Installing and Configuring CiscoWorks

This chapter describes how to install and configure CiscoWorks software on Sun workstations and HP systems.

Installation Overview

Before installing CiscoWorks, you must complete the prerequisite steps described in the "Preparing to Install CiscoWorks" chapter. To install and configure CiscoWorks, you need to perform the following general tasks:

1 Become the superuser.

2 Perform backups in preparation for a CiscoWorks upgrade, if you are upgrading.

If you are a current CiscoWorks users on HPUX 9.x, you must back up your data when upgrading to HPUX 10.x. For more information, refer to "Migration from HPUX 9.x to HPUX 10.x," later in this chapter.

3 Mount the CiscoWorks CD-ROM from a local or remote drive.

4 Install CiscoWorks by using the CiscoWorks installation script.

5 Configure CiscoWorks by using the CiscoWorks configuration script.

6 Unmount the CiscoWorks CD-ROM.

7 Perform the required post-installation tasks.

Becoming the Superuser

To perform the tasks associated with installing and configuring CiscoWorks, you must log in to your system as the superuser (*root*). Superusers can perform functions that normal users cannot.

> **Caution** If you are a relatively inexperienced UNIX user, limit your activities as the superuser to the tasks described in this publication. As the superuser, you can adversely affect your operating environment if you are unaware of the effects of the commands you use.

To become the superuser, you must know the root password. In the following examples, the root password is *rootpassword*.

Note   This chapter assumes that you use the C shell (csh). If you use the C shell, the prompt displays as a percent sign (%). If you use the Bourne shell, the prompt displays as a dollar sign ($). When you log in as the superuser in either shell, the root prompt displays as a pound sign (#).

If you are not logged in, enter the following commands to log in as the superuser:

```
login: root
Password:<rootpassword>
#
```

Make sure that you start an X Window Manager session.

The UNIX prompt is a pound sign (#), indicating that you are logged in as the superuser.

Note   For security reasons, when you enter *rootpassword*, nothing appears on the screen because passwords are encrypted and not echoed.

If you are already logged in, but not as root, enter the following commands to change your login:

```
% su
Password:<rootpassword>
#
```

The C shell prompt changes from a percent sign (%) to a pound sign (#), indicating that you are logged in as the superuser.

Upgrading from a Previous Version of CiscoWorks

If you are upgrading from a previous version of CiscoWorks, follow the instructions outlined in the "Verifying Installation of Your Operating System and Network Management Platform Software," "Shutting Down the Sybase Database," "Backing Up Your Existing CiscoWorks Software," "Migration from SunOS to Solaris," and "Migration from HPUX 9.x to HPUX 10.x" sections.

Caution   If you are running Sybase, it is extremely important to back up each Sybase version (Version 4.9, Version 10.0, or both) separately. To prevent possible data loss, back up your system and database before installing CiscoWorks. If your system fails during the upgrade, it could corrupt the Sybase database. If you are upgrading from UPUX 9.x to HPUX 10.x, you must backup your existing data using the **bcp** command prior to upgrading the operating system.

Verifying Installation of Your Operating System and Network Management Platform Software

After you shut down the Sybase database and back up your existing CiscoWorks software, verify that you are running the supported operating systems and network management software versions.

To verify your current operating system, enter **uname -r**.

To verify your current network management platform versions, enter the following:

- For SunNet Manager, enter **$SNMHOME/bin/snm_version**.

- For HP OpenView, start HP OpenView and then select **Help>About Open View** to view the version number.

If you are not running the supported versions, follow the instructions to upgrade your operating system and the network management platform software. If you are using SunOS, follow the instructions in the Sun documentation to upgrade your version of SunOS to Version 4.1.3 or 4.1.4 (Solaris 1.X). If you are using Solaris, follow the instructions in the Sun documentation to upgrade your version of Solaris to Version 2.4 (SunOS 5.4). If you are using HP-UX, follow the instructions in the HP documentation to upgrade your version of HP-UX to the appropriate version. After you install your operating system, follow the instructions in your NMS documentation to install SunNet Manager Version 2.2.2 or HP OpenView Version 4.0, if it is not already installed.

Shutting Down the Sybase Database

Since CiscoWorks uses the Sybase database, you must close all database files and shut down your database before starting the backup process.

To shut down the database, perform the following steps:

Step 1 Log in to your system as the superuser.

For information on how to become the superuser, refer to the section "Becoming the Superuser," earlier in this chapter.

Step 2 To ensure that your Sybase environment variable is set, enter the following:

```
# setenv SYBASE $NMSROOT/sybase
```

Step 3 Execute the **isql** binary by entering the following:

```
# $SYBASE/bin/isql -Usa -P <sa_password>
```

Enter the password, if you created one, for the Sybase SA account at your site. If you do not supply a password, the script assumes the value for password is null.

After starting **isql**, the prompt **1>** appears.

Step 4 Enter the **shutdown** command as follows:

```
1> shutdown
2> go
```

The database shuts down, and the root prompt reappears.

Backing Up Your Existing CiscoWorks Software

Back up your entire CiscoWorks system, including the *$NMSROOT* directory, current database(s) and map files, as well as any additional Sybase data files. For information on backing up UNIX files, refer to the UNIX manual pages on **tar**(1) or **cpio**(1).

⚠ **Caution** To prevent possible data loss, back up your system and database before installing CiscoWorks.

CiscoWorks Software Structure for HP-UX

CiscoWorks software is distributed on a CD-ROM. For HP-UX installations, the CD-ROM contains a number of filesets. A *fileset* is group of related files. Each partition or fileset contains a specific set of files, as described in Table 3-1 for HPUX 9.x and Table 3-2 for HPUX 10.x.

Table 3-1   Parts of the CiscoWorks Software for HPUX 9.x

Partition Name	Fileset Name	Contents
CWIC		*cwinstall* and *cwconfigure* scripts, which install and configure CiscoWorks
CISCO-WORKS	CW-BIN	Actual CiscoWorks applications
	CW-DOC	CiscoWorks help and UNIX manual (**man**) page files
	CW-ETC	Daemons and utilities that support CiscoWorks applications
	CW-MISC	Software you can use with CiscoWorks, such as *tcl* (a scripting language)
	CW-OV-REGISTER	CiscoWorks files that support HP OpenView
	CW-WGD	WorkGroup Director application
HYPERHELP		HyperHelp text files
SYBASE		Sybase relational database
SHARE-LIBS	LIBXMU	X11 standard libraries
	SHARE-LIBS	C++ runtime libraries

Table 3-2   Parts of the CiscoWorks Software for HPUX 10.x (HPOV 4)

Partition Name	Fileset Name	Contents
CISCO-WORKS	CISCOWORKS	Scripts, applications, and help files
SYBASE		Sybase relational database version 10.02
SHARE-LIBS	LIBXMU	X11 standard libraries
	LIBXAW	X11 standard libraries

Installing from a Local or Remote CD-ROM

Before you install CiscoWorks from a CD-ROM drive attached to your system or a remote system, perform the following steps:

Step 1   Connect a CD-ROM drive either to your workstation or to a remote workstation. Retain the device number used by the CD-ROM drive for later use in installing CiscoWorks.

Step 2   To install CiscoWorks from a remote host, acquire the appropriate login account to mount the CD-ROM remotely.

Step 3   Log in as the superuser. For instructions, refer to the section "Becoming the Superuser," earlier in this chapter.

Step 4   Perform the installation steps that follow.

Caution   Avoid exposing the CiscoWorks CD-ROM to direct sunlight because it might harm the contents.

After you log in as the superuser, the installation script prompts you to supply the device name of the local or the remote CD-ROM drive, or the name of the remote system and the device name of the remote drive.

The installation and configuration process takes a minimum of 20 to 30 minutes. Depending on your system performance and installation method, installation from a remote CD-ROM drive may take longer than 30 minutes.

