

Catalyst 3000 Release Note: Version 1.3

Introduction

This Release Note provides specific information regarding Catalyst 3000 software release 1.3 and the WS-X3006A ATM Expansion Module, including important cautions and certain known anomalies.

Use the accompanying document for installation and configuration instructions for the WS-X3006A ATM Expansion Module.

For details about downloading software, see the Download section in Chapter 7, "Console Configuration" in the Catalyst 3000 User Guide.

This Release Note is issued to:

- Identify limitations of Catalyst software release 1.3 and previous releases.
- Provide procedures for using product features.



Notes for the 1.3 Release

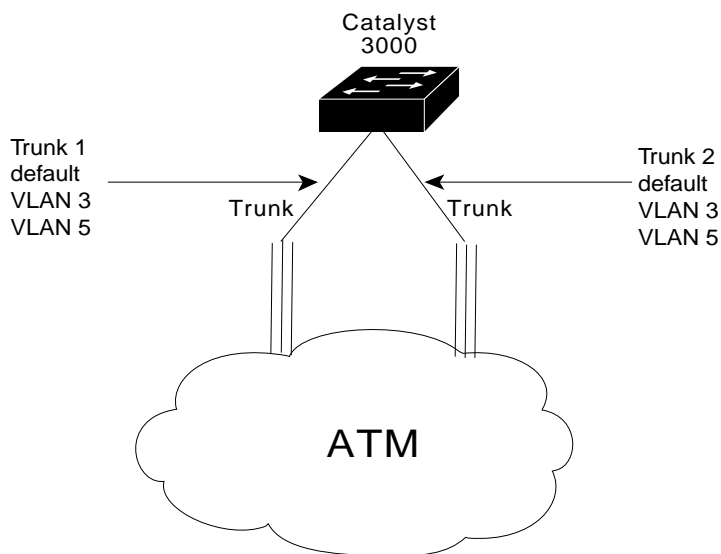
The 1.3 version of Catalyst 3000 system software consists of the 1.3 feature set, plus support for the WS-X3006A hardware module.

The software version 1.3 can support only the catalyst 3000 switch, NOT the Kalpana Pro16 or the Cisco Pro CPW16. Minimum ATM firmware version 12 is needed on the WS-X3006A in order to run version 1.3 software.

ATM Module

- 1 It is not recommended to use more than 2,000 *active* LANE LE-ARP addresses on the WS-X3006A ATM port for the 4MByte memory version of the Catalyst 3000 switch and 4,000 LANE LE-ARP addresses on the ATM port for the 8MB memory version.
- 2 With the 4MB version of the Catalyst 3000, under certain circumstances, such as having more than 2,000 LANE LE-ARP address entries on the ATM port *and* more than 20 VLANs are configured, the system may run out of main memory. If you encounter this problem, please upgrade the memory in your Catalyst 3000 to 8MB
- 3 The ATM module supports 1912 VCCs. It is not recommended to exceed this limit as it will impact system performance.
- 4 If multiple ATM ports in the same Stack are connected to the same LANE cloud, spanning tree must be enabled on the common VLANs. Note that the default VLAN is always carried on all ATM ports (see illustration below).

Figure 0-1



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Spanning Tree

Occasionally, a LANE client (LEC) will take several minutes to complete initialization. This will cause the spanning tree state on the ATM port to stay in the “listening” state until the LEC is initialized completely.



Address Filtering

MAC address filtering and Port Security features can not be applied to the ATM port.

TFTP Downloading

On the Catalyst 3000 switch, with the 4MByte memory version and ATM module, TFTP downloads may occasionally fail with the following error message “Download operation FAILED, Loading box abort operation.” It is highly recommended to use the following steps for TFTP downloading:

- Step 1** Remove fiber cables from the ATM modules.
- Step 2** Reboot the Catalyst 3000
- Step 3** Execute TFTP download
- Step 4** Reconnect the fiber cables to the ATM module
- Step 5** Reboot the Catalyst 3000

SNMP

A Stack with more than 4 Catalyst 3000 switches may exhibit slow response times from CiscoView Network Management Station. If you see this, increase timeout and retry count to 120 seconds and 10 seconds respectively on your CiscoView Network Management Station application.

100Base Fx Expansion Module

A 100BaseFx (WS-X3005) expansion module in a Catalyst 3000, with V1.3 software, may display its type in the Port Configuration menu as a 1000BaseFx . This should be displayed as 100BaseFx

System

- 1** Port 1 link status is always up, since the AUI port has no indication of link up/down. The 10Base-T port always takes priority over AUI for data transmission. Do not use Port 1 as part of an EtherChannel connection.
 - a) If Port 1 is used as an EtherChannel and the link fails, the console and SNMP will not show the failure.
 - b) Using an SNMP Manager, Port 1 will always show as *UP* even when there is no link, due to the AUI interface.
 - c) Any Link Up or Link Down traps will not be sent on Port 1 to the SNMP manager.
- 2** Warm reboots of Catalyst 3000 switches may take longer than 30 seconds. This could possibly result in server or client stations suffering timeouts.
- 3** The system message log is capable of holding information for a maximum of fifty events. The design of this log is to discard the oldest messages in order to make room for the new ones, only the most recent twenty-five events will be subject to this first in first out updating of the event log. The first twenty-five messages will not be flushed out and will remain in the log indefinitely.



