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Release Note for Catalyst 1600 Software Release 1.2

December 12, 1995

This Release Note describes important notes and caveats for Catalyst 1600 Software Release 1.2.

Catalyst 1600 Software version 1.2 comprises the following components:

- Catalyst 1600 run-time microcode (SRSW117R.BIN), version 1.17.
- TrueView, version 3.04.
- TrueView Catalyst 1600 Manager, version 1.03.
- TrueView Alert Manager, version 3.04.

Introduction

These release notes discuss the following topics:

- Supported Platforms, page 2
- Important Notes, page 3
- Release 1.2 Caveats, page 10
- Cisco Information Online, page 13

Supported Platforms

TrueView Catalyst 1600 Manager supports the following platform:

- 80486 series IBM-PC or compatible computer running at 25MHz (80486 at 50MHz recommended)
- 8 Mbytes RAM (16 Mbytes recommended)
- 510 Kbytes of free conventional memory before running Microsoft Windows
- VGA graphics adapter and monitor (SVGA recommended)
- Mouse supported by Microsoft Windows version 3.1
- MS-DOS, version 5.0 or later
- Microsoft Windows, version 3.1 or later, running in Enhanced mode

Microcode Software

Table 1 lists the microcode version supplied with the Catalyst 1600 Software version 1.2.

Table 1 Microcode versions for the Catalyst 1600 Software version 1.2

Module	Version supplied
Run-time microcode SRSW117R.BIN	1.17

If the Catalyst 1600 you are managing does not have run-time microcode version 1.17 or later, some management features are not available. For information about downloading new run-time microcode to the Catalyst 1600, see the section “Downloading Code to the Catalyst 1600” in Chapter 3, “Managing Devices” of the *TrueView Catalyst 1600 Manager User Guide*.

When you manage a Catalyst 1600 with microcode version 1.17 or later, the following additional management features are available:

- You can specify the default IP gateway for a Catalyst 1600.
- You can enable or disable cut-through switching for each Token Ring switch port, when source routing by the port is enabled.
- You can perform the entire range of functions that are available when you hold down the Reset button on the Catalyst 1600, by clicking on the Reset button in the Catalyst 1600 dialog box.
- You can click on the Reset button in the Catalyst 1600 dialog box, and execute the following management functions:
 - Reset the Catalyst 1600
 - Return the system configuration to the factory default values
 - Erase the boot code to make the Catalyst 1600 use the boot code stored in Read-Only Memory (ROM) when you reset the Catalyst 1600
 - Erase the run-time microcode and start the loader program

Important Notes

This section describes warnings and cautions about using the Catalyst 1600 software. The information in this section supplements that given in the section “Release 1.2 Caveats” later in this document. This section discusses the following topics:

- Managing Catalyst 1600s over IP or IPX, page 3
- Configuring IP Addresses, page 4
- Controlling Broadcast Frames, page 4
- Configuring LLC SAPs and Link Stations, page 5
- Running TrueView Applications, page 6
- Viewing the Speed of the Internal Fans, page 6
- Using the Reset button, page 7
- Downloading Code from a TFTP Server, page 9

Managing Catalyst 1600s over IP or IPX

TrueView Catalyst 1600 Manager can manage Catalyst 1600s on the network using either IP or IPX. To manage Catalyst 1600s over IPX only, load an IPX interface.

To manage Catalyst 1600s over IPX and IP over a Logical Link Control (LLC) interface, configure the management station as follows:

Step 1 Load an LLC interface.

Step 2 If you normally use IPX on the network, load an IPX interface.

Step 3 Remove any IP protocols that are running on the management station.

Step 4 Add the following line to the trueview.ini file in the TrueView directory, where *ip address* is the IP address of the TrueView management station.

```
[ SNMP ]  
MyIPAddress=ip address
```

Note Do not run TrueView Catalyst 1600 Manager over a Microsoft DLC (MSDL) interface. If you do use an MSDLC interface, you may experience problems when managing more than one or two Catalyst 1600s on the network.

Configuring IP Addresses

You can set an IP address, subnet mask and default IP gateway for the Catalyst 1600 in the Information dialog box. You can set the IP address of a Catalyst 1600 whether Catalyst 1600 Manager communicates with the device using IP or IPX.

Note You can only set the IP gateway if the Catalyst 1600 has microcode version 1.17 or later.