If you are using a CD-ROM drive that is connected to your workstation, refer to the following section, "Installing from a Local CD-ROM Drive." If you are using a CD-ROM drive that is connected to a remote workstation, refer to the section "Installing from a Remote CD-ROM Drive on SunOS, HP-UX 9.x and HP-UX 10.x," later in this chapter. These instructions are also provided in the CiscoWorks CD-ROM insert booklet shipped with the product.

Note You can exit the installation or configuration script at any time by pressing **Ctrl-C** to return to the UNIX prompt. Many of the responses you make up to the point you exit are recorded for use as the defaults the next time you start the installation process.

Installing from a Local CD-ROM Drive

If you are installing CiscoWorks from a local CD-ROM drive, complete the steps in this section. Use the Installation Worksheet Items and the Configuration Worksheet Items in the "Preparing to Install CiscoWorks" chapter as a reference.

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

Step 1 Log in as the superuser by entering **su** and the root password.

Step 2 Create a */cdrom* directory, if one does not exist, by entering the following command:

```
# mkdir /cdrom
```

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

Step 3 Place the CD-ROM in its caddy and insert it into the CD-ROM drive.

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

On SunOS:

```
# /etc/mount -rt hsfs /dev/device_name /cdrom
```

On HP-UX:

```
# /etc/mount -rt cdfs /dev/device_name /cdrom
```

where *-r* mounts the CD-ROM in read-only mode. *-t* indicates the type of file system. *hsfs* specifies a file system with an ISO 9660 standard or High Sierra standard with Rock Ridge extensions and a *CDFS* file system. *device_name* is the device that you mount, usually *sr0* on SunOS, *dsk/c201d5s0* on HP-UX 9.x, or *dsk/c0t3d0* on HP-UX 10.x. If you do not use these options, media error messages may display on the console.

On Solaris:

The CD is automatically mounted onto the */cdrom* directory. If you are running File Manager, a separate File Manager window displays the contents of the CD-ROM. If the */cdrom* directory is empty because the CD was not mounted, or if File Manager did not open a window displaying the contents of the CD-ROM, check if the vold daemon is running by entering the following command:

```
# ps -e | grep vold | grep -v grep
```

If the system does not display anything, enter the following command:

```
# /usr/sbin/vold &
```

The vold daemon manages the CD-ROM device and performs the mounting.

To continue with CiscoWorks installation, refer to the appropriate section in this chapter for your operating system or platform. For SunOS, refer to "Installing CiscoWorks on SunOS;" for Solaris, refer to "Installing CiscoWorks on Solaris;" for HP-UX, refer to "Installing CiscoWorks on HP-UX 9.x" and "Installing CiscoWorks on HP-UX 10.x."

Software Access Control on HP-UX 10.x Only

All root file systems, software depots, and products in software depots are protected by Access Control Lists (ACLs). The HP-UX 10.x installation commands (SD-UX) permit or prevent specific operations based on whether the ACLs on these objects permit the operation. Use the **swacl** command to view, edit, and manage these ACLs. The ACL must exist and you must have the appropriate permission (granted by the ACL itself) in order to modify it.

To view the current access list for the product:

```
swacl -l product -x target_directory=/cdrom/HPUX_10 CISCOWORKS303
```

To view the current access list for the host:

```
swacl -l host
```

To modify or for more information on the access control list, refer to **man swacl**.

Installing from a Remote CD-ROM Drive on SunOS, HP-UX 9.x and HP-UX 10.x

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

The root .*rhosts* file on the remote system must contain the host name of your local system and an entry for the user *root*. Otherwise, you cannot access the remote system to download software from its CD-ROM drive. For more information, refer to the **rhosts** UNIX manual page.

If you are installing CiscoWorks from a remote CD-ROM drive, complete the steps in this section. Use the Installation Worksheet Items and the Configuration Worksheet Items in the "Preparing to Install CiscoWorks" chapter as a reference.

To install CiscoWorks from a remote CD-ROM drive, perform the following steps on the remote system:

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

Step 2 Log in as the superuser on the remote workstation.

For information on how to become the superuser, refer to the section "Becoming the Superuser," earlier in this chapter.

Step 3 Create a */cdrom* directory, if one does not exist, by entering the following command:

```
# mkdir /cdrom
```

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

Step 4 Use a text editor to create an */etc/exports* file on SunOS and HP-UX or an */etc/dfs/dfstab* file on Solaris, if one does not exist.

Step 5 Add the following line to the */etc/exports* file on SunOS and HP-UX:

```
/cdrom -ro
```

Add the following line to the */etc/dfs/dfstab* file on Solaris:

```
share -F nfs -o ro /cdrom
```

Step 6 Ensure that your workstation is enabled as an NFS server.

On SunOS, check NFS server status with the following command. Both *nfsd* and *rpc.mountd* daemons must be running for a workstation to be an NFS server.

```
# ps -ax | grep nfsd | grep -v grep
```

If no *nfsd* daemons are running, start some with the following command:

```
# nfsd 8 &
```

Check *rpc.mountd* daemon status with the following command:

HP-UX

```
# ps -ax | grep rpc.mountd | grep -v grep
```

For HP-UX 9.x only:

If no *rpc.mountd* daemon is running, start one with the following command:

```
# /usr/etc/rpc.mountd -n
```

On Solaris, check NFS server status with the following command:

```
# ps -ef | grep nfs | grep -v grep
```

If your machine is enabled as an NFS server, the following daemons should be running: */usr/lib/nfs/nfsd* and */usr/lib/nfs/mountd.*

If these daemons are not running, enable your machine as an NFS server with the following command:

HP-UX 9.x:

```
# /etc/nfs.server start
```

HP-UX 10.x:

```
# /sbin/init.d/nfs.server start
```

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

On SunOS:

```
# /etc/mount -rt hsfs /dev/device_name /cdrom
```

On HP-UX 9.x:

```
# /etc/mount -rt cdfs /dev/device_name /cdrom
```

On HP-UX 10.x:

```
# /etc/usr/sbin/mount -rt cdfs /dev/device_name /cdrom
```

where *-r* mounts the CD-ROM in read-only mode. *-t* indicates the type of file system. *hsfs* specifies a file system with an ISO 9660 standard or High Sierra standard with Rock Ridge extensions and a *CDFS* file system. *device_name* is the device that you mount, usually **sr0** on SunOS, **dsk/c201d5s0** on HP-UX 9.x, or **dsk/c0t3d0** on HP-UX 10.x. If you do not use these options, media error messages may display on the console.

On Solaris:

The CD is automatically mounted onto the */cdrom* directory. If you are running File Manager, a separate File Manager window displays the contents of the CD-ROM. If the */cdrom* directory is empty because the CD was not mounted, or if File Manager did not open a window displaying the contents of the CD-ROM, check if the vold daemon is running by entering the following command:

```
# ps -e | grep vold | grep -v grep
```

If the system does not display anything, enter the following command:

```
# /usr/sbin/vold &
```

The vold daemon manages the CD-ROM device and performs the mounting.

Step 8 Run **exportfs -a** with the following command on SunOS and HP-UX:

```
# exportfs -a
```

On Solaris and HP-UX 10.x, do not invoke the **exportfs** command. The **nfs.server start** command is already sharing the CD-ROM drive.

Step 9 Go to the *local* machine.

Step 10 Become the superuser by entering **su** and the root password.

Step 11 Create a */cdrom* directory, if one does not already exist, by entering the following command:

```
# mkdir /cdrom
```

Step 12 To mount the CD-ROM, enter the following command:

On SunOS and HP-UX 9.x:

```
# /etc/mount remote_machinename:/cdrom /cdrom
```

On Solaris and HP-UX 10.x:

```
# /usr/sbin/mount remote_machinename:/cdrom /cdrom
```

Step 13 a. On SunOS and HP-UX 9.x, if you are installing CiscoWorks for the first time, create a directory for the CiscoWorks files with the following command:

```
# mkdir /usr/nms
```

If you already have a version of CiscoWorks installed in the directory */usr/nms* on your system, and you want to save it, enter the following commands:

```
# mv /usr/nms /usr/nms.save
# mkdir /usr/nms
```

The installation process overwrites the contents of the existing */usr/nms* directory.

