD-ROM insert booklet shipped with the product.

Mounting from a Local CD-ROM

To mount the CD-ROM from a local CD-ROM drive, perform the following steps:

Step 1 Place the CD-ROM into its caddy and insert it into the CD-ROM drive.

Step 2 Become a superuser by entering the following command and supplying your root password:

```
login: su
Password: <rootpassword>
```

Step 3 If the */cdrom* directory does not already exist, enter the following command to create a new directory:

```
hostname# mkdir /cdrom
```

If the */cdrom* directory already exists, proceed to the next step.

Step 4 To mount the CD-ROM, enter the following command:

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

In this command, the **-r** option mounts the CD-ROM in ReadOnly mode. The **-t** indicates the type of filesystem where **hsfs** specifies a filesystem with an ISO 9660 standard or High Sierra standard with Rock Ridge extensions. If you do not use these options, media error messages may display on the console.

If you are installing CiscoWorks for the first time, refer to the section "Installing CiscoWorks Release 1.0(3) for the First Time" on page 6 for instructions. If you are upgrading from NetCentral Release 1.3 or CiscoWorks Release 1.0 or 1.0(2) to CiscoWorks Release 1.0(3), refer to the section "Performing a CiscoWorks Upgrade" on page 17.

Mounting from a Remote CD-ROM

If you plan to use a CD-ROM drive attached to a remote system, CiscoWorks does not require any disk space on the remote system. The software is copied across the network to the local workstation.

The root *.rhosts* file on the remote system must contain the local host name of your system and your user name. Otherwise, you will not be able to access the remote system to download software from the CD-ROM drive connected to the remote system. For more information, refer to the manual pages on **rhosts**.

To mount the CD-ROM from a remote CD-ROM drive, perform the following steps on the remote machine:

Step 1 Place the CD-ROM into its caddy and insert it into the CD-ROM drive.

Step 2 Become a superuser by entering the following command and supplying your root password:

```
login: su
Password: <rootpassword>
```

Step 3 If */cdrom* directory does not already exist, enter the following command to create a new directory:

```
hostname# mkdir /cdrom
```

If the */cdrom* directory already exists, proceed to the next step.

Step 4 If the */etc/exports* file does not exist, create it.

Step 5 Edit the */etc/exports* file to include the following line:

```
/cdrom -ro
```

Step 6 If */etc/exports* did not exist previously, reboot your workstation to become an NFS server, so the *nfsd* can be started.

Step 7 To mount the CD-ROM, enter the following command:

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

In this command, the **-r** option mounts the CD-ROM in ReadOnly mode. The **-t** indicates the type of filesystem where **hsfs** ISO 9660 standard or High Sierra standard with Rock Ridge extensions. If you do not use these options, media error messages may display on the console.

Step 8 If the */etc/exports* existed previously, run **exportfs -a**.

```
hostname# exportfs -a
```

Perform steps 9 through 11 on the local workstation:

Step 9 Become a superuser by entering the following command and supplying your root password:

```
login: su
Password: <rootpassword>
```

Step 10 If the */cdrom* directory does not already exist, enter the following command to create a new directory:

```
hostname# mkdir /cdrom
```

If the */cdrom* directory already exists, proceed to the next step.

Step 11 To mount the CD-ROM, enter the following command:

```
hostname# mount remote_workstation: /cdrom /cdrom
```

If you are installing CiscoWorks for the first time, refer to the following section, “Installing CiscoWorks Release 1.0(3) for the First Time.” If you are upgrading from NetCentral Release 1.3 to CiscoWorks Release 1.0 or 1.0(2) to CiscoWorks Release 1.0(3), refer to the section “Performing a CiscoWorks Upgrade” on page 17.

Installing CiscoWorks Release 1.0(3) for the First Time

After mounting the CD-ROM, install CiscoWorks by changing to the */cdrom* directory and invoking and running the *./extract_unbundled* script which is supplied on the CD-ROM.
The *./extract_unbundled* script provides an interactive prompt and response dialog interface that guides you through the installation process.

Note When invoking the *./extract_unbundled* script, make sure you specify the complete syntax with the period (.) and the slash (/) to ensure that you run the correct version of this command.

The installation and configuration process takes approximately 20 to 30 minutes, although the amount of time can vary depending on your system performance and installation method. Installation from a CD-ROM drive attached to a remote device can take longer.

Note You can exit the installation script at any time by entering **Control-C** (**^C**) to return to the UNIX environment. The responses you made up to the point you exit will be recorded for use as the defaults the next time you start the installation process.

The following are used for the installation procedure and script in this section:

- */usr/nms* is the name of the directory where the CiscoWorks software is being installed.
- *zen* is the name of the system where CiscoWorks is being installed.
- The Sun SPARCstation is using Sun4c architecture.

Substitute the appropriate names and directory path names when you install the software.

Some of the output displayed by the sample installation script is not included. Ellipses (...) in the script indicate that some output is not displayed. A bracketed item ([ ]) after a prompt denotes the default response. If a bracketed item appears without any input next to it, the default value has been accepted.

Procedure for a New Installation

This section provides a detailed explanation of the CiscoWorks installation script dialog for an installation from a CD-ROM drive.

To install CiscoWorks Release 1.0(3), perform the following steps:

Step 1 Change the directory to the */cdrom* directory:

```
zen# cd /cdrom
```

Step 2 Enter the following command to begin the *./extract_unbundled* installation dialog:

```
zen# ./extract_unbundled
```

The following message appears and asks you if you wish to continue:

```
./extract_unbundled: The following product will be installed:
```

```
**********************************************************************

                        CiscoWorks Version 1.0(3)
                Copyright (c) 1986-1993 by Cisco Systems, Inc.
                           All rights reserved

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

Step 3 To begin the extraction of the installation scripts, press Return.

```
./extract_unbundled: Extracting installation scripts ...x ./
install_unbundled, 717 bytes, 2 tape blocks
x ./1.0_CiscoWorks, 18774 bytes, 37 tape blocks
x ./ncsconfigure, 66695 bytes, 131 tape blocks
x ./ncskernel, 7953 bytes, 16 tape blocks
x ./.install/config.defs, 429 bytes, 1 tape blocks
...
x ./.install/dbunload, 3036 bytes, 6 tape blocks
./extract_unbundled: Starting installation process ...
./extract_unbundled: /usr/tmp/unbundled/install_unbundled -c/cdrom -f
/usr/tmp/unbundled/install_unbundled: Starting installation script /usr/
tmp/unbundled/1.0_CiscoWorks ...
/usr/tmp/unbundled/install_unbundled: /usr/tmp/unbundled/1.0_CiscoWorks -c/
cdrom -f
^^^^^^^^^^^^^^^^^CiscoWorks 1.0 INSTALLATION **********************
INSTALLATION SETUP  -  This section of the CiscoWorks 1.0 installation will
ask you to specify the type of installation (new or upgrade) and the directory
path for the product installation.  Existing NetCentral data will be saved
if this is an upgrade, and the new directory structure will be set up.
```

Step 4 Specify that you are installing CiscoWorks for the first time by pressing Return to accept the default option.

```
Is this a new installation of CiscoWorks 1.0, or an upgrade of an existing
CiscoWorks 1.0 or NetCentral 1.3 installation?
Enter type of installation as (n)ew or (u)pgrade: [new]
```

Step 5 Specify the directory where you want CiscoWorks installed. The default directory is */usr/nms*. If this directory does not exist on your system, the installation script can create it for you.

```
What directory will CiscoWorks 1.0 be installed in? [/usr/nms]
```

To accept the displayed directory, press Return. You also can enter the complete path for the directory where you want the software installed.

Step 6 If the directory does not exist on your system, confirm that you want the directory to be created. To create the directory, press Return.

```
Directory /usr/nms does not exist!  Create it (y/n)? [y]
Directory /usr/nms has been created.
```

Step 7 Confirm the information you specified earlier:

```
Installation type          :  new
Destination directory      :  /usr/nms
Are these values correct (y/n)? [y]
CDROM INSTALLATION - This section of the CiscoWorks 1.0 installation
will load files from the installation cdrom into the /usr/nms directory.
```

Step 8 If your installation is of a different type or if you wish to install the software in a different directory, enter **n**. You are returned to the beginning of the *./extract_unbundled* script.

Otherwise, press Return to continue.

The CiscoWorks software is copied onto your system. It takes approximately 20 minutes for the files to be copied to your system. Ignore the pauses that occur briefly while the files are being copied. While the files are being copied, you will see output similar to the following:

```
CiscoWorks 1.0 installation will take approximately 20 minutes.
Installing CiscoWorks 1.0 ...
uncompress -c /cdrom/ciscoworks/sun4.ncs.tar.Z | tar xvfpB - 2>&1 | tee /
usr/tmp
/unbundled/.install/tar.log | cat -u
x ./snm/agents/cisco.schema, 113239 bytes, 222 tape blocks
x ./snm/agents/cisco.asn1.oid, 20825 bytes, 41 tape blocks
x ./snm/agents/snmp-mibII.oid, 8094 bytes, 16 tape blocks
...
x ./help/nmproc.hlp, 3419 bytes, 7 tape blocks
x ./help/nmsync.hlp, 3081 bytes, 7 tape blocks
x ./help/nmhealth.hlp, 6507 bytes, 13 tape blocks
Finished installing CiscoWorks 1.0.
Installing Sybase Database & Server ...
uncompress -c /cdrom/sybase/sybase.sun4.tar.Z | tar xvfpB - 2>&1 | tee /usr/
tmp/
unbundled/.install/tar.log | cat -u
x ./sybase/bin/apt.std, 1630208 bytes, 3184 tape blocks
x ./sybase/bin/apt, 998 bytes, 2 tape blocks
x ./sybase/bin/aptcompile, 499712 bytes, 976 tape blocks
...
x ./sybase/termdef/xterm_c.ncd, 1514 bytes, 3 tape blocks
x ./sybase/termdef/xterm_c.sun, 1602 bytes, 4 tape blocks
x ./sybase/interfaces.dist, 132 bytes, 1 tape blocks
Finished installing Sybase Database & Server.
Verifying installed files ...
Installation verified - CiscoWorks 1.0 files loaded correctly.
```

Step 9 If any one of the following conditions is true, enter **n** to the question on kernel modifications:

- You already have the new Sybase Version 4.9.1 installed on your system.
- You are reinstalling CiscoWorks.
- You prefer to edit the configuration file manually.
- You have installed Sybase on a different system.

Otherwise, press Return to continue with kernel modifications.

