CISCO SYSTEMS ®

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Catalyst 3000 Release Note Version 1.1.2

This release note provides specific information regarding the release of the Catalyst 3000 Stack and Matrix, and the 10BaseT (WS-C3001) and 100BaseT (WS-C3004) expansion modules, including important cautions and certain known differences.

This Release Note is issued to:

- Identify the limitations of the Catalyst 3000 Stack and the 100BaseT (WS-X3001), and Catalyst Stack Port (WS-X3004) expansion modules.

- Provide procedures for using product features.

Notes for the 1.1.2 Release

1. Current version 1.1.1 software for the Cat3000 does not recognize the stack port in certain console menus. In Configuration-Module information menu only three entries appear. The fourth one, which is for the stack port information, is missing. The stack port picture is also missing from NMS (CiscoView) which is a device bitmap drawing. However, the stack port is functioning OK. Stack forming and communication is not affected. This issue is fixed in v1.1.2 release.

If cat3_111.gz runs on a system with board ID = 0x01, this problem does not exist.

Notes for the 1.1.1 Release

The 1.1.1 version of the Catalyst 3000 Stack system software consists of the 1.1.1 feature set, plus support for the WS-X3001, WS-X3004, and Catalyst Matrix hardware.

System

1 Port 1 link status is always up, since the AUI port has no indication of link up/down. The 10BaseT port takes priority for data transmission. Do not use Port 1 as part of the EtherChannel connection.

— If Port 1 is used as an EtherChannel and the link fails, the console and SNMP will not show the failure.

— Using an SNMP Manager, Port 1 will always show as UP even when there is no link, due to the AUI interface.

— Any link up or link down traps will not be sent on Port 1 to the SNMP manager.

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2 When a stack is forming, all the switches must have the same software revision. However, even if they do, sometimes a message is incorrectly displayed, stating that there are different versions of software. Ignore this message.

3 Each Catalyst 3000 keeps its own real-time clock. It is possible that two or more Catalyst 3000 units within a stack may report different times. When you set the time in the System Configuration menu, the real time clocks on all the individual Catalyst 3000 units are updated with the new time.

TFTP

4 You should initiate TFTP downloads from the console or Telnet. This release version does not support initiating TFTP download from the SNMP manager station.

SwitchProbe

5 The SwitchProbe port may drop some packets when traffic on the port is heavy, for example, when there is 80-90% utilization.

6 The SwitchProbe only applies to the 10BaseT ports. It cannot be used on the 100BaseTX ports.

Port Counters

7 The counters for STP reserved addresses should always be zero in the port address table. Ignore them if they are not zero.

8 In the Port Address Table display, some entries will show a zero SrcPkts count and   a non-zero SrcBytes count. The packet count should be zero in such cases. Under limited conditions some entries will show a zero DstPkt count and a non-zero DstBytes count. This counter should be ignored.

9 The first few packets received from a previously unknown address may not be included in the packet count.

IP Configuration

Caution   Sending a ping from IP-disabled VLANs or a VLAN 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.

10 The Catalyst 3000 Catalyst Stack sends a ping to the default gateway every 10 minutes if a default gateway is configured.

11 If a stack becomes disjoined, you will have multiple switches with the same IP address. Also, the ARP tables in other network end stations may no longer be valid. The Catalyst 3000 transmits an ARP reply to update the end stations' ARP tables.

Bootp

12 Use the following formula to enter the hardware address in the "bootptab" file when VLANs are configured:

```
(VLAN 0 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, 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 base MAC address that is displayed as the "default VLAN" under the Master Address Table in the Statistics menu. (Note that this address dynamically changes, depending on the IP provider in use.)

Address Tables

13 In a stack, resetting a port's address table also clears the remote address entries for ports on different switches in that stack.

SNMP Management

14 MIB variables:

— The ifInErrors and kalEps3PortPktsInErrors always return 0 (zero).

— When the kalEps3PortHashOverflows variable is read from an SNM manager, the count is always zero. Please check the console for correct information.

— In the kalEps3PortStnE table, the variable StnPortOfExit does not return the correct value.

15 To add an entry in the trap receiver table using the console, make sure to use the spacebar to select the desired VLAN (an * will appear next to the VLAN after the spacebar is pressed).

16 If an SNMP get request packet contains gets on several kalEps3DmnPortPorts instances, the port mask will be returned for all values.

For example:

