

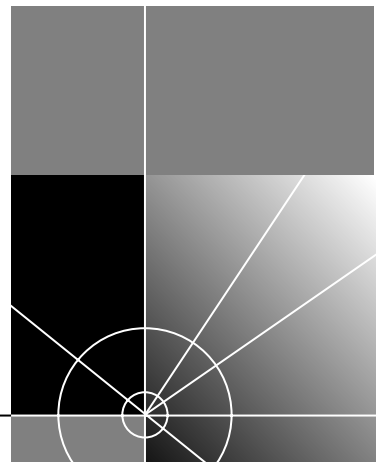


CoreBuilder™ 3500 Release Notes

Base Plus Extended System Software
Release 1.1.1
May 19, 1998

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COREBUILDER 3500 BASE PLUS EXTENDED SYSTEM SOFTWARE

Overview

These release notes describe Release 1.1.1 of the CoreBuilder™ 3500 Base Plus Extended system software from 3Com Corporation, dated May 19, 1998. This release supersedes release 1.1.0 dated April 27, 1998.

This is the third release of the CoreBuilder 3500 system software. To load the software, see "Loading Your System Software" on page 3 for instructions.

The CoreBuilder 3500 Base Plus Extended system software Release 1.1.1 enhances system security by adding the following changes to the system software:

- The CoreBuilder 3500 system no longer displays Administration Console Read/Write access or the Administration Console password via the SNMP MIB variable.
- To ensure system security, you must change the Administration password when you first log on to the system. To set Administration password see "Setting Passwords" on page 7.

Release Highlights for 1.1.1

Release 1.1.1 of the CoreBuilder 3500 Base Plus Extended system software supports the following new features:

Base System Software

- IP routing (OSPF support)
- IPv4 multicast DVMRP routing
- IGMP snooping
- RMON v1
- Gigabit Ethernet module
- Address table per virtual LAN (closed VLAN)
- Port group packet filtering
- Web-based management
- IEEE 802.1Q tagging
- Port trunking
- Simplified port numbering for the Administration Console

Base Plus Extended System Software

- Everything in Base System Software, plus:
- RMON v2
- IPX routing
- AppleTalk routing
- RSVP for 10/100 Ethernet
- Quality of Service: Static bandwidth reservation for 10/100 Ethernet

Before You Start

Before you use your new software, read all of these release notes. Carefully read these sections:

- "System Issues at Release 1.1.1" on page 12
- "System Software Known Problems at Release 1.1.1" on page 14
- "Web Management System Issues at Release 1.1.1" on page 16

Downloading Your System Software

To install Release 1.1.1 or to upgrade your system software to the latest revision, download the software from the 3Com WWW site:

<http://infodeli.3Com.com/infodeli/swlib/index.htm>

Loading Your System Software

Your Corebuilder 3500 is shipped with system software installed. If you need to reinstall this new release, follow these instructions.

The CoreBuilder 3500 system software is distributed on CD in an ISO 9660 standard format, which is readable by virtually all CD-ROM drives, including drives used with IBM PC compatibles, Macintosh computers, and Sun and HP UNIX workstations.

You can install new software from any host that is running a Trivial File Transfer Protocol (TFTP) server.

To install or upgrade your system software, you must:

- Insert the CD into your CD-ROM drive on the computer from which you want to load your new software and verify that your system is accessing the CDROM drive and reading the CD correctly.
- Load the system software from the CD to flash memory on the CoreBuilder 3500.

To load the system software for your platform, follow the procedures provided in the next sections.

Loading System Software on Microsoft Windows

To load the CoreBuilder 3500 system software from the Microsoft Windows platform, follow these steps:

- 1 Insert the CD into the CD-ROM drive and open *File Manager* or *Explorer*.
- 2 Select the drive representing your CD-ROM and ensure that you are able to view the contents of the CD.
- 3 Configure your TFTP server on this system to allow TFTP file transfers from the CD, if possible. If this configuration is not possible, copy the CoreBuilder 3500 system software (called "cb3500v" in the "software" directory of the CD) to a directory from which your TFTP server allows file transfers.

You are now ready to load the system software. See "Installing System Software via TFTP" on page 5 for instructions.

Loading System Software on Macintosh OS

To load the CoreBuilder 3500 system software from the Macintosh OS platform, follow these steps:

- 1 Insert the CD into the CD-ROM drive.
- 2 Double-click the icon that represents your CD-ROM drive and ensure that you are able to view the contents of the CD.
- 3 Configure your TFTP server on this system to allow TFTP file transfers from the CD, if possible. If this configuration is not possible, copy the CoreBuilder 3500 system software (called "cb3500" in the "software" directory of the CD) to a directory from which your TFTP server allows file transfers.

You are now ready to load the system software. See "Installing System Software via TFTP" on page 5 for instructions.

Loading System Software on UNIX

To load the system software from the UNIX platform, follow these steps:

- 1 Insert the CD into the CD-ROM drive.
- 2 Mount the CD as required by your UNIX system.



For detailed information on mounting your CD, see your UNIX system documentation.

- 3 Verify that you are able to view the contents of the CD by executing the appropriate "ls" command.
- 4 Configure your TFTP server on this system to allow TFTP file transfers from the CD, if possible. If this configuration is not possible, copy the CoreBuilder 3500 system software (called "cb3500" in the "software" directory of the CD) to a directory from which your TFTP server allows file transfers.
- 5 You are now ready to load the system software. See "Installing System Software via TFTP" on page 5 for instructions.

Installing System Software via TFTP

To download the CoreBuilder 3500 system software via TFTP, follow the procedures in this section.



You can load the system software into flash memory while the CoreBuilder 3500 system is operating. You do not need to bring the system down.



Before you begin this procedure, be sure that the TFTP server software is running on the device from which you will be installing the software.

Loading software into flash memory takes approximately 10 to 15 minutes to complete, depending on your network load.



Before you load the new software, be sure that you have defined an IP address on the CoreBuilder 3500 system. See the CoreBuilder 3500 Quick Installation Guide for information.

To load the new software:

- 1 From the top level of the Administration Console, enter:

```
system softwareUpdate
```

You are prompted for the host IP address and Install file name. The current values are displayed in brackets [].

- 2 For `Host IP address`, enter the IP address of the host machine (such as a Macintosh or Sun workstation or PC) from which you are installing the software. If the current value is already set to the correct host IP address, press Return.

In the example in step 3, the IP address of the host is **192.9.200.96**.

- 3 For `Install file name`, enter the complete path and filename. To accept the current value, press Return.



Some TFTP servers do not accept the full path. If that is the case for your server, enter only the filename of the image. See your server's documentation for more information.



CAUTION: *If the flash installation stops (that is, if you see no activity for more than 2 minutes), wait for the TFTP session to time out. **Do not reboot the system.** When the session has timed out, perform the installation procedure again.*

Here is an example of a successful software installation:

```
Host IP address [192.9.200.14]:192.9.200.96  
Install file name [/tftpboot/cb3500]:
```

```
Updating operational image block 1 of 80  
Updating operational image block 2 of 80  
.  
.  
.  
Updating operational image block 80 of 80  
Updating sysBoot image block 1 of 8  
Updating sysBoot image block 2 of 8  
.  
.  
.  
Updating sysBoot image block 8 of 8  
Updating diagnostic image block 1 of 16  
Updating diagnostic image block 2 of 16  
.  
.  
.  
Updating diagnostic image block 16 of 16
```

After the software has been loaded successfully, the following message appears:

```
Installation completed
```



If the CoreBuilder 3500 executable software image stored in FLASH is corrupted (for example, when a power failure occurs while you are installing the software), contact 3Com Technical Support.

- 4 To reboot the system to use the newly loaded software, enter:

```
system reboot
```

The system prompts you with the following message:

```
Are you sure you want to reboot the system (n,y) [y]:
```

- 5 At the prompt, enter **y** for (yes).

You are now ready to configure management access for your system. For a quick reminder of setup and management tasks, see the *CoreBuilder 3500 Quick Installation Guide*. For more detailed information about setting up your system and configuring management access, see the *CoreBuilder 3500 Getting Started Guide*.

What's New at Release 1.1.1

This section describes the major new changes and features that are implemented in the Base Plus Extended system software at this 1.1.1 release.

Setting Passwords

To ensure system security, you must change the Administration password for all three levels when you first log on to the system. The following procedure details the setting of passwords.

The Administration Console supports three levels of access:

- One for only browsing or viewing (*read*)
- One for configuring network parameters (*write*)
- One for full system administration (*administer*)

Initial passwords

Because the initial passwords stored in the nonvolatile memory of the system are null for all access levels, press Return or Enter at the password prompt when you log on for the first time.



You can change passwords only if you enter the Console at the `administer` access level.

