# Troubleshooting CiscoWorks Problems

This chapter presents troubleshooting information for problems commonly encountered when using CiscoWorks. The following sections provide basic procedures for checking your CiscoWorks installation.

- Testing Basic Connectivity and Setup
- CiscoWorks Environment Variables

The remaining sections describe specific CiscoWorks symptoms, the problems that are likely to cause each symptom, and the solutions to those problems.

- CiscoWorks: No Devices in Application Window
- CiscoWorks: Sync w/Sybase Fails
- CiscoWorks: Sybase Login Fails
- CiscoWorks: Locked Out of Security Manager
- Configuration Management: Device-to-Database or Database-to-Device Does Not Run
- Configuration Snap-In Manager: Cannot Modify DoItNow
- CiscoView: Timeout Error Messages

Symptoms, problems, and solutions are not provided for every CiscoWorks application. For information about applications not covered in this chapter, refer to the *CiscoWorks Admin and Installation Guide* and the *CiscoWorks User Guide*.

## Testing Basic Connectivity and Setup

The following procedure describes how to test the basic connectivity and setup of a CiscoWorks installation. Perform these steps first when presented with a CiscoWorks-related problem.

**Step 1**   Begin by testing IP connectivity. From the Unix workstation, try to **ping** the router's IP address. If the ping is unsuccessful, make sure that IP routing is properly enabled and is functioning normally. For detailed information about troubleshooting IP routing problems, see the "Troubleshooting TCP/IP" chapter.

**Step 2**   Try to **ping** the device by its name as well as by its IP address. If you can ping the device by its IP address but not its resolved name, there is a name resolution problem. Consult your system administrator for assistance in resolving the problem.

**Step 3**   Open a Telnet session to the router. Enter the **show running-config** privileged EXEC command to view the router configuration. Check to see if there is an **snmp-server community** *string* **rw** command entry in the configuration.

If the command is not present, configure the router with the **snmp-server community** command. If the command is present, make sure that the **rw** (read-write) keyword is specified, not the **ro** (read only) keyword.

For complete information on the use of the **snmp-server community** command, refer to the Cisco IOS *Configuration Fundamentals Configuration Guide* and *Configuration Fundamentals Command Reference*.

**Step 4**    On the management station, check for the proper community string on the base platform (CiscoWorks obtains community string information from the base platform). On Netview/6000 and HP OpenView, choose Options, SNMP Configuration, and check community for the device. On SunNetManager, choose Properties and check community for the device. The community name configured on the router (with the **snmp-server community** command) and that configured on the management station should be the same.

**Step 5**    Try a MIB Browse of the device from the base platform. On Netview/6000, choose Tools, MIB-Browser, SNMP. On HP OpenView, choose Monitor, MIB Values, Browse MIB: SNMP. On SunNetManager, choose the device and then select a Quick Dump of SNMP.

If MIB values are not returned for the device, check the documentation for your base platform and re-check the **snmp-server** information in the router.

## Testing Basic TFTP Connectivity

The following procedure describes the steps to take to test the connectivity of your TFTP server.

**Step 1**    Check to see if the inetd daemon is running on the Unix workstation. On AIX, HPUX, or Solaris, enter **ps -ef | grep inetd**. On Sun, enter **ps -aux | grep inetd**. If the inetd daemon is not running, start it. For information on starting the inetd daemon, refer to your operating system manual.

**Step 2**    Use the **netstat -a | grep tftp** command to see if the TFTP daemon is running on the UNIX workstation. If the TFTP daemon is not running, start it. For instructions on starting the TFTP daemon, refer to the *CiscoWorks Installation and Reference Guide*.

**Step 3**    Test TFTP functionality from the router to the UNIX workstation. On the UNIX workstation, enter the command **cd /tftpboot** and then the command **ls -l** *filename* to check for the presence of a scratch configuration file for the router (the default is *router_name*-**confg**).

If there is not a configuration file for the router, create one by entering the command **touch** *filename* and then the command **chmod 777** *filename*.

**Step 4**    Open a Telnet session to the router, enter privileged mode, and enter the **copy running-config tftp** command. Specify the TFTP server and file you just created (*filename*) to overwrite the file on the TFTP server. If this fails, check connectivity between the router and the host and refer to your operating system manual to troubleshoot TFTP server problems.

# CiscoWorks Environment Variables

Frequently, misconfigured environment variables cause problems in the operation of CiscoWorks. The following sections describe the default values, descriptions, and locations of CiscoWorks environment variables for each platform.

## Default Variable Values

The following sections provide the default values assigned to the CiscoWorks environment variables for each platform.

- SunOS and HP-UX Installations
- AIX Installations
- Solaris Installations

## SunOS and HP-UX Installations

On SunOS and HP-UX installations, the values assigned to the CiscoWorks environment variables should be similar to the following, provided you chose the defaults during installation of the software. If you did not load your software in the default directories, your values should point to the locations you chose.