On Solaris, it is not necessary to create the directory for the CiscoWorks files. By default, CiscoWorks is installed in the following directories:

Sun NetManager version: */opt/CSCOcws*
HP OpenView version: */opt/CSCOcwh*
All Sybase modules: */opt/CSCOsyb*

On HP-UX 10.x, it is not necessary to create the directory for the CiscoWorks files. By default, CiscoWorks is installed in the following directories:

HP OpenView version: */opt/CSCOcwh*
All Sybase modules: */opt/CSCOsyb*

Proceed to "Installing CiscoWorks on SunOS," "Installing CiscoWorks on Solaris," "Installing CiscoWorks on HP-UX 9.x," or "Installing CiscoWorks on HP-UX 10.x,"

Installing CiscoWorks on SunOS

To install the CiscoWorks files on a SunOS platform, perform the following steps:

Step 1 Extract the files from the CD-ROM by entering the following commands:

```
# cd /cdrom/CISCOWORKS/SunOS4.1.3
# ./extract_unbundled
```

Make sure you include the **. /** in the **extract_unbundled** command to ensure that you run the correct version of this command.

Step 2 Answer the system prompt questions.

Step 3 Reboot your system, if you were prompted whether you wanted automatic kernel modification and you answered *yes*. Rebooting ensures that the new kernel is used by entering the following command:

```
# reboot
```

If you were prompted whether you wanted automatic kernel modification and you answered *no*, you must manually update the kernel before rebooting by performing the steps in the "Manually Entered Sybase Modifications to the Kernel Configuration File" section.

Step 4 Log into your system as the superuser after your computer reboots.

```
login: root
password:rootpassword
#
```

Step 5 Complete configuration of CiscoWorks with the following command:

```
# /usr/tmp/unbundled/cwconfigure
```

Answer the system prompt questions.

Step 6 To unmount and eject the CD-ROM from your local machine, enter the following commands:

```
# cd /
# umount /cdrom
# eject sr0
```

The CD-ROM caddy is ejected from the drive. Remove the CD-ROM from the caddy and store in a safe place. Skip to Step 9.

Step 7 To unmount and eject the CD-ROM from a remote machine, enter the following commands from your local machine:

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

Step 8   Log into the remote machine as root and enter the following commands:

```
# cd /
# umount /cdrom
# eject sr0
```

The CD-ROM caddy is ejected from the drive. Remove the CD-ROM from the caddy and store it in a safe place.

Step 9   Refer to the chapter "Validating CiscoWorks Installation" for verification procedures and customizing information.

Manually Entered Sybase Modifications to the Kernel Configuration File

All Sun workstations contain a *kernel*. The kernel is the heart of the UNIX system that is read when your system is started; it is the part of the operating system that allocates resources and controls processing.

If you are using an HP-UX system, you can skip this section. HP-UX recommends that you use the system administrator manager, or SAM, to update your configuration.

If you are using a Sun workstation and selected to manually update the kernel instead of having the installation script perform the changes, perform the following procedure. In order for Sybase Version 10.0.1 software to work on your Sun system, you must modify the kernel. The kernel is built from a configuration file in either the */usr/share/$ARCH/conf* directory (where $ARCH could be defined as *sun4c*, *sun4m*, or *sun4n*) or the */usr/sys/$ARCH /conf* directory.

Kernel modifications must be completed after you run your installation and before you run your configuration scripts.

Most systems use a generic kernel stored in a configuration file called *GENERIC*. If the kernel is customized for your system, it may be stored in a configuration file with a different name.

If you choose to allow the installation script to build the new kernel, it uses your current system configuration and automatically saves the old kernel configuration file as *vmunix.syb_inst*.

To modify the kernel manually (as the superuser), perform the following steps:

Step 1   Back up your existing configuration file by entering the following command:

```
# cp /vmunix /vmunix.bak
```

Step 2   Change directories by entering the following command:

```
# cd /usr/share/$ARCH/conf
OR
cd /usr/sys/$ARCH/conf
```

Step 3   Copy the base kernel configuration file (usually called *GENERIC*) to *filename* by entering the following command, where *filename* is the new name you assign to the kernel configuration file:

```
# cp GENERIC filename
```

Step 4   Add the following lines anywhere in the */usr/share/$ARCH/conf/filename* file or */usr/sys/$ARCH/conf/filename* file:

```
options "SHMSIZE=0x20000"
options "SEMMNS=640"
options "SHMMNI=256"
```

Step 5   Start the configuration process by entering the following command:

```
# config directoryname
```

This command executes the configuration process and builds a directory called
/usr/share/$ARCH/conf//directoryname or */usr/sys/$ARCH/conf/directoryname*.

Step 6   Create the *vmunix* or *vmunix_small* file by entering the following command:

```
# cd ../directoryname
# make
```

Step 7   Copy the *vmunix* or *vmunix_small* file, created in the previous step, by entering the
following command:

```
# cp ./vmunix /vmunix
or
# cp ./vmunix_small /vmunix
```

Step 8   Restart your system.

The modified kernel is now loaded and ready to use with Sybase.

For more information on modifying the kernel, refer to the *Sun Workstation and Network
Administration* publication.

Installing CiscoWorks on Solaris

The installation process on Solaris requires you to install the CiscoWorks packages, modify the
kernel configuration file, and run the configuration scripts.

To install CiscoWorks on a Solaris 2.4 platform, perform the following steps:

Step 1   Extract the files from the CD-ROM by entering the following command:

```
# pkgadd -d /cdrom/CISCOWORKS/Solaris2.4 all
```

Answer Yes each time **pkgadd** prompts whether you want to install a package.

Step 2   Reboot your system, if you were prompted whether you wanted automatic kernel
modification and you answered Yes.

Rebooting ensures that the new kernel is used. Enter the following command:

```
# reboot
```

If you were prompted whether you wanted automatic kernel modification and you
answered No, you must manually update the kernel before rebooting by performing the
steps in "Manually Entered Sybase Modifications to the Kernel Configuration File."

Step 3   Log into your system as the superuser after your computer reboots.

```
login: root
password:rootpassword
#
```

Step 4   Begin the CiscoWorks configuration process by entering the following command:

```
# cd /opt/CSCOcwh/install
# ./cwconfigure
```

While the **cwconfigure** script runs, answer the questions it displays according to the
information you entered on the CiscoWorks Configuration Worksheet.

Step 5 To unmount and eject the CD-ROM, enter the following command:

```
# umount /cdrom
# eject cdrom
```

Remove the CD-ROM caddy from the drive and store it in a safe place. Skip to Step 9.

Step 6 To unmount and eject the CD-ROM from a remote machine, enter the following commands from your local machine:

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

Step 7 Log into the remote machine as root and enter the following commands:

```
# cd /
# umount /cdrom
# eject sr0
```

The CD-ROM caddy is ejected from the drive. Remove the CD-ROM from the caddy and store it in a safe place.

Step 8 Refer to the chapter "Validating CiscoWorks Installation" for installation verification procedures and customizing information.

Installing CiscoWorks on HP-UX 9.x

If this is a new installation, perform Steps 1, 2, 3, and 8. If this is an upgrade, perform Steps 1 through 8. Only CiscoWorks 3.0 is supported for an upgrade. Before performing this procedure, back up the Sybase database and the $NMSROOT directory. Then load CiscoWorks on top of the previous version.

To install the CiscoWorks files on an HP-UX 9.x platform, perform the following steps:

Step 1 Create the directory in which you will install CiscoWorks files:

```
# mkdir /usr/nms
```

Ensure you have enough disk space to load CiscoWorks.

Step 2 Copy the installation and configuration scripts to the new CiscoWorks directory by entering the following command:

```
# /etc/update -s /cdrom/HPUX_9/cw.tar -d /usr/nms CWIC
```

where -s specifies where the CiscoWorks software is located on the CD-ROM. -d indicates the destination where the scripts are stored. For example, if you enter the pathname /usr/nms, the scripts are stored in /usr/nms.