```
KERNEL MODIFICATIONS  -  This section of the CiscoWorks 1.0 installation
will make sybase modifications to your system kernel.  You will be
prompted for an existing kernel configuration file to use as a base for
the new system kernel; the default is your current kernel configuration.
After this script has completed successfully, you must reboot your system
for the kernel modifications to take effect.
You may decide to skip this section of the installation if:
1.  Your kernel has already been modified for Sybase 4.9.1,
2.  You wish to modify and rebuild your kernel manually, or
3.  Sybase will not be running on this system.
OK to continue with kernel modifications (y/n)? [y]
```

Step 10 If your configuration file name is *GENERIC* or if you enter the name of your system configuration file, the installation script creates a new system configuration file called *SYBASE* and saves the old configuration file as */vmunix.syb_inst*. In addition, the new SYBASE kernel will be installed as */vmunix*. The *ncskernel.log* file will contain information about the kernel rebuild process.

```
Please enter System Configuration file or (q)uit: [GENERIC]
```

If the name of your configuration file is *GENERIC*, press Return. Otherwise, enter the name of the configuration file of your system.

Step 11 Confirm that the values for the system configuration file are correct by pressing Return to accept the displayed values. Otherwise, enter **n**.

```
The base kernel configuration file is      : /sys/sun4c/conf/GENERIC
The new kernel configuration file will be  : /sys/sun4c/conf/SYBASE
The old kernel will be saved as            : /vmunix.syb_inst
The new SYBASE kernel will be installed as : /vmunix
The kernel rebuild will be logged in       /usr/tmp/unbundled/ncskernel.log
Are these values correct [y/n]? [y]
```

The old kernel file is saved as *syb_inst*, and a new configuration file called *SYBASE* is created from the existing configuration file on your system. The *SYBASE* file is configured and is used to install a new kernel on your system.

```
Saving old kernel as /vmunix.syb_inst ...
Creating /sys/sun4c/conf/SYBASE from /sys/sun4c/conf/GENERIC
Configuring /sys/sun4c/conf/SYBASE
Building SYBASE kernel from /sys/sun4c/conf/SYBASE
Installing new system kernel...
SYBASE kernel modifications completed - Reboot your system to use
the new kernel before you proceed with CiscoWorks 1.0 configuration.
REBOOT NOW!
CiscoWorks 1.0 Installation completed - continue with CiscoWorks 1.0
configuration by starting /usr/tmp/unbundled/ncsconfigure.
zen#
```

After the old kernel is saved, and the new kernel is created with the Sybase changes, you are returned to the UNIX prompt.

Step 12 At the UNIX prompt, enter the following command to reboot your system and ensure that the new kernel is used.

```
zen# reboot
```

Step 13 After the reboot process is completed, log into your system as a superuser.

```
login: root
password:
```

Your installation is complete. Next, configure the CiscoWorks software as described in the following section, “Configuring CiscoWorks Release 1.0(3).”

Configuring CiscoWorks Release 1.0(3)

This section provides a detailed configuration procedure to help you respond to the questions posed by the configuration script.

After installing CiscoWorks and rebooting your system, you must configure CiscoWorks to fit your particular environment. The interactive configuration script will first prompt you to enter all of the required information, then ask you to confirm your choices before any actual changes are made to your system.

When you run the configuration script *ncsconfigure*, it performs the following:

- Adds an entry to */etc/password* for Sybase and CiscoWorks
- Adds an entry to */etc/group* for the CiscoWorks group
- Adds CiscoWorks startup commands to */etc/rc.local*

If you are using Network Information Service (NIS) at your site, the configuration script saves NIS-related information during the configuration to the following files:

- */usr/tmp/CW.group*
- */usr/tmp/CW.prod*
- */usr/tmp/CW.sybase*

After completing the CiscoWorks configuration, use the information in these files to update your NIS server.

Note At any time before you confirm the configuration, you can abort the process by entering **Control -C** (**^C**) to return to the UNIX command environment. The responses to the interactive dialog you make up to the point you exit are recorded for use as the defaults in the next configuration. After you confirm your configuration choices and the actual configuration process begins, **^C** is disabled. If you want to change your choices, rerun the */usr/tmp/unbundled/ncsconfigure* script.

Before configuring CiscoWorks, do the following:

- Install SunNet Manager (SNM) on your system. The configuration script attempts to find SNM files. If it fails to find them, the configuration process is aborted.
- Log in as a superuser. If you are not logged in as a superuser, you cannot complete the CiscoWorks configuration.
- Check your umask to ensure proper privileges. If your your umask is set to 7 or 77, you need to change it to 022 in order for the *ncsconfigure* script to run correctly. To check your umask, enter **umask** at the UNIX prompt. To change your umask, enter **umask 022** at the UNIX prompt. This is a temporary change since the umask is usually set in your *.cshrc* file and will revert back to the original setting.

Caution If you do not check your **umask** setting, you may experience a failure in the *ncsconfigure* script. If you experience a configuration script failure, refer to "Troubleshooting Installation Problems" on page 33 for more detailed instructions.

Procedure for New Configuration

This detailed procedure describes how to configure CiscoWorks. Follow this procedure if you want an explanation of the information you need to provide during the configuration process.

Ellipses (...) in the script indicate that some output is not displayed. The letters or words enclosed in brackets are the default selection that will be made if you press Return. To select something other than the default, enter your response followed by Return.

To configure CiscoWorks Release 1.0(3), perform the following steps:

Step 1 After rebooting your system and logging in as a superuser, enter the following command and press Return to begin the CiscoWorks configuration process:

```
zen# /usr/tmp/unbundled/ncsconfigure
```

Step 2 Specify that you are configuring a new installation of CiscoWorks by pressing Return to accept the default option.

```
******************** CiscoWorks 1.0 CONFIGURATION **********************
CONFIGURATION SETUP  -  This section of the CiscoWorks 1.0 configuration
will ask you to verify the type of installation (new or upgrade) and
the directory path where the product has been installed.
Is this a new installation of CiscoWorks 1.0, or an upgrade of an
existing CiscoWorks 1.0 or NetCentral 1.3 installation?
Verify type of installation as (n)ew or (u)pgrade: [new]
```

Step 3 Confirm the directory where CiscoWorks software will be configured.

```
Verify the directory path for the CiscoWorks 1.0 software: [/usr/nms]
```

Press Return to accept the displayed directory. This is the same directory where you installed CiscoWorks.

Step 4 Confirm the type of installation and the directory where CiscoWorks will be configured.

```
Installation type          :  new
Destination directory      :  /usr/nms
Are these values correct (y/n)? [y]
```

If you are using Network Information Service (NIS) at your site, the configuration script displays the following message:

```
*************************************************************
NIS CHECK - Your system appears to be running Network Information Service.
Your NIS Administrator should update your NIS server
with any new or modified groups and users. This
information is also added to your local host.
*************************************************************
```

After completing CiscoWorks configuration, make sure that the NIS server is updated with the new or modified groups and users. If you are not using NIS, this NIS message will not appear.

Step 5 Specify a name for the CiscoWorks group. Later you will add users to this group, and they will have login IDs that will enable them to access the system that is running CiscoWorks. The default name for the group is *CscWorks*.

```
GROUPS AND USERS - This section of the CiscoWorks 1.0 configuration will
set up a UNIX group and users for the installed software.  You will be
asked for a group name, group id, and a list of group users.  Next,
you will be asked to specify user information for ownership of the
CiscoWorks 1.0 files followed by user information for ownership of the
Sybase database files.  The users for CiscoWorks 1.0 and Sybase will be
added to the group automatically.
Refer to your system and CiscoWorks 1.0 documentation for instructions
on adding/modifying groups and users after configuration is complete.
What would you like to call the CiscoWorks 1.0 group?  [CscWorks]
```

To accept the default option, press Return. Or enter a name of your choice. The configuration script adds the group name to the */etc/group* file.

Step 6 To accept the group ID number for the CscWorks group, press Return. Otherwise, specify a unique group ID number. The group ID number you accept or specify is added to the */etc/group* file on your system.

```
Group id for the CiscoWorks 1.0 group? [55]
```

Step 7 Add users to the CiscoWorks group. These users can access the CiscoWorks application if they already have login accounts on the system where you are installing the software. If these users do not have login accounts, you can create the login accounts after configuring

CiscoWorks. Later, you also will be able to assign specific permissions for each users in this group by using the CiscoWorks Security Manager application, which is described in the *CiscoWorks User Guide*.

```
Enter CiscoWorks 1.0 group user names one line at a time.
Terminate the list with an empty line.
Input users name>kwilson
Input users name>
```

Step 8 When you finish adding all the usernames, confirm the values by pressing Return.

Step 9 Confirm the values you entered earlier.

