



## 2.2(1) Version Software Release Note Catalyst 3000 Series

---

The 2.2(1) software release supports the existing Catalyst 3000 switch family (including the Catalyst 3000, Catalyst 3100 and Catalyst 3200) and CPW1601, and introduces the following features:

- Cisco Group Management Protocol (CGMP)
  - to provide enhanced multicast management
- Dynamic Inter-Switch Link Protocol (DISL)
  - to enhance plug and play connectivity of ISL capable ports
- Enhanced broadcast packet handling
- Monitoring of ATM Services (LECS, LES, BUS) via SNMP
  - these MIBs can be read from but not written to
- Deterministic box identification in back to back (dual) Stack configurations
- Improved system performance when creating VLANs or when moving ports between VLANs
- Support for SNMP v2C including get-bulk transfers with transfer sizes up to 8KB
  - refer to RFC1901 for more details.

For detailed information about configuring CGMP and DISL Protocols, refer to the 2.2(1) Configuration Note. For detailed information about configuring other features on a Catalyst 3000 series switch, refer to the Installation and Configuration Guide.

### Critical 2.2(1) Software Upgrading Instructions



**Caution** As with other 2.0 and above releases, if you are upgrading a pre 2.0 system, you *MUST* upgrade the bootcode first. If you do not, the system will *not* boot when restarted.

See the section “Downloading the 2.0 (or above) Image to a Pre 2.0 system” in the 2.0(1), 2.0(2), 2.0(3), 2.1(1) or 2.1(2) Release Notes for complete details.

### Firmware and Memory Requirements for the 2.2(1) Release

- ATM Firmware revision v14 is also released with the 2.2(1) release. This ATM firmware version contains a fix for 1 anomaly and is required for CGMP to run over ATM trunks on the Catalyst 3000 family. The new firmware is fully compatible with existing main images.
- The 2.2(1) release requires 8MB of DRAM. For existing 4MB boxes, an upgrade kit (WS-X3428) is available.

### System Limitations

- All systems still have the same hardware limitation of no more than 4 trunk ports per box (ISL and/or ATM). ATM ports are always considered to be trunk ports. This limit is per box, not per Stack (up to 32 trunk ports can be supported in an 8 box Stack).
- No more than 2 ATM ports can be installed per box.
- As with all post 2.0 releases, Boot Code version 2.0 must be used for the system to boot correctly.

### Configuration Notes

- When upgrading existing systems, ISL-capable ports previously configured as Static are set to DISL state Auto, and ISL-capable ports previously configured as Trunk are set to DISL state Desirable.
- A new version of ATM firmware (v14) is required to run CGMP over ATM trunks. v14 of the ATM firmware is backward compatible with all existing ATM releases on the Catalyst 3000 family (i.e. 1.3, 2.0(x), 2.1(x)).
- When using the Port Statistics Screen (from the Reset Statistics menu) please observe the following warning:

Clearing a port's statistics resets *all* of the counters for this port, both those displayed on the console and those reported via SNMP. If you are using port statistics data for important applications you should exercise extreme caution in choosing to reset a port's statistics, since all applications dependent on such statistics will be affected.

### Feature Notes

- Enhanced broadcast handling is provided by not forwarding broadcast packets to the CPU on any VLAN which has IP disabled. This allows the user to enable IP on only management VLANs and not have the CPU see broadcasts on other VLANs.
- Reliable box identification in back to back (dual) Stacks is provided to ensure that stacks reliably reform with the boxes assuming the same box number each time. This is provided by saving the box number of each box in non-volatile memory and using that value when the stack is reforming. The earlier method of determining box numbers is still used if there are no valid box numbers saved or the boxes have conflicting information due to a box being replaced.

### NMS Notes

- A CiscoView package (version 1.4) for the Catalyst 3000 series, which provides full support for the 2.2(1) release, will be available on CCO. This package will be incorporated into the CWSI 2.0 release.

## Known Anomalies

The following are known conditions as of this version of the software release.