- 1 To set a password, from the top level of the Administration Console, enter:
system password
- 2 At the prompt that requests you to enter an access level to change, enter one of these commands:
 - **read**
 - **write**
 - **administer**
- 3 At the prompt for your new password, enter the new password.

The password can be up to 24 characters long and is case sensitive. To enter a null password, press the Return or Enter key.



You must enter your administration password after installing this release even if the password is the same as the one you have currently configured. Entering the administration password at this point causes the debug password to mirror the administration password.

- 4 Retype the new password for verification. The system does not display the password in any of the fields as you type.

Example:

```
Select menu option (system): password
Password access level (read, write, administer) read
New password:
Retype new password:
The administration console password has been successfully
changed.
```

- 5 Repeat steps 1 through 4 for each level of password.

Base System Software New Features

The following new features are implemented in the Base system software and therefore apply to the Base Plus Extended system software at this 1.1.1 release.

Simplified Port Numbering

For the Administration Console, this release simplifies the port numbering scheme. Now, port numbers remain the same for physical ports and bridge ports even after trunking. See "Support for Port Trunking," next.



The Web Management software does not reflect the port numbering changes at this release.

Support for Port Trunking

Trunking allows you to group multiple independent ports under a single logical unit, called a *trunk*. Trunking of multiple ports (for example, ports 2, 4, and 5) allows you to build higher-speed interconnections using existing CoreBuilder 3500 modules and cabling. Trunking does not affect your physical port numbering. Create your trunks before you configure your VLANs.

Displaying Port Configuration with the ? Option

When the system prompts you to select from a list of options, you can now use the ? (question mark) option to display the port's current configuration. For example, you can use the ? option to display the port assignments when you specify port numbers for Ethernet ports, trunks, and VLANs.



Some areas of the Administration Console, such as Quality of Service, do not support the ? option at this release.

IEEE 802.1Q Tagging

This release supports IEEE 802.1Q tagging for bridging and routing.

Address Table Per VLAN (Closed VLAN)

This release supports address tables for each VLAN.

Support for Gigabit Ethernet Module

This release supports the Gigabit Ethernet module, which provides a single 1000BASE-SX multimode fiber (MMF) connection. The 1000BASE-SX MMF module is available in either 62.5 or 50 micron multimode fiber.

Support for Port Group Packet Filtering

This release supports packet filtering for standard port group packet filters. The system can create standard packet filters for a list of ports (*a port group*) to minimize delays by filtering packets at wire speed.

Support for RMONv1

This release supports full-time Embedded RMON support for Ethernet ports through SNMP for seven of the RMON groups. When combined with the roving analysis port (RAP) function, RMON support for these groups provides a powerful mechanism for managing your network. See the section "SNMP MIB Files" on page 17 for a list of the supported RMONv1 groups.

Support for Web-Based Management

This release supports the following Web Management applications:

- **Filter Builder** — Filter Builder allows you to implement packet filters easily and verify that your filters are syntactically correct before you test them on your 3Com devices.



At this release Filter Builder supports only port group packet filtering. See the Filter Builder README file for information on how to best use Filter Builder.

- **WebManage FrameWork** — The WebManage FrameWork application (also referred to as *local WebManage*) allows you to configure multiple devices using WebManage software and a web browser (Netscape or Internet Explorer) with an Internet connection.

- **Embedded WebManage** — The Embedded Web Manager application allows you to configure a single device using a web browser (Netscape or Internet Explorer) with an Internet connection.

You install Web Management applications locally. You install Help files on an attached local **server**. To install the Web Management application, see Appendix A in these release notes.

New Features in the Base Plus Extended System Software

The following new features are implemented in the Base Plus Extended system software at Release 1.1.1 .

Support for RMONv2

This release supports full-time Embedded RMON for Ethernet ports through SNMP for five RMONv2 groups and for one object from the probeConfig group. When combined with the roving analysis port (RAP) function, RMON support for these groups provides a comprehensive, powerful mechanism for managing your network. See the section “SNMP MIB Files” on page 17 for a list of the supported RMONv2 groups.

Support for IPX and AppleTalk Routing

This release supports IPX and AppleTalk routing.

Support for Quality of Service (QoS)

This release supports QoS features for traffic policy-based services, including static bandwidth reservation for 10/100 Ethernet and policing of reserved traffic using the Resource Reservation Protocol (RSVP) with 10/100 Ethernet.

**User
Documentation**

This release of software is compatible with the documentation listed here. These release notes describe any changes and additions to this documentation:

- *CoreBuilder 3500 Quick Installation Guide*
- *CoreBuilder 3500 Getting Started Guide*
- *CoreBuilder 3500 Administration Guide*
- *10/100BASE-TX Fast Ethernet Module Installation Guide*
- *100BASE-FX SMF Fast Ethernet Module Installation Guide*
- *100BASE-FX MMF Fast Ethernet Module Installation Guide*
- *1000BASE-SX Gigabit Ethernet Module Installation Guide*
- *System Processor Removal and Replacement Guide*
- *System Processor Memory Upgrade Installation Guide*
- *Power Supply Assembly Removal and Replacement Guide*
- *Fan Tray Assembly Removal and Replacement Guide*
- *PCMCIA Flash Card Installation Guide*
- *Blank Faceplate Installation Guide*

System Issues at Release 1.1.1

The following system issues are identified at this release:

- If you modify the **system serialPort terminalSpeed** via a telnet session, the change does not become effective until you reboot the system. The Administration Console incorrectly states, "The baud rate will not change until you exit your current telnet session."
- The first time you attempt to access the modem, the screen alignment is incorrect. On subsequent attempts, the screen alignment is correct.
- The **swSysSystemConsoleAccess** MIB cannot be set to disable Administration Console access.
- The Administration Console displays **poisionReverse** and **advertisementAddress** fields for **management IP RIP display**. However, the management IP port cannot act as a router.
- The selectable bridge ports option of the Administration Console includes ports that have already been designated as a monitor port or an analyzer port. The display is corrected when you attempt to use the port.
- To receive RMONV2 updates, you must manually set the VLAN protocol type that you wish to monitor on the selected port.
- The **SYS** LED on the system processor no longer lights if the system processor fails at power up.
- The **management IP RIP display** in the Administration Console shows incorrect information at this release.
- The Address Threshold trap does not respond at this release.
- Multiple port filter assignment requests in a pdu return a bad value.
- There are no port noRxBuffers after an AppleTalk VLAN modify and AARP update.
- To add a new nonflow classifier, you must delete one or more (unrequired) nonflow classifiers in the range of 400-498.
- Flow control is not supported for 10/100BASE-TX Ethernet ports at this release.
- You cannot perform an **nvData reset** while you are using telnet to access the system.
- The **ip arp flush** command removes all ARP entries, including static ARP entries.

- There is no SNMP support for creating or deleting trunks. There is no SNMP support for closed VLANs.
- External remote roving analysis port (RAP) is not supported.
- 802.1Q tagging is not supported by RAP at this release.
- Bridge IP multicast frames are not counted in the bridge statistics.
- You cannot disable the bridge aging time.
- To prevent time-outs of SNMP requests, 3Com recommends that you increase the default timeout for the network management station or browser.
- The system does not report an error if you assign the same IP address to the IP interface that is associated with the *out-of-band* Ethernet port and to the IP routing interface that is associated with an *in-band* Ethernet port.
- If the autonegotiation feature does not function properly, manually set the port speed and duplex mode (*half-duplex* or *full-duplex*).
- The serial port receives **error** messages from user interfaces at this release (including telnet session, Web Management, and SNMP).
- Do not assign an IP interface to the out-of-band Ethernet port on the system processor module unless you attach the port to your network. If an IP interface is assigned to this port and you do not have a network link, the system can experience problems with DNS, traceRoute, ping, and software updates through your in-band IP interface.
- To enable the timeout of remote sessions to the CoreBuilder 3500 system, ensure that **system consoleTimeout** is set to *enabled*. The factory default for **system consoleTimeout** is *disabled*.

System Software Known Problems at Release 1.1.1

The following system software known problems are identified at this release:

- If you revert from this new release 1.1.1 to the previous release 1.0.0, the system continuously reboots. To fix this known problem, you must:
 - Stop the system in the boot code.
 - Change the boot flags to production value 0x130000.
 - Change the boot flags again to production value 0x130000.
 - Enter **b** to boot.
- To use STP or TCMP on the system with closed VLAN mode, create at least one untagged, unspecified VLAN for *each* port. That is, you can have many unspecified, untagged VLANs, as long as each port is part of one of them.
- You can no longer define an IP multicast rate limit. You could previously use **ip multicast interface enable** and specify a rate limit. Now, use **bridge port multicastLimit** or QoS to set this type of rate limit.
- If you are using the CoreBuilder 3500 system as a one-armed router without IEEE 802.1Q tagging, QoS rate limits and flow filters do not work.
- The IP interface statistics `outForwards` and `outFastForwards` may display incorrect values.
- The IPX, VLAN, and TCMP statistics, as well as the Ethernet detail statistics for peak bytes and frame rates, are not reset when you set a baseline using the command **system baseline set**.
- Some IP multicast traffic may stop after an STP topology change.
- For SNMP management, the `ipDefaultTTL` object cannot be set, that is, no write is allowed.

