Release Notes for Catalyst 5000 Family Software Release 4.*x*

Current Release:
4.5(13a) - February 5, 2002

Previous Releases
4.5(13), 4.5(12), 4.5(11), 4.5(10), 4.5(9), 4.5(8), 4.5(7), 4.5(6), 4.5(5), 4.5(4), 4.5(3), 4.5(2), 4.5(1), 4.4(1), 4.3(1a), 4.2(2), 4.2(1), 4.1(3), 4.1(2), 4.1(1)

These release notes describe the features, modifications, and caveats for Catalyst5000 family supervisor engine software release4.*x* and all 4.*x* maintenance releases. The current 4.*x* release is supervisor engine software release4.5(13a). These release notes apply to Catalyst 5000 family switches as well as to Catalyst 2926G and 2926 series switches running Catalyst 5000 family supervisor engine software.

Note Although the software image in a new Catalyst5000 family switch operates correctly, later software images containing the latest upgrades and modifications are released regularly to provide the optimal software available. We strongly recommend that you check for the latest released software images at the World Wide Web locations listed in the "Release 4.x Software Upgrade Path" section on page3

Note Release notes for prior Catalyst5000 family software releases were accurate at the time of release. However, for information on the latest caveats and updates to previously released Catalyst5000 family software releases, refer to the release notes for the latest maintenance release in your software release train. You can access all Catalyst 5000 family release notes at the World Wide Web locations listed in the section "Obtaining Documentation" section on page86.

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Document Contents

This document consists of these sections:

Release 4.*x* Memory Requirements

These memory restrictions apply when running supervisor engine software release 4.*x*:

- If you are using the new 20-MB Flash PC card (Cisco product number MEM-S3-FLC20MA) for the Supervisor Engine III, you must use software release 4.5(4) or later. The old 20-MB Flash PC card (MEM-S3-FLC20M) is supported in all 4.*x* releases.
- All of the Catalyst 5000 family supervisor engine 4.*x* software releases require a minimum of 16-MB RAM installed on your supervisor engine. All Catalyst5000 family supervisor engines with at least 16-MB DRAM fully support software release4.*x*.

Note Future releases of the supervisor engine software will require 32-MB DRAM on the supervisor engine.

Release 4.*x* Software Upgrade Path

Caution Always back up the switch configuration file before upgrading or downgrading the switch software to avoid losing all or part of the configuration stored in nonvolatile RAM (NVRAM). Use the **write network** command (Supervisor Engine I or II) or the **copy config tftp** command (Supervisor Engine III) to back up your configuration to a Trivial File Transfer Protocol (TFTP) server. Use the **copy config flash** command on a Supervisor Engine III to back up the configuration to a Flash device.

Caution Upgrading from software release version 4.5(1), 4.5(2), and 4.5(3) to 4.5(4) causes Token Ring module configurations to be lost. The workaround is to upload the configuration to a TFTP server before upgrading and reload the configuration after the upgrade is complete. Note that this problem only affects the configuration for the actual Token Ring module itself and not general configurations such as Token Ring VLANs.

Catalyst5000 family supervisor engine software image files are available in the Software Center on Cisco.com, Cisco's WWW site (software downloads are available to registered Cisco.com users only):

http://www.cisco.com/kobayashi/sw-center/switching/cat2900-5000-planner.shtml

Table1shows the supervisor engine software upgrade path to software release 4.*x* from previous supervisor engine software releases.

Table1 Catalyst 5000 Family 4.x Software Upgrade Path

Desired Upgrade	Upgrade Path
2.4(3) or earlier to 4.*x*	**Supervisor Engines I and II** Follow these steps to upgrade to 4.*x*: 1. Upgrade to software release2.4(5) 2. Upgrade to release3.2(4) 3. Upgrade to release 4.*x*.
2.4(4) through 3.2(2) to 4.*x*	**Supervisor Engines I and II** Follow these steps to upgrade to 4.*x*: 1. Upgrade to release3.2(4) 2. Upgrade to release 4.*x*. **Supervisor Engine III** No restriction. Upgrade directly to software release 4.*x*.
3.2(3) or later to 4.*x*	**All Supervisor Engines** No restriction. Upgrade directly to software release 4.*x*.

Note In some cases, when upgrading to software release4.5(1) from release4.4(1) or earlier, a "Corrupted nvlog area" error is generated. This error is harmless and can be safely ignored.

Note When downgrading the software on your supervisor engine, follow the upgrade path for your supervisor engine in the reverse order.

Release 4.*x* Supervisor Engine Support Matrix

Catalyst5000 family switches support these supervisor engine modules in software release4.*x*:

- Supervisor EngineI
- Supervisor Engine II
- Supervisor Engine III
- Supervisor Engine III F

Some supervisor engine types are not supported in certain switch chassis. Table2shows which supervisor engine types are supported in which Catalyst5000 family switch chassis.

In addition, the supervisor engines are compatible with specific software releases. For more information, see the "Product and Software Version Matrix" section on page6

Table2 Supervisor Engine Matrix

Switch	Supervisor EngineI	Supervisor EngineII	Supervisor EngineIII	Supervisor EngineIII F
Catalyst2900	Fixed	N/A	N/A	N/A
Catalyst2926	N/A	Fixed	N/A	N/A
Catalyst2926G	N/A	N/A	Fixed	N/A
Catalyst5002	Yes	Yes	No	No
Catalyst5002 with PFC[1]	Yes	Yes	Yes	Yes
Catalyst5000	Yes	Yes	Yes	Yes
Catalyst5505	No	Yes	Yes	Yes
Catalyst5509	No	Yes	Yes	Yes
Catalyst5500	No	Yes	Yes	Yes

1. PFC=power factor correction

Supervisor Engine Redundancy

You can install redundant supervisor engines in your switch if the following conditions are met:

- The switch must be a Catalyst 5500 series switch.
- The supervisor engines must be Supervisor Engine II, III, or IIIF in the following configurations:
  - Two Supervisor Engine IIs
  - Two Supervisor Engine IIIs with EARL 1
  - Two Supervisor Engine IIIs with the NFFC
  - Two Supervisor Engine IIIs with the NFFC II
  - Two Supervisor Engine III Fs with EARL 1
  - Two Supervisor Engine III Fs with NFFC
  - Two Supervisor Engine III Fs with NFFC II

The following redundant configurations are supported, but with the caveat that MLS is not supported for traffic on the standby supervisor engine ports when the supervisor engine in standby mode has the NFFC or NFFCII. MLS is supported for traffic on the standby supervisor engine ports when the supervisor engine in standby mode has the NFFC-A or NFFCII-A.

- Supervisor Engine III with NFFC and Supervisor Engine III with NFFC-A
- Supervisor Engine III with NFFC II and Supervisor Engine III with NFFC II-A
- Supervisor Engine III F with NFFC and Supervisor Engine III F with NFFC-A
- Supervisor Engine III F with NFFC II and Supervisor Engine III F with NFFC II-A

For more information on configuring supervisor engines for redundant operation, refer to the *Software Configuration Guide* for your switch.

Product and Software Version Matrix

This section contains configuration matrixes to help you order Catalyst5000 family products. Table3 lists the minimum supervisor engine version and the current recommended supervisor engine version for Catalyst5000 family modules and chassis.

Note There might be additional minimum software version requirements for intelligent modules (those that run an additional, separate software image). Refer to the software release notes for the module type for more information.

Table3 Product and Software Version Matrix

Product Number (append with "=" for spares)	Product Description	Minimum Supervisor Engine Software Version	Recommended Supervisor Engine Software Version
SupervisorEngine I			
WS-X5005	Supervisor Engine I, dual-port 100BASE-FX SMF uplinks	1.1	4.5(13a)
WS-X5006	Supervisor Engine I, dual-port 100BASE-FX MMF uplinks		
WS-X5009	Supervisor Engine I, dual-port 100BASE-TX RJ-45/MII uplinks		
SupervisorEngine II			
WS-X5505	Supervisor Engine II, dual-port 100BASE-FX SMF uplinks	2.2(1)	4.5(13a)
WS-X5506	Supervisor Engine II, dual-port 100BASE-FX MMF uplinks		
WS-X5509	Supervisor Engine II, dual-port 100BASE-TX RJ-45/MII uplinks		
Supervisor Engine IIG			
WS-X5540	Supervisor Engine IIG base module	5.1(1a)	5.1(1a)
Supervisor Engine III			
WS-X5530-E1	Supervisor Engine III base module	3.1(1)	4.5(13a)
WS-X5530-E2	Supervisor Engine III base module with NFFC[1]	4.1(1)	4.5(13a)
WS-X5530-E2A	Supervisor Engine III base module with enhanced NFFC	4.5(4)	4.5(13a)
WS-X5530-E3	Supervisor Engine III base module with NFFCII	4.3(1a)	4.5(13a)
WS-X5530-E3A	Supervisor Engine III base module with enhanced NFFCII	4.5(4)	4.5(13a)

Table3 Product and Software Version Matrix (continued)

Product Number (append with "=" for spares)	Product Description	Minimum Supervisor Engine Software Version	Recommended Supervisor Engine Software Version
SupervisorEngine III F			
WS-X5534-E1-GESX	Supervisor Engine III FSX, dual-port 1000BASE-SX uplinks	4.3(1a)	4.5(13a)
WS-X5536-E1-GELX	Supervisor Engine III FLX, dual-port 1000BASE-LX/LH uplinks		
SupervisorEngine III G			
WS-X5550	Supervisor Engine III G, dual-port 1000BASE-X uplinks	5.1(1a)	5.1(1a)
Supervisor Engine Uplink Modules			
WS-U5531-FETX	Dual-port 10/100BASE-TX Fast Ethernet uplink module	3.1(1)	4.5(13a)
WS-U5533-FEFX-MMF	Dual-port 100BASE-FX MMF Fast Ethernet uplink module		
WS-U5535-FEFX-SMF	Dual-port 100BASE-FX SMF Fast Ethernet uplink module		
WS-U5537-FETX	4-port 10/100BASE-TX Fast EtherChannel uplink module	4.3(1a)	4.5(13a)
WS-U5534-GESX	Dual-port 1000BASE-SX Gigabit Ethernet uplink module	4.1(1)	4.5(13a)
WS-U5536-GELX	Dual-port 1000BASE-LX/LH Gigabit Ethernet uplink module		
WS-U5538-FEFX-MMF	4-port 100BASE-FX MMF MT-RJ Fast EtherChannel uplink module	4.5(1)	4.5(13a)
Supervisor Engine III Feature Cards			
WS-F5521=	NetFlow Feature Card (NFFC)	4.1(1)	4.5(13a)
WS-F5531=	NFFC II	4.3(1a)	4.5(13a)
WS-F5541=	Route Switch Feature Card (RSFC)	5.1(1a)	5.1(1a)
Ethernet, Fast Ethernet, and Gigabit Ethernet			
WS-X5010	24-port 10BASE-T Ethernet Telco	1.1	4.5(13a)
WS-X5011	12-port 10BASE-FL Ethernet MMF ST	1.2	
WS-X5012	48-port 10BASE-T Ethernet	2.4(1)	4.5(13a)
WS-X5012A	48-port 10BASE-T Ethernet Telco	4.2(1)	4.5(13a)
WS-X5013	24-port 10BASE-T Ethernet RJ-45	2.2(1)	4.5(13a)
WS-X5014	48-port, 2-slot 10BASE-T Ethernet	4.2(1)	4.5(13a)
WS-X5015-MT	24-port 10BASE-FL Ethernet MT-RJ	5.1(1)	5.1(1)

Table3 Product and Software Version Matrix (continued)

Product Number (append with "=" for spares)	Product Description	Minimum Supervisor Engine Software Version	Recommended Supervisor Engine Software Version
WS-X5020	48-port, 4-segment 10BASE-T Ethernet Telco	2.1(1)	4.5(13a)
WS-X5111	12-port 100BASE-FX Fast Ethernet MMF SC	1.4	
WS-X5113	12-port 100BASE-TX Fast Ethernet RJ-45	1.2	
WS-X5114	12-port (6-port SMF, 6-port MMF) 100BASE-FX Fast Ethernet SC	2.1(5)	
WS-X5201	12-port 100BASE-FX Fast EtherChannel SC	2.3(1)	
WS-X5201R	12-port 100BASE-FX backbone Fast Ethernet SC	4.1(2)	4.5(13a)
WS-X5203	12-port 10/100BASE-TX Fast EtherChannel RJ-45	2.3(1)	4.5(13a)
WS-X5213[2]	12-port 10/100BASE-TX Fast Ethernet RJ-45	1.5(4)	
WS-X5213A	12-port 10/100BASE-TX Fast Ethernet RJ-45	2.1(7)	
WS-X5223	24-port, 3-segment 100BASE-TX Fast Ethernet RJ-45	2.2(1)	
WS-X5224	24-port 10/100BASE-TX RJ-45	2.4(2)	
WS-X5225R	24-port 10/100BASE-TX Fast Ethernet RJ-45	4.1(2)	4.5(13a)
WS-X5234-RJ45	24-port 10/100BASE-TX Fast Ethernet RJ-45	4.5(1)	4.5(13a)
WS-X5236-FX-MT	24-port 100BASE-FX Fast Ethernet MT-RJ		
WS-X5239-RJ21	36-port 10/100BASE-TX Fast Ethernet Telco	5.1(2a)	5.1(2a)
WS-X5403	3-port 1000BASE-X Gigabit Ethernet module	4.1(1)	4.5(13a)
WS-X5410	9-port, 2-slot 1000BASE-X Gigabit EtherChannel module[3]	4.2(1)	

Table3 Product and Software Version Matrix (continued)

Product Number (append with "=" for spares)	Product Description	Minimum Supervisor Engine Software Version	Recommended Supervisor Engine Software Version
Gigabit Interface Converters (GBICs)			
WS-G5484=	1000BASE-SX GBIC	4.1(1)	4.5(13a)
WS-G5486=	1000BASE-LX/LH GBIC		
WS-G5487=	1000BASE-ZX GBIC	4.5(1)	
Token Ring			
WS-X5030	16-port Token Ring module, UTP/FTP, RJ-45	3.1(1)	4.5(13a)
WS-X5031	16-port Token Ring module, Volition, VF-45		
FDDI/CDDI			
WS-X5101	1 Dual-attach Multimode FDDI MIC	1.3	4.5(13a)
WS-X5103	1 Dual-attach CDDI RJ-45		
WS-X5104	1 Dual-attach Single-Mode FDDI ST		
WS-X5105	1 Dual-attach Multimode FDDI SC		
ATM			
WS-X5153[2]	1-port OC-3 UTP RJ-45	1.4	4.5(13a)
WS-X5154[2]	1-port OC-3 Single-Mode SC		
WS-X5155[2]	1-port OC-3 Multimode SC		
WS-X5156	1 Dual PHY OC-3 UTP RJ-45	2.1(5)	
WS-X5157	1 Dual PHY OC-3 Single-Mode SC		
WS-X5158	1 Dual PHY OC-3 Multimode SC		
WS-X5161	1 Dual PHY OC-12 MMF SC, MPOA/LANE	3.2(1)	4.5(13a)
WS-X5162	1 Dual PHY OC-12 SC, MPOA/LANE		
WS-X5166	1 Dual PHY DS3, BNC connectors	3.1(1)	
WS-X5167	1 Dual PHY OC-3 MMF SC, MPOA/LANE	3.2(1)	
WS-X5168	1 Dual PHY OC-3 SMF SC, MPOA/LANE		
Route Switch Module			
WS-X5302	Route Switch Module	2.3(1)	4.5(13a)
Fabric Integration Modules			
WS-X5165	ATM fabric integration module	4.3(1a)	4.5(13a)
WS-X5305	Layer 3 fabric integration module	4.4(1)	
Network Analysis Module			
WS-X5380	Network Analysis Module	4.3(1a)	4.5(13a)

Table3 Product and Software Version Matrix (continued)

Product Number (append with "=" for spares)	Product Description	Minimum Supervisor Engine Software Version	Recommended Supervisor Engine Software Version
Modular Chassis			
WS-C5000	Catalyst 5000 chassis (5-slot)	1.1	4.5(13a)
WS-C5002	Catalyst 5002 chassis (2-slot)	2.2(1)	4.5(13a)
WS-C5500	Catalyst 5500 chassis (13-slot)		
WS-C5505	Catalyst 5505 chassis (5-slot)	2.3(1)	
WS-C5509	Catalyst 5509 chassis (9-slot)	4.2(1)	4.5(13a)
Fixed-Configuration Chassis			
WS-C2901	Catalyst 2900 with two 100BASE-TX uplinks and 1210/100BASE-TX ports	2.1(1)	4.5(13a)
WS-C2902	Catalyst 2900 with two 100BASE-TX uplinks and 1210/100BASE-FX ports		
WS-C2926T	Catalyst 2926 with two 100BASE-TX uplinks and 24 10/100BASE-TX ports	2.4(2)	
WS-C2926F	Catalyst 2926 with two 100BASE-FX uplinks and 24 10/100BASE-TX ports		
WS-C2926GS	Catalyst 2926G with NFFC, two 1000BASE-SX uplinks, and 2410/100BASE-TX ports	4.3(1a)	4.5(13a)
WS-C2926GL	Catalyst 2926G with NFFC, two 1000BASE-LX/LH uplinks, and 2410/100BASE-TX ports		

1. NFFC = NetFlow Feature Card
2. The WS-X5213, WS-X5153, WS-X5154, and WS-X5155 modules have been moved to end-of-life (EOL) status.
3. The Gigabit EtherChannel module (WS-X5410) is supported with Supervisor Engine I or II or in a Catalyst 5000 chassis with supervisor engine software release 4.3(1) or later in conjunction with Gigabit EtherChannel module software release 4.3(1) or later. This hardware was not fully tested with the Gigabit EtherChannel module in earlier releases.

Release 4.*x* Orderable Software Images

Table4lists the software versions and applicable ordering information for the Catalyst5000 family supervisor engine software release 4.*x*.

Table4 Orderable Software Images

Software Version	Filename	Orderable Product Number Flash on System	Orderable Product Number Spare Upgrade (Floppy Media)
SupervisorI and II (16 MB minimum)			
4.1(1)	cat5000-sup.4-1-1.bin	SFC5K-SUP-4.1.1	SWC5K-SUP-4.1.1=
4.1(2)	cat5000-sup.4-1-2.bin	SFC5K-SUP-4.1.2	SWC5K-SUP-4.1.2=
4.1(3)	cat5000-sup.4-1-3.bin	SFC5K-SUP-4.1.3	SWC5K-SUP-4.1.3=

Table4 Orderable Software Images (continued)

Software Version	Filename	Orderable Product Number Flash on System	Orderable Product Number Spare Upgrade (Floppy Media)
4.2(1)	cat5000-sup.4-2-1.bin	SFC5K-SUP-4.2.1	SWC5K-SUP-4.2.1=
4.2(2)	cat5000-sup.4-2-2.bin	SFC5K-SUP-4.2.2	SWC5K-SUP-4.2.2=
4.3(1a)	cat5000-sup.4-3-1a.bin	SFC5K-SUP-4.3.1	SWC5K-SUP-4.3.1=
4.4(1)	cat5000-sup.4-4-1.bin	SFC5K-SUP-4.4.1	SWC5K-SUP-4.4.1=
4.5(1)	cat5000-sup.4-5-1.bin	SFC5K-SUP-4.5.1	SWC5K-SUP-4.5.1=
4.5(2)	cat5000-sup.4-5-2.bin	SFC5K-SUP-4.5.2	SWC5K-SUP-4.5.2=
4.5(3)	cat5000-sup.4-5-3.bin	SFC5K-SUP-4.5.3	SWC5K-SUP-4.5.3=
4.5(4)	cat5000-sup.4-5-4.bin	SFC5K-SUP-4.5.4	SWC5K-SUP-4.5.4=
4.5(5)	cat5000-sup.4-5-5.bin	SFC5K-SUP-4.5.5	SWC5K-SUP-4.5.5=
4.5(6)	cat5000-sup.4-5-6.bin	SFC5K-SUP3-4.5.6	SWC5K-SUP-4.5.6=
4.5(7)	cat5000-sup.4-5-7.bin	SC5K-SUP3-4.5.7	SC5K-SUP-4.5.7=
4.5(8)	cat5000-sup.4-5-8.bin	SC5K-SUP3-4.5.8	SC5K-SUP-4.5.8=
4.5(9)	cat5000-sup.4-5-9.bin	SC5K-SUP3-4.5.9	SC5K-SUP-4.5.9=
4.5(10)	cat5000-sup.4-5-10.bin	SC5K-SUP3-4.5.10	SC5K-SUP-4.5.10=
4.5(11)	cat5000-sup.4-5-11.bin	SC5K-SUP3-4.5.11	SC5K-SUP-4.5.11=
4.5(12)	cat5000-sup.4-5-12.bin	SC5K-SUP3-4.5.12	SC5K-SUP-4.5.12=
4.5(13)	cat5000-sup.4-5-13.bin	SC5K-SUP3-4.5.13	SC5K-SUP-4.5.13=
SupervisorIII and IIIF			
4.1(1)	cat5000-sup3.4-1-1.bin	N/A	N/A
4.1(2)	cat5000-sup3.4-1-2.bin	N/A	N/A
4.1(3)	cat5000-sup3.4-1-3.bin	N/A	N/A
4.2(1)	cat5000-sup3.4-2-1.bin	SFC5K-SUP3-4.2.1	SWC5K-SUP-4.2.1=
4.2(2)	cat5000-sup3.4-2-2.bin	SFC5K-SUP3-4.2.2	SWC5K-SUP-4.2.2=
4.3(1a)	cat5000-sup3.4-3-1a.bin	SFC5K-SUP3-4.3.1	SWC5K-SUP-4.3.1=
4.4(1)	cat5000-sup3.4-4-1.bin	SFC5K-SUP3-4.4.1	SWC5K-SUP-4.4.1=
4.5(1)	cat5000-sup3.4-5-1.bin	SFC5K-SUP3-4.5.1	SWC5K-SUP-4.5.1=
4.5(2)	cat5000-sup3.4-5-2.bin	SFC5K-SUP3-4.5.2	SWC5K-SUP-4.5.2=
4.5(3)	cat5000-sup3.4-5-3.bin	SFC5K-SUP3-4.5.3	SWC5K-SUP-4.5.3=
4.5(4)	cat5000-sup3.4-5-4.bin	SFC5K-SUP3-4.5.4	SWC5K-SUP-4.5.4=
4.5(5)	cat5000-sup3.4-5-5.bin	SFC5K-SUP3-4.5.5	SWC5K-SUP-4.5.5=
4.5(6)	cat5000-sup3.4-5-6.bin	SFC5K-SUP3-4.5.6	SWC5K-SUP-4.5.6=
4.5(7)	cat5000-sup3.4-5-7.bin	SC5K-SUP3-4.5.7	SC5K-SUP-4.5.7=
4.5(8)	cat5000-sup3.4-5-8.bin	SC5K-SUP3-4.5.8	SC5K-SUP-4.5.8=
4.5(9)	cat5000-sup3.4-5-9.bin	SC5K-SUP3-4.5.9	SC5K-SUP-4.5.9=
4.5(10)	cat5000-sup3.4-5-10.bin	SC5K-SUP3-4.5.10	SC5K-SUP-4.5.10=

Table4 Orderable Software Images (continued)

Software Version	Filename	Orderable Product Number Flash on System	Orderable Product Number Spare Upgrade (Floppy Media)
4.5(11)	cat5000-sup3.4-5-11.bin	SC5K-SUP3-4.5.11	SC5K-SUP-4.5.11=
4.5(12)	cat5000-sup3.4-5-12.bin	SC5K-SUP3-4.5.12	SC5K-SUP-4.5.12=
4.5(13)	cat5000-sup3.4-5-13.bin	SC5K-SUP3-4.5.13	SC5K-SUP-4.5.13=

New Features for Supervisor Engine Software Release 4.5(4)

This section describes the new features available in software release4.5(4).

