CHAPTER 3

Installing and Configuring CiscoWorks

You can install and configure CiscoWorks from a local CD-ROM drive or from a CD-ROM drive connected to a remote workstation. You will use System Management Interface Tool (SMIT), an IBM AIX system administration facility. The example installation and configuration process described in this chapter uses the graphical user interface (GUI) version of SMIT; you can use the ASCII version of SMIT if you prefer. Refer to your IBM documentation for more information about SMIT.

To install and configure CiscoWorks on NetView for AIX, you will perform the following general tasks:

- Log in as a superuser
- Mount the CiscoWorks CD-ROM from a local or remote CD-ROM drive
- Install CiscoWorks using SMIT
- Configure CiscoWorks using SMIT
  - CiscoWorks
  - Sybase
- Unmount the CD-ROM

Becoming a Superuser

To perform the tasks associated with installing and configuring CiscoWorks, you must log into your system as a superuser (*root*). Being a superuser allows you to perform functions restricted from normal users.

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

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

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

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

The prompt changes to a pound sign (#), indicating that you are logged in as a superuser.

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

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

The UNIX prompt changes to a pound sign (#), indicating that you are logged in as a superuser:

```
hostname#
```

Mounting from a Local or Remote CD-ROM

You can install CiscoWorks from a CD-ROM drive attached to your system or from a drive connected to a remote system.

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

Mounting from a Local CD-ROM

You can mount from a local CD-ROM using SMIT. To mount from a local CD-ROM drive using SMIT, perform the following steps:

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

Step 2 Log in as a superuser.

For more information about how to become a superuser, refer to the previous section, “Becoming a Superuser.”

Step 3 Start SMIT by entering the following at the command prompt:

```
hostname# smit
```

The main SMIT window appears, as shown in Figure 3-1.

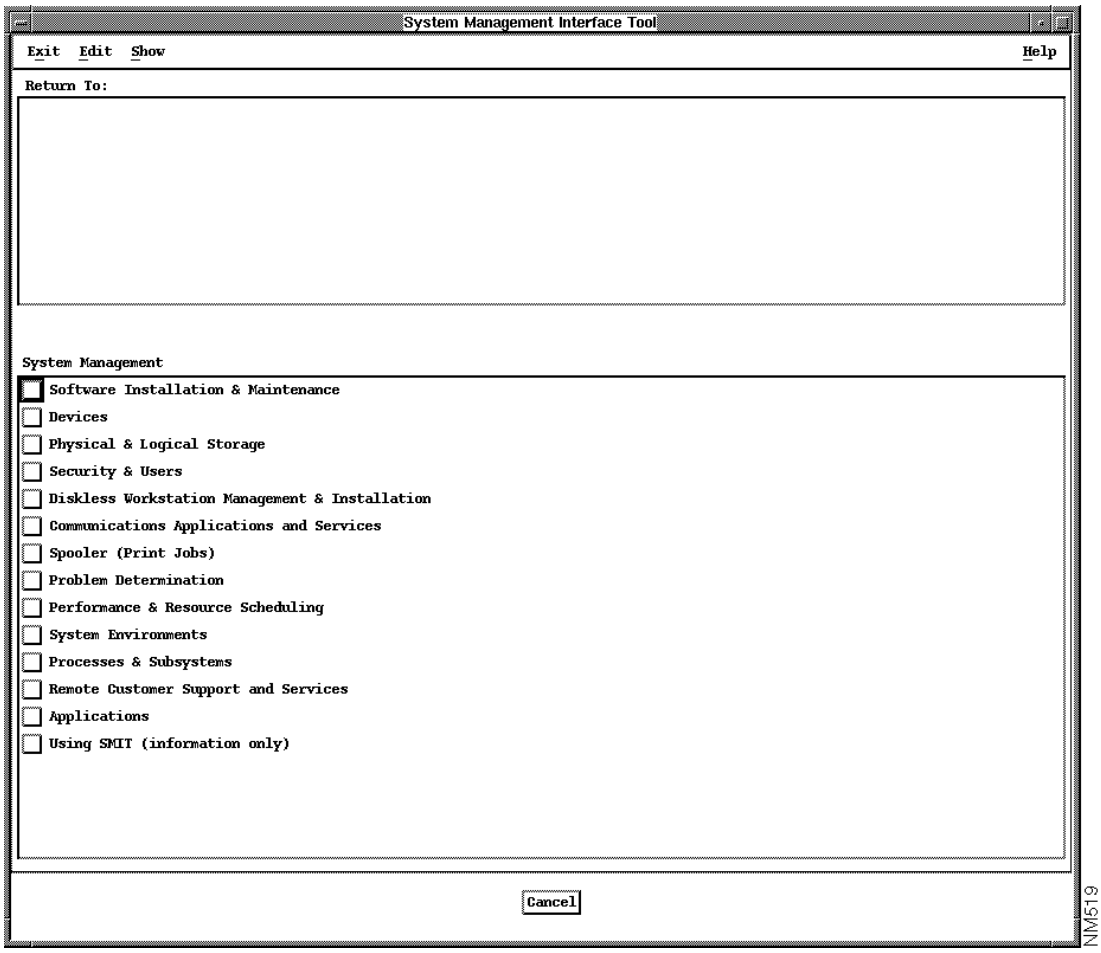

Figure 3-1 Main SMIT Window

Step 4 From the System Management list, select **Physical & Logical Storage**.

Step 5 Select **File Systems**.

Step 6 Select **Add/Change/Show Delete File Systems**.

Step 7 Select **CDROM File Systems**.

Step 8 Select **Add a CDROM File System**.

Step 9 Click on the device name **List** button.

Step 10 Select the device name from the list that appears.

Note Device names for CD-ROM filesystems must be unique. You might need to delete a previously defined CD-ROM filesystem if there is a conflict.

Step 11 Enter the mount point (for example, */cdrom*) in the mount point field.

Step 12 Click on **Do**.

Step 13 Select **Exit>Exit SMIT**.

Step 14 Mount the filesystem by entering the following at the command prompt:

```
hostname# smit mountfs
```

Step 15 Select the filesystem name.

Step 16 Enter the mount point (for example, */cdrom*) as the directory name.

Step 17 Select **cdrfs** as the filesystem type. (Use the **List** button to display choices.)

Step 18 Set the Mount as Read-Only System field to **yes**.

Step 19 Click on **Do**.

The Mount a File System window appears. Click on **Done** after the mounting process is complete.

Step 20 Select **Exit>Exit SMIT**.

Mounting from a Remote CD-ROM Drive

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 *.rhosts* file (root directory) on the remote system must contain the local host name and your username to access the remote system. 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 system:

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

Step 2 Log in as a superuser.

For more information about how to become a superuser, see the section “Becoming a Superuser” earlier in this chapter.

Step 3 Start SMIT by entering the following at the command prompt:

```
hostname# smit
```

Step 4 From the System Management list, select **Physical & Logical Storage**.

Step 5 Select **File Systems**.

Step 6 Select **Add/Change/Show Delete File Systems**.

Step 7 Select **CDROM File Systems**.

Step 8 Select **Add a CDROM File System**.

Step 9 Select the device name from the list that appears.

Note Device names for CD-ROM filesystems must be unique. You might need to delete a previously defined CD-ROM filesystem if there is a conflict.

Step 10 Enter the mount point (for example, */cdrom*) in the mount point field.