Step 3 Enter the **cwinstall** command to install the CiscoWorks software:

```
# cd /usr/nms/install/bin
./cwinstall -s /cdrom/HPUX_9/cw.tar -d /usr/nms
```

If you do not enter any options, **cwinstall** prompts you for them.

The path name you enter after -s is the same as the source path name you entered in Step 2. -d specifies where the CiscoWorks software will be installed.

cwinstall command options include:

-s—Source

-d—Destination

-help—Print the usage

-f `filesets`—CiscoWorks software to install

where *-f* specifies the filesets that must be loaded. To install just CiscoWorks, specify
CISCO-WORKS. To install CiscoWorks, Sybase, and HyperHelp, specify
CISCO-WORKS SYBASE HYPERHELP. If you do not specify the *-f* option, **cwinstall**
loads CiscoWorks, Sybase, and HyperHelp.

Step 4   Verify that Sybase is running as shown in the following example:

```
----------------------------------------------------------------
ps -ef |grep sybase
  root 18167 18164 53 11:21:52 ttys0   1:15 /usr/nms/sybase/bin/dataserver
-d/usr/nms/sybase/data/cw_dat
  root 13204    1  0  May 11 ?        0:00 sh -c /usr/nms/sybase/install/RUN_CW_BACKUP_SERVER
> /usr/nm
  root 18164    1  0 11:21:52 ttys0   0:00 /usr/nms/sybase/install/RUN_CW_SYBASE
/usr/nms/sybase/instal
  root 13206 13205  0  May 11 ?         0:00 /usr/nms/sybase/bin/backupserver
-SCW_BACKUP_SERVER -e/usr/n
  root 13205 13204  0  May 11 ?         0:00 /usr/nms/sybase/install/RUN_CW_BACKUP_SERVER
/usr/nms/sybas
```

If Sybase is not running, use the following command to start it:

```
run $NMSROOT/etc/nmstartup.
```

Step 5   Run **$NMSROOT/sybase10/sybase/install/sybinit** as follows:

The log file for this session is */old.usr/sybase/sybase10/sybase/init/logs/log0513.001*. The
screens appear as follows:

```
SYBINIT

1.  Release directory:  /usr/nms/sybase

2.  Edit / View Interfaces File

3.  Configure a Server product
4.  Configure an Open Client/Server product

Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

Enter the number of your choice and press return.
```

Type **3** and press **Return**:

```
CONFIGURE SERVER PRODUCTS

Products:

Product               Date Installed    Date Configured
1.  SQL Server          Sep 17 95 17:07   May 11 96 16:12
2.  Backup Server       Sep 17 95 17:07   May 11 96 16:

Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

Enter the number of your choice and press return.
```

Type **1** and press **Return**:

```
NEW OR EXISTING SQL SERVER

1.   Configure a new SQL Server
2.   Configure an existing SQL Server
3.   Upgrade an existing SQL Server

Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

Enter the number of your choice and press return:
```

Type **2** and press **Return**.

```
CONFIGURE EXISTING SQL SERVER

Select one of the following servers:

1.   CW_BACKUP_SERVER
2.   CW_SYBASE

Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

Enter the number of your choice and press return:
```

Type **2** and press **Return**.

```
ENTER SA ACCOUNT NAME AND PASSWORD

1.   SA Account:   sa

2.   SA Password:

Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

Enter the number of your choice and press return:
```

Type **2** and press **Return**.

```
Enter the password to this account:

ENTER SA ACCOUNT NAME AND PASSWORD

1.   SA Account:   sa

2.   SA Password:   ########

Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

Enter the number of your choice and press return:
```

Enter the password and press **Ctrl-A**.

```
SQL SERVER UPGRADE

1.   Test SQL Server upgrade eligibility now

2.   Upgrade SQL Server now

Ctrl-a Accept and Continue, Ctrl-x Exit Screen, ? Help.

Enter the number of your choice and press return:
```

Type **1** and press **Enter**.

This program examines your existing SQL server to determine if the existing databases contain the following:

- Enough free space to complete the upgrade

- Any options set that would prevent a successful upgrade

- Any inconsistencies that would prevent a successful upgrade

```
Copying old interfaces file '/usr/nms/sybase/interfaces' to
'/old.usr/sybase/sybase10/sybase/interfaces'.
Testing SQL Server 'CW_SYBASE' for eligibility to upgrade to release '10.0.2'.
.Done

Server 'CW_SYBASE' failed preupgrade eligibility test.  See log for more
information.
Press <return> to continue.
```

Press **Ctrl-x** to exit the sybinit menu, and continue to press these keys until the system prompt returns to the screen.

Step 6 Verify the log file to check for errors, as shown in the following example:

```
-------------------------------------------------------------
more /old.usr/sybase/sybase10/sybase/init/logs/log0513.003


05/13/96 11:23:36 AM Sybinit/10.0.2/P/HP9000/800/HP-UX 9.0/1/OPT/Fri Oct 28

   08:56:00 PDT 1994
05/13/96 11:23:36 AM Confidential property of Sybase, Inc. (c) Copyright Sybase
   Inc. 1987, 1994. All rights reserved. Use, duplication, or
   disclosure by the United States Government is subject to
   restrictions as set forth in FAR subparagraphs 52.227-19
   (a)-(d) for civilian agency contracts and DFARS
   252.227-7013 (c)(1)(ii) for Department of Defense
   Contracts. Sybase reserves all unpublished rights under the copyright laws of the
   United States. Sybase, Inc. 6475
   Christie Avenue, Emeryville, CA 94608 USA.
05/13/96 11:23:36 AM BEGIN ENVIRONMENT INFORMATION

USER ENVIRONMENT
---------------------------------------
user name:                 root
current directory:         /old.usr/sybase/sybase10/sybase/install
character set:             roman8
language:                  us_english
sybinit release directory: /old.usr/sybase/sybase10/sybase
working release directory: /usr/nms/sybase

DSQUERY:                   CW_SYBASE

05/13/96 11:23:36 AM END ENVIRONMENT INFORMATION
05/13/96 11:26:45 AM Copying old interfaces file '/usr/nms/sybase/interfaces' to
   '/old.usr/sybase/sybase10/sybase/interfaces'.
05/13/96 11:26:45 AM Calling the shell with
   '/old.usr/sybase/sybase10/sybase/upgrade/preupgrade
   -SCW_SYBASE -P        -N >
   /old.usr/sybase/sybase10/sybase/init/logs/tmp 2>&1 '.
05/13/96 11:26:45 AM Testing SQL Server 'CW_SYBASE' for eligibility to upgrade
```

```
       to release '10.0.2'.
05/13/96 11:26:46 AM Done
05/13/96 11:26:46 AM Begin output from 'preupgrade':
  Starting preupgrade of SQL Server
  Checking status in all existing databases.
  ** Database 'nms' is marked `trunc. log on chkpt.`.
  ** You must reset this via sp_dboption before upgrade can continue.
  ** Database 'polldb' is marked `trunc. log on chkpt.`.
  ** You must reset this via sp_dboption before upgrade can continue.
  Upgrade of SQL Server to 10.0.2 aborted.
05/13/96 11:26:46 AM End output from 'preupgrade'.
05/13/96 11:27:52 AM Server 'CW_SYBASE' failed preupgrade eligibility test.
   See log for more information.
05/13/96 11:28:08 AM Exiting.
05/13/96 11:28:08 AM The log file for this session is
   '/old.usr/sybase/sybase10/sybase/init/logs/log0513.003'.
05/13/96 11:28:08 AM Log close.
```

Step 7 Use the **isql** command to turn off database checkpoints in the databases indicated in the error log as shown in the following example:

```
--------------------------------------------------
isql -Usa -Psa_password
1> sp_dboption nms, "trunc. log on chkpt.", false
2> go
Database option 'trunc. log on chkpt.' turned OFF for database 'nms'.
Run the CHECKPOINT command in the database that was changed.
(return status = 0)
1> sp_dboption polldb, "trunc. log on chkpt.", false
2> go
Database option 'trunc. log on chkpt.' turned OFF for database 'polldb'.
Run the CHECKPOINT command in the database that was changed.
(return status = 0)
1> quit
```

Step 8 After the CiscoWorks files are installed and the preupgrade test is passed, enter the following command to configure CiscoWorks:

```
# /usr/nms/install/bin/cwconfigure
```

Answer the system prompt questions. Remove the CD-ROM from the caddy and store it in a safe place as explained in the next steps.

