

Doc. No. 78-4295-04

CiscoView 4.1(1) Release Notes

December 17, 1997

This document discusses the CiscoView 4.1(1) release and contains the following information:

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What's New in This Release

- The CiscoView 4.1(1) release supports
 - HP OpenView 4.1, 4.11, 5.0, and 5.01 (HP-UX 10.1 and 10.2; Solaris 2.4 and 2.5.1)
 - NetView for AIX 4.1 and 5.0 (AIX 4.1.5 and 4.2)
 - Solaris Site Manager 2.3/Domain Manager 2.3 (Solaris 2.4, 2.5.1, and 2.6)
 - Enterprise Manager 2.0 (Solaris 2.4, 2.5.1, and 2.6)
- CiscoView 4.1 supports the following upgrade paths:
 - Upgrade from CiscoView 3.1.1, 3.2, and 4.0
 - Coexistence with CiscoWorks 3.2 and 4.0. On AIX, CiscoView coexists with CiscoWorks 3.0.3 and 4.0
 - Upgrade CiscoView within CiscoWorks for Switched Internetworks 1.3 (CWSI 1.3)
 - CiscoView does not support an upgrade from CWSI 1.1 (on HP-UX and AIX). To upgrade CWSI 1.1 to CiscoView, first upgrade CWSI 1.1 to CWSI 1.3 (or higher), and then upgrade CiscoView.
- CiscoView is Year 2000 Compliant.
- CiscoView 4.1 for HP OpenView on Solaris is provided on the same CD-ROM disk as CiscoView 4.1 for Solstice Site Manager, Domain Manager, and Enterprise Manager on Solaris. In the previous release of CiscoView, these products were on separate CD-ROMs.



Caution Before installing CiscoView or CiscoView devices, read the caveats in "Installation Notes and Caveats" on page 11 to understand any issues that might affect your platform.

Table 1 shows supported CiscoView devices by product type.

Table 1 **Supported CiscoView Devices**

Small to Medium Business Products	Mid-Range Enterprise Products ¹	High-End Enterprise Products
Cisco and CiscoPro 761, 762, 765, 766, 771, 772, 775, 776	Catalyst and CiscoPro switch models ² 1200, 1400, 1600, 1601, 1700, 1800, 1900, 2100, 2600, 2800, 2820, 2900, 2926, 3000, 3100, 3200, 3900, 5002, and CPW2200	Catalyst 5000, 5500, and 5505
Cisco or CiscoPro 1003, 1004, and 1005	EtherSwitch Pro16,EPS2015, 1200, 1220, 1400, 1420	Cisco 7000, 7010, 7204, 7206, 7505, 7507, 7513 routers
Cisco and CiscoPro 1601, 1602, 1603, 1604, 1605	EtherSwitches: Pro16 and CPW16	LS1010 ³
Cisco 2501, 2502, 2503, 2504, 2505, 2507, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2520, 2521, 2522, 2523, 2524, and 2525	CiscoPro switch models CPW10_100, CPW500, CPW1200, CPW1220, and CPW1400	
CiscoPro 2051, 2052, 2503, 2504, 2505, 2507, 2509, 2511, 2513, 2514, 2516, 2520, 2521, 2522, 2523, and 2524	Workgroup concentrators 1400	
Cisco and CiscoPro 3600 series (includes 3620 and 3640)	Fasthub 216T	
Cisco and CiscoPro 4000 series ⁴ (includes 4000, 4000-M, 4500, 4500-M, 4700, and 4700-M)		
AS5200 Access Server	AS2509-RJ AS2511-RJ	AS5300 Access Server

Table 1 Supported CiscoView Devices (Continued)

Small to Medium Business Products	Mid-Range Enterprise Products ¹	High-End Enterprise Products
Cisco 1501, 1502, 1503, 1516		
NetBeyond Fasthub 300 and Fasthub 100+ Series		
EPS-500, EPS-1500, EPS2115, CPW-500, CPW-2115, and CPW-16		

- Adapters WA-C301TA, WA-C303TA, WA-C308TA, WA-C306TA, WA-C321T-PC, WA-C321T-UX, WA-C323T-PC, WA-C323T-UX, WA-C326T-PC, WAC326T-UX, WA-C328T-PC, WA-C328T-UX are no longer supported.
- 2. Catalyst 1000 and 1100 are no longer supported.
- 3. LS100 and LS2020 are no longer supported.
- Due to a fix made for the BRI port problem, the Cisco 4000 series devices now support Cisco IOS 10.3 or later.

Note Check CCO periodically for download information on the latest device support and upgrades.

Other supported CiscoView applications are shown in Table 2.

Table 2 Supported CiscoView Applications

Application	Description	os	Cisco IOS	Device Support
Threshold Manager	Monitors the availability and performance of Cisco devices	Solaris 2.4, with recommended patches as of 3/16/95, Solaris 2.5.1, and 2.6 HP-UX 10.01 AIX 4.2	Cisco IOS 11.1 or 11.2 with RMON events and alarms group support	All devices with appropriate Cisco IOS or RMON features

Supported CiscoView Applications (Continued) Table 2

Application	Description	os	Cisco IOS	Device Support
StackMaker	Manages the device membership in a Cisco stack	Solaris 2.4, 2.5.1, and 2.6 HP-UX10.1 and 10.2 AIX 4.1	Cisco IOS 10.0 through 11.2	Cisco and CiscoPro 1600, 3600, 3620, 3640, Catalyst 1900, Catalyst 2820, CPW1220, CPW1420, Fasthub 100+ and Fasthub 300
Flash File System	Provides file copying and editing features for the 7000 Series routers	Solaris 2.4, 2.5.1, and 2.6 HP-UX 10.1 and 10.2 AIX 4.1.5, 4.2	Cisco IOS 10.0 through 11.2	Cisco 7000, 7010, 7204, 7206, 7505, 7507, 7513 routers
Cisco TN3270 Monitor	Monitor/configures TN3270 capability embedded in Cisco devices with IBU feature set.	Solaris 2.4, 2.5.1, and 2.6 HP-UX 10.0 AIX 4.1	Cisco IOS 11.0(13)BT or 11.2 with cip22-14	Cisco 7000 and 7500 (with a CIP card)

The CiscoView devices packages included in this release are shown in Table 3.