- Enhanced NFFC and Enhanced NFFC II provide increased performance and support the forwarding of multilayer traffic through uplink ports on standby supervisor engines in redundant configurations.
- Support for the new Supervisor EngineIII Flash PC card (Cisco product number MEM-S3-FLC20MA). For more information, see the "Release 4.x Memory Requirements" section on page3
- Support for the **set tokenring explorer-throttle** command allows you to limit the number of explorer frames that are allowed to enter a port on the Token Ring modules. The command syntax is as follows:

  set tokenring explorer-throttle *mod_num/port_num maximum_explorers*

  Refer to the online version of the *Command Reference* for supervisor engine software release4.5 for more information about this command.

New Features for Supervisor Engine Software Release 4.5(3)

This section describes the new features available in software release4.5(3).

Support for updating EPLDs on Catalyst5000 family Token Ring modules (WS-X5030 and WS-X5031) running Token Ring software release3.3(2) or later. For complete information on how to perform an EPLD update on your Token Ring modules, refer to the "Catalyst 5000 Series Token Ring Software Release 3.3(2) Release Note."

New Features for Supervisor Engine Software Release 4.5

This section describes the new features available in software release4.5.

- Four-port 100-Mbps uplink module (WS-U5538-FEFX-MMF)—Catalyst 5000 family Supervisor Engine III four-port 100BASE-FX MMF uplink module with MT-RJ connectors.
- 24-port 10/100-Mbps switching module (WS-X5234-RJ45)—Catalyst 5000 family 24-port 10/100BASE-TX Fast Ethernet switching module with RJ-45 connectors.
- 24-port 100-Mbps switching module (WS-X5236-FX-MT)—Catalyst 5000 family 24-port 100BASE-FX Fast Ethernet switching module with MT-RJ connectors.
- 1000BASE-ZX GBIC (WS-G5487=)—Hot-swappable GBIC supporting Gigabit Ethernet transmission over distances up to 90 km (55 miles).

New Features for Supervisor Engine Software Release 4.4

This section describes the new features available in software release4.4.

Layer 3 fabric integration module (WS-X5305)—Seamlessly integrates the Catalyst 5500 switching backplane and the Catalyst 8510 campus switch router (CSR) backplane in a Catalyst 5500 chassis by providing an internal Fast EtherChannel trunk between the two switches.

New Features for Supervisor Engine Software Release 4.3

This section describes the new features available in software release4.3.

- Command-line editing—Enhanced keyboard shortcuts for working with the Catalyst 5000 family software command-line interface (CLI).
- Enable or disable active standby supervisor engine ports—A new command, **set standbyports** {**enable** | **disable**}, allows you to control whether the uplink ports on the standby supervisor engine (if present) are active or inactive. Use the **show standbyports** command to display the current configuration.

  If you enable this feature, the ports on the standby supervisor engine are always active (unless you manually disable them using the **set port disable** command). If you disable this feature, the ports on the standby supervisor engine are inactive when the supervisor engine is in standby mode. In the event of a switchover from the active to the standby supervisor, the ports on the new active supervisor engine become active and the ports on the new standby supervisor engine become inactive.

  If you upgrade to software release 4.3(1) from any release prior to 4.1(1), the default setting for this feature is disabled. If you upgrade from any 4.*x* release prior to release 4.3(1), the default setting for this feature is enabled. If you enter the **clear config all** command, the feature is returned to the default of disabled.
- Supervisor Engine III FSX (WS-X5534-E1-GESX)—New supervisor engine module with fixed 1000BASE-SX Gigabit Ethernet uplink ports.
- Supervisor Engine III FLX (WS-X5536-E1-GELX)—New supervisor engine module with fixed 1000BASE-LX/LH Gigabit Ethernet uplink ports.
- NetFlow Feature Card (NFFC) II (WS-F5531=)—Increases IP Multilayer Switching (MLS) performance.
- 4-port 10/100BASE-TX Fast EtherChannel uplink module (WS-U5537-FETX)—Provides four 10/100BASE-TX Fast EtherChannel interfaces for the Supervisor Engine III.
- ATM fabric integration module (WS-X5165)—Seamlessly integrates the Catalyst 5500 switching backplane and the LightStream1010 backplane in a Catalyst5500 chassis by providing an internal interface between the two switches.
- Network Analysis Module (WS-X5380)—Provides extended Remote Monitoring (RMON) support and can analyze Ethernet VLAN traffic from either or both of the following sources:
  - Switched Port Analyzer (SPAN) source port
  - NetFlow Data Export (NDE) from an NFFC installed on the Supervisor EngineIIISX, III LX, or III
- Catalyst 2926G series switches—The Catalyst 2926GS and 2926GL are fixed-configuration switches with the NFFC, 2410/100BASE-TX ports, and two Gigabit Ethernet uplink ports (either 1000BASE-SX or 1000BASE-LX/LH).

New Features for Supervisor Engine Software Release 4.2

This section describes the new features available in software release4.2.

- Dynamic Trunking Protocol (DTP)—DTP supports negotiation of both Inter-Switch Link (ISL) and IEEE 802.1Q VLAN trunks.
- Disable receive traffic on Switched Port Analyzer (SPAN) destination port—You can prevent normal receive traffic from entering a port configured as a SPAN destination.
- ATM and Token Ring fast switchover support—Token Ring modules and ATM modules running the proper software releases no longer reset when there is a supervisor engine switchover from active to standby. Fast switchover support for these modules requires supervisor engine software release 4.2(1) and one of the following module software releases:

Token Ring modules	Token Ring software release 4.2(1) and later
ATM modules	• ATM module software release 3.2(8) • ATM module software release 51.1(3) • ATM module software release 11.3(3a)WA4(5)

- New hardware supported:
  - Catalyst 5509 chassis—Provides a nine-slot chassis with a 3.6-Gbps backplane, support for redundant supervisor engines and power supplies, and support for all of the Catalyst 5000 family switching modules. (WS-C5509)
  - Gigabit EtherChannel module (WS-X5410)—Provides nine Gigabit Ethernet interfaces with support for Gigabit EtherChannel in a two-slot configuration. This module is designed for backbone interconnection of other high-performance Catalyst 5000 family switches and Cisco routers through Gigabit EtherChannel. The module accepts any combination of Cisco hot-swappable Gigabit Interface Converters (GBICs), such as the 1000BASE-SX GBIC (WS-G5484) and the 1000BASE-LX/LH GBIC (WS-G5486).
  - Two-slot 48-port 10BASE-T RJ-45 Ethernet module (WS-X5014)—Provides 48 switched 10BASE-T RJ-45 Ethernet ports in a two-slot configuration.
  - 48-port 10BASE-T Telco Ethernet module (WS-X5012A)—Provides 48 switched 10BASE-T Telco Ethernet ports.

New Features for Supervisor Engine Software Release 4.1

This section describes the new features available in software release4.1.

- Multilayer Switching (MLS)—Scales Layer 3 performance to high-performance link speeds by extending the MLS concept introduced in Cisco IOS software to LAN switching hardware.
- Internet Group Management Protocol (IGMP) Snooping—Allows the switch to examine IGMP packets and make forwarding decisions based on their content.
- Protocol Filtering—Supports protocol filtering within a port VLAN. With protocol filtering enabled, ports are grouped on a protocol basis.
- Spanning Tree Protocol Backbone Fast Convergence—Provides fast convergence after a spanning tree topology change caused by indirect link failures.

- Switch TopN reports—Provides metrics for port utilization, broadcasts, multicasts, unicasts, and errors, sorted by TopN ports in the switch.
- IP Traceroute Support—Provides support for the standard Internet Control Message Protocol (ICMP)-based IP traceroute facility from the system console.
- Token Ring VLANs in RSM—Provides RSM support for Token Ring VLANs.
- NetFlow Data Export—Allows a summary of intersubnet Layer 3 traffic statistics for all expired flows to be periodically exported to a network management data collector.
- Standby Supervisor Engine Port Usage—Allows the uplink ports on both the active and standby supervisor engine to be active at the same time. Prior to software release 4.1, the uplink ports on the standby supervisor engine were always in standby mode (inactive).
- IEEE 802.1Q VLAN Trunking—Allows you to support multiple VLANs across a single trunk link between two switches using 802.1Q packet encapsulation. This feature is supported only on modules that support 802.1Q encapsulation.
- Multiple Default IP Gateways—Allows you to configure up to three default IP gateways. If one gateway is not reachable, another gateway becomes the default.
- SNMP Trap Message Enhancements—Provides additional information with certain SNMP trap messages, including:
  - Spanning Tree Topology Enhancement—Provides a Cisco-defined SNMP trap notification and syslog message for a spanning tree topology change.
  - Configure Change Syslog Message and SNMP Trap—Sends a syslog message and/or SNMP trap indicating who is making a configuration change (via SNMP or the CLI): Terminal Access Controller Access Control System Plus (TACACS+) user name, Domain Name Service (DNS) name, IP address, or console port.
- Remote Monitoring 2 (RMON2) Configuration Group—Adds support, probe capabilities, software revision, and hardware revision for the RMON2 configuration group trap destinations Management Information Base (MIB) defined in RFC2021.
- DNS Device Name Usage—Allows you to set the system name to be configured automatically based on the IP address of the switch.
- **show port capabilities** command—Allows you to determine the capabilities of the modules and ports in a switch.
- Configuration File Management—Allows you to copy a configuration file to or from a file on a flash device (**bootflash**, **slot0**, or **slot1**) or a TFTP server with the **config** keyword of the **copy** command.
- New hardware supported:
  - 24-port 10/100BASE-TX Ethernet Module—Provides 24 10/100BASE-TX Ethernet ports; supports ISL and IEEE 802.1Q trunking, broadcast suppression in hardware, 802.3x flow control, EtherChannel port aggregation, and a local rewrite engine. (WS-X5225R)
  - 12-port 100BASE-FX Ethernet Module—Provides 12 100BASE-FX Ethernet ports; supports ISL and 802.1Q trunking, broadcast suppression in hardware, 802.3x flow control, EtherChannel port aggregation, and a local rewrite engine. (WS-X5201R)
  - Gigabit Ethernet Uplink for Supervisor Engine III—Provides two 1000BASE-SX Gigabit Ethernet ports; supports ISL and 802.1Q trunking. This uplink module does not support Gigabit EtherChannel port aggregation. (WS-U5534)

- Three-port Gigabit Ethernet Module—Provides three 1000BASE-SX Ethernet ports; supports ISL and 802.1Q trunking, broadcast suppression in hardware, 802.3x flow control, and is full duplex only. This module does not support Gigabit EtherChannel port aggregation. (WS-X5403)
- NetFlow Feature Card (NFFC)—Enables new features for the Supervisor Engine III, including MLS, IGMP snooping, and Protocol Filtering. (WS-F5521)

Open and Resolved Caveats in Software Release 4.5(13a)

This section describes open and resolved caveats in supervisor engine software release4.5(13a):

Open Caveats in Software Release 4.5(13a)

Note For a description of caveats resolved in software release4.5(13a), see the "Resolved Caveats in Software Release4.5(13a)" section on page17.

This section describes open caveats in software release4.5(13a).

- When operating at 10MB, a disabled port on a WS-X5224, WS-X5012, WS-X5012A, or WS-X5014 module will continue to transmit link pulses. This causes the link-partner port to stay up. There is no workaround. The problem exists in 4.x, 5.x, and 6.x releases of the Catalyst operating software. (CSCdw25922)
- On Catalyst 5500 series switches, Gigabit Ethernet autonegotiation is broken on the Gigabit Ethernet uplink module (WS-U5534) in supervisor engine software releases 4.5(11), 4.5(12), and 4.5(13). Autonegotiation fails only if the other end of the link is also connected to a WS-U5534 uplink module. There is no problem if the other end of the link is connected to another Gigabit Ethernet module such as the 3- or 9-port modules.

  Turning off autonegotiation to avoid the problem is not recommended as this can lead to spanning-tree loops if you have a unidirectional link. The only workaround is to connect a WS-U5534 uplink module to a different module (not the WS-U5534 uplink module). (CSCdw21589)
- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the **download** command). (CSCdk55355)
- If IGMP snooping or CGMP is disabled while protocol filtering is enabled, Layer 2 multicast forwarding will be affected when protocol filtering is later disabled. The commands to reproduce this are:
  a. **set igmp enable** (or **set cgmp enable**)
  b. **set protocolfilter enable**
  c. **set igmp disable** (or **set cgmp disable**)
  d. **set protocolfilter disable**

Workaround: Reenable protocol filtering, which will restore multicast traffic forwarding. If you do not want to reenable protocol filtering, you must reset the switch to resolve the condition. (CSCdu04672)

- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)

- After a switchover from the active to the redundant supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)

Resolved Caveats in Software Release4.5(13a)

Note For a description of caveats open in software release4.5(13a), see the "Open Caveats in Software Release4.5(13a)" section on page16.

This section describes resolved caveats in software release4.5(13a).

- Some Cisco Catalyst switches, running certain Catalyst OS software releases, have a vulnerability wherein a buffer overflow in the Telnet option handling can cause the Telnet daemon to crash and result in a switch reload. This vulnerability can be exploited to initiate a denial of service (DoS) attack.

  This vulnerability is documented as Cisco bug ID CSCdw19195. There are workarounds available to mitigate the vulnerability.

  This advisory will be posted at this URL:

  http://www.cisco.com/warp/public/707/catos-telrcv-vuln-pub.shtml

  The following workarounds can be implemented.

  – If ssh is available in the code base use ssh instead of Telnet and disable Telnet.

    For instructions how to do this, please refer to this URL:

    http://www.cisco.com/warp/public/707/ssh_cat_switches.html.

  – Apply Access Control Lists (ACLs) on routers / switches / firewalls in front of the vulnerable switches such that traffic destined for the Telnet port 23 on the vulnerable switches is only allowed from the network management subnets.

  (CSCdw19195)

Open and Resolved Caveats in Software Release 4.5(13)

This section describes open and resolved caveats in supervisor engine software release4.5(13):

Open Caveats in Software Release 4.5(13)

Note For a description of caveats resolved in software release4.5(13), see the "Resolved Caveats in Software Release4.5(13)" section on page19.

This section describes open caveats in software release4.5(13).

- When operating at 10MB, a disabled port on a WS-X5224, WS-X5012, WS-X5012A, or WS-X5014 module will continue to transmit link pulses. This causes the link-partner port to stay up. There is no workaround. The problem exists in 4.x, 5.x, and 6.x releases of the Catalyst operating software. (CSCdw25922)
- On Catalyst 5500 series switches, Gigabit Ethernet autonegotiation is broken on the Gigabit Ethernet uplink module (WS-U5534) in supervisor engine software releases 4.5(11), 4.5(12), and 4.5(13). Autonegotiation fails only if the other end of the link is also connected to a WS-U5534 uplink module. There is no problem if the other end of the link is connected to another Gigabit Ethernet module such as the 3- or 9-port modules.

  Turning off autonegotiation to avoid the problem is not recommended as this can lead to spanning-tree loops if you have a unidirectional link. The only workaround is to connect a WS-U5534 uplink module to a different module (not the WS-U5534 uplink module). (CSCdw21589)
- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the **download** command). (CSCdk55355)
- If IGMP snooping or CGMP is disabled while protocol filtering is enabled, Layer 2 multicast forwarding will be affected when protocol filtering is later disabled. The commands to reproduce this are:

  a. **set igmp enable** (or **set cgmp enable**)

  b. **set protocolfilter enable**

  c. **set igmp disable** (or **set cgmp disable**)

  d. **set protocolfilter disable**

  Workaround: Reenable protocol filtering, which will restore multicast traffic forwarding. If you do not want to reenable protocol filtering, you must reset the switch to resolve the condition. (CSCdu04672)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- After a switchover from the active to the redundant supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)

Resolved Caveats in Software Release4.5(13)

Note For a description of caveats open in software release4.5(13), see the "Open Caveats in Software Release4.5(13)" section on page18.

This section describes resolved caveats in software release4.5(13).

- The Catalyst 5500 series switch might crash when you make Telnet connections between the switch and the RSM.

  Workaround: Reload the switch.

  This problem is resolved in software release 4.5(13). (CSCdt01088)

- Due to an issue with CGMP, multicast packet loss may be experienced when there are no receivers in the multicast source LAN segment (for example, a source-only segment).

  Workaround: Configure a static IGMP group or disable CGMP.

  This problem is resolved in software release 4.5(13). (CSCdt58274)

- A Catalyst 5000 family switch with Supervisor Engine III running 4.5(8) with CGMP configured will not install a static CAM entry for a multicast receiver on the other end of a port channel.

  Workaround: Enable IGMP instead of CGMP on the core switch.

  This problem is resolved in software release 4.5(13). (CSCdu05568)

- The Catalyst 5000 family switch may pause indefinitely after the 20 MB Viking Flash PC (PCMCIA) card is hotswapped numerous times (approximately 20).

  This problem is resolved in software release 4.5(13). (CSCdu23412)

- When an ISL trunk port is connected to an access port and QoS is enabled on the switch that has the ISL trunk, the ISL header sets the user bits in the DA. Currently, the supervisor engine drops only the packets with user bits set to 0 and 1 and forwards the packets with other bits set to the access VLAN of the non-trunk port. The forwarded packets do not go through blocked ports.

  This problem is resolved in software release 4.5(13). (CSCdu10858)

Open and Resolved Caveats in Software Release 4.5(12)

This section describes open and resolved caveats in supervisor engine software release4.5(12):

Open Caveats in Software Release 4.5(12)

Note For a description of caveats resolved in software release4.5(12), see the "Resolved Caveats in Software Release4.5(12)" section on page21.

This section describes open caveats in software release4.5(12).

- On Catalyst 5500 series switches, Gigabit Ethernet autonegotiation is broken on the Gigabit Ethernet uplink module (WS-U5534) in supervisor engine software releases 4.5(11), 4.5(12), and 4.5(13). Autonegotiation fails only if the other end of the link is also connected to a WS-U5534 uplink module. There is no problem if the other end of the link is connected to another Gigabit Ethernet module such as the 3- or 9-port modules.

  Turning off autonegotiation to avoid the problem is not recommended as this can lead to spanning-tree loops if you have a unidirectional link. The only workaround is to connect a WS-U5534 uplink module to a different module (not the WS-U5534 uplink module). (CSCdw21589)

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the **download** command). (CSCdk55355)

- If IGMP snooping or CGMP is disabled while protocol filtering is enabled, Layer 2 multicast forwarding will be affected when protocol filtering is later disabled. The commands to reproduce this are:

  a. **set igmp enable** (or **set cgmp enable**)

  b. **set protocolfilter enable**

  c. **set igmp disable** (or **set cgmp disable**)

  d. **set protocolfilter disable**

  Workaround: Reenable protocol filtering, which will restore multicast traffic forwarding. If you do not want to reenable protocol filtering, you must reset the switch to resolve the condition. (CSCdu04672)

- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)

- After a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)

Resolved Caveats in Software Release4.5(12)

Note For a description of caveats open in software release4.5(12), see the "Open Caveats in Software Release4.5(12)" section on page20.

This section describes resolved caveats in software release4.5(12).

- Supervisor Engine III sends CGMP packets to routers with a source mac address of all zeros.

  This problem is resolved in software release 4.5(12). (CSCds74250)

- Resetting the ATM line card from the supervisor engine console might reset the supervisor engine.

  This problem is resolved in software release 4.5(12). (CSCdt31393)

- Operating systems, such as Windows XP, will attempt 802.1X authentication by sending frames to the Authenticator PAE on the destination multicast address 01-80-c2-00-00-0f and 01-80-c2-00-00-03. On Catalyst 5000 family switches with EARL1, EARL1+, or EARL1++, these frames will be forwarded on all ports including spanning tree blocking ports. Because these frames are forwarded on blocked ports, the network will experience a Layer 2 multicast storm.

  Workaround 1: Enter the following commands to configure a permanent CAM entry for 01-80-c2-00-00-0f and 01-80-c2-00-00-03 to be directed out an unused port:

  – **set cam permanent 01-80-c2-00-00-0f** *mod/port*

  – **set cam permanent 01-80-c2-00-00-03** *mod/port*

  Workaround 2: Follow this procedure to configure Windows XP to not send these frames:

  a. Click on the associated Local Area Connection under Network Connections.

  b. Click on the Authentication Tab.

  c. Uncheck "Network Access Control using IEEE 802.1x."

  For additional information, see the following URL:

  http://www.cisco.com/warp/public/707/cat5k-8021x-vuln-pub.shtml

  This problem is resolved in software release 4.5(12). (CSCdt62732)

- A Catalyst 5000 switch running 4.5(5) might display "malloc failed!" messages, indicating that the NetFlow process is taking memory. NetFlow does not have to be enabled for this to occur.

  Workaround: Configure one HSRP group per VLAN.

  This problem is resolved in software release 4.5(12). (CSCdt45785)

- Creating a large number of rows in cseStaticExtRouterTable, deleting them, and then creating a large number of rows again might cause the switch to reset.

  This problem is resolved in software release 4.5(12). (CSCdt53749)

- The RSM might reset with the following error message:

```
Jan 19 10:15:54 CST: %LINK-4-TOOBIG: Interface Vlan1, Output packet size of 1534 bytes
too big
-Traceback= 602494E8 601D454C 603D0470 603CECE0 603D64C4 603D63B0 603CD2E8 601F558C
601F5578
%SYS-3-OVERRUN: Block overrun at 61B4D460 (red zone 0C07AC5C)
-Traceback= 6026E140 60270D30 60271E00 60272060 6026190C 602618F8
```

The reset is caused by a high number of MLS-enabled interfaces with HSRP and static MAC addresses configured. The fix allows MLS to be enabled on a large number of interfaces configured for MLS.

This problem is resolved in software release 4.5(12). (CSCdp08252)

Note that the RSM IOS software must be upgraded to 12.2(1) or later.

- When the ifOperStatus value for the port changes (the port is enabled and disabled, or the link is brought up and down), the ifLastChange value for the port does not change.

  This problem is resolved in software release 4.5(12). (CSCdt69418)

- The switch might reset with a TLB exception when CmpOctetStringWithLen() receives a null pointer.

  This problem is resolved in software release 4.5(12). (CSCdt75849)

Open and Resolved Caveats in Software Release 4.5(11)

This section describes open and resolved caveats in supervisor engine software release4.5(11):

Open Caveats in Software Release 4.5(11)

Note For a description of caveats resolved in software release4.5(11), see the "Resolved Caveats in Software Release4.5(11)" section on page23.

This section describes open caveats in software release4.5(11).

- On Catalyst 5500 series switches, Gigabit Ethernet autonegotiation is broken on the Gigabit Ethernet uplink module (WS-U5534) in supervisor engine software releases 4.5(11), 4.5(12), and 4.5(13). Autonegotiation fails only if the other end of the link is also connected to a WS-U5534 uplink module. There is no problem if the other end of the link is connected to another Gigabit Ethernet module such as the 3- or 9-port modules.

  Turning off autonegotiation to avoid the problem is not recommended as this can lead to spanning-tree loops if you have a unidirectional link. The only workaround is to connect a WS-U5534 uplink module to a different module (not the WS-U5534 uplink module). (CSCdw21589)

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)

- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)

- After a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)

Resolved Caveats in Software Release4.5(11)

Note For a description of caveats open in software release4.5(11), see the "Open Caveats in Software Release4.5(11)" section on page22.

This section describes resolved caveats in software release4.5(11).

- Ports on WS-X5225r may stop sending and receiving frames.

  Workaround: Disable and re-enable the port. This problem is resolved in software release 4.5(11). (CSCdt23334)

- Ports on WS-X5225r that have Intel Pro 10/100 Management Adapters may stop sending frames but will receive frames from the port.