- You may not configure the IP interface associated with the *out-of-band* Ethernet port for the same subnet as any *in-band* IP interfaces. If you do, attempts to modify or remove IP interfaces may hang the other interface on the same subnet or cause the system to reboot.
- The IP interface statistics, peak byte rates, and frame rates are not reset when you set a baseline with the command **system baseline set**.

System Software Corrections at Release 1.1.1

The following system issues and known problems have been corrected at this release:

- Read/Write access and the Administration password are no longer available through the SNMP MIB variable.
- SNMP traps can now be transmitted through the out-of-band Ethernet port.
- The Administration Console now correctly reports a power supply failure as either Power Supply No. 1 or Power Supply No. 2, depending on which power supply has failed.
- The **SYS** LED now functions correctly when the system is running diagnostics during power up. To determine if the system processor has failed at power up, enter **system display** from the top level of the Administration Console.
- After you power up the CoreBuilder 3500, the following diagnostic messages no longer appear:
 - Checksum Failure on IC2 ID Block
 - Diagnostic test 100 has failed
- The CoreBuilder 3500 out-of-band Ethernet management port now correctly reports its IP interface state.
- When you are connected via the serial port, entering the key combination Control+S (Ctrl+S) no longer locks out the serial port and telnet access.
- Tasks that use tftp, such as `softwareUpdate`, `nvData save` and `restore`, `system snapshot save`, and `bridge packetfilter load`, no longer hang under heavy system load, particularly under heavy traffic directed to the management port.

- UDPHelper does work on an overlapped, untagged IP VLAN when the client and server both reside on any of the overlapped VLANs.

Web Management System Issues at Release 1.1.1

The following Web Management software issues are identified at this release:

- The PCMCIA card is not supported through the Web management software. Use the Administration Console for PCMCIA support.
- After you initially set the Help Configuration URL, choose another menu item and then select the item that you want to configure in order for the Help link to work.



For more information about the Web Management software, see Appendix A in these release notes.

Web Management Known Problems at Release 1.1.1

The following Web Management software known problems are identified at this release:

- The IP Wizard Introduction online Help incorrectly states that you will not use the Wizard to configure a management IP interface.
- Because this release supports port group packet filtering, port group creation, and port group editing only, only use Filter Builder for port group packet filters.
- If you enter incorrect information via the Web interface, the system reports an error and you must reenter previous information.
- The Web Console incorrectly reports success when you attempt to configure autonegotiation on a trunked port.
- The Web Console incorrectly accepts a value outside of the valid range for the QoS statistical interval (0 to 4294967295).
- When running installable Web Management applications, the Java Console in Internet Explorer and Netscape incorrectly displays exceptions.
- The online help incorrectly advises that a maximum of ten filters may be configured for each classifier.



For more information about the Web Management software, see Appendix A in these release notes.

SNMP MIB Files

SNMP MIB files are shipped with the CoreBuilder™ 3500 system software as ASN.1 files. Copies of ASN.1 files are provided for each of the supported compilers described in “Compiler Support.”

Supported Versions

The SNMP MIB file names and the currently supported version of each MIB are listed here for the CoreBuilder 3500:

- **bridge.mib** — Bridge MIB, RFC 1493
Unsupported groups and tables in this MIB:
 - **dot1dSr** group
 - **dot1dTpFdbTable**
 - **dot1dStatic** group
- **ethernet.mib** — Ethernet MIB, RFC 1398
Unsupported groups and tables in this MIB:
 - **dot3CollTable**
 - **dot3Test** group
 - **dot3Errors** group
 - **dot3ChipSets** group
- **if.mib** — IF MIB, RFC 1573
Unsupported tables in this MIB:
 - **ifTestTable**
 - **ifRcvAddressTable**
 - **ifHC** 64-bit counters
- **mib2.mib** — MIB-II MIB, RFC 1213
Unsupported groups and tables in this MIB:
 - **egp** group
- **rmon.mib** — RMON MIB, RFC 1757 and RFC 2021
Supported groups in this MIB:
 - **statistics**
 - **history**
 - **alarm**
 - **hosts**

- **hostTopN**
- **matrix**
- **event**
- **protocolDir** (RMONv2)
- **protocolDist** (RMONv2)
- **addressMap** (RMONv2)
- **n1Host** (RMONv2)
- **n1Matrix** (RMONv2)
- **probeCapabilities** object of **probeConfig** group (RMONv2)



A maximum of four different ports can be configured for the following RMON groups at any given time:

- **hosts**
- **hostTopN**
- **matrix**
- **n1Host**
- **n1matrix**
- **trunk.mib**
- **vlan.mib** — 3Com VLAN MIB
- **swSys.mib** — Replaces s2System.mib, swSystem.mib, and lp.mib
Unsupported groups and tables in this MIB:
 - **swSysSlot**
 - **swSysControlPanel**
 - **swSysSnmp**
 - **swSysSmt**
 - **swSysTokenRingPort**
- **swFilter.mib**
- **swQos.mib**
- **swProd**

Compiler Support

ASN.1 MIB files are provided for each of the MIB compilers listed in this section.

- HP Openview (version 3.1)
- SunNet Manager (version 2.0)

Release History

Table 1 describes the release history of the CoreBuilder 3500 system software.

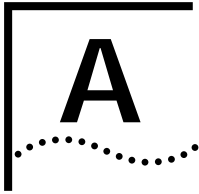
Table 1 Release History for CoreBuilder 3500 System Software

Release Number	Description of Release
1.0.0	First release of the CoreBuilder 3500 system software. Release features: <ul style="list-style-type: none">■ 10/100 BASE-TX module■ 100 BASE-FX module■ IP routing (RIP support)■ Multicast packet firewall to limit broadcast storms■ SNMP MIB management■ Spanning Tree Protocol■ Protocol-based VLANs■ traceRoute■ DNS client

(continued)

Table 1 Release History for CoreBuilder 3500 System Software (continued)

Release Number	Description of Release
1.1.0	<p data-bbox="648 322 1229 348">Second release of the CoreBuilder 3500 system software.</p> <p data-bbox="648 361 1093 387">Base System Software Release features:</p> <ul data-bbox="648 401 1143 826" style="list-style-type: none"> <li data-bbox="648 401 936 427">■ IP routing (OSPF support) <li data-bbox="648 440 986 466">■ IPv4 multicast DVMRP routing <li data-bbox="648 480 839 506">■ IGMP snooping <li data-bbox="648 520 779 546">■ RMON v1 <li data-bbox="648 560 1079 586">■ Gigabit Ethernet 1000BASE-SX module <li data-bbox="648 600 815 626">■ Port trunking <li data-bbox="648 640 951 666">■ Port group packet filtering <li data-bbox="648 680 1143 706">■ IEEE 802.1Q tagging for bridging and routing <li data-bbox="648 720 1068 746">■ Address table per VLAN (closed VLAN) <li data-bbox="648 760 948 786">■ Simplified port numbering <li data-bbox="648 800 939 826">■ Web-based management <p data-bbox="648 840 1258 866">Base Plus Extended System Software Release features:</p> <ul data-bbox="648 880 1272 1130" style="list-style-type: none"> <li data-bbox="648 880 1100 906">■ Everything in Base System Software, plus: <li data-bbox="648 920 779 946">■ RMON v2 <li data-bbox="648 960 793 986">■ IPX routing <li data-bbox="648 999 862 1025">■ AppleTalk routing <li data-bbox="648 1039 939 1065">■ RSVP for 10/100 Ethernet <li data-bbox="648 1079 1272 1130">■ Quality of Service: Static bandwidth reservation (RSVP) for 10/100 Ethernet
1.1.1	<p data-bbox="648 1156 1208 1182">Third release of the CoreBuilder 3500 system software.</p> <p data-bbox="648 1194 1258 1220">Base Plus Extended System Software Release changes:</p> <ul data-bbox="648 1234 1272 1289" style="list-style-type: none"> <li data-bbox="648 1234 1272 1289">■ Read/Write access and Administration password no longer available through the SNMP MIB variable



USING WEB MANAGEMENT

This appendix describes the new Web Management suite of applications for the CoreBuilder 3500 high-function switch. The appendix contains:

- Web Management Overview
- Embedded Web Management
- Installable Web Management Files
- Launching Web Management Applications
- Troubleshooting the Installed Web Management Software

*Browser
requirements*

The Web Management suite of applications requires Microsoft Internet Explorer 4.0 or later or Netscape Navigator 4.03 or later.