CiscoView Device Package Versions Table 3

Device Package	Version	
1000.pkg	4.0(1.2)	
1500.pkg	4.0(1.2)	
1600.pkg	4.0(4.2)	
2500.pkg	4.0(3.1)	
3600.pkg	4.0(6.1)	
4000.pkg	4.0(2.4)	
700.pkg	4.0(1.4)	
7000.pkg	4.0(3.0)	
AS5200.pkg	4.0(3.1)	
AS5300.pkg	4.0(1.1)	
CPW10_100.pkg	4.0(1.4)	
CPW1200.pkg	4.0(1.4)	
CPW1220.pkg	4.0(1.5)	

CiscoView Device Package Versions (Continued) Table 3

Device Package	Version	
CPW1400.pkg	4.0(1.4)	
CPW1420.pkg	4.0(1.5)	
CPW16.pkg	4.0(1.1)	
CPW2115.pkg	4.0(1.1)	
CPW2200.pkg	4.0(1.5)	
CPW316.pkg	4.0(1.4)	
CPW500.pkg	4.0(1.1)	
Cat116.pkg	4.0(1.4)	
Cat1200.pkg	4.0(1.4)	
Cat1600.pkg	4.0(1.2)	
Cat1700.pkg	4.0(1.4)	
Cat1800.pkg	4.0(1.1)	
Cat1900.pkg	4.0(1.6)	
Cat2100.pkg	4.0(1.4)	
Cat216.pkg	4.0(1.1)	
Cat2600.pkg	4.0(1.2)	
Cat2800.pkg	4.0(1.4)	
Cat2820.pkg	4.0(1.5)	
Cat2900.pkg	4.0(1.7)	
Cat3000.pkg	4.0(1.6)	
Cat3900.pkg	4.0(1.1)	
Cat5000.pkg	4.0(1.8)	
Cat5500.pkg	4.0(1.7)	
Cisco1516.pkg	4.0(1.1)	
EPS2015.pkg	4.0(1.1)	
LS1010.pkg ¹	4.0(1.4)	
-		

^{1.} Please upgrade to LS1010 device package version 4.0(1.8). This package can be downloaded from CCO.

Cisco IOS Information

This section contains the latest Cisco IOS (Internetwork Operating System) software version information at the time of printing.

Cisco View supports Cisco IOS software Releases 10.0 through 11.2. Access servers require a minimum of Cisco IOS software Release 10.2. Cisco 3600 devices require Cisco IOS software Release 11.1 or later. Cisco 4000 series devices require Cisco IOS software Release 10.3 or later.

Note CiscoView supports the Qualified Logical Link Control (QLLC) feature in Cisco IOS software Release 10.3(7) through 11.x. CiscoView supports the Synchronous Data Link Control (SDLC) feature in Cisco IOS software Release 10.2 through 11.x. CiscoView supports the CIP card in Cisco IOS software Release 10.2 through 11.x.

New devices and further specifics on Cisco IOS support will be updated as devices become supported. For the online release notes, refer to one of the following:

- Cisco Connection Online (CCO) in the Cisco Connection Documentation section (continually updated)
- Cisco Connection Documentation, Enterprise Series CD

Note The Cisco Connection Documentation, Enterprise Series CD was formerly called UniverCD.

Documentation Information

The documentation for CiscoView includes this release note, a CD-ROM booklet, an overview manual, and online help. The primary documentation for CiscoView is the online help. If you have documentation feedback, please email comments to

bug-doc@cisco.com

The documents shipped with this release include:

- Overview for CiscoView
- CiscoView CD Installation Instructions
- CiscoView Release Notes

Customer documentation can also be found on the Cisco Enterprise Customer Documentation CD or on CCO.

Incremental Installation Information

There are several ways to add (or incrementally install) new devices to CiscoView 4.1. For our direct customers, refer to the section "Cisco Connection Online." For our partner-initiated customers, refer to the section "Partner Initiated Customer Accounts."

You can add new devices to CiscoView from CCO or from the Network Management Support CD. For more information, refer to the "Downloading Device Packages" chapter in Overview for CiscoView. A quick reference version exists in the CiscoView CD Installation Instructions booklet.

For Solaris:

The **pkgadd** command is no longer used for installation. Please use **setup.sh**. See the CiscoView CD Installation Instructions booklet for the most up-to-date version of install.

Partner Initiated Customer Accounts

To get more information about the Partner Initiated Customer Accounts (PICA) program before accessing CCO for device package files, use the following URL:

http://www.cisco.com/acs/info/pica.html

You can also refer to the "Downloading Device Packages" chapter in Overview for CiscoView.

Defects Fixed in This Release

The following problems in CiscoView 4.0(1) are fixed in CiscoView 4.1(1). Table 4 lists only the most serious problems resolved in CiscoView 4.1(1).

Defects Fixed in CiscoView 4.1(1) Table 4

CSCdj03079	Upgrade from cv311 to cv40 fails
CSCdj07135	10BaseT interface fails to Select
CSCdj07195	CiscoView install does not clean up before exit if disk full
CSCdj07710	Unable to configure cat 5000 port
CSCdj09056	CiscoWorks tools missing in CiscoView
CSCdj12055	CiscoView installation removes some of the symbols supported by CW 3.0
CSCdj12074	CiscoView deinstallation does not remove menu entry from NetView
CSCdj12860	SanFran:Etna module reports error messages while getting displayed
CSCdj14942	CiscoView: 5111 and 5011 cards don't have link ports
CSCdj15629	CiscoView engine crashed due to continuously polling large table
CSCdj15790	7000 symbol registered for 7010 router in oid_to_sym
CSCdj17659	Cannot set Token Ring segment -cat1600
CSCdj18660	LS1010:LEDs on IBIS PAM not labeled
CSCdj26323	Fractional interfaces are displayed for one port only
CSCdj28590	ATM interface stats to be computed based on frames, not octets
CSCdj30092	HP-UX: Cannot modify VLAN Number in port config for Catalyst 5000
CSCdj30370	Errors during configuration - ERROR: failed to create /C/CiscoS
CSCdj35453	CW + CWSI 1.3 + CV 4.0 = Failure
CSCdj38584	Cannot configure due to missing fonts
CSCdj41569	CiscoView does not have a feature to deinstall a package
CSCdj57471	Warnings while invoking OVW (Duplicate definitions of Cisco Router)

Troubleshooting

If you cannot open a device in CiscoView 4.1, a message appears indicating that the device is unmanageable for one of the following reasons:

 The Simple Network Management Protocol (SNMP) agent is not running in the device.