Virtual LAN's

- 1 Fields and labels in the system console screens which used to be displayed as “domain” have been changed to display “VLAN.” This change will only become apparent if the Catalyst 3000's NVRAM is re-initialized after the 1.3 software release has been loaded. All console references to “domain” will be changed to “VLAN” after a NVRAM initialization.

TFTP

- 1 TFTP downloads should be initiated from the console port or through a Telnet session. This release version does not support initiating TFTP download from the SNMP manager station.

SwitchProbe

- 1 The SwitchProbe port may drop some packets when traffic on the port is heavy, (80-90% utilization).
- 2 The SwitchProbe only applies to the 10BaseT ports and cannot be used on the high-speed ports.
- 3 When using the SwitchProbe feature, be sure to enter the correct number of the port to be monitored.

IP Configuration

Caution Sending a Ping from IP-disabled domains or a domain whose IP address is 0.0.0.0. may cause system problems. Do not set any gateway address to IP-disabled VLANs or a VLAN whose IP address is 0.0.0.0. as this may cause system problems.

- 1 The Catalyst 3000 sends a ping to the default gateway every 10 minutes if a default gateway is configured.
- 2 If a Stack becomes divided:
 - a) All of the Catalyst 3000's will have the same IP address
 - b) The ARP tables in other network end stations may no longer be valid.
 - c) The Catalyst 3000 will transmit an ARP reply to update the end stations' ARP tables.



Bootp

- 1 Use the following formula to enter the hardware address in the “bootptab” file when VLANs are configured:

(Switch Base address + 0x20(hex) + VLAN number)

For example, if the bootp request is started from the default VLAN (VLAN 0) and the switch's base MAC Address is 008024044AC0, then the MAC address to be entered in the bootptab file is (008024044AC0 + 0x20h + 0) = 008024044AE0.

For a Stack, use the same formula, but begin with the switch base address of the lowest numbered box in the Stack.

SNMP Management

- 1 MIB variables:
 - a) The ifInErrors and ciscoEs3PortPktsInErrors always return 0 (zero).
 - b) When the ciscoEs3PortHashOverflows variable is read from an SNMP manager, the count is always zero. Check the console for correct information.
 - c) In the ciscoEs3PortStnE table, the variable StnPortOfExit does not return the correct value.
- 2 When using the console to add an entry in the trap receiver table, be sure to use the spacebar to select the desired domain (an asterisk will appear next to the domain after the spacebar is pressed).
- 3 If an SNMP *get-request* packet contains *gets* on several kalEps3DmnPortPorts instances, the port mask is returned for all values.

Example:

ciscoEs3DmnPortPorts.0.1

ciscoEs3DmnPortPorts.0.1.2

ciscoEs3DmnPortPorts.40.5

ciscoEs3DmnPortPorts.45.5

Console

- 1 To Autobaud, press alt-B or Break repeatedly.
- 2 When a console is connected to a Catalyst 3000 that is powered-up and running, There are times when the console screen may appear to be locked. Press the Escape key a few times to free up the console screen. Some warning messages may be lost before the console session returns.
- 3 When using console and telnet sessions to access the user configuration interface of the catalyst 3000, do not attempt to modify any of the same configuration parameters from two or more telnet or console sessions at the same time.



Downloading New Software

▶▶▶▶▶ **Note**

Cisco recommends that only the Main Image file (cat3_13.gz) and the ATM firmware image file (kas.v12.bin) should be downloaded by the user.

Observe the following precautions when downloading new software. For more details on software downloading instructions, see the accompanying ATM Expansion Module installation guide.

Downloading is used to load the FLASH Memory within the Catalyst 3000. The Download menu displays two download choices for a non-Stacked Catalyst 3000, and three options for a Catalyst Stack. If software is not downloaded properly to the Catalyst 3000 units when configured as a Stack, communication between Catalyst 3000 units in a Stack could become broken.

Serial Link downloading is used for downloading software through a console or Personal Computer. TFTP downloading is used for downloading software that has been loaded onto a server. In a Stack environment, it is easier to download through TFTP because you only have to download to one of the Catalyst 3000 units in the Stack. That Catalyst 3000 then updates the FLASH memory in each remaining 3000 unit in the Stack. This feature is not available when using Serial Link downloading. With Serial Link downloading, each Catalyst 3000 unit must be downloaded individually. See the following section, “Serial Link Download” for more information.

