Doc. No. 78-1042-03 Rev. A0

CiscoWorks 1.0(3) Release Note

Note To install and configure the CiscoWorks™ software 1.0(3), refer to the *CiscoWorks 1.0(3) Getting Started Guide Addendum* and the *CiscoWorks Getting Started Guide*.

This release note describes the following:

Note If you do not plan to read this release note completely, read the section "CiscoWorks Release 1.0(3) Caveats—Installation" on page 25. Also read "OpenWindows Caveats and Patch" on page 31, which describes the Sun Microsystems OpenWindows Patch that corrects a number of OPEN LOOK bugs. Also read the section "SunNet Manager Caveats and Patch" on page 32, which describes the SunNet Manager (SNM) 2.0 patch that corrects several SNM bugs and other bugs associated with CiscoWorks Release 1.0(2).

CiscoWorks Release 1.0(3)Maintenance Update

The CiscoWorks Release 1.0(3) does not add any new features. The Sybase server has been upgraded to Version 4.9.1. For more information, refer to “CiscoWorks Release 1.0(3) Caveats,” on page 20.

CiscoWorks Release 1.0(2) Features

This section describes the features and updates applicable to CiscoWorks Release 1.0(3) that were released in CiscoWorks Release 1.0(2). Refer to this section if you are a NetCentral or CiscoWorks Release 1.0(1) user.

- Network Information Services (NIS) is supported. The CiscoWorks configuration script prompts you to update your NIS information after completing the CiscoWorks Release 1.0(3) configuration.
- Some database changes allow the disk space to be used more efficiently to store polling table information.
- A retry popup window, which indicates the loss of connectivity to a device, has been added to the Health Monitor, Path Tool, Show Commands, and Environmental Monitor applications.
- You can update the list of devices shown in the Configuration Management window to reflect the current list of devices in the database. As a result, the devices displayed in the Configuration Management window are identical to the devices in the database.
- The maximum size of a configuration file or a comments file has been increased from 108 to 128 kilobytes (KB).
- A new field called *Write Community* has been added to the Device window in the Device Management window. This field enables you to specify the ReadWrite (RW) community string for a device.
- The **Show Flash** command in the Show Commands window enables you to view files in Flash memory for a Cisco device.
- The Interfaces window has been modified to display a lookup window when you click on the Line Type field. To assign a line type to an interface, click on a line type in the lookup window.

For more information on CiscoWorks features, refer to the *CiscoWorks User Guide*.

Additions to the CiscoWorks User Guide

This section provides information that is either unavailable in the *CiscoWorks User Guide* or has been changed since CiscoWorks Release 1.0(1). It also supplements the *CiscoWorks User Guide*.

This section describes the following:

Adding Device Information

The following information applies to Chapter 6, "Device Management," in the *CiscoWorks User Guide*. If the host name of a device is the same as its IP address, do not enter the domain name along with the IP address in the Device Name field of the Devices window. For example, if the host name of a device is *130.104.23.5* and its domain name is *cisco.com*, you would enter the IP address portion of the host name only in the Device Name field.

If you include the domain name with the IP address in the Device Name field and click on the **Initialize** button, the information you entered will not be initialized correctly.

Note If the device has a host name that is different from its IP address—for example, its host name is *alfred*; its IP address is *130.104.23.5* and it belongs to the domain *cisco.com*—you would enter both the host name and the domain name (for example, *alfred.cisco.com*) in the Devices window.

Enabling Better Use of Disk Space by Device Polling

Use this section if upgrading from CiscoWorks Release 1.0 to 1.0(3). If you have upgraded to CiscoWorks Release 1.0(2) and performed this procedure, you do not need to do it again.

The storage of polling data was changed in CiscoWorks Release 1.0(2) and 1.0(3). When a poll table is specified in the Device Polling window for a poll group, the inst column in the database field stores the instance value of the MIB table you use. The size of the inst column was 255 bytes in CiscoWorks Release 1.0, however, some instance values are smaller in size and do not require the use of 255 bytes in the inst column. As a result, database polling tables created in CiscoWorks Release 1.0 used more disk space than necessary.

CiscoWorks Release 1.0(3) software uses a variable size for the inst column with a maximum limit of 255 characters. For example, if the instance value of a MIB table is 3 bytes, the inst column field uses only 3 bytes to store the instance value. As a result, the disk consumption rate is significantly lower, and less disk space is used.

Although you can multiply the disk space consumption by the length of time you plan to poll and obtain an estimate of required disk space, your calculations might not be 100 percent accurate. The Device Polling application is unaware of which device interfaces are up or down and whether or not MIB values returned by a device are sent in one or more packets. Therefore, you should occasionally check the database to determine the actual consumption rate.

The CiscoWorks Release 1.0(3) software includes two scripts that address the size of the inst column used to store the instance value of a MIB variable:

- *$NMSROOT/etc/fixpolls* enables you to change the size of the inst column for all polling tables created after upgrading from CiscoWorks Release 1.0 to 1.0(3). Run this script once after upgrading to CiscoWorks Release 1.0(3).
- *$NMSROOT/etc/fixpolltable* enables you to change the size of the inst column for an existing poll table from a fixed size of 255 bytes to a variable size with a maximum limit of 255 bytes. Run this script for each poll table you created using CiscoWorks Release 1.0.

Note Use the *$NMSROOT/etc/fixpolltable* and *$NMSROOT/etc/fixpolls* scripts *only* if you are upgrading from CiscoWorks Release 1.0.x to 1.0(3). If you are upgrading from NetCentral Release 1.3 to CiscoWorks Release 1.0 or installing CiscoWorks Release 1.0(3) for the first time, you need not run these scripts.

Running the $NMSROOT/etc/fixpolls Script

To run the *$NMSROOT/etc/fixpolls* script after upgrading from CiscoWorks Release 1.0 to 1.0(3), perform the following steps:

Step 1 Make sure you know the password for *nmsuper* or the password of a CiscoWorks Release 1.0 user. (Do not use the Sybase SA password.)

Step 2 Enter the following command at the UNIX prompt (%):

```
% $NMSROOT/etc/fixpolls -Uuser -Ppassword
```

For example, if your user name is *kwilson* and your password is *casey2*, you would enter the following command:

```
% $NMSROOT/etc/fixpolls -Ukwilson -Pcasey2
```

Output similar to the following will appear:

```
Fixing poll template table... Done.
```

Running the $NMSROOT/etc/fixpolltable Script

To run the *$NMSROOT/etc/fixpolltable* script for each polling table, perform the following steps:

Step 1 To identify the names of the polling tables, select the Tools menu on the SNM console and pull down to **Device Polling**.

The Device Polling window appears.

Step 2 Select the Poll Group field and pull down the pick menu to display the existing poll group names for polling tables.

Step 3 Note the names of the polling tables.

Step 4 Make sure you know the password for *nmsuper* or the password of a CiscoWorks user. (Do not use the Sybase SA password.)

Step 5 Enter the following command at the UNIX prompt, substituting the name of the polling table:

```
% $NMSROOT/etc/fixpolltable -Uuser -Ppassword polling_table_name
```

For example, if your user name is *kwilson*, your password is *casey2*, and the name of the polling table is *sample*, you would enter the following command:

```
% $NMSROOT/etc/fixpolltable -Ukwilson -Pcasey2 sample
```

Output similar to the following will display:

```
Fixing poll table sample
All done fixing test1
```

Step 6 Repeat step 5 for each polling group.

Removing Log Manager Messages

Messages in the Log Manager window are stored in a Sybase table called *ciscolog*. These messages can accumulate quickly, and the database can consume large amounts of hard disk space; therefore, you should delete unwanted Log Manager messages to prevent your database from consuming too much disk space.

You can delete log messages from the Log Manager window in two ways:

- Delete the log messages from the Log Manager window as described in the *CiscoWorks User Guide*.
- Use the isql utility to remove all log messages as described in this section.

Use the isql utility in the following situations:

- The Sybase transaction log runs out of space when you try to delete all messages in the Log Manager window.
- You need more flexibility in specifying which records to delete.
- You want to use a shell script to delete the log messages efficiently. A script can be run with **cron** to ensure that the log messages are removed at regular intervals.

If the Sybase transaction log is filled up during the deletion of messages from the Log Manager window, you can resolve the problem by using the *$NMSROOT/etc/enlarge_nms* script to enlarge the transaction log. Instructions for using this script are provided in the *CiscoWorks User Guide*.

Using the Truncate Table Command

You also can use the isql **truncate table** command to remove the log messages from the Log Manager window and the records from the Sybase table. The **truncate table** command uses less space in the transaction log.

Caution The following procedure deletes *all* messages in the Log Manager window. Do not follow these steps if you want to delete the messages selectively.