You can still ping the device from the management station.

- You have entered an incorrect community string in the File>Open Device window.
- The management station cannot reach or successfully ping the device.
- You have the wrong device package version.

Check your device package and compare the date with the version on CCO. Upgrade your device package to the latest version, if required.

CiscoView Notes and Caveats

This section contains notes and restrictions that apply to the CiscoView 4.1 release.

- Installation Notes and Caveats, page 11
- General Notes and Caveats, page 15

Note For your reference, identification numbers follow the description of the caveat, for example, [CSCdj00001]. If you need to contact Technical Support about one of the following caveats, refer to the identification number to speed the resolution of any questions or situations you might encounter.

Installation Notes and Caveats

Installation notes and caveats for CiscoView follow:

Upgrading CiscoView 3.2.1 to CiscoView 4.1

After upgrading CiscoView 3.2.1 to 4.1, some links may remain in the \$SUNHOME/snm/agents directory, where SUNHOME is Solaris SunNet Manager home directory (normally, /opt/SUNWconn). [CSCdj13160]

You can remove the links that point to invalid files by running the following script:

```
#!/bin/sh
SUNHOME=/opt/SUNWconn
cd $SUNHOME/snm/agents
ls | while file=`line`
do
  FILE=`ls -ld $file | awk '{ print $NF }'`
  if [ ! -f "$FILE" ]; then
     rm "$FILE"
  fi
done
```

CiscoView 4.1 With HP OpenView 5.0/5.01

When a device package is installed, CiscoView updates HP OpenView with the device symbols and bitmaps. If the CiscoView devices are shown as default Network Devices icons in HP OpenView Windows, perform the following:

```
#!/bin/sh
/opt/OV/bin/ovstart
/opt/OV/bin/ovstop netmon
cp /etc/opt/OV/share/conf/C/oid_to_sym /etc/opt/OV/share/conf
rm /etc/opt/OV/share/conf/C/oid_to_sym
ln -s /etc/opt/OV/share/conf/oid_to_sym /etc/opt/OV/share/conf/C/oid_to_sym
/opt/OV/bin/ovtopofix -a
/opt/OV/bin/ovstart netmon
```

CiscoView 4.1 With Enterprise Manager 2.0

Before integrating CiscoView 4.1 with Enterprise Manager 2.0, apply EM patch 104170-04 to the Enterprise Manager installation. Without this patch, the Enterprise Manager Discover utility will not discover Cisco devices. [CSCdj63240]

CiscoView 4.1 Missing Fonts

If CiscoView fails to come up because of missing fonts, you can choose a font by editing the *cview.ini* file, which is in the \$NMSROOT/etc/cview directory. [CSCdj57455]

CiscoView 4.1 for Solaris/HP-UX Installation Warnings

Warnings and error messages that are generated when you incrementally install device packages are logged into the log file devinstall.log in the Cisco View base directory (/opt/CSCOcv or /usr/nms/CVapp). You can use the log file for troubleshooting if a device package installation fails. The file can be cleaned up after a successful device package installation. [CSCdj47801]

CiscoView 4.1 for AIX Installation

If you are upgrading CiscoView 4.0(1) to CiscoView 4.1(1) and /usr/nms or /usr/nms/CVapp is a symbolic link, the link is removed by SMIT (installp utility). To overcome this, remove the link, mount the actual directory to /usr/nms/CVapp, and perform the upgrade. You can also remove the previous version of CiscoView and perform a fresh installation. [CSCdj41509]

CiscoView 4.1 Deinstallation

CiscoView does not remove symbols, bitmaps, fields, and MIBs from HP OpenView/AIX NetView directories during deinstallation.

Deinstallation leaves the file *ciscoview.schema* in the \$SUNHOME/snm/struct directory. You should remove this file after deinstalling CiscoView 4.1. [CSCdj62915]

If CiscoView does not appear in the Tools menu in Solstice Site Manager/Domain Manager, perform the following steps:

- Step 1 Copy the file *ciscoview.schema* from the \$NMSROOT/etc/cview/snm/struct directory to \$SNMHOME/snm/struct, where NMSROOT is the CiscoView home directory (typically /opt/CSCOcv).
- Edit the \$SNMHOME/snm/struct/ciscoview.schema file and Step 2 replace the string "\$NMSROOT" with your CiscoView home directory.

CiscoWorks for Switched Internetworks 1.1 (for Solaris)

When CiscoView 4.1 is installed with CiscoWorks for Switched Internetworks (CWSI) 1.1, you are unable to read VlanDirector help. This error occurs when you select **Help>VLAN** or **Help>Contents**. The workaround is to log in as *root* and enter the following at the command prompt:

cp /cdrom/install/.config/vlanview.hlp /opt/CSCOcv/help [CSCdi84393, CSCdi84412]

CiscoWorks for Switched Internetworks (for AIX and HP-UX)

CiscoView 4.1(1) does not support an upgrade from CWSI 1.1. To upgrade CWSI to CiscoView 4.1(1), first upgrade CWSI 1.1 to CWSI 1.3 (or higher) and then upgrade to CiscoView 4.1(1).

CiscoWorks 2.x and CiscoView Upgrades

CiscoView 4.1(1) is not compatible with CiscoWorks 2.x. There are two solutions. You can upgrade to CiscoWorks 3.2.1 or later or remove it.

Incremental Installation

Even when one package is being installed incrementally, CiscoView updates HP OpenView/AIX NetView with symbols, bitmaps, and fields from all installed device packages. [CSCdj41573]

Errors Integrating MIBs into AIX NetView

Some errors will be reported during the installation or incremental installation of device packages when MIBs are loaded into AIX NetView. For more information and workaround suggestions, refer to the following URLs:

http://www.cisco.com/public/mibs/app_notes/mib-compilers

or

ftp://ftp.cisco.com/pub/mibs/app_notes/mib-compilers

Solaris/SNM

Update the path variable to include the path for the snm binaries and also set the SNMHOME environment variable.

C Shell:

```
setenv SNMHOME /opt/SUNWconn/snm
set path=($path /opt/SUNWconn/snm/bin)
```

Bourne Shell:

```
SNMHOME=/opt/SUNWconn/snm
export SNMHOME
PATH=$PATH:/opt/SUNWconn/snm/bin
export PATH
```

The /opt/SUNWconn/snm directory is the default directory for SNM in Solaris. If SNM is installed elsewhere, please change the SNMHOME and path variables accordingly.