Step 9 To unmount and eject the CD-ROM from your local machine, enter the following commands:

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

Step 10 To unmount and eject the CD-ROM from a remote machine, enter the following commands from your local machine:

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

Step 11 Log into the remote machine and enter the following commands:

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

Step 12 Remove the CD-ROM from the caddy and store it in a safe place.

Installing CiscoWorks on HP-UX 10.x

The installation process on HP-UX requires you to install the CiscoWorks packages, modify the kernel configuration file, and run the configuration scripts.

To install CiscoWorks on an HP-UX 10.x platform, perform the following steps:

Step 1 Extract the files from the CD-ROM by entering the following commands:

```
# cd /cdrom/HPUX_10
# ./cwinstall -s /cdrom/HPUX_10
```

Step 2 Answer Yes each time **cwinstall** prompts whether you want to install a package.

Step 3 Log into your system as the superuser after your computer reboots.

```
login: root
password:rootpassword
#
```

Step 4 Begin the CiscoWorks configuration process by entering the following command:

```
# cd /opt/CSCOcwh/install
# ./cwconfigure
```

While the **cwconfigure** script runs, answer the questions it displays according to the information you entered on the CiscoWorks Configuration Worksheet.

Step 5 To unmount and eject the CD-ROM, enter the following command:

```
# umount /cdrom
```

Remove the CD-ROM caddy from the drive and store it in a safe place.

Step 6 To unmount the CD-ROM from a remote machine, enter the following commands from your local machine:

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

Step 7 Log into the remote machine as root and enter the following commands:

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

Remove the CD-ROM caddy from the drive. Remove the CD-ROM from the caddy and store it in a safe place.

Step 8 Refer to the chapter "Validating CiscoWorks Installation" for installation verification procedures and customizing information.

Migration from SunOS to Solaris

This section is intended for users of CiscoWorks 3.0 on SunOS who want to move to CiscoWorks 3.0 on Solaris and also want to migrate their existing SunOS CiscoWorks 3.0 to their new Solaris installation.

This section only explains the steps necessary to migrate your existing SunOS CiscoWorks 3.0 data to Solaris. Refer to the appropriate Solaris or CiscoWorks installation guides for instructions on installing Solaris or CiscoWorks.

The shell script on the CiscoWorks 3.0 CD can perform most of the steps described in this section. Each step of the migration procedure is explained below, and it is indicated if the shell-script can do the step for you.

There are four stages in migrating from SunOS CiscoWorks 3.0 to Solaris CiscoWorks 3.0:

1 On the SunOS machine on which you currently run CiscoWorks 3.0, create a new directory and dump all the necessary data into files in this new directory, as explained in the section "Saving Your SunOS CiscoWorks 3.0 Data (Migration Stage 1)."

2 Move this entire directory to the Solaris machine on which you are going to install CiscoWorks 3.0. If this is the same machine on which you are currently running SunOS, you should have your system administrator back up this directory before installing Solaris and then restore it after Solaris has been installed.

3 Install CiscoWorks 3.0 on your Solaris machine. If you have added any user Sybase accounts (either with **isql** or a CiscoWorks application) to your SunOS CiscoWorks 3.0 installation, you must recreate them on your Solaris CiscoWorks 3.0 installation. Follow the same procedure you used originally to create the accounts on SunOS Sybase. However, you must recreate them in the Solaris Sybase database before restoring the data saved from SunOS CiscoWorks.

4 On the Solaris machine, move to the directory that contains all the data dumped from the SunOS installation, and load it into Solaris CiscoWorks 3.0, as explained in the section "Restoring Your Saved Data on the Solaris Machine (Migration Stage 4)."

Most of the CiscoWorks data is stored in Sybase tables, but there are also a few standard UNIX files you may want to retain. The procedures below provide the details of stages 1 and 4 by describing how to save and restore all the CiscoWorks-created Sybase tables as well as relevant standard UNIX files.

Stages 2 and 3 are not discussed further in this section. If you added any user-created tables to your SunOS Sybase database (for polling data) and want to retain that data on Solaris, follow the same steps for each user-created Sybase table as described below for the standard CiscoWorks-created Sybase tables.

Note Each command that you must enter is preceded by a pound (#) sign.

Saving Your SunOS CiscoWorks 3.0 Data (Migration Stage 1)

To save your SunOS CiscoWorks 3.0 data, perform the following steps:

Step 1 Log into your SunOS machine as root (you must be root to save the non-Sybase data) and start a C-shell (/bin/csh) if you are not already running one. Make sure the environmental variable NMSROOT is set correctly, and that $NMSROOT/bin is at the front of your PATH environmental variable.

If you want to use the commands below exactly as shown, you need to set the environmental variable *sa_password* to the password of your Sybase sa account:

 # setenv sa_password *YOUR_PASSWORD*

Otherwise, use your Sybase sa password wherever *$sa_password* appears below.

Step 2 Make a directory for the data files you are about to create, and change to that directory.

```
# mkdir /tmp/bcp_data
# cd /tmp/bcp_data
```

This directory needs to be in a partition large enough to hold your exported database. If there is enough room to do a Sybase dump command to that partition, you should be fine.

To run the commands exactly as shown below, you need to set the environmental variable *saved* to the directory you just created:

```
# setenv saved /tmp/bcp_data
```

Step 3   Mount your CiscoWorks 3.0 CD and copy the file */CISCOWORKS/Migrate/copy_tables* into your current working directory (which should be the *$saved* directory you are using to hold the saved data). Refer to "Installing from a Local or Remote CD-ROM" for instructions on mounting and copying from the CD-ROM.

As supplied, the **copy_tables** script works only if you have not created any user-defined poll group tables. If you created any such tables, edit the script before running it.

If you created user-defined poll groups, but you *do not* want to save the data in them, edit the **copy_tables** script to remove the following line from the list of tables:

```
polldb.nmsuper.polls
```

The list of tables looks like this:

```
TABLES="polldb.nmsuper.polls_config
polldb.nmsuper.tables
polldb.nmsuper.columns
polldb.nmsuper.summaryinfo
polldb.nmsuper.grouptemplate
polldb.nmsuper.polls
...
```

If you have created user-defined poll groups, and you *do* want to save the data in them, edit the **copy_tables** script to add a line naming each of your user-defined poll groups to the end of the list of tables, as shown below:

```
TABLES="polldb.nmsuper.polls_config
polldb.nmsuper.tables
polldb.nmsuper.columns
polldb.nmsuper.summaryinfo
polldb.nmsuper.grouptemplate
polldb.nmsuper.polls
...
polldb.nmsuper.my_first_poll_group
polldb.nmsuper.my_second_poll_group
```

Make sure the **copy_tables** script is executable, and then run the following commands:

```
# chmod +x copy_tables
# ./copy_tables out $sa_password $cwd
```

Step 4   If you do not use the shell-script provided on the CiscoWorks 3.0 CD, proceed to Step 4. Otherwise, individually extract each Cisco-created database table into an external file using the **bcp** command, as shown below:

```
bcp table_name out table_name.dat -c -t "\t" -Usa -P$sa_password
```

where *table_name* is the name of the table to be dumped.