When software is downloaded, it is loaded into FLASH memory. The Catalyst 3000 does not start executing the newly downloaded code software until the FLASH memory has been written to the system DRAM, which will take place when the unit is reset or power cycled.

When upgrading a Stack, software is sequentially loaded into the FLASH of each individual Catalyst 3000. After the FLASH in all of the Catalyst 3000 units in the Stack have received the new software image, a software reset for all of the units must be done in order to load the new image into DRAM.

When configured as a Stack, all Catalyst 3000 units must be running the same versions of code. Catalyst units running software versions different than what is already running on the Stack will not be allowed to join the Stack.

You should always perform software upgrades before installing any new hardware that is only supported by upgraded software. Installing hardware that is not supported by the current software version may cause problems.

Main Image TFTP Download

TFTP is not a standard part of the Catalyst 3000 bootup procedure, so TFTP is not invoked automatically on the Catalyst 3000 as it is on certain other network devices, such as diskless workstations. Since FLASH memory normally contains a functional software image, TFTP is only intended for software upgrades or “repairs.” Once a new image is installed, there should be no need for TFTP until the next software upgrade.

The TFTP function in the Catalyst 3000 is designed as an explicitly-requested operation with operator configurable parameters. Note that changes to these parameters are displayed as they are made, but are not recorded until the screen is exited normally.

The TFTP Download menu is accessible from the Main menu. From the Main menu, select the Download menu and then select the TFTP Download sub-menu.



ATM Firmware TFTP Download

One of the features of the new WS-X3006A ATM module is that it allows Firmware upgrades to be download into the module's FLASH memory by using the TFTP download process. Like the main image download, upgrading of the WS-X3006A firmware is a user initiated process. This feature will eliminate the need to send modules back to the factory for the purpose of software upgrades.

The ATM Firmware TFTP Download menu is accessible from the Main Menu. From the Main menu, select the Download menu and then select the ATM Firmware TFTP Download sub-menu.

Serial Link Download

The Serial Link Download is used for downloading via the console port. From the Main menu, select the Download menu and then select Serial Link Download. This displays a prompt requesting to "confirm new code download via serial port (Y or N)". Follow the prompts as they are displayed.

When the console indicates that it is waiting for a binary file, be sure you set your communications program to use the XMODEM protocol and select the file type as binary before sending the file. After the file is downloaded, reset the switch.

Repeat this process for each Catalyst 3000 if you have more than one.

Unlike TFTP downloads, it is not recommended that you perform a serial download on a "live" network.

This type of downloading procedure does not support ATM Firmware downloading.

TFTP Download Menus For Main And Firmware Images

When entering the "TFTP Download" sub-menu to download the main system image, the following menu options will be displayed:

- TFTP Server Address
- Download VLAN
- Download Filename
- Execute Network Download
- Execute Stack Network Download (for a Stack configuration)

TFTP Server Address menu

The IP address of the host machine serving as the TFTP server.

Download VLAN menu

The VLAN name through which the download will be attempted.

Download Filename menu

The file the Catalyst 3000 attempts to download, as it is to be received and interpreted by the TFTP server. (The security mode in use on the TFTP server may affect this function).

Depending on your server software, the filename may be case sensitive. If necessary, go back to the server and verify the exact case of the filename.



Execute Network Download

Use this option for downloading to a single, stand-alone Catalyst 3000 switch. The Execute Network Download will download only to the FLASH in the switch that the command is executed from.

▶▶▶▶▶ **Note**

This option is not recommended for Stack configurations.

During the download process, the screen will display which block of the new software image it received from the network until the last code block arrives. Immediately after the last block is received, the system FLASH is cleared and loaded with the new image.

Once the download is complete (when the console indicates “download complete- reset switch to load new software”), reset the switch to load and run the new software.

Use this option for downloading ATM firmware to WS-X3006A modules in a single, stand-alone Catalyst 3000 switch. The Execute Network Download will download only to the modules in the switch that the command is executed from. This command will TFTP download the image, and then store it into the FLASH of the WS-X3006A module(s) that are installed in that switch.

Execute Stack Network Download

This function initiates the TFTP download process for Catalyst 3000 Stack configurations. The Execute Stack Network Download procedure is similar to the Execute Network Download procedure, with the exception that this option will automatically download the software and send it to the FLASH memory of all of the switches in a Stack. This feature eliminates the need to individually load each switch in the Stack.

This single command can also be used to update the firmware on all of the WS-X3006A ATM modules located in all of the switches in a Stack. When using this option for ATM firmware downloading, the the specified image is TFTP downloaded and the new image is then written to FLASH in all of the WS-X3006A modules in the Stack.



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▶▶▶▶▶ Note

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This document is to be used in conjunction with the *Catalyst 3000 Stack User Guide* publication.

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