Step 11 Click on **Do**.

Step 12 Select **Exit>Exit SMIT**.

Step 13 Enter the following at the command prompt:

```
hostname# smit mountfs
```

Step 14 Select the filesystem name.

Step 15 Enter the mount point (for example, */cdrom*) as the directory name.

Step 16 Select **cdrfs** as the filesystem type. (Use the **List** button to display choices.)

Step 17 Set the Mount as Read-Only System field to **yes**.

Step 18 Click on **Do**.

Step 19 Select **Exit>Exit SMIT**.

Step 20 Enter **smit mknfsexp** at the command prompt.

Step 21 Enter the path name of the directory you want to export.

Step 22 Use the arrow keys to change the Mode to Export the Directory field to **read-only**.

Step 23 Enter the appropriate information for any of the other fields.

Step 24 Click on **Do**.

Step 25 Select **Exit>Exit SMIT**.

Perform the following steps on the local system:

Step 1 Log in as a superuser.

Step 2 Enter the following at the command prompt:

```
hostname# mount remote_hostname:remote_exported_filesystem_name local_mount_point
```

For example, to mount a remote filesystem named zen, enter the following at the prompt:

```
hostname# mount zen:/cdrom /cdrom
```

Installing CiscoWorks

You will complete the following tasks using SMIT during the installation process:

- Installing CiscoWorks Software Modules
- Configuring the CiscoWorks Product
- Configuring Sybase for CiscoWorks

Caution CiscoWorks can only be installed in */usr/nms*. If you created a filesystem, the mount point of the filesystem you created must be */usr/nms*. Upon installation, CiscoWorks deletes the contents of the directory in which it is installed, thus erasing any preexisting data.

Installing CiscoWorks Software Modules

During the first part of the CiscoWorks installation process, you will install the following CiscoWorks software modules:

- *CiscoWorks.base.obj*
- *CiscoWorks.sybase.obj*

The *CiscoWorks.base.obj* module installs CiscoWorks files and the files required to integrate CiscoWorks into NetView for AIX. The *CiscoWorks.sybase.obj* module installs the Sybase database files.

To install CiscoWorks, perform the following steps:

Step 1 Enter the following command at the prompt:

```
hostname# smit
```

The main SMIT window appears. See Figure 3-1.

Step 2 Select **Software Installation & Maintenance** from the System Management item list.

The Software Installation and Maintenance panel appears, as shown in Figure 3-2.

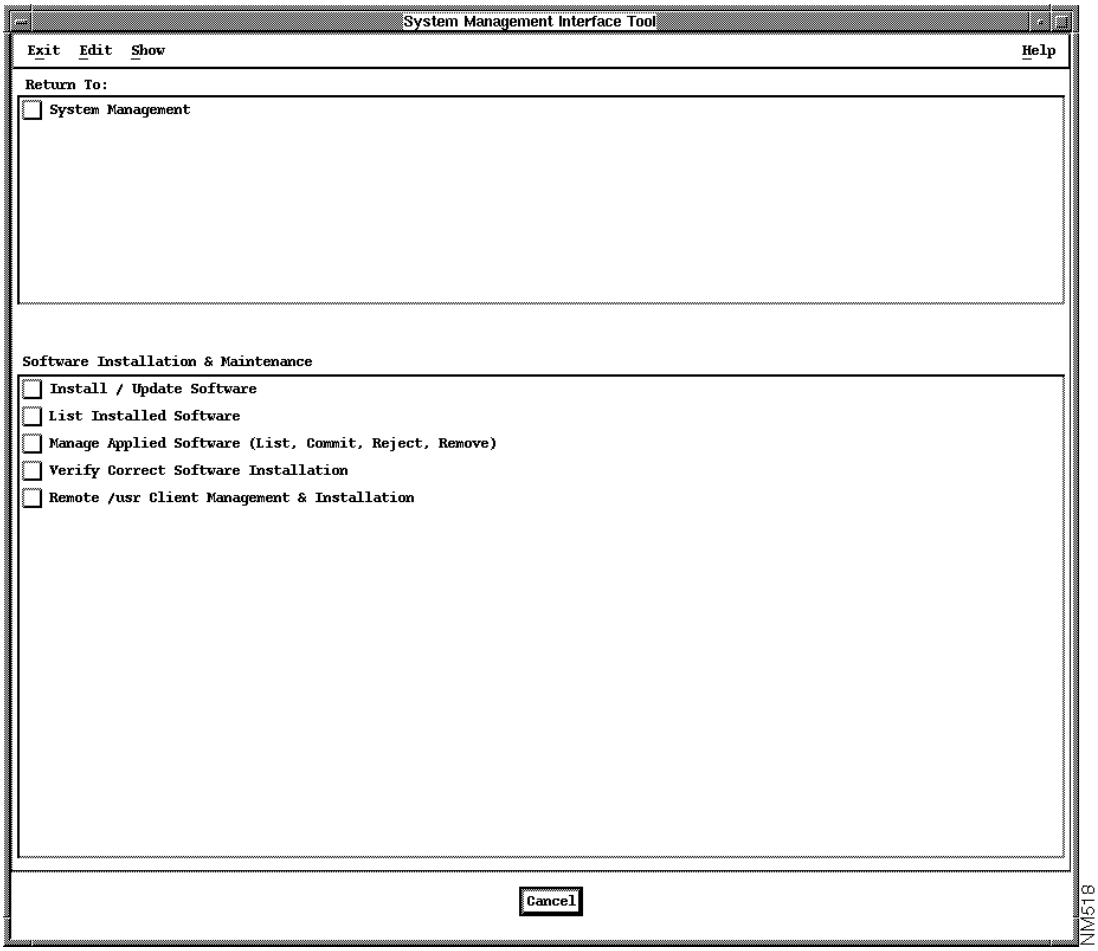

Figure 3-2 Software Installation and Maintenance Panel

Step 3 Select **Install/Update Software** from the System Management item list.

The Install/Update Software panel appears, as shown in Figure 3-3.