  Workaround: Disable and re-enable the port. This problem is resolved in software release 4.5(11). (CSCds02646)

- The Catalyst 5000 switch might reload if the configuration is restored from the configuration file and if EtherChannel and RMON are enabled and the following commands are entered in sequence:

  a. **clear config all**

  b. **reset**

  c. **copy flash config**

  This problem is resolved in software release 4.5(11). (CSCds79278)

- The **set cam** command does not have a VCD option available to create a CAM entry for an ATM index. This problem is resolved in software release 4.5(11). (CSCds55054)

- CAM entries created by MPOA are not removed when the ATM module is removed, reset, reloaded, or when the ATM module hangs.

  Workaround: Reload the Catalyst 5000 switch. This problem is resolved in software release 4.5(11). (CSCds79580)

- In some cases, if you enable PortFast on a port on the Gigabit Ethernet uplink module (WS-U5534) and the attached end station is rebooted, the port stops transmitting traffic. The port continues to receive traffic.

  Workaround: Disable and then reenable the port (using the **set port disable** and **set port enable** commands) after the end station has rebooted, or disable PortFast on the port (using the **set spantree portfast disable** command). This problem is resolved in software release 4.5(11). (CSCds79580) (CSCds32079)

Open and Resolved Caveats in Software Release 4.5(10)

This section describes open and resolved caveats in supervisor engine software release4.5(10):

Open Caveats in Software Release 4.5(10)

Note For a description of caveats resolved in software release4.5(10), see the "Resolved Caveats in Software Release4.5(10)" section on page24.

This section describes open caveats in software release4.5(10).

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- After a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)

Resolved Caveats in Software Release 4.5(10)

Note For a description of open caveats in software release4.5(10), see the "Open Caveats in Software Release4.5(10)" section on page24.

This section describes caveats resolved in software release 4.5(10):

- A series of unauthenticated Telnet attempts can cause the switch to fail to pass traffic or accept management connections until the system is rebooted or a power cycle is performed. This problem is resolved in software release 4.5(10). (CSCds66191)
- Supervisor engine might not respond to SNMP queries. In a Catalyst 5000 family switch with the WS-X5530 supervisor engine and the WS-X5012 10BASE-T module, SCP communication between the supervisor engine and the WS-X5012 module might fail. The SNMP is unable to collect statistics from the switching module and SNMP stops responding to queries. This problem is resolved in software release 4.5(10). (CSCds16761)
- Non-alphanumeric characters are not valid in VTP domain names but can be configured in certain cases. This problem is resolved in software release 4.5(10). (CSCds34927)

- To avoid high CPU utilization from a **show logging buffer** command, do not display more than 20 messages when the screen length is set to 0 or greater than 24 with the **set length** command. This problem is resolved in software release 4.5(10). (CSCds05287)
- An MPOA client configured on WS-X516* modules in the Catalyst WS-C5509 switch with supervisor engine WS-X5550 might not forward the packets on MPOA shortcuts (or might drop the packets) under the following conditions:
  - When the NMP creates system CAM entries for the MPOA protocol
  - When the MPOA configuration is done and packets are forwarded through LANE data direct VCCs

  Workaround: Reboot the switch after the MPOA configuration is done. This problem is resolved in software release 4.5(10). Additionally, the WS-X516* module software must be later than 120-10.W5.18a or 12.1(3a)E releases. (CSCdr81332)
- An incorrect value might be returned when SNMP uses vlanTrunkPortVlansEnabled to display VLANs enabled on the trunking ports. This problem is resolved in software release 4.5(10). (CSCds44309)
- If there is too much traffic (over 10 Mbps) getting to the supervisor engine, you might lose the connection to manage ATM module-related MIB objects through SNMP.

  Workaround: Reset the ATM module. This problem is resolved in software release 4.5(10). Additionally, the ATM module software must be 12.0(10)W5(18a) or later. (CSCds11673) (CSCdk36902)
- The switch resets with a TLB exception when using the **show flash tftp: chips** command. This problem is resolved in software release 4.5(10). The system now returns a response indicating that the **chips** option is not valid with the **tftp:** option. (CSCds64917)
- When "." is used as a filename for **copy** or **show file** commands, the system might reset. This problem is resolved in software release 4.5(10). (CSCds54945)
- After upgrading the 7204 VXR MLS router to 12.1(2) and Catalyst 5500 switch to 4.5(7), the following messages appear randomly in the switch logs:

  ```
  2000 Aug 16 18:08:27 nzst +13:00 %MLS-5-ROUTERDEL:Route Processor 10.177.134.1 deleted
  - rxed a random sequence number SDM
  2000 Aug 16 18:09:39 nzst +13:00 %MLS-5-ROUTERADD:Route Processor 10.177.134.1 added
  ```

  When a **show mls entry** is entered on the switch and the screen output is paused with -More- at the bottom for more than one minute, these messages appear:

  ```
  2000 Jul 05 16:13:57 nzst +13:00 %MLS-5-ROUTERDEL:Route Processor 10.177.134.1 deleted
  - dead router timer expired
  2000 Jul 05 16:13:57 nzst +13:00 %MLS-5-ROUTERADD:Route Processor 10.177.134.1 added
  ```

  This problem is resolved in software release 4.5(10). (CSCds07183)

Open and Resolved Caveats in Software Release 4.5(9)

This section describes open and resolved caveats in supervisor engine software release4.5(9):

- Open Caveats in Software Release4.5(9), page26
- Resolved Caveats in Software Release4.5(9), page26

Open Caveats in Software Release 4.5(9)

Note For a description of caveats resolved in software release4.5(9), see the "Resolved Caveats in Software Release4.5(9)" section on page26.

This section describes open caveats in software release4.5(9).

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- After a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)

Resolved Caveats in Software Release 4.5(9)

Note For a description of open caveats in software release4.5(9), see the "Open Caveats in Software Release4.5(9)" section on page26.

This section describes caveats resolved in software release 4.5(9):

- The following messages might be displayed when CGMP is enabled, some entries are populated, and a topology change occurs:

  ```
  %EARL-3-LTL:Failure to set LTL for module 5
  %EARL-3-LTL:Failure to set LTL for module 5
  %SPANTREE-5-PORTDEL_SUCCESS:5/4 deleted from vlan 2 (LinKUpdPrcs)
  %EARL-3-LTL:Failure to set
  ```

  These message do not affect the operation of the switch.

  This problem is resolved in software release 4.5(9). (CSCdp13686)
- In some instances when IGMP snooping is used, a device might not be added to a multicast group on its first attempt to join. A related problem occurs when a switch has only multicast sources for a given group of MAC addresses directly attached. Because of problems with entries periodically timing out, packet loss may occur when this entry is removed and reinstalled. This problem is resolved in software release 4.5(9). (CSCdr54030)
- VMPS client malfunctions occur with SUN and SGI workstations. The problem occurs when reconfirm VMPS requests are retransmitted and, as a result, multiple replies are received from the VMPS server. This problem is resolved in software release 4.5(9). (CSCdr82526)

- When upgrading Supervisor Engine II from software release 3.2(5) directly to software release 4.5(7), the clock may report an earlier date and become stuck after the reset. Use the **set time** comm to recover the correct time and start the clock. This problem is resolved in software release 4.5(9). (CSCdr89912)
- The switch might display “Out of memory” messages, which can cause VMPS to become inactive. This might be caused by duplicate MAC addresses in the VMPS database.

  Workaround: Reboot the switch. This problem is resolved in software release 4.5(9). (CSCdr95115)
- When the RMON alarmStatus is set to “invalid” (4), you might see the following syslog message:

  ```
  Task RMON AlarmTimer waits for the same semaphore alarm_sem
  ```

  Workaround: Clear all the RMON alarmEntries.

  This problem is resolved in software release 4.5(9). (CSCds01500)

Open and Resolved Caveats in Software Release 4.5(8)

These sections describe open and resolved caveats in supervisor engine software release 4.5(8):

Open Caveats in Software Release 4.5(8)

Note For a description of caveats resolved in software release 4.5(8), see the “Resolved Caveats in Software Release4.5(8)” section on page28.

This section describes open caveats in software release 4.5(8).

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- After a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)

Resolved Caveats in Software Release 4.5(8)

Note For a description of open caveats in software release 4.5(8), see the "Open Caveats in Software Release4.5(8)" section on page27.

This section describes caveats resolved in software release 4.5(8):

- When a port on a WS-X5012 or WS-X5012A module is disabled, the OutOctet counters might report an incorrect value if the value is larger than can be displayed with 32 bits. This problem is resolved in software release 4.5(8). (CSCdr48865)
- The Catalyst 5000 family switch is unable to resolve DNS names if the DNS server has more than seven entries. This problem is resolved in software release 4.5(8). (CSCdr80835)
- A system reset might occur during SNMP polling of the switch ports (SWPoll64bCnt) if a module goes on- and off-line frequently. This problem is resolved in software releases 4.5(8) and 5.4(3). (CSCdr41609)
- If you clear a VLAN from a trunk port and disable spanning tree on the switch, STP BPDUs for that VLAN are still received on the trunk port and the switch floods the BPDUs to all other ports in that VLAN. This situation might lead to spanning tree instabilities and Fast EtherChannels getting err-disabled. This problem is resolved in software release 4.5(8). (CSCdr228643)
- Repeatedly removing and creating an entry in cseStaticExtRouterTable using SNMP causes a system reset. This problem is resolved in software releases 4.5(8) and 5.4(3). (CSCdr40101)
- Installing a Multicast Group Destination Address (GDA) into a static CAM for a specific VLAN is not allowed. This problem is resolved in software release 4.5(8). (CSCdr49350)
- A memory corruption occurs if you turn on IGMP Snooping and configure an EtherChannel connection. The corruption occurs when the EtherChannel port status changes from Administratively Down to Up. This problem is resolved in software release 4.5(8). (CSCdr24709)
- Under certain conditions the CPU on the supervisor engine might stay at 90 percent or higher utilization. This situation might affect management and essential operation of the system. Switching of data traffic will be unaffected. This problem is resolved in software release 4.5(8). (CSCdr71528)
- If you Telnet to a Supervisor Engine III running software release 4.5 and then Telnet to another device, displaying a large list or file can cause the Telnet session to hang. This problem is resolved in software release 4.5(8). (CSCdm79404)
- When large amounts of data display during a Telnet session, the Telnet session will sometimes hang. This problem usually happens if you have set the screen length to 0 and long **show** commands are being displayed or if you have cut and pasted several **show** commands onto the window.

  Workaround: Avoid using cut and paste in a Telnet session and set the screen length to non-zero. This problem is resolved in software release 4.5(8). (CSCdp47176, CSCdr40184)

Open and Resolved Caveats in Software Release 4.5(7)

These sections describe open and resolved caveats in supervisor engine software release4.5(7):

Open Caveats in Software Release 4.5(7)

Note For a description of caveats resolved in software release4.5(7), see the "Resolved Caveats in Software Release4.5(7)" section on page29.

This section describes open caveats in software release4.5(7):

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- After a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- Frame Priority is set incorrectly from Ethernet to FDDI. A new command, **set option fddi-user-pri**, has been added to enable the priority field in the FDDI packets. The command requires FDDI software release 3.2(1a) and supervisor engine software release 5.5(2) or later. This problem is resolved in software release 5.5(2). (CSCdr42228)
- The Catalyst 5000 family switch is unable to resolve DNS names if the DNS server has more than seven entries. (CSCdr808353)

Resolved Caveats in Software Release4.5(7)

Note For a description of open caveats in software release4.5(7), see the "Open Caveats in Software Release4.5(7)" section on page29.

This section describes caveats resolved in software release 4.5(7):

- The FDDI dual-port module returns the ifIndex of the first port. This problem occurs in software release 4.5.7 and all earlier versions of 4.x software and in software release 5.5(1) and all earlier versions of 5.x software. This problem is resolved in software releases 4.5(7) and 5.5(2). (CSCdp81474)
- Under certain conditions during initial bootup of a Catalyst 5000 family switch running 4.5(6) software, a port may be left in the initial (unused) VLAN instead of being programmed into the end user VLAN. This problem is resolved in software release 4.5(7). (CSCdr31594)
- Broadcast/multicast suppression on modules that support hardware suppression does not filter out multicasts to DA FF FF FF FF FF 00. This problem is resolved in software release 4.5(7). (CSCdr30012)

- If you save a configuration file from a switch where Token Ring is not configured, and then apply the saved configuration file to that same switch, it is safe to ignore messages about TRBRF and TrCRF VLANs. These messages are caused by the default Token Ring VLAN configuration, which is always present regardless of the specific configuration of the switch. This problem is resolved in software release 4.5(7). (CSCdm92714)
- The SNMP **getone** and **getnext** commands produce different values for the same dot1dTpFdbPort object when they retrieve LANE module port index information from the CAM table. This problem is resolved in software release 4.5(7). (CSCdp80044)
- The WS-X5225R module fails to negotiate the duplex mode correctly after a system reset or power cycle with Sun workstations “Ultra 5." This problem is resolved in software release 4.5(7). (CSCdr03818)
- After a system reset under traffic, the switch initializes to VLAN 0 and Spanning Tree Protocol sets the ports to Forwarding state. Due to a short delay before the correct VLAN is set, packets might come in with VLAN 0 learned, which causes VLAN 0 CAM entries to be created and isolates the ports from connected devices. This problem is resolved in software release 4.5(7). (CSCdr21314)
- In certain situations, incoming traffic is missing on the SPAN port when spanning from WS-X5012A module to WS-X5011 module or from WS-X5011 to WS-X5224 module using a different bus. This problem is resolved in software release 4.5(7). (CSCdr22775)
- The show TopN utility reports errors on trunk ports when no errors occurred. This problem is resolved in software release 4.5(7). (CSCdr23551)
- After closing a Telnet session, the switch still shows the session as open. Using the **disconnect** *ip_address* command to disconnect a user and manually close the session does not close the session. This problem is fixed in software release 4.5(7). (CSCdp33649)
- A memory corruption might occur if you insert a standby supervisor engine or boot up a redundant system that has fewer VLANs configured than the active supervisor engine. This problem is resolved in software release 4.5(7). (CSCdp98884)
- The **show top** command incorrectly reports errors on trunk. This problem is resolved in software release 4.5(7). (CSCdr23551)
- On Catalyst 5000 platforms, if the protocol filtering feature is enabled when the switch is reset, IGMP Snooping will not be able to process IGMP reports or other IGMP messages.

  Workaround: Ensure that protocol filtering is disabled when a switch is reset. Once the switch is reset with protocol filtering disabled, IGMP will work correctly. If you desire both features, the following workaround can be applied:

  a. Enable IGMP Snooping.
  b. Disable protocol filtering.
  c. Reset the switch.
  d. Enable protocol filtering.

  

  Note Note, in the above scenario, IGMP Snooping will again not work if the switch is reset a second time (since now both features are enabled).

  This problem is resolved in software releases 4.5(7). (CSCdr61567)

Open and Resolved Caveats in Software Release 4.5(6)

These sections describe open and resolved caveats in supervisor engine software release4.5(6):

Open Caveats in Software Release 4.5(6)

Note For a description of caveats resolved in software release4.5(6), see the "Resolved Caveats in Software Release4.5(6)" section on page31.

This section describes open caveats in software release4.5(6).

- If you save a configuration file from a switch where Token Ring is not configured and then apply the saved configuration file to that same switch, it is safe to ignore messages about TRBRF and TrCRF VLANs. These messages are caused by the default Token Ring VLAN configuration, which is always present regardless of the specific configuration of the switch. (CSCdm92714)
- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- After a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- After closing a Telnet session, the switch still shows the session as open. Using the **disconnect** *ip_address* command to disconnect a user and manually close the session does not close the session. This problem is fixed in software release 4.5(7). (CSCdp33649)
- Frame Priority is set incorrectly from Ethernet to FDDI. A new command, **set option fddi-user-pri**, has been added to enable the priority field in the FDDI packets. The command requires FDDI software release 3.2(1a) and supervisor engine software release 5.5(2) or later. This problem is resolved in software release 5.5(2). (CSCdr42228)
- The Catalyst 5000 family switch is unable to resolve DNS names if the DNS server has more than 7 entries. (CSCdr808353)

Resolved Caveats in Software Release4.5(6)

Note For a description of open caveats in software release4.5(6), see the "Open Caveats in Software Release4.5(6)" section on page31.

This section describes caveats resolved in software release 4.5(6):

- If a large number of RMON history, alarm, and event entries are continuously deleted and added, the RMON alarmTimer experiences a memory allocation problem. This problem is resolved in software release 4.5(6). (CSCdp58575)
- When a FDDI port is trunking, a fast link flap may cause the port to stop trunking. This problem is resolved in software release 4.5(6). (CSCdp72267)
- Supervisor Engine III experiences an exception when receiving an rmon_set_historyEnable entry. This problem is resolved in software release 4.5(6). (CSCdp67262)
- A port status mismatch might occur on Catalyst 5000 family switch module WS-X5225R and WS-X5234 ports that are directly connected to ports on the WS-X6248-RJ-45 Catalyst 6000 family switch module. This problem is resolved in software release 4.5(6). (CSCdp61755)
- If you define VLAN groups in the VMPS configuration database file, there may not be enough free memory to save this information. This problem is resolved in software release 4.5(6). (CSCdp68303)
- TACACS+ might experience an exception if access to an invalid socket is attempted. This problem is resolved in software release 4.5(6). (CSCdp40197)
- With the Catalyst 5000 family switch running software release 4.5(1) and later, the ifOutUcastPkts and ifInUcastPkts counter sometimes decrements instead of increments on 10/100 Ethernet ports. This problem is resolved in software release 4.5(6). (CSCdp71615)
- If you configure a Catalyst 5000 family switch for VTP client mode with redundant Supervisor Engine IIIGs (WS-X5550s), there is no connectivity to devices on the WS-X5101 after the switch reloads. This problem is resolved in software release 4.5(6). (CSCdp68378)
- Intermittently, PVST+ conversion is not performed when BPDUs go from a non-native VLAN on an 802.1Q trunk to an access port and STP is disabled. This problem is resolved in software release 4.5(6). (CSCdp81050)
- If a port comes up as an individual port and there is a channel in its EBC range, the port gets the default channel port setting whether the port is connected or not. From the point of view of a Fast Ethernet channel, the switch appears to be sending traffic through a disconnected port.This problem is resolved in software release 4.5(6). (CSCdp78923)
- Supervisor Engine II in a Catalyst 5500 running software version 4.5(5) will continually reboot. This problem is resolved in software release 4.5(6). (CSCdp74698)
- TrafficDirector NetFlow monitoring stops on the Network Analysis module (WS-X5380) after the module is reset. This problem is resolved in software release 4.5(6). (CSCdp10760)
- Entering the **show mls** command after changing the flowmask from **destination** to **full** can cause a system exception. This problem is resolved in software release 4.5(6). (CSCdp02406)
- When using VMPS on ports connected to routers running HSRP that are not configured to use the burned-in address, the Catalyst 5000 family switch might reset when the active HSRP router is shut down.

  Workaround: Configure **standby use-bia** on the router interfaces for the HSRP (standby uses the interfaces burned in address [bia]). This problem is resolved in software release 4.5(6). (CSCdp51787)
- Occasionally, when MLS detects a host move, the **show mls entry** command might display **no entries**. This problem is resolved in software release 4.5(6). (CSCdp39218)
- VTP updates received through other trunks might enable disabled trunks that have a default VLAN other than 1. This problem is resolved in software release 4.5(6). (CSCdp39638)

- The switch might reset following a **show configuration** command if the login banner is set through SNMP and is longer than 200 characters without a return. This problem is resolved in software release 4.5(6). (CSCdp65405)
- Permanent CAM entries created by MPOA are not removed when an ATM module is removed or reset. This problem is resolved in software release 4.5(6). (CSCdm94115)
- Configuring the RMON alarm for the ATM module-related MIB object might cause Catalyst5000 family switches to stop responding to SNMP requests. This problem is resolved in software release 4.5(6). (CSCdp48766)
- If DNS lookup fails, a high rate of memory leaks occur for every DNS lookup. This problem is resolved in software release4.5(6). (CSCdp71815)
- If you are connected to the console port on a Catalyst 5000 supervisor engine and Telnet out of the supervisor engine, the Catalyst switch reboots with a TLB exception. To avoid this problem, do not cut and paste a large amount of data onto the Telnet screen while Telnetting out of or sessioning into the RSM. This problem is resolved in software release4.5(6). (CSCdp60430)
- The system might encounter an exception if all of the following conditions are met:
  - RMON is enabled
  - A Token Ring module exists in the device
  - The system is low on free memory

  To prevent this problem, disable RMON, remove the Token Ring module, or reduce the memory usage in the device. This problem is resolved in software release4.5(6). (CSCdp57910)
- MAC addresses might be learned on invalid or nonexistent ports when CDP traffic on Fast Ethernet channel or Gigabit Ethernet channel interfaces is received with different MAC addresses but from the same physical port in the channel group.

  Workaround: Disable CDP on the device channeling to or connecting to the Catalyst 5000 family switch. This problem is resolved in software release4.5(6). (CSCdp55073)

Open and Resolved Caveats in Software Release 4.5(5)

These sections describe open and resolved caveats in supervisor engine software release4.5(5):

- Open Caveats in Software Release4.5(6), page31
- Resolved Caveats in Software Release4.5(6), page31

Open Caveats in Software Release 4.5(5)

Note For a description of caveats resolved in software release4.5(5), see the "Resolved Caveats in Software Release4.5(5)" section on page35.

This section describes open caveats in software release4.5(5).

- When using VMPS on ports connected to routers running HSRP that are not configured to use the burned in address, the Catalyst 5000 family switch might reset when the active HSRP router is being shut down.

Workaround: Configure **standby use-bia** on the router interfaces for the HSRP (standby uses the interfaces burned in address [bia]). (CSCdp51787)

- If you save a configuration file from a switch where Token Ring is not configured, and then apply the saved configuration file to that same switch, it is safe to ignore messages about TRBRF and TrCRF VLANs. These messages are caused by the default Token Ring VLAN configuration, which is always present regardless of the specific configuration of the switch. (CSCdm92714)
- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- In some cases, after a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- Frame Priority is set incorrectly from Ethernet to FDDI. A new command, **set option fddi-user-pri**, has been added to enable the priority field in the FDDI packets. The command requires FDDI software release 3.2(1a) and supervisor engine software release 5.5(2) or later. This problem is resolved in software release 5.5(2). (CSCdr42228)
- The Catalyst 5000 family switch is unable to resolve DNS names if the DNS server has more than 7 entries. (CSCdr808353)
- If a VLAN is cleared from a trunk port and spanning tree is disabled on the switch, STP BPDUs for that VLAN are still received on the trunk port, and the switch in turn floods the BPDUs to all other ports in that VLAN. This might lead to spanning tree instabilities and Fast EtherChannels getting err-disabled. (CSCdr228643)

Resolved Caveats in Software Release4.5(5)

Note For a description of open caveats in software release4.5(5), see the "Open Caveats in Software Release4.5(6)" section on page31.

This section describes caveats resolved in software release 4.5(5):

- If a switch is configured with the sc0 interface in a Token Ring VLAN, and there are parallel trunks to another switch, it is possible for the first switch to erroneously detect a duplicate IP address. This can lead to excessive console messages being displayed, making the console unusable.

  Workaround: Move the sc0 interface into an Ethernet VLAN. (CSCdm93084)

- When the backup concentrator relay function (CRF) is configured on the Catalyst 5000 supervisor engine, it is stored in the NVRAM, but when you enter a **copy config** command, the CRF configuration parameters do not get copied with the rest of the switch configuration. If the switch is power-cycled, the backup CRF configuration is retained in the NVRAM. (CSCdp38648)
- When a VTP client and a VTP server in a VTP domain are separated from each other by a VTP transparent mode switch that is not a member of any VTP domain and the client is reset, the client does not update its configuration after receiving a VTP update from the VTP server. This problem is fixed in software release 4.5(5). (CSCdp05027)
- Telnet sessions to the switch are not released properly. This problem is fixed in software release 4.5(5). (CSCdp15609)
- If a switch is configured with the sc0 interface in a Token Ring VLAN and there are parallel trunks to another switch, the first switch might erroneously detect a duplicate IP address. This can lead to excessive console messages being displayed making the console unusable.