If you are using Netscape Navigator 4.03 or 4.04, be sure to install the Netscape JDK 1.1 Patch. Download the patch from this URL:

<http://help.netscape.com/filelib.html#smartupdate>

See “Web Management and Internet Explorer” on page A-18 and “Web Management and Netscape Navigator” on page A-23 for more details.

Web Management Overview

The Web Management suite of applications consists of **Embedded Web Management applications** and **additional installable software files**:

- **Embedded Web Management Applications** — This software is part of the CoreBuilder 3500 system software image. The embedded applications are a collection of Web-based components that fit into a consistent GUI model:
 - **WebConsole** — An HTML-based application. See “WebConsole” on page A-4 for details.
 - **DeviceView** — A Java-based application that displays a real-time image of the device. The image is “live,” which means that you can manage each port, module, or system by clicking on the image of the part of the device that you want to manage. See “DeviceView” on page A-6 for details and “Browser Requirements” on page A-6 for browser information.
 - **Help** — The HTML-based Help system for the Embedded Web Management applications. See “Embedded Web Management Help” on page A-10 for details.

*When to use
Embedded software*

Use the Embedded Web Management applications for most of your device management tasks except filtering packets or receiving e-mail notices. Because this software is part of the CoreBuilder 3500 system software image, these embedded applications are available immediately on your CoreBuilder 3500 system. You can manage a single port or device, or, using multiple windows, you can manage multiple devices at the same time.

- **Installable Software Files** — Available for you to install on your workstation or PC from the CoreBuilder 3500 Software and Documentation CD.

*When to use
installable software*

Install some or all of these additional applications if you want to:

- Filter packets, using the **Filter Builder** application. See “Filter Builder” on page A-13 for details.
- Receive e-mail messages of events, using **Status Log**. See “Troubleshooting Help Access” on page A-23 for details.

- Use the **integrated GUI interface** for WebConsole, DeviceView, and their Help topics. See “Integrating the Embedded and Installed Applications with a Combined Interface” on page A-11 for details.
- Use **context-sensitive Help** for many screen items. See “Context-Sensitive Help” on page A-15 for details.

Embedded Web Management



Embedded Web Management is part of the system software image.

The Embedded Web Management applications are WebConsole (including Configuration Wizards), DeviceView, and the HTML-based Help system.

All of these applications share a consistent GUI interface. See Figure A-1.

Tabs panel →

Menu tree →

Workspace →

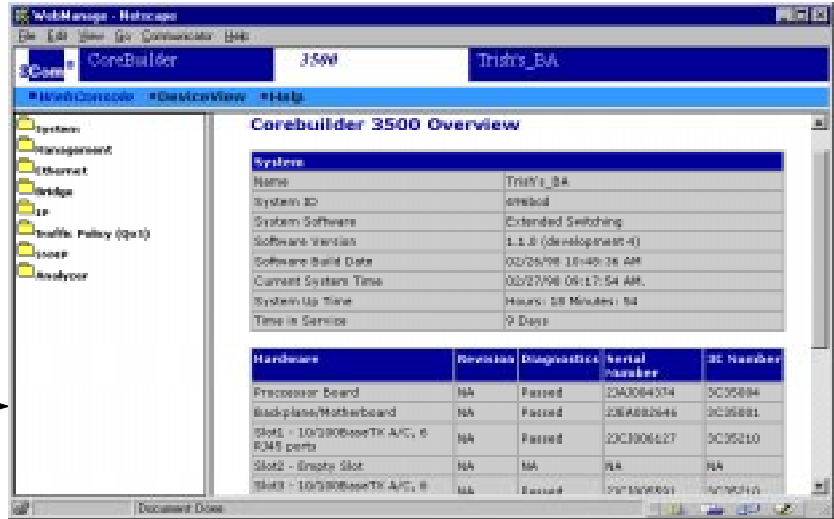


Figure A-1 Embedded Web Management Screen

The GUI for the Embedded Web Management applications is divided into three areas, as shown in Figure A-1:

- **Tabs panel** — At the top of your browser window; contains three tabs: WebConsole, DeviceView, and Help. When you select a tab, the contents of the menu tree and the workspace change accordingly:
 - **WebConsole tab** — When you select this tab, the menu tree lists the parameters that you can configure for the selected device.
 - **DeviceView tab** — When you select this tab, you can view an image of the device. See “Browser Requirements” for the specifications for versions of Java-based browsers for DeviceView.
 - **Help tab** — When you select this tab, the menu tree lists a collection of Help topics that relate to the Embedded Web Management applications
- **Menu tree** — Lists system menu options, much like the Administration Console. Click a menu item to view the associated form in the workspace.



Telnet icons in the menu tree are provided for configuring system parameters which are not supported through the WebConsole. Click an icon to launch a telnet session for the selected device.

- **Workspace** — Displays forms for the selected menu option. To access context-sensitive Help for the form, if you have installed the additional files, click the *Help* button on the form. See “Configuring Installable Help Files” on page A-17 for more information.

WebConsole

The WebConsole application provides a tree of options for managing your devices. Each option calls up one or more forms that help you set parameters and view statistics.

Embedded Configuration Wizards

Embedded Web Management also contains Configuration Wizards, which are designed to facilitate configuration tasks. They help you to create valid configurations and prevent common configuration mishaps. In addition, Configuration Wizards allow you to change or modify attributes. See Figure A-2.

Configuration Wizards, which are available through the WebConsole menu tree, include:

- IP In-Band and IP Out-Of-Band Configuration Wizards. To help you configure IP on a device, they walk you through the configuration process.
- Traffic Policy Configuration Wizard. This wizard offers a high level procedure for configuring QoS policies, performing most of the low-level details itself.

Configuration Wizard
icon

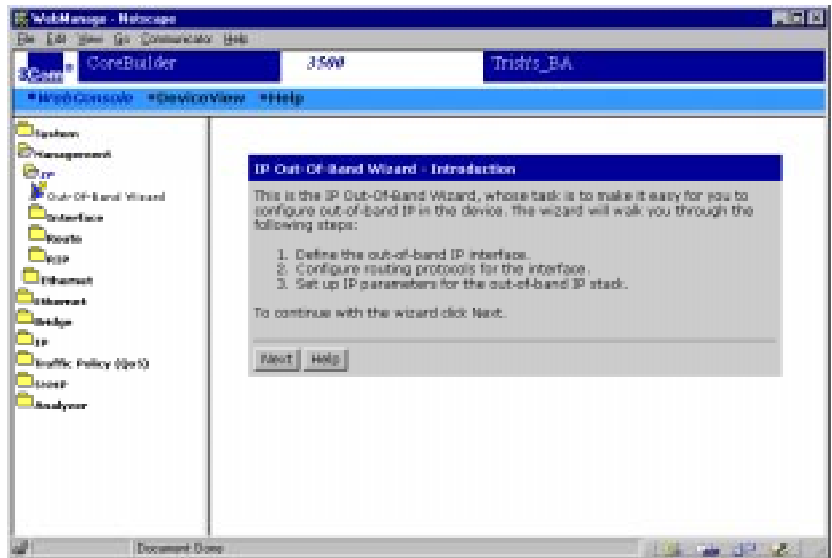


Figure A-2 Configuration Wizard

DeviceView Click the DeviceView tab on the Web Management screen to launch an image of the device and its installed modules. You can click on ports or modules to view real-time system status and to configure system parameters. See Figure A-3.

Browser Requirements

The Web Management suite of applications requires Microsoft Internet Explorer 4.0 or later or Netscape Navigator 4.03 or later.

If you are using Netscape Navigator 4.03 or 4.04, be sure to install the Netscape JDK 1.1 Patch. Download the patch from this URL:

<http://help.netscape.com/filelib.html#smartupdate>

See “Web Management and Internet Explorer” on page A-18 and “Web Management and Netscape Navigator” on page A-23 for more details.