Solaris and SNM Patch Requirement

The SNM Discover utility will not work if *all* the device packages are installed for CiscoView 4.1. This bug requires SNM patches for SNM 2.3. You can download the patches can be downloaded from Sun Microsystem's official patch site [CSCdj01623]:

ftp://zippy.telcom.arizona.edu/pub/snm/patches/Solaris2.x/SNM2.3/104018-02.tar.Z

Solaris 2.5.1 and HP OpenView 4.1 Patch Requirement

The CiscoView installation on Solaris might fail if you do not install a Hewlett-Packard patch. This patch is required to install NNM 4.1 on Solaris 2.5.1 and must be installed before installing NNM 4.1. This patch is required to run a license server on Solaris 2.5.1. If your license server is on a different machine, this patch is not necessary.

Both patches consist of a tar file and a text file describing the patch. To obtain a patch

Step 1 Enter the following URL:

ftp://ovweb.external.hp.com/pub/cpe/patches/nnm/4.1x

Step 2 Click on the appropriate links to get to your software patch.

Patch numbers are not available because HP consolidates the patches periodically to contain all previous fixes. Select the one related to Network Node Manager 4.1x by viewing the patch text files. If you have difficulty installing the patch, contact HP Service and Support.

Using pkgadd

The CiscoView installation uses the Solaris pkgadd utility. When pkgadd finishes installing CiscoView, the screen shows that the installation was successful but does not quit. Type **Q** to exit the pkgadd utility.

General Notes and Caveats

The general notes and caveats follow. They are divided into six sections:

- Notes and Caveats for Enterprise Network Management Products (including CiscoView and other products), page 16
- Notes and Caveats for Workgroup Products, page 19
- Notes and Caveats for Access Products, page 28
- Notes and Caveats for High-End Business Products (ATM switches and the Cisco 7000, 7200, and 7500 series), page 33
- Notes and Caveats for Online Help, page 37

Notes and Caveats for Enterprise Network Management Products

Config/Monitor for Multiple Ports

For some devices, config/monitor does not work for multiple ports. [CSCdj65066]

CiscoView and Internationalization

CiscoView does not support internationalization.

CiscoView Times Out

In high traffic situations, you might experience timeouts. To increase the timeout period, select **Options>Properties** from the CiscoView menu and change the value for the Timeout field.

You should not reduce the physical view polling interval below (retries*timeout), especially if you experience timeouts; this can exhaust resources on Windows and result in a general error.

Dragging Ports

For this release, use the middle mouse button to drag on UNIX. Only certain devices (such as the CAT1200, CAT1600, CAT5000, CPW16) have defined their ports for dragging across devices.

HP OpenView

If a switch is configured as two or more domains, HP OpenView discovery might not work properly and might discover only one of the domains. If this occurs, use CiscoView to manage the domain directly rather than launching the switch from the map.

By default, SNMP standard traps are logged in the *trapd.log* file in HP OpenView 4.1. To view the standard traps in the event window, use the Option>Event Configuration menu to change the standard trap configuration. [CSCdi91796]

Traps defined in the MIB BRIDGE-MIB.my are not loaded into HP OpenView. Because of this, HP OpenView does not recognize the traps newRoot and topologyChange. [CSCdj62552]

Sometimes, because of font scaling problems, HP OpenView grapher cannot be invoked. Refer to the description provided in the following app-defaults file for HP OpenView grapher applications for more information.

/opt/OV/newconfig/OVNNM-RUN/app-defaults/C/XNm* [CSCdi44163]

CiscoView Engine (for AIX only)

While some devices are being invoked, a number of MIB variables are queried and the NetView grapher is invoked. Some of the queries might time out often (three or more occurrences). If this happens, CiscoView does not exit gracefully and produces a core dump. [CSCdj04380]

SunNet Manager/Enterprise Manager Issues

When you select **Monitor>Port** and invoke the Grapher, the Grapher does not display the data. Currently working with Sun Microsystems to resolve this problem.[CSCdj01623]

When you use CiscoView 4.1 with Enterprise Manager 2.0, sometimes the em discover application terminates abnormally. [CSCdj56566]

Open Look

- Popup menus might be out of focus. To correct the focus, move your mouse pointer out of the window and back into the menu.
- Popup menus occasionally lose events in olwm. The menus always appear, but you might not be able to select anything. If this occurs, move your mouse pointer out and back into the menu to start tracking the events. [CSCdi50535]

Popup Menu Titles

Popup menu titles are raised; users might mistake them for menu items. [CSCdi53475]

Printing to LaserJet III

CiscoView might fail to print to a LaserJet III printer, especially in the "LaserJet" format, because of this printer's limited memory.

Running CiscoView 4.1 with Little Swap Space

If the server or display workstation is running out of swap space, you see a message such as "X error: Couldn't allocate color cell," and CiscoView core dumps. If you are running other applications, you should check your swap space occasionally.

To check swap space on a Sun Solaris 2.x workstation, enter the following:

```
hostname% swap -1
```

If your system is running out of swap space (for example, only 200 KB of swap space remains), quit some of the other applications you are running or increase your swap space, if possible. [CSCdi37063]

StackMaker

Internal Debugging—When the StackMaker Debug option is set to **On**, debug messages print to the StackMaker Debug Log file. The default is Off. The StackMaker Debug Log file stores messages that are useful in troubleshooting problems. This log file is /tmp/.smDebugLog.

Internal Debugging—When the StackMaker Debug SNMP option is set to On, SNMP debug messages print to the StackMaker Debug Log file on the UNIX platform. The messages show the SNMP packets that have been sent and received. The default is **Off**. The StackMaker Debug Log file stores messages that are useful in troubleshooting problems. This log file is /tmp/.smDebugLog.

Log File from Apply Operations—The StackMaker log file stores the results of a saved stack configuration (Actions>Apply Stack Configuration). The log file is /tmp/stackmkr/sm.log. When the log file exceeds 1 MB, it automatically resets to 0 bytes.

When StackMaker is invoked on Catalyst 1900 devices, some debug output is printed to the console. You can ignore this output.