Follow these steps to delete all log messages from the Log Manager window and the *ciscolog* file:

Step 1 Enter the following command at the UNIX prompt (%):

```
% isql -Unmsuper -Ppasswd
```

Step 2 Enter the following commands in a sequence to clean the ciscolog file:

```
> truncate table ciscolog
> go
> quit
```

The isql utility allows you to specify clauses for deleting the data in the *ciscolog* file. If you want to delete log records that are older than 3 days, perform the following steps:

Step 1 Enter the following command at the UNIX prompt (%):

```
% isql -Unmsuper -Ppasswd
```

Step 2 Enter the following commands to delete log records that are older than 3 days:

```
> delete ciscolog where datediff(day, timestamp, getdate()) > 3
> go
> quit
```

To automate the deletion of the log records, you can add these lines to a shell script that can be run manually or from cron. Refer to the manual pages on **cron** and **crontab** commands for more information.

An example of the contents of a sample shell script follows:

```
#!/bin/sh
$SYBASE/bin/isql -Unmsuper -Ppasswd <<EOF
delete ciscolog where datediff (day, timestamp, getdate ()) > 3
go
quit
EOF
```

Retry Popup Window

A new retry popup window has been added to several CiscoWorks applications. This popup window indicates loss of connectivity to a device and enables you to retry the request or quit. The popup window displays the following message:

```
Device router_name not responding to SNMP
```

The retry popup window appears in the following CiscoWorks applications:

- Health Monitor—Restarts the timer and proceeds when the Cisco device is available.
- Path Tool—Skips a hop and proceeds normally until it completes its task. Path Tool reports devices that did not respond to SNMP.
- Show Commands—No timer is available, but the Show Commands application continues when the Cisco device is available.
- Environmental Monitor—Restarts the timer and proceeds when the Cisco device is available.

Enhancements to Configuration Management

The Configuration Management application includes the features described in this section.

Updating Devices in the Configuration Management Window

You can update the list of devices displayed in the Configuration Management window to reflect the current list of Cisco devices in the database, so the Cisco devices displayed in the Configuration Management window will be identical to the devices in the database.

Follow these steps to update the list of devices in the Configuration Management window:

Step 1 From the SNM Tools menu, select **Config Management**.

Step 2 Click on the **Options** button to display the pull-down menu.

Step 3 Select **Refresh Device List**.

The list of devices in the Configuration Management window are updated to reflect the current list of Cisco devices in the database.

Configuration File Size

The maximum size of a configuration file or a comments file is 128 KB.

Specifying the Write Community String for a Device

A new field called *Write Community* has been added to the Device window in the Device Management window. This field enables you to specify the ReadWrite (RW) community string for a device. The Security Manager application protects the RW community string specified in this field. In order to specify the RW community string in this field, you must have Write Password privilege assigned to your username in the Security Manager application. Otherwise, you cannot perform this task.

Edit Group or Edit User Window

The Security Manager application enables you to edit the name of an existing user or group. To perform either task, click on the **Edit** button for users or groups in the Users and Groups window to display the Edit User or Edit Group window. The *CiscoWorks User Guide* refers to the Edit User and Edit Group windows as Modify User and Modify Groups windows. This reference is incorrect.

Enlarging Disk Space Using a Command Sequence

Chapter 8, "Database Administration" in the *CiscoWorks User Guide* provides a procedure for expanding database space allocation. The steps in the procedure on page 8-10 were missing commas for some commands. The correct steps follow:

Step 1 Enter the following command at the UNIX prompt (%):

```
% $SYBASE/bin/isql -Usa -Ppasswd
```

Step 2 Enter the following command sequence to enlarge your disk space. The name must be a unique name each time the enlarge routine is run.

```
1> disk init
2> name = "nms2",
```

Step 3 Continue entering the following command sequence. Replace *../data/nms2* with any filename.

```
3> physname = "../data/nms2.dat",
```

Step 4 Continue entering the following command sequence. Enter any unique number that is greater than one. This number must be incremented by one each time the enlarge routine is run.

```
4> vdevno = 3,
```

Step 5 Continue entering the following command sequence:

```
5> size = 4906
```

This is the size of disk space desired in 2-KB increment blocks, for example, 2 x 4096 = 8 MB.

Step 6 Start the sequence by entering the following:

```
6> go
```

Step 7 Now, alter the database by entering the following at the command line. In this example, you would create an 8-MB file.

```
1> alter database nms
```

Step 8 Continue entering the following command sequence. Enter size in megabytes. This number cannot exceed the size specified in the enlarge routine.

```
2> on nms2 = 8
```

Step 9 Start the sequence by entering the following command:

```
3> go
```

Step 10 Exit the command mode by entering the following command:

```
4> quit
```

Locations Information in the People Window

You can only modify location information in the People window for the Device Management application; you cannot add new location information in this window. To add new location information, use the Locations window.

nmslog Files

When you use the **ls -l** command to list the *nmslog* files in a directory, the list includes names of the *nmslog* files and the dates they were created. Following is a sample listing displayed by the **ls -l** command:

```
-rw-r--r--  1 root         4187 Mar  5 07:32 nmslog
-rw-r--r--  1 root        13108 Mar  4 18:48 nmslog.Fri
-rw-rw-rw-  1 root          226 Mar  3 14:26 nmslog.Thu
```

The date indicates the day when the file was created, and the name of the file (*nmslog.Fri*) indicates the day when that *nmslog* file was closed.

Path Tool Link

A black link in a path displayed in the Path Tool window indicates that the device did not respond to SNMP.

Running Data Workbench Reports

The section "Running Reports from UNIX" in Chapter 4 in the *CiscoWorks User Guide* explains how you can use the **runrpt** command to run reports that were created and saved by the Data Workbench.

The correct name of this command is **runrw**. It is located in the *$SYBASE/bin* directory. The correct command syntax for the sample report called *storm_report* follows:

runrw *storm_report* **-U***yourname* **-P***password*

For more information about the **runrw** command, enter the following command:

syman runrw

Show Command Support for Flash Memory

To display information about Flash memory on a Cisco device, click on the **Show Flash** button in the Show Commands window. If the device is a Cisco 7000 router, information similar to the following displays:

```
4096K bytes of flash memory on embedded flash (in RP1).

file     offset     length        name
  0     0x80        53364       eip1-0
  [4140812/4194304 bytes free]
```

For CiscoWorks Release 1.0(3) caveat information on this feature, refer to "CiscoWorks Release 1.0(3)Modifications" on page 33.

Troubleshooting Configuration Management

If the Configuration Management application fails or you are unable to use commands in this application, verify the following:

- You have a ReadWrite (RW) community string for the device.

  Log on to the device and check the device configuration file. Ensure that a line similar to the following exists in the file:

  `snmp-server community` *`your_community_string`* `RW`

- The device is running.
- The TFTP server is running.
- The */tftpboot* directory is readable and writable to all.
- The router has Software Release 8.2 or later.
- The device specification in your name resolution software (for example, NIS, DNS or the */etc/hosts* file) is correct.

- The configuration file that you download does not have syntax errors in it. If you suspect that it does, log on to the router console and initiate a TFTP session from the router. The errors will be displayed on your console screen. Or, log on to the router before you download the file, and check to see if any error messages exist.
- You have not deleted lines when editing configuration command scripts. Instead change parameters. For example, if you do not want debugging on, do not delete the lines containing the parameter. Instead, modify the parameter from debugging on to debugging off.

Using the nmsanms Program

The *CiscoWorks User Guide* provides instructions on how to run the *nmsamns* program. Run the *nmsamns* program when you are not using the Security Manager application. If you run the *nmsamns* program when Security Manager is being used, you will need to restart the Security Manager application. Otherwise, Security Manager will be unable to access any Sybase database records.

Writing SQL Reports for Custom Polling Tables

To write SQL-based reports for analyzing data collected in polling tables, you must be familiar with CiscoWorks polling applications, Simple Network Management Protocol (SNMP), and structured query language (SQL).

Table 1 shows the columns that are always present in a polling table. The remaining columns are user-defined and contain the values of the polled MIB objects.

Table 1 Columns in a Polling Table

Field Name	Field Size	Field Type
timestamp	datetime	Timestamp for each row of data polled
device_id	int	Join to devices table
sysUpTime	int	System up time in 100ths of a second
inst	char (255)	Index into MIB object table
rec_type	tinyint	0 = normal record, 1 = start record, 2 = not used, 3 = restart record, 4= irregular records

If the polled MIB objects are indexed by *ifIndex*, the inst column contains the appropriate value (for example, *ifIndex* or *locIfxxx)*. This inst column can be used to join with the interface_id column in the Interfaces table. To join the inst column with the interface_id column, add the following to the SQL WHERE clause:

```
select ...
where ...
and convert(int, inst) = interfaces.interface_id
```

When you start polling a device, CiscoWorks creates a record with rec_type = 1. All the values in this record are absolute. All other records have rec_type = 0 and contain a mix of delta and absolute values. When you stop polling a device, you do not get any additional rows. A new rec_type value of 4 has been added to account for any anomalies or irregularities, which includes absolute values instead of delta values.

You can determine whether a MIB object will contain an absolute or delta value by getting its data type from the *$SNMHOME/agents/cisco.schema* file and identifying the value for each type. For example, *sysUpTime* uses timeticks as its record type, so the data value will be displayed as a delta value (the difference in value between the current poll and the last poll) if rec_type = 0.

For information on identifying the value for a data type, refer to Table 2.