  Workaround: Move the sc0 interface into an Ethernet VLAN. This problem is fixed in software release 4.5(5). (CSCdm93084)
- Use of the **set standbyports enable** command to enable a port on a backup Supervisor Engine III associates an ifIndex number with the port, which can be displayed by the **show port** command, but the MIB object **cdpInterfaceEntry** does not see this ifIndex number. This causes CiscoWorks2000 map discovery to fail. To avoid this problem, reset the standby supervisor engine. This problem is fixed in software release 4.5(5). (CSCdm30287)
- Communication using SLIP on the console port of a Supervisor EngineII might fail. This problem is fixed in software release 4.5(5). (CSCdm45445)
- Multicast and broadcast traffic is not cleared correctly from the counters when the **clear counter** command is issued. This problem is fixed in software release 4.5(5). (CSCdm94354)
- VTP Clients do not learn new configurations from each other.When the update timer in one VTP client times out, it has to send a request advertisement but this request does not reach other clients and the requesting client remains stuck waiting for the rest of the configuration. Resetting the switch or changing the state of the switch enables the hung client to learn the configuration. This problem is fixed in software release 4.5(5). (CSCdm90300)
- Cut-and-paste does not work with the **session** command for the WS-X5167 OC-3 ATM module. This problem is fixed in software release 4.5(5). (CSCdp18016)

- After a switchover, ports that are in a Port Security shutdown state on the 10/100 Mbps Fast Ethernet Switching Module (WS-X5224) do not recover their links to workstations connected to those ports. If the cables on the ports are disconnected, the link lights remain green and the link is not dropped, indicating that the ports are connected and spanning tree is in forwarding state. Resetting the module is the only means of recovering from this problem. This problem is fixed in software release 4.5(5). (CSCdp08791)
- The Token Ring module is slow to recover from a supervisor engine switchover. This problem is fixed in software release 4.5(5). (CSCdp27114)
- When the **set snmp trap help** command is executed, the keyword **syslog** is not shown as an option. This problem is fixed in software release 4.5(5). (CSCdp29969)
- Ports on the standby supervisor engine are not included in the ifIndex-related MIB tables.

  Workaround: Reset the standby supervisor engine. This problem is fixed in software release 4.5(5). (CSCdm30287)
- Trunk is going up and down when the channel is in channel-on mode and the trunk is in non-negotiate mode. This problem is fixed in software release 4.5(5). (CSCdp32703)
- When upgrading from any Catalyst 5000 4.x software release to software release 5.2(2), the SNMP trap receiver conversion causes SNMP trap receiver information to be lost and replaced with 10 incorrect SNMP trap receivers of 0.0.0.0.

  Workaround: Issue a **clear snmp trap all** command and reenter the valid SNMP trap receivers. This problem is fixed in software release 4.5(5). (CSCdp44206)
- The LED light remains on indicating link speed even when the link is down. This problem is fixed in software release 4.5(5). (CSCdp42337)
- Switch processor went down while loading new software. This problem is fixed in software release 4.5(5). (CSCdp43577)
- When a port is configured for SPAN with the **inpkt disable** option, the port still receives packets. This problem is fixed in software release 4.5(5). (CSCdp40076)
- Entries in the ATM module LE-ARP table are changing due to incorrect CAM entries. This problem is fixed in software release 4.5(5). (CSCdp37448)
- In software releases 4.5(3) and 4.5(4), when a VLAN designation is changed on a port on the WS-X5010 card, new MAC entries are not learned until the port is disabled and re-enabled. This problem is fixed in software release 4.5(5). (CSCdp38670)

Open and Resolved Caveats in Software Release 4.5(4)

These sections describe open and resolved caveats in supervisor engine software release4.5(4):

- Open Caveats in Software Release4.5(3), page39
- Resolved Caveats in Software Release4.5(3), page40

Open Caveats in Software Release 4.5(4)

Note For a description of caveats resolved in software release4.5(4), see the "Resolved Caveats in Software Release4.5(4)" section on page38.

This section describes open caveats in software release4.5(4).

- When the backup concentrator relay function (CRF) is configured on the Catalyst 5000 supervisor engine, it is stored in the NVRAM, but when you enter a **copy config** command, the CRF configuration parameters do not get copied with the rest of the switch configuration. If the switch is power-cycled, the backup CRF configuration is retained in the NVRAM. (CSCdp38648)
- If a switch is configured with the sc0 interface in a Token Ring VLAN and there are parallel trunks to another switch, it is possible for the first switch to erroneously detect a duplicate IP address. This can lead to excessive console messages being displayed, making the console unusable.

  Workaround: Move the sc0 interface into an Ethernet VLAN. (CSCdm93084)
- If you save a configuration file from a switch where Token Ring is not configured, and then apply the saved configuration file to that same switch, it is safe to ignore messages about TRBRF and TrCRF VLANs. These messages are caused by the default Token Ring VLAN configuration, which is always present regardless of the specific configuration of the switch. (CSCdm92714)
- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- In some cases, after a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- Communication using SLIP on the console port of a Supervisor EngineII might fail. (CSCdm45445)
- Frame Priority is set incorrectly from Ethernet to FDDI. A new command, **set option fddi-user-pri**, has been added to enable the priority field in the FDDI packets. The command requires FDDI software release 3.2(1a) and supervisor engine software release 5.5(2) or later. This problem is resolved in software release 5.5(2). (CSCdr42228)
- The Catalyst 5000 family switch is unable to resolve DNS names if the DNS server has more than 7 entries. (CSCdr808353)

Resolved Caveats in Software Release 4.5(4)

Note For a description of open caveats in software release4.5(4), see the "Open Caveats in Software Release4.5(4)" section on page37.

This section describes caveats resolved in software release 4.5(4):

- Under certain conditions, the switch can access an out-of-range memory location, causing the switch to reset. This problem is fixed in software release 4.5(4). (CSCdm81976)
- When there are ELANs configured on an ATM module but a corresponding VLAN is not configured on the supervisor engine, you might see syslog message such as the following:

  ```
  1999 Aug 24 17:15:51 EDT -04:00 %PRUNING-4-NOBUF:no mbuf to build join
  ```

  These messages indicate that a protocol failed to find a memory buffer to perform an operation.

  Workaround: Configure the corresponding VLANs on the supervisor engine. The syslog messages should stop within a few minutes. This problem is fixed in software release4.5(4). (CSCdm30975)
- When using TACACS+, if you open a Telnet session to the switch and enter a username and close the Telnet session without entering a password, the TACACS+ session from the switch to the TACACS+ server remains open. This problem is fixed in software release 4.5(4). (CSCdp02341)
- Occasionally, you may see "%SPANTREE-3-PORTADD_DISABLE" messages. This message indicates that a port for a given VLAN has been added to the spanning tree in a disabled state. Examine the condition of the port. Contact your technical support representative.These messages have been moved to severity level 7 in software release 4.5(4). (CSCdp06238)
- The switch might not respond to SNMP requests for a while if an SNMP set command is issued on MIB object vlanPortIslVlansAllowed when the port is an RSM module. This problem is fixed in software release 4.5(4). (CSCdp03818)
- Periodically, the switch reboots with an "MCP not responding" message. This problem is fixed in software release 4.5(4). (CSCdm90981)
- With MLS configured to use more than one MLS-RP and with the MLS-RPs configured for HSRP, when a Spanning Tree Protocol topology change occurs, MLS cache entries are deleted and occasionally may not be re-created. This problem is fixed in software release 4.5(4). (CSCdm90511)
- In a redundant Token Ring topology with ISL trunking, it is possible for a ping from a Catalyst 5000 series switch to a Catalyst 3900 switch to fail. Other network traffic is not affected. This problem is fixed in software release 4.5(4). (CSCdp07427)
- When you configure a permanent multicast CAM entry for multiple ports and you change the port VLAN membership for multiple ports, the supervisor engine receives an exception and reloads. Only the first port listed retains the new VLAN membership, and is removed from the permanent cam entry. This problem is fixed in software release 4.5(4). (CSCdm91321)
- If you configure a Supervisor EngineI as a VTP client, the switch might reset when the trunk link to the VTP server is enabled. This problem is fixed in software release4.5(4). (CSCdm92411)
- When linked to ports on switches that do not limit channels to contiguous ports, such as ports on Catalyst 6000 family switches and ports on the WS-X5410 Gigabit EtherChannel switching module, ports at either end of the channel might be incorrectly bundled, which may cause a network loop resulting in disabled ports. This is fixed in software release 4.5(4). (CSCdm49693)

Open and Resolved Caveats in Software Release 4.5(3)

These sections describe open and resolved caveats in supervisor engine software release4.5(3):

Open Caveats in Software Release 4.5(3)

Note For a description of caveats resolved in software release4.5(3), see the "Resolved Caveats in Software Release4.5(3)" section on page40.

This section describes open caveats in software release4.5(3).

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- In some cases, after a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- When there are ELANs configured on an ATM module but a corresponding VLAN is not configured on the supervisor engine, you might see a syslog message such as the following:

  ```
  1999 Aug 24 17:15:51 EDT -04:00 %PRUNING-4-NOBUF:no mbuf to build join
  ```

  These messages indicate that a protocol failed to find a memory buffer to perform an operation.

  Workaround: Configure the corresponding VLANs on the supervisor engine. The syslog messages should stop within a few minutes. This problem is fixed in software release4.5(4). (CSCdm30975)
- Communication using SLIP on the console port of a Supervisor EngineII might fail. (CSCdm45445)
- Frame Priority is set incorrectly from Ethernet to FDDI. A new command, **set option fddi-user-pri**, has been added to enable the priority field in the FDDI packets. The command requires FDDI software release 3.2(1a) and supervisor engine software release 5.5(2) or later. This problem is resolved in software release 5.5(2). (CSCdr42228)
- The Catalyst 5000 family switch is unable to resolve DNS names if the DNS server has more than 7 entries. (CSCdr808353)

Resolved Caveats in Software Release 4.5(3)

Note For a description of open caveats in software release4.5(3), see the "Open Caveats in Software Release4.5(3)" section on page39.

This section describes caveats resolved in software release 4.5(3):

- Autonegotiation between Sun 10/100 NICs and certain Catalyst5000 family modules (such as the WS-X5225R) might result in speed and/or duplex mismatches under certain conditions. The problem typically occurs after you reset the module or you disable and reenable the switch port.

  Workaround: Disconnect and reconnect the cable connecting the workstation to the switch port. This problem is fixed in software release4.5(3). (CSCdm51653)

- In some situations, the "RxBPDUThresholdDrop" counter does not show the actual number of dropped frames. This problem is fixed in software release4.5(3). (CSCdm56862)

- When you configure a port with a connected workstation as the SPAN destination port (with the inpkts option enabled) for a SPAN source port configured as a VLAN trunk, attempts to ping other devices in the network from the workstation fail. This problem is fixed in software release4.5(3). (CSCdm48998)

- If you repeatedly delete and create an etherStatsEntry, you might be unable to access the counter MIB objects for the current etherStatsEntry.

  Workaround: Delete the problem etherStatsEntry and create a new one. This problem is fixed in software release4.5(3). (CSCdm01166)

- If you configure an RMON threshold alarm on the switch and that alarm is triggered while a MIB walk is in progress, the MIB walking application might loop back to the first leaf of the MIB branch it is currently walking.

  Workaround: Disable RMON, not configure any RMON alarms on the switch, or increase the polling interval of the alarm (such as one poll every five minutes). This problem is fixed in software release4.5(3). (CSCdm34091)

- On the Gigabit EtherChannel module (WS-X5410), when the native VLAN of a trunk port is cleared and then the trunk port is set to **off**, the port is placed in the inactive state but the Link LED for the port still shows green. The correct behavior is that the LED for the port should show orange. This problem is fixed in software release4.5(3). (CSCdk31985)

- If you repeatedly delete and create an etherStatsEntry, you might be unable to access the counter MIB objects for the current etherStatsEntry.

  Workaround: Delete the problem etherStatsEntry and create a new one. This problem is fixed in software release4.5(3). (CSCdm01166)

- In some cases, the CiscoView application fails to display a Catalyst5000 family switch if the switch contains 24-port 10/100BASE-TX RJ-45 (WS-X5224) or 24-port 10/100BASE-TX Fast Ethernet RJ-45 (WS-X5225R) modules.

  Workaround: Increase the polling interval value on the CiscoView application. This problem is fixed in software release4.5(3). (CSCdm34809)

- If you configure a port as an ISL trunk in on mode and the neighbor port is configured in **off** mode, the switch still forwards Token Ring ISL frames over the link.

  Workaround: Correct the misconfiguration by configuring the ports to compatible trunk modes (for example, both **off**, both **on**, one **desirable** and one **auto**, and so forth). This problem is fixed in software release4.5(3). (CSCdm44861)

- If you configure a port on the 24-port 10/100BASE-TX Fast Ethernet RJ-45 module (WS-X5225R) as a SPAN destination port, incoming interVLAN traffic on the SPAN source port is not mirrored on the SPAN destination port when IP MLS is enabled. This problem is fixed in software release4.5(3). (CSCdm74201)

- A syslog message for a given facility is not sent to the syslog server if the syslog server severity level is set to a value equal to or greater than the message severity but the default severity level for that facility is set to a value less than the message severity.

  Workaround: Set the default facility severity level to a value equal to or greater than the configured syslog severity level. In release4.5(3), syslog messages are sent to the syslog server if the syslog server severity level is equal to or greater than the message severity and the default facility severity level is equal to or greater than the message severity. (CSCdm71889)

- In some cases, when you clear the configuration using the **clear config all** command, not all routes are removed from the IP routing table.

  Workaround: Configure the in-band (sc0), out-of-band management Ethernet (me1), and SLIP (sl0) interfaces down using the **set interface** {**sc0** | **me1** | **sl0**} **down** command before clearing the configuration. This problem is fixed in software release4.5(3). (CSCdm56746)

- On a switch with redundant Supervisor Engine III modules and an RSM, if the switch is a VTP client and you reset of the active supervisor engine, VLAN interfaces on the RSM fail to come back up.

  Workaround: Configure the switch as a VTP server or as VTP transparent. This problem is fixed in software release4.5(3). (CSCdm23628)

- Attempts to authenticate users on the switch using CiscoSecure NT might fail because the switch does not include the remote address (rem_addr) field in TACACS+ authentication packets. This problem is fixed in software release4.5(3). (CSCdm60984)

- If you configure a switch from a configuration file on a TFTP server and the configuration applies to 24-port 10BASE-T RJ-45 (WS-X5013) modules in the switch, one or more of the WS-X5013 modules might stop responding. In addition, if you enter the **show mac** command, this message is displayed for the affected module: “Unable to access counters.”

  Workaround: Reset the module. This problem is fixed in software release4.5(3). (CSCdm74925)

Open and Resolved Caveats in Software Release 4.5(2)

These sections describe open and resolved caveats in supervisor engine software release4.5(2):

- Open Caveats in Software Release4.5(2), page42
- Resolved Caveats in Software Release4.5(2), page43

Open Caveats in Software Release 4.5(2)

Note For a description of caveats resolved in software release4.5(2), see the "Resolved Caveats in Software Release4.5(2)" section on page43.

This section describes open caveats in software release4.5(2).

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- On the Gigabit EtherChannel module (WS-X5410), when the native VLAN of a trunk port is cleared and then the trunk port is set to **off**, the port is placed in the inactive state but the Link LED for the port still shows green. The correct behavior is that the LED for the port should show orange. (CSCdk31985)
- In some cases, after a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- If you configure an RMON threshold alarm on the switch and that alarm is triggered while a MIB walk is in progress, the MIB walking application might loop back to the first leaf of the MIB branch it is currently walking.

  Workaround: Disable RMON, not configure any RMON alarms on the switch, or increase the polling interval of the alarm (such as one poll every five minutes). (CSCdm34091)
- If you repeatedly delete and create an etherStatsEntry, you might be unable to access the counter MIB objects for the current etherStatsEntry.

  Workaround: Delete the problem etherStatsEntry and create a new one. (CSCdm01166)
- A syslog message for a given facility is not sent to the syslog server if the syslog server severity level is set to a value equal to or greater than the message severity but the default severity level for that facility is set to a value less than the message severity.

  Workaround: Set the default facility severity level to a value equal to or greater than the configured syslog severity level. (CSCdm71889)
- Frame Priority is set incorrectly from Ethernet to FDDI. A new command, **set option fddi-user-pri**, has been added to enable the priority field in the FDDI packets. The command requires FDDI software release 3.2(1a) and supervisor engine software release 5.5(2) or later. This problem is resolved in software release 5.5(2). (CSCdr42228)
- The Catalyst 5000 family switch is unable to resolve DNS names if the DNS server has more than 7 entries. (CSCdr808353)

Resolved Caveats in Software Release4.5(2)

Note For a description of open caveats in software release4.5(2), see the "Open Caveats in Software Release4.5(2)" section on page42.

This section describes caveats resolved in software release 4.5(2):

- In some cases, multiple Catalyst5000 family switches connected through ISL trunk ports might all report that they are the designated root for the default TrBRF (VLAN 1005). This problem is resolved in software release4.5(2). (CSCdk63476)
- In a system with redundant Supervisor Engine III modules, after a switchover from the active to the standby supervisor engine, any 48-port, 10BASE-T Ethernet modules (WS-X5012) installed in the system might reset. The expected behavior is that the modules stay online. This problem is resolved in software release4.5(2). (CSCdm06609)
- In some cases, when using SPAN on the Token Ring modules (WS-X5030 or WS-X5031), receive (Rx) traffic is not mirrored to the SPAN destination port. This problem is resolved in software release4.5(2). (CSCdk78241)
- If DNS is enabled and none of the configured DNS servers is reachable, local password authentication can be excessively slow. This problem is resolved in software release4.5(2). (CSCdm14239)
- If you reset the switch with certain Lancast MII transceivers attached, the port to which the transceiver is attached is marked faulty.

  Workaround: Disconnect the transceiver, reset the switch, and then reattach the transceiver after the switch boots up. This problem is resolved in software release4.5(2). (CSCdk70113)
- Under specific conditions, a spanning tree loop might occur in a redundant configuration with Catalyst 5000 family and Catalyst 3900 series switches connected using ISL trunks. This problem is resolved in software release4.5(2). (CSCdm24178)
- In some cases, if you enable PortFast on a port on the Gigabit Ethernet uplink module (WS-U5534) and the attached end station is rebooted, the port stops transmitting traffic. The port continues to receive traffic.

  Workaround: Disable and then reenable the port (using the **set port disable** and **set port enable** commands) after the end station has rebooted, or disable PortFast on the port (using the **set spantree portfast disable** command). This problem is resolved in software release4.5(2). (CSCdm27416)
- In some cases, when the active link of an UplinkFast link pair is disconnected, the switch does not transmit broadcast frames on the secondary link. This problem is resolved in software release4.5(2). (CSCdm23587)
- If the Network Analysis Module (WS-X5380) is configured as the SPAN destination port, assigning a port to a VLAN using the **set vlan** command might cause an exception error that resets the switch. This problem is resolved in software release4.5(2). (CSCdm30829)
- In some cases, a Catalyst 5000 family switch might bridge an 802.1Q-encapsulated BPDU if spanning tree is disabled and both an 802.1Q trunk and an ATM LANE or ISL trunk are configured on the switch. This problem is resolved in software release4.5(2). (CSCdm26165)

- In a switch with one or more 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) or the 12-port 100BASE-FX Ethernet (WS-X5201R) modules, the swBusSBDErrorDrop counter in the **show counters** output increments if the module detects invalid frames on the backplane. Such frames are discarded and have no effect on the normal operation of the switch. This counter has been renamed swBusSBDEvent in software release4.5(2). (CSCdm02396)
- In some cases, if the primary UplinkFast link goes down, when it comes back up it can take 20 to 25 seconds to begin forwarding traffic instead of the usual one to five seconds, depending on the remote hardware.

  Workaround: Connect to a different port on the remote device if the problem occurs. This problem is resolved in software release4.5(2). (CSCdm26273)
- In some cases, UplinkFast does not function correctly between a Catalyst5000 family switch and a Catalyst 4000family switch, a Catalyst 2948G switch, or a Catalyst 5000 family Gigabit EtherChannel module (WS-X5410). This problem is resolved in software release4.5(2). (CSCdm34341)
- When you configure dynamic VLAN membership for any EtherChannel-capable port, spanning tree convergence time is 7 to 8 seconds longer than usual for those ports. This problem is resolved in software release4.5(2). (CSCdm40338)
- In some cases, when you connect a port on the 24-port 10/100 BASE-TX Fast Ethernet module (WS-X5225R) to an end station, the port might loop data back to itself. If spanning tree is disabled on the port, this problem can negatively affect switch performance. If spanning tree is enabled, the port is automatically disabled. You can verify that the problem is occurring, and identify the problem port, by entering the **show cdp neighbors** command and checking to see if the switch itself is listed as a neighbor.

  Workaround: Disable and reenable the problem port. This problem is resolved in software release4.5(2). (CSCdm26889)
- In some cases, if you configure a port as a SPAN source port and subsequently configure the same port as the SPAN destination, the SPAN destination port might be unable to receive traffic if any other SPAN-related commands are executed on the port. To avoid the problem, disable SPAN before changing the SPAN configuration. If the problem occurs, reset the module with the problem SPAN port. This problem is resolved in software release4.5(2). (CSCdm43384)
- On the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) and 12-port 100BASE-FX Ethernet (WS-X5201R) modules, if you configure a port as a SPAN destination for both transmit and receive traffic, and then you connect an analyzer to the port (bringing the link up), only receive traffic on the SPAN source port is mirrored to the SPAN destination port. The problem only occurs if the source and destination SPAN ports are both in the same group of four ports (1–4, 4–8, 9–12, 13–16, 17–20, or 21–24). This problem is resolved in software release4.5(2). (CSCdm25471)
- Under certain circumstances, an ISL packet can get corrupted in such a way that a blocked spanning tree port will forward the packet. The packet can get flooded again, leading to packet storms in certain network topologies. This problem is resolved in software release4.5(2). (CSCdm34970)
- In some cases, if you boot a switch with a user-defined TrCRF VLAN configured but no active end user ports or trunk ports in that TrCRF, an RSM VLAN interface in that TrCRF is not properly added to the parent TrBRF, preventing routing for the TrCRF.

  Workaround: Do not define a TrCRF without active ports in the TrCRF, add the TrCRF to an active trunk port, add an active port to the TrCRF, or disable RSM autostate. This problem is resolved in software release 4.5(2). (CSCdm23217)
- If you delete the RMON alarmEntry or if you modify the alarmVariable of the RMON alarmEntry while that alarmVariable is being sampled, the switch might reset. This problem is resolved in software release 4.5(2). (CSCdm49575)

- If you configure the IP address of the in-band (sc0) interface with an address in subnet zero of a ClassB address and 24bits of subnet mask, IP traffic destined for other subnets in the same ClassB network are not forwarded to the default gateway. For example, if the sc0 IP address is 172.20.0.10/24, a ping to any other address in the 172.20 ClassB network (except for those in the 172.20.0 subnet) fails. However, a ping to an address in any other ClassB network succeeds. This problem is resolved in software release 4.5(2). (CSCdm33248)

Open and Resolved Caveats in Software Release 4.5(1)

These sections describe open and resolved caveats in supervisor engine software release4.5(1):

Open Caveats in Software Release 4.5(1)

Note For a description of caveats resolved in software release4.5(1), see the "Resolved Caveats in Software Release4.5(1)" section on page46.

This section describes open caveats in software release4.5(1).