Threshold Manager

Some agents, most notably the Catalyst switches, impose a limit on the number of alarm and event entries that can be created. Applying a large number of thresholds to these devices will likely fail. In this case, some alarm entries might be successfully created but their associated event entries are not. These failed creations are marked as *Failed* in the Current Threshold Settings pane. If you attempt to delete those settings, Threshold Manager reports that the deletion failed (because it cannot delete nonexistent event entries.) In this case, you can ignore the error message and can verify that the deletion occurred by retrieving the threshold settings after the deletion.

New policies are always added to the display list. To view the new policies, exit the Configure Thresholds window, then reopen it. [CSCdi62741]

Policy filenames do not match if the IP address is used. To correct this, use the host name instead of the IP address when saving host-specific policies. [CSCdi62739]

Duplicate global/device/host policies may be allowed, depending on which window is used. When creating a custom policy, you can save it only once, either as global, device, or host. But after saving the policy, you can use the Modify Threshold Policy window to modify the saved custom policy and save it as all three. [CSCdi68329]

Notes and Caveats for Workgroup Products

Catalyst 1200

When you use the Switch Zoom menu (if TrafficDirector is installed) from CiscoView to view multiple switch ports, the default configuration for the Catalyst 1200 is Statistics, Short-Term history, Long-Term history, and Host group. To see the Short-Term or Long-Term history from Traffic Monitor, use the Domain Manager to configure the Short-Term and Long-Term groups manually or use Segment Zoom to view the port first.

When using the Segment Zoom menu from CiscoView to view the port segment, the default configuration for the Catalyst 1200 is the Statistics, Short-Term history, Long-Term history and Host group. For the Catalyst 5000 it is Statistics, Short-Term history, and Long-Term history.

If you get the "Error: Entry or Group not present in Agent" message when invoking Segment Zoom, Switch Zoom, or Data Capture, the write community string might not be matched with the device. If the community string is matched and the problem still occurs, use the CiscoView Configure Device menu to see whether the RMON capability is enabled.

If you launch Switch/Port Zoom from CiscoView and then delete one of the RMON Agents using TrafficDirector, you must relaunch CiscoView before launching Switch/Port Zoom again.

If you see "IP address is not set in sysIpAddr Mib variable," it is because the Catalyst 1200 SNMP agent does not store the correct IP address in the sysIpAddr MIB variable. You must use CiscoView to correct it. Select **Configure**>**Device**, enter the correct IP address in the corresponding field, and click **Modify**.

Traffic Director 3.3 cannot be launched for interfaces with if Index values greater than 1000.

Catalyst 1800

The device agent does not update the IP address table of MIB-II properly and does not reflect the correct IP address information of all the device interfaces. You cannot view the correct IP address information of the device by selecting **Device>Configure>IP Address Table.**

You cannot create new static entries for IP Route Table and ARP Table through CiscoView.

In the interface configuration (**Port>Config>Interface**), modifying the IP parameters always displays an error message, but the modification is successful.

You cannot change the bridge type of the FDDI port to sr-only or srt.

You cannot change the bridge type of the Token Ring port to srtb or tb-only.

The system time configuration is not included as part of device configuration.

Catalyst 1900, Catalyst 2100, Catalyst 2800, EtherSwitch 1200, and EtherSwitch 1400 Series Devices

CPW1200, CPW1220, CPW1400, CPW1420, Catalyst 1900, Catalyst 2100, Catalyst 2800, and Catalyst 2820—The General Bridge window shows the bridge information for VLAN1 only. Bridge information for other VLANs is not available.

CPW1220, CPW1420, Catalyst 1900, and Catalyst 2820—In the CDP Configuration Dialog, changing the transmission time of one port changes the transmission time of all ports. This is a feature of the implementation of the corresponding MIB objects in the device firmware. [CSCdi83959]

CPW1200, CPW1220, CPW1400, CPW1420, Catalyst 1900, Catalyst 2100, Catalyst 2800, and Catalyst 2820—The Spanning Tree Protocol Window for switched ports is available for ports in VLAN1 only. This window does not show valid information for ports not in VLAN1.

If CiscoView for Cat1900 is invoked, the following message is displayed on the console. You can ignore the message. [CSCdj62767]

```
Sess0 21 noSuchName 1 {{1.3.6.1.4.1.437.1.1.3.2.19.0 noSuchObject N/A}}
```

CPW 1420 and Catalyst 2820

On the front panel display of the device, the Connect and Disabled LEDs on FDDI modules do not reflect the appropriate status.

Although a Monitor menu option is available for both FDDI and repeater ports, this feature is not supported on these modules. [CSCdj57452]

The **Configure>Module** option is supported only for one module type, even though it can be invoked for multiple module types.

There is a dependency between the CPW1420 and Cat2820. The CPW1420 device package will not run unless the Cat2820 package is installed. [CSCdj64496].

Catalyst 2600

The Catalyst 2600 device package contains two versions of the enterprise MIBs for the Catalyst 2600 switch:

- C2600_cisco.my—This MIB file is installed to support devices with image versions prior to 2.2.1.
- C2600.my This MIB file is installed to support devices with image version 2.2.1 or later.

If you are using a MIB browser tool, you will see the MIB variables defined in each of the above files, under different branches, at the same time, although any particular Catalyst 2600 switch will respond to queries on only one of the MIBs, based upon the release of software in the device. Cisco recommends that you upgrade your Catalyst 2600 switches to version 2.2.1 or later.

CPW 2200 and Catalyst 2900

Under a heavy load condition, SNMP responses are slow. You might see an "error, no response since..." message in the CiscoView status window. Select **Options**>**Properties** and increase the Polling Frequency and Timeout values. [CSCdi57962]

If the number of the embedded RMON agent is over 50, you cannot create any new embedded RMON agent group for the new port. Use the Domain Manager to uninstall the agent group from the unused port to free the memory resource.

If you launch Switch/Port Zoom (if TrafficDirector is installed) from CiscoView and then delete one of the RMON Agents using TrafficDirector, you must relaunch CiscoView before launching Switch/Port Zoom again.

Traffic Director 3.3 cannot be launched for interfaces with if Index values greater than 1000.

When multiple ports are selected, the Port>Configure window does not display the Broadcast Suppression category. This category is available only for single port selection.

When you enable port security administration on a port, there may be timeouts. If this happens, increase the SNMP timeout value to approximately 10 seconds.

The WS-X2901 module shows the speed LED lit only when the speed is configured as 100 Mbps and the port is connected.

The Port Utilization tool has been removed from the Tools menu and is now available only on a per module basis on the Config>Module menu.