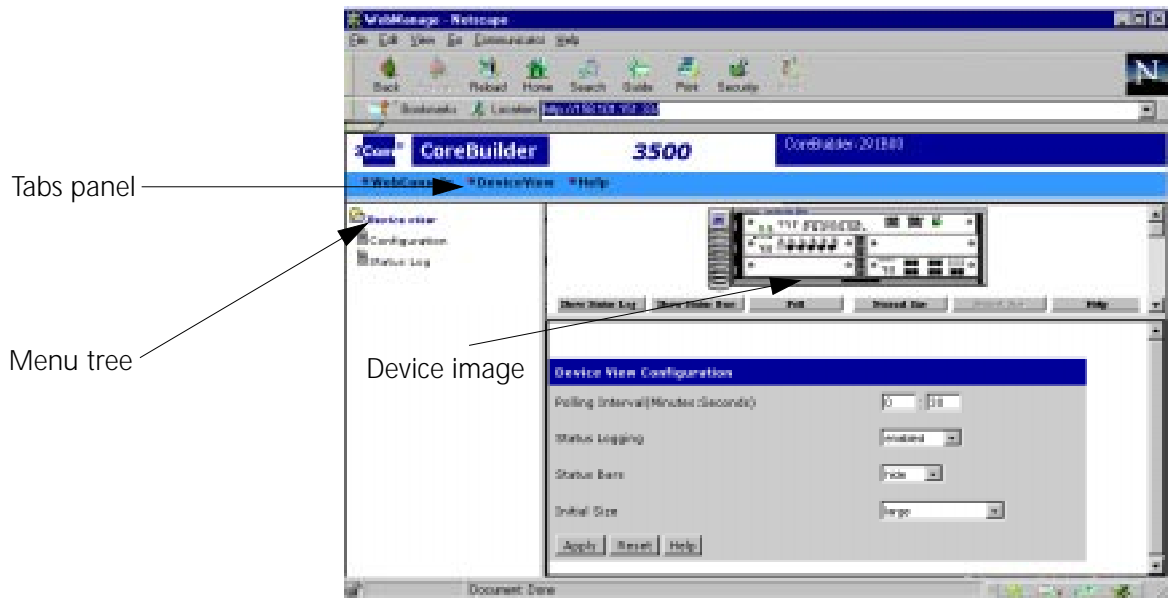


Figure A-3 DeviceView Screen

About the Device Image

The device image (shown in Figure A-4) provides a subset of the system management options that are available through the WebConsole tab. Use the image to view system status and configure some system parameters. The device image highlights the current state of the system and each port with one of the color codes listed in Table A-1.

Table A-1 Status Color Codes

This color/shade	Indicates this status
Green	Enabled, link present
Partial shading (dark edge)	Disabled, link present
Black	Enabled, link absent
Gray shading	Disabled, link absent
Red	Partitioned, link present
Yellow	Resilient, link absent

For more information on the device image see the online Help forms associated with the device.



If you click the Help button below the device image, but do not see the online Help forms, verify that the installable Help files are configured properly for your device. See “Configuring Installable Help Files” on page A-17 for details.

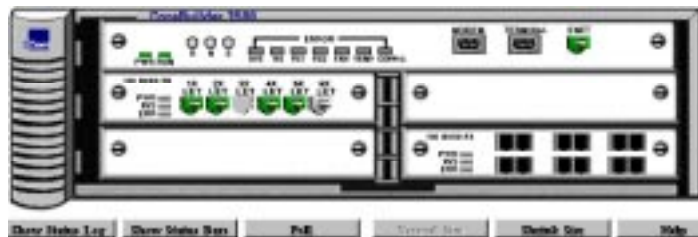


Figure A-4 DeviceView Image

The DeviceView application actively monitors the device and allows you to configure system, module, and port parameters.



The part of the device image to which you are pointing displays a blue border.

To configure a parameter for the system, module, or port, click the area of the device that you want to configure:

- To view system-level parameters, click anywhere along the outline of the CoreBuilder 3500 *chassis*, outside the module outline.
- To view module-level parameters, click the outline of the *module* that you want to configure.
- To view port-level parameters, click the image of the *port* that you want to configure.

Configuration forms appear in the DeviceView workspace.

Status Logging in DeviceView

DeviceView has a Status Log that monitors system, module, and port changes on the device and displays the events in a log. See Figure A-5.

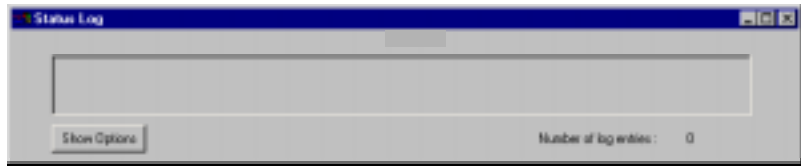


Figure A-5 Status Log in DeviceView



If you are using Internet Explorer, you may want to follow the instructions to improve DeviceView download speed for Status Logging functionality. See “Enabling E-Mail Options on Internet Explorer” on page A-21 for details.

You can set DeviceView to monitor the system, the modules, or the ports in any combination. If you have installed the DeviceView accessories, you can set the system to send e-mail of events to specified destinations to facilitate network monitoring.

To receive e-mail regarding changes to the system, you must configure available options (that is whether you want, device, module, or port changes). See Figure A-6.



Figure A-6 Status Log Configuration Form

To enable Status Logging options:

- 1 Select the DeviceView tab from the Embedded Web Management menu screen.
- 2 Click **DeviceView** in the menu tree.
- 3 Click **Configuration** in the menu tree.
- 4 In the drop-down menu of the Status Logging field, select Enabled.
- 5 Click **Apply**.
- 6 Click **Status Log** in the menu tree and configure the options for e-mailing system, module, or port changes.
- 7 Click **Apply** in the Status Log configuration form.



When you use Netscape Navigator, you must reload the browser before the changes take effect. In Internet Explorer, you must refresh the browser window before the changes take effect.

For more information on the Status Log e-mail options, click Help in the Status Log configuration form.

Embedded Web Management Help

The third component of the embedded Web Management suite of applications is the Help system. To access Help, click the Help tab on the Web Management main screen.

Installable Web Management Files

The CoreBuilder 3500 system comes with a Software and Documentation CD that has additional, installable Web Management files. You can choose to install one or more extra applications to perform these tasks:

- Use the integrated GUI interface for the combined embedded and installable Web Management applications. See “Integrating the Embedded and Installed Applications with a Combined Interface” next for more details.
- Use Filter Builder to configure packet filters that filter packets on your device. See “Filter Builder” on page A-13 for details.
- Use context-sensitive Help for many items on the Web Management screens and forms. See “Context-Sensitive Help” on page A-15 for details.
- Group multiple devices using Web Management software and a Web browser (Netscape or Internet Explorer) with an Internet connection.

Integrating the Embedded and Installed Applications with a Combined Interface

Install the additional files to combine the embedded tools of WebConsole and DeviceView, and their Help topics in an integrated Web Management interface. Figure A-7 shows the main screen for the integrated interface.

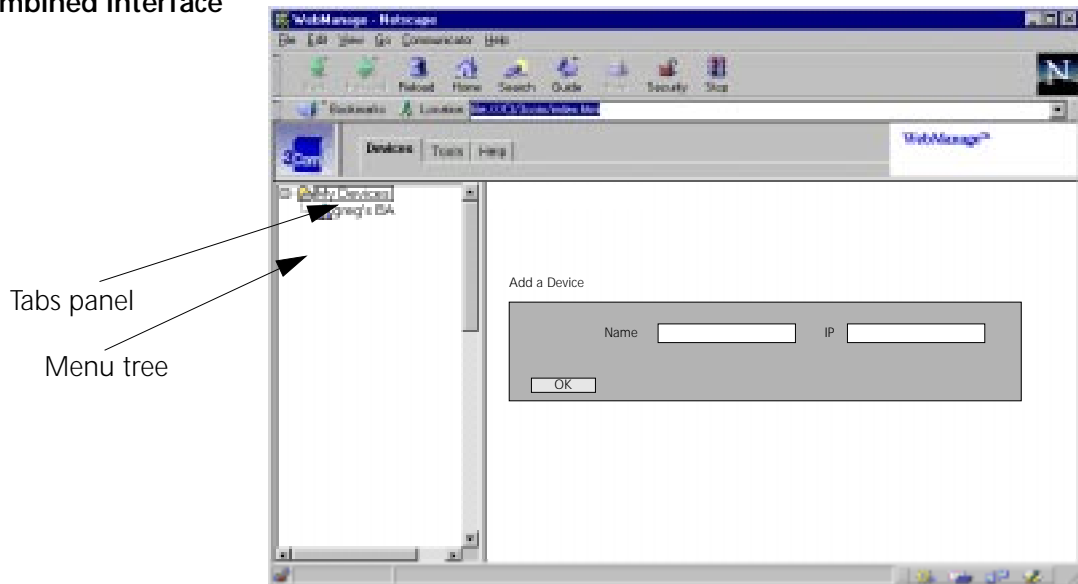


Figure A-7 Integrated Web Management Browser Window

The integrated Web Management GUI interface enables you to list and manage all your devices from one central location. You can easily add and delete devices and group the devices in ways that make sense to you, for example, by location or subnetwork.