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- On the Gigabit EtherChannel module (WS-X5410), when the native VLAN of a trunk port is cleared and then the trunk port is set to **off**, the port is placed in the inactive state but the Link LED for the port still shows green. The correct behavior is that the LED for the port should show orange. (CSCdk31985)
- In some cases, after a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- In some cases, multiple Catalyst5000 family switches connected through ISL trunk ports might all report that they are the designated root for the default TrBRF (VLAN 1005). (CSCdk63476)
- In a system with redundant Supervisor Engine III modules, after a switchover from the active to the standby supervisor engine, any 48-port, 10BASE-T Ethernet modules (WS-X5012) installed in the system might reset. The expected behavior is that the modules stay online. (CSCdm06609)
- In some cases, when using SPAN on the Token Ring modules (WS-X5030 or WS-X5031), receive (Rx) traffic is not mirrored to the SPAN destination port. (CSCdk78241)

- In some cases, when you connect a port on the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) to an end station, the port might loop data back to itself. If spanning tree is disabled on the port, this problem can negatively affect switch performance. If spanning tree is enabled, the port is automatically disabled. You can verify that the problem is occurring, and identify the problem port, by entering the **show cdp neighbors** command and checking to see if the switch itself is listed as a neighbor.

  Workaround: Disable and reenable the problem port. (CSCdm26889)

- In some cases, if you configure a port as a SPAN source port and subsequently configure the same port as the SPAN destination, the SPAN destination port might be unable to receive traffic if any other SPAN-related commands are executed on the port. To avoid the problem, disable SPAN before changing the SPAN configuration. If the problem occurs, reset the module with the problem SPAN port. (CSCdm43384)

- Frame Priority is set incorrectly from Ethernet to FDDI. A new command, **set option fddi-user-pri**, has been added to enable the priority field in the FDDI packets. The command requires FDDI software release 3.2(1a) and supervisor engine software release 5.5(2) or later. This problem is resolved in software release 5.5(2). (CSCdr42228)

Resolved Caveats in Software Release 4.5(1)

Note For a description of open caveats in software release4.5(1), see the "Open Caveats in Software Release4.5(1)" section on page45.

This section describes caveats resolved in software release 4.5(1):

- In some cases, if you change the VLAN assignment of ports in a Fast EtherChannel, some ports are placed in the errdisable state and the channel is not renegotiated. The correct behavior is that the channel is torn down and renegotiated. This problem is resolved in software release4.5(1). (CSCdk32807)

- With Multilayer Switching (MLS) enabled on a Catalyst5000 family switch with an NFFC and one or more Token Ring modules (WS-X5030 or WS-X5031), after booting the switch you might see error messages similar to the following as a result of high CPU utilization by MLS:

```
1/11/1998,13:02:04:MLS-4:Too many moves, stop MLS for 5 sec!(60000000)
11/11/1998,13:04:12:MLS-4:Resume MLS after detecting too many moves
```

  Workaround: Disable MLS on the switch. This problem is resolved in software release4.5(1). (CSCdk63976)

- After a topology change occurs in a Token Ring environment, when STP reconverges, source-routed frames originating from a Catalyst 5000 family Token Ring module (WS-X5030 or WS-X5031) are not forwarded across an ISL trunk link to another switch. Non-source-routed frames are forwarded correctly.

  Workaround: Enter the **clear cam dynamic** command on the affected switches. This problem is resolved in software release4.5(1). (CSCdk63561)

- In a Token Ring network, if a TrBRF VLAN is running IEEE STP, the Catalyst 5000 family switch does not flood IBM STP BPDUs from other sources, potentially preventing SRB devices running IBM STP from properly creating a loop-free spanning tree topology.

  Workaround: Change the TrBRF STP mode to IBM and force forwarding between the TrCRFs and TrBRFs when in SRT mode. This problem is resolved in software release4.5(1). (CSCdk54704)

- On some switch ports, if you enable port security on the port before the port is in the spanning tree forwarding state, port security might shut the port down. This problem occurs only if BPDUs, broadcast packets, or other traffic is received on the port before the port enters the forwarding state. This problem affects these products:
  - WS-C2926—Catalyst 2926 switch
  - WS-X5223—24-port 3 segment 100BASE-TX (RJ-45 connector)
  - WS-X5224— 24-port 10/100BASE-TX (RJ-45 connector)
  - WS-X5020—48-port 4 segment 10BASE-T (Telco connector)
  - WS-X5010—24-port 10BASE-T (Telco connector)
  - WS-X5014—48-port 10BASE-T (RJ-45 connector)
  - WS-X5012—48-port 10BASE-T (Telco connector)
  - WS-X5012a—48-port 10BASE-T (Telco connector)
  - WS-X5013— 24-port 10BASE-T (RJ-45 connector)

  Workaround: Enable the port security feature after the port is in the forwarding state (use the **showspantree** *mod_num/port_num* command to verify the spanning tree state). This problem is resolved in software release4.5(1). (CSCdk73206)
- Under some circumstances, several ports might incorrectly be assigned the same ifIndex value (you can see the ifIndex values for ports using the **show port** command). If multiple ports share an ifIndex value, when you change the configuration on one port other ports with the same ifIndex value might be affected. If this problem occurs, clear the entire switch configuration using the **clear config all** command (make sure you back up your switch configuration before entering this command or your configuration will be lost) and reset the switch. This problem is resolved in software release4.5(1). (CSCdk74506)
- In some cases, after a switchover from the active (slot1) to the standby (slot2) supervisor engine, the uplink ports on the previously active supervisor engine (slot1) fail to come online. You might see this message:

  ```
  %SYS-3-PORT_SSUPFAIL:Failed to bring up ports on standby supervisor
  ```

  Workaround: Disable the standby ports using the **set standbyports disable** command and then reenable them using the **set standbyports enable** command. If the ports still fail to come online, reset the standby supervisor engine. This problem is resolved in software release4.5(1). (CSCdk73705)
- If a Catalyst5000 family switch is configured as a VTP client and its only connection to the VTP server is through a port on the Gigabit EtherChannel module (WS-X5410) that is configured as an IEEE 802.1Q trunk with its native VLAN other than VLAN 1, when the system is reset the trunk port might fail to enter trunking mode after the system comes online (the show trunk command output shows the trunk in the “inactive” state).

  Workaround: Reset the module on which the trunk port is located or set the native VLAN of the trunk port to VLAN1. This problem is resolved in software release4.5(1). (CSCdk77956)

- In a Catalyst5000 family switch with redundant Supervisor EngineII modules and one or more ATM modules, if you download a software image to an ATM module and the active supervisor engine is reset before the ATM module comes online, the ATM image is corrupted and the output of the **show test** command for the module shows "Flash-CheckSum Failure." If you later reset the ATM module again the system might generate this error message:

  ```
  recv_data_active : errno = 60

  followed by this error message every five seconds:
  SYS-3:nvram_active unable to connect with standby
  ```

  Workaround: Reset the system using the **reset** command and download the ATM image again. This problem is resolved in software release4.5(1). (CSCdk79201)

- On the Catalyst5000 family Supervisor Engine III, make sure you have a cable attached to the console port before entering the **set system modem enable** command. If you enter the command with no cable attached, the switch might stop sending frames (including BPDUs) the next time an event is reported to the console log. This might result in a broadcast storm, spanning tree loops, or other problems.

  Workaround: Do not enter the **set system modem enable** command when no cable is attached to the console port. This problem is resolved in software release4.5(1). (CSCdk69429)

- If you connect to the switch through a Telnet session, execute the **traceroute** command, and then terminate the Telnet session (before the **traceroute** process is complete or any time thereafter), memory corruption can occur, causing an exception error and reset of the switch. This problem is resolved in software release4.5(1). (CSCdk91274)

- In some cases, when you upgrade the system software on Supervisor Engine I or II, some sectors of the Flash memory might not be erased completely, causing the output of the **show version** command to display the original version number in the McpSW version field and the upgrade version number in the NmpSW version field. In most cases, this problem does not impact the functionality of the switch. This problem is resolved in software release4.5(1). (CSCdk78704, CSCdk86788)

- In some cases, if a Telnet session to the switch closes abnormally while the switch is authenticating a user with the TACACS+ server, the switch might not close the session to the server properly, eventually causing the server to reach the maximum number of supported sessions. Subsequent attempts to authenticate with the server will fail. This problem is resolved in software release4.5(1). (CSCdk79831)

- If you configure an RMON alarm on an ATM module MIB, subsequently configuring an RMON alarm on the switch might cause the switch to stop responding to SNMP requests.

  Workaround: Avoid configuring RMON alarms on ATM module MIBs. This problem is resolved in software release4.5(1). (CSCdk69513)

- In some cases, when you remove an NTP server using the **clear ntp server** command, the removed server is not removed from the configuration.

  Workaround: Reset the switch. This problem is resolved in software release4.5(1). (CSCdk84025)

- In some situations, attempts to create or modify a VLAN fail with this message:

  ```
  Vlan configuration failed (41)
  ```

  Workaround: Reset the switch. This problem is resolved in software release4.5(1). (CSCdk88280)

- In some cases, enabling IGMP snooping on a switch with a Supervisor EngineIII causes the switch to reset. The problem occurs when one of these special multicast addresses is used for normal multicast data traffic:

  01-00-5e-00-00-01
  01-00-5e-00-00-02
  01-00-5e-00-00-04
  01-00-5e-00-00-05
  01-00-5e-00-00-0d

  This problem is resolved in software release4.5(1). (CSCdk76272)

- In some cases, in a switch with a Supervisor EngineI or II and an ATM module, the ATM module might not receive VTP updates from the VTP server after the switch or the module is reset.

  Workaround: Session to the ATM module, shut down the ATM interface (using the **shutdown** command), wait five seconds, and then bring the interface back up (using the **no shutdown** command). This problem is resolved in software release4.5(1). (CSCdk80168)

- In some cases, autonegotiation fails when connecting some 10/100-Mbps Fast Ethernet modules to a Compaq4000 system with the Netflex 3 NIC. This problem is resolved in software release4.5(1). (CSCdk87853)

- In some cases, entering the **show cdp neighbors detail** command causes the switch to generate "alignment correction" syslog messages. These messages do not affect the functionality of the switch. This problem is resolved in software release4.5(1). (CSCdk85671)

- After reloading a switch with an RSM and multiple ISL trunk links, the state of configured VLAN interfaces on the RSM might change to down.

  Workaround: Disconnect all of the ISL links and then reconnect them one at a time. This problem is resolved in software release4.5(1). (CSCdk81521)

- On the Token Ring modules (WS-X5030 or WS-X5031), if you move the SPAN destination from port to port, the ports might stop forwarding traffic. This problem is resolved in software release4.5(1). (CSCdk88229)

- On a switch with Supervisor EngineIII, if the system message logging level is set to 7 for all facilities, then entering the **show logging buffer** command can cause an exception error, causing the switch to reset. This problem is resolved in software release4.5(1). (CSCdk93930)

- The RSM autostate function does not shut down TrBRF VLAN interfaces when there are no active ports in any of the TrBRF's child TrCRFs. This problem is resolved in software release4.5(1). (CSCdk75627)

- In some cases, when using the IBM type1 cabling system, packet loss might occur on the 48-port, 10BASE-T Ethernet module (WS-X5012) if the port is incorrectly terminated (such that the port is placed in external loopback mode). This problem is resolved in software release4.5(1). (CSCdk56632)

- Enabling an ISL trunk on a switch with many (spanning tree enabled) VLANs can cause the switch to delay BPDU transmission on TrBRF and TrCRF VLANs if the switch is the root bridge for any of the defined VLANs. This problem is resolved in software release4.5(1). (CSCdk69087)

- In some cases, enabling SPAN can cause a memory leak, causing the switch to return an "out of memory" error. This problem is resolved in software release4.5(1). (CSCdk92662)

- The 64-bit Rx and Tx unicast packet counters are reported incorrectly for these modules:
  - WS-X5005, WS-X5006, WS-X5009—Supervisor EngineI module uplink ports
  - WS-X5010—24 port 10 BASE-T (Telco connector)
  - WS-X5011—12-port 10BASE-FL MMF (ST connector)
  - WS-X5013— 24 port 10BASE-T (RJ-45 connector)
  - WS-X5113—12-port 100BASE-TX (RJ-45 connector)

  This problem is resolved in software release4.5(1). (CSCdk92543)
- If you reconnect a Sun Gigabit Ethernet Card 2.0 to the Catalyst5000 family Gigabit EtherChannel module (WS-X5410) after the link was broken (for example, by disabling the port or disconnecting the cable), the output of the **show port status** command might indicate a "remfault" condition, even though the link is operational. This problem is resolved in software release4.5(1). (CSCdk88589)
- In some cases, the switch might incorrectly discard HSRP Hello messages. This problem is resolved in software release4.5(1). (CSCdm05087)
- In some cases, after upgrading the switch software in a chassis with three or more 12-port 100BASE-FX Fast EtherChannel modules (WS-X5201), those modules might fail the loopback tests and will not come online. This problem is resolved in software release4.5(1). (CSCdm00601)
- In some cases, ports on the 12-port 10BASE-FL MMF module (WS-X5011) might stop transmitting unicast and broadcast traffic if the connected device experiences a rapid power interruption. This problem is resolved in software release4.5(1). (CSCdk86526)
- In some cases, when you change the VLAN membership of ports on a Token Ring module (WS-X5030 or WS-X5031), the CAM table entries for the ports in the original VLAN are not cleared. This problem is resolved in software release4.5(1). (CSCdk47938)
- In some cases, with clients connected to a Token Ring port, you might experience session timeouts to servers in the same TrCRF/ELAN reached through an ATM cloud if spanning tree must reconverge due to a network failure. The client sessions eventually recover after approximately four minutes. This problem is resolved in software release4.5(1). (CSCdk72635)
- In some situations, a discrepancy can occur between the supervisor engine and the Token Ring module (WS-X5030 or WS-X5031) CAM tables, causing connectivity problems for some hosts. This problem is resolved in software release4.5(1) provided the Token Ring module is running Token Ring software release3.2(5) or later. For more detailed information, see the "New Features" section in the release notes for Token Ring software release 3.2(5). (CSCdk92278, CSCdm05881)
- In some cases, when you hot insert, reset, or load a new software image on a Token Ring module (WS-X5030 or WS-X5031), when the module comes online, the spanning tree state for TrCRF VLANs on the module might be blocking, preventing frame forwarding between TrCRF VLANs (frame forwarding within a CRF works correctly). This problem is resolved in software release4.5(1). (CSCdk83458)
- In some TR-LANE environments, All-Route Explorer frames might not be received on or transmitted out blocking TrBRF VLAN ports. This problem is resolved in software release4.5(1) with TR-LANE software release70.2(1) or later. (CSCdm07467)
- In some cases, when using a perl script to obtain a list of addresses in the CAM table on the switch, the switch will issue an "mfree 2 panic" error message onscreen and then reset. This problem is resolved in software release4.5(1). (CSCdm12707)

- In some cases, on a switch with both BackboneFast and UplinkFast enabled, the **show spantree** *mod_num/port_num* command output shows that a port is in forwarding mode, but in reality the port is in listening mode. As a result, all data traffic received on the port is discarded.

  Workaround: Disable and reenable the affected port. This problem is resolved in software release4.5(1). (CSCdm08504)

- If you disable a switching module, trunk ports configured on the module might *not* be removed from the spanning tree, possibly resulting in spanning tree loops when the module is reenabled.

  Workaround: Reset the module. This problem is resolved in software release4.5(1). (CSCdm02421)

- In some cases, a Catalyst 5000 family switch with redundant supervisor engines might reset as a result of the change from Daylight Saving Time to Standard Time. This problem only occurs if the Daylight Saving Time adjustment is enabled (using the **set summertime enable** command) and the switch has not been reset or power-cycled since the change to Standard Time. This problem is resolved in software release 4.5(1). (CSCdk57762)

Open and Resolved Caveats in Software Release 4.4(1)

These sections describe open and resolved caveats in supervisor engine software release4.4(1):

- Open Caveats in Software Release4.4(1), page51
- Resolved Caveats in Software Release4.4(1), page54

Open Caveats in Software Release 4.4(1)

Note For a description of caveats resolved in software release4.4(1), see the "Resolved Caveats in Software Release4.4(1)" section on page54.

This section describes open caveats in software release4.4(1).

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple-module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)

- On the Gigabit EtherChannel module (WS-X5410), when the native VLAN of a trunk port is cleared and then the trunk port is set to **off**, the port is placed in the inactive state but the Link LED for the port still shows green. The correct behavior is that the LED for the port should show orange. (CSCdk31985)
- In some cases, if you change the VLAN assignment of ports in a Fast EtherChannel, some ports are placed in the errdisable state and the channel is not renegotiated. The correct behavior is that the channel is torn down and renegotiated. (CSCdk32807)

- In some cases, after a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- With Multilayer Switching (MLS) enabled on a Catalyst5000 family switch with an NFFC and one or more Token Ring modules (WS-X5030 or WS-X5031), after booting the switch you might see error messages similar to the following as a result of high CPU utilization by MLS:

```
1/11/1998,13:02:04:MLS-4:Too many moves, stop MLS for 5 sec!(60000000)
11/11/1998,13:04:12:MLS-4:Resume MLS after detecting too many moves
```

  Workaround: Disable MLS on the switch. (CSCdk63976)
- In some cases, multiple Catalyst5000 family switches connected through ISL trunk ports might all report that they are the designated root for the default TrBRF (VLAN 1005). (CSCdk63476)
- After a topology change occurs in a Token Ring environment, when STP reconverges, source-routed frames originating from a Catalyst 5000 family Token Ring module (WS-X5030 or WS-X5031) are not forwarded across an ISL trunk link to another switch. Non-source-routed frames are forwarded correctly.

  Workaround: Enter the **clear cam dynamic** command on the affected switches. (CSCdk63561)
- In a Token Ring network, if a TrBRF VLAN is running IEEE STP, the Catalyst 5000 family switch does not flood IBM STP BPDUs from other sources, potentially preventing SRB devices running IBM STP from properly creating a loop-free spanning tree topology.

  Workaround: Change the TrBRF STP mode to IBM and force forwarding between the TrCRFs and TrBRFs when in SRT mode. (CSCdk54704)
- On some switch ports, if you enable port security on the port before the port is in the spanning tree forwarding state, port security might shut the port down. This problem occurs only if BPDUs, broadcast packets, or other traffic is received on the port before the port enters the forwarding state. This problem affects these products:
  - WS-C2926—Catalyst 2926 switch
  - WS-X5223—24-port 3 segment 100BASE-TX (RJ-45 connector)
  - WS-X5224— 24-port 10/100BASE-TX (RJ-45 connector)
  - WS-X5020—48-port 4 segment 10BASE-T (Telco connector)
  - WS-X5010—24-port 10BASE-T (Telco connector)
  - WS-X5014—48-port 10BASE-T (RJ-45 connector)
  - WS-X5012—48-port 10BASE-T (Telco connector)
  - WS-X5012a—48-port 10BASE-T (Telco connector)
  - WS-X5013— 24-port 10BASE-T (RJ-45 connector)

  Workaround: Enable the port security feature after the port is in the forwarding state (enter the **show spantree** *mod_num/port_num* command to verify the spanning tree state). (CSCdk73206)
- Under some circumstances, several ports might incorrectly be assigned the same ifIndex value (you can see the ifIndex values for ports using the **show port** command). If multiple ports share an ifIndex value, when you change the configuration on one port other ports with the same ifIndex value might be affected. If this problem occurs, clear the entire switch configuration using the **clear config all** command (make sure you back up your switch configuration before entering this command or your configuration will be lost) and reset the switch. (CSCdk74506)

- In some cases, after a switchover from the active (slot1) to the standby (slot2) supervisor engine, the uplink ports on the previously active supervisor engine (slot1) fail to come online. You might see this message:

  ```
  %SYS-3-PORT_SSUPFAIL:Failed to bring up ports on standby supervisor
  ```

  Workaround: Disable the standby ports using the **set standbyports disable** command and then reenable them using the **set standbyports enable** command. If the ports still fail to come online, reset the standby supervisor engine. (CSCdk73705)

- If a Catalyst5000 family switch is configured as a VTP client and its only connection to the VTP server is through a port on the Gigabit EtherChannel module (WS-X5410) that is configured as an IEEE 802.1Q trunk with its native VLAN other than VLAN 1, when the system is reset the trunk port might fail to enter trunking mode after the system comes online (the show trunk command output shows the trunk in the "inactive" state).

  Workaround: Reset the module on which the trunk port is located or set the native VLAN of the trunk port to VLAN1. (CSCdk77956)

- In a Catalyst5000 family switch with redundant Supervisor EngineII modules and one or more ATM modules, if you download a software image to an ATM module and the active supervisor engine is reset before the ATM module comes online, the ATM image is corrupted and the output of the **show test** command for the module shows "Flash-CheckSum Failure." If you later reset the ATM module again the system might generate this error message:

  ```
  recv_data_active : errno = 60
  ```

  followed by this error message every five seconds:

  ```
  SYS-3:nvram_active unable to connect with standby
  ```

  Workaround: Reset the system using the **reset** command and download the ATM image again. (CSCdk79201)

- On the Catalyst5000 family Supervisor Engine III, make sure you have a cable attached to the console port before entering the **set system modem enable** command. If you enter the command with no cable attached, the switch might stop sending frames (including BPDUs) the next time an event is reported to the console log. This might result in a broadcast storm, spanning tree loops, or other problems.

  Workaround: Do not enter the **set system modem enable** command when no cable is attached to the console port. (CSCdk69429)

- If you connect to the switch through a Telnet session, execute the **traceroute** command, and then terminate the Telnet session (before the **traceroute** process is complete or any time thereafter), memory corruption can occur, causing an exception error and reset of the switch. (CSCdk91274)

- In some cases, if you configure a port as a SPAN source port and subsequently configure the same port as the SPAN destination, the SPAN destination port might be unable to receive traffic if any other SPAN-related commands are executed on the port. To avoid the problem, disable SPAN before changing the SPAN configuration. If the problem occurs, reset the module with the problem SPAN port. (CSCdm43384)

- In some cases, when you connect a port on the 24-port 10/100 BASE-TX Fast Ethernet module (WS-X5225R) to an end station, the port might loop data back to itself. If spanning tree is disabled on the port, this problem can negatively affect switch performance. If spanning tree is enabled, the port is automatically disabled. You can verify that the problem is occurring, and identify the problem port, by entering the **show cdp neighbors** command and checking to see if the switch itself is listed as a neighbor.

  Workaround: Disable and reenable the problem port. (CSCdm26889)

- In some cases, a Catalyst 5000 family switch with redundant supervisor engines might reset as a result of the change from Daylight Saving Time to Standard Time. This problem only occurs if the Daylight Saving Time adjustment is enabled (using the **set summertime enable** command) and the switch has not been reset or power-cycled since the change to Standard Time. (CSCdk57762)

Resolved Caveats in Software Release 4.4(1)

Note For a description of open caveats in software release4.4(1), see the "Open Caveats in Software Release4.4(1)" section on page51.

This section describes caveats resolved in software release4.4(1):

- On a Catalyst 5000 family switch with redundant supervisor engines, if you enable both port security and VMPS, you might see a "Minor hardware problem" error on the standby supervisor engine after a reset.

  Workaround: Reset the standby supervisor engine. This problem is resolved in software release4.4(1). (CSCdk59755)

- If two IEEE 802.1Q-capable peers are negotiating a trunk when a spanning tree loop or prolonged line-rate traffic exists, a port inconsistency error might occur, causing an excessive number of syslog messages to be sent to the console. This problem is resolved in software release4.4(1). (CSCdk29882)

- In a network with a large number of Token Ring ports assigned to different TrCRFs, spanning tree might not converge correctly, causing network loops.