- NMSROOT—/usr/nms
- SYBASE—/usr/nms/sybase
- PATH—$NMSROOT/bin, /$NMSROOT/etc, $SYBASE/bin
- DSQUERY—CW_SYBASE

Use the **printenv** UNIX command to see the current environment variable settings.

For descriptions of these variables, see the section "Description of Environment Variables" later in this chapter.

## AIX Installations

On AIX installations, the values assigned to the CiscoWorks environment variables should be similar to the following, provided you chose the defaults during installation of the software. If you did not load your software in the default directories, your values should point to the locations you chose.

- NMSROOT—/usr/nms
- SYBASE—/usr/nms/sybase10
- PATH—/usr/OV/bin, $NMSROOT/bin, /$NMSROOT/etc, $SYBASE/bin
- DSQUERY—CW_SYBASE

Use the **printenv** UNIX command to see the current environment variable settings.

For descriptions of these variables, see the section "Description of Environment Variables" later in this chapter.

## Solaris Installations

On Solaris installations, the values assigned to the CiscoWorks environment variables should be similar to the following, provided you chose the defaults during installation of the software. If you did not load your software in the default directories, your values should point to the locations you chose.

- NMSROOT—/opt/CSCOcw
- SYBASE—/opt/CSCOcw/sybase
- PATH—$NMSROOT/bin, /$NMSROOT/etc, $SYBASE/bin
- DSQUERY—CW_SYBASE

Use the **printenv** UNIX command to see the current environment variable settings.

For descriptions of these variables, see the section "Description of Environment Variables" later in this chapter.

## Description of Environment Variables

This section provides descriptions of the CiscoWorks environment variables.

NMSROOT—Default directory for CiscoWorks installation. If the software was installed in a different directory, substitute the appropriate directory path to ensure the correct definition of the NMSROOT environment variable.

SYBASE—Default directory for Sybase installation. If the software was installed in a different directory, substitute the appropriate directory path to ensure the correct definition of the SYBASE environment variable. The SYBASE variable refers to the NMSROOT variable and the Sybase directory following it.

PATH—Directory path for your NMS software and various CiscoWorks directories (including $NMSROOT/bin, $NMSROOT/etc, and $SYBASE/bin). The path should be specified to include SunNetManager, HP OpenView, or Netview; CiscoWorks; and Sybase.

DSQUERY—Sybase server name. The default is CW_SYBASE.

## Environment Variable Locations

The location of environment variable definitions differs depending on the UNIX shell you are using. This will typically be the Korn shell (ksh), the C shell (csh), or the Bourne shell (sh). The default UNIX shell for a user ID is set up in the /etc/passwd file. Use the **set** command to find out which shell you are using.

**C shell**—At login, the system reads the .cshrc file in the user's home directory. Ciscoworks creates an install.cshrc file which is found in $NMSROOT/etc under HPUX, Solaris, and SunOS, and under $NMSROOT/install under AIX. The variables in this file can be cut and pasted into the .cshrc file in the user's home directory. An example of variable definition in the .cshrc file is:

```
setenv NMSROOT /usr/nms
```

**Korn shell**—At login, the system reads the .kshrc file in the user's home directory. CiscoWorks creates an install.kshrc file which is found in $NMSROOT/etc under HPUX, Solaris, and SunOS, and under $NMSROOT/install under AIX. The variables in this file can be cut and pasted into the .kshrc file in the user's home directory. An example of variable definition in the .kshrc file is:

```
export NMSROOT=/usr/nms
```

# CiscoWorks: No Devices in Application Window

**Symptom:** No devices appear in the windows of CiscoWorks applications (such as Configuration Management or Configuration Snap-In Manager).

Table 21-1 outlines the problems that might cause this symptom and describes solutions to those problems.

**Table 21-1    CiscoWorks: No Devices in Application Window**

| Possible Problem | Solution |
|---|---|
| Sync w/Sybase has not been run | You must run Sync w/Sybase to populate the CiscoWorks application windows. With Netview/6000 and HP OpenView, choose a Sync entry under Misc. On SunNetManager, choose a Sync entry under Tools. For more information on running Sync w/Sybase, refer to the *CiscoWorks User Guide*. |

# CiscoWorks: Sync w/Sybase Fails

**Symptom:** Attempts to run Sync w/Sybase in CiscoWorks fail.

Table 21-2 outlines the problems that might cause this symptom and describes solutions to those problems.