```
Using the following values for the CiscoWorks 1.0 group:
CiscoWorks 1.0 Group Name     : CscWorks
CiscoWorks 1.0 Group ID       : 55
CiscoWorks 1.0 Group Users    : kwilson,cscworks,sybase
Are these values correct?  [yes]
```

To accept the displayed values, press Return. If you want to change any values at this time, enter **n** and press Return. You are returned to the beginning of the configuration script.

If you are using NIS at your site, the configuration script displays the following message:

```
****Please add this information to the NIS server:
CscWorks:*:55:root, kwilson, cscworks, sybase
This information is saved to /usr/tmp/CW.group also
```

After completing CiscoWorks configuration, use the information in the */usr/tmp/CW.group* file to update your NIS server.

Step 10 Specify a username for CiscoWorks.

```
What would you like to call the CiscoWorks 1.0 user name?  [cscworks]
```

Press Return to accept the default username *cscworks* or enter a user name of your choice.

Step 11 Specify a unique user ID number for CiscoWorks or accept the default user ID that is displayed.

```
User ID for CiscoWorks 1.0 login? [100]
```

Press Return to accept the default user ID. Or enter a unique user ID number.

Step 12 Specify the full name for the CiscoWorks username.

```
Full name for CiscoWorks 1.0 user? [CiscoWorks]
```

Press Return to accept the default name.

Step 13 Specify the shell that will be used by CiscoWorks.

```
Shell for CiscoWorks 1.0 login? [/bin/csh]
```

Press Return to accept the default C-shell . Or enter a shell name of your choice.

Step 14 Confirm the values you chose for CiscoWorks.

```
Using the following values for the CiscoWorks 1.0 user:
CiscoWorks 1.0 User Name          : cscworks
CiscoWorks 1.0 User ID            : 100
CiscoWorks 1.0 Group ID           : 55
CiscoWorks 1.0 Full Name          : CiscoWorks
CiscoWorks 1.0 Home Directory     : /usr/nms
CiscoWorks 1.0 Shell              : /bin/csh
Are these values correct? [yes]
```

Press Return to accept the displayed values. If you enter **n**, you are asked to specify the values again.

If you are using NIS at your site, the following message displays:

```
**** Please add this information to the NIS SERVER
cscworks:*:100:55:CiscoWorks:/disk/cw1.0:/bin/csh
This information is saved to /usr/tmp/CW.prod also
```

After completing CiscoWorks configuration, use the information in the */usr/tmp/CW.prod* file to update your NIS server.

Step 15 Specify a user ID for the Sybase login.

```
User ID for Sybase login? [101]
```

Press Return to accept the default user ID for the Sybase login. Or specify a unique user ID for the Sybase login.

Step 16 To accept the */bin/csh* shell for Sybase login, press Return. Or specify a different shell.

```
Shell for Sybase login? [/bin/csh]
```

Step 17 Confirm whether the Sybase values are correct.

```
Using the following values for the Sybase user:
Sybase User Name          : sybase
Sybase User ID            : 101
Sybase Group ID           : 55
Sybase Full Name          : Sybase
Sybase Home Directory     : /usr/nms/sybase
Sybase Shell              : /bin/csh
Are these values correct?  [yes]
```

To accept the values and continue, press Return. If you enter **n**, you are asked to specify the values again.

If you are using NIS at your site, the following message displays:

```
Please add this information to the NIS SERVER
sybase:*:55:Sybase:/disk/cw1.0/sybase:/bin/csh
This information is saved to /usr/tmp/CW.sybase also.
```

After completing the CiscoWorks configuration, use the information in the */usr/tmp/CW.sybase* file to update the information in your NIS server.

The */etc/passwd* and */etc/group* files are updated with the information you specified for CiscoWorks and Sybase.

```
Updating CscWorks group in /etc/group with kwilson,cscworks,sybase ...
```

The configuration script also sets the owner and group permissions for CiscoWorks files.

```
FILE OWNERSHIP AND PERMISSIONS  -  The ownership of the CiscoWorks 1.0
files will be changed to the selected users and groups.  Permissions
of specific files will be modified to enable execution and read/write
capabilities.
Setting the owner and group for CiscoWorks 1.0 software ...
chown -R cscworks.CscWorks /usr/nms/.
chown -R sybase /usr/nms/sybase
chown root /usr/nms/bin/nmsummary
...
```

```
Setting the permissions for CiscoWorks 1.0 software ...
chmod -R 750 /usr/nms
chmod 4750 /usr/nms/bin/nmsummary
...
chmod 770 /usr/nms/log
```

Step 18 To enable the addition of Cisco schema files to the SNM schema files, specify the complete path for the directory where you installed SNM.

```
SUNNET MANAGER MODIFICATIONS  -  A set of Cisco schema files must be
added to the SunNet Manager schema files to enable SunNet Manager to
to integrate CiscoWorks 1.0 functionality.  You need to specify the
directory path for the SunNet Manager schema files.
Directory path for SunNet Manager schema files? [/usr/snm]
```

If SNM was installed in the */usr/snm* directory, press Return. Otherwise, enter the correct directory path for SNM.

The Cisco schema files are added to the SNM schema files.

```
Merging CiscoWorks 1.0 schemas with SunNet Manager ...
cp /usr/nms/snm/agents/* /usr/snm/agents/
cp /usr/nms/snm/struct/* /usr/snm/struct/
cp /usr/nms/snm/icons/* /usr/snm/icons/
chmod +r /usr/snm/agents/*
chmod +r /usr/snm/struct/*
chmod +r /usr/snm/icons/*
Updating na.snmp.schemas in /etc/snm.conf ...
Running /usr/snm/bin/build_oid ...
Parsing /usr/snm/agents/enterprises.oid
Parsing /usr/snm/agents/snmp.oid
Parsing /usr/snm/agents/cisco.asn1.oid
Parsing /usr/snm/agents/sun-snmp.oid
Parsing /usr/snm/agents/snmp-mibII.oid
Writing /var/adm/snm/oid.dbase
SunNet Manager modifications completed.
```

The configuration script also opens the TCP ports for the Sybase installation and changes the Sybase interfaces file.

```
TCP PORTS  -  An open set of tcp ports will be identified for this
new Sybase installation.  The ports will be defined in the Sybase
interfaces file.
Identifying open ports for Sybase ...
Using ports 8000 thru 8003
Defining ports in /usr/nms/sybase/interfaces file ...
/usr/nms/etc/setaddress 8000
Please wait...
Sybase interface file has been changed.
```

Step 19 To enable the configuration script to build and load the CiscoWorks database, press Return.

```
DATABASE STARTUP  -  This section of the CiscoWorks 1.0 configuration will
build and load the CiscoWorks 1.0 database.  The Sybase dataserver and
any daemons from previous installations will be halted.  Then, the new
database will be built.  If this is an upgrade installation, data from
the previous installation will be reloaded into the new database.
Certain operations will require you to provide the Sybase 'sa' (system
admin) password. Use password 'NULL' if this is a new installation.
OK to continue (y/n)? [y]
```

Step 20 The Sybase dataserver must be halted before you continue with the CiscoWorks Release 1.0(2) configuration. Press Return to halt the Sybase dataserver.

```
Halting Sybase dataserver and CiscoWorks 1.0 daemons ...
```

```
Running /usr/nms/etc/load_nms ...
    **** Do not interrupt the execution of this script! ****
The load_nms script will create the Sybase master database and the
nms database.  During database intensive operations, output may not
be produced for several minutes.  If problems occur, this script can
be run manually from /usr/nms/etc/load_nms.
Creating master.dat database file ...
Starting Sybase dataserver ...
```

A series of messages appear, indicating that the Sybase database is being installed, loaded, and verified. A verification message appears, indicating that the database was installed without any errors.

```
Database (null) is alive
Sybase is running.
No errors detected, the Database seems to be correctly installed.
```

The configuration script verifies that you set up TFTP on your system. If you plan to use the CiscoWorks Configuration Management application, and TFTP is not configured, complete the CiscoWorks Release 1.0(2) configuration and then refer to the TFTP instructions in Chapter 2, the section called "Setting Up TFTP," of the *CiscoWorks Getting Started Guide*

```
TFTP CHECK  -  The CiscoWorks 1.0 Configuration Management application
uses TFTP for configuration upload and download of Cisco devices.
Correct operation of this feature requires that TFTP service be enabled
and that the TFTP directory have the correct access permissions.
Checking for correct TFTP service configuration ...
TFTP is correctly configured.
```

Step 21 Specify the name of the log file to be used to store messages from the UNIX syslogd process.

```
SYSLOG MODIFICATIONS  -  The CiscoWorks 1.0 Log Manager application
uses a centralized log file which gets messages from the UNIX syslogd
process.  You will need to specify the log file name and which syslog
facility (local0-local7) to use.  Use facility local7 if you want to
log both CiscoWorks 1.0 messages and Cisco device messages; use a
different facility if you want to log only CiscoWorks 1.0 messages.
Enter log file to use for CiscoWorks 1.0 messages: [/var/log/nmslog]
```

To accept the default log file, press Return. You can also enter the directory path name and filename.

Step 22 Specify the facility to be used with syslog for logging messages. To log both CiscoWorks messages and Cisco device messages, accept the default facility, *local7*. To log only CiscoWorks messages, enter a different facility within the range of *local0* through *local6*.

```
Enter syslog facility to use for CiscoWorks 1.0 messages: [local7]
```

To accept *local7*, press Return.

Step 23 If there are other applications that use the facility you chose, press Return to clear the facility for use by syslog.

```
OK to remove other syslog entries which use local7 (y/n)? [y]
```

Step 24 To confirm the values you specified for the log files and the syslog facility, press Return.