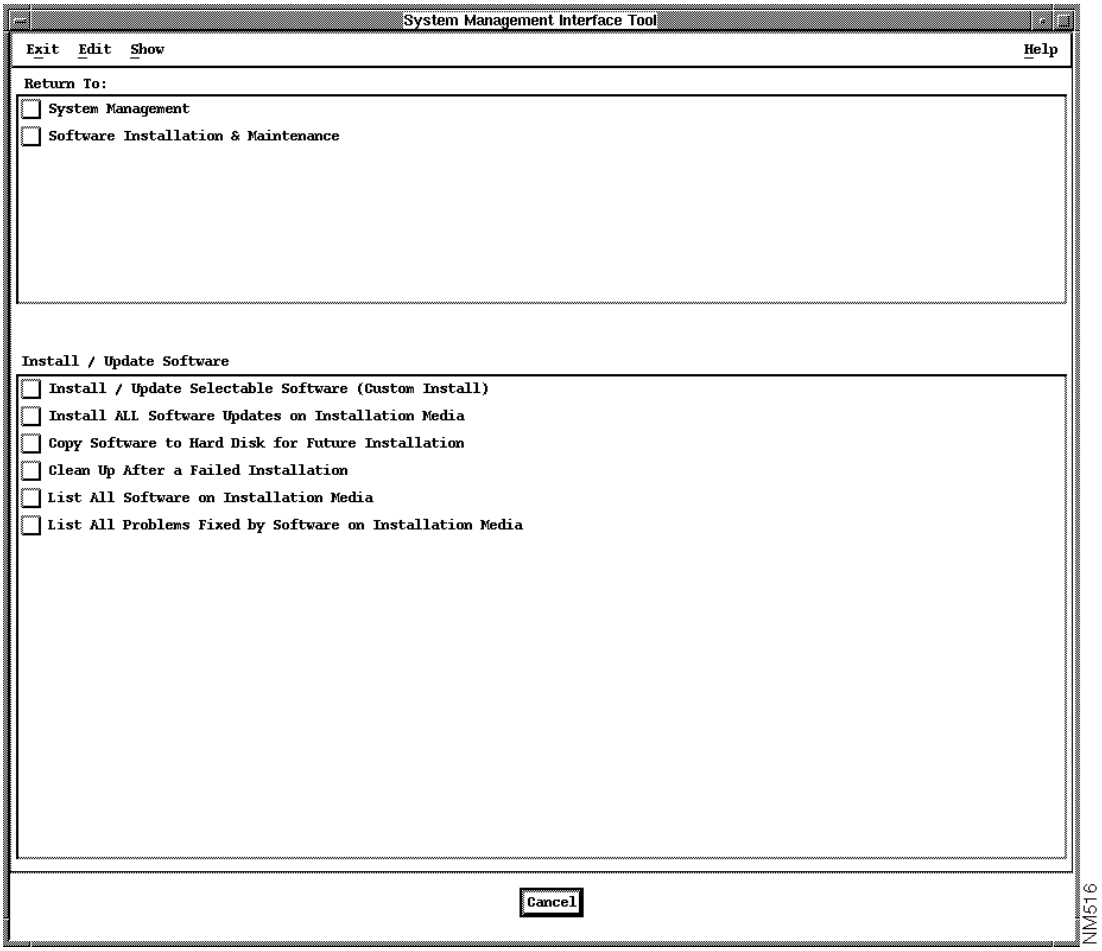

Figure 3-3 Install/Update Panel

Step 4 Select **Install/Update Selectable Software (Custom Install)**.

The Install/Update Selectable Software (Custom Install) panel appears, as shown in Figure 3-4.

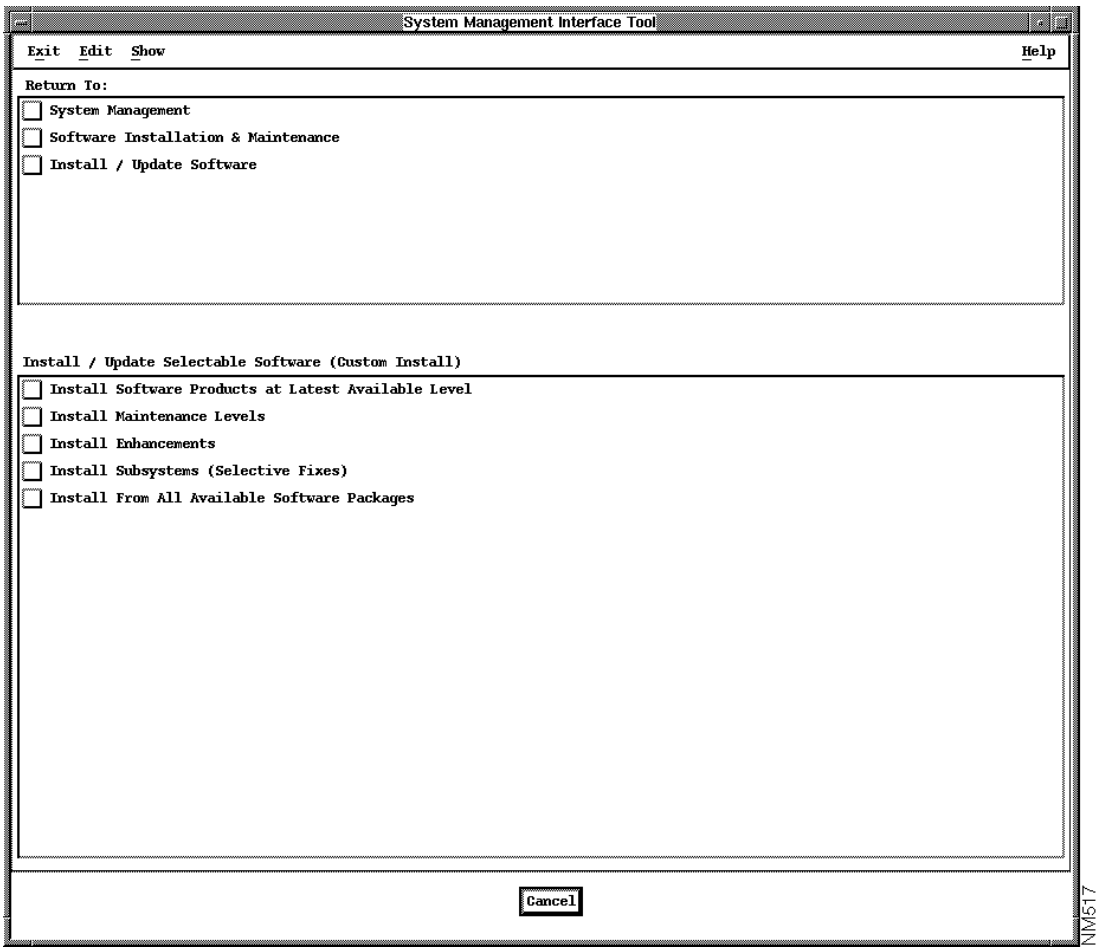

Figure 3-4 Install/Update Selectable Software (Custom Install) Panel

Step 5 Select **Install Software Products at Latest Available Level**.

The Install Software Products at Latest Available Level panel appears, as shown in Figure 3-5.