The integrated Web Management screen, shown in Figure A-7, is divided into three areas:

- **Tabs panel** — At the top of your browser window. It contains three tabs: Devices, Tools, and Help. When you select a tab, the contents of the menu tree and the workspace change accordingly:
 - **Devices tab** — When you select this tab, the menu tree lists the devices that are currently accessible through Web Management.
 - **Tools tab** — When you select this tab, the menu tree lists installed applications. Currently, only the Filter Builder application appears.
 - **Help tab** — When you select this tab, the menu tree lists the Help topics for the local Web Management applications. Additionally, you may also access links to 3Com Technical Support and to other locations on 3Com's Web site.
- **Menu tree** — Organizes devices, tools, and documentation into folders. Click a folder for a list of devices, tools, or documents. Click a device, tool, or document to display it in the workspace.
- **Workspace** — Displays the device, application, or Help topic that you select from the Menu tree.

Filter Builder

Before Filter Builder, you created filters manually with the packet filter language in a text editor or in the built-in line editor of your 3Com device's Administration Console. The limitations of these methods is that you need a good understanding about how the packet filter language and its operators work, what part of a packet you want to filter, and how to combine sequential tests. Also, you did not know whether you had written your filters correctly.

With Filter Builder, you can implement packet filters easily and verify that your filters are syntactically correct before you test them on your 3Com devices. You can use one of the predefined filters included with Filter Builder or you can create a new one.

Figure A-8 shows the Filter Builder configuration form.

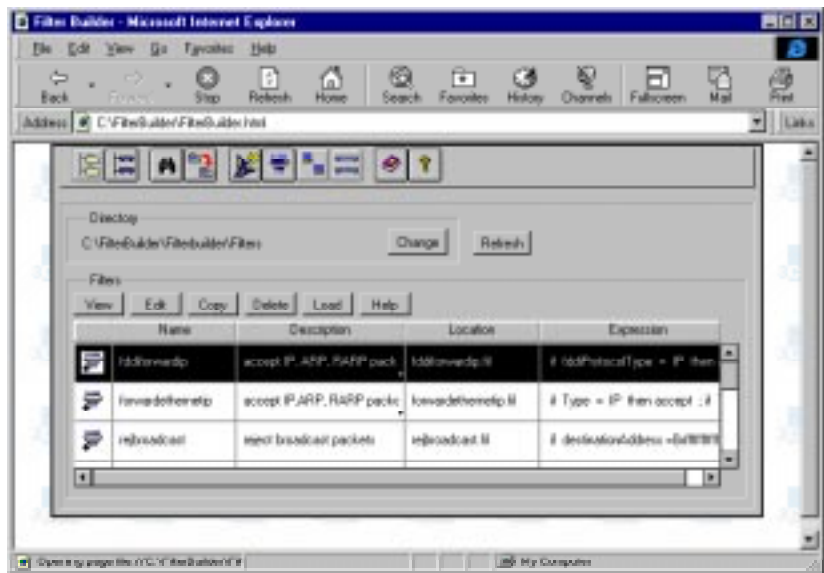


Figure A-8 Filter Builder Configuration Form

Filter Builder includes 10 predefined filters, which are displayed on the Filter tab. Table A-2 lists the predefined filters and what each does.

Table A-2 Predefined Filter Builder Packet Filters

Filter Name	Filtering Job
fddiforwardip	Forwards FDDI IP, ARP, and RARP packets
forwardethernetip	Forwards Ethernet IP, ARP, and RARP packets
rejbroadcast	Rejects broadcast packets
rejdifffaddrgrp	Rejects packets from a specific address group
rejdifffportgrp	Rejects packets from a specific port group
rejethernetappletalk	Rejects Ethernet AppleTalk packets
rejethernetipx802	Rejects Ethernet IPX packets
rejfdiat	Rejects FDDI AppleTalk packets
rejfdiipx802	Rejects FDDI IPX packets
rejmcast	Rejects multicast packets

You can distinguish predefined filters from filters that you create by the icon that pertains to each filter's name in the list on the Filter tab. The icon for predefined filters has a lock in the lower left corner, which indicates that the filter is write protected; you cannot edit or delete it.



Although the predefined filters are write-protected, you can edit a predefined filter indirectly by copying it, giving it a new name, and then editing it.

To create a filter, Filter Builder has two interfaces:

- **Filter Wizard** window — If you are unfamiliar with the packet filtering or to create a simple filter, use this interface.
- **Create or Edit Filter** window — If you are familiar with the packet filtering or to create a complex filter, use this interface.

You can also use Filter Builder to create address groups and port groups to use with filters. (At this release, you can only use Filter Builder to create port groups.)

For additional information on the Filter Builder application, use these resources:

- *Filter Builder Help System*

Filter Builder has a comprehensive Help system that is accessible from the Help menu and from Help Buttons within the application. The Filter Builder Help system includes “What’s This?” Help, with which you can access Help information about individual screen icons, buttons, fields, and the like.

- *Filter Builder Readme.txt*

Any system issues or known problems related to Filter Builder among the Web Management System Issues and Web Management Known Problems in the body of these Release Notes.

- *CoreBuilder 3500 Administration Guide*

Chapter 13 in the *Administration Guide* contains detailed information on the packet filter language.

Context-Sensitive Help

When you install the additional Web Management files, you can choose to install context-sensitive Help for each task-based form in the WebConsole and DeviceView.

See “Configuring Installable Help Files” on page A-17 for more information about context-sensitive Help.

Installing the Additional Web Management Files

An installation file called `setup.exe` is available on the CoreBuilder 3500 Software and Documentation CD. Use this file to launch the Web Management Installation Wizard.



At this release, the Install facility supports installation of the additional Help files only on a PC. To install the context-sensitive Help files on a UNIX workstation, see “UNIX Help Installation” on page A-18 for details.

Windows Installation

If you choose to install the additional Web Management files, place them on a workstation that runs Windows 95 or Windows NT. Follow these steps:

- 1 Close all open programs and applications.
- 2 Locate the `setup.exe` file in the `\WebManag\Windows` directory on the CD.
- 3 Double-click the file name `setup.exe` and follow the instructions in the Web Management Setup Wizard. Three installation options are provided: Custom, Help Files Install, and Typical.



To manage multiple devices, install the Web Management application. To install Web Management, choose the Typical installation or choose the Web Management option in the Custom installation.

- **Custom** — To install one or more components of Web Management.
- **Help Files Install** — To install the context-sensitive Help files for the Web Management embedded forms.
- **Typical** — To install all Web Management components, including Web Management, Filter Builder, context-sensitive Help files, and DeviceView Accessories (such as Status Logging).

- 4 If you have installed Web Management applications and are using Windows 95, the Wizard prompts you to reboot your system. You must reboot to complete the installation process.

If you have chosen Custom installation and chose only the Help files, you do not need to reboot your system.

The Web Management installation wizard installs the Web Management program icons into the directory you specified at the beginning of the installation procedure.

Configuring Installable Help Files

To access context-sensitive Help for the CoreBuilder 3500 system, install the Help files on your workstation or PC using Help Files Install or Typical for the installation option. See "Windows Installation" on page A-16 for details.

The first time that you attempt to access Help, the system prompts you for the URL of the workstation or PC on which you have stored the Help files. After you configure the URL, you can access form-specific Help as well as the complete Help system for the Embedded Web Management application.



For the Help link to work at this release, after you first set the Help Configuration URL, select another menu item and then select the item that you want to configure.

To configure the location of the Help files:

- 1 In the URL field of the Help Server Configuration form, enter the complete path for the Help files. See Figure A-9. Example:

http://158.101.171.32/3Com/Help

Figure A-9 Help Server Configuration Form



When entering the complete path in the URL field of the Help Server Configuration form, do not end the path argument with a slash ('/'). Leave the path open. For example: http://0.0.0.0/3Com/Help

2 Click **Apply**.

Help is now configured for your system. To access context-sensitive Help on any task or form, use one of these methods:

- Click the Help button on each web form
- Click Help on the Tab panel of the Embedded Web Management main screen to access the Help system Contents.



At this release, the Install facility supports the installation of these Help files only on a PC. To install the context-sensitive Help files on a UNIX workstation, refer to “UNIX Help Installation” next.

UNIX Help Installation

A UNIX TAR file containing the Web Management Help system is available on the CoreBuilder 3500 Software and Documentation CD.

To install Help files on your UNIX workstation:

- 1 Locate the `HELP.TAR` file in the `\webManag\unix` directory on the CoreBuilder 3500 Software and Documentation CD.
- 2 Extract the .TAR file into your Web server directory using the `tar -xvf HELP.TAR` command.

Launching Web Management Applications

Depending on which of the additional files you have installed, you can manage a single device or multiple devices or you can use Filter Builder:

- To manage a single device, open a new browser window and enter the IP address of the system that you want to manage.
- To manage multiple devices, from the Windows 95 or NT Start menu, select Web Management from the *Programs* menu.
- To launch the Filter Builder application, from the Windows 95 or NT Start menu, select FilterBuilder from the *Programs* menu.



UNIX functionality is not supported at this release.