Table 2 Values for Types of Records

Record Type	Value
timeticks	delta
counter	delta
gauge	absolute
int	absolute

Using genmibview

In a custom polling table, the columns containing the polled object values are labeled var[1-*n*], where *n* is the number of polled MIB objects. The *genmibview* script in the *$NMSROOT/etc* directory enables you to create a view of the polling table that uses the MIB variable names. Use the following command to create a table with meaningful column names:

```
$NMSROOT/etc/genmibview -Uuser -Ppassword tablename
```

The command creates a view called *tablename*_view. For example, to generate a view for a polling table named *traffic*, a user named *netman* and a password *cisco*, use the following command:

```
$NMSROOT/etc/genmibview -Unetman -Pcisco traffic
```

This command creates a view of the traffic table called *traffic_view*, with columns named after the MIB object names.

Specifying MIB Object Values

When you create a polling table in Device Polling, you specify the MIB object values that you want to collect. These values are collected by the poller and added to the database as the values are received. When polled values arrive at the poller in different packets, the values are written to the database in different records. Therefore, you might find that the data for a given poll is spread over two or more records, with NULL appearing where data was not available.

The following example shows how polling data is received over time and added to the database:

```
Polling:
                time    sysUpTime       var1    var2    inst
                 x         100           10              1
                 x+1       101                  15       1
                 x+2       102           10              2
                 x+10      110           20              1
                 x+11      111           25              2
Database storage:
                rec_type sysUpTime      var1    var2    inst
                   1          100        10             1
                   1          101              15      1
                   1          102        10            2
                   0           8         10       1
                   0           1         15            2
```

You cannot perform row operations without first grouping and aggregating your data. You might want to use the timestamp column to perform groupings and then use the AVG or MAX (for absolute values) or SUM (for delta values) to aggregate. You can use the following GROUP BY clause to group by device, inst, and 15-minute intervals:

```
select ...
group by device_id, convert(int, inst), datepart(dd, timestamp),
datepart(hh, timestamp), convert(int, datepart(mi, timestamp)/15)
```

Computing sysUpTime Over a Polling Interval

To calculate time-dependent statistics for a device, calculate the total device uptime during the polling period. Create a temporary table containing the uptime for each polled device by using the following SQL commands:

```
select device_id, sum(sysUpTime)/100 uptime into #t1 from <table>
where rec_type = 0 group by device_id
```

The SQL commands create a temporary table called *#t1* that contains device IDs and the uptime values for each device. The value is divided by 100 so that uptime will be in seconds (*sysUpTime* is in 100ths of a second).

Using ifOperStatus and ifAdminStatus

If you are polling interface values, include *ifOperStatus* and *ifAdminStatus* in your polling values to determine whether a given interface is operational. If you are using a GROUP BY clause in your SQL, add a HAVING condition to the group to check whether the interface was operational. Add the following commands to the group:

```
select ...
group by ...
having max(ifOperStatus) = 1 and max(ifAdminStatus) = 1
```

The possible values for *ifAdminStatus* are listed in Table 3.

Table 3 Values for ifAdminStatus

Value	Meaning
1	up
2	down
3	testing

These values are also described in RFC 1213, *Management Information Base for Network Management of TCP/IP-based Internets: MIB-II*.

Calculating Traffic Values on Serial Lines

Because serial lines are full duplex, there is no single way to perform a traffic calculation. The following calculation provides the best view:

```
traffic = max(ifInOctets, ifOutOctets)
utilization = traffic/line bandwidth
```

In general, however, it is often less complex and more direct to look at traffic as the amount of data transmitted by a given device onto a line. This is consistent with the router calculation that obtains a load value. In this case, use the following calculation (where the utilization is a function of which end of the serial line that you are measuring):

```
traffic = ifOutOctets
utilization = traffic/line bandwidth
```

If you use *ifInOctets+ifOutOctets* as a traffic measure for serial lines, your utilization levels appear to be greater than 100 percent.

To determine whether you have a serial line, check the interface_type column in the Interfaces table. Table 4 lists the serial interface types and the protocols associated with each interface. For detailed information on interfaces and protocols, refer to RFC 1213, *Management Information Base for Network Management of TCP/IP-based Internets: MIB-II*.

Table 4 Serial Interface and Protocol Type

Serial Interface Type	Protocol Type
2	1822
3	1822
4	ddnx25
5	RFC 877-x25
16	lapb
17	sdlc
18	ds1
19	e1
20	ISDN
22	serial
23	PPP

To select serial interfaces, use the following with the WHERE clause:

```
select ...
where ...
and interfaces.interface_type in (2,3,4,5,16,17,18,19,20,21,22,23)
```

Additional Files in the *$NMSROOT/contrib* Directory

The following utilities have been added to the *$NMSROOT/contrib* directory. For more detailed information, refer to the individual README files also located in the directory.

- *nmlogclean*—Cleans out nmslog messages.
- *nmpolldump*—Dumps polling data to a file that can be imported to a spreadsheet.
- *nmpollpurge*—Helps with deletion of old polling data without destroying the poll table.

Shutting Down the CiscoWorks Daemons

If you are unable to shut down the CiscoWorks daemons (including nmpolld, nmlogd, nmeventd, or nmdevmond) by clicking on the **Off** button in the Process Manager window, perform the following steps as a superuser. Do not attempt to turn off the Sybase dataserver.

Step 1 At the UNIX prompt (#), enter the **ps** command to identity the process identification number (PID) for nmpolld:

```
# ps vax | grep nmpolld
```

The PID for nmpolld displays.

Step 2 Enter the following command to remove the process

```
# kill process-id-number
```

You may have to wait several minutes for the Polling daemon to shutdown.

Step 3 At the UNIX prompt (#), enter the **ps** command to ensure that the displayed processes do not include the process you just removed.

```
# ps vax | grep nmpolld
```

Step 4 If the process is still running, remove the nmpolld daemon:

```
hostname# kill -9 process-id-number
```

CiscoWorks Error Messages

This section describes undocumented error messages that do not appear in the *CiscoWorks User Guide*. They are arranged in alphabetical order.

Error Message
`Bad poll rate: <string>, for poll group <string> (id=<string>)`

Explanation The poll rate is invalid.

Recommended Action Ensure that the poll rate for this poll group is an unsigned number between 0 and 2684354 seconds (maximum valid poll rate). Use the Device Polling application to check the poll rate.

Error Message
`Cannot find an IP address for the specified device.`

Explanation The IP address for the device that you are trying to find is unavailable.

Recommended Action Check the */etc/hosts* file, the Domain Name System (DNS) server, or the NIS server (whichever is applicable) to find out if the IP address is listed for the device.

Error Message
`Cannot find data repository table <tablename>`

Explanation The specified table does not exist in the Sybase directory.

Recommended Action Use Device Polling to recreate the poll group.

Error Message
`Cannot open snm+lock file: path: permission denied.`

Explanation This message appears if you try to launch SunNet Manager (SNM) when you are logged in as a user, and the directory with the *snm+lock* file and other files are owned by the superuser.

Recommended Action To transfer the ownership of the directory and the files that belong to the superuser to a user, enter the following command at the UNIX prompt (#):

```
# chown -R username directory name
```

Remove the *snm+lock* file:

```
# rm snm+lock
```

The *snm+lock* file is created when you launch SNM.

Error Message
`Cannot poll this variable - do not know what it is.`

Explanation The specified variable could not be identified.

Recommended Action Ensure that an entry for this variable exists in a *.oid* file in the *$SNMHOME/agents* directory.

Error Message
`Cannot touch nmstartup.`

Explanation If your system is running CiscoWorks, and you change the host name for your system, Sybase might not function because it continues to use the old host name.

Recommended Action Add the new host name to the *$NMSROOT/sybase/interfaces* file and restart Sybase. For example, if the new host name for your system is *tassle*, the entries in the *interfaces* file should be as follows:

```
SYBASE
        query tcp sun-ether tassle 8000
        master tcp sun-ether tassle 8000
        console tcp sun-ether tassle 8001
```

Error Message
`Cannot write to <directory path>!`

Explanation The permissions for the specified directory are read-only.

Recommended Action Using the **chmod** command, change the permissions for the specified directory to RW (read/write) or specify a different directory.

Error Message
`Could not send Data Report to SunNet Manager Console.`

Explanation The Real-Time Graphs application could not send a Data Report on the SNM Console.

Recommended Action Make sure the SNM Console is running. Also, check the shell where the SNM Console was started for additional Sun error messages.

Error Message
`Data type mismatch for <string> (id=<string>) : database claims <string> while mib claims <string>`

Explanation The CiscoWorks MIB database (*mib.bin*) claims one data type, while the SNM schema claims another. The data type claimed by SNM will be assumed to be the correct one.

Recommended Action Correct the CiscoWorks MIB database or the SNM schema file, whichever is in error.

Error Message
`Database is full - cannot store any more records.`

Explanation The system might have inadequate disk space for storing database records.

Recommended Action Use the *$NMSROOT/etc/enlarge_nms* script to enlarge your database. For instructions, refer to Chapter 8, in the section "Enlarging the Database" in the *CiscoWorks User Guide*.