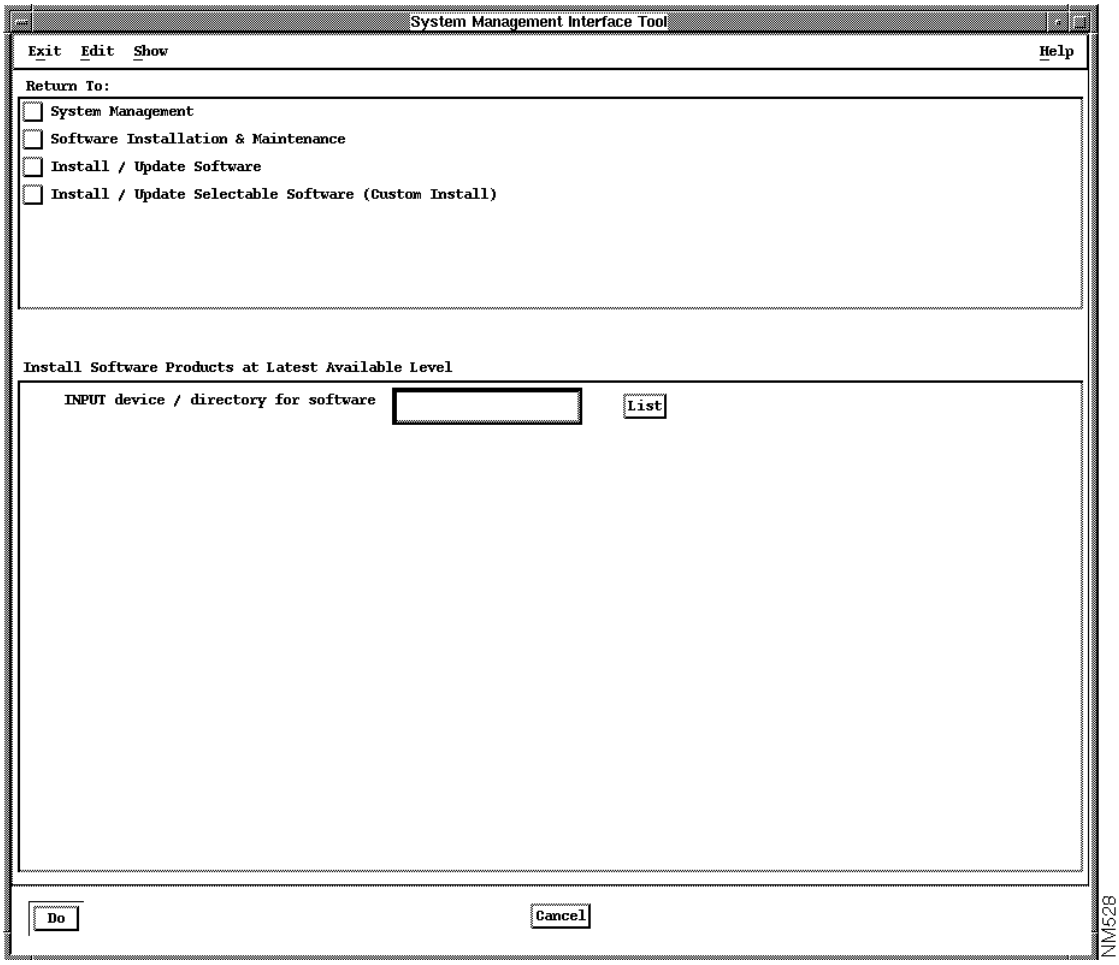

Figure 3-5 Install Software Products at Latest Available Level Panel

Step 6 Enter the input device name. You can also click on **List** to see the list of device names; see Figure 3-6.

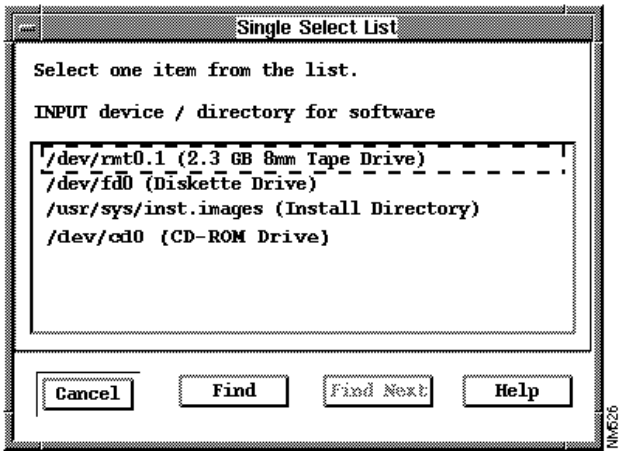

Figure 3-6 Single Select List Window

Step 7 Select the device name from the list.

The Install Software Products at Latest Available Level panel appears. See Figure 3-7.

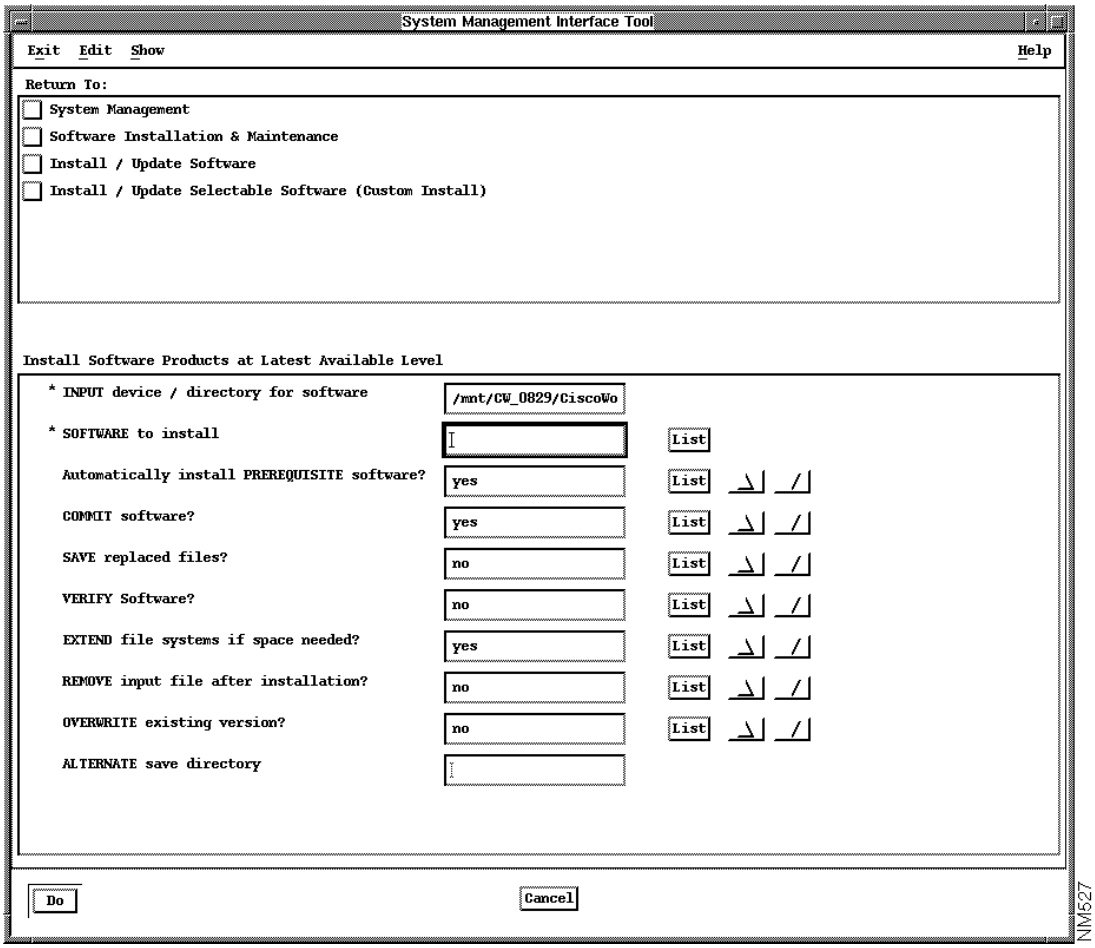

Figure 3-7 Install Software Products at Latest Available Level Panel

Step 8 Click on **List** (located to the right of Software to Install field) to show the software modules to be installed.

The Multi-select List window appears. (See Figure 3-8.)