Catalyst 3000 Series

When you reinstall or perform a cvinstall -f of CiscoView 4.1 and integrate with HP OpenView 4.11, you will see an error relating to the $C3_2_0.my$ MIB file display. This error is because of duplicate definitions in the Catalyst 3000 MIB files. To correct this problem, download a new copy of the Catalyst 3000 package from the CCO web site. This package resolves CSCdj03981.

When you access a stack with six or more devices, there might be some significant performance problems. You can improve performance by increasing the SNMP timeout settings.

The Catalyst 3000 software does not support RMON on either a stack or an ATM port.

You might notice timeout messages and SNMP Set Failed messages when using the EtherChannel Configuration tool. If this happens, increase the SNMP timeout values for better performance.

If you are running version 2.0(1) of the Catalyst 3000 software, you will not be able to drag a port to a VLAN that does not already have ports assigned to it. You can fix this problem by upgrading to a later release of Catalyst 3000 software.

If you are running version 2.0(1) of the Catalyst 3000 software, changes to Full/Half Duplex settings will not always be reported correctly. You can fix this problem by upgrading to a later release of Catalyst 3000 software.

If you are running version 2.0(1) of the Catalyst 3000 software, the SAID value entered when creating a new VLAN will be redisplayed as a different value. However, the VLAN will have been created with the SAID value you specified. You can fix this problem by upgrading to a later release of Catalyst 3000 software.

The Domain Configuration and EtherChannel Configuration tools are not supported on Windows 95.

Because of restrictions in the Catalyst 3000 software, the WS-X3006B is displayed in CiscoView as a WS-X3006A.

If you launch Switch/Port Zoom (if TrafficDirector is installed) from CiscoView and then delete one of the RMON Agents using TrafficDirector, you must relaunch CiscoView before attempting to launch Switch/Port Zoom again.

Catalyst 3900

CiscoView does not show the rear view of the Catalyst 3900 box.

When you attempt to drag port(s) to drop into one of the CRFs in the VLAN table, CiscoView might exit with an error. To work around this problem, first select the ports of interest, then bring the focus back to the VLAN Table window, and then drag the selected port(s) and drop them into the desired CRF.

The **Configure...** option under the Bridge Configuration category allows you to view a current configuration only. It reports an error when you attempt to configure new values for any parameter.

The Threshold Manager and Traffic Director applications have not been fully tested with the Catalyst 3900.

Catalyst 5000 Series

While integrating some device packages with HP OpenView for HP-UX/Solaris or AIX NetView, some Catalyst 5000 device-specific traps are not integrated into HP OpenView. [CSCdj63184]

After an online insertion/removal (OIR) event (also called a "hot-swap"), CiscoView does not show the correct module or port status. The only way to display the correct status is to reopen the device or relaunch CiscoView. [CSCdj39860]

ATM, FDDI, and CDDI do not support Broadcast Suppression.

In machines that do not have a /tftpboot directory (such as a PC), an error is displayed whenever the Upload/Download feature is invoked on a Catalyst 5000 module.

Do not use the Grapher in the CiscoView Monitor 10BaseT Group Switching Ethernet window. Use the Monitor or Traffic Director tools (if Traffic Director is installed) to see graphical views of the selected repeater ports.

When you use the Switch Zoom menu (if TrafficDirector is installed) from CiscoView to view multiple switch ports, the default configuration for the Catalyst 5000 is to configure Statistics only. To see the Short-Term or Long-Term history from Traffic Monitor, use the Domain Manager to configure the Short-Term and Long-Term groups manually or use Segment Zoom to view the port first.

When you use the Segment Zoom menu from CiscoView to view the port segment, the default configuration for the Catalyst 5000 is Statistics, Short-Term history, and Long-Term history.

If you see the message "Error: Entry or Group not present in Agent" when invoking Segment Zoom, Switch Zoom, or Data Capture, the write community string may not be matched with the device. If the community string is matched and the problem still occurs, use the CiscoView Configure Device menu to see whether the RMON capability is enabled.

When you select the repeater module port on a Catalyst 5000, it always uses the first port of the selected segment to create the RMON agent group.

If all Catalyst 5500 slots are populated with modules and you experience timeouts, increase the SNMP timeout value to 15 seconds.

The WS-X5213 and WS-X5213A modules show the 100 Mbps speed LED lit only if the speed is configured at 100 Mbps and the port is connected.

Opening the FDDI/Ethernet Bridge category under Configure>Device can display an "unknown error." This is because of a problem with the device software.

If a general error (genErr) is displayed when you change vlanPortIslStatus, the selected port might not support ISL.

The values of ifAdminStatus and ifLinkUpDownEnable cannot be changed on an ATM port.

Port duplex settings cannot be changed on ATM and FDDI ports.

The value portSpanTreeFastStart cannot be changed on ATM and FDDI ports.

Configuring ports to unsupported speeds returns a general error (genErr). This is because of a problem in the device software.

The following list details the availability of Broadcast Suppression in terms of pps (packets per second) or % (percentage) for modules on Catalyst 5000 series switches. A plus sign (+) means available, while a minus sign (-) means

not. Modules not on this list do not have Broadcast Suppression. The Broadcast Suppression feature is not available on ATM and FDDI. [CSCdi90909]

Module	Packets per Second (pps)	Percentage	Note
	Second (pps)	reiceillage	Note
WS-X5013	+	+	
WS-X5011	+	-	
WS-X5010	+	+	% available with newer hardware only
WS-X5113	+	-	
WS-X5111	+	-	
WS-X5213	+	-	
WS-X5020	+	-	
WS-X5114	+	-	
WS-X5223	+	+	
WS-X5224	+	+	
WS-X5213A	+	-	

Fasthub 100+ and 300 Series

For devices that have an expansion module, the port numbering is not consistent with the management console. Ports 17 through 32 are listed in CiscoView as Repeater 2: Port 1 through 16. [CSCdi77159]

After the first reset of the device, the user must set the *rptrReset* MIB variable to noReset (default value) before the next reset can be performed. This is because of a problem on the device software and will be fixed in a later release. [CSCdi77452]

CDP and CGMP Protocols Unsupported

The CPW 1200/1400 and Cat 2100/2800 devices do not support the CDP and CGMP protocols. The CiscoView dialogs for these will return errors.