  Workaround: Increase the IBM STP maxage timer and forward delay timer to allow spanning tree to converge. Another workaround is reduce the number of Token Ring ports in a single Catalyst 5000 family switch. This problem is resolved in software release4.4(1). (CSCdk63967)

- After a switchover from the active to the standby supervisor engine, any Token Ring modules (WS-X5030 or WS-X5031) installed in the chassis will reset, resulting in a 3- to 5-minute interruption for users attached to the modules. This problem is resolved in software release4.4(1). (CSCdk63991)

- If you reset a Catalyst5000 family switch with a Supervisor Engine II module when the in-band (sc0) interface is assigned to a Token Ring VLAN, attempts to connect to the switch using IP (such as a Telnet connection) fail.

  Workaround: Connect to the switch through the console port and reconfigure the sc0 interface using the **set interface** command. This problem is resolved in software release4.4(1). (CSCdk66002)

- When a Catalyst 5000 family switch learns a MAC address on a port of the Gigabit EtherChannel module (WS-X5410), an ATM LANE module installed in the same chassis might be unable to respond to LE-ARP requests for that MAC address. As a result, all traffic for this MAC address is forwarded through the BUS rather than over a data direct VC, resulting in poor network performance. This problem is resolved in software release4.4(1). (CSCdk67909)
- If you attempt to configure a port filter with a protocol or MAC address of 0 on the Catalyst5000 family Token Ring modules (WS-X5030 and WS-X5031), the filter is not set on the module but appears multiple times in the output of the **show config** command. These configuration file entries cannot be removed using the **clear port filter** command.

  Workaround: Clear the configuration, reset the switch, and restore the original configuration. This problem is resolved in software release4.4(1). (CSCdk55091)
- In the output of the **show module** command, the NFFC II (WS-F5531=) is incorrectly identified as the NFFC+. This problem is resolved in software release4.4(1). (CSCdk70972)
- SNMP queries might take an unusually long amount of time on a Catalyst 5000 family switch with a LANE module installed, especially when you attempt to enable RMON alarms on the device. This problem is resolved in software release4.4(1). (CSCdk22392)
- In some cases, VMPS client switches might reset when an end station is moved from a static port to a dynamic port. This problem is resolved in software release4.4(1). (CSCdk56145)
- On a VMPS client switch attached to an ATM cloud, MAC addresses reachable over the ATM link might incorrectly be interpreted by the VMPS client as connected to a local Ethernet port. If the VMPS server is configured to deny VLAN membership to MAC addresses that are not contained in the VMPS database, communication with devices located out the ATM link is lost. This problem is resolved in software release4.4(1). (CSCdk61813)
- In some cases, in a Catalyst5000 family switch with an EARL1+ daughter card and one or more 12-port 100BASE-FX Ethernet (WS-X5201R) or 24-port 10/100BASE-TX Ethernet (WS-X5225R) modules, a switching bus timeout might occur. This problem is resolved in software release4.4(1). (CSCdk61818)
- When you attempt to configure the switch using the **configure network** command, the switch might reset. The problem only occurs when you specify the DNS host name instead of the dotted decimal IP address of the TFTP server. This problem is resolved in software release4.4(1). (CSCdk66599)
- The sysDescr MIB object does not contain the software version information. This problem is resolved in software release4.4(1). (CSCdk63651)
- In some cases, an ATM module might not receive any traffic even though the **show spantree** command output shows that the port is connected. This problem is resolved in software release 4.4(1). (CSCdk50047)
- When a station attached to the 48-port, 10BASE-T Ethernet module (WS-X5012) is powered off or disconnected, the ifOutOctets counter value for the port (shown in the output of the **show counters** command) is changed to whatever the current ifInOctets counter value is for that port. This problem is resolved in software release 4.4(1). (CSCdk58207)

- When you enter the **set port protocol group** command, the command functions normally and is saved in NVRAM, but does not appear in the output of the **show config** command. This problem is resolved in software release4.4(1). (CSCdk63943)
- In some cases, if you power up a workstation connected to the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) after a reset, the workstation cannot connect to the network until the port is disabled and reenabled. This problem is resolved in software release 4.4(1). (CSCdk44532)
- In some cases, when you run a switch TopN report on a switch with Token Ring modules, data for the Token Ring modules is not returned in the report. This problem is resolved in software release 4.4(1). (CSCdk54499)
- If a link on a port comes up and immediately goes down again for whatever reason, the port might be placed in the errdisable state. You must reenable the port using the **set port enable** command. This problem is resolved in software release 4.4(1). (CSCdk62426)
- If you remove and reinsert the standby supervisor engine in a redundant configuration, SNMP module down/up traps might not be generated. This problem is resolved in software release 4.4(1). (CSCdk45449)
- In a system with redundant Supervisor Engine III modules, after a switchover from the active to the standby supervisor engine, any 48-port, 10BASE-T Ethernet modules (WS-X5012) installed in the system might reset. The expected behavior is that the modules stay online. This problem is resolved in software release 4.4(1). (CSCdk72006)
- In some cases, you cannot remove a UGHD (up, gateway, host, dynamic) route from the Catalyst5000 family switch IP routing table. This problem is resolved in software release4.4(1). (CSCdk14130)
- In some cases, when you initiate a TFTP download of a configuration file that contains the **set interface** command, SNMP queries to the switch will fail.

  Workaround: Remove the **set interface** command in the configuration file. This problem is resolved in software release4.4(1). (CSCdk67081)
- In some cases, on Catalyst5000 family switches with Supervisor Engine III, configuring the port priority level to **high** (using the **set port level** *mod_num/port_num* **high** command) on certain modules can cause a switching bus timeout, resetting the switch. The problem only occurs on modules with EPLD-based arbiters. Use the **show test** command to check whether a particular module is affected. Modules that display “N” in the SAMBA field are affected.

  Workaround: Configure the port priority level to **normal** on the affected module. This problem is resolved in software release4.4(1). (CSCdk69662)

Open and Resolved Caveats in Software Release 4.3(1)

These sections describe the open and resolved caveats in supervisor engine software release4.3(1):

- Open Caveats in Software Release4.3(1), page57
- Resolved Caveats in Software Release4.3(1), page59

Open Caveats in Software Release 4.3(1)

Note For a description of caveats resolved in software release 4.3(1), see the "Resolved Caveats in Software Release4.3(1)" section on page59.

This section describes open caveats in software release4.3(1).

Caution If your switch contains an ATM module running Token Ring LANE software, you *must* install Token Ring LANE software release 70.1(4) or later *before* you install Catalyst5000 family supervisor engine software release4.3(1a) on the supervisor engine. If you fail to install the new Token Ring LANE software first, the ATM module might not come online correctly.

Caution There are known problems that exist in Token Ring LANE software releases 70.1(5) and earlier and Catalyst5000 family supervisor engine software release 4.3(1) that affect spanning tree convergence. These problems can cause an instability in a redundant Token Ring LANE configuration that can result in an extended network outage or a split network. These conditions increase when there is heavy traffic in the network. We strongly recommend that you do not configure a redundant Token Ring LANE configuration with supervisor engine software release 4.3(1) and Token Ring LANE software releases prior to 70.1(5). For additional information, see the release notes your Token Ring LANE software release.

- If you have multiple ATM fabric integration modules (WS-X5165) installed and you have more than 50 LECs configured on each module, a multiple module software download to the modules can take an excessively long time to complete. For this reason, we recommend that you download software images one module at a time (by specifying the module number in the download command). (CSCdk55355)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- On the Gigabit EtherChannel module (WS-X5410), when the native VLAN of a trunk port is cleared and then the trunk port is set to **off**, the port is placed in the inactive state but the Link LED for the port still shows green. The correct behavior is that the LED for the port should show orange. (CSCdk31985)
- If two IEEE 802.1Q-capable peers are negotiating a trunk when a spanning tree loop or prolonged line-rate traffic exists, a port inconsistency error might occur, causing an excessive number of syslog messages to be sent to the console. (CSCdk29882)
- On a Catalyst 5000 family switch with redundant supervisor engines, if you enable both port security and VMPS, you might see a "Minor hardware problem" error on the standby supervisor engine after a reset.

  Workaround: Reset the standby supervisor engine. (CSCdk59755)

- In certain situations, attempts to create or modify a VLAN using SNMP fail.

  Workaround: Create or modify the VLAN from the CLI. (CSCdk01511)

  Note CSCdk01511 has not been seen in later releases.

- In some cases, if you change the VLAN assignment of ports in a Fast EtherChannel, some ports are placed in the errdisable state and the channel is not renegotiated. The correct behavior is that the channel is torn down and renegotiated. (CSCdk32807)
- In some cases, after a switchover from the active to the standby supervisor engine, the SPAN destination port might not function correctly. (CSCdk55360)
- In a network with a large number of Token Ring ports assigned to different TrCRFs, spanning tree might not converge correctly, causing network loops.

  Workaround: Increase the IBM STP maxage timer and forward delay timer to allow spanning tree to converge. Another workaround is reduce the number of Token Ring ports in a single Catalyst 5000 family switch. (CSCdk63967)
- With Multilayer Switching (MLS) enabled on a Catalyst5000 family switch with an NFFC and one or more Token Ring modules (WS-X5030 or WS-X5031), after booting the switch you might see error messages similar to the following as a result of high CPU utilization by MLS:

  ```
  1/11/1998,13:02:04:MLS-4:Too many moves, stop MLS for 5 sec!(60000000)
  11/11/1998,13:04:12:MLS-4:Resume MLS after detecting too many moves
  ```

  Workaround: Disable MLS on the switch. (CSCdk63976)
- In some cases, multiple Catalyst5000 family switches connected through ISL trunk ports might all report that they are the designated root for the default TrBRF (VLAN 1005). (CSCdk63476)
- After a switchover from the active to the standby supervisor engine, any Token Ring modules (WS-X5030 or WS-X5031) installed in the chassis will reset, resulting in a 3- to 5-minute interruption for users attached to the modules. (CSCdk63991)
- If you reset a Catalyst5000 family switch with a Supervisor Engine II module when the in-band (sc0) interface is assigned to a Token Ring VLAN, attempts to connect to the switch using IP (such as a Telnet connection) fail.

  Workaround: Connect to the switch through the console port and reconfigure the sc0 interface using the **set interface** command. (CSCdk66002)
- When a Catalyst 5000 family switch learns a MAC address on a port of the Gigabit EtherChannel module (WS-X5410), an ATM LANE module installed in the same chassis might be unable to respond to LE-ARP requests for that MAC address. As a result, all traffic for this MAC address is forwarded through the BUS rather than over a data direct VC, resulting in poor network performance. (CSCdk67909)
- If you attempt to configure a port filter with a protocol or MAC address of 0 on the Catalyst5000 family Token Ring modules (WS-X5030 and WS-X5031), the filter is not set on the module but appears multiple times in the output of the **show config** command. These configuration file entries cannot be removed using the **clear port filter** command.

  Workaround: Clear the configuration, reset the switch, and restore the original configuration. (CSCdk55091)

- After a topology change occurs in a Token Ring environment, when STP reconverges, source-routed frames originating from a Catalyst 5000 family Token Ring module (WS-X5030 or WS-X5031) are not forwarded across an ISL trunk link to another switch. Non-source-routed frames are forwarded correctly.

  Workaround: Enter the **clear cam dynamic** command on the affected switches. (CSCdk63561)

- In a Token Ring network, if a TrBRF VLAN is running IEEE STP, the Catalyst 5000 family switch does not flood IBM STP BPDUs from other sources, potentially preventing SRB devices running IBM STP from properly creating a loop-free spanning tree topology.

  Workaround: Change the TrBRF STP mode to IBM and force forwarding between the TrCRFs and TrBRFs when in SRT mode. (CSCdk54704)

- In the output of the **show module** command, the NFFC II (WS-F5531=) is incorrectly identified as the NFFC+. (CSCdk70972)

- In some cases, when you connect a port on the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) to an end station, the port might loop data back to itself. If spanning tree is disabled on the port, this problem can negatively affect switch performance. If spanning tree is enabled, the port is automatically disabled. You can verify that the problem is occurring, and identify the problem port, by entering the **show cdp neighbors** command and checking to see if the switch itself is listed as a neighbor.

  Workaround: Disable and reenable the problem port. (CSCdm26889)

- In some cases, a Catalyst 5000 family switch with redundant supervisor engines might reset as a result of the change from Daylight Saving Time to Standard Time. This problem only occurs if the Daylight Saving Time adjustment is enabled (using the **set summertime enable** command) and the switch has not been reset or power-cycled since the change to Standard Time. (CSCdk57762)

Resolved Caveats in Software Release4.3(1)

Note For a description of open caveats in software release 4.3(1), see the "Open Caveats in Software Release4.3(1)" section on page57.

This section describes caveats resolved in software release 4.3(1):

- In some cases, in a Catalyst 5000 family chassis with both a Supervisor Engine III module and a Token Ring module (WS-X5030 and WS-X5031), the supervisor engine might generate an MCP exception error periodically that resets the switch. The problem occurs more frequently if the switch is processing many SNMP queries. This problem is resolved in software release4.3(1). (CSCdk34066)

- If a device (such as certain network analyzers) locally attached to a Token Ring module incorrectly transmits traffic using the same source MAC address as another device in a remote location in the network, subsequent traffic sent from the Token Ring port to the remote device is dropped. The CAM table shows the remote address in the correct location but the Token Ring module treats the address as local on the switch port. This problem is resolved in software release4.3(1). (CSCdk45832)

- If you configure Fast EtherChannel on the Supervisor Engine III dual-port fiber-optic uplink module (WS-U5533-FEFX-MMF or WS-U5535-FEFX-SMF) and the link in one direction on one of the ports fails so that receive (Rx) traffic is no longer received on that port, that port incorrectly continues to transmit traffic. The correct behavior is that the port should be disabled, allowing all traffic to be transmitted over the second link in the bundle. This problem is resolved in software release4.3(1). (CSCdk49184)
- In the "Designated Root Port" field of the **show spantree** command, a four-port channel on ports4–8 of the Gigabit EtherChannel module (WS-X5410) is incorrectly shown as being a five-port channel (ports5–9). This problem is resolved in software release4.3(1). (CSCdk25123)
- In some cases, when you attempt to use the CiscoView Device Configuration window to modify the IP routing table on a Catalyst 5000 family switch, the change is not made on the switch correctly. If you attempt to change the ipRouteNextHop, the value is not changed. If you attempt to change the ipRouteDest, a new table entry is added instead of the old value being changed. This problem is resolved in software release4.3(1). (CSCdk34909)
- When you attempt to set a SPAN source that contains two FDDI ports, the command fails and displays this message: "failed to configure span feature."

  Workaround: Set a single FDDI port as the SPAN source. This problem is resolved in software release4.3(1). (CSCdk37502)
- When you set a port on the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) as the SPAN destination for receive traffic on an ISL trunk port, not all unicast and multicast frames are seen on the SPAN destination port. This problem is resolved in software release4.3(1). (CSCdk31709)
- In some situations, when a port is removed from a VLAN configured as a SPAN source, the port continues to appear as an "Oper Source" in the output of the **show span** command. This problem is resolved in software release4.3(1). (CSCdk32034)
- In some situations, a port set to autonegotiate speed and duplex on a 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) that is connected to a port on a 12-port 10/100BASE-TX RJ-45 module or a 12-port 10/100BASE-TX Fast EtherChannel module (WS-X5213A or WS-X5203) in another switch incorrectly negotiates a half-duplex link when either of the switches is reset.

  Workaround: Manually set the port speed and duplex using the **set port speed** and **set port duplex** commands. This problem is resolved in software release4.3(1). (CSCdk37919)
- In some cases, when you open a Telnet session to a Catalyst 5000 family switch from a Windows95 PC and then attempt to configure the switch using the **configure network** command, the Telnet session hangs.

  Workaround: Connect to the switch through the console port and then configure the switch from the network using the **configure network** command. This problem is resolved in software release4.3(1). (CSCdk30576)
- In some situations, when you configure a four-port Fast EtherChannel bundle and then configure a two-port bundle using the first two ports in the original bundle, the remaining two ports will not participate in spanning tree.
- **Workaround**: Turn channeling **off** on all four ports and then create the two-port Fast EtherChannel bundle. This problem is resolved in software release4.3(1). (CSCdk37901)
- In some cases, when you initiate a switchover from the active supervisor engine in slot1 to the standby supervisor engine in slot2, the Token Ring module (WS-X5030 and WS-X5031) fails to come online. The output of the **show module** command shows the module status as "faulty."

  Workaround: Reset the Token Ring module. This problem is resolved in software release4.3(1). (CSCdk30906)

- When upgrading to software release 4.2(1) from a previous release, if you download the software image file and then hot insert a second supervisor engine before you reset the system, the standby supervisor engine does not synchronize with the primary. This problem is resolved in software release4.3(1). (CSCdk31881)
- In some cases, a Catalyst 5000 family switch continues to send authentication failure traps to the trap receiver when the switch is polled with the incorrect community string, even when you have entered the **set snmp trap disable auth** command. This problem is resolved in software release4.3(1). (CSCdk31799)
- When you open a Telnet session to a Catalyst 5000 family switch with a Supervisor Engine III, TACACS+ might allow more than the configured number of login attempts. This problem is resolved in software release4.3(1). (CSCdk24291)
- When Connectionless Network Service/Intermediate System-to-Intermediate System (CLNS/ISIS) routing is enabled on a neighboring router, the Catalyst 5000 family switch might drop CDP packets, preventing some neighboring devices from appearing in the **show cdp neighbors** command output. This problem is resolved in software release 4.3(1). (CSCdk34032)
- In some cases, a router entry might incorrectly be aged out of the CAM table, preventing the proper creation of MLS cache entries. This problem is resolved in software release 4.3(1). (CSCdk36438)
- Removing a 1000BASE-SX GBIC from the three-port Gigabit Ethernet module (WS-X5403) and replacing it with a 1000BASE-LX/LH GBIC might cause the switch to reset. This problem is resolved in software release 4.3(1). (CSCdk34862)
- In some cases, the output of the **show cam** *mac_addr* command does not correctly identify MLS router entries with an "R" suffix in the display. This problem is resolved in software release 4.3(1). (CSCdk38054)
- In some cases, when a cold start SNMP trap is generated, the network address portion of the trap might incorrectly have the address 0.0.0.0. This problem is resolved in software release 4.3(1). (CSCdk35617)
- In some cases, RMON traps contain incorrect utilization values, and utilization threshold alarms are generated for ports that are disabled or are not connected. This problem is resolved in software release 4.3(1). (CSCdk31934)
- In some circumstances, VLANs that are not allowed on a trunk port are listed incorrectly as "Vlans in spanning tree forwarding state and not pruned" in the output of the show trunk command. This problem is resolved in software release 4.3(1). (CSCdk31784)
- When enabling hardware broadcast suppression (using the **set port broadcast** *mod_num/port_num threshold***%** command) after enabling software broadcast suppression (using the **set port broadcast** *mod_num/port_num threshold_in_pps* command) on a module that supports both, software broadcast suppression is still enabled even though the output of the **show port** command indicates that hardware suppression is enabled. This problem is resolved in software release4.3(1). (CSCdk40580)
- In certain situations, after a switchover from the active to the standby supervisor engine, SNMP module up/down traps are not generated when modules are inserted into or removed from the switch until the switch is reset. This problem is resolved in software release4.3(1). (CSCdk45450)
- In some situations, spanning tree reconvergence might not be optimal after a failure when you configure parallel Fast EtherChannel trunks for VLAN load-balancing using the **set spantree portvlanpri** command. If one of the links in a channel fails (causing all VLAN traffic to pass over the remaining channel) and is later reestablished, spanning tree will converge but load-balancing does not occur. The second channel is placed in blocking mode. This problem is resolved in software release 4.3(1). (CSCdk40289)

- On Gigabit Ethernet ports, if autonegotiation is disabled and the link fails in only one direction, only the port losing the receive (Rx) signal brings its link down; the other port incorrectly keeps the link up. This problem is resolved in software release 4.3(1). (CSCdk48954)
- Some counters might not restart at one again after reaching their maximum value. This problem is resolved in software release 4.3(1). (CSCdk10989)
- If you specify a metric value when you configure multiple default gateways, the primary gateway appears in the output of the **show ip route** command but does not appear in the output of the **show config** command. When you reset the switch, the primary gateway entry is lost. This problem is resolved in software release 4.3(1). (CSCdk45487)
- If you Telnet to a Catalyst 5000 family switch with a Supervisor Engine III from a workstation running certain versions of SunOS, the output of the **show spantree** command shows that spanning tree is disabled, even though spanning tree is still functioning normally. This problem is resolved in software release 4.3(1). (CSCdk42809)
- In some cases, on a Catalyst 5000 family switch with a Supervisor Engine III and multiple Token Ring modules (WS-X5030 and WS-X5031), "MCP not responding" errors might appear on the console, followed by a system reset. This problem is resolved in software release 4.3(1). (CSCdk48291)
- In certain configurations, an end station might be unable to communicate with an RSM. This problem is resolved in software release 4.3(1). (CSCdk22895)
- In some cases, when you configure ports as a Fast EtherChannel bundle, the configuration might fail due to a speed/duplex mismatch even though the ports are not connected to another device. This problem is resolved in software release 4.3(1). (CSCdk22225)
- In a Catalyst 5000 family switch that has VMPS enabled and is configured so that most of the MAC addresses are assigned to the fallback VLAN, after a significant period of time the system might become unmanageable. This problem is resolved in software release 4.3(1). (CSCdk20131)
- In some cases, when using a Token Ring VLAN as the management VLAN, the Catalyst5000 family switch might become unmanageable through Telnet or SNMP in the presence of continuous explorer frames. This problem is resolved in software release 4.3(1). (CSCdk14657)
- In some cases, on Catalyst5000 family modules that support Fast EtherChannel, the port with the lowest port cost (the shortest path) is blocked. This problem is resolved in software release 4.3(1). (CSCdk22886)
- When you attempt to enable NTP on a switch with many active Telnet sessions established, the NTP configuration might fail. This problem is resolved in software release 4.3(1). (CSCdk19605)
- A Catalyst5000 family switch sends two traps when a rising or falling threshold is reached: the generic RMON trap and the Enterprise-specific trap. The Enterprise-specific trap contains a truncated Organizational Unique Identifier (OID) for the variable being monitored. This problem is resolved in software release4.3(1). (CSCdk10594)
- After prolonged SNMP usage, the Catalyst5000 family supervisor engine might become unable to communicate with a module through some SNMP and CLI commands. To recover, reset the module. This problem is resolved in software release4.3(1). (CSCdk21580, CSCdk26527)
- When a personal computer is connected to a 48-port, 10BASE-T Ethernet module (WS-X5012) and is booted, the WS-X5012 ports show carrier-sense errors. This problem is resolved in software release4.3(1). (CSCdj73609)

- On 10 BASE-T Ethernet modules, if a port is assigned to a particular VLAN and is configured as the SPAN source, when you change the VLAN assignment for that port, the port might stop transmitting traffic. This problem is resolved in software release4.3(1). (CSCdk25510)
- In some cases, under heavy traffic (close to 99 percent), the system might generate a Switching Bus Timeout error, causing the switch to reset. This problem is resolved in software release4.3(1). (CSCdk56528)
- Under certain conditions, a Catalyst 5000 family switch stops sending syslog output to the logging server. This problem is resolved in software release4.3(1). (CSCdj93539)
- If you have an RSM installed in a Catalyst5000 family switch running supervisor engine software release4.2, the output of the **show controller c5ip** command might show many index errors. This problem is resolved in software release4.3(1). (CSCdk56602)
- If you enable and then disable VTP version 2 in a VTP domain that includes a Gigabit EtherChannel module, port aggregation, trunking, CDP, VTP, and in some cases spanning tree no longer function correctly. This problem is resolved in software release 4.3(1). (CSCdk42906)
- In some cases, the Gigabit EtherChannel module (WS-X5410) might fail diagnostics (visible in the output of the **show test** command) when installed in a chassis with a Supervisor Engine II. This problem is resolved in software release 4.3(1). (CSCdk53312)
- If you enable SPAN twice on the Gigabit EtherChannel module (WS-X5410) using the **set span enable** command, the Gigabit EtherChannel module changes the Oper Source port configuration to an incorrect configuration. This problem is resolved in software release 4.3(1). (CSCdk32267)
- If you perform the following actions, a Gigabit EtherChannel module (WS-X5410) port might fail to operate correctly even though all indications show the port to be operational:
  a. Disconnect the port, bringing down the link (or disable the link at the far end).
  b. Make the port a SPAN destination using the **set span** command.
  c. Connect the port, bringing up the link (or reenable the port at the far end).
  d. Disable SPAN using the **set span disable** command.