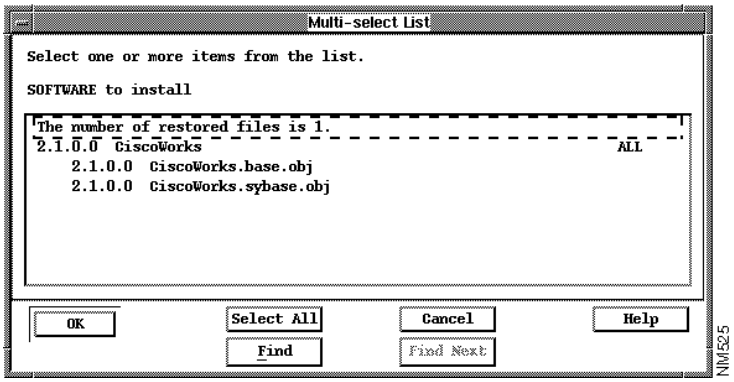

Figure 3-8 Multi-Select List Window

Step 9 For the CiscoWorks installation, select the following modules:

- *CiscoWorks.base.obj*
- *CiscoWorks.sybase.obj*

Timesaver Clicking on the Select All button accomplishes the same task as Step 9.

Step 10 Click on **OK**.

Step 11 Click on **Do** in the SMIT window.

If the installation was successful, a status message of "OK" will appear, and the figure in the upper right corner will appear with its arms raised.

If the CiscoWorks installation fails, or a given application seems to be malfunctioning, the figure in the upper right corner will fall down. Look at the log file to see if an error was generated that you can correct. If the error condition is unusual, you might want to supply the log file to a technical support representative in order to verify and resolve the condition.

Your installation is complete. Next, configure the CiscoWorks software as described in the following section, "Configuring CiscoWorks."

Step 12 Click on **Done**.

You are returned to the main SMIT window.

You can obtain complete SMIT log information on the installation in the *$HOME/smit.log* file. Similarly, you can obtain complete log information on the installation and configuration processes in the */usr/nms/install/log/cwinstall.log* and */usr/nms/install/cwconfig.log* files.

Configuring CiscoWorks

Configuring CiscoWorks is a two-part process; first, you will configure the CiscoWorks product, and then you will configure Sybase for CiscoWorks.

The following tasks are completed when you configure CiscoWorks:

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

If you are using Network Information Service (NIS), the NIS-related information is saved to the following files:

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

After completing the CiscoWorks configuration, refer your NIS administrator to the information in these files to update your NIS server. Your NIS administrator can add these files to the NIS database and transfer this information to the NIS server as an update.

Configuring the CiscoWorks Product

To configure the CiscoWorks product, perform the following steps:

Step 1 Click on **System Management** in the main SMIT window.

Step 2 From the SMIT main window, select **Communications Applications and Services**.

The Communications Applications and Services panel appears, as shown in Figure 3-9.

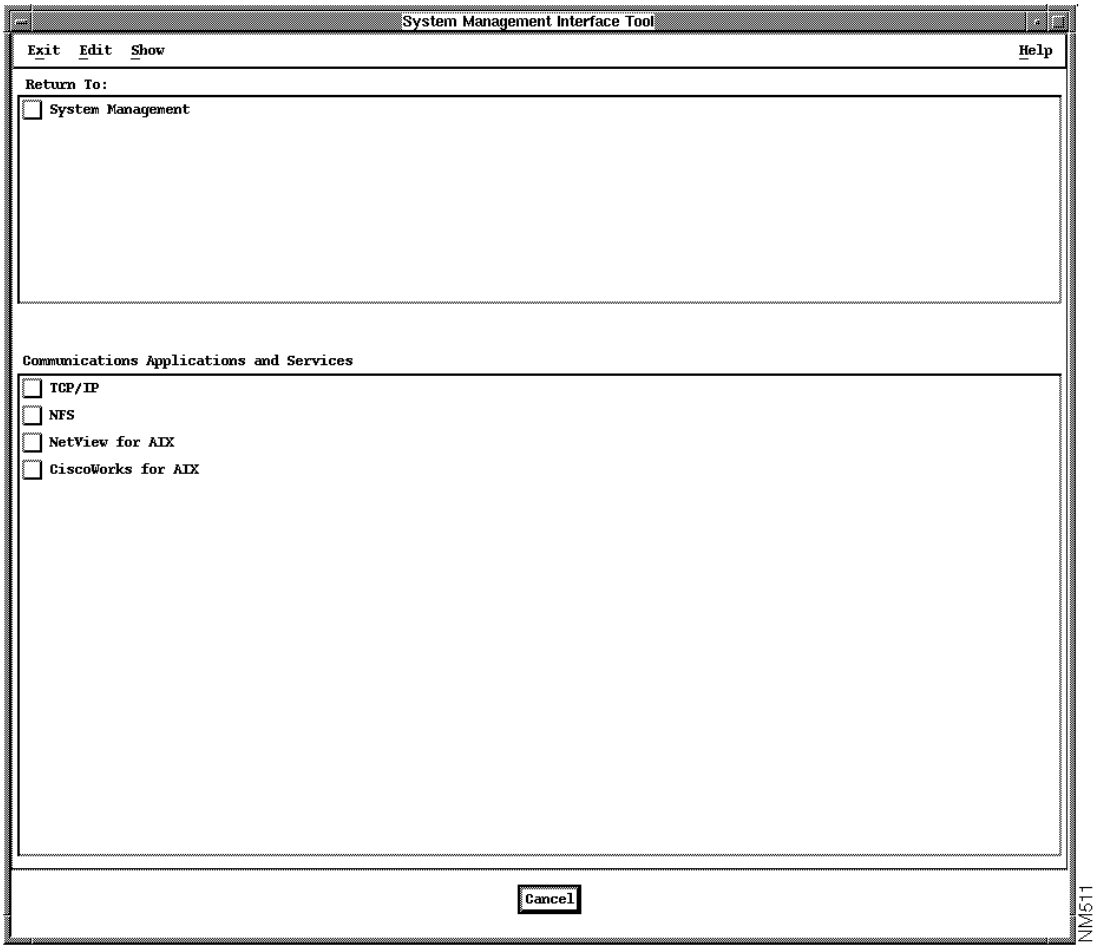

Figure 3-9 Communications Applications and Services Panel

Step 3 Select **CiscoWorks for AIX**.

The CiscoWorks for AIX panel appears, as shown in Figure 3-10.