Error Message
`Database server has disappeared.`

Explanation The database server might have stopped working.

Recommended Action Access the Process Manager application and check to see if the **On** button for the database server is grayed out. If it is not, run the *$NMSROOT/etc/nmstartup* script to start all processes required for CiscoWorks.

Error Message
`Delete doesn’t delete data from the database.`

Explanation When you delete a vendor from the Vendors table, the vendor is deleted from the Vendors window, but the information continues to exist in the People window.

Recommended Action Access the People window and delete the information for the appropriate vendor.

Error Message
`Device Poll <string> (id=<string>) cannot find device id in database.`

Explanation The specified device no longer exists within the Devices table in Sybase.

Recommended Action Use the Device Management application to ensure that the device still exists. If not, create it. Use Device Polling to recreate the poll group that was polling this device.

Error Message
`Device Poll <string> (id=<string>) can't find previous stop record to update it - disabling itself.`

Explanation There is a consistency problem in the start_stop table in Sybase.

Recommended Action Use the Process Manager window to restart Device Polling, or obtain the process ID number for the nmpolld process and send it a HUP signal.

Step 1 To obtain the process ID number for nmpolld, enter the following command:

`hostname% ps -aux`

Identity the process ID number for nmpolld.

Step 2 Send the HUP signal by entering the following command:

`hostname% kill -HUP process ID number`

Error Message
`Device poll: desired poll rate: secs, actual poll rate:`

Explanation Device Polling is unable to maintain polling at the desired poll rate.

Recommended Action Adjust your desired poll rate to a reasonable poll rate between 0 and 2684354 seconds.

Error Message
`<directory> does not contain a valid CiscoWorks 1.0 or NetCentral 1.3!`

Explanation During an upgrade installation, you are asked for the directory path for the old software. This error message indicates that the software in the specified directory path cannot be upgraded.

Recommended Action You can correct this error in one of two ways. You can specify the directory path that contains a valid CiscoWorks or NetCentral installation. You can also exit the installation process and reinstall the software, selecting **new** when prompted to specify the type of installation by the script.

Error Message
`<directory path> is not a directory!`

Explanation The specified directory is either a file or it does not exist.

Recommended Action Specify a valid directory path.

Error Message
`File: File table is full.`

Explanation This message appears if the number of open files on your system exceeds the limit defined in the system kernel.

Recommended Action To solve this problem, close some open files or shut down applications that might have open files. Or you can increase the limit for open files by building a new kernel and changing the allowed number of open files. For information on building a new kernel, refer to your Sun documentation.

Error Message
`Fork failed: <string>.`

Explanation Your system might have inadequate process quota or swap space, or you have a full process table.

Recommended Action Check the process quota for your system to find out if it is sufficient. If the process quota is inadequate, either shut down some applications or add more swap space to your system.

If your system swap space is inadequate, shut down some applications and rebuild the kernel with a larger process table.

Error Message
`Invalid variable name: <string> - <string>`

Explanation The specified variable cannot be identified or polled.

Recommended Action Ensure that an entry for this variable exists in a *.oid* file in the *$SNMHOME/agents* directory.

Error Message
`Scrollbar - Bad proportion Length resource value, set to default.`

Explanation When using the Log Manager application, this error message might display repeatedly.

Recommended Action None. Ignore the error message.

Error Message
`Sybase error: This location is currently being referenced by one or more devices.`

Explanation You are attempting to delete a location that is used by another device.

Recommended Action Delete references to this location for all devices that use this location and try again.

Error Message
`System error: Unable to verify session ID.`

Explanation This error message might appear when you login through the CW-Login application.

Recommended Action Follow these steps to verify the problem caused by error message and eliminate the problem:

Step 1 To verify if the error message is associated with a core dump caused by the **ps -ajx** command, enter the following command at the UNIX prompt (%):

```
% ps -ajx
```

Determine if a core dump occurred. Also contact Sun Microsystems and report this error message.

Step 2 If the **ps -ajx** command caused a core dump, quit from all applications in SNM and CiscoWorks and enter the following command again:

```
% ps -ajx
```

A core dump might not occur now. If it does, report the problem to Sun.

Step 3 If a core dump did not occur a second time, restart the SNM and CiscoWorks applications.

The error message will not appear the next time you login using the CW-Login application.

To receive the SunOS patch (ID 100981) to fix this error, contact Sun Microsystems, Inc.

Error Message
`Unable to find agents directory in <directory path> directory!`

Explanation The configuration has attempted to find the directory path where the new CiscoWorks schema files can be merged with the existing SNM schema files. The specified directory does not have the appropriate subdirectory structure for SNM schema files.

Recommended Action Specify a directory with a valid subdirectory structure for SNM schema files. The default directory is *$SNMHOME*.

Error Message
`Unable to obtain grapher port number.`

Explanation The SNM grapher is not currently running.

Recommended Action Start the grapher again from the SNM Tools menu.

CiscoWorks Release 1.0(3) Caveats

This section lists notes and restrictions that apply to the CiscoWorks Release 1.0(3). If a caveat applies only to CiscoWorks Release 1.0 or 1.0(2), it is noted in the description of the caveat.

These caveats are arranged within sections by CiscoWorks applications. General caveats are presented first, followed by CiscoWorks applications, which are presented in an alphabetical order.

Note For your reference, identification numbers follow the description of the caveat. For example, [CSCdi00001]. If you need to contact Technical Support about one of the following caveats, refer to the identification number to speed up the resolution of any questions or situations you might encounter.

General

This section describes general caveats associated with CiscoWorks applications.

Altering the Interface File

When you install the Sybase software, either separately or by using the Sybase software supplied with CiscoWorks Release 1.0(3), the network interface on your system must be present before you install Sybase. For example, a system might have an Ethernet network interface.

When you install the CiscoWorks and Sybase software by running the *./extract_unbundled* script, an *interfaces* file is created. This file specifies the network interface used by your system.

Avoid editing the *interfaces* file manually before configuring the CiscoWorks software. If you change this *interfaces* file before configuring CiscoWorks, the Sybase dataserver is not activated. To avoid this problem, make sure that you do not manually change the *interfaces* file while you are installing the CiscoWorks and the Sybase software. [CSCdi08816]

Backup_nms

To change the device to which you back up files, remove the log file *$NMSROOT/DBMS_backup.log* and enter the **backup_nms** command string. [CSCdi03734]

Enabling Boot File Option

In the *CiscoWorks User Guide*, the section "Option for Enabling Boot File Generation" in Chapter 5 contains a spelling error. This section describes how you can save an image of a loaded configuration file in a TFTP boot file under the */tftpboot* directory. The steps in the procedure describe how you can enable the boot file generation feature in the */tfptboot* directory by editing the *.Xdefaults* file and activating it.

The command for step 1 contains a spelling error in Nmconfman. The correct procedure appears below.

Step 1 To turn on the boot file generation, add the following line to the *.Xdefaults* file in your home directory.

```
Nmconfman*bootfile: on
```

Step 2 Save the changes to the *.Xdefaults* file using the save command from your text editor.

Step 3 To write over the existing information in the *.Xdefaults* file, enter the following command at the UNIX command line (#):

```
# xrdb -merge $HOME/.Xdefaults
```

[CSCdi010145]

Increasing Transaction Log Size

When CiscoWorks is shipped, the disk space allocated to database functions leaves about 6 MB of free space to record table information and polling and 4 MB of free space for the transaction log. However, 4 MB of disk space might be inadequate for the transaction log.

When you delete a Sybase table or specific portions of the database, the deleted database is copied to the transaction log. If the deleted information is larger than 4 MB, the deletion process is aborted, and a Sybase error message is displayed.

Increase the size of the transaction log to allow the Sybase database to be copied to the log. The *$NMSROOT/etc/enlarge_nms* script in CiscoWorks Release 1.0(3) enables you to increase the size of the transaction log. After adding space to the database, the script asks you if you want to use the new space for the transaction log. If you answer yes, the new disk space is allocated to the transaction log.

For detailed instructions on how to increase the size of the transaction log, refer to Chapter 8, in the section "Enlarging the Transaction Log Space" in the *CiscoWorks User Guide*. [CSCdi08179]

Interfaces File for Sybase

If you change the host name for the system running the Sybase dataserver, you will be unable to use the interfaces file for Sybase. To correct this problem, update the *interfaces* file by following the instructions in your Sybase documentation or run the *$NMSROOT/etc/setaddress* script. [CSCdi07688]

Keys for Interfaces in Choices Window

SNM uses instances and keys synonymously to indicate interfaces for a device. For example, to graph MIB object data for a device, you can click on a device in the Results Browser window and choose the **Graph** option, or select **Choices** from the **Graph** pull-down menu.