```
The log file will be                          : /var/log/nmslog
The syslog facility will be                   : local7
Remove other syslog entries which use local7  : y
Are these values correct (y/n)? [y]
```

The syslog modifications are completed.

Step 25 To enable the configuration script to install *nmstartup* and modify the */etc/rc.local* file, press Return.

```
RC.LOCAL MODIFICATIONS  -  The Sybase dataserver and other CiscoWorks 1.0
daemons must be running as background processes for correct operation
of CiscoWorks 1.0.  This section of the configuration will modify the file
/etc/rc.local to include nmstartup which will start the Sybase dataserver
and CiscoWorks 1.0 daemons during system reboot.
Checking for nmstartup in /etc/rc.local ...
Install nmstartup for CiscoWorks 1.0 in /etc/rc.local (y/n)? [y]
```

Step 26 If you want the centralized log file syslog to be automatically purged and backed up every day, press Return. As a result, the CiscoWorks log purging utility is started automatically by the UNIX cron daemon. If you do not want the syslog file to be purged and backed up automatically every day, enter **n**. For information on customizing the log purge utility and editing the *crontab* file, refer to the *CiscoWorks User Guide*.

```
CRON MODIFICATIONS  -  The syslog file must be purged periodically
to avoid running out of disk space.  This activity is automated by the
CiscoWorks 1.0 log purge utility when scheduled by the UNIX cron daemon.
This will purge syslog daily and maintain a seven day history of syslog files.
Schedule the CiscoWorks 1.0 log purge utility to run daily (y/n)? [y]
```

If you pressed Return, the *crontab* file modifications are completed.

Make sure that you set up the environment variables and the paths by following the instructions in Chapter 4, ”Validating CiscoWorks Installation, “ in the section “Defining Environment Variables and Search Paths,” of the *CiscoWorks Getting Started Guide*.

```
CONFIGURATION COMPLETE  -  Various environment variables must be defined for
correct operation of CiscoWorks 1.0. You can append the following lines to
the .login or .cshrc file of CiscoWorks 1.0 users so that required
environment variables will be set correctly:
#   Set environment variables for CiscoWorks 1.0.
setenv SNMHOME /usr/snm
setenv NMSROOT /usr/nms
setenv SYBASE /usr/nms/sybase
#   Set path for CiscoWorks 1.0 man pages.
if (!($?MANPATH)) setenv MANPATH /usr/man
setenv MANPATH "$MANPATH":"$NMSROOT"/man
#   Set path for CiscoWorks 1.0 executables.
set path=($path /usr/nms/bin /usr/nms/etc)
Refer to the CiscoWorks 1.0 Getting Started Guide for instructions on
validating your installation and configuration.
zen#
```

Step 27 After configuring CiscoWorks Release 1.0(3), you can remove the installation log files by following the instructions in the section “Cleaning Up Log Files,” in the *CiscoWorks Getting Started Guide*.

Step 28 To eject the CD-ROM enter the following commands:

```
hostname# cd /
hostname# eject sr0
```

If you are using Network Information Service (NIS) at your site, the configuration script saves NIS-related information during the configuration to the following files: */usr/tmp/CW.group*, */usr/tmp/CW.prod*, and */usr/tmp/CW.sybase*. Use the information in these files to update your NIS server.

Note Make sure you validate the CiscoWorks installation and configuration process by following the instructions in Chapter 4, "Validating CiscoWorks Installation," of the *CiscoWorks Getting Started Guide*. When you validate the CiscoWorks installation, you will be able to access CiscoWorks through SNM.

Performing a CiscoWorks Upgrade

This section provides the CiscoWorks Release 1.0(3) installation and configuration script for a CiscoWorks Release 1.0 or 1.0(2) upgrade installation and configuration. Refer to this section if you are upgrading from CiscoWorks Release 1.0 or 1.0(2) to CiscoWorks Release 1.0(3).

Remember to backup your Sybase database before continuing with the upgrade.

Note If you are upgrading from NetCentral Release 1.3 to CiscoWorks Release 1.0(3), refer to the section "Performing a NetCentral Release 1.3 Upgrade" on page 24.

CiscoWorks software is distributed on a CD-ROM. You can install CiscoWorks from a CD-ROM drive attached to your system or from a CD-ROM drive attached to a remote system.

After you mount the CD-ROM as described in the section "Installing from a Local or Remote CD-ROM" on page 3, you will install CiscoWorks by invoking and running the *./extract_unbundled* script from the CD-ROM drive. The *./extract_unbundled* script provides an interactive prompt and response dialog interface that guides you through the installation process.

The installation and configuration process takes 20 to 30 minutes, although the amount of time can vary depending on your system performance and installation method. An installation from a CD-ROM drive attached to a remote device might take longer.

You can exit the installation script at any time by entering **Control-C** (**^C**) to return to the UNIX environment. The responses you made up to the point you exit will be recorded for use as the defaults the next time you start the installation process.

Some of the output displayed by the sample installation script is not included. Ellipses (...) in the script indicate that some output is not displayed. A bracketed item ([ ]) after a prompt denotes the default response. If a bracketed item appears without any input next to it, the default value has been accepted.

```
zen# cd /cdrom
zen# ./extract_unbundled
./extract_unbundled: The following product will be installed:


*************************************************************************

                        CiscoWorks Version 1.0(3)
               Copyright (c) 1986-1993 by Cisco Systems, Inc.
                           All rights reserved

*************************************************************************


Do you want to continue (y/n)?  [y]

./extract_unbundled: Extracting installation scripts ...
```

```
x ./install_unbundled, 717 bytes, 2 tape blocks
x ./1.0_CiscoWorks, 18774 bytes, 37 tape blocks
x ./ncsconfigure, 66695 bytes, 131 tape blocks
x ./ncskernel, 7953 bytes, 16 tape blocks
x ./.install/config.defs, 429 bytes, 1 tape blocks
x ./.install/nmcopyout, 4935 bytes, 10 tape blocks
x ./.install/exclude.sun4, 0 bytes, 0 tape blocks
x ./.install/find.sun4, 10081 bytes, 20 tape blocks
x ./.install/include.install, 244 bytes, 1 tape blocks
x ./.install/upgrade_nms, 13279 bytes, 26 tape blocks
x ./.install/variables, 176 bytes, 1 tape blocks
x ./.install/dbunload, 3036 bytes, 6 tape blocks

./extract_unbundled: Starting installation process ...
./extract_unbundled: /usr/tmp/unbundled/install_unbundled -c/cdrom -f

/usr/tmp/unbundled/install_unbundled: Starting installation script /disk/tmp/unb
undled/1.0_CiscoWorks ...
/usr/tmp/unbundled/install_unbundled: /disk/tmp/unbundled/1.0_CiscoWorks -c/cdro
m -f


********************** CiscoWorks 1.0 INSTALLATION **********************

INSTALLATION SETUP  -  This section of the CiscoWorks 1.0 installation
will ask you to specify the type of installation (new or upgrade) and
the directory path for the product installation.  Existing NetCentral
data will be saved if this is an upgrade, and the new directory
structure will be setup.

Is this a new installation of CiscoWorks 1.0, or an upgrade of an
existing CiscoWorks 1.0 or NetCentral 1.3 installation?

Enter type of installation as (n)ew or (u)pgrade: [new] u

What directory contains the existing installation? [/disk/netcentral]

Installation type          :  upgrade
Destination directory      :  /disk/netcentral


Destination directory      :  /disk/netcentral

Are these values correct (y/n)? [y]

CDROM INSTALLATION - This section of the CiscoWorks 1.0 installation
will load files from the installation cdrom into the /disk/netcentral
directory.

CiscoWorks 1.0 installation will take approximately 20 minutes.

Installing CiscoWorks 1.0 ...

uncompress -c /cdrom/ciscoworks/sun4.ncs.tar.Z | tar xvfpB - 2>&1 | tee /disk/tm
p/unbundled/.install/tar.log | cat -u
x ./snm/agents/cisco.schema, 113239 bytes, 222 tape blocks
x ./snm/agents/cisco.asn1.oid, 20825 bytes, 41 tape blocks
x ./snm/agents/snmp-mibII.oid, 8094 bytes, 16 tape blocks
x ./snm/struct/cisco-elements.schema, 14702 bytes, 29 tape blocks
x ./snm/icons/3000.icon, 622 bytes, 2 tape blocks
x ./snm/icons/3000.iconmask, 622 bytes, 2 tape blocks
x ./snm/icons/4000.icon, 622 bytes, 2 tape blocks
...
...
x ./help/nmsync.hlp, 3081 bytes, 7 tape blocks
```

```
x ./help/nmhealth.hlp, 6507 bytes, 13 tape blocks

Finished installing CiscoWorks 1.0.

About to install upgrade to Sybase version 4.9.1
To upgrade your Sybase server you will need 63.8135 Megabytes of free disk space
If you don't have enough space on the /disk/netcentral device,
you can enter a new path for the installation here,
otherwise press return to accept /disk/netcentral/syb491:

Installing Sybase Database & Server ...

uncompress -c /cdrom/sybase/sybase.sun4.tar.Z | tar xvfpB - 2>&1 | tee /disk/tmp
/unbundled/.install/tar.log | cat -u
x ./sybase/bin/apt.std, 1630208 bytes, 3184 tape blocks
x ./sybase/bin/apt, 998 bytes, 2 tape blocks
x ./sybase/bin/aptcompile, 499712 bytes, 976 tape blocks
x ./sybase/bin/apt.x11, 1654784 bytes, 3232 tape blocks
x ./sybase/bin/aptexec.std, 1056768 bytes, 2064 tape blocks
x ./sybase/bin/aptconv, 1081344 bytes, 2112 tape blocks
x ./sybase/bin/aptexec, 2718 bytes, 6 tape blocks
x ./sybase/bin/buildmaster, 860160 bytes, 1680 tape blocks
x ./sybase/bin/aptexec.x11, 1081344 bytes, 2112 tape blocks
x ./sybase/bin/aptmig, 1056768 bytes, 2064 tape blocks
...
...
x ./sybase/termdef/xterm_c.sun, 1602 bytes, 4 tape blocks
x ./sybase/interfaces.dist, 132 bytes, 1 tape blocks

Finished installing upgrade to sybase 4.9.1

Verifying installed files ...