**Table 21-2    CiscoWorks: Sync w/Sybase Fails**

| Possible Problem | Solution |
| --- | --- |
| Basic connectivity or setup problem | Follow the steps outlined in the section "Testing Basic Connectivity and Setup" earlier in this chapter. |
| Community string, name resolution, or timeout problem | Run **nmadd** from the command line to determine if the problem is related to community string, name resolution, or timing out. The **nmadd** syntax is:<br><br>`nmadd [-n device] [-r commstring] [-w rw_commstring] [-t timeout]`<br><br>Use a process of elimination to isolate the specific problem. |

# CiscoWorks: Sybase Login Fails

**Symptom:** When attempting to use CiscoWorks applications that involve the use of Sybase, you receive a "Sybase login failed" error message.

Table 21-3 outlines the problems that might cause this symptom and describes solutions to those problems.

**Table 21-3        CiscoWorks: Sybase Login Fails**

| Possible Problem | Solution | |
|---|---|---|
| Misconfigured environment | **Step 1** | Check the environment settings for your CiscoWorks installation using the **printenv** command. Make sure the settings shown point to the directories where you installed CiscoWorks. |
| | **Step 2** | If any of these variables point at the wrong location, Sybase logins will fail. Set any incorrect variables to the proper value and attempt to use the CiscoWorks application again. |
| | | For more information about the default values, descriptions, or locations of the CiscoWorks environment variables, see the section "CiscoWorks Environment Variables" earlier in this chapter. |
| Dataserver is not running | | Check to see if the dataserver is running. On HP-UX, Solaris, and AIX use the command **ps -ef \| grep** *dataserver*. On SunOS, use the command **ps -auxww \| grep** *dataserver*. On any of these systems, executing $NMSROOT/etc/isalive will also return status. |
| nscpwd file is corrupted | **Step 1** | Check to see if the nscpwd file is corrupted. Enter the command **ls -al $NMSROOT/etc/ncspwd** and check the output for the following: |
| | | `4 (date) (year) (time) ncspwd` |
| | **Step 2** | If the output begins with anything other than "4', run the following command, answering the prompts as shown: |
| | | **$NMSROOT/bin/nmsanms**<br>`Name:` **sa**<br>`Password:` **sybasesa**<br>`Key:` **beta** |
| $SYBASE interfaces file has been modified | **Step 1** | Check to make sure that the $SYBASE interfaces file is present in the $SYBASE directory and that $SYBASE and the path to $SYBASE are defined in the environment variables. |
| | | If you are using Solaris and the IP address of the management station has changed, you must recalculate the decimal-to-hexadecimal IP address specification. See the section "$SYBASE Interfaces File Format" later in this chapter. |
| | **Step 2** | Make sure the DSQUERY environment variable correctly specifies the Sybase server name indicated in the $SYBASE interfaces file (the default is CW_SYBASE). For more information, see the section "CiscoWorks Environment Variables" earlier in this chapter. |
| | | To find out the proper format for the $SYBASE interfaces file on your platform, see the section "$SYBASE Interfaces File Format" later in this chapter. |

## $SYBASE Interfaces File Format

If the $SYBASE interfaces file has been modified, Sybase logins can fail. The $SYBASE interfaces file should always be found in the $SYBASE directory. The following sections describe the format for the interfaces file for different platforms.

- AIX, HP-UX, and SunOS $SYBASE Interfaces File Format

- Solaris $SYBASE Interfaces File Format

## AIX, HP-UX, and SunOS $SYBASE Interfaces File Format

On AIX, HP-UX, and SunOS, the $SYBASE interfaces file should resemble the following:

```
## CW_BACKUP_SERVER on oak
##   Services:
##       query     tcp  (3001)
##       master    tcp  (3001)

CW_BACKUP_SERVER 5 5
    query tcp ether oak 3001
    master tcp ether oak 3001

## CW_SYBASE on oak
##   Services:
##       query     tcp  (10000)
##       master    tcp  (10000)

CW_SYBASE 0 0
    query tcp ether oak 10000
    master tcp ether oak 10000
```

On the AIX, HP-UX, and SunOS platforms, the entries in the $SYBASE interfaces file take the following generic format:

```
CW_BACKUP_SERVER # #
    query tcp interface machine port
    master tcp interface machine port

CW_SYBASE # #
    query tcp interface machine port
    master tcp interface machine port
```

## Solaris $SYBASE Interfaces File Format

On Solaris, the $SYBASE interfaces file should resemble the following:

```
## CW_BACKUP_SERVER on Bamboo
##    Services:
##        query      tcp  (3000)
##        master     tcp  (3000)

CW_BACKUP_SERVER 5 5
     query tli tcp /dev/tcp \x00020bb8ab44766a0000000000000000
     master tli tcp /dev/tcp \x00020bb8ab44766a0000000000000000

## CW_SYBASE on Bamboo
##    Services:
##        query      tcp  (2002)
##        master     tcp  (2002)

CW_SYBASE 0 0
     query tli tcp /dev/tcp \x000207d2ab44766a0000000000000000
     master tli tcp /dev/tcp \x000207d2ab44766a0000000000000000
```