To configure IP addresses:

Step 1 Start Catalyst 1600 Manager.

The Catalyst 1600 dialog box is displayed.

Step 2 Click on the Information button.

The Information dialog box is displayed.

Step 3 Enter addresses in the IP address, Subnet mask, and IP gateway text boxes.

Instead of entering the subnet mask in the Subnet mask text box, you can choose to enable the Automatic check box. If the Automatic check box is enabled, Catalyst 1600 Manager determines the subnet mask from the class of the IP address.

Step 4 Click on the OK button.

Controlling Broadcast Frames

If the Catalyst 1600 has microcode version 1.17 or later, you can use TrueView Ringswitch Manager to configure the following means of controlling broadcast frames:

- RIP/SAP suppression determines whether the Catalyst 1600 attempts to suppress IPX RIP and SAP frames on ports that do not have an IPX router or server attached.
- All Routes Explorer (ARE) conversion determines whether the Catalyst 1600 converts ARE frames into Spanning-Tree Explorer (STE) frames.

To configure broadcast control settings:

Step 1 Start Catalyst 1600 Manager.

The Catalyst 1600 dialog box is displayed.

Step 2 Click on the Information button.

The Information dialog box is displayed.

Step 3 Click on the Source Routing button.

The Source Routing Information dialog box is displayed.

The RIP/SAP suppression and ARE conversion broadcast control settings in the Source Routing Information dialog box are described in Table 2.

Table 2 RIP/SAP Suppression and ARE Conversion

Broadcast control method	Description										
RIP/SAP suppression	<p>A means of controlling broadcast frames that determines whether the Catalyst 1600 attempts to suppress IPX RIP and SAP frames on ports that do not have an IPX router or server attached.</p> <p>If RIP/SAP suppression is enabled, the Catalyst 1600 forwards Broadcast DA Response and Broadcast DA Request frames only on ports that have been the source of Broadcast DA Response frames.</p> <p>If a Token Ring switch port fails to receive a Broadcast DA Response frame for a period of five minutes, the Catalyst 1600 determines that only IPX workstations are attached to that Token Ring and no longer sends out Broadcast DA Response frames or Broadcast DA Request frames on the port.</p> <p>The default RIP/SAP suppression setting is disabled.</p>										
ARE conversion	<p>A means of controlling broadcast frames that determines whether the Catalyst 1600 converts ARE frames into STE frames.</p> <table> <tr> <td>Enable first</td><td>The Catalyst 1600 converts all ARE frames that have a RIF length of 2.</td></tr> <tr> <td>Enable all</td><td>The Catalyst 1600 converts all ARE frames to STE frames.</td></tr> <tr> <td>Enable bcst first</td><td>The Catalyst 1600 converts all ARE frames with the broadcast destination address and a RIF length of 2.</td></tr> <tr> <td>Enable bcst all</td><td>The Catalyst 1600 converts all ARE frames with the broadcast destination address.</td></tr> <tr> <td>Disable</td><td>The Catalyst 1600 does not convert ARE frames to STE frames.</td></tr> </table> <p>The default ARE conversion setting is Disable.</p>	Enable first	The Catalyst 1600 converts all ARE frames that have a RIF length of 2.	Enable all	The Catalyst 1600 converts all ARE frames to STE frames.	Enable bcst first	The Catalyst 1600 converts all ARE frames with the broadcast destination address and a RIF length of 2.	Enable bcst all	The Catalyst 1600 converts all ARE frames with the broadcast destination address.	Disable	The Catalyst 1600 does not convert ARE frames to STE frames.
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Enable bcst all	The Catalyst 1600 converts all ARE frames with the broadcast destination address.										
Disable	The Catalyst 1600 does not convert ARE frames to STE frames.										

Configuring LLC SAPs and Link Stations

If you use an LLC interface to manage Catalyst 1600s over IPX and IP, configure the following parameters on the management station:

- 8 or more SAPs
- 30 or more link stations

If errors occur when you run Catalyst 1600 Manager, increase the available SAPs and link stations.

For information about configuring LLC SAPs and link stations, refer to the documentation supplied with your network adapter card.

Running TrueView Applications

If you attempt to run TrueView Catalyst 1600 Manager or TrueView Alert Manager by running the executable file (RSTV.EXE and ALERTTV.EXE respectively), a general protection fault may occur.