The Choices window displays the attributes and the keys in two columns. The keys indicate the interfaces for the device. The first key indicates the first interface, the second key indicates the second interface; and so on. The interfaces are listed in the order of the keys. To identify the interface associated with the key in the Choices window (for example, it could be Ethernet, serial, and so on), you might need to refer to the interfaces displayed by the Instances option in the Device Polling window or with the Show Commands. You could also perform a quick dump of the Cisco MIB variables *ifTable*. When you identify the desired interface, you can select the appropriate key from the Choices window. [CSCdi08171]

Listing the Host Name in the Hosts File

If the */etc/hosts* table is larger than 190 KB, and the host name of your system is not listed at the top of the hosts file, Sybase might be unable to resolve the name and refuse to start. This is caused by a name resolution bug in Sun *libc* file. Make sure that the host name of your system is listed at the beginning of the */etc/hosts* file. [CSCdi07681]

noSuchName Response for SET Error

Some older versions of SNMP agents (including the Cisco agent) return a noSuchName error for SET requests on a read-only variable. CiscoWorks will incorrectly generate an error indicating that the reply was invalid. What displays is dependent upon the CiscoWorks application you are using, but generally CiscoWorks will indicate that the reply is invalid in some way, when the actual error is something different. [CSCdi11578]

Running the $NMSROOT/sybase/bin/dwb Script

When the Sybase script *dwb* in the *$NMSROOT/sybase/bin* directory is run, it uses a System V command to invoke the Sybase Data Workbench. If System V extensions are not installed on your Sun workstation, the script fails when it is run. [CSCdi08660]

SNMP Server Community String

This caveat applies to Cisco routers, but is pertinent to CiscoWorks users.

When defining a community string for a router, enter the community string without quotation marks around it. For example, to define the community string as “public,” enter the following command:

snmp-server community public RO

Sybase-Related Log Daemon Error

The Log daemon (nmlogd) establishes a connection with the Sybase server. If the Sybase dataserver dies, nmlogd attempts to reestablish the connection with the Sybase dataserver once every 60 seconds until it succeeds. If nmlogd is unable to connect to the Sybase dataserver after continuous attempts, it displays a Sybase error message that explains the reason for the error.

A typical example of an error message follows:

```
Nmlogd: Sybase error_handler: General SQL server error: Check messages from SQL error.
```

For an explanation of the Sybase error, refer to your Sybase documentation and follow the instructions for eliminating the Sybase error. The nmlogd error message will not appear again. [CSCdi08183]

Turning off CiscoWorks Daemons

If you shut down the Sybase dataserver and the Log daemon (nmlogd), you might need to shut down all CiscoWorks daemons and restart them because you will no longer be able to turn off the Event Logger daemon (nmeventd) and the Device Monitor daemon (nmdevmond) from the Process Manager window.

The following steps describe how to identify the process ID number for a CiscoWorks daemon and remove it. Repeat these steps for each CiscoWorks daemon, substituting the appropriate daemon name and process ID number.

Step 1 Enter the following commands at the UNIX prompt to identify the process identification numbers (PID) for the Log daemon (nmlogd).

```
# ps -vax | grep nmlogd
```

The PID for nmlogd displays.

Step 2 Enter the following command to remove the nmlogd process:

```
hostname# kill -9 process-id-number
```

Step 3 Repeat these steps for each of the CiscoWorks daemons: the Polling daemon (nmpolld), the Event Logger daemon (nmeventd), and the Device Monitor daemon (nmdevmond). [CSCdi08220]

Configuration Management

The caveats in this section apply to the Configuration Management application.

Community String

You must use the same community string in the Configuration Management application that you use for polling functions. The community string for the Configuration Management application must be ReadWrite (RW). [CSCdi01416]

Downloading Configuration Files (Syntax Errors)

It is possible to download a configuration file containing syntax errors. If you suspect this is the case, log onto the router console, then initiate a TFTP configuration file download from the router. The errors will be displayed on your Console screen. [CSCdi02187]

File Dialog Box in Configuration Management

When you display the File Selection window by selecting **File to Database** from the Configuration Management window, the path displayed in the Path field is your current home directory. To change the path, place the cursor in the Path field, enter the new path over the existing path, and press Return. [CSCdi08321]

Updated Devices in Configuration Management

If a ReadWrite (RW) community string was assigned to the device in the Devices window, you can select a device in the Configuration Management window and execute a database-related command such as **Database to Device**, **Device to Database**, or **Compare Configs**. If you select a command for a device that is not assigned with a RW community string, a popup window appears and prompts you to supply the RW community string.

If you enter a community string other than RW, the database-related command fails. If this problem occurs, perform the following steps:

Step 1 Deselect the device and select it again.

Step 2 Click on the appropriate command button (for example, **Database to Device**).

Step 3 When prompted for the community string, enter the RW community string and click OK.

The requested command should execute correctly. [CSCdi08890]

Device Monitor

The caveats in this section apply to the Device Monitor application.

Device Monitor Message on IP Address Information

If an IP address is assigned to an interface that did not previously have an IP address, the Device Monitor daemon (nmdevmond) generates the following type of message in the Log Manager window:

```
IP address went from 0.0.0.0. to 130.109.22.5
```

If a device interface already has an IP address, and it was removed from the configuration file, nmdevmond generates the following type of message in the Log Manager window:

```
IP address went from 130.109.22.5 to 0.0.0.0
```

[CSCdi09975]

Interface Status on Unreachable Devices

The Device Monitor application monitors the interfaces of each device by checking each interface. However, if the device cannot be reached, the Device Monitor application cannot determine the status of the interfaces or provide information about the interfaces. It does not generate an event when the interface status of a device is unknown. To obtain information about the status of devices, use SNM. For information on automatic node management, refer to your *SunNet Manager 2.0 Reference Guide*. [CSCdi09634]

Device Polling

The caveats in this section apply to the Device Polling application.

Destroying Polling Tables in isql

If you use isql to destroy a device polling table that is being actively polled, the CiscoWorks Device Polling daemon (nmpolld) displays a series of error messages in the Log manager window. Device Polling is unable to continue, and the poll group in the table remains disabled until you restart nmpolld. [CSCdi08292]

Entering Poll Rate and Device Name Manually

If you manually enter the polling interval in the Poll Rate field or a device name in the Device field and click on the **Apply** button, the information you entered is not accepted by the Device Polling application. To avoid this problem, select from the available polling interval rates or device names and click on the **Apply** button. [CSCdi09006]

Incorrect Query in Sybase for nmpolld

If you have more than one Device Polling daemon (nmpolld) process, you may need to delete one of the processes for polling to occur. As part of nmstartup, the kernel may create a new process identification number (pid). This may cause nmpolld to assume an incorrect poller id (based upon the process id problems) and thus not poll the poll groups it should be polling. [CSCdi10777]

Log Filenames Must be Full Path Names

In nmpolld, the filenames specified with the *-l*, *-L*, or *-D* options that do not contain an absolute path are created relative to the root directory (/), rather than the current working directory. For example, if your current working directory was */usr/nms* and you ran **nmpolld -l log**, you would expect the log file to be created as */usr/nms/log*. However, it is created as */log*.

The workaround is to always specify absolute path names when using these options. For example, enter **nmpolld -l /usr/nms/log**. [CSCdi12654]

Selecting Interfaces in Device Polling

When you select an interface from the Instance pick menu in Device Polling, select a device, and then click on the **Apply** button, the interface is applied to the object that is selected in the Objects window. [CSCdi08264]

Installation

The caveats in this section apply to CiscoWorks Release 1.0(3) installation.

Problem with Root umask in Configuration Script

If you run *ncsconfigure* and receive the message, "FIFO_config: Permission denied," your installation fails. The root umask setting on your system has caused the configuration script to not allow other users, in this case the Sybase user, to read the configuration files. To remove the files with the incorrect privileges and rerun the installation correctly, perform the following steps:

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

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

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

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

Step 2 Rerun *ncsconfigure* as a superuser.

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

The configuration should run correctly. If you have further problems, refer to the *CiscoWorks 1.03 Release Notes*. [CSCdi12809]

Upgrading from CiscoWorks Release 1.0 or 1.0(2) to 1.0(3)

When upgrading from CiscoWorks Release 1.0 or 1.0(2) to 1.0(3), make sure your system has a minimum of 64+ MB of free disk space in the database. Sybase requires this space in order to keep the current database running while installing the new database in a different directory.

The amount of space required will display during the installation, but you may want to calculate the space ahead of time. To calculate your disk space requirement, perform the following steps:

Step 1 Back up your current database.

The Sybase database upgrade writes over your current database files. This backup ensures that a recovery can be performed in case of installation failure.

Step 2 To calculate the current amount of disk space used in *$SYBASE/data*, enter the following command string at the UNIX prompt (%):

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

This will report the total number of kilobytes used by the *$SYBASE/data* directory.

Step 3 Divide that number by 1000 to get the approximate number of megabytes.

$SYBASE/data / 1000 = current amount of disk space used in *$SYBASE/data*

Step 4 Add 45 MB to the number of megabytes to determine how much extra space will be required during installation.

Use this number to ensure that you have the required amount of disk space before attempting an upgrade to CiscoWorks Release 1.0(3).

For more information on installation, refer to the *CiscoWorks 1.0(3) Getting Started Addendum.*

Upgrading from NetCentral Release 1.3 to CiscoWorks Release 1.0(3)

The upgrade from NetCentral Release 1.3 to CiscoWorks Release 1.0(3) includes the installation of the new Sybase server 4.9.1.