Web Management and Internet Explorer

To improve DeviceView download speed or to ensure the Status Log e-mail options are available when you use Internet Explorer to manage devices, you must change several security settings, as described in this section.



Certain Status Log options allow you to send e-mail messages regarding system, module, and port status changes to one or more e-mail addresses. To access these e-mail options, install the additional Web Management files and enable Status Logging. See Web Management Help for additional information on DeviceView Status Log options.

Improving DeviceView Download Speed

To improve the download speed for DeviceView mimic in Internet Explorer:

- 1 Open an Internet Explorer browser window.
- 2 Choose **Internet Options** from the **View** menu in the browser window. The Internet Options dialog box appears
- 3 Choose the **Security** tab to view security options. See Figure A-10.



Figure A-10 Internet Options Dialog Box

- 4 In the **Zone** field, choose **Trusted sites zone** from the drop-down menu.
- 5 The **Add Sites** button is now available. Click it.
- 6 The Trusted sites zone dialog box appears. See Figure A-11. In the **Add this Web site to the zone** field, type **http://** plus the IP address of the device that you want to manage through Web Management. Example:

http://158.101.81.1

This information is added in the **Web sites** field.



*Deselect the **Required server verification** option when you add device information.*

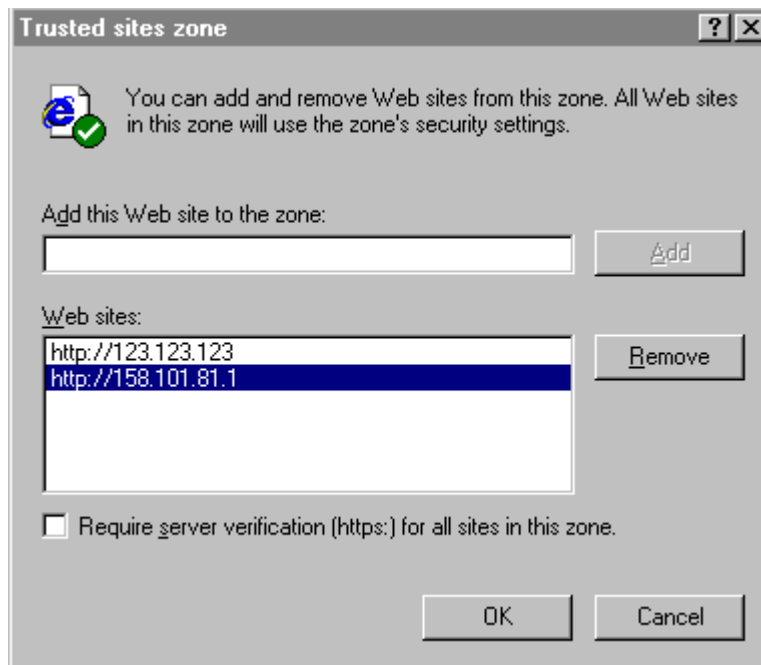


Figure A-11 Trusted Sites Zone Dialog Box

- 7 Click **OK** when you have added all of the devices that you want to manage.



To ensure Status Log features in Web Management applications are available, follow the procedure in the next section.

Enabling E-Mail Options on Internet Explorer

To ensure that the e-mail option for Status Log is available, follow the steps in “Improving DeviceView Download Speed” on page A-19 and then take these steps:

- 1 Choose the **Security** tab in the **Internet Options** dialog box, and then select the **Custom** radio button to set custom security settings. The **Settings** button to the right of this option is now available (Figure A-10).
- 2 Click **Settings**. The **Security Settings** dialog box appears (shown in Figure A-12).
 - In the **Reset custom settings** area, choose **Low security** from the drop-down menu and click **Reset**.
 - In the Security Settings area, scroll down to Java Permissions and select the **Custom** radio button. The **Java Custom Settings** button at the bottom of the dialog box is now available.

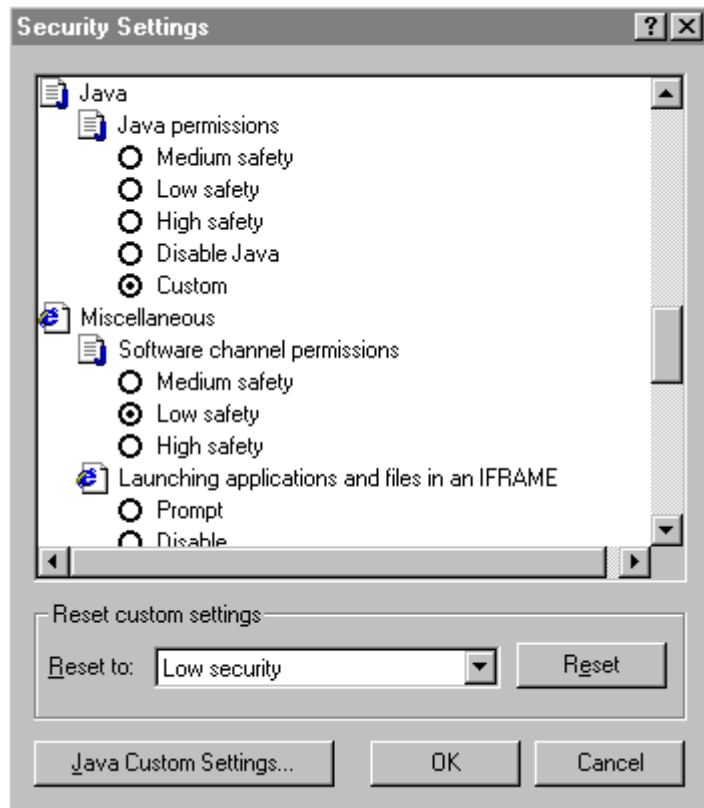


Figure A-12 Secure Settings Dialog Box

- 3 Click **Java Custom Settings**.
- 4 The **Trusted sites zones** dialog box appears. See Figure A-13. Select the **Edit Permissions** tab.



If you are using Windows 95 and the options under Unsigned Content are unavailable, (Figure A-13) verify that you are using the latest version of Internet Explorer.

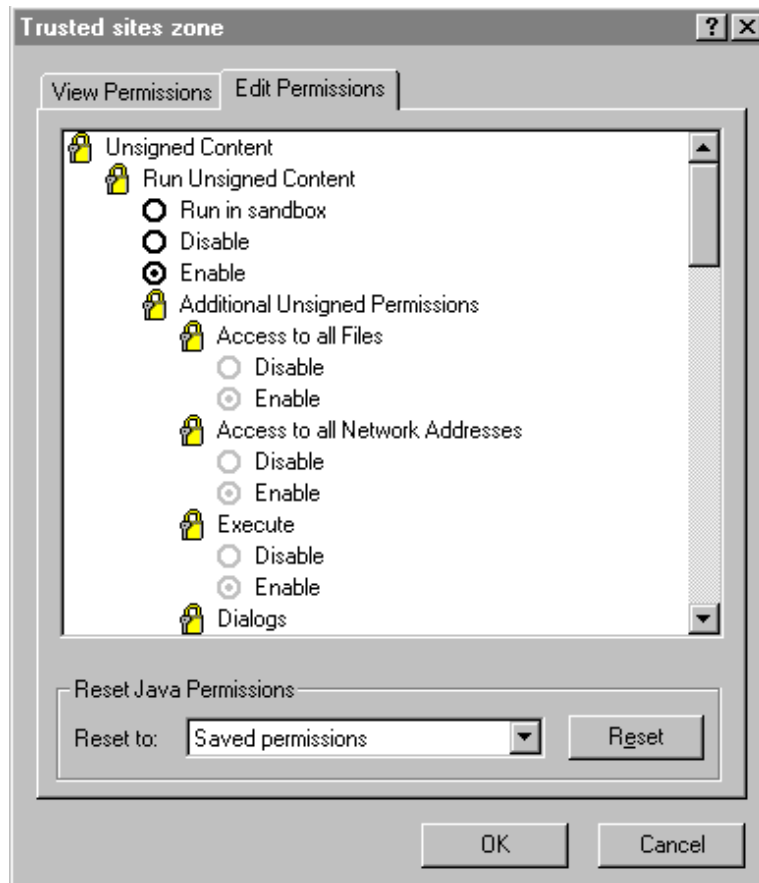


Figure A-13 Edit Permissions Dialog Box

- 5 Under the **Run Unsigned Content** choices, click the **Enable** radio button.
- 6 Click **OK** to close the Trusted site zone dialog box and again to close the Security Settings dialog box.
- 7 Click **Apply** in the Internet Options dialog box to apply the setting and **OK** to close the Internet Options dialog box.

Web Management and Netscape Navigator

If you encounter problems accessing Help files from the Filter Builder application or other Web Management applications when using Netscape, clear the browser memory cache and disk cache and restart the browser, as explained next.