  This problem is resolved in software release 4.3(1). (CSCdk31744)
- Setting the monitorSourcePort.0 MIB object to a value greater than 1023 is not rejected as an illegal value. This problem is resolved in software release 4.3(1). (CSCdk26394)
- In some cases, duplicate packets might be seen on the SPAN destination port when MLS is enabled and the SPAN source is a VLAN that is the native VLAN on one or more trunk ports. This problem is resolved in software release 4.3(1). (CSCdk54789)

Open and Resolved Caveats in Software Release 4.2(2)

These sections describe the open and resolved caveats in supervisor engine software release4.2(2):

Open Caveats in Software Release 4.2(2)

Note For a description of caveats resolved in software release 4.2(2), see the "Resolved Caveats in Software Release4.2(2)" section on page65.

This section describes open caveats in software release4.2(2).

- If you configure Fast EtherChannel on the Supervisor Engine III dual-port fiber-optic uplink module (WS-U5533-FEFX-MMF or WS-U5535-FEFX-SMF) and the link in one direction on one of the ports fails so that receive (Rx) traffic is no longer received on that port, that port incorrectly continues to transmit traffic. The correct behavior is that the port should be disabled, allowing all traffic to be transmitted over the second link in the bundle. (CSCdk49184)
- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)
- On the Gigabit EtherChannel module (WS-X5410), when the native VLAN of a trunk port is cleared and then the trunk port is set to **off**, the port is placed in the inactive state but the Link LED for the port still shows green. The correct behavior is that the LED for the port should show orange. (CSCdk31985)
- In the "Designated Root Port" field of the **show spantree** command, a four-port channel on ports4–8 of the Gigabit EtherChannel module (WS-X5410) is incorrectly shown as being a five-port channel (ports5–9). (CSCdk25123)
- In some cases, when you attempt to use the CiscoView Device Configuration window to modify the IP routing table on a Catalyst 5000 family switch, the change is not made on the switch correctly. If you attempt to change the ipRouteNextHop, the value is not changed. If you attempt to change the ipRouteDest, a new table entry is added instead of the old value being changed. (CSCdk34909)
- When you attempt to set a SPAN source that contains two FDDI ports, the command fails and displays this message: "failed to configure span feature."

  Workaround: Set a single FDDI port as the SPAN source. (CSCdk37502)
- When you set a port on the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) as the SPAN destination for receive traffic on an ISL trunk port, not all unicast and multicast frames are seen on the SPAN destination port. (CSCdk31709)
- In some situations, when a port is removed from a VLAN configured as a SPAN source, the port continues to appear as an "Oper Source" in the output of the **show span** command. (CSCdk32034)
- In some situations, a port set to autonegotiate speed and duplex on a 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) that is connected to a port on a 12-port 10/100BASE-TX RJ-45 module or a 12-port 10/100BASE-TX Fast EtherChannel module (WS-X5213A or WS-X5203) in another switch incorrectly negotiates a half-duplex link when either of the switches is reset.

  Workaround: Manually set the port speed and duplex using the **set port speed** and **set port duplex** commands. (CSCdk37919)

- In some cases, when you open a Telnet session to a Catalyst 5000 family switch from a Windows95 PC and then attempt to configure the switch using the **configure network** command, the Telnet session hangs.

  Workaround: Connect to the switch through the console port and then configure the switch from the network using the **configure network** command. (CSCdk30576)

- In some situations, when you configure a four-port Fast EtherChannel bundle and then configure a two-port bundle using the first two ports in the original bundle, the remaining two ports will not participate in spanning tree.

  Workaround: Turn channeling **off** on all four ports and then create the two-port Fast EtherChannel bundle. (CSCdk37901)

- In some cases, when you initiate a switchover from the active supervisor engine in slot1 to the standby supervisor engine in slot2, the Token Ring module (WS-X5030 and WS-X5031) fails to come online. The output of the **show module** command shows the module status as "faulty."

  Workaround: Reset the Token Ring module. (CSCdk30906)

- In some cases, in a Catalyst 5000 family chassis with both a Supervisor Engine III module and a Token Ring module (WS-X5030 and WS-X5031), the supervisor engine periodically might generate an MCP exception error that resets the switch. The problem occurs more frequently if the switch is processing many SNMP queries. (CSCdk34066)

- If two IEEE 802.1Q-capable peers are negotiating a trunk when a spanning tree loop or prolonged line-rate traffic exists, a port inconsistency error might occur, causing an excessive number of syslog messages to be sent to the console. (CSCdk29882)

- When upgrading to software release 4.2(1) from a previous release, if you download the software image file and then hot insert a second supervisor engine before you reset the system, the standby supervisor engine does not synchronize with the primary. (CSCdk31881)

Resolved Caveats in Software Release4.2(2)

Note For a description of open caveats in software release 4.2(2), see the "Open Caveats in Software Release4.2(2)" section on page64.

This section describes caveats resolved in software release 4.2(2):

- The 48-port, 10BASE-T Ethernet module (WS-X5012) incorrectly drops valid frames with dribble bits (extra bits added to frames by some end stations and transceivers). This problem is resolved in software release4.2(2). (CSCdk32984)

- In a Catalyst 5000 family switch with a Supervisor Engine III and an NFFC, if there is no uplink module installed in the supervisor engine, MLS might not function correctly.

  Workaround: Install an uplink module in the Supervisor Engine III. This problem is resolved in software release4.2(2). (CSCdk43863)

- In Catalyst 5000 family supervisor engine software release 3.2(2) and later, when the 48-port 10BASE-T Telco module (WS-X5012) detects excessive/late collisions on a port, that port is automatically disabled. The **show port** command output shows the state of the disabled port as "errdisable."

These errors can occur when there is a port-duplex misconfiguration (both ends of the link are not configured for the same duplex mode) or when the attached cable is not to specification (too long or of the wrong type). If a port has been automatically disabled, make sure the duplex configuration is the same on both ends of the link, verify that the cable is within specification, and then reenable the port using the **set port enable** command.

If you do not want to have ports disabled under these conditions, you can enter the **set option errport enable** command to disable this feature (this command affects the entire switch). However, because disabling this feature creates a risk that all ports on the module might stop transmitting and receiving traffic when there is a port-duplex mismatch or when an out-of-specification cable is used, we strongly recommend that you leave this feature disabled. The **set option errport** command is available in software release 4.2(2) and later. (CSCdk44463)

- The Catalyst 5000 family switch might erroneously transmit a multicast frame on a blocked port when the following conditions are met:
  - A multicast MAC address is configured as a permanent content-addressable memory (CAM) entry
  - A port on a 48-port, 10BASE-T Ethernet module (WS-X5012) is enabled and disabled
  - A frame with the MAC address in the CAM table originates from the port

  This problem is resolved in software release 4.2(2). (CSCdk44560)
- In a chassis with redundant Supervisor Engine III modules with NFFCs and the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R), you must have an uplink module installed in the supervisor engine in slot2. Without an uplink module in the supervisor engine in slot2, system diagnostics might fail, causing a variety of problems on the switch.

  Workaround: Install an uplink module in the supervisor engine in slot 2. This problem is resolved in software release4.2(2). (CSCdk41377)
- When you boot a Catalyst 5000 family switch with a supervisor engine installed in slot 2 and no supervisor engine in slot 1, the DRiP protocol incorrectly initializes with a MAC address of all zeros. The correct behavior is for DRiP to initialize with a MAC address in the MAC address range of the supervisor engine.

  Workaround: Install a supervisor engine in slot 1. This problem is resolved in software release4.2(2). (CSCdk35223)
- Duplicate packets might be seen on an RSM VLAN interface after you move the interface from one DMA channel to the other using the **dma-channel** interface configuration command.

  Workaround: Enter the **microcode reload** global configuration command after entering or removing a **dma-channel** command on RSM interfaces. This problem is resolved in software release4.2(2). (CSCdk45657)
- If you enable distributed TrCRF VLANs using the **set tokenring distrib-crf enable** command while DRiP is enabled, you still cannot configure a distributed TrCRF VLAN.

  Workaround: Disable DRiP using the **set tokenring reduction disable** command. This problem is resolved in software release4.2(2). (CSCdk36408)
- After a reset, an ATM module might not receive all of the configuration necessary (such as the DRiP database) to properly forward traffic to and from a Token Ring LEC. This problem is resolved in software release4.2(2). (CSCdk28968)

- In certain cases, if there are multiple ports assigned to the same TrCRF VLAN on different modules in a Catalyst 5000 family switch, and an ATM LAN emulation client (LEC) is one of those ports, Token Ring source-route switching might not forward data correctly.

  Workaround: Disable the spanning tree for the parent TrBRF VLAN (using the **set spantree disable** *vlan_num* command) and then reenable the TrBRF spanning tree (using the **set spantree enable** *vlan_num* command). This problem is resolved in software release4.2(2). (CSCdk48854)

- In some cases, in a redundant supervisor engine configuration, communication between the two supervisor engine modules might be lost when a broadcast storm occurs.

  Workaround: Reset the switch. This problem is resolved in software release4.2(2). (CSCdk38130)

- In some cases, when a parity error occurs, the switch might reset without first validating the parity error in hardware. This problem is resolved in software release4.2(2). (CSCdk47791)

- In some cases, configuring multiple default gateways on a Catalyst 5000 family switch can result in poor performance over time (due to progressively reduced available memory).

  Workaround: Remove non-primary gateways from the configuration using the **clear ip route default** *gateway* command and reset the switch. This problem is resolved in software release4.2(2). (CSCdk46384)

Open and Resolved Caveats in Software Release 4.2(1)

These sections describe the open and resolved caveats in supervisor engine software release4.2(1):

Open Caveats in Software Release 4.2(1)

Note For a description of caveats resolved in software release 4.2(1), see the "Resolved Caveats in Software Release4.2(1)" section on page69.

This section describes open caveats in software release4.2(1).

- On the Gigabit EtherChannel module (WS-X5410), if a host allowed on one secured port is moved to another, previously unused secured port on the same module, the host cannot connect to the network on the second port.

  Workaround: Disable port security on the first port, move the host to the second port, and then reenable port security on the first port (if desired). (CSCdk31747)

- On the Gigabit EtherChannel module (WS-X5410), when the native VLAN of a trunk port is cleared and then the trunk port is set to **off**, the port is placed in the inactive state but the Link LED for the port still shows green. The correct behavior is that the LED for the port should show orange. (CSCdk31985)

- In the "Designated Root Port" field of the **show spantree** command, a four-port channel on ports4–8 of the Gigabit EtherChannel module (WS-X5410) is incorrectly shown as being a five-port channel (ports5–9). (CSCdk25123)

- In some cases, when you attempt to use the CiscoView Device Configuration window to modify the IP routing table on a Catalyst 5000 family switch, the change is not made on the switch correctly. If you attempt to change the ipRouteNextHop, the value is not changed. If you attempt to change the ipRouteDest, a new table entry is added instead of the old value being changed. (CSCdk34909)
- When you attempt to set a SPAN source that contains two FDDI ports, the command fails and displays this message: "failed to configure span feature."

  Workaround: Set a single FDDI port as the SPAN source. (CSCdk37502)
- When you set a port on the 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) as the SPAN destination for receive traffic on an ISL trunk port, not all unicast and multicast frames are seen on the SPAN destination port. (CSCdk31709)
- In some situations, when a port is removed from a VLAN configured as a SPAN source, the port continues to appear as an "Oper Source" in the output of the **show span** command. (CSCdk32034)
- In some situations, a port set to autonegotiate speed and duplex on a 24-port 10/100BASE-TX Fast Ethernet module (WS-X5225R) that is connected to a port on a 12-port 10/100BASE-TX RJ-45 module or a 12-port 10/100BASE-TX Fast EtherChannel module (WS-X5213A or WS-X5203) in another switch incorrectly negotiates a half-duplex link when either of the switches is reset.

  Workaround: Manually set the port speed and duplex using the **set port speed** and **set port duplex** commands. (CSCdk37919)
- In some cases, the TACACS+ key is lost when you perform a switchover from the active to the standby supervisor engine. (CSCdk33031)

  Note CSCdk33031 has not been seen in later releases.
- In some cases, when you open a Telnet session to a Catalyst 5000 family switch from a Windows95 PC and then attempt to configure the switch using the **configure network** command, the Telnet session hangs.

  Workaround: Connect to the switch through the console port and then configure the switch from the network using the **configure network** command. (CSCdk30576)
- In some situations, when you configure a four-port Fast EtherChannel bundle and then configure a two-port bundle using the first two ports in the original bundle, the remaining two ports will not participate in spanning tree.

  Workaround: Turn channeling **off** on all four ports and then create the two-port Fast EtherChannel bundle. (CSCdk37901)
- In some cases, when you initiate a switchover from the active supervisor engine in slot1 to the standby supervisor engine in slot2, the Token Ring module (WS-X5030 and WS-X5031) fails to come online. The output of the **show module** command shows the module status as "faulty."

  Workaround: Reset the Token Ring module. (CSCdk30906)
- In some cases, in a Catalyst 5000 family chassis with both a Supervisor Engine III module and a Token Ring module (WS-X5030 and WS-X5031), the supervisor engine might generate an MCP exception error periodically that resets the switch. The problem occurs more frequently if the switch is processing many SNMP queries. (CSCdk34066)
- If two IEEE 802.1Q-capable peers are negotiating a trunk when a spanning tree loop or prolonged line-rate traffic exists, a port inconsistency error might occur, causing an excessive number of syslog messages to be sent to the console. (CSCdk29882)

- In a chassis with redundant Supervisor Engine III modules with NFFCs and the 24-port 10/100 BASE-TX Fast Ethernet module (WS-X5225R), you must have an uplink module installed in the supervisor engine in slot2. Without an uplink module in the supervisor engine in slot2, the synchronization between the active and standby supervisor engines might fail. (CSCdk41377)
- When you download a new software image to a Catalyst 5000 family switch with redundant Supervisor Engine III modules and the BOOT environment variable on the standby supervisor engine is too long (about 512bytes), the system synchronizes the software images but fails to synchronize the BOOT variable.

  Workaround: Clear all or part of the BOOT variable on the standby supervisor engine. (CSCdk41232)

  Note CSCdk41232 has not been seen in later releases.

- When upgrading to software release 4.2(1) from a previous release, if you download the software image file and then hot insert a second supervisor engine before you reset the system, the standby supervisor engine does not synchronize with the primary. (CSCdk31881)
- Duplicate packets might be seen on an RSM VLAN interface after you move the interface from one DMA channel to the other using the **dma-channel** interface configuration command.

  Workaround: Enter the **microcode reload** global configuration command after entering or removing a **dma-channel** command on RSM interfaces. (CSCdk45657)

Resolved Caveats in Software Release4.2(1)

Note For a description of open caveats in software release 4.2(1), see the "Open Caveats in Software Release4.2(1)" section on page67.

This section describes the caveats resolved in software release 4.2(1):

- If you have redundant Fast EtherChannel links and redundant Gigabit Ethernet links, and UplinkFast is enabled, Fast EtherChannel might be incorrectly chosen as the primary path.

  Workaround: Manually adjust the port costs. This problem is resolved in software release4.2(1). (CSCdk02273, CSCdk10855)
- A port on the three-port Gigabit Ethernet module (WS-X5403) might not establish a link with some Gigabit Ethernet network interface cards (NICs) if autonegotiation is enabled on the port. When autonegotiation is disabled on the port, a link is established normally. This problem is resolved in software release4.2(1). (CSCdk29940)
- A Catalyst 5500 switch might reload continuously when the SNMP historyControlInterval.*x* is set to a very small number, such as two seconds.

  Workaround: Increase the historyControlInterval*x* to a larger number, such as 30 seconds, or disable RMON on the switch by entering the **set snmp rmon disable** command. This problem is resolved in software release4.2(1). (CSCdk23780)
- In a Catalyst 5000 family chassis with redundant Supervisor Engine III modules, if the standby supervisor engine does not have an uplink module installed and you remove the standby supervisor, install an uplink module, and reinsert the module with the switch still running, the uplink ports on the standby supervisor engine are not activated (they are disabled). This problem is resolved in software release 4.2(1). (CSCdk28678)

- When you set the BOOT environment variable using SNMP, the trailing semicolon (;) is not appended correctly, which can cause an error. This problem is resolved in software release 4.2(1). (CSCdk36756)
- In some cases, after a module comes online, ports configured as a Fast or Gigabit EtherChannel bundle (in **on** mode) do not form a channel.

  Workaround: Reenter the **set port channel** *mod_num/port_list* **on** command. This problem is resolved in software release 4.2(1). (CSCdk30075)
- In some cases, in a Catalyst 5000 family chassis with a Supervisor Engine III, if you move a Token Ring port out of the default TrCRF VLAN (VLAN 1003) into a user-defined TrCRF and then move the port back to the default TrCRF, connectivity might be lost on that port. This problem is resolved in software release 4.2(1). (CSCdk34821)
- In some cases, during a switchover from the active to the standby supervisor engine, links on the 48-port, 4-segment 10BASE-T Telco Ethernet module (WS-X5020) and the 24-port, 3-segment 100BASE-TX RJ-45 Fast Ethernet module (WS-X5223) go down momentarily and come back up. This problem is resolved in software release 4.2(1). (CSCdk27991)
- In some cases, when you switch over from the active to the standby supervisor engine, an exception error occurs. In most cases, the supervisor engine resets and comes online properly. This problem is resolved in software release 4.2(1). (CSCdk30533)
- In some cases, when you set an Ethernet port for dynamic VLAN membership and then you disable the port using the **set port disable** command, the link goes down and comes back up continuously. This problem is resolved in software release 4.2(1). (CSCdk30112)
- In certain situations, when you configure dynamic VLAN membership on an Ethernet port configured as a SPAN source, the port does not get assigned to a VLAN properly and stays in "inactive" mode. This problem is resolved in software release 4.2(1). (CSCdk30164)
- In some situations, an EtherChannel port might toggle up and down continuously. This problem is resolved in software release 4.2(1). (CSCdk21348)
- When the SNMP agent on the Catalyst 5000 family switch receives a GET-REQUEST that uses an invalid (out-of-range) vlanIndex instance to query a MIB object in the vlanTable, a bus exception error is generated. This problem is resolved in software release 4.2(1). (CSCdk20786)
- In some cases, when you attempt to modify the VTP domain name (managementDomainName object) through SNMP, the VTP domain name is not modified. This problem is resolved in software release 4.2(1). (CSCdk30055)
- In some cases, the VTP configuration revision number ("Config Revision" in the **show vtp domain** command output) is incorrectly reset to 1 when certain VTP parameters are changed through SNMP. This problem is resolved in software release 4.2(1). (CSCdk25222)
- If an EtherChannel-capable port in **off** mode belongs to a VLAN that is used as a SPAN source, and you move the port to a different VLAN without disabling SPAN first, SPAN continues to monitor traffic on that port. This problem is resolved in software release 4.2(1). (CSCdk26638)
- In some circumstances, the Catalyst 5000 switch might drop some IGMP general queries, causing the multicast router to not learn some IGMP reports.

  Workaround: Enable CGMP on the multicast router. This problem is resolved in software release 4.2(1). (CSCdk37792)

- When UplinkFast is enabled on a switch with a supervisor engine with an EARL daughter card installed, the switch might respond slowly to CLI commands and software image downloads. However, switch performance and spanning tree processing are not affected. This problem is resolved in software release 4.2(1). (CSCdk39115)
- On a Catalyst 5000 family switch with a Supervisor Engine III, if the "System Uptime" (shown in the output of the **show version** command) reaches 49days, 17hours, and 3minutes (2^{32} seconds), some switching modules might reset. This problem is resolved in software release4.2(1). (CSCdk32229)

Open and Resolved Caveats in Software Release 4.1(3)

These sections describe the open and resolved caveats in supervisor engine software release4.1(3):

Open Caveats in Software Release 4.1(3)

Note For a description of caveats resolved in software release 4.1(3), see the "Resolved Caveats in Software Release4.1(3)" section on page72.

This section describes open caveats in Catalyst5000 family software release4.1(3).

Caution We do not recommend using the Token Ring modules (WS-X5030 and WS-X5031) with supervisor engine release 4.1(3).

- If you have redundant Fast EtherChannel links and redundant Gigabit Ethernet links, and UplinkFast is enabled, Fast EtherChannel may be incorrectly chosen as the primary path.

  Workaround: Manually adjust the port costs. (CSCdk02273, CSCdk10855)
- A port on the three-port Gigabit Ethernet module (WS-X5403) might not establish a link with certain Gigabit Ethernet NICs if autonegotiation is enabled on the port. When autonegotiation is disabled on the port, a link is established normally. (CSCdk29940)
- A Catalyst 5500 switch might reload continuously when the SNMP historyControlInterval.*x* is set to a very small number, such as 2 seconds.

  Workaround: Increase the historyControlInterval*x* to a larger number, such as 30 seconds, or disable RMON on the switch by entering the **set snmp rmon disable** command. (CSCdk23780)
- On a Catalyst 5000 family switch with a Supervisor Engine III, if the "System Uptime" (shown in the output of the **show version** command) reaches 49days, 17hours, and 3minutes (2^{32} seconds), some switching modules might reset. (CSCdk32229)

Resolved Caveats in Software Release 4.1(3)

Note For a description of open caveats in software release 4.1(3), see the "Open Caveats in Software Release4.1(3)" section on page71.

This section describes caveats resolved in software release4.1(3):

- Under heavy traffic conditions, ports 1–24 (or ports 25–48) of the 48-port, 10 BASE-T Ethernet module (WS-X5012) might stop transmitting frames. This problem is resolved in software release4.1(3). (CSCdj82035)
- On a Catalyst 5000 family switch running software release 4.1(2), the WS-C5568 and WS-C5598 DC power supplies are incorrectly identified by the software as being WS-C5508 AC power supplies. Although they are incorrectly identified, the power supplies still operate correctly. This problem is resolved in software release4.1(3). (CSCdk28191)

Open and Resolved Caveats in Software Release 4.1(2)

These sections describe the open and resolved caveats in supervisor engine software release4.1(2):

Open Caveats in Software Release 4.1(2)

Note For a description of caveats resolved in software release 4.1(2), see the "Resolved Caveats in Software Release4.1(2)" section on page73.

This section describes open caveats in software release4.1(2).

Caution We do not recommend using the Token Ring modules (WS-X5030 and WS-X5031) with supervisor engine release 4.1(2).

- If you have redundant Fast EtherChannel links and redundant Gigabit Ethernet links, and UplinkFast is enabled, Fast EtherChannel may be incorrectly chosen as the primary path.

  Workaround: Manually adjust the port costs. (CSCdk02273, CSCdk10855)
- On a Catalyst 5000 family switch with a Supervisor Engine III, if the "System Uptime" (shown in the output of the **show version** command) reaches 49days, 17hours, and 3minutes (2^{32} seconds), some switching modules might reset. (CSCdk32229)
- On a Catalyst 5000 family switch running software release 4.1(2), the WS-C5568 and WS-C5598 DC power supplies are incorrectly identified by the software as being WS-C5508 AC power supplies. Although they are incorrectly identified, the power supplies still operate correctly. (CSCdk28191)

Resolved Caveats in Software Release4.1(2)

Note For a description of open caveats in software release 4.1(2), see the "Open Caveats in Software Release4.1(2)" section on page72.