Installation verified - CiscoWorks 1.0 files loaded correctly.

KERNEL MODIFICATIONS  -  This section of the CiscoWorks 1.0 installation
will make sybase modifications to your system kernel.  You will be
prompted for an existing kernel configuration file to use as a base for
the new system kernel; the default is your current kernel configuration.
After this script has completed successfully, you must reboot your
system for the kernel modifications to take effect.

You may decide to skip this section of the installation if:
1.  Your kernel has already been modified for Sybase 4.9.1,
2.  You wish to modify and rebuild your kernel manually, or
3.  Sybase will not be running on this system.

OK to continue with kernel modifications (y/n)? [y] n

****  Skipping kernel configuration ...
****  Kernel configuration not modified!


CiscoWorks 1.0 Installation completed - continue with CiscoWorks 1.0
configuration by starting /usr/tmp/unbundled/ncsconfigure.
```

To configure CiscoWorks, proceed to the next section, “Sample Configuration Dialog for a CiscoWorks Release 1.0 Upgrade.”

Sample Configuration Dialog for a CiscoWorks Release 1.0 Upgrade

This section provides an example of a sample upgrade configuration of CiscoWorks Release 1.0. Refer to this section if you are configuring CiscoWorks Release 1.0(2) software to upgrade from CiscoWorks Release 1.0.

Before configuring CiscoWorks, do the following:

- Install SunNet Manager on your system. The configuration script attempts to find SunNet Manager files. If it fails to find them, the configuration process is aborted.
- Log in as a superuser. If you are not logged in as a superuser, CiscoWorks will be unable to complete the configuration.
- Check your umask to ensure proper privileges. If your your umask is set to 7 or 77, you need to change it to 022 in order for the *ncsconfigure* script to run correctly. To check your umask, enter **umask** at the UNIX prompt. To change your umask, enter **umask 022** at the UNIX prompt. This is a temporary change since the umask is usually set in your *.cshrc* file and will revert back to the original setting.

Caution If you do not check your **umask** setting, you may experience a failure in the *ncsconfigure* script. If you experience a configuration script failure, refer to "Troubleshooting Installation Problems" on page 33 for more detailed instructions.

If you are using Network Information Service (NIS) at your site, the configuration script saves NIS-related information during the configuration to the following files:

- /usr/tmp/CW.group
- */usr/tmp/CW.prod*
- */usr/tmp/CW.sybase*

The *ncsconfigure* script follows:

After completing the CiscoWorks configuration, use the information in these files to update your NIS server.

```
zen# /usr/tmp/unbundled/ncsconfigure
********************** CiscoWorks 1.0 CONFIGURATION **********************

CONFIGURATION SETUP  -  This section of the CiscoWorks 1.0 configuration
will ask you to verify the type of installation (new or upgrade) and
the directory path where the product has been installed.

Is this a new installation of CiscoWorks 1.0, or an upgrade of an
existing CiscoWorks 1.0 or NetCentral 1.3 installation?

Verify type of installation as (n)ew or (u)pgrade: [upgrade]

Verify the directory path for the CiscoWorks 1.0 software: [/usr/nms]
Installation type          :  upgrade
Destination directory      :  /usr/nms

Are these values correct (y/n)? [y]

************************************************************
NIS CHECK - Your system appears to be running Network Information
Service. Your NIS Administrator should update your NIS server
with any new or modified groups and users. This
```

```
information is also added to your local host.
*************************************************************

GROUPS AND USERS - This section of the CiscoWorks 1.0 configuration will
set up a UNIX group and users for the installed software.  You will be
asked for a group name, group id, and a list of group users.  Next,
you will be asked to specify user information for ownership of the
CiscoWorks 1.0 files followed by user information for ownership of the
Sybase database files.  The users for CiscoWorks 1.0 and Sybase will be
added to the group automatically.

Refer to your system and CiscoWorks 1.0 documentation for instructions
on adding/modifying groups and users after configuration is complete.

What is the name of the existing CiscoWorks 1.0 group?  [CscWorks]
Using the following values for the CiscoWorks 1.0 group:

CiscoWorks 1.0 Group Name     : CscWorks
CiscoWorks 1.0 Group ID       : 55
CiscoWorks 1.0 Group Users    : kwilson,cscworks,sybase
Are these values correct?  [yes]

****Please add this information to the NIS server:
CscWorks:*:55:root, kwilson, cscworks, sybase
This information is saved to /usr/tmp/CW.group also

What is the name of the existing CiscoWorks 1.0 login?  [cscworks]

Using the following values for the CiscoWorks 1.0 user:

CiscoWorks 1.0 User Name          : cscworks
CiscoWorks 1.0 User ID            : 100
CiscoWorks 1.0 Group ID           : 55
CiscoWorks 1.0 Full Name          : CiscoWorks
CiscoWorks 1.0 Home Directory     : /usr/nms
CiscoWorks 1.0 Shell              : /bin/csh
Are these values correct? [yes]

**** Please add this information to the NIS SERVER
cscworks:*:100:55:CiscoWorks:/disk/cw1.0:/bin/csh
This information is saved to /usr/tmp/CW.prod also

Updating CscWorks group in /etc/group with kwilson,cscworks,sybase ...

FILE OWNERSHIP AND PERMISSIONS  -  The ownership of the CiscoWorks 1.0
files will be changed to the selected users and groups.  Permissions
of specific files will be modified to enable execution and read/write
capabilities.

Setting the owner and group for CiscoWorks 1.0 software ...

chown -R cscworks.CscWorks /usr/nms/.
chown -R sybase /usr/nms/sybase
chown root /usr/nms/bin/nmsummary
chown root /usr/nms/bin/nmpoll
chown root /usr/nms/bin/nmproc
chown root /usr/nms/bin/nmpath
chown root /usr/nms/bin/nmdevmon
chown root /usr/nms/contrib/tcpdump

Setting the permissions for CiscoWorks 1.0 software ...

chmod -R 750 /usr/nms
chmod 4750 /usr/nms/bin/nmsummary
```

```
chmod 4750 /usr/nms/bin/nmpoll
chmod 4750 /usr/nms/bin/nmproc
chmod 4750 /usr/nms/bin/nmpath
chmod 4750 /usr/nms/bin/nmdevmon
chmod 4750 /usr/nms/contrib/tcpdump
chmod 660 /usr/nms/etc/ncspwd
chmod 770 /usr/nms/log
Do you wish to install the new MIB files? [yes]

SUNNET MANAGER MODIFICATIONS  -  A set of Cisco schema files must be
added to the SunNet Manager schema files to enable SunNet Manager
to integrate CiscoWorks 1.0 functionality.  You need to specify the
directory path for the SunNet Manager schema files.
Directory path for SunNet Manager schema files? [/usr/snm]

Merging CiscoWorks 1.0 schemas with SunNet Manager ...

cp /usr/nms/snm/agents/* /usr/snm/agents/
cp /usr/nms/snm/struct/* /usr/snm/struct/
chmod +r /usr/snm/agents/*
chmod +r /usr/snm/struct/*
chmod +r /usr/snm/icons/*

Running /usr/snm/bin/build_oid ...
Parsing /usr/snm/agents/enterprises.oid
Parsing /usr/snm/agents/snmp.oid
Parsing /usr/snm/agents/cisco.asn1.oid
Parsing /usr/snm/agents/sun-snmp.oid
Parsing /usr/snm/agents/snmp-mibII.oid
Writing /var/adm/snm/oid.dbase

SunNet Manager modifications completed.

Halting Sybase dataserver and CiscoWorks 1.0 daemons ...

Starting sybase server for upgrade ...

Waiting for server to complete initialization ...

Upgrading CiscoWorks 1.0 Database ...

Please enter DBMS password for nmsuper:
Database SYBASE is alive

Upgrading 102 database to 103
This will take about 10 minutes ...

Enter directory where you installed the sybase upgrade [usr/nms/sybase]
[1] 735
Server SHUTDOWN by request.
The SQL Server is terminating this process.
DB-LIBRARY error:
      Unexpected EOF from SQL Server.
Finished 102 to 103 upgrade
Upgrading sample reports ... Done

TFTP CHECK  -  The CiscoWorks 1.0 Configuration Management application
uses TFTP for configuration upload and download of Cisco devices.
Correct operation of this feature requires that TFTP service be enabled
and that the TFTP directory have the correct access permissions.
Checking for correct TFTP service configuration ...

TFTP is correctly configured.

SYSLOG MODIFICATIONS  -  The CiscoWorks 1.0 Log Manager application
```

```
uses a centralized log file which gets messages from the UNIX syslogd
process.  You will need to specify the log file name and which syslog
facility (local0-local7) to use.  Use facility local7 if you want to
log both CiscoWorks 1.0 messages and Cisco device messages; use a
different facility if you want to log only CiscoWorks 1.0 messages.