On the Solaris platform, the entries in the $SYBASE interfaces file take the following generic format, where *P* is the 5-digit port address converted to hex and the *I* is the IP address converted to hex on an octet-by-octet basis.

```
CW_BACKUP_SERVER 5 5
     query tli tcp /dev/tcp \x00020PPPPPIIIIIIII0000000000000000
     master tli tcp /dev/tcp \x00020PPPPPIIIIIIII0000000000000000

CW_SYBASE 0 0
     query tli tcp /dev/tcp \x00020PPPPPIIIIIIII0000000000000000
     master tli tcp /dev/tcp \x00020PPPPPIIIIIIII0000000000000000
```

If you are using Solaris and the IP address of the management station has changed, you must recalculate the decimal-to-hexadecimal IP address specification, as shown in the following example.

```
CW_SYBASE 0 0
     query tli tcp /dev/tcp \x000207d0ab44766a0000000000000000
     master tli tcp /dev/tcp \x000207d0ab44766a0000000000000000
##                                  7d0 = 2000 port number
##                                   ab = 171
##                                     44 = 68
##                                       76 = 118
##                                         6a = 106
##                       IP address = 171.68.118.106
```

# CiscoWorks: Locked Out of Security Manager

**Symptom:** When you try to use the Administer, CW-Security menu selection, regardless of the name and password you enter on the User Identification screen you receive a "Sybase login failed" error. When you try entering the "sa" user ID and password, the message returned is "Sorry, the username [sa] is reserved to the CiscoWorks system."

Table 21-4 outlines the problems that might cause this symptom and describes solutions to those problems.

**Table 21-4      CiscoWorks: Locked Out of Security Manager**

| Possible Problem | Solution |
|---|---|
| Security Manager on without an enabled group | If Security Manager is on without having a group enabled to use it, all users can be locked out of Security Manager. |
| | **Step 1**  Temporarily disable Security Manager to allow security administration. Enter the following commands on from the command line: |
| | ``` $SYBASE/bin/isql -Usa -Psybasesa ``` |
| | ``` 1> use nms 2> go 1> setuser "SAnms" 2> go 1> update applications set authority_ck = 0 2> where app_name = "nmadmin" 3> go 1> quit ``` |
| | **Step 2**  All security is now removed from the CiscoWorks application. You must reconfigure Security Manager with a group enabled to use it. |
| | For information on configuring Security Manager, refer to the *CiscoWorks User Guide*. |

# Configuration Management: Device-to-Database or Database-to-Device Does Not Run

**Symptom:** The device-to-database or the database-to-device operation in the Configuration Management application does not work.

Table 21-5 outlines the problems that might cause this symptom and describes solutions to those problems.

**Table 21-5**  **Configuration Management: Device-to-Database or Database-to-Device Does Not Run**

| Possible Problem | Solution |
|---|---|
| Basic connectivity or setup problem | Perform the steps outlined in the section "Testing Basic Connectivity and Setup" earlier in this chapter. |
| TFTP problem | Perform the steps outlined in the section "Testing Basic TFTP Connectivity" earlier in this chapter. |

# Configuration Snap-In Manager: Cannot Modify DoItNow

**Symptom:** The DoItNow operation in the Configuration Snap-In Manager application does not work.

Table 21-6 outlines the problems that might cause this symptom and describes solutions to those problems.

**Table 21-6    Configuration Snap-In Manager: Cannot Modify DoItNow**

| Possible Problem | Solution |
| --- | --- |
| Basic connectivity or setup problem | Perform the steps outlined in the section "Testing Basic Connectivity and Setup" earlier in this chapter. |
| TFTP problem | Perform the steps outlined in the section "Testing Basic TFTP Connectivity" earlier in this chapter. |

# CiscoView: Timeout Error Messages

**Symptom:** When attempting to use the CiscoView application you receive timeout messages and cannot view a device.

Table 21-7 outlines the problems that might cause this symptom and describes solutions to those problems.

**Table 21-7    CiscoView: Timeout Error Messages**

| Possible Problem | Solution |
|---|---|
| Basic connectivity or setup problem | Perform the steps outlined in the section "Testing Basic Connectivity and Setup". |
| Polling interval too low | Try increasing the polling interval. To increase the polling interval, select Options, then Properties, and increase the value in the "Timeout (secs):" field. If the polling interval is too low, CiscoView will time out. |
| Community string, name resolution, or timeout problem | If CiscoView still fails, trying running **nmcview** from the command line to determine if the problem is related to community string, name resolution, or timing out. The **nmcview** command syntax is:<br><br>`nmcview [-h host] [-c | -rd read community] [-C | -rw write community]`<br>`[-t timeout] [-r retries] [-P poll frequency]`<br><br>Use a process of elimination to isolate the specific problem. |