To make sure an application runs when you start TrueView, use the Setup program to specify that the application is included in TrueView.

For example, use the Setup program to configure TrueView Catalyst 1600 Manager as follows:

- Step 1** In Program Manager, click on the Setup icon in the TrueView program group.
The TrueView Configure dialog box is displayed.
- Step 2** Click on the Catalyst 1600 Manager for TV entry in the list of modules.
The Catalyst 1600 Manager Settings dialog box is displayed.
- Step 3** Set the Include Catalyst 1600 Manager in TrueView check box to on, so that an 'X' appears in the check box.
- Step 4** Click on the OK button.
The TrueView Configure check box is displayed.
- Step 5** Click on the Exit button to exit Setup and return to Program Manager.

Viewing the Speed of the Internal Fans

If the Catalyst 1600 has microcode version 1.17 or later, you can check the speed and status of the power supply fan and the external fan inside the unit.

To view the fan speeds:

- Step 1** Start Catalyst 1600 Manager.
The Catalyst 1600 dialog box is displayed.
- Step 2** Click on the Fan Speeds button.
The Fan Speed dialog box shows the speed and status of the power supply fan and the external fan.

For information about the Catalyst 1600 dialog box and the Fan Speeds button, refer to TrueView Catalyst 1600 Manager Help.

Using the Reset button

When you have entered a valid password, you can download code to the Catalyst 1600 by clicking on the Reset button in the Catalyst 1600 dialog box.

If the Catalyst 1600 has microcode version 1.17 or later, you can also reset the Catalyst 1600, erase the stored configuration, erase the run-time microcode or erase the boot code.

Resetting the Catalyst 1600

If the Catalyst 1600 has microcode version 1.17 or later, you can reset the Catalyst 1600 from the management station.

To reset the Catalyst 1600:

Step 1 Start Catalyst 1600 Manager.

The Catalyst 1600 dialog box is displayed.

Step 2 Click on the Reset button.

A pop-up menu is displayed.

Step 3 Click on the Remote Reset choice.

A warning is displayed.

Step 4 Click on the OK button.

The Catalyst 1600 resets.

Erasing the Stored Configuration

If the Catalyst 1600 has microcode version 1.17 or later, you can erase the stored configuration information and reset the settings to the factory default values. When you erase the configuration, the Catalyst 1600 password returns to the default password.

To erase the stored configuration:

Step 1 Start Catalyst 1600 Manager.

The Catalyst 1600 dialog box is displayed.

Step 2 Click on the Reset button.

A pop-up menu is displayed.

Step 3 Click on the Erase Config choice.

A warning is displayed.

Step 4 Click on the OK button.

The stored configuration is erased.

Erasing the Boot Code

If the Catalyst 1600 has microcode version 1.17 or later, you can erase the boot code from the Catalyst 1600.

To erase the boot code:

Step 1 Start Catalyst 1600 Manager.

The Catalyst 1600 dialog box is displayed.

Step 2 Click on the Reset button.

A pop-up menu is displayed.

Step 3 Click on the Erase Bootcode choice.

A warning is displayed.

Step 4 To proceed, click on the OK button.

The Open dialog box is displayed.

Step 5 Click on the OK button.

The boot code is erased. Use the Remote Reset choice (see the section “Resetting the Catalyst 1600”) to make the Catalyst 1600 restart using the boot code stored in ROM.

Erasing the Microcode

If the Catalyst 1600 has microcode version 1.17 or later, you can erase the run-time microcode from the Catalyst 1600.

To erase the microcode:

Step 1 Start Catalyst 1600 Manager.

The Catalyst 1600 dialog box is displayed.

Step 2 Click on the Reset button.

A pop-up menu is displayed.

Step 3 Click on the Erase Microcode choice.

A warning is displayed.

Step 4 To proceed, click on the OK button.

The Open dialog box is displayed.

Step 5 Click on the OK button.

The Catalyst 1600 runs the loader program, which waits for new code to be downloaded from the management station or a TFTP server (see the section “Downloading Code from a TFTP Server”), then erases the old version and restarts with the new code.

Downloading Code from a TFTP Server

If the Catalyst 1600 has boot code version 1.01 or later, you can download code from a TFTP server to the switch via TFTP over IP.

Note If you have a BOOTP server, you can download code from the TFTP server to the Catalyst 1600 by configuring your BOOTP server with the node address of the Token Ring switch port to which the BOOTP server is connected.