When upgrading from NetCentral Release 1.3 to CiscoWorks Release 1.0(3), make sure your system has the required amount of disk space before proceeding with the installation.

The amount of space required will display during the installation, but you may want to calculate the space ahead of time. To calculate the disk space needed for your NetCentral Release 1.3 upgrade, refer to the *CiscoWorks User Guide*, Chapter 8. In the section “Calculating Disk Space Utilization” on page 8-7, perform the steps to calculate the disk space used. Use this number to ensure that you have sufficient free disk space for that database information and the new Sybase server 4.9.1.

SPARC10 Installation Problem

The installation of CiscoWorks Release 1.0(3) on a SPARC 10 might fail if you are installing CiscoWorks on a Sun4m class machine, such as a Sparc10. This occurs when CiscoWorks tries to rebuild the kernel for Sybase and finds that *ranlib* has not been run on *libprom.a*. To determine why CiscoWorks failed, look in the *ncskernel.log* file. This file should tell you to run *ranlib* by entering the following command:

```
ranlib /usr/sys/sun4m/libprom.a
```

After you run *ranlib*, restart the CiscoWorks installation by using the following command:

```
/usr/tmp/unbundled/ncskernel
```

This command will rebuild the kernel appropriately. [CSCdi12538]

Log Manager

The caveats in this section apply to the Log Manager application.

Deleting Log Manager Messages

When you click on the **Delete All** button to delete messages displayed in the CiscoWorks Release 1.0.x Log Manager window, these messages are saved in the transaction log and then deleted. If the transaction log contains inadequate space for the messages, the deletion process is aborted.

There are several ways to prevent this problem:

- Increase the size of the transaction log by following the instructions in the *CiscoWorks User Guide*, Software Release 1.0. Answer yes to the prompt "Do you want to use the new space for the transaction log?" A good rule of thumb is that the transaction log should be at least 25 percent the database size.
- Log into isql and issue the command **truncate table** *ciscolog*. Do this only if you want to delete all the log manager records.
- You can set up automatic deletion of old log manager records by using the **nmlogclean** scripts in the *$NMSROOT/contrib* directory. For more information, refer to the file *$NMSROOT/contrib/nmlogclean.README*.

  By automatically cleaning the Log Manager table, you can keep the size of the table at a manageable level and may never have to delete Log Manager records manually. This also helps keep the database from filling up.
- Instead of clicking on the **Delete All** button, select a few messages in the Log Manager window and delete them by clicking on the **Delete** button. Repeat this action until you delete all the messages that you want to delete. [CSCdi08179]

Highlighting Messages in the Log Manager Window

When you select one or more messages in the Log Manager window, the messages are selected, but not highlighted. This occurs infrequently after scrolling the window by clicking on the up and down arrows for the window. If this occurs, refresh the screen with the Utilities Refresh option and try again. [CSCdi08157]

Log Manager Buttons

When you select a message in the Log Manager window, the message might not appear grayed out, which would indicate that the item was selected. Generally, this problem occurs after you use the scroller to scroll up and down and then click on a message.

To correct this problem, use the OpenWindows Refresh option to refresh your screen monitor. All selected messages are grayed out. [CSCdi08157]

OPEN LOOK Toolkit Warning

When running the Log Manager application, the following message might appear repeatedly:

```
OPEN LOOK Toolkit Warning in application "nmlogman":
    Scrollbar - Bad proportion Length resource value, set to default
```

Ignore this message. [CSCdi08145]

Resetting Hit Count in the Log Manager Window

When you click on the **Delete All** button in the Log Manager window, all the entries are deleted, but the Hit Count field is not reset to 0. To reset the Hit Count field to 0, use the OpenWindows Refresh option. [CSCdi08178]

Traps Are Not Associated with Interfaces

SNMP traps that are received by the Log Manager application are displayed in the Log Manager window. Occasionally, the interfaces associated with the traps might not be displayed in the Log Manager window. [CSCdi08827]

Path Tool

The caveats in this section apply to the Path Tool application.

Empty Source/Destination Field Error

On SunOS 4.1.3 systems, if you leave the source or destination field in the Source/Destination form of the Path Tool window blank and click on the **OK** button, the Path Tool does not notify you that the source or destination field is an unknown host. The Path Tool application will fail. [CSCdi12401]

Failure to Remove Trailing or Leading Spaces

Path Tool does not remove trailing or leading spaces in the fields on the Source/Destination form. The following error messages display when this occurs:

```
Path Source is an unknown host
Path Destination is an unknown host
```

Remove the spaces in the host names and retry the application. [CSCdi09978]

Incorrect Display of Icons

When you use the Path Tool application to display the route between two devices on a Token Ring network, the path displays correctly. However, the icons used to indicate the devices might be incorrect. [CSCdi09016]

No Support for CiscoWorks NetView PCA Icon

Path Tool does not support the CiscoWorks NetView Interface Protocol Conversion Application (PCA) icon. If a workstation that runs NetView is using the PCA icon, Path Tool substitutes a router icon instead of a workstation icon. [CSCdi09990]

Use of Interfaces by Path Tool

When the Path Tool application displays a link between two devices, the line speed is obtained from the outbound interface of the first device it displays. For example, if it displays the link between a Sun workstation and a router, the speed of the interface on the Sun workstation is displayed with the link. [CSCdi09016]

Polling Summary

The caveats in this section apply to the Polling Summary application.

Removing an Extra Data Entry in the Polling Summary Window

If a device restarts (for example, a router reboots) while it is being polled, an extra data entry might appear and disappear in the Polling Summary window. Follow these steps to resolve this problem:

Step 1 Quit the Polling Summary application.

Step 2 Select the Tools menu on the SNM console and pull down to **Polling Summary** to restart the application.

The problem should not occur again.

If the problem occurs again follow these steps:

Step 1 In the Device Polling window, select the Poll Rate field and pull down the pick menu to select a poll rate of 0.

Step 2 Select **Activate Changes** from the Options menu to send the changes to the device polling daemon.

Step 3 Select **Quit** from the File menu to quit from Device Polling.

Step 4 Select the Tools menu on the SNM console and pull down to **Device Polling** to restart the application.

The extra data entry will not appear in the Polling Summary window. [CSCdi09606]

Specifying an Attribute and a Key

To specify the attribute and a key for a MIB object, perform the following steps:

Step 1 Select a group you want to poll from the Poll Groups scroll window in the Polling Summary window.

Step 2 In the Data scroll window, select the data report that you want to poll.

Step 3 Select the Options pull-down menu from the SNM console and pull down to **Browse Data**.

The Results Browser window appears.

Step 4 In the Results Browser window, select the appropriate data report and click on it to display the Streams window.

Step 5 In the Streams window, select **Graph**.

Step 6 In the Graph window, select **Choices**.

Step 7 In the Choices window, select one attribute and one key.

If you select the key and do not select an attribute, the following error message might appear at the bottom of the Polling Summary window:

```
localhost: RPC: Unable to receive errno = Connection reset by peer.
```

In addition, a core dump might occur, and you might be unable to access the Health Monitor and nmgraph applications.

To resolve this problem, select Grapher from the Tools menu and then quit from the Grapher window. [CSCdi09252]

Timestamp in Polling Summary

When you set up a polling table in Device Polling and access the Polling Summary window to view the poll group, the Data scroller might display two timestamps instead of one. These extra entries may occur when a device restarts or the Device Polling daemon is restarted. To remove any extra polling intervals, use the *$NMSROOT/contrib/nmpollpurge* utility. For more details on how to use this utility, refer to the *nmpollpurge.README* file located in the same directory. [CSCdi08066]

Security Manager

When you enter the names of users or groups with an underline to represent a space (for example, Charles_Rockwell), the name displays without the underline. However, the underline does exist within the name. [CSCdi07847]

Show Commands

Show Version returns incorrect information when identifying the difference between a CSC3 and CSC4 card. [CSCdi10561]

Sync w/Sybase

The caveats in this section apply to the Sync w/Sybase application.

Host IP Address Identification

If your SNM map contains glyphs whose host names are represented by IP addresses, executing the Sync w/Sybase application does not result in the display of these IP addresses in the devices table. To resolve this problem, make sure that hosts whose host names are represented by IP addresses are listed at the beginning of the */etc/hosts* file. As a result, Sync w/Sybase will resolve the host name for these hosts. [CSCdi09061]

Sybase Negative Values Stored

Due to a conflict in the number of supported bits between the router (32 bits) and the Sybase database (31 bits), when data collected on *ifInOctets* or *ifOutOctets* exceeds the 31-bit limit, the numbers stored in the Sybase database become negative. [CSCdi12372]

Unknown Host Error

When using Sync w/Sybase or adding a device from Device Management, devices whose fully qualified domain names (FQDN) contain more than two periods may fail to be initialized. The following error message displays: [CSCdi11554]

```
ERROR: Unknown host <FQDN> displays.
```

OpenWindows Caveats and Patch

This section describes caveats associated with OpenWindows. It also describes the patches from Sun Microsystems that you can use to resolve some caveats.