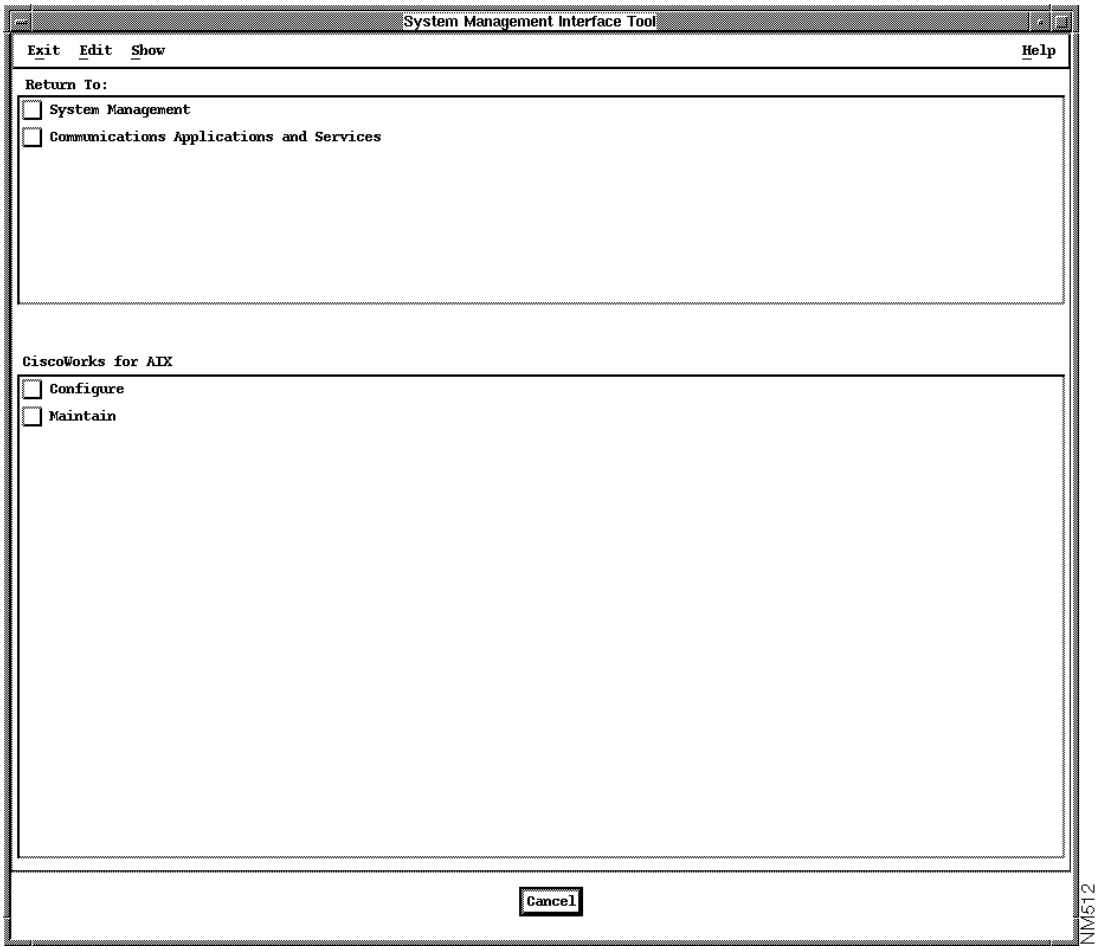

Figure 3-10 CiscoWorks for AIX Panel

Step 4 Select **Configure**.

The Configure panel appears, as shown in Figure 3-11.

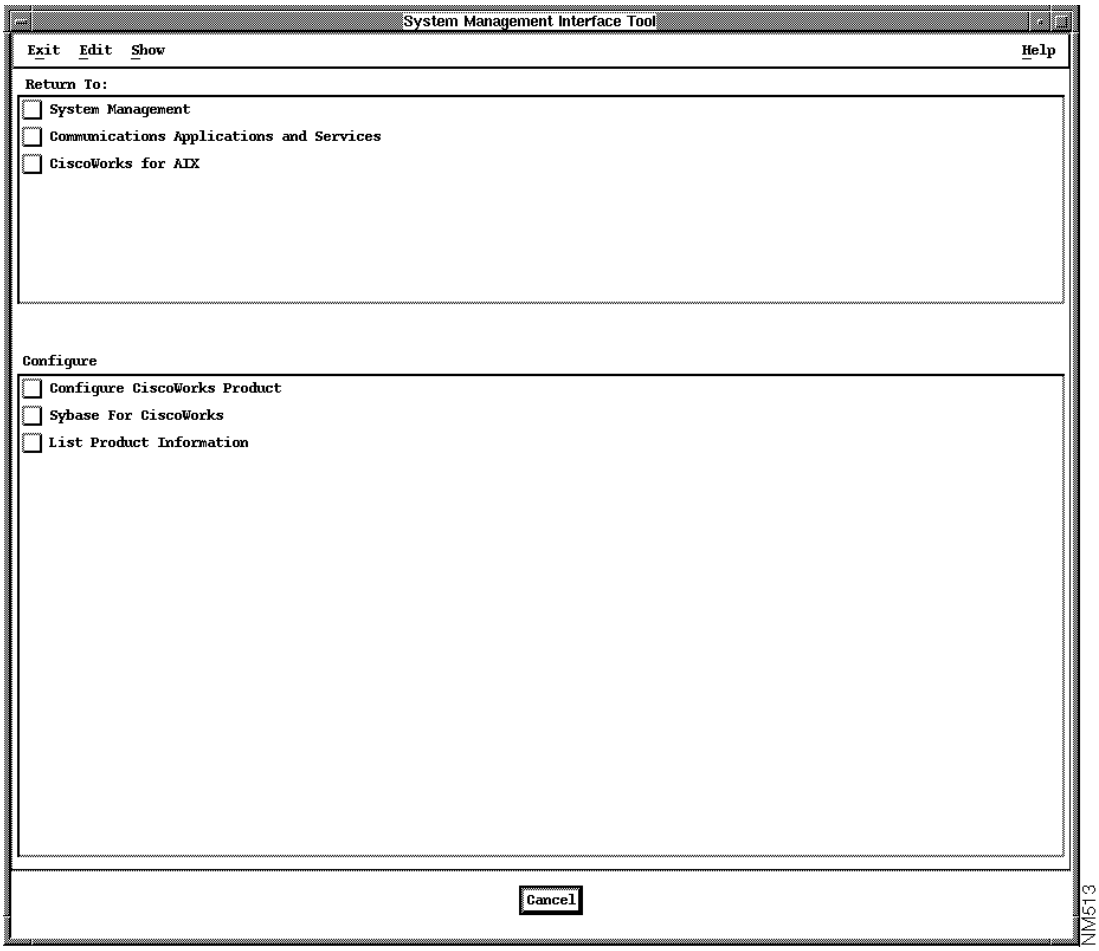

Figure 3-11 Configure Panel

Step 5 Select **Configure CiscoWorks Product**.

The Configure CiscoWorks Product panel appears. See Figure 3-12.