Enter log file to use for CiscoWorks 1.0 messages: [/var/log/nmslog]
/var/log/nmslog already exists!  Use this file anyway (y/n)? [y]

Enter syslog facility to use for CiscoWorks 1.0 messages: [local7]

OK to remove other syslog entries which use local7 (y/n)? [y]
The log file will be                        : /var/log/nmslog
The syslog facility will be                 : local7
Remove other syslog entries which use local7  : y

Are these values correct (y/n)? [y]

Syslog modifications in progress ...
NMSLOGFILE = /var/log/nmslog
INSTALL = upgrade

Resetting database and system logs ...
logpurg 2.0 Experimental starting:
        Process id = 618
        Debugging: = Off

logpurg started at: Thu Feb 18 17:53:47 1993

logpurg completed
Syslog modifications completed.
Start the CiscoWorks 1.0 processes and database server (y/n)? [y]

Starting CiscoWorks 1.0.  Please wait ...

RC.LOCAL MODIFICATIONS  -  The Sybase dataserver and other CiscoWorks 1.0
daemons must be running as background processes for correct operation
of CiscoWorks 1.0.  This section of the configuration will modify the file
/etc/rc.local to include nmstartup which will start the Sybase dataserver
and CiscoWorks 1.0 daemons during system reboot.

Checking for nmstartup in /etc/rc.local ...

Old version of nmstartup detected in /etc/rc.local!
Update existing nmstartup for CiscoWorks 1.0 in /etc/rc.local (y/n)? [y]
Updating nmstartup for CiscoWorks 1.0 in /etc/rc.local ...
/etc/rc.local modifications completed.


CRON MODIFICATIONS  -  The syslog file must be purged periodically
to avoid running out of disk space.  This activity is automated by the
CiscoWorks 1.0 log purge utility when scheduled by the UNIX cron daemon.
This will purge syslog daily and maintain a seven day history of syslog
files.

Schedule the CiscoWorks 1.0 log purge utility to run daily (y/n)? [y]

Adding line "0 2 * * * /usr/nms/bin/purge /usr/nms" to crontab
...
Cron modifications completed.
CONFIGURATION COMPLETE  -  Various environment variables must be defined
for correct operation of CiscoWorks 1.0. You can append the following lines
to the .login or .cshrc file of CiscoWorks 1.0 users so that required
environment variables will be set correctly:
```

```
#   Set environment variables for CiscoWorks 1.0.
setenv SNMHOME /usr/snm
setenv NMSROOT /usr/nms
setenv SYBASE /usr/nms/sybase
#   Set path for CiscoWorks 1.0 man pages.
if (!($?MANPATH)) setenv MANPATH /usr/man
setenv MANPATH "$MANPATH":"$NMSROOT"/man
#   Set path for CiscoWorks 1.0 executables.
set path=($path /usr/nms/bin /usr/nms/etc)

Refer to the CiscoWorks 1.0 Getting Started Guide for instructions on
validating your installation and configuration.
```

After configuring CiscoWorks Release 1.0(3), you can remove the installation log files by following the instructions on page 38 in the *CiscoWorks Getting Started Guide*.

To eject the CD-ROM enter the following commands:

```
hostname# cd /
hostname# eject sr0
```

The CD-ROM caddy is ejected from the drive.

Note Make sure you validate CiscoWorks installation and configuration process by following the instructions in Chapter 4, "Validating CiscoWorks Installation" of the *CiscoWorks Getting Started Guide*. When you validate the CiscoWorks installation, you will be able to access CiscoWorks through SNM.

Performing a NetCentral Release 1.3 Upgrade

This section provides CiscoWorks Release 1.0(3) installation and configuration scripts for a NetCentral Release 1.3 upgrade installation and configuration. Refer to this section if you are upgrading from NetCentral Release 1.3 to CiscoWorks Release 1.0(3).

CiscoWorks software is distributed on a CD-ROM. You can install CiscoWorks from a CD-ROM drive attached to your system or from a CD-ROM drive attached to a remote system.

After mounting the CD-ROM as described in the section "Installing from a Local or Remote CD-ROM" on page 3, you will install CiscoWorks by invoking and running the *./extract_unbundled* script supplied on the CD-ROM. The *./extract_unbundled* script provides an interactive prompt and response dialog interface that guides you through the installation process.

The installation and configuration process takes approximately 20 to 30 minutes, although the amount of time can vary depending on your system performance and installation method. An installation from a CD-ROM drive attached to a remote device might take longer.

You can exit the installation script at any time by entering **Control-C** (**^C**) to return to the UNIX environment. The responses you make up to the point you exit will be recorded for use as the defaults the next time you start the installation process.

Some of the output displayed by the sample installation script is not included. Ellipses (...) in the script indicate that some output is not displayed. A bracketed item ([ ]) after a prompt denotes the default response. If a bracketed item appears without any input next to it, the default value has been accepted.

Sample Installation Dialog for a NetCentral Release 1.3 Upgrade

This section provides an example of an upgrade installation of CiscoWorks Release 1.0(3). Refer to this section if you are upgrading from NetCentral Release 1.3 to CiscoWorks Release 1.0(3).

The letters or words enclosed in brackets are the default selection that will be made if you press Return. To select something other than the default, enter your response followed by Return.

The sample installation script uses the following values and Sun system:

- */usr/nms* is the name of the directory where the software is installed.
- *zen* is the name of the system where CiscoWorks is being installed.
- The Sun SPARCstation is using Sun4c architecture.

Substitute the appropriate names and directory path names when you install the software on your system.

Note When invoking the *./extract_unbundled* script, make sure you specify the complete syntax with the period (.) and the slash (/).

```
zen# cd /cdrom
zen# ./extract_unbundled
./extract_unbundled: The following product will be installed:


*****************************************************************************
                         CiscoWorks Version 1.0(3)
               Copyright (c) 1986-1993 by Cisco Systems, Inc.
                            All rights reserved
*****************************************************************************

Do you want to continue (y/n)?  [y]

./extract_unbundled: Extracting installation scripts ...
x ./install_unbundled, 717 bytes, 2 tape blocks
x ./1.0_CiscoWorks, 18774 bytes, 37 tape blocks
x ./ncsconfigure, 66695 bytes, 131 tape blocks
x ./ncskernel, 7953 bytes, 16 tape blocks
x ./.install/config.defs, 429 bytes, 1 tape blocks
x ./.install/nmcopyout, 4935 bytes, 10 tape blocks
x ./.install/exclude.sun4, 0 bytes, 0 tape blocks
x ./.install/find.sun4, 10081 bytes, 20 tape blocks
x ./.install/include.install, 244 bytes, 1 tape blocks
x ./.install/upgrade_nms, 13279 bytes, 26 tape blocks
x ./.install/variables, 176 bytes, 1 tape blocks
x ./.install/dbunload, 3036 bytes, 6 tape blocks

./extract_unbundled: Starting installation process ...
./extract_unbundled: /usr/tmp/unbundled/install_unbundled -c/cdrom -f

/usr/tmp/unbundled/install_unbundled: Starting installation script /usr/tmp/unbundled/1.0_CiscoWorks ...
/usr/tmp/unbundled/install_unbundled: /usr/tmp/unbundled/1.0_CiscoWorks -c/cdrom -f

********************* CiscoWorks 1.0 INSTALLATION **********************

INSTALLATION SETUP  -  This section of the CiscoWorks 1.0 installation
will ask you to specify the type of installation (new or upgrade) and
the directory path for the product installation.  Existing NetCentral
```

```
data will be saved if this is an upgrade, and the new directory
structure will be setup.

Is this a new installation of CiscoWorks 1.0, or an upgrade of an
existing CiscoWorks 1.0 or NetCentral 1.3 installation?

Enter type of installation as (n)ew or (u)pgrade: [new] u

What directory contains the existing installation? [/usr/nms]

Installation type          :  upgrade
Destination directory      :  /usr/nms
Are these values correct (y/n)? [y]

CDROM INSTALLATION - This section of the CiscoWorks 1.0 installation
will load files from the installation cdrom into the /usr/nms directory.

CiscoWorks 1.0 installation will take approximately 20 minutes.

Installing CiscoWorks 1.0 ...

uncompress -c /cdrom/ciscoworks/sun4.ncs.tar.Z | tar xvfpB - 2>&1 | tee /disk/tm
p/unbundled/.install/tar.log | cat -u
x ./snm/agents/cisco.schema, 113239 bytes, 222 tape blocks
x ./snm/agents/cisco.asn1.oid, 20825 bytes, 41 tape blocks
x ./snm/agents/snmp-mibII.oid, 8094 bytes, 16 tape blocks
...
...
x ./help/nmhealth.hlp, 6507 bytes, 13 tape blocks

Finished installing CiscoWorks 1.0.

About to install upgrade to Sybase version 4.9.1
To upgrade your Sybase server you will need xxxxx Megabytes of free disk space
If you don't have enough space on the /usr/nms device,
you can enter a new path for the installation here,
otherwise press return to accept /usr/nms/syb491:

Installing Sybase Database & Server ...

uncompress -c /cdrom/sybase/sybase.sun4.tar.Z | tar xvfpB - 2>&1 | tee /disk/tmp
/unbundled/.install/tar.log | cat -u
x ./sybase/bin/apt.std, 1630208 bytes, 3184 tape blocks
x ./sybase/bin/apt, 998 bytes, 2 tape blocks
...
...
x ./sybase/interfaces.dist, 132 bytes, 1 tape blocks

Finished installing upgrade to sybase 4.9.1

Verifying installed files ...

Installation verified - CiscoWorks 1.0 files loaded correctly.