Console Message on Libc

CiscoWorks is compiled on a SunOS Version 4.1.3. If you are running an older version of SunOS (prior to release 4.1.2), the following message will appear when you start any of the CiscoWorks applications:

```
ld.so: warning: /usr/lib/libc.so.x.y has older revision than expected 8
```

In the example, `x.y` indicates the version number of the *libc* library that you currently have installed on your system. To deceive the system into thinking that it has Version 1.8 of the library, link your existing library to a version 1.8 library. Become the root user and enter the following at the UNIX prompt (#):

```
# ln -s /usr/lib/libc.so.x.y /usr/lib/libc.so.1.8
# ln -s /usr/lib/libc.sa.x.y /usr/lib/libc.sa.1.8
```

Substitute your current version number of your libc library for *x.y.*

Note, use this workaround with caution. Deceiving the system may also deceive other users and system administrators of this system. [CSCdi11801]

X Error

When using CiscoWorks, you might occasionally encounter an X error. A typical example of an X error follows:

```
X Error of failed request
```

When an X error occurs, the CiscoWorks application disappears. If you see an X error, restart the appropriate CiscoWorks application. If you are unable to access the CiscoWorks application or the X error occurs repeatedly, call Cisco Technical Support.

Using the OpenWindows Patch

The Sun Microsystems OpenWindows Patch (ID 100451-30) corrects a number of OPEN LOOK bugs and eliminates the display of unwanted red color from push buttons and scroll bars. Obtain this patch and install it in the */usr/openwin* directory on the system that is running CiscoWorks.

If you install this patch in a different directory or a directory with a different name (for example, */usr/openwin3*), create a symbolic link between */usr/openwin* and the directory where you installed this patch.

Note When you use the CiscoWorks applications, they attempt to find certain libraries in the */usr/openwin* directory. If the libraries do not exist in the */usr/openwin* directory, the CiscoWorks applications might fail.

SunNet Manager Caveats and Patch

Some SunNet Manager (SNM) bugs might impact how CiscoWorks Release 1.0(3) functions. Table 5 provides the SNM bug numbers and a brief description. For detailed information on these bugs, refer to your SNM manuals or call Sun Technical Support.

Table 5 SNM Bugs That Impact CiscoWorks

SNM Bug ID Number	Description/Error Message
1087679	New Results Grapher might appear when graphing.
1087683	Headers and information columns are misaligned on Requests window.
1088920	The Console does not redraw all glyphs properly under standards X11.
1089605	There is no easy way to figure out why a glyph has changed state.
1089607	There is not a way to find selected devices on the Console map.

Using the SNM Patch

The SNM 2.0 Patch Release (Patch ID 100770-04) corrects a number of SNM bugs that might impact CiscoWorks. These corrected bugs are different from the bugs described in Table 5. For information on how to obtain this patch, contact Sun Microsystems.

This patch also resolves the following bugs associated with CiscoWorks Release 1.0(2):

- The SNM Console displays the message, “Unknown API Error,” when attempting to present information in a graph. It might be caused by lack of system resources and is not reproduced often. [CSCdi8035]

  Use the SNM patch to correct this bug or restart SNM and the CiscoWorks application with which you are trying to produce a graph (either Real-Time Graphs or Health Monitor).

- When the Sync w/Sybase application is run, some icons in the SNM map might move to a different location. The Sun Jumbo Patch resolves this problem. [CSCdi07090]

Maximum Objects in an SNM Map

The maximum number of objects in an SNM map is 1024. You can create more components, but you cannot exceed 1024 objects.

SNM Grapher

When plotting delta values in a graph, some counter variables might wrap around. As a result, incorrect data might be plotted in the delta graph. You might see unexpected peaks in the data when the counter variables are wrapped around. If so, try quitting the application and restarting again.

SunOS Caveats and Patch

Some SunOS bugs might impact how CiscoWorks Release 1.0(3) functions. If you see the following error message, “System error: Unable to verify session ID,” it may be a SunOS problem. Refer to “CiscoWorks Error Messages,” page 19 for a description of a workaround. For information on how to obtain the SunOS patch (ID 100981), contact Sun MicroSystems, Inc.

Resolution of CiscoWorks Release 1.0 Caveats

The following sections include modifications that were fixed in the CiscoWorks Release 1.0(3) or prior to this release.

CiscoWorks Release 1.0(3)Modifications

CiscoWorks Release 1.0(3) contains the following modifications that resolve problems in CiscoWorks Release 1.0(2):

- In the Device Interface window, when a router has multiple interfaces, and the interface line type is changed for one interface, all interface line types change to the same line type.This bug has been fixed by adding an pick menu to select values for line type. [CSCdi09667]
- In Device Polling, if a device restarts and is currently being polled, the device polling no longer stops. [CSCdi11576]
- The Device Polling daemon (nmpolld) no longer stores negative sysUpTime values in the Sybase database while polling. [CSCdi11577]
- In Device Polling, if two tables poll the same variable with different poll rates, each poll group table will now store data at the desired poll rate. [CSCdi10770]
- In Device Polling, if a polling table is destroyed while polling is still occurring on that table, the Log Manager is flooded with messages. Destroying a group is no longer allowed unless the user sets the poll rate to zero and selects **Activate Changes** before selecting the **Destroy Table** option. [CSCdi9571]
- For NetCentral Release 1.3 to CiscoWorks Release 1.0(2) upgrades, the polling table definition in the database now includes the data type for each column. You will no longer see the Log Manager messages on a data-type mismatch. [CSCdi09558]
- Device Polling no longer supplies an extra empty record in the browser after the polling table has been deleted. [CSCdi09605]
- The sample table entry no longer appears twice in the Device Polling window. [CSCdi09511]
- Installation now displays a warning message if OpenWindows 2.0 is running instead of the required OpenWindows Version 3.0. [CSCdi09410]
- CiscoWorks upgrade installation no longer fails. [CSCdi11200]
- For new installations, the *cisco.traps* file is now loaded during the installation. [CSCdi11795]
- During CiscoWorks installation, Polling Summary now checks to ensure that it is being run as setuid root. If it is not run as setuid root, an error message is generated. [CSCdi11512]
- If you are running a non-CiscoWorks Sybase server when you attempt to install CiscoWorks Release 1.0(3), the installation no longer fails. [CSCdi11513]
- The installation script now checks for the proper Sun OS (Version 4.1.2 or later) before proceeding with the installation of CiscoWorks. [CSCdi08687]

- During the CiscoWorks Release 1.0(3) upgrade installation, if the Sybase user is other than "sybase," the installation script no longer fails to create the master database. [CSCdi11797]
- The updated *cisco.schema* and the *cisco.asn1.oid* files have been added to the CiscoWorks Release 1.0(3) software. These files solve the problems introduced in CiscoWorks Release 1.0. [CSCdi10146]
- In Process Manager, you can now shut down nmpolld by clicking on the **Off** button. [CSCdi08914]
- When using Show Commands or the Health Monitor to request Flash group MIB variables, CiscoWorks Release 1.0(3) now verifies the router software version prior to requesting the Flash variables. If you are using router Software Release 8.2, this information request will no longer cause the router to crash. To avoid crashes with other SNMP management packages, upgrade to router Software Release 8.3, 9.0, or 9.1. [CSCdi12128]
- Show Commands no longer exits when using Show Traffic Mix. [CSCdi09658]
- When using Sync w/Sybase or device initialization in Device Management, CiscoWorks no longer ignores the SNM or Device Management community string and substitutes *public* when adding a device to the database. [CSCdi11637]
- The **enlarge_nms** script automatically creates a new file name if the current device name already exists as a file. [CSCdi09839]
- The current **enlarge_nms** script fixes the problem of having to provide a unique filename for the *nms2.dat* file. The script will no longer allow you to choose a default filename if a previous filename exists. [CSCdi08944]
- Enterprise traps have been added to the SNM *snmp.traps* file to define the Cisco-specific traps. [CSCdi09664]

CiscoWorks Release 1.0(2) Modifications

CiscoWorks Release 1.0(2) contains the following modifications that resolve problems in CiscoWorks Release 1.0:

- When you added or deleted a device from the CiscoWorks Release 1.0 database, the devices list in the Configuration Management window did not display the latest database with the added or deleted device. This bug has been fixed. [CSCdi08172]
- If you added new location information to the Locations field in the People window, this information replaced the previous location information in that window and all other primary windows that had the same location information in the Locations field. This bug has been fixed. [CSCdi08320]
- When you selected an option (for example, clicking on the Vendors button) from the Device Management window, entered data in the form, quit from the window and then reopened it, the following error message was generated "`Warning: an instance of Lines exists.`" In addition, you might have been unable to access the same option (for example, the Vendors form) again. This bug has been fixed. [CSCdi08895]
- When you added duplicate entries by mistake in any of the Device Management windows (for example, the People window), CiscoWorks Release 1.0 did not warn you that you were entering the same information twice. For example, you might enter a phone number for a user and then reenter the same phone number in another field within the same window. CiscoWorks Release 1.0 accepted both entries. This bug has been fixed in CiscoWorks Release 1.0(2). [CSCdi7999]