Before downloading code via TFTP over IP, you need the following:

- A Catalyst 1600 with a valid IP address and subnet mask.
- A TFTP server containing the microcode file that you want to download to the Catalyst 1600.
- An SNMP Management Information Base (MIB) browser to compile CISCOBOX.MIB.

To start the download process from the network management station:

Step 1 Compile CISCOBOX.MIB and use the browser to set variables *madgeDownloadIPAddress*, *madgeDownloadIPGateway* and *madgeDownloadFileName* under:

iso.org.dod.internet.private.enterprises.madge.madgeBox.madgeDownload

Step 2 Set the variable *madgeDownloadIPAddress* to match the IP address of the TFTP server.

Step 3 If the TFTP server and the Catalyst 1600 are on different IP subnets, set the variable *madgeDownloadIPGateway* to match the IP gateway.

Step 4 Set the variable *madgeDownloadFileName* to match the pathname of the microcode file on the TFTP server.

Step 5 Use the browser to set variable *madgeConfigAdminStatus* under:

iso.org.dod.internet.private.enterprises.madge.madgeBox.madgeConfig

Step 6 Set the variable *madgeConfigAdminStatus* to 7. With some MIB browsers, the option may be shown as *tftp-ip*.

When you finish browsing CISCOBOX.MIB, the Catalyst 1600 resets and starts the loader program, and the TFTP server downloads new microcode. When the code has been downloaded from the TFTP server, the switch returns all the above MIB variables to null.

If the download process fails:

Step 1 Use the browser to check the variable *madgeDownloadFailureText* under:

iso.org.dod.internet.private.enterprises.madge.madgeBox.madgeDownload

Step 2 Check the variable *madgeDownloadFailureText* to find out why the download process failed, then rectify the problem and repeat the download procedures from the start. You do not need to reset the Catalyst 1600 if the loader program is still running.

Release 1.2 Caveats

This section describes possibly unexpected behavior by Catalyst 1600 Software Release 1.2.

Upgrading to a New Software Release

When you upgrade to TrueView Catalyst 1600 Manager Release 1.2 from a previous version, delete the Catalyst 1600 database by using the TrueView Setup program, then add the Catalyst 1600s on the network to the database.

To delete the Catalyst 1600 database:

- 1 In Program Manager, double-click on the Setup icon.

The TrueView Configure dialog box is displayed.

- 2 Click on the Catalyst 1600 Manager for TV module.

- 3 Click on the Configure button.

The Catalyst 1600 Settings dialog box is displayed.

- 4 Click on the Delete database button.

You are warned that you are about to delete all saved data about Catalyst 1600s on the network.

- 5 Click on the OK button.

The Catalyst 1600 database is deleted.

When you run TrueView Catalyst 1600 Manager, add the Catalyst 1600s on the network to the database by using Auto discovery or adding the devices manually. For information about adding Catalyst 1600s, see the section “Adding a Catalyst 1600” in Chapter 2, “Getting Started” in the *TrueView Catalyst 1600 Manager User Guide*.

Compatibility with IBM Network Adapter Drivers

The following combination of IBM network adapter drivers is not supported by TrueView Catalyst 1600 Manager:

- DXMA0MOD.SYS
- DXME0MOD.SYS
- DXMT0MOD.SYS

Do not run Catalyst 1600 Manager with the above combination of IBM network adapter drivers.

Compatibility with Integralis' Chameleon

TrueView Catalyst 1600 Manager does not support Integralis' Chameleon TCP/IP applications package for Windows. Do not run Catalyst 1600 Manager with Chameleon.

IBM Spanning-Tree Algorithm

The Catalyst 1600 supports the IBM spanning-tree algorithm. In the section “Spanning-Tree Protocol” in Appendix B, “About Token Ring Switching” of the *Catalyst 1600 Token Ring Switch User Guide*, it states that the Catalyst 1600 can use IEEE spanning-tree algorithm. The Catalyst 1600 does not support the IEEE spanning-tree algorithm.

Byte Counters

TrueView Catalyst 1600 Manager uses the SNMP MIB counters IfInOctets and IfOutOctets to calculate the total number of bytes transmitted by the Catalyst 1600. The MIB defines that these are 32-bit counters. The serial management protocol uses a 48-bit counter for the Bytes Transmitted field. The result is that values for the number of bytes transmitted are truncated when they exceed 4296 million in Catalyst 1600 Manager, or 256 trillion when displayed by a terminal emulator.