### CGMP Limitations Over ATM (CSCdj04492)

This limitation is described in detail in the CGMP section of the 2.2(1) Configuration Note. Multicast sources arriving at the Cat3000 via an ATM port cannot have the list of destination ports controlled by CGMP. This is a limitation of the ATM subsystem and is not planned to be fixed in any future release.

### CGMP and Filter Table Entry Conflict (CSCdj15673)

It is not possible to run CGMP and have Address Filtering in use at the same time. CGMP will override filter table entries.

### SNMP Sets Are Not Supported for ATM LANE MIBs (CSCdj21675)

SNMP Sets for the LANE server MIBs, CISCO-LECS-MIB, CISCO-LES-MIB and CISCO-BUS-MIB are not supported for the 2.2(1) release.

---

**Note** The CISCO-LEC-MIB remains unchanged with this release (it continues to support only SNMP Gets and does not support SNMP Sets).

---

### Per-VLAN, Per-Trunk Statistics Not Supported (CSCdj21110)

IfNumber MIB object counts only physical port and VLAN interfaces. The sub-interfaces reported in the ifTable and ifXTable for reporting per-VLAN, per trunk/ATM server type statistics, are not counted in the current Catalyst 3000 implementation.

## Corrected Anomalies

The following conditions have been corrected with this version of the software release. In addition, all corrections applied to the 2.0(3) and 2.1(2) releases are included in this release.

CSCdj10909: NVRAM TFTP Download/Upload fails if a Catalyst 3200 is not first in the Stack

CSCdj11850: Changing ports between VLANs on a Catalyst 3000 series causes packet loss

CSCdj09537: Interoperability between Catalyst 3000 and 5000 with ISL; CAM gets confused

CSCdj12151: Broadcast Suppression Broken

CSCdj12152: ISL, Non-ISL Ports are numbered incorrectly

CSCdj12155: Trunking, Non-Trunking bounces if new VLAN is created

CSCdj15107: Connectivity over LANE stops for awhile then comes back.

Note: The fix for this anomaly is contained in v14 of the ATM firmware, not in the 2.2(1) image.

CSCdj16625: MAC filters block traffic to CPU

CSCdj02783: Stack port numbering incorrect if boxes swapped

CSCdj08257: High ping failure rate between Catalyst 3000 series and FORE ATM NIC

CSCdj15310: SSCOP problems between Catalyst 3000 series and LS1010

CSCdj14897: Catalyst 3000 (series) propagates VTP packets from STP blocked ports in VTP transparent mode

CSCdj18924: Address table - ping stopped working when trunk became static

CSCdj19374: ARP response was not sent over a trunk. STP was FWD but ASIC was BLK

CSCdj19472: Stack - box 2 does not agree with box 1's spanning tree topology

CSCdj19203: STP - Box 2 does not see box 1's ports due to ATM card init timing

CSCdi92430: RB can be confused by primary leaving/rejoining without notification

CSCdj13107: Broadcast packets should not be forwarded to CPU when IP is disabled

CSCdj17518: ISL trunking not passing Appletalk traffic

## Obtaining Service and Support

For service and support for a product purchased from a reseller, contact the reseller. Resellers offer a wide variety of Cisco service and support programs, which are described in the section “Service and Support” in the information packet that shipped with your chassis.

---

**Note** If you purchased your product from a reseller, you can access Cisco Connection On-line (CCO) as a guest. CCO is Cisco Systems’ primary, real-time support channel. Your reseller offers programs that include direct access to CCO’s services.

---

For service and support for a product purchased directly from Cisco, use CCO.

## Cisco Connection On-line

CCO is Cisco Systems’ primary, real-time support channel. SMARTnet customers and partners can self-register on CCO to obtain additional content and services.

---

**Note** If you purchased your product from a reseller, you can access CCO as a guest. Your reseller offers programs that include direct access to CCO’s services.