- Interface Type and Interface Speed data you entered in the Interfaces window was stored and displayed in integers only. For example, if you entered Ethernet in the Interface Type field, only the Ethernet value 0 was displayed when you accessed the Interfaces window. If you entered 10 megabits in the Interface Speed field, only the value 10 was stored and displayed when you access the Interfaces window next time. This bug has been fixed. [CSCdi08307]
- In Device Polling, the consumption rate calculation seems too low and misleading. The formula that calculates consumption rate has been modified to include multiple interface tables and routing accounting tables. [CSCdi09662]
- When you set up a polling table in the Device Polling window and selected interfaces from Instances, the SNM Results Browser might have disappeared unexpectedly if you selected the following:
  - One interface from the Instances pick menu in the Device Polling window
  - Device in the Results Browser window for Device Polling
  - Choices window from the Streams window

  This bug has been fixed. [CSCdi08266]
- When you selected the last MIB object in a list displayed from the Enterprise MIB group in the Device Polling window, the selected MIB object might not be grayed out to indicate that it was selected. This does not occur in CiscoWorks Release 1.0(2). [CSCdi08274]
- If you selected an interface in the Instances pick menu, it was marked by an asterisk (*). After you select an interface and clicked the **Apply** button, the asterisk was deleted from the selected interface. This does not occur in CiscoWorks Release 1.0(2). [CSCdi08325]
- If you started the CiscoWorks Polling daemon at the UNIX command line with a **-l** *logfile* or **-L** *logfile* option, and the log file was located in a directory without write permissions, and the Polling daemon exited unexpectedly. This does not occur in CiscoWorks Release 1.0(2). [CSCdi08249]
- Database-related scripts, such as **enlarge_nms**, now check for user *root* before executing. If you are not *root*, the scripts automatically exit. [CSCdi09461]
- When you clicked on a menu button to view a popup window, the menu button might have remained grayed out after you exited the window. For example, when you click on the **File** button in a window and select **Version** to display the Version popup window, the **File** button might remain grayed out after you exit from the Version window. This bug has been fixed. [CSCdi08053]
- In CiscoWorks Release 1.0, a problem occurred with IP address resolution. An excerpt of IP addresses in a sample */etc/host*s table follows:

  ```
  1.1.1.1 tassle.cisco.com
  1.1.1.2 tassle.cisco.com
  1.1.1.3 tassle.cisco.com
  ```

  If Path Tool found *tassle.cisco.com* at IP address 1.1.1.2 and tried to map this address to a name, it failed. It also was unable to access the SNM database and identify the type of glyph that should be associated with the device. Therefore, the glyph for the device displayed as a default generic router. This bug has been fixed. [CSCdi7892]
- When a table in the Polling Summary window was destroyed, the objects and devices associated with the table were not always deleted from the Objects and Devices windows. This does not occur in CiscoWorks Release 1.0(2). [CSCdi08328]

- The Show Commands window would freeze if you appended print-related commands to the Options field in the Print window. In CiscoWorks Release 1.0(2), this field has been modified to enable the entry of print-related commands. [CSCdi06210]
- When you shut down the Sybase dataserver and the CiscoWorks Polling Daemon (nmpolld) in the Process Manager window, the Process Manager window might have continued to show the polling daemon as being turned on. When you restarted the Sybase dataserver, a series of error messages might have appeared. This bug has been fixed. [CSCdi08915]
- When you shut down and restarted the Sybase and nmlogd daemons in the Process Manager window, the nmdevmond and nmeventd daemons could not be shut down. This bug has been fixed. [CSCdi08220]
- The following limitations applied to the *cisco.schema* file supplied with CiscoWorks Release 1.0(2) for use with SNM:
  - Errors in the FDDI MAC and SMT tables caused them to return incorrect and incomplete data.
  - The *lifTablePackets* and *lifTableOctets* groups were too large for SNM; therefore, results were not returned.
  - Many variables in the protocol groups were defined as integer type instead of counter. Therefore, SNM generated warning messages about type mismatch. These warning messages could fill up the *ciscolog* file.
  - Octet variables lacked formatting; therefore, MAC addresses were presented without any colons within each address.
  - Interface groups *if* and *lif* lacked the *ifDescr* variable which indicated the statistics for the interface (instead of just the interface index).

  The *cisco.asn1.oid* file had the following limitations:

  - *snmpFddiMACSMTIndex* was defined as 1.3.6.1.2.1.10.15.2.2.1.2 and should be 1.3.6.1.2.1.10.15.2.2.1.1.
  - *snmpFddiMACIndex* was missing and should be included as 1.3.6.1.2.1.10.15.2.2.1.2.

  If you currently are using CiscoWorks Release 1.0(2), the updated *cisco.schema* and the *cisco.asn1.oid* files can be obtained from the */ftp/CiscoWorks* directory on the FTP server. Use of these updated files resolves the problems described here. If you need assistance in obtaining the updated files, contact Cisco Systems Technical Assistance Center (TAC). [CSCdi10146]

Resolution of NetCentral Release 1.3(1) Caveats

CiscoWorks Release 1.0 contains the following modifications that resolve problems that occurred when using NetCentral Release 1.3(1). The bug numbers listed in this section apply to NetCentral Release 1.3(1).

Flashing Icon

Due to an error in calculating the amount of time required for a device to respond to a poll, NetCentral Release 1.3(1) occasionally assumed that the device was not responding. As a result, the device icon would momentarily turn red and then change back to its previous color. This problem does not occur in CiscoWorks Release 1.0. [CSCdi05444].

Database to Device

If you tried to use the **Database >> Device** button to load a configuration file from the database to a device, the window might have frozen because of database-related problems. This problem does not occur in CiscoWorks Release 1.0. [CSCdi05333].

File to Database

If you chose a device and tried to load a configuration file to the database, the application exited unexpectedly because the device name could not be resolved. This problem has been fixed. The application will not exit, and no error message will appear stating that there is a name resolution problem. [CSCdi05334]

Frequently Asked Questions

This section contains some frequently asked questions about CiscoWorks and SNM issues that impact CiscoWorks. Read this section to see if your questions are addressed before calling Cisco Technical Support.

- When I request a Quick Dump from the device Glyphs menu for *lifTableBytes* or *lifTablePackets*, nothing is ever returned. What is wrong?

  The router defaults to a packetsize for an SNMP reply of 484 bytes. The groups you are requesting are very large and the request can timeout while the router is replying. Try reconfiguring the SNMP reply size with the router command **snmp-server packetsize 4096** or **snmp-server packetsize 8192**.

- What are the files in */tftpboot*?

  Remote configuration functions leave configuration files in */tftpboot*. CiscoWorks was designed to operate as the TFTP server for a network device to net-load the configuration file (and code images for that matter). The loaded configuration file is always left in */tftpboot* for this purpose.

- Why is my configuration file not loading properly?

  The operation of loading a configuration performs an incremental update of the file into the existing configuration file. For example, it is not sufficient to delete a **novell routing** command from the configuration file and then load it. You must explicitly specify **no novell routing**.

  Alternatively, the configuration file might have syntax errors. If you suspect this is the case, log onto the router console and initiate a TFTP session from the router. The errors will be displayed on your console screen. Or, log onto the router before you download the file.

- Why am I not able to load a configuration file to a device?

  If the community string for a device is ReadOnly (RO), you cannot load a configuration file to the device. Use the Devices window in Device Management to enter a ReadWrite (RW) community string for each device.

- If I start polling in Device Monitor, can I use Device Polling to change the poll rate and poller?

  Yes, but you will not change the device monitor poller, only the poller for statistical information. You must use the Device Monitor application to change the polling rate for the Device Monitor daemon (nmdevmond).

- When an SNMP request is made to a router for the *sysName* object, the results show a string of unprintable characters that are added to the host name. Why does this occur?

If the router's host name does not include the domain name (for example, the complete host name is *tassle*, not *tassle.cisco.com*), the SNMP agent on the router attempts to add a domain name to the host name. The domain name appears like a string of unprintable characters.

To solve this problem, configure the router with a domain name.

- Even though I created a map using the SNM Discover tool, the Discover map displays only a few subnets within my own network. Why?

  In SNM, you need to create separate bus connections for each subnet and then discover each one using the Discover tool. SNM will not discover devices in each subnet of the entire network or create a detailed network map.

- The subnets that I wish to discover by using the Discover tool are physically located within our own network and are bridged by routers. Should I create a separate bus segment for each subnet?

  You need to create one segment for all of these subnets. SNM discovers devices by pinging the first IP address in the segment and then continuing upward with the rest of the IP addresses. If you create a segment 131.107.1.0, SNM pings 131.107.1.1 and continues until it reaches 131.107.1.255. You can alter this method of pinging the devices. For detailed information, refer to the SNM **snm_discover** manual page.

- I have a host name resolution problem in DN. What do I do?

  If NIS is running and the device is not specified in the NIS database, make sure you start **ypserv** with the **-d** option. This option tells NIS to go to DNS for more host information. This is according to the **ypserv** manual pages.

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

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