Community String Mismatching

When the user enters values for the read-only, write-only, and read-writeId with the Command Line Interface (CLI) commands, these values must match. A mismatch results in noSuchName or timeout errors. To avoid these error conditions, use identical community strings in CiscoView and corresponding agents.

Duplicate Categories

When multiple ports of different types are selected, Port>Config may show duplicate categories.

Switch Firmware

The following firmware versions must be used in the switches:

- Catalyst 2100 and 2800—v. 3.63 or higher
- EtherSwitch 1200 and 2800—v. 3.63 or higher
- EtherSwitch 10/100—v. 1.38 or higher
- Catalyst 1700—v. 1.38 or higher
- Grand Junction FastSwitch 10/100—v. 1.37 or higher
- Grand Junction FastSwitch 2100 and 2800—v. 3.62 or higher

Note The Grand Junction FastSwitch 2100 and 2800 are managed the same as the Catalyst 2100 and 2800, respectively.

Switches

If you configure EtherChannel or Virtual Domains in Kalpana switch models EPS2015RS, EPS2115RSM, and Pro16 while running version 9.0 firmware with STP active, the map icons become red, and you receive the following error message:

No response from the device

After restarting the system, deactivate STP before you reconfigure. This problem is fixed in version 9.1 of the device firmware. [CSCdi41317]

TrafficDirector

When launching TrafficDirector 4.1.3 from CiscoView make sure that /usr/lib is included at the start of the LD_LIBRARY_PATH environment variable. A segmentation fault may occur if it is not included.

If you launch Switch/Port Zoom from CiscoView and then delete one of the RMON Agents using TrafficDirector, you must relaunch CiscoView before attempting to launch Switch/Port Zoom again.

TrafficDirector 3.3 cannot be launched for interfaces with ifIndex values greater than 1000.

Notes and Caveats for Access Products

Card Support for Cisco AS5300 Universal Access Servers

The following network processor modules are supported:

- as5300-4ct1
- as5300-4ce1
- pm-as5200-12m
- pm-dtd-6m

Card Support for Cisco AS5200 Universal Access Servers

The following network processor modules are supported:

- as5200-carrier(290)
- as5200-2ctl(291)
- as5200-2ce1(292)
- pm-as5200-12m(310)
- pm-as5200-12m-56k(311)
- pm-as5200-12m-v110(312)

DS1 Line Channelized Info Not Displayed

A Cisco IOS defect causes CiscoView to not display the DS1 Line Channelized info when a T1/E1 port is configured for cas-group. This is applicable when the option is selected from the global menu item Connection Info or if it is selected through the Line_ds1 config dialog box. [CSCdj44707]

Status of T1/E1 Channel_ports for Channel-group

In the channel modem view, CiscoView does not properly reflect the status of the T1/E1 channel ports (timeslots) that have been configured for channel-group. This is a Cisco IOS software problem.

Card Support for Cisco 1600 Series Routers

The following WAN interface cards are supported:

- wic-csu-dsu-4
- wic-serial-1t
- wic-s-t-2186
- wic-s-t-2186-leased
- wic-u-2091

Card Support for 3600 Series Routers

The following WAN interface cards are supported:

- wic-1t
- wic-1dsu-56k4
- wic-1b-s/t
- wic-1b-s/t-ll
- wic-1b-u

The following network modules are supported:

- nm-4t
- nm-compr

- nm-1e2w
- nm-2e2w
- nm-1e1r2w
- nm-1ct1-csu
- nm-2ct1-csu
- nm-1ct1
- nm-2ct1
- nm-1ce1b
- nm-2ce1b
- nm-1ce1u
- nm-2ce1u
- nm-4b-u
- nm-4b-s/t
- nm-8b-u
- nm-8b-s/t
- nm-4a/s
- nm-8a/s
- nm-4e
- nm-1e
- nm-4e
- nm-16a
- nm-32a
- nm-1fe-tx
- nm-1fe-fx
- nm-2v
- nm-1v
- vic-2em

- vic-2fxs
- vic-2fxo
- nm-6dm
- nm-12dm
- nm-18dm
- nm-24dm
- nm-30dm

BRI Interface Information is not Correct

For the BRI interface in 8-port BRI cards or 4-port BRI card, the configure and monitor information shown in CiscoView is not correct. The information does not correspond to the correct BRI interface. This problem is present only if you use Cisco IOS Release 11.2 and above. This is a Cisco IOS software defect, CSCdj50307.

Hot Swap Does Not Work for Stacked Cisco 3600

The hot swap feature is not available for stacked Cisco 3600 series routers.

Whenever the async/sync port configuration is changed, you must reopen the stack for CiscoView to update the async/sync port status. However, the hot swap feature for the async/sync ports is supported for individual Cisco 3600 series routers.

Also, whenever the async/sync port configuration is changed in a 16/32 port asynchronous network module, you must reopen the stack to obtain the latest state. However, the hot swap feature for the async/sync ports is supported for individual Cisco 3600 series routers.

Logical View and Channel Modem View Not Available in Stack View

The Logical view and Channel Modem Mapping view are not available for stacked Cisco 3600 series routers. This support is scheduled for a future release. However, for individual Cisco 3600 routers, Logical View is available if a digital modem carrier card is present, and Channel Modem View is available if a CT1/CE1 card is present.

Fix for CSCdi69480 Invalid for Cisco IOS Versions Below 11.1(7)

The fix for defect CSCdi69480 (PRI/E1 interfaces missing in cardIfIndex table) is integrated into Cisco IOS Release 011.001(007) and above. The Cisco 3600 4.0(6.1) device package incorporates the fix and may not work properly with Cisco 3600 series routers running Cisco IOS versions below 011.001(007).