To save typing the entire bcp command, you can create an alias as shown in the following example:

```
# alias bcp 'bcp \!^ out \!^.dat -c -t "\t" -Usa -P$sa_password'
```

If you created any user-defined poll group tables and want to save the data in them, repeat the **bcp** command for each table:

```
bcp polldb.nmsuper.CREATED_TABLENAME
```

Step 5 After saving all your Sybase tables, you can also save certain information contained in standard UNIX files. To save your CiscoConnect history, enter the following commands:

```
# cd $NMSROOT/lib/httpd/conf
# tar cvf $saved/cc-conf.tar *Profile.conf
# cd $NMSROOT/lib/httpd
# tar cvf $saved/cc-query.tar etc/*.dat htdocs/Cisco*/CaseQueryReply.shtml
```

To save your TACACS information, enter the following commands:

```
# cd /etc
# tar cvf $saved/tacacs.tar tac*
```

To migrate your crontab entries, enter the following command:

```
# crontab -l $saved/cronfile
```

Restoring Your Saved Data on the Solaris Machine (Migration Stage 4)

To restore your saved data on the Solaris machine, perform the following steps:

Step 1 Log into your Solaris machine as root (you must be root to restore the non-Sybase data) and start a C-shell (/bin/csh) if you are not already running one. Make sure the environmental variable **$NMSROOT** is set correctly (default is */opt/CSCOcwh*). Source the *$NMSROOT/etc/install.cshrc* as shown below:

```
# source $NMSROOT/etc/install.cshrc
```

Note If *install.cshrc* has been moved to another directory, find it and issue the appropriately modified source statement.

If you want to use the following commands exactly as shown, you need to set the environmental variable *sa_password* to the password of your Sybase sa account:

```
# setenv sa_password YOUR_PASSWORD
```

Otherwise, just use your Sybase sa password wherever *$sa_password* appears below.

Step 2 To run the commands exactly as shown, you need to set the environmental variable *saved* to the directory containing your data files saved from your SunOS CiscoWorks and then change to this directory:

```
# setenv saved /tmp/bcp_data
# cd $saved
```

Step 3 Log into **isql** as sa, set the bulkcopy option, and checkpoint your database:

```
# isql -Usa -P$sa_password
# sp_dboption nms, "select into/bulkcopy", true
# go
# use nms
# go
# checkpoint
# go
# quit
```

Step 4 If you chose to use the **copy_tables** script on SunOS, it should now be in your *$saved* directory. Make sure it is still executable, and then run it using the following commands:

```
# chmod +x copy_tables
# ./copy_tables in $sa_password $cwd
```

Step 5 If you are using the **copy_tables** script (that is, you performed Step 4 on SunOS), proceed to Step 5. Otherwise, log into **isql** as sa, truncate the following standard CiscoWorks tables, and exit **isql**.

Note It is advisable to issue a **go** command after every truncate; otherwise, if you mistype a *table-name,* you will have to retype the entire list.

Now individually load each standard Cisco-created database table from its dumped file using the **bcp** command (note the command uses **in** for Solaris and **out** for SunOS):

```
bcp table_name in table_name.dat -c -t "\t" -Usa -P$sa_password
```

where *table_name* is the name of the table to be loaded.

To save typing the entire **bcp** command, you can create an alias as shown below (again note the command uses **in** for Solaris and **out** for SunOS):

```
# alias bcp 'bcp \!^ in \!^.dat -c -t "\t" -Usa -P$sa_password'
```

Then use this aliased **bcp** command on each table.

If you chose to save any user-defined poll group tables on SunOS, you must load them into the polldb database. To do so, truncate the polldb.nmsuper.polls table by entering the following commands:

```
# isql -Usa -P$sa_password
# truncate table polldb.nmsuper.polls
# go
# quit
```

Then load the polldb.nmsuper.polls table by entering the following command:

```
# bcp polldb.nmsuper.polls
```

Next, load each of the user-created tables you dumped on SunOS by entering a **bcp** command:

```
bcp polldb.nmsuper.CREATED_TABLENAME
```

Proceed to Step 7.

Step 6 Log into **isql** as sa and unset the bulkcopy option:

```
# isql -Usa -P$sa_password
# sp_dboption nms, "select into/bulkcopy", false
# go
# quit
```

Step 7 Restore the non-Sybase files you chose to save from SunOS. If you saved your CiscoConnect history, enter the following commands:

```
# cd $NMSROOT/lib/httpd/conf
# tar xvf $saved/cc-conf.tar
# cd $NMSROOT/lib/httpd
```

```
# tar xvf $saved/cc-query.tar
```

If you saved your TACACS information, enter the following commands:

```
# cd /etc
# tar xvf $saved/tacacs.tar
```

If you saved your crontab entries, enter the following command:

```
# crontab $saved/cronfile
```

Step 8   For safety's safe, back up your new database immediately, now that you have finished the migration.

Note   If you get errors that look like "You cannot run the non-logged version of bulkcopy in this database" when using either **bcp** or **copy_tables** to load your database on Solaris, it generally means the database was not checkpointed (see Step 3). If you were using the **bcp** command, repeat Step 3, truncate the table as in Step 4, and then repeat the **bcp** command. It is essential to truncate the table before repeating the **bcp** command, or you may end up with duplicate rows in the table, which will cause problems. If you were using **copy_tables**, repeat Step 3 and reissue the **copy_tables** command. You do not need to truncate the table.

Refer to Table D-32 for a list of the tables moved by the **copy_tables** command.

Migration from HPUX 9.x to HPUX 10.x

This section is intended for users of CiscoWorks 3.0 on HPUX 9.x who want to move to CiscoWorks 3.0 on HPUX 10.x and also want to migrate their existing HPUX 9.x CiscoWorks 3.0 to their new HPUX 10.x installation.

This section explains only the steps necessary to migrate your existing HPUX 9.x CiscoWorks 3.0 data to HPUX 10.x. Refer to the appropriate HPUX 10.x or CiscoWorks installation sections for instructions on installing HPUX 10.x or CiscoWorks.

The shell script on the CiscoWorks 3.0 CD can perform most of the steps described in this section. Each step of the migration procedure is explained below, and it is indicated if the shell-script can do the step for you.

There are four stages in migrating from HPUX 9.x CiscoWorks 3.0 to HPUX 10.x CiscoWorks 3.0:

1   On the HPUX 9.x machine on which you currently run CiscoWorks 3.0, create a new directory and dump all the necessary data into files in this new directory, as explained in the section "Saving Your HPUX 9.x CiscoWorks 3.0 Data (Migration Stage 1)."

2   Move this entire directory to the HPUX 10.x machine on which you are going to install CiscoWorks 3.0. If this is the same machine on which you are currently running HPUX 9.x, you should have your system administrator back up this directory before installing HPUX 10.x and then restore it after HPUX 10.x has been installed.

3   Install CiscoWorks 3.0 on your HPUX 10.x machine. If you have added any user Sybase accounts (either with **isql** or a CiscoWorks application) to your HPUX 9.x CiscoWorks 3.0 installation, you must recreate them on your HPUX 10.x CiscoWorks 3.0 installation. Follow the same procedure you used originally to create the accounts on HPUX 9.x Sybase. However, you must recreate them in the HPUX 10.x Sybase database before restoring the data saved from HPUX 9.x CiscoWorks.

4 On the HPUX 10.x machine, move to the directory that contains all the data dumped from the HPUX 9.x installation, and load it into HPUX 10.x CiscoWorks 3.0, as explained in the section "Restoring Your Saved Data on the HPUX 10.x Machine (Migration Stage 4)."

Most of the CiscoWorks data is stored in Sybase tables, but there are also a few standard UNIX files you may want to retain. The procedures below provide the details of stages 1 and 4 by describing how to save and restore all the CiscoWorks-created Sybase tables as well as relevant standard UNIX files.

Stages 2 and 3 are not discussed further in this section. If you added any user-created tables to your HPUX 9.x Sybase database (for polling data) and want to retain that data on HPUX 10.x, follow the same steps for each user-created Sybase table as described below for the standard CiscoWorks-created Sybase tables.

Note Each command that you must enter is preceded by a pound (#) sign.