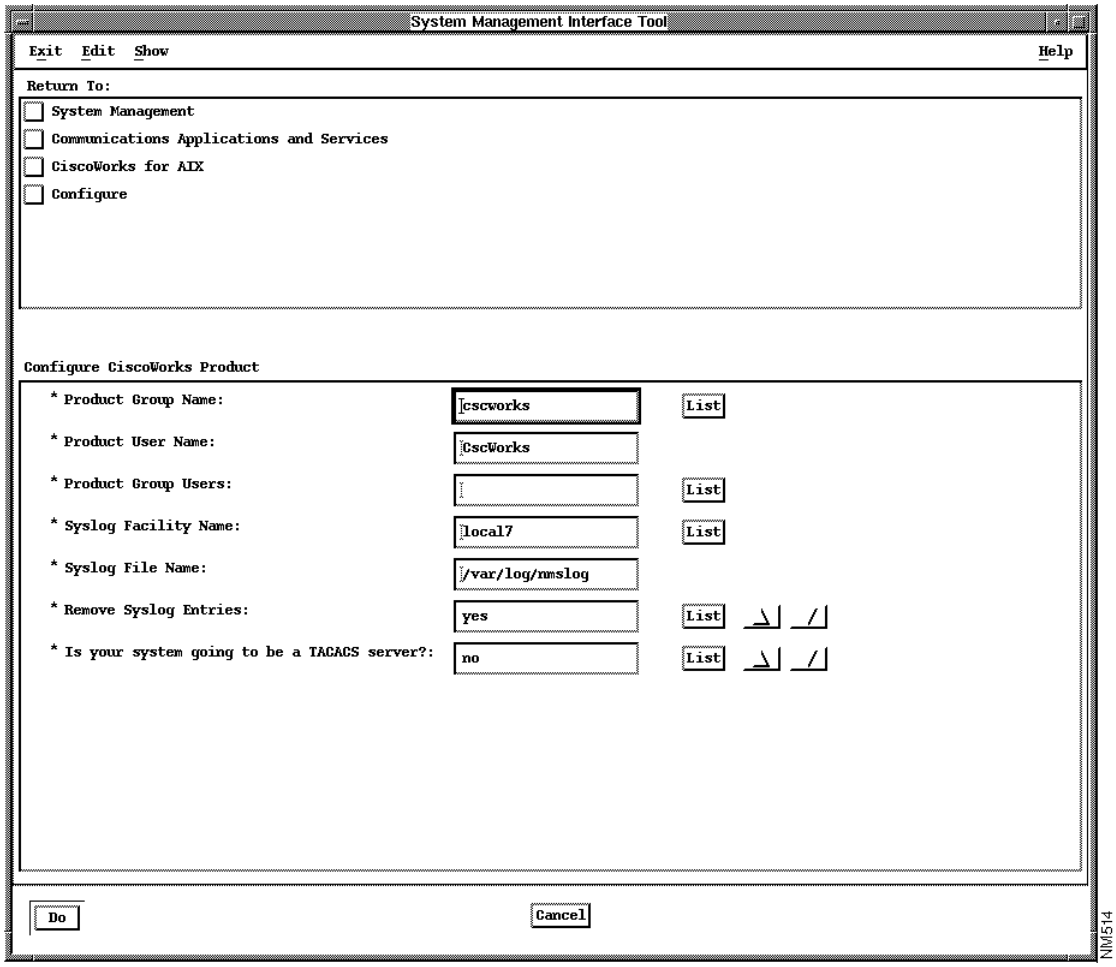

Figure 3-12 Configure CiscoWorks Product Panel

Step 6 Enter values for the following fields:

- Product Group Name—Identifies the CiscoWorks group name.
- Product User Name—Identifies the CiscoWorks username.
- Product Group Users—Identifies the list of users who belong to the product group.
- Syslog Facility Name—Identifies the syslog facility for CiscoWorks messages.
- Syslog File Name—Identifies the log file for CiscoWorks messages.
- Remove Syslog Entries—Specifies whether you want to enable the CiscoWorks log purging utility.
- Is your system going to be a TACACS server?—Identifies whether you want your workstation to be a TACACS server. If yes, you will be prompted for other TACACS information later in the configuration.

Step 7 After specifying the parameters, click on **Do**.

The Configure CiscoWorks Product window appears, as shown in Figure 3-13. You will see informational status messages about the configuration in the window.

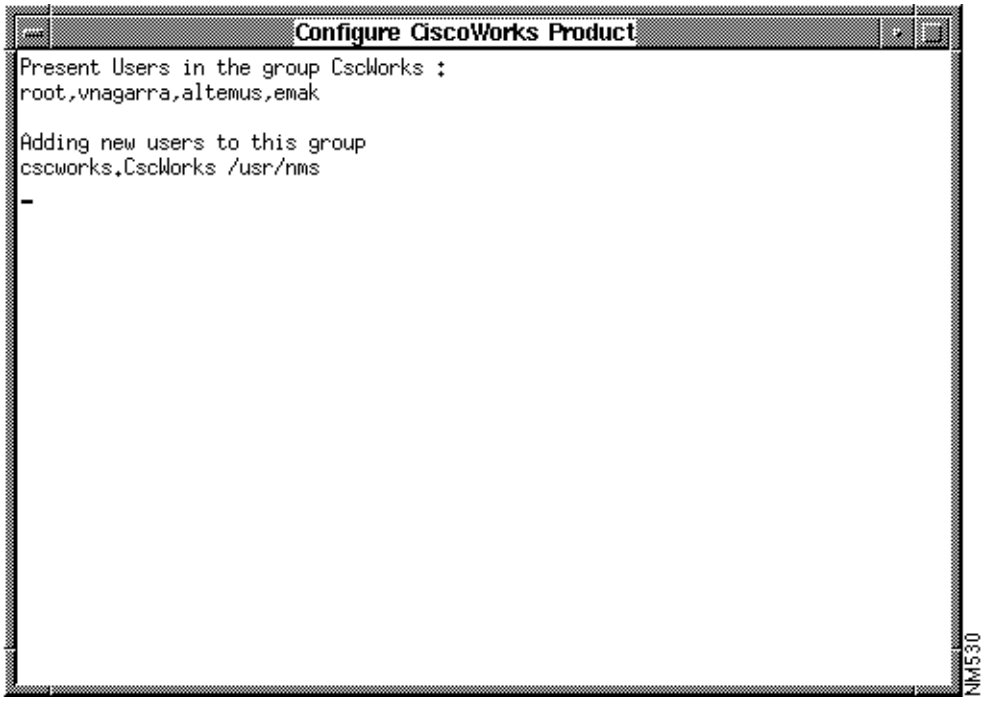

Figure 3-13 Configure CiscoWorks Product Window

If you specified that your workstation will be a TACACS server, you will be prompted for the following TACACS information:

- Start of TACACS daemon during system reboot
- TACACS username
- TACACS password
- Extended TACACS mode
- Extended TACACS password

If the configuration was successful, the message “Configuration completed successfully” will appear in the window.

Step 8 Press **Enter** to return to the SMIT window.

Configuring Sybase for CiscoWorks

Configuring Sybase for CiscoWorks creates a master database and the network management system database and its associated tables.

To configure Sybase for CiscoWorks, perform the following steps:

Step 1 Perform steps 1 through 4 in the section "Configuring the CiscoWorks Product."

Step 2 Select **Sybase for CiscoWorks**.

The Configure Sybase for CiscoWorks panel appears. (See Figure 3-14.)