KERNEL MODIFICATIONS  -  This section of the CiscoWorks 1.0 installation
will make sybase modifications to your system kernel. You will be
prompted for an existing kernel configuration file to use as a base for
the new system kernel; the default is your current kernel configuration.
After this script has completed successfully, you must reboot your
system for the kernel modifications to take effect.

You may decide to skip this section of the installation if:
1.  Your kernel has already been modified for Sybase 4.9.1,
2.  You wish to modify and rebuild your kernel manually, or
3.  Sybase will not be running on this system.
```

```
OK to continue with kernel modifications (y/n)? [y]

Please enter System Configuration file or (q)uit: [GENERIC]

The base kernel configuration file is           : /sys/sun4c/conf/GENERIC
The new kernel configuration file will be       : /sys/sun4c/conf/SYBASE
The old kernel will be saved as                 : /vmunix.syb_inst
The new SYBASE kernel will be installed as:     : /usr/tmp/unbundled/ncskernel.log

Are these values correct (y/n) ? [y]

Saving old kernel as /vmunix.syb_inst ...
Creating /sys/sun4c/conf/SYBASE ...
Configuring /sys/sun4c/conf/SYBASE ...
Building SYBASE kernel from /sys/sun4c/conf/SYBASE ...
Installing new system kernel ...

SYBASE kernel modifications completed - Reboot your system to use the
new kernel before you proceed with CiscoWorks 1.0 configuration.

REBOOT NOW!


CiscoWorks 1.0 Installation completed - continue with CiscoWorks 1.0
configuration by starting /usr/tmp/unbundled/ncsconfigure.
```

To configure CiscoWorks, proceed to the next section, “Sample Configuration Dialog for a NetCentral Release 1.3 Upgrade.”

Sample Configuration Dialog for a NetCentral Release 1.3 Upgrade

This section provides an example of a sample upgrade configuration of CiscoWorks Release 1.0(3). Refer to this section if you are configuring CiscoWorks Release 1.0(3) software to upgrade from NetCentral Release 1.3.

Before configuring CiscoWorks, do the following:

- Install SunNet Manager on your system. The configuration script attempts to find SunNet Manager files. If it fails to find them, the configuration process is aborted.
- Log in as a superuser. If you are not logged in as a superuser, CiscoWorks will be unable to complete the configuration.
- Check your umask to ensure proper privileges. If your your umask is set to 7 or 77, you need to change it to 022 in order for the *ncsconfigure* script to run correctly. To check your umask, enter **umask** at the UNIX prompt. To change your umask, enter **umask 022** at the UNIX prompt. This is a temporary change since the umask is usually set in your *.cshrc* file and will revert back to the original setting.

Caution If you do not check your umask setting, you may experience a failure in the *ncsconfigure* script. If you experience a configuration script failure, refer to “Troubleshooting Installation Problems” on page 33 for more detailed instructions.

If you are using Network Information Service (NIS) at your site, the configuration script saves NIS-related information during the configuration to the following files:

- */usr/tmp/CW.group*

- */usr/tmp/CW.prod*
- */usr/tmp/CW.sybase*

After completing the CiscoWorks configuration, use the information in these files to update your NIS server.

```
zen# /usr/tmp/unbundled/ncsconfigure
********************** CiscoWorks 1.0 CONFIGURATION **********************

CONFIGURATION SETUP  -  This section of the CiscoWorks 1.0 configuration
will ask you to verify the type of installation (new or upgrade) and
the directory path where the product has been installed.

Is this a new installation of CiscoWorks 1.0, or an upgrade of an
existing CiscoWorks 1.0 or NetCentral 1.3 installation?

Verify type of installation as (n)ew or (u)pgrade: [upgrade]

Verify the directory path for the CiscoWorks 1.0 software: [/usr/nms]
Installation type          :  upgrade
Destination directory      :  /usr/nms

Are these values correct (y/n)? [y]

*****************************************************************
NIS CHECK - Your system appears to be running Network Information
Service. Your NIS Administrator should update your NIS server
with any new or modified groups and users. This
information is also added to your local host.
*****************************************************************
```

Note If you are not using NIS, the NIS-related information is not displayed by the configuration script.

```
GROUPS AND USERS - This section of the CiscoWorks 1.0 configuration will
set up a UNIX group and users for the installed software.  You will be
asked for a group name, group id, and a list of group users.  Next,
you will be asked to specify user information for ownership of the
CiscoWorks 1.0 files followed by user information for ownership of the
Sybase database files.  The users for CiscoWorks 1.0 and Sybase will be
added to the group automatically.

Refer to your system and CiscoWorks 1.0 documentation for instructions
on adding/modifying groups and users after configuration is complete.

What is the name of the existing CiscoWorks 1.0 group?  [CscWorks]
Using the following values for the CiscoWorks 1.0 group:

CiscoWorks 1.0 Group Name     : CscWorks
CiscoWorks 1.0 Group ID       : 55
CiscoWorks 1.0 Group Users    : kwilson,cscworks,sybase
Are these values correct?  [yes]

****Please add this information to the NIS server:
CscWorks:*:55:root, kwilson, cscworks, sybase
This information is saved to /usr/tmp/CW.group also
```

```
What is the name of the existing CiscoWorks 1.0 login?  [cscworks]
Using the following values for the CiscoWorks 1.0 user:

CiscoWorks 1.0 User Name          : cscworks
CiscoWorks 1.0 User ID            : 100
CiscoWorks 1.0 Group ID           : 55
CiscoWorks 1.0 Full Name          : CiscoWorks
CiscoWorks 1.0 Home Directory     : /usr/nms
CiscoWorks 1.0 Shell              : /bin/csh
Are these values correct? [yes]

**** Please add this information to the NIS SERVER
cscworks:*:100:55:CiscoWorks:/disk/cw1.0:/bin/csh
This information is saved to /usr/tmp/CW.prod also

Using the following values for the Sybase user:

Sybase User Name          : sybase
Sybase User ID            : 101
Sybase Group ID           : 55
Sybase Full Name          : Sybase
Sybase Home Directory     : /usr/nms/sybase
Sybase Shell              : /bin/csh

Are these values correct?  [yes]


Please add this information to the NIS SERVER
sybase:*:55:Sybase:/disk/cw1.0/sybase:/bin/csh
This information is saved to /usr/tmp/CW.sybase also.

Updating CscWorks group in /etc/group with kwilson,cscworks,sybase ...

FILE OWNERSHIP AND PERMISSIONS  -  The ownership of the CiscoWorks 1.0
files will be changed to the selected users and groups.  Permissions
of specific files will be modified to enable execution and read/write
capabilities.

Setting the owner and group for CiscoWorks 1.0 software ...

chown -R cscworks.CscWorks /usr/nms/.
chown -R sybase /usr/nms/sybase
chown root /usr/nms/bin/nmsummary
chown root /usr/nms/bin/nmpoll
chown root /usr/nms/bin/nmproc
chown root /usr/nms/bin/nmpath
chown root /usr/nms/bin/nmdevmon
chown root /usr/nms/contrib/tcpdump

Setting the permissions for CiscoWorks 1.0 software ...

chmod -R 750 /usr/nms
chmod 4750 /usr/nms/bin/nmsummary
chmod 4750 /usr/nms/bin/nmpoll
chmod 4750 /usr/nms/bin/nmproc
chmod 4750 /usr/nms/bin/nmpath
chmod 4750 /usr/nms/bin/nmdevmon
chmod 4750 /usr/nms/contrib/tcpdump
chmod 660 /usr/nms/etc/ncspwd
chmod 770 /usr/nms/log
Do you wish to install the new MIB files? [yes]

SUNNET MANAGER MODIFICATIONS  -  A set of Cisco schema files must be
added to the SunNet Manager schema files to enable SunNet Manager
to integrate CiscoWorks 1.0 functionality.  You need to specify the
```

```
directory path for the SunNet Manager schema files.
Directory path for SunNet Manager schema files? [/usr/snm]

Merging CiscoWorks 1.0 schemas with SunNet Manager ...

cp /usr/nms/snm/agents/* /usr/snm/agents/
cp /usr/nms/snm/struct/* /usr/snm/struct/
cp /usr/nms/snm/icons/* /usr/snm/sun4/snm/icons/
cp /usr/nms/snm/traps/cisco.traps /var/adm/snm/
chmod +r /usr/snm/agents/*
chmod +r /usr/snm/struct/*
chmod +r /usr/snm/icons/*
chmod +r /var/adm/snm/*

Running /usr/snm/bin/build_oid ...

Parsing /usr/snm/agents/enterprises.oid
Parsing /usr/snm/agents/snmp.oid
Parsing /usr/snm/agents/sun-snmp.oid
Parsing /usr/snm/agents/cisco.asn1.oid
Parsing /usr/snm/agents/snmp-mibII.oid
Writing /var/adm/snm/oid.dbase

SunNet Manager modifications completed.

DATABASE STARTUP - This section of the CiscoWorks 1.0 configuration will
build and load the CiscoWorks 1.0 database. The Sybase dataserver and
any daemons from previous installations will be halted. Then the new
database will be built. If this is an upgrade installation, data from
the previous installation will be reloaded into the new database.
Certain operations will require you to provide the Sybase ‘sa’ (system
admin) password. Use password ‘NULL’ if this is a new installation.

OK to continue (y/n)? [y]

Halting Sybase dataserver and CiscoWorks 1.0 daemons ...

Running /usr/nms/etc/load_nms ...

      **** Do not interrupt the execution of this script! ****
The load_nms script will create the Sybase master database and the
nms database. During database intensive operations, output may not
be produced for several minutes. If problems occur, this script can
be run manually from /usr/nms/etc/load_nms.

Creating master.dat database file ...

Starting Sybase dataserver ...

Waiting for server to complete initialization...