Troubleshooting Help Access

To clear the cache in Netscape Navigator:

- 1 In the browser window, choose **Preferences** from the **Edit** menu.
- 2 Click **Advanced** in the Category menu tree.
- 3 Click **Cache** in the **Advanced** folder.
The browser cache options appear to the right of the menu tree.
- 4 Clear the memory and disk cache by clicking the appropriate buttons on the cache options form.
- 5 Restart the browser.



*The Netscape browser does not always shut down. To shut down the browser, press **Ctrl+Alt+Delete** and then end the task.*

Troubleshooting the Installed Web Management Software

If you are unable to run the installed Web Management software, check your `CLASSPATH` environment variable.

By default, the Web Management installation adds two directories above your existing `CLASSPATH`: `C:\3Com`.



Your directories may be different if you did not choose the default `C:\3Com` directory during installation.

If your system already has an existing `CLASSPATH` before you install the additional Web Management files, the necessary 3Com directories are added above the existing one. As a result, your classpath may resemble the following:

```
C:\3Com;C:\java\classes;C:\java\applets\myclasses;
```

If you modify your classpath and do not include the 3Com directories (and possibly if you do not list them before any other directories in your classpath), the installed Web Management components may fail to run properly.

- In Windows 95, your `CLASSPATH` is set in the `autoexec.bat` file. It usually appears in this format:

```
SET CLASSPATH=C:\3Com;
```

- In Windows NT, your `CLASSPATH` is set through the System icon in the Control Panel. Ask your system administrator if you do not know how to change your environment variables.

Examples of Good and Problematic CLASSPATH Settings

This is the minimal setting required for installed Web Management:

```
SET CLASSPATH=C:\3Com;
```

The following setting is also acceptable:

```
SET CLASSPATH=C:\3Com;C:\java\classes;
```

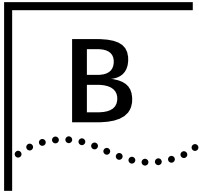
This setting may cause problems:

```
SET CLASSPATH=C:\java\classes;C:\myclasses;C:\3Com;
```

The next setting results in unspecified behavior, because the 3Com installed Web Management directories are not included.

An unspecified CLASSPATH has similar results. In either case, the installed Web Management applications may fail to run.

```
SET CLASSPATH=C:Local Status Log
```

TECHNICAL SUPPORT

3Com provides easy access to technical support information through a variety of services. This appendix describes these services.

Information contained in this appendix is correct at time of publication. For the very latest, 3Com recommends that you access the 3Com Corporation World Wide Web site.

Online Technical Services

3Com offers worldwide product support 24 hours a day, 7 days a week, through the following online systems:

- World Wide Web site
- 3Com FTP site
- 3Com Bulletin Board Service (3Com BBS)
- 3ComFactsSM automated fax service

World Wide Web Site

Access the latest networking information on the 3Com Corporation World Wide Web site by entering the URL into your Internet browser:

<http://www.3com.com/>

This service provides access to online support information such as technical documentation and software library, as well as support options ranging from technical education to maintenance and professional services.

3Com FTP Site Download drivers, patches, and software across the Internet from the 3Com public FTP site. This service is available 24 hours a day, 7 days a week.

To connect to the 3Com FTP site, enter the following information into your FTP client:

- Hostname: **ftp.3com.com** (or **192.156.136.12**)
- Username: **anonymous**
- Password: **<your Internet e-mail address>**



A user name and password are not needed with Web browser software such as Netscape Navigator and Internet Explorer.

3Com Bulletin Board Service

The 3Com BBS contains patches, software, and drivers for 3Com products. This service is available through analog modem or digital modem (ISDN) 24 hours a day, 7 days a week.

Access by Analog Modem

To reach the service by modem, set your modem to 8 data bits, no parity, and 1 stop bit. Call the telephone number nearest you:

Country	Data Rate	Telephone Number
Australia	Up to 14,400 bps	61 2 9955 2073
Brazil	Up to 14,400 bps	55 11 5181 9666
France	Up to 14,400 bps	33 1 6986 6954
Germany	Up to 28,800 bps	4989 62732 188
Hong Kong	Up to 14,400 bps	852 2537 5601
Italy	Up to 14,400 bps	39 2 27300680
Japan	Up to 14,400 bps	81 3 3345 7266
Mexico	Up to 28,800 bps	52 5 520 7835
P.R. of China	Up to 14,400 bps	86 10 684 92351
Taiwan, R.O.C.	Up to 14,400 bps	886 2 377 5840
U.K.	Up to 28,800 bps	44 1442 438278
U.S.A.	Up to 28,800 bps	1 408 980 8204

Access by Digital Modem

ISDN users can dial in to the 3Com BBS using a digital modem for fast access up to 56 Kbps. To access the 3Com BBS using ISDN, use the following number:

1 408 654 2703

3ComFacts Automated Fax Service

The 3ComFacts automated fax service provides technical articles, diagrams, and troubleshooting instructions on 3Com products 24 hours a day, 7 days a week.

Call 3ComFacts using your Touch-Tone telephone:

1 408 727 7021

Support from Your Network Supplier

If additional assistance is required, contact your network supplier. Many suppliers are authorized 3Com service partners who are qualified to provide a variety of services, including network planning, installation, hardware maintenance, application training, and support services.

When you contact your network supplier for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable

If you are unable to contact your network supplier, see the following section on how to contact 3Com.

Support from 3Com

If you are unable to obtain assistance from the 3Com online technical resources or from your network supplier, 3Com offers technical telephone support services. To find out more about your support options, please call the 3Com technical telephone support phone number at the location nearest you.

When you contact 3Com for assistance, have the following information ready:

- Product model name, part number, and serial number
- A list of system hardware and software, including revision levels
- Diagnostic error messages
- Details about recent configuration changes, if applicable

Below is a list of worldwide technical telephone support numbers:

Country	Telephone Number	Country	Telephone Number
Asia Pacific Rim			
Australia	1 800 678 515	New Zealand	0800 446 398
China		Singapore	800 6161 463
From anywhere in China:	86 21 6350 1590	S. Korea	
From Shanghai:	10 800 3656	From anywhere in S. Korea:	82 2 3455 6455
Hong Kong	800 933 486	From Seoul:	00798 611 2230
India	61 2 9937 5085	Taiwan	0080 611 261
Indonesia	001 800 61 009	Thailand	001 800 611 2000
Japan	0031 61 6439	Pakistan	61 2 9937 5085
Malaysia	1800 801 777	Philippines	1235 61 266 2602
Europe			
From anywhere in Europe, call:	+31 (0)30 6029900 phone +31 (0)30 6029999 fax		
From the following European countries, you may use the toll-free numbers:			
Austria	06 607468	Netherlands	0800 0227788
Belgium	0800 71429	Norway	800 11376
Denmark	800 17309	Poland	0800 3111206
Finland	0800 113153	Portugal	05 05313416
France	0800 917959	South Africa	0800 995014
Germany	0130 821502	Spain	900 983125
Hungary	00800 12813	Sweden	020 795482
Ireland	1 800 553117	Switzerland	0800 55 3072
Israel	177 3103794	U.K.	0800 966197
Italy	1678 79489		
Latin America			
Argentina	541 312 3266	Colombia	571 629 4847
Brazil	55 11 523 2725, ext. 422	Mexico	01 800 849 2273
North America			
	1 800 NET 3Com (1 800 638 3266)		

Returning Products for Repair

Before you send a product directly to 3Com for repair, you must first obtain a Return Materials Authorization (RMA) number. Products sent to 3Com without RMA numbers will be returned to the sender unopened, at the sender's expense.

To obtain an RMA number, call or fax:

Country	Telephone Number	Fax Number
Asia, Pacific Rim	65 543 6342	65 543 6348
Europe, South Africa, and Middle East	011 44 1442 435860	011 44 1442 435718
From the following European countries, you may call the toll-free numbers; select option 2 and then option 2:		
Belgium	0800 71429	
Denmark	800 17309	
Finland	0800 113153	
France	0800 917959	
Germany	0130 821502	
Hungary	00800 12813	
Ireland	1800553117	
Israel	177 3103794	
Italy	1678 79489	
Netherlands	0800 0227788	
Norway	800 11376	
Spain	900 983125	
Sweden	020 795482	
U.K.	0800 966197	
Austria	06 607468	
Poland	00800 3111206	
Portugal	05 05313416	
South Africa	0800 995014	
Switzerland	0800 55 3072	
Latin America	1 408 326 2927	1 408 764 6883
U.S.A. and Canada	1 800 876 3266, option 2	1 408 764 7120

Year 2000 Compliance

For information on Year 2000 compliance and 3Com products, visit the 3Com Year 2000 Web page:

<http://www.3com.com/products/yr2000.html>