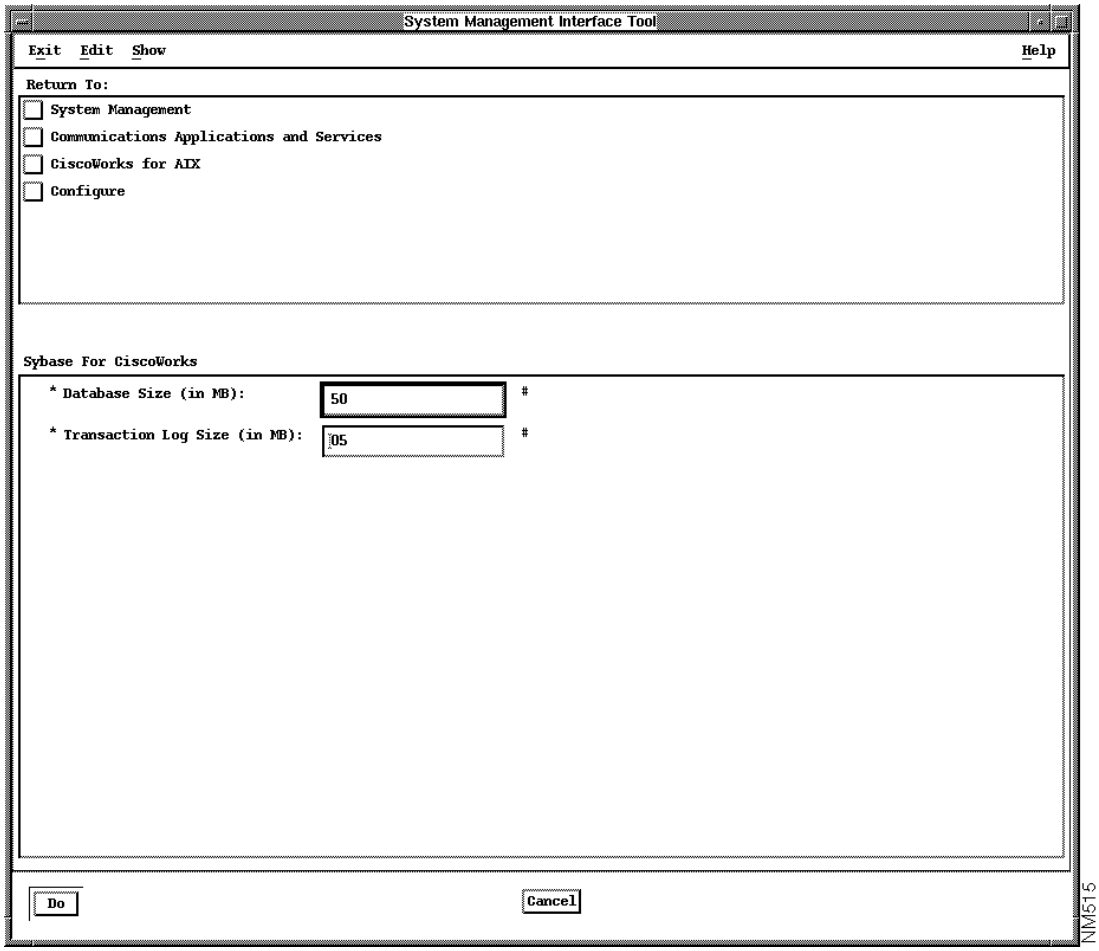

Figure 3-14 Configure Sybase for CiscoWorks Panel

Step 3 Enter a value for the database size if you have special needs.

The default for the database size is 50 MB.

Step 4 Enter a value for the transaction log size.

The default for the transaction log size is 5 MB.

Step 5 Click **Do**.

The Sybase for CiscoWorks window appears. You will see informational status messages in the window.

Step 6 Press the **Return** key when prompted to do so.

You will return to the main SMIT window.

Step 7 Select **Exit>Exit SMIT**.

If you are using Network Information Service (NIS), the NIS-related information obtained during the configuration is saved to the following files:

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

Your NIS administrator can add these files to the NIS database and transfer this information to the NIS server as an update.

Note Make sure you validate the CiscoWorks installation and configuration process by following the instructions in Chapter 4, "Validating CiscoWorks Installation." You should be able to access CiscoWorks applications through NetView for AIX menus.

Unmounting the CD-ROM

To unmount the CD-ROM from the local workstation, enter the following commands at the command prompt:

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

Remove the CD-ROM caddy from the drive.

If you mounted from a remote CD-ROM, go the remote workstation and enter the previous commands and remove the CD-ROM caddy.

Updating the XKeysymDB File

CiscoWorks 2.1(2) is based on the OSF/Motif windowing system and requires Motif key mapping. If necessary, you can also manually update the *XKeysymDB* file by appending *$NMSROOT/etc/XKeysymDB* to your *XKeysymDB* file.

Removing Log Files

During installation and configuration, 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 these files. To remove these files from your system, enter the following command:

```
hostname# rm /usr/nms/install/log/cwinstall.log cwconfig.log
```

After installing and configuring CiscoWorks, proceed to Chapter 4, "Validating CiscoWorks Installation."

Modifying Your .Xdefaults File

Some operations of CiscoWorks and NetView for AIX are determined by X Windows. You can customize the way you work with CiscoWorks on NetView for AIX by modifying your *.Xdefaults* file. For example, you can change the colors that NetView for AIX displays by changing your X Windows environment. (Refer to your IBM documentation.) Or, you can specify certain ways in which CiscoWorks runs in your X Windows environment.

This section provides information on the following topics:

- Customizing CiscoWorks Colors and Fonts
- Editing the .Xdefaults File to Specify the Text Editor
- Enabling Boot File Generation
- Updating the Refresh Interval in the CiscoWorks Log Manager Window
- Resetting the Default Window Size of CiscoWorks Applications

Customizing CiscoWorks Colors and Fonts

All of the X resources used by CiscoWorks applications are customizable, including colors and fonts. By overwriting the default resources used in CiscoWorks, you can customize the colors and fonts to meet your needs. To use your own colors and fonts for CiscoWorks, perform one of the following procedures:

- Store your resources in the */usr/lib/X11/app-defaults/XCiscoWorks* file.
- Rename your resource file to *$HOME/XCiscoWorks.*
- Store your resources in the *$HOME/.Xdefaults* file.
- Start your CiscoWorks applications with your specified resource options (for example, **-font 9x15bold**).

Editing the .Xdefaults File to Specify the Text Editor

Defining the look of your text editor window requires that you add the following command to the *.Xdefaults* file, substituting the appropriate options:

Step 1 Confirm that X Windows is running. You can start an X window by entering the **startx** command at the UNIX prompt.

Step 2 Using your text editor, open your *.Xdefaults* file. The *.Xdefaults* file is usually stored in your home directory. For example, if you are using *vi* as your text editor, enter the following command:

```
hostname% vi $HOME/.Xdefaults
```

Step 3 Add the following command:

*** EditorFormat:***command string* %s

Step 4 Similarly, to specify the emacs editor in */usr/local/bin*, add the following line to the *.Xdefaults* file:

*** EditorFormat:**/usr/local/bin/emacs %s

Enabling Boot File Generation

Enabling boot file generation is a matter of editing the *.Xdefaults* file to specify the "on" state. To specify the "on" state, perform the following steps:

Step 1 Confirm that the X Window is running. You can always start an X window by entering the **startx** command at the UNIX prompt.

Step 2 Using your text editor, open your *.Xdefaults* file. The *.Xdefaults* file is usually stored in your home directory. For example, if you are using *vi* as your text editor, enter the following command:

```
hostname% vi $HOME/.Xdefaults
```

Step 3 Add the following line to the *.Xdefaults* file in your home directory:

```
*Bootfile:on
```

Updating the Refresh Interval in the CiscoWorks Log Manager Window

Your CiscoWorks Log Manager redraws, or refreshes, its window according to a default interval of 900 seconds. You can customize the frequency of this process by modifying the *.Xdefaults* file. To change the refresh interval of the Log Manager window, perform the following steps:

Step 1 Using your text editor, open your *.Xdefaults* file. The *.Xdefaults* file is usually stored in your home directory. For example, if you are using *vi* as your text editor, enter the following command:

```
hostname% vi $HOME/.Xdefaults
```

Step 2 Add the following line to your *.Xdefaults* file:

XCiscoworks*refreshInterval:*new_interval_in_seconds*

For example, if you want to reset the refresh interval to 450 seconds, enter the following line to your *.Xdefaults* file:

```
XCiscoWorks*refreshInterval:450
```

Resetting the Default Window Size of CiscoWorks Applications

When working with CiscoWorks applications, you may notice that the window sizes may 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 reset 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 Enter the following command:

```
hostname% xrdb -merge < ~/XCiscoWorks
```