Obtaining the Spanning-Tree Bridge ID

When you manage the Catalyst 1600 using the serial interface, and enter the **show bridge status command** to obtain the spanning-tree bridge ID, only the MAC address portion of the spanning-tree bridge ID is displayed. The complete spanning-tree bridge ID consists of the MAC address portion and the spanning-tree root priority.

To obtain the spanning-tree root priority, enter the **show bridge characteristics** command.

Line Errors

In certain situations, Token Ring network adapter cards generate aborted frames. A node transmits an aborted frame when it experiences a brief or permanent internal error that interrupts the transmission of the frame. For example, a Token Ring network adapter that operates at a slow bus speed may cause bus timing problems that result in aborted frames. Aborted frames are not visible on the ring.

If the Catalyst 1600 receives aborted frames, it generates a frame with a CRC error on the output port. This is reported as a line error on the ring that is attached to the output port.

If you detect a high frequency of line errors, identify the node that is generating aborted frames.

Beaconing Alerts

If beaconing occurs on a port that is configured for concentrator interface mode, no alert is sent to the network management software. No alert is generated for a beaconing recovered state.

Printing Data from Tables

When you click on the Print button to print information in the Catalyst 1600 Manager table or Alert Manager table, the information may be wider than the width of the page.

To make sure the table information fits onto the page, save the information in ASCII text, Lotus 1-2-3, or dBASE III format and open the file using a word processor or spreadsheet application.

Configuring Tables

In the Table Column Configuration dialog box, which allows you to configure the columns in the Catalyst 1600 Manager table or Alert Manager table, you cannot use keystrokes. Use the mouse to configure the table instead.

Duplicate Bridges

When ports in concentrator interface mode are connected to a device after the bridge test, the Catalyst 1600 may pass the bridge test although another Catalyst 1600 with an identical bridge number exists on the network.

When a port in concentrator interface mode is not connected to a device, a single station message indicates that it is the only node on the ring, and it passes the bridge test. If a wiring concentrator such as a Controlled Access Unit (CAU), that is already connected to another Catalyst 1600, is subsequently connected to the port that is in concentrator interface mode, the result is two parallel Catalyst 1600 devices with identical bridge numbers. The spanning tree continues to operate correctly despite the duplicate bridge condition.

To correct the problem:

Step 1 Disable source routing on the Catalyst 1600.

Step 2 Enable source routing on the Catalyst 1600.

The bridge test runs, and fails with a duplicate bridge message.

Disabling Ports with TrueView Catalyst 1600 Manager

When you use TrueView Catalyst 1600 Manager to manage a Catalyst 1600, it is possible to disable the Token Ring switch port that connects the management station to the Catalyst 1600. No warning message is displayed by TrueView Catalyst 1600 Manager. Disabling the management connection prevents further management of the Catalyst 1600 from the management station.

To resume management with TrueView Catalyst 1600 Manager, either connect to the serial interface and enable the port using the **enable port interface** command, or erase the stored configuration by holding the Reset button and releasing it when the LCD displays the appropriate message.



Caution Erasing the stored configuration returns all Catalyst 1600 parameters and the Catalyst 1600 password to the factory default values.

Downloading Code from TrueView Catalyst 1600 Manager

When there are parallel paths from the management station to a Catalyst 1600, and you use TrueView Catalyst 1600 Manager to download to a device, Catalyst 1600 Manager may time out and fail to download code. If Catalyst 1600 Manager times out, the Catalyst 1600 loader program waits for new code from the management station.

While the loader program is running, Catalyst 1600 Manager displays the warning “TV14355: Can't send request; Ringswitch needs new code.” You can download code successfully to the Catalyst 1600 when the loader program is running.

For information about downloading code to Catalyst 1600s, see the section “Downloading Code to the Catalyst 1600” in Chapter 3, “Managing Devices” in the *TrueView Catalyst 1600 Manager User Guide*.

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This document is to be used in conjunction with the *Catalyst 1600 Token Ring Switch User Guide*, *TrueView Catalyst 1600 Manager User Guide*, *TrueView Alert Manager User Guide* and *TrueView Applications Installation and User Guide* publications.

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