Card Support for Cisco 4000, 4500, and 4700 Series

The following network processor modules (npm) are supported:

- npm-4000-fddi-sas
- npm-4000-fddi-das
- npm-4000-1e
- npm-4000-1r
- npm-4000-2s
- npm-4000-2e1
- npm-4000-2e
- npm-4000-2r1
- npm-4000-2r
- npm-4000-4t
- npm-4000-2t16s (for 4500 and 4700 routers only)
- npm-4000-4b
- npm-4000-8b
- npm-4000-ct1
- npm-4000-ce1
- npm-4000-1a
- npm-4000-6e
- npm-4000-1fe
- npm-4000-1hssi (for 4500 and 4700 routers only)

FDDI Port Status Functionality

For 4000 series routers running Cisco IOS Release 10.2 or earlier, the displayed status color is determined from the port's administrative status (ifAdminStatus) and operational status (ifOperStatus) values. This status color will be the same on each connector. For devices running Cisco IOS 10.3 through 11.x, the displayed status color is determined from the Port Connect State (fddimibPORTConnectState) for each connector. The possible values for this status and the corresponding status colors follow: [CSCdi28566]

Status	Status Color
disabled	brown
standby	brown
connecting	blue
active	green

Notes and Caveats for High-End Business Products

Card Support for Cisco 7000 Series

The following interface processors and port adaptors are supported:

- cpu-7200-npe200
- vip2-50
- ct3ip Phase II
- feip2 tx/fx
- sa-encryption
- pa-oc3sm-mux-cbrt1
- pa-oc3sm-mux-cbr120e1
- pa-oc3sm-mux-cbr75e1
- pa-oc3mm-mux-cbrt1
- pa-oc3mm-mux-cbr120e1
- pa-oc3mm-mux-cbr75e1
- pa-ds3-mux-cbrt1

- pa-e3-mux-cbr120e1
- pa-jt2
- pa-4me1-bal
- pa-4me1-unbal
- pa-1e3
- pa-2e3
- pa-1t3
- pa-14e-switch

Can't Read DD(port-23.port-26.pos) for Fast Ethernet PA

When you try to open a horizontal-chassis device such as the Cisco 7204, 7206, or 7505 with a Fast Ethernet port adapter installed, the error message "can't read 'DD(port-23.port-26.pos)": no such element in array" is displayed. To fix this, upgrade to the latest Cisco 7000 CiscoView package at http://www.cisco.com/cgi-bin/tablebuild.pl/cview40. [CSCdj16247]

CT3IP Interface Processor Card

No MIB object is associated with the test port on a CT3IP card. [CSCdj18638]

Displayed ATM Connector Type

CiscoView 4.1 always displays the multimode fiber SC type of ATM connector on AIPs, even when the media interface is of another type. [CSCdi53420]

DS3 Config-Monitor Items Missing from Dialog Boxes

For pa-1e3 and pa-1t3 cards, DS3 Configuration does not appear in the config rport dialog box. Also, DS3 Current Statistics and DS3 Total Statistics do not appear in the monitor rport dialog box. [CSCdj60001]

FDDI Port Status Functionality

For 7000/7500 series routers running Cisco IOS Release 10.2 or earlier, the displayed status color is determined from the port's administrative status (ifAdminStatus) and operational status (ifOperStatus) values. This status color will be the same on each connector. For devices running Cisco IOS 10.3 through 11.x, the displayed status color is determined from the Port Connect State (fddimibPORTConnectState) for each connector. The possible values for this status and the corresponding status colors follow: [CSCdi28566]

Status	Status Color
disabled	brown
standby	brown
connecting	blue
active	green

FEIP2 Interface Processors

Cisco View displays an FEIP2-FX interface processor as an FEIP2-TX for all Cisco IOS versions before Release 11.1(11)CA. [CSCdj15831]

FEIP-FX Card Not Displayed

The feip-fx card does not appear in CiscoView. When the Cisco 7000 series device comes up, you might see the error message "no such element in array." [CSCdj61077]

LEDs Not Shown for FDDI Interface

For devices running Cisco IOS Release 10.2, a FIP card's PhyA and PhyB LEDs do not appear lit in CiscoView. [CSCdj23023]

Flash File System

When performing the Squeeze operation on a Flash card, the error message "Failed to Squeeze. Try increasing the timeout property under Options in the Main window" might be observed even though the operation succeeds. [CSCdj03172]

High System Availability (HSA)

On 7513 and 7507 chassis, when the master RSP (Route Switch Processor) is in use, the console port changes color on the CiscoView 4.1 display. However, when a slave RSP is installed, its console port mirrors that of the master, regardless of whether it is in use. [CSCdi49049]

Invalid Port Level FSIP Config Category

An invalid port level FSIP Config category will appear for devices with MIP cards running Cisco IOS software earlier than Release 11.1. The dialog box shows N/A for variables displayed in it, as these do not apply. [CSCdj23970]

Misidentified FastSerial Port Adapter

CiscoView might display a 4-port FastSerial port adapter (pa-4t) as a HSSI adapter (pa-ahlt). [CSCdj17487, CSCdj17516]

Wrong Polling Results After Hot Swap

After an online insertion/removal (OIR) event (also called a "hot-swap"), CiscoView does not show the correct module or port status. The only way to display the correct status is to reopen the device or relaunch CiscoView. [CSCdj39860]

Unknown Enumeration

In the DS1 Configuration dialog, dsx1LoopbackConfig is reported with an unknown enumeration. [CSCdj17466]

LightStream1010

Ensure you are using the latest LS1010 device package (version 1.8). You can download this package from CCO. [CSCdj59465]

To configure an LECS address for LS1010 from CiscoView, ServiceId needs to be the following: 10.1.3.6.1.4.1.353.1.5.1. < Index >, where Index is the row differentiator for configuring multiple LECS addresses. Index is an integer.

From CiscoView for LS1010, the ATM Traffic Descriptor table does not show any rows. This is an agent bug. [CSCdj00685]

Power Supply Display

By default, CiscoView 3.1(1) displays two power supplies for a Cisco 7000 router running Cisco IOS Release 10.2 and earlier. With Cisco IOS Release 10.3 and later, power supplies are displayed based on ciscoEnvMonSupplyState values.

Notes and Caveats for Online Help

Find Tab

Because of the way a master CiscoView contents file is used by the software when multiple CiscoView device package help files are present, the list of files to include when setting up a customized find operation contains multiple items, called CiscoView. [CSCdj62089]

Online Help Oddities

There is a problem with the online help viewer, HyperHelp, intermittently displaying the Help topic window when opening Help>Contents.

When you first open a help topic using **Help>Contents** and click the **Back** button, the HyperHelp viewer might display a blank window. This is a HyperHelp bug. [CSCdi04758]

Cisco Connection Online

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- WWW: http://www.cisco.com
- WWW: http://www-europe.cisco.com
- WWW: http://www-china.cisco.com
- Telnet: cco.cisco.com
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and connection rates up to 28.8 kbps.

For a copy of CCO's Frequently Asked Questions (FAQ), contact cco-help@cisco.com. For additional information, contact cco-team@cisco.com.

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