Saving Your HPUX 9.x CiscoWorks 3.0 Data (Migration Stage 1)

To save your HPUX 9.x CiscoWorks 3.0 data, perform the following steps:

Step 1 Log into your HPUX 9.x machine as root (you must be root to save the non-Sybase data) and start a C-shell (/bin/csh) if you are not already running one. Make sure the environmental variable NMSROOT is set correctly, and that $NMSROOT/bin is at the front of your PATH environmental variable.

If you want to use the commands below exactly as shown, you need to set the environmental variable *sa_password* to the password of your Sybase sa account:

 # setenv sa_password *YOUR_PASSWORD*

Otherwise, use your Sybase sa password wherever *$sa_password* appears below.

Step 2 Make a directory for the data files you are about to create, and change to that directory.

```
# mkdir /tmp/bcp_data
# cd /tmp/bcp_data
```

This directory needs to be in a partition large enough to hold your exported database. If there is enough room to do a Sybase dump command to that partition, you should be fine.

To run the commands exactly as shown below, you need to set the environmental variable *saved* to the directory you just created:

```
# setenv saved /tmp/bcp_data
```

Step 3 Mount your CiscoWorks 3.0 CD and copy the file */CISCOWORKS/Migrate/copy_tables* into your current working directory (which should be the *$saved* directory you are using to hold the saved data). Refer to "Installing from a Local or Remote CD-ROM" for instructions on mounting and copying from the CD-ROM.

As supplied, the **copy_tables** script works only if you have not created any user-defined poll group tables. If you created any such tables, edit the script before running it.

If you created user-defined poll groups, but you *do not* want to save the data in them, edit the **copy_tables** script to remove the following line from the list of tables:

```
polldb.nmsuper.polls
```

The list of tables looks like this:

```
TABLES="polldb.nmsuper.polls_config
polldb.nmsuper.tables
polldb.nmsuper.columns
polldb.nmsuper.summaryinfo
polldb.nmsuper.grouptemplate
polldb.nmsuper.polls
...
```

If you have created user-defined poll groups, and you *do* want to save the data in them, edit the **copy_tables** script to add a line naming each of your user-defined poll groups to the end of the list of tables, as shown below:

```
TABLES="polldb.nmsuper.polls_config
polldb.nmsuper.tables
polldb.nmsuper.columns
polldb.nmsuper.summaryinfo
polldb.nmsuper.grouptemplate
polldb.nmsuper.polls
...
polldb.nmsuper.my_first_poll_group
polldb.nmsuper.my_second_poll_group
```

Make sure the **copy_tables** script is executable, and then run the following commands:

```
# chmod +x copy_tables
# ./copy_tables out $sa_password $cwd
```

Step 4 If you do not use the shell-script provided on the CiscoWorks 3.0 CD, proceed to Step 5. Otherwise, individually extract each Cisco-created database table into an external file using the **bcp** command, as shown below:

```
bcp table_name out table_name.dat -c -t "\t" -Usa -P$sa_password
```

where *table_name* is the name of the table to be dumped.

To save typing the entire **bcp** command, you can create an alias as shown in the following example:

```
# alias bcp 'bcp \!^ out \!^.dat -c -t "\t" -Usa -P$sa_password'
```

If you created any user-defined poll group tables and want to save the data in them, repeat the **bcp** command for each table:

```
bcp polldb.nmsuper.CREATED_TABLENAME
```

Step 5 After saving all your Sybase tables, you can also save certain information contained in standard UNIX files. To save your CiscoConnect history, enter the following commands:

```
# cd $NMSROOT/lib/httpd/conf
# tar cvf $saved/cc-conf.tar *Profile.conf
# cd $NMSROOT/lib/httpd
# tar cvf $saved/cc-query.tar etc/*.dat htdocs/Cisco*/CaseQueryReply.shtml
```

To save your TACACS information, enter the following commands:

```
# cd /etc
# tar cvf $saved/tacacs.tar tac*
```

To migrate your crontab entries, enter the following command:

```
# crontab -l $saved/cronfile
```

Restoring Your Saved Data on the HPUX 10.x Machine (Migration Stage 4)

To restore your saved data on the HPUX 10.x machine, perform the following steps:

Step 1   Log into your HPUX 10.x machine as root (you must be root to restore the non-Sybase data) and start a C-shell (/bin/csh) if you are not already running one. Make sure the environmental variable **$NMSROOT** is set correctly (default is */opt/CSCOcwh*). Source the *$NMSROOT/etc/install.cshrc* as shown below:

```
# source $NMSROOT/etc/install.cshrc
```

Note   If *install.cshrc* has been moved to another directory, find it and issue the appropriately modified source statement.

If you want to use the commands below exactly as shown, you need to set the environmental variable *sa_password* to the password of your Sybase sa account:

```
# setenv sa_password YOUR_PASSWORD
```

Otherwise, just use your Sybase sa password wherever *$sa_password* appears below.

Step 2   To run the commands exactly as shown below, you need to set the environmental variable *saved* to the directory containing your data files saved from your HPUX 9.x CiscoWorks and then change to this directory:

```
# setenv saved /tmp/bcp_data
# cd $saved
```

Step 3   Log into **isql** as sa, set the bulkcopy option, and checkpoint your database:

```
# isql -Usa -P$sa_password
# sp_dboption nms, "select into/bulkcopy", true
# go
# use nms
# go
# checkpoint
# go
# quit
```

Step 4   If you chose to use the **copy_tables** script on HPUX 9.x, it should now be in your *$saved* directory. Make sure it is still executable, and then run it using the following commands:

```
# chmod +x copy_tables
# ./copy_tables in $sa_password $cwd
```

Step 5   If you are using the **copy_tables** script (that is, you performed Step 4 on HPUX 9.x), proceed to Step 6. Otherwise, log into **isql** as sa, truncate the following standard CiscoWorks tables, and exit **isql**.

Note   It is advisable to enter a **go** command after every truncate; otherwise, if you incorrectly type a *table-name,* you will have to retype the entire list.

Now individually load each standard Cisco-created database table from its dumped file using the **bcp** command (note the command uses **in** for HPUX 10.x and **out** for HPUX 9.x):

```
bcp table_name in table_name.dat -c -t "\t" -Usa -P$sa_password
```

where *table_name* is the name of the table to be loaded.

To save typing the entire **bcp** command, you can create an alias as shown below (again note the command uses **in** for HPUX 10.x and **out** for HPUX 9.x):

```
# alias bcp 'bcp \!^ in \!^.dat -c -t "\t" -Usa -P$sa_password'
```

Then use this aliased **bcp** command on each table.

If you chose to save any user-defined poll group tables on HPUX 9.x, you must load them into the polldb database. To do so, truncate the polldb.nmsuper.polls table by entering the following commands:

```
# isql -Usa -P$sa_password
# truncate table polldb.nmsuper.polls
# go
# quit
```

Then load the polldb.nmsuper.polls table by entering the following command:

```
# bcp polldb.nmsuper.polls
```

Next, load each of the user-created tables you dumped on HPUX 9.x by entering a **bcp** command:

```
bcp polldb.nmsuper.CREATED_TABLENAME
```

Proceed to Step 7.

Step 6 Log into **isql** as sa and unset the bulkcopy option:

```
# isql -Usa -P$sa_password
# sp_dboption nms, "select into/bulkcopy", false
# go
# quit
```

Step 7 Restore the non-Sybase files you chose to save from HPUX 9.x. If you saved your CiscoConnect history, enter the following commands:

```
# cd $NMSROOT/lib/httpd/conf
# tar xvf $saved/cc-conf.tar
# cd $NMSROOT/lib/httpd
# tar xvf $saved/cc-query.tar
```

If you saved your TACACS information, enter the following commands:

```
# cd /etc
# tar xvf $saved/tacacs.tar
```

If you saved your crontab entries, enter the following command:

```
# crontab $saved/cronfile
```

Step 8 For safety, back up your new database immediately, now that you have finished the migration.