```
kalEps3DmnPortPorts.0.1 kalEps3DmnPortPorts.0.1.2 kalEps3DmnPortPorts.40.5
kalEps3DmnPortPorts.45.5
```

17 The get_kalEps3DmnPortPorts( ) routing in comain.c returns OCTET_T Pointer to a local static variable. When this routing is called multiple times to answer the requests of one packet, the old value will be overwritten.

Console

18 To enable the Autobaud feature, press alt-B or Break, and then press the RETURN key rapidly for five seconds.

19 If the console is connected after the switch is up and running, sometimes the console screen may appear to be locked. Press the Escape key a few times to free up the console screen. Be aware that some warning messages may be lost.

Spanning Tree Configuration

20 In the Spanning Tree menu, for the selection of port priority or port path cost, select only the ports which are part of the current VLAN. Do not configure ports in other VLANs.

Software Disk File Names

21 The file names are as follows on the software disk provided with the Catalyst 3000:

— Main Image for download: Cat3_111.gz

— Catalyst 3000 Private MIB: Cat3000.mib

— Catalyst 3000 Private MIB without Trap: C3notrap.mib

— Readme File: readme.txt

The Main Image file (Cat3_111.gz) is the only file that Cisco recommends be downloaded by the user. For further assistance contact the Cisco Technical Assistance Center (TAC).

Downloading New Software

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 in a stack, communication between Catalyst 3000 units in a stack could become broken. It is important that these procedures are followed when downloading new software.

Serial Link downloading is used for downloading software through a console or PC. TFTP downloading is used for downloading software that has been loaded on a server. In a stack environment, it is easier to download through TFTP, because you only have to update one Catalyst 3000; that Catalyst 3000 in turn updates the Flash memory in each remaining Catalyst 3000 in the stack. Note that this feature does not work when doing a serial download through the console port. In this case, you must load each Catalyst 3000 separately.

When software is downloaded, it is downloaded into FLASH memory. The Catalyst 3000 does not start executing the newly downloaded software until the FLASH memory writes the image to DRAM. DRAM is not updated until the unit is reset, either manually or when prompted through the operator interface.

When upgrading a stack, software is normally loaded into the FLASH of each individual Catalyst 3000. After all the Catalyst 3000 units have received the new software image, all the Catalyst 3000 units are reset at the same time. In a stack configuration, all Catalyst 3000 units in the stack must be running the same version of software. Two Catalyst 3000 units running different versions of software will not join to form a stack.

You should perform software upgrades before installing any new hardware that is only supported by the upgraded software. Installing hardware that is not supported by the currently loaded software can cause problems.

TFTP Download

TFTP is not invoked automatically on the Catalyst 3000 as it is on certain other network devices, such as a diskless workstation. This is because there should normally be a functional software image in Flash memory and, therefore, TFTP is not a standard part of the Catalyst 3000 bootup procedure (under normal circumstances). TFTP is intended for use during software upgrades or "repairs" only, and, once a new image is installed, there should be no need for TFTP until the next software upgrade.

In view of this, the TFTP function in the Catalyst 3000 is designed as an explicitly-requested operation with operator-settable parameters. Note that changes to these parameters may be altered and are used when starting a download in the display, but they are not recorded until the display is exited normally.

The TFTP Download menu is accessed through the Main menu. From the Main menu select the Download menu and then select the TFTP Download menu.

Serial Link Download

The Serial Link download is 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.

TFTP Download Menu

When Catalyst 3000 units are not stacked, the following submenu options appear:

- TFTP Server Address
- Download VLAN
- Download Filename
- Execute Network Download

If you are running version 1.1.1 software or higher and two or more Catalyst 3000 units are stacked together, the following submenu options appear:

- TFTP Server Address
- Download VLAN
- Download Filename
- Execute Network Download
- Execute Stack Network Download

More information about these menu options is given below.

TFTP Server Address

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

Download VLAN

The VLAN name through which the download is attempted.

Download Filename

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, this filename may be case sensitive. If necessary, go back to the server and verify the exact case of the filename.

Execute Network Download

This option initiates the download for a single Catalyst 3000 switch. Use it if you only have one switch. This procedure is not recommended for stack configurations.

The screen displays the block it last received from the server (block 0 if no reply has been received) until the last packet arrives. The Catalyst 3000 does not attempt to load any of the image into Flash memory until it receives the final packet. Therefore, if the download is interrupted or canceled for any reason before the last packet, the previous system image remains intact in Flash memory. After the last packet has arrived, the Catalyst 3000 immediately begins clearing Flash memory and loads it with the new image.

The Catalyst 3000 continues to use its previously loaded software until its next reset. The newly stored image is not functional until a reset is performed. If the process is interrupted during this time, the stored image may be corrupted and the Catalyst 3000 will not be able to boot normally. If this happens, it is necessary to download the Catalyst 3000 via its console port since the system boot image does not contain software capable of operating the Catalyst 3000 network hardware or translating IP and TFTP protocols.

During this operation, the diagnostic LED on the Catalyst 3000 blinks to indicate the clearing (slow blink) and reloading (faster blink) of FLASH memory. The screen also displays messages indicating these events.

Execute Stack Network Download

This function initiates downloading for the stack. The procedure is similar to the "Execute Network Download; " however, the stack download procedure downloads to the entire stack of switches in one operation. When the stack download procedure is used, only the same code or the same level of code can be downloaded for all of the switches in the stack. Use this option if you are running version 1.1.1 or greater software and you have two or more switches in a stack.

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* Telnet: `cio.cisco.com`.

* Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and baud rates up to 14.4 kbps.

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

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