Loading master database schema ... (ignore message about sp_configure)

Loading master database ... (ignore message about unexpected EOF)
‘Disk’ device added.
(return status = 0)
DB-LIBRARY error:
      Unexpected EOF from SQL Server.

Restarting Sybase dataserver with new master database.

Creating new nms database ...

CREATE DATABASE: allocating 3072 pages on disk ‘nms’
CREATE DATABASE: allocating 2048 pages on disk ‘nms’
```

```
Loading nms database ... (ignore message about unexpected EOF)

Run the CHECKPOINT command in the database that was changed.
(return status = 0)
Run the CHECKPOINT command in the database that was changed.
(return status = 0)
Server SHUTDOWN by request.
The SQL Server is terminating this process.
DB-LIBRARY error:
      Unexpected EOF from SQL Server.
/usr/nms/sybase/install

Sybase database installation and load is complete.

Upgrading database files ...
Start the new server on the old database ...

00: 02/Waiting for server to complete initialization ...
00: 92/10/12 08:50:11.96 kernel:SQL Server/4.8/EBF 984/Sun 4/SunOS 4.1.X/55/OPT/
Thu Aug 6 10:29:22 PDT 1992
00: 92/10/12 08:50:11.98 kernel: Sybase SMP SQL Server 4.8
00: 92/10/12 08:50:11.98 kernel: Confidential Property of Sybase, Inc.
.................................................
Loading database data from old server in new server ...

Where did you save the database data? [/usr/tmp]
Creating table testpoll
Creating table nms_rev_history
(0 rows affected)
(1 row affected)
(2 rows affected)
Database (null) is alive
Sybase is running.

No errors detected, the Database seems to be correctly installed.

TFTP CHECK  -  The CiscoWorks 1.0 Configuration Management application
uses TFTP for configuration upload and download of Cisco devices.
Correct operation of this feature requires that TFTP service be enabled
and that the TFTP directory have the correct access permissions.
Checking for correct TFTP service configuration ...

TFTP is correctly configured.

SYSLOG MODIFICATIONS  -  The CiscoWorks 1.0 Log Manager application
uses a centralized log file which gets messages from the UNIX syslogd
process.  You will need to specify the log file name and which syslog
facility (local0-local7) to use.  Use facility local7 if you want to
log both CiscoWorks 1.0 messages and Cisco device messages; use a
different facility if you want to log only CiscoWorks 1.0 messages.

Enter log file to use for CiscoWorks 1.0 messages: [/var/log/nmslog]
/var/log/nmslog already exists!  Use this file anyway (y/n)? [y]

Enter syslog facility to use for CiscoWorks 1.0 messages: [local7]

OK to remove other syslog entries which use local7 (y/n)? [y]
The log file will be                        : /var/log/nmslog
The syslog facility will be                 : local7
Remove other syslog entries which use local7  : y

Are these values correct (y/n)? [y]

Syslog modifications in progress ...
```

```
NMSLOGFILE = /var/log/nmslog
INSTALL = upgrade

Resetting database and system logs ...
logpurg 1.0(2.8) Alpha starting:
        Process id = 842
        Debugging: = Off

logpurg started at: Fri Jul 23 17:19:21 1993
logpurg completed
Syslog modifications completed.

Start the CiscoWorks 1.0 processes and database server (y/n)? [y]

Starting CiscoWorks 1.0.  Please wait ...

RC.LOCAL MODIFICATIONS  -  The Sybase dataserver and other CiscoWorks 1.0
daemons must be running as background processes for correct operation
of CiscoWorks 1.0.  This section of the configuration will modify the file
/etc/rc.local to include nmstartup which will start the Sybase dataserver
and CiscoWorks 1.0 daemons during system reboot.
Checking for nmstartup in /etc/rc.local ...

Old version of nmstartup detected in /etc/rc.local!
Update existing nmstartup for CiscoWorks 1.0 in /etc/rc.local (y/n)? [y]

Updating nmstartup for CiscoWorks 1.0 in /etc/rc.local ...
/etc/rc.local modifications completed.


CRON MODIFICATIONS  -  The syslog file must be purged periodically
to avoid running out of disk space.  This activity is automated by the
CiscoWorks 1.0 log purge utility when scheduled by the UNIX cron daemon.
This will purge syslog daily and maintain a seven day history of syslog
files.

Schedule the CiscoWorks 1.0 log purge utility to run daily (y/n)? [y]

Adding line "0 2 * * * /usr/nms/bin/purge /usr/nms" to crontab
...
Cron modifications completed.

CONFIGURATION COMPLETE  -  Various environment variables must be defined
for correct operation of CiscoWorks 1.0. You can append the following lines
to the .login or .cshrc file of CiscoWorks 1.0 users so that required
environment variables will be set correctly:

#   Set environment variables for CiscoWorks 1.0.
setenv SNMHOME /usr/snm
setenv NMSROOT /usr/nms
setenv SYBASE /usr/nms/sybase
#   Set path for CiscoWorks 1.0 man pages.
if (!($?MANPATH)) setenv MANPATH /usr/man
setenv MANPATH "$MANPATH":"$NMSROOT"/man
#   Set path for CiscoWorks 1.0 executables.
set path=($path /usr/nms/bin /usr/nms/etc)

Refer to the CiscoWorks 1.0 Getting Started Guide for instructions on
validating your installation and configuration.
```

After configuring CiscoWorks Release 1.0(3), you can remove the installation log files by following the instructions on page 38 in the *CiscoWorks Getting Started Guide*.

To eject the CD-ROM enter the following commands:

```
hostname# cd /
hostname# eject sr0
```

The CD-ROM caddy is ejected from the drive.

Note Make sure you validate CiscoWorks installation and configuration process by following the instructions in Chapter 4, ”Validating CiscoWorks Installation” of the *CiscoWorks Getting Started Guide*. When you validate the CiscoWorks installation, you will be able to access CiscoWorks through SNM.

Troubleshooting Installation Problems

If you experience any installation or configuration problems, refer to the appendix on “Error Messages” in the *CiscoWorks Getting Started Guide*.

Note All the following steps should be run as root, and in sequence without logging out or changing to superuser, or the umask setting (from the **umask** command) will be lost.

If you see the message, “FIFO_config: Permission denied,” during the configuration, perform the following steps.

Step 1 As root, remove the following files using the remove (**rm**) command:

```
# rm /tmp/interfaces
# rm $SYBASE/install/FIFO_config
# rm $SYBASE/interfaces
# umask 0
```

This allows you to rerun *ncsconfigure* and get the correct file permissions.

Step 2 Rerun *ncsconfigure* as a superuser.

```
# /usr/tmp/unbundled/ncsconfigure
```

The configuration should run correctly. If you have further problems, refer to the *CiscoWorks 1.0(3) Release Note*.

Transferring CD-ROM Documents to Your Hard Disk

Your CD-ROM contains the CiscoWorks Release 1.0 documentation. If you are upgrading from CiscoWorks Release 1.0(2) and have already transferred the CD-ROM documents to your hard disk, you do not need to repeat this procedure.

Note No additional documents were added to the CD-ROM since the CiscoWorks Release 1.0(2) version. All new release note and addendum information are on paper, not CD-ROM. This is due to early CD-ROM press schedules.

Perform the following steps to copy these documents from the CD-ROM to your hard disk:

Step 1 If the CD-ROM is not already mounted, refer to the CiscoWorks 1.0(3) CD-ROM installation booklet or this addendum for instructions on mounting the disc.

Step 2 Create a directory to store the CD-ROM files by entering the following at the UNIX prompt (%). This path allows the documentation to remain with the source software.

```
% mkdir /usr/nms/docs
```

Step 3 Change to the new */usr/nms/docs* directory by entering the following:

```
% cd /usr/nms/docs
```

Step 4 To copy all the document files to your */usr/nms/docs* directory, enter the following:

```
% cp /cdrom/documentation/Viewer_docs/UserGuide/* .
```

Step 5 To copy a specific document file to your */usr/nms/docs* directory, enter the following:

```
% cp /cdrom/documentation/Viewer_docs/UserGuide/filename.view .
```

Substitute the name of your file for *filename.view*.

Step 6 To copy the complete directory structure with the documents to your system, enter the following:

```
% cp -r /cdrom/documentation .
```

For additional information on accessing the documents on the CD-ROM, refer to the *README* file in the */cdrom/documentation* directory.

Note If you experience trouble during the installation or need additional upgrade or product information, contact a customer service representative or the Cisco Systems Technical Assistance Center (TAC) for assistance. TAC telephone numbers and e-mail address follow: 800 553-2447, 415 903-7209, `tac@cisco.com`.

Customer Information Online

Cisco Systems' Customer Information Online (CIO) system provides online information and electronic services to Cisco direct customers and business partners. Basic CIO services include general Cisco information, product announcements, descriptions of service offerings, and download access to public and authorized files, including release notes and software. Maintenance customers receive a much broader offering, including technical notes, the bug database, and electronic mail access to the TAC. (Maintenance customers must have authorization from their Cisco contract administrators to receive these privileges.)

For dialup or Internet users, CIO supports Zmodem, Kermit, Xmodem, FTP PUT, Internet e-mail, Telnet, rlogin, and fax download options. Internet users also can retrieve files from CIO using FTP.

Registration for CIO is handled on line. To reach CIO via the Internet, use Telnet or FTP to `cio.cisco.com` (131.108.89.33). To reach CIO by dialup, use 415 903-8070 (Mountain View, California) or 33 1 6446 4082 (Paris, France).

This document is to be used in conjunction with the *CiscoWorks Getting Started Guide* and *CiscoWorks User Guide*.