Note If you get errors that look like "You cannot run the non-logged version of bulkcopy in this database," when using either **bcp** or **copy_tables** to load your database on HPUX 10.x, it generally means the database was not checkpointed (see Step 3). If you were using the **bcp** command, repeat Step 3, truncate the table as in Step 4, and then repeat the **bcp** command. It is essential to truncate the table before repeating the **bcp** command, or you may end up with duplicate rows in the table, which will cause problems. If you were using **copy_tables**, repeat Step 3 and reissue the **copy_tables** command. You do not need to truncate the table.

Refer to Table D-32 for a list of the tables moved by the **copy_tables** command.

Performing Post-Installation Tasks

To ensure that CiscoWorks runs successfully, you may need to perform several post-installation tasks. The following sections contain instructions for these tasks:

- Removing Log Files
- Updating the SunOS XKeysymDB File
- Modifying Your .Xdefaults File or X Resources
- Reinstalling CiscoWorks

Removing Log Files

During installation, several log files are created to track the installation process and provide diagnostic information if a problem arises.

When you are satisfied that CiscoWorks is properly installed and operating, you can remove each log file by entering the following command.

On SunOS:

```
# rm /usr/tmp/unbundled/log/filename.log
```

On Solaris:

```
# rm /tmp/filename.log
# rm $NMSROOT/install/filename.log
```

On HP-UX 9.x:

```
# rm $usr/rms/install/bin/log/filename.log
```

On HP-UX 10.x:

```
# rm /opt/CSCOcwh/install/filename.log
```

Note Do not use **rm *.log** to remove the CiscoWorks log files because other applications can put log files in these directories, and you may need to keep those application's log files.

The log files are described in Table 3-3.

Table 3-4   CiscoWorks Log Files

Log Filename	Contents
cwconfigure.defs	Your responses to the prompts during the configuration. (This file is not removed because you may want to use the same answers if you need to reinstall CiscoWorks. The software will use these answers as the defaults when you next install CiscoWorks.)
cwconfigure.log	Configuration log messages.
cwinstall.log	Installation log messages.
update.log	Messages logged while extracting files from CD-ROM.
swagent.log	Installation log for software tools (HP-UX 10.x only).

Note   On Sun machines running SunOS, all CiscoWorks installation and upgrade logs are in the directories */tmp* and */var/tmp/unbundled/log*. On HP machines, they are in the directories */tmp* and *$NMSROOT/install/bin/log*. On Solaris machines, they are in the directories */tmp* and *$NMSROOT /install*.

Updating the SunOS XKeysymDB File

CiscoWorks is based on the OSF/Motif windowing system and requires Motif key mapping. During installation, you are alerted that you need Motif key mapping. The installation script then offers to update the *XKeysymDB* (key mapping) file for you in case you are using a different platform, such as OPEN LOOK. If necessary, you can also manually update the *XKeysymDB* file by appending *$NMSROOT/etc/XKeysymDB* to your *XKeysymDB* file.

Modifying Your .Xdefaults File or X Resources

You can customize certain features of your CiscoWorks and NMS environments by modifying the X Windows resource files. X resources are listed in each user's *.Xdefaults* file or in the system X resource files located in the */usr/lib/X11/app-defaults* directory. For example, you can change the window display colors, fonts, or sizes, or specify certain ways for CiscoWorks to run in your X Windows environment.

This section provides information on the following topics:

- Customizing CiscoWorks X Resources
- Resetting the Default Window Size of CiscoWorks Applications
- Modifying Default Color Settings in Your Help Files
- Editing the .Xdefaults File Entry to Specify the Text Editor
- Enabling Boot File Generation

Customizing CiscoWorks X Resources

You can customize any X resource that CiscoWorks applications use, including colors, fonts, and sizes in CiscoWorks windows. To use your own colors, fonts, and sizes for CiscoWorks, perform one of the following procedures:

- Store your resources in the */usr/lib/X11/app-defaults/XCiscoWorks* file.
- Rename your custom resource file to *$HOME/XCiscoWorks.*

- Store your resource files in your *$HOME/.Xdefaults* file.

- Start your CiscoWorks applications with your specified resource options (for example, **-font 9x15bold**).

Resetting the Default Window Size of CiscoWorks Applications

When working with CiscoWorks applications, you may notice that the window sizes vary from application to application. The layout of the window and the size of its text and graphics is preset to be large enough to contain all the elements that define the window. However, you can resize the window without obscuring the text.

To save the default CiscoWorks window size, perform the following steps:

Step 1 Use a text editor such as **vi** to open the *$HOME/XCiscoWorks* file.

Step 2 Add the following line to your *$HOME/XCiscoWorks* file:

```
XCiscoWorks*geometry:500x400+0+0
```

Step 3 Save the *$HOME/XCiscoWorks* file and quit the text editor.

Step 4 Enter the following command at the UNIX prompt:

```
xrdb -merge ~/XCiscoWorks
```

Modifying Default Color Settings in Your Help Files

CiscoWorks features an expanded Help system with *hyperlinks* (jumps to other help windows) to help you learn more about your CiscoWorks applications.

By default, hyperlinks display link text in forest green. To change the color, you can modify the X resource HyperHelp*LinkColor.

The current default help settings are modeled after Microsoft Help's color scheme. To change the default setting for windows, fonts, and other options, modify lines in your X resource *HyperHelp* file.

Caution For CiscoWorks online help to display correctly on a system running SunOS and the OPEN LOOK window manager, you must run the following command before you start CiscoWorks, or add it to your *.cshrc* or *.profile* file so it is read when you log in to your system:
```
% xrdb -merge /usr/lib/X11/app-defaults/HyperHelp
```

To modify the X resources for your Help windows, perform the following steps:

Step 1 Change to the directory where the *HyperHelp* X resource file is located:

```
% cd /usr/lib/X11/app-defaults
```

You may have put the *HyperHelp* file in a different directory; if so, change to the appropriate directory path.

Step 2 Use a text editor such as **vi** to alter any of the following X resources in the *HyperHelp* file:

```
Hyperhelp*fontList: 9x15bold
HyperHelp*ScrolledWindow*background: grey
HyperHelp*NonScrollableWindow.background: gray80
HyperHelp*LinkColor: pink
```

Step 3 Save the *HyperHelp* file and exit.

Step 4 Restart the online help system to allow the new HyperHelp system changes to take effect.

Editing the .Xdefaults File Entry to Specify the Text Editor

To define the look of your text editor window, perform the following steps, substituting the appropriate options:

Step 1 Confirm that X Windows is running.

To start an X window session, enter **x11start** or **xinit** at the UNIX command line.

Step 2 Use a text editor such as **vi** to open the *.Xdefaults* file.

Step 3 Add a line with the following format to the *.Xdefaults* file:

EditorFormat:*command_string* **%s**

Where *command_string* is the value or name of the X resource. For example, to specify the **vi** editor located in */usr/local/bin*, add the following line to the *.Xdefaults* file:

EditorFormat:/usr/local/bin/vi %s

For example, to specify the **vuepad** editor located in */usr/vue/bin*, add the following line to the *.Xdefaults* file:

EditorFormat:/usr/vue/bin/vuepad %s

Step 4 Save the *.Xdefaults* file and quit the text editor.

Enabling Boot File Generation

To enable boot file generation, edit the *.Xdefaults* file to specify the *on* state by performing the following steps:

Step 1 Confirm that X Windows is running.

To start an X window enter **x11start** or **xinit** at the UNIX command line.

Step 2 Use a text editor such as **vi** to open the *.Xdefaults* file.

Step 3 Add the following line to the *.Xdefaults* file:

Bootfile:on

Step 4 Save the *.Xdefaults* file and quit the text editor.

Reinstalling CiscoWorks

After you install CiscoWorks for the first time, you may need to reinstall it. For example, some files on your workstation might become damaged or corrupted. Reinstalling means that you delete all of the existing CiscoWorks files and reinstall them from the same version of CiscoWorks. When you reinstall CiscoWorks, you can do a new or upgrade install, as appropriate.