---

Available 24 hours a day, 7 days a week, CCO provides a wealth of standard and value-added services to Cisco’s customers and business partners. CCO services include product information, software updates, release notes, technical tips, the Bug Navigator, configuration notes, brochures, descriptions of service offerings, and download access to public and authorized files.

CCO serves a wide variety of users through two interfaces that are updated and enhanced simultaneously—a character-based version and a multimedia version that resides on the World Wide Web (WWW). The character-based CCO supports Zmodem, Kermit, Xmodem, FTP, and Internet e-mail, and is excellent for quick access to information over lower bandwidths. The WWW version of CCO provides richly formatted documents with photographs, figures, graphics, and video, as well as hyperlinks to related information.

You can access CCO in the following ways:

- WWW: <http://www.cisco.com>.
- WWW: <http://www-europe.cisco.com>.
- WWW: <http://www-china.cisco.com>.
- Telnet: [cco.cisco.com](http://cco.cisco.com).
- Modem: From North America, 408 526-8070; from Europe, 33 1 64 46 40 82. Use the following terminal settings: VT100 emulation; databits: 8; parity: none; stop bits: 1; and baud rates up to 14.4 kbps.

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

---

**Note** If you need technical assistance with a Cisco product that is under warranty or covered by a Cisco maintenance contract, contact Cisco's Technical Assistance Center (TAC) at 800 553-2447, 408 526-7209, or tac@cisco.com.

---

Please use CCO to obtain general information about Cisco Systems, Cisco products, or upgrades. If CCO is not accessible, contact 800 553-6387, 408 526-7208, or cs-rep@cisco.com.

---

This document is to be used in conjunction with the *document\_title* publication.

AtmDirector, AutoConnect, AutoRoute, AXIS, BPX, Catalyst, CD-PAC, CiscoAdvantage, CiscoFusion, Cisco IOS, the Cisco IOS logo, *CiscoLink*, CiscoPro, the CiscoPro logo, CiscoRemote, the CiscoRemote logo, CiscoSecure, Cisco Systems, CiscoView, CiscoVision, CiscoWorks, ClickStart, ControlStream, EdgeConnect, EtherChannel, FairShare, FastCell, FastForward, FastManager, FastMate, FastPADImp, FastPADmicro, FastPADmp, FragmentFree, FrameClass, Fulcrum INS, IGX, Impact, Internet Junction, JumpStart, LAN<sup>2</sup>LAN Enterprise, LAN<sup>2</sup>LAN Remote Office, LightSwitch, NetBeyond, NetFlow, Newport Systems Solutions, *Packet*, PIX, Point and Click Internetworking, RouteStream, Secure/IP, SMARTnet, StrataSphere, StrataSphere BILLder, StrataSphere Connection Manager, StrataSphere Modeler, StrataSphere Optimizer, Stratm, StrataView Plus, StreamView, SwitchProbe, SwitchVision, SwitchWare, SynchroniCD, *The Cell*, The FastPacket Company, TokenSwitch, TrafficDirector, Virtual EtherSwitch, VirtualStream, VlanDirector, Web Clusters, WNIC, Workgroup Director, Workgroup Stack, and XCI are trademarks; Access by Cisco, Bringing the Power of Internetworking to Everyone, Enter the Net with MultiNet, and The Network Works. No Excuses, are service marks; and Cisco, the Cisco Systems logo, CollisionFree, Combinet, EtherSwitch, FastHub, FastLink, FastNIC, FastPacket, FastPAD, FastSwitch, ForeSight, Grand, Grand Junction, Grand Junction Networks, the Grand Junction Networks logo, HSSI, IGRP, IPX, Kalpana, the Kalpana logo, LightStream, MultiNet, MultiWare, OptiClass, Personal Ethernet, Phase/IP, RPS, StrataCom, TGV, the TGV logo, and UniverCD are registered trademarks of Cisco Systems, Inc. All other trademarks, service marks, registered trademarks, or registered service marks mentioned in this document are the property of their respective owners.

Copyright © 1997, Cisco Systems, Inc.  
All rights reserved. Printed in USA.  
9611R