This section describes caveats resolved in software release 4.1(2):

If you attempt to upgrade the software on a Catalyst 5500 chassis with redundant Supervisor EngineIIIs from software release 3.X to software release 4.1(1), the image loads properly but the Flash synchronization between the active and standby supervisor engine is unsuccessful due to a checksum failure. This problem is resolved in Catalyst 5000 family supervisor engine software release 4.1(2). (CSCdk18762)

Open Caveats in Software Release 4.1(1)

This section describes open caveats in software release4.1(1).

Caution We do not recommend using the Token Ring modules (WS-X5030 and WS-X5031) with supervisor engine release 4.1(1).

- If you have redundant Fast EtherChannel links and redundant Gigabit Ethernet links, and UplinkFast is enabled, Fast EtherChannel may be incorrectly chosen as the primary path.

  Workaround: Manually adjust the port costs. (CSCdk02273, CSCdk10855)

- On a Catalyst 5000 family switch with a Supervisor Engine III, if the "System Uptime" (shown in the output of the **show version** command) reaches 49days, 17hours, and 3minutes (2^{32} seconds), some switching modules might reset. (CSCdk32229)

Usage Guidelines and Restrictions

This section describes features, warnings, and cautions about using Catalyst5000 family supervisor engine software release4.*x*.

- Ensure that the total number of logical ports across all instances of spanning tree for different VLANs does not exceed the maximum number supported for each supervisor engine type and memory configuration. Use this formula to compute the total number of logical ports on the switch:

  sum of all logical ports <=
  (*number of non-ATM trunks on the switch* * *number of active VLANs on that trunk*)
  + (*number of ATM trunks on the switch* * *number of active VLANs on that trunk* * 2)
  + *number of nontrunking ports on the switch*

  where the *sum of all logical ports* equals:

  - 400 for Supervisor Engine I (with 20-MB DRAM)
  - 1500 for Supervisor Engine II and IIIF
  - 4000 for Supervisor Engine III

Caution If you enable numerous memory-intensive features concurrently (such as VTP pruning, VMPS, EtherChannel, and RMON), or if there is switched data traffic on the management VLAN, the maximum number of supported logical ports is reduced.

Note Count each port in an EtherChannel port bundle independently (do not count the bundle as a single port).

- When connecting end stations (such as Windows95/98/NT workstations) to 10/100-Mbps switch ports, we recommend this configuration:
  - Spanning tree PortFast enabled

    Use the **set spantree portfast** *mod_num/port_num* **enable** command to enable PortFast on a port.
  - Trunking off

    Use the **set trunk** *mod_num/port_num* **off** command to disable trunking on a port.
  - Channeling off

    Use the **set port channel** *port_list* **off** command to disable channeling on a port.

  Note You must specify a valid port range when entering the **set port channel** command. You cannot specify a single port.

  This example shows how to configure a port for end station connectivity:

```
Console> (enable) set spantree portfast 2/2 enable

Warning: Spantree port fast start should only be enabled on ports connected
to a single host.  Connecting hubs, concentrators, switches, bridges, etc. to
a fast start port can cause temporary spanning tree loops.  Use with caution.

Spantree port 2/2 fast start enabled.
Console> (enable) set trunk 2/2 off
Port(s) 2/2 trunk mode set to off.
Console> (enable) set port channel 2/1-2 off
Port(s) 2/1-2 channel mode set to off.
Console> (enable)
```

- In software release 4.*x*, the uplink ports on the standby supervisor engine are active (in software release 4.3(1) and later you can disable this feature). If you are using the ports on the standby supervisor, and you have configured those ports as trunk ports, make sure that traffic for no more than 20 different VLANs will traverse the trunk.

Caution If traffic for more than 20 VLANs is carried on standby supervisor engine trunk ports, under certain conditions, network loops can temporarily open, increasing spanning tree convergence time and increasing network instability.

- If you plan to use the Gigabit EtherChannel module (WS-X5410) with Supervisor Engine I or II or in a Catalyst 5000 series chassis, use supervisor engine software release 4.3(1) or later in conjunction with Gigabit EtherChannel module software release 4.3(1) or later. This hardware was not fully tested with the Gigabit EtherChannel module in earlier releases. The Gigabit EtherChannel module is supported in the Catalyst 5500 series chassis with a Supervisor Engine III module in software release4.2(1) and later.
- If you need to download configuration files to many switches in a network topology with redundant EtherChannel links, download the configuration at each switch manually using the **configure network** command. Otherwise, in some situations, a broadcast storm can occur.
- The Catalyst 5500 series switches support redundant supervisor engine modules. Redundant supervisor engines must be the same type (both Supervisor Engine II or both Supervisor EngineIII). You can use any combination of Supervisor Engine III and III F modules in a redundant configuration provided the feature card on both modules is the same (both EARL1+, both NFFC, or both NFFC II).
- A maximum of seven ATM modules or RSMs, in any combination, can be installed in a Catalyst5500 or 5509 switch.

Caution If you plan to run both the Ethernet LANE software and the Token Ring LANE software, you must run them on separate ATM LANE modules.

- To use the dynamic port VLAN assignment feature in a Catalyst5000 family switch that contains a Supervisor Engine I module, the Supervisor Engine I module must be at hardware revision1.7 or higher. All hardware revision levels of Supervisor Engine II and III modules support the dynamic port VLAN assignment feature.
- If both PHY ports on an FDDI module are connected, you should disable and reenable them together. If you disable and reenable only one port, a broadcast storm might result.
- Under certain conditions, etherHistoryUtilization is not reported correctly if the counter value wraps between the two consecutive samples.

  Workaround: Reduce the sample interval. (CSCdk09592)

Usage Guidelines, Restrictions, and Troubleshooting

These sections provide usage guidelines, restrictions, and troubleshooting information for Catalyst5000 family switch hardware and software:

System and Supervisor Engine

This section contains usage guidelines, restrictions, and troubleshooting information that apply to the supervisor engine and to the switch at the system level.

- A minor hardware problem that causes the switching bus to time out occurs during the power-on self-test on the supervisor engine if the configuration includes a single WS-X550x (Supervisor Engine II) and any combination of the WS-X5234-RJ45 and WS-X5236-FX-MT modules. This problem occurs during every boot-up and is not software dependent.

  This usage guideline applies only to switch configurations that consist of a single Supervisor Engine II (WS-X550x) and any combination of the WS-X5234-RJ45 and WS-X5236-FX-MT modules. Redundant configurations of Supervisor Engine II and Supervisor Engine III (WS-X5530) are not affected by this problem.

- If you attempt to boot a Catalyst 5000 family switch and the switch generates continuous MCP exception errors (and possibly fails to boot), make sure that the supervisor engine has the correct software version for all of the hardware in your configuration. For information on the minimum and recommended software versions for Catalyst 5000 family hardware, see the "Product and Software Version Matrix" section on page6.

Caution Before powering up a Catalyst5500 (WS-C5500) switch with redundant power supplies, install at least two modules in the chassis. If you power up a Catalyst5500 switch with redundant power supplies with less than two modules installed, the red OUTPUT FAIL LED on one of the power supplies might light, even though the supply is not faulty.

- After downloading a new Flash image, the next reboot might take longer than normal if Erasable Programmable Logic Devices (EPLDs) on the supervisor engine need to be reprogrammed. Whether this happens depends on which software version was running on the supervisor engine before the download and which software version is downloaded. This can add up to 15 minutes to the normal reboot time the first time you reboot with the new image.
- After initiating a switchover from the active supervisor engine to the standby supervisor engine, or when inserting a redundant supervisor engine in an operating switch, always wait until the supervisor engines have synchronized and all modules are online before removing or inserting modules or supervisor engines, or performing another switchover.
- Under certain conditions, inserting a second supervisor engine into a running Catalyst5500 switch might cause the switch to reset.
- Under certain conditions, Clock Module:B is Active after boot. This does not indicate any failure of Clock Module:A. It is related to fluctuations in the boot sequence that select Clock Module:B over Clock Module:A. All standard error query and notification processes accurately reflect the status of the primary and standby clock modules.
- If your configuration produces thousands of content-addressable memory (CAM) entries, ensure that your screen length is set to a value greater than 0 before entering the **show cam dynamic** command.
- The LrnDiscard counter (displayed by entering the **show mac** command) indicates the number of times a CAM entry is replaced with a newly learned address when the CAM table is full. The counter value is not maintained for each port; instead, the value is maintained for the entire switch.
- The CLI command **show cam dynamic** and the SNMP query "getmany community@vlan dot1dTpFdbAddress" are sometimes out of sync.

Modules and Switch Ports

This section contains usage guidelines, restrictions, and troubleshooting information that apply to modules and switch ports.

- To avoid a broadcast storm on Catalyst 5500 switches with a Supervisor Engine III and NFFC, do not insert a WS-X5030 Token Ring module in slots 9 through 12 while the switch is in service. Reset the switch after inserting a WS-X5030 Token Ring module in slots 9 through 12. (CSCdk67305)
- If the Catalyst 5000 family switch has a Supervisor Engine II, Supervisor Engine II G, or Supervisor Engine III G and a Network Analysis module installed in the chassis, SNMP timeout errors might be seen when TrafficDirector is used to install RMON statistics tables on all the ports.

  Workaround: Disable the Extended RMON feature with the **set snmp extededrmon disable** command or enable SPAN, with the port on NAM module as the SPAN destination port if you want to use the Extended RMON feature provided by the Network Analysis module.
- On Catalyst 5500 switches with a Supervisor Engine III and NFFC, to avoid a broadcast storm, do not insert a WS-X5030 Token Ring module in slots 9 through 12 while the switch is in service. Reset the switch after inserting a WS-X5030 Token Ring module in slots 9 through 12.
- When inserting a module into a Catalyst5000 family chassis, be sure to use the ejector levers on the front of the module to seat the backplane pins properly. Incorrectly inserting a module can cause unexpected behavior. For proper module installation instructions, refer to the *Catalyst5000 Series Module Installation Guide*.
- When you replace a module (other than the supervisor engine) with a module of a different type, or when you insert a module (other than the supervisor engine) in an empty slot, enter the command **clear config** *mod_num* to clear the module configuration information in the supervisor engine and obtain the correct spanning tree parameters.
- If a module fails to come online, reset the module by entering the **reset** *mod_num* command.
- On a Catalyst5000 family switch with a Supervisor Engine I or II, if you attempt to download a new supervisor engine software image file before one or more modules come online, those modules might fail to come online. Once the download is complete and you reset the switch, the modules should come online correctly.
- If a port fails the physical-medium-dependent (PMD) loopback test (port LED is flashing orange) after the Catalyst5000 family switch is reset, you must reset the affected module to recover.
- If the Catalyst 5000 family switch detects a port-duplex misconfiguration, the misconfigured switch port is disabled and placed in the errdisable state. Reconfigure the port-duplex setting and use the **set port enable** command to reenable the port.
- In Catalyst 5000 family supervisor engine software release 3.2(2) and later, when the 48-port 10BASE-T Telco module (WS-X5012) detects excessive/late collisions on a port, that port is automatically disabled. The **show port** command output shows the state of the disabled port as "errdisable."

  These errors can occur when there is a port-duplex misconfiguration (both ends of the link are not configured for the same duplex mode) or when the attached cable is not to specification (too long or of the wrong type). If a port has been automatically disabled, make sure the duplex configuration is the same on both ends of the link, verify that the cable is within specification, and then reenable the port using the **set port enable** command.
- If you have a port whose port speed is set to **auto** connected to another port whose speed is set to a fixed value, configure the port whose speed is set to a fixed value for half duplex. Alternately, you can configure both ports to a fixed-value port speed and full duplex.

- Whenever you connect a Catalyst 5000 family port that is set to autonegotiate to an end station or another networking device, make sure that the other device is configured for autonegotiation as well. If the other device is not set to autonegotiate, the Catalyst 5000 family port will remain in half-duplex mode, which can cause a duplex mismatch resulting in packet loss, late collisions, and line errors on the link.
- With a system containing a Supervisor Engine III or III F with an NFFC or NFFCII, do not hot insert a Token Ring module (WS-X5030 and WS-X5031) because it can cause the switch to reset. Instead, power down the switch before inserting the Token Ring module.
- The **show mac** command displays the InDiscard counter value as zero, instead of the actual counter value for Ethernet ports. (The InDiscard counter tracks the number of frames that the Catalyst5000 family switch discards because the frames were destined for the local segment.)
- Under heavy traffic conditions, and with a duplex mismatch between connected ports, the following Catalyst 5000 family modules might transmit frames with bad CRC values:
  - 48-port 10BASE-T Telco Ethernet module (WS-X5012)
  - 48-port 10BASE-T Telco Ethernet module (WS-X5012A)
  - Two-slot 48-port 10BASE-T RJ-45 Ethernet module (WS-X5014)
- If you are using FDDI modules in your Catalyst5000 family switch, we recommend that you run FDDI software release 2.1(7) or later.
- Do not install a Network Analysis Module (WS-X5380) in a Catalyst5000 series chassis with a Supervisor Engine I. Do not install a Network Analysis Module in a Catalyst5000 family chassis with a Supervisor Engine II in software releases prior to release4.5(1).
- Serial download is supported for downloading Flash code to the supervisor engine, but not to the switching modules.
- In some instances, when using the autonegotiating functions of either the WS-X5213 or WS-X5213A 10/100-Mbps Fast Ethernet 12-port switching modules to connect to another autonegotiating Ethernet or Fast Ethernet device over a cable distance of 98 to 131 feet (30 to 40meters), the duplex mode and port speed might be incorrectly negotiated. In this case, the link between the devices cannot be established. To recover from this situation, manually set the port speed and duplex mode manually.
- Alignment and frame check sequence (FCS) errors are detected when 3Com 3c595 and 3c905 cards are attached to a Catalyst5000 family switch. (CSCdj01465)
- You cannot disable an ATM module by entering the **set module disable** command.

  Workaround: Session to the ATM module and shut down the ATM interface using the **shutdown** interface configuration command.
- If you have a LECS or LES/BUS configured on an ATM module and you replace the supervisor engine (on Catalyst5000 series switches only) or move the ATM module from one slot to another, the ATM addresses (NSAPs) are modified. Be sure to update the LECS database configuration with the new NSAP values.
- ATM modules do not generate link up/down traps.
- UplinkFast is not supported over ATM.
- In a 10BASE-2 network, incorrect termination can cause the port to hang. To recover, disable and then reenable the port.

Transceivers

This section contains usage guidelines, restrictions, and troubleshooting information that apply to transceivers.

- If you experience trouble with a port that has an MII transceiver attached to it, check that the transceiver jumpers are set properly.
- If an MII transceiver is plugged in at an angle, the Catalyst5000 family switch might stop transmitting data. To recover, reseat the MII transceiver so that it is not seated at an angle. If the Catalyst5000 family switch still cannot transmit data, disable and then reenable the port.
- If you are using MII transceivers, make sure that you are using compliant MII transceivers. Enter the **show portreg** command for each MII port to ensure that the value 2100 appears in the first column of output, as shown in the following example:

```
Console> (enable) show portreg 1/1
Port/PHY registers for 1/1

0x00:  2100 780F 2000 5C00 0081 0000 0000 0000
.
.
.
Console> (enable)
```

  If you see a value of 0xffff instead of 2100, do not use the MII transceiver. An MII transceiver whose value is set to 0xffff can prevent the Catalyst5000 family switch from receiving on this MII port, which can cause spanning tree loops.

  Check the disconnect counter register (DCR) and the False Carrier Sense Counter register (FCSCR). These registers should remain at 0 (except for the moment at which the link comes up). A value other than 0 indicates a physical layer problem (most likely a problem with the transceiver).

Spanning Tree

The Spanning Tree Protocol (STP) blocks certain ports to prevent physical loops in a redundant topology. On a blocked port, the Catalyst5000 family switch receives spanning tree bridge protocol data units (BPDUs) periodically from its neighboring Catalyst5000 family switch. You can configure the frequency with which BPDUs are received by entering the **set spantree hello** command (the default frequency is set to two seconds). If a Catalyst5000 family switch does not receive a BPDU in the time period defined by the **set spantree maxage** command (20 seconds by default), the blocked port transitions to the listening state, the learning state, and to the forwarding state. As it transitions, the Catalyst5000 family switch waits for the time period specified by the **set spantree fwddelay** command (15 seconds by default) in each of these intermediate states. Therefore, a blocked spanning tree port moves into the forwarding state if it does not receive BPDUs from its neighbor within approximately 50 seconds.

This section contains usage guidelines, restrictions, and troubleshooting information that apply to spanning tree.

- Connectivity between certain Token Rings might not be possible in a redundant ISL network if a Token Ring or ATM link is the forwarding path to the root switch instead of an ISL link. Ensure that spanning tree path costs are configured such that a Token Ring or ATM link can never have a lower cost to the root bridge than an ISL link in the same switch. (CSCdk87396)

- A Catalyst family switch should be the root for all VLANs, especially VLAN1. In order to recover from an extended broadcast storm caused by a faulty device in a network, Catalyst family switches reset blocked ports. To ensure recovery, all Catalyst family switches in the network should perform this function at the same time by sending synchronization packets on VLAN 1. These synchronization packets are only sent by a Catalyst family switch if it is the root bridge.
- Use the most-powerful possible supervisor engine version for the root node (for example, Supervisor Engine III instead of Supervisor Engine II).
- On a switch with Supervisor Engine III or III F with a NFFC or NFFC II, you cannot enable or disable spanning tree on a per-VLAN basis. You must enable or disable spanning tree on every VLAN using the **set spantree enable all** and **set spantree disable all** commands.
- In software release 4.*x* and later, the uplink ports on the standby supervisor engine are active (in software release 4.3(1) and later you can disable this feature). If you are using the ports on the standby supervisor, and you have configured those ports as trunk ports, make sure that traffic for no more than 20 different VLANs will traverse the trunk.

Caution If traffic for more than 20 VLANs is carried on standby supervisor engine trunk ports, under certain conditions, network loops can temporarily open, increasing spanning tree convergence time and network instability.

- After a switchover from the active to the standby supervisor engine, the ports on the standby supervisor engine take 20seconds to recover if spanning tree is disabled or PortFast is enabled on those ports. Other ports on the switch take from 5 to 15 seconds to recover if spanning tree is disabled or PortFast is enabled on those ports.
- Disabling spanning tree on the native VLAN of an IEEE 802.1Q trunk can potentially cause spanning tree loops. We recommend that you leave spanning tree enabled on the native VLAN of an 802.1Q trunk. If you plan to disable spanning tree in an 802.1Q environment, disable spanning tree on every VLAN in the network and ensure a loop-free topology exists.
- Use these commands to monitor blocked spanning tree ports:
  - **show port**—Check to see if the port has registered a lot of alignment, FCS, or any other type of line errors. If these errors are incrementing continuously, the port might drop input BPDUs.
  - **show mac**—If the Inlost counter is incrementing continuously, the port is losing input packets because of a lack of receive buffers. This problem can also cause the port to drop incoming BPDUs.
- On a blocked spanning tree port, make sure that the Rcv-Frms and Rcv-Multi counters are incrementing continuously. If the Rcv-Frms counter stops incrementing, the port is not receiving any frames, including BPDUs. If the Rcv-Frms counter is incrementing but the Rcv-Multi counter is not, then this port is receiving non-multicast frames but is not receiving BPDUs.
- On a blocked spanning tree port, check the duplex configuration to ensure that the port duplex is set to the same type as the port of the neighboring device.
- On trunk ports, make sure that the trunk configuration is set properly on both sides of the link.
- On trunk ports, make sure that the duplex is set to full on both sides of the link to prevent any collisions under heavy traffic conditions.
- Do not use spanning tree PortFast on a trunk port. Although the **show spantree** command displays PortFast as enabled on a trunk port, PortFast has no effect on trunk ports.
- IEEE STP between a Cisco router and Catalyst5000 family ATM LANE module over RFC 1483 PVCs does not function properly.

VTP, VLANs, and VLAN Trunks

This section contains usage guidelines, restrictions, and troubleshooting information that apply to VTP, VLANs, and VLAN trunks.

- Although the Dynamic Trunk Protocol (DTP) is a point-to-point protocol, some internetworking devices might forward DTP frames. To avoid connectivity problems, follow these guidelines:
  - For ports connected to non-Catalyst family devices in which trunking is not being used, configure trunk-capable Catalyst5000 family switch ports to **off** by entering the **set trunk** *mod_num/port_num* **off** command.
  - When trunking to a Cisco router, use the **set trunk** *mod_num/port_num* **nonegotiate** command. The **nonegotiate** keyword transitions a link into trunking mode without sending DTP frames.
- With Cisco IOS software release 12.0, the Catalyst8510 campus switch router (CSR) does not process untagged packets (packets on the native VLAN) received on an IEEE802.1Q trunked interface (all such packets are dropped). If you configure Catalyst8510 CSR subinterfaces to trunk using 802.1Q encapsulation, traffic cannot be carried successfully on the native VLAN for the trunk configured on the Catalyst5000 family switch.

  Workaround: Create an unused VLAN and assign that VLAN as the native VLAN for the 802.1Q trunk on the Catalyst5000 family switch. Verify the native VLAN assignment for the trunk using the **show trunk** command.

  This problem is tracked as a defect against the Catalyst8510 CSR software (CSCdk77676).

EtherChannel

This section contains usage guidelines, restrictions, and troubleshooting information that apply to Fast and Gigabit EtherChannel.

- When using Fast EtherChannel, if a "SPANTREE-2: Channel misconfig - *x/x-x* will be disabled" or similar syslog message is displayed, it indicates a mismatch of Fast EtherChannel modes on the connected ports. We recommend that you correct the configuration and reenable the ports by entering the **set port enable** command. Valid EtherChannel configurations include:

Port Channel Mode	Valid Neighbor Port Channel Mode(s)
desirable	**desirable** or **auto**
auto	**desirable** or **auto**[1]
on	**on**
off	**off**

1. If both the local and neighbor ports are in **auto** mode, an EtherChannel bundle will not form.

- If you are using media-independent interface (MII) connectors, Fast EtherChannel does not work on the 100BASE-TX, RJ-45 supervisor engine (WS-X5509).
- With a large number of channels, trunks, or VLANs, or a change of channel configuration (for example, **off** to **auto**), or upon Fast EtherChannel module reboot, ports might take up to five minutes to form a channel and to participate in spanning tree. (During this interval, the port does not appear in **show spantree** command output.) If it takes more than ten minutes for a channel to form and appear on spanning tree, disable and reenable the ports. In addition, it might take up to two minutes to unbundle a channel after changing the channel mode.

SPAN

This section contains usage guidelines, restrictions, and troubleshooting information that apply to the Switch Port Analyzer (SPAN).

- If you configure a SPAN destination port with the **inpkts disable** option (the default), normal incoming traffic on the port is not forwarded. However, if you reset the module on which the SPAN destination port is configured, the port will forward normal incoming traffic after the module comes online.

  Workaround: Enter the **set span inpkts disable** command again after the module comes online. (CSCdk61912)

- In software releases prior to 4.2, if the SPAN destination port is connected to another device, the port always receives incoming packets for the VLAN it is assigned to but does not participate in the spanning tree for that VLAN. To avoid creating spanning tree loops, assign the SPAN destination port to an unused VLAN.
- In software release 4.2 and later, incoming traffic on the SPAN destination port is disabled by default. You can enable it using the **set span** command with the **inpkts enable** keywords. However, while the port receives traffic for its assigned VLAN, it does not participate in spanning tree for that VLAN. To avoid creating spanning tree loops with incoming traffic enabled, assign the SPAN destination port to an unused VLAN.
- A SPAN destination port receives flooded unicasts and broadcasts for the VLAN of the source SPAN port.
- The RSM does not support SPAN.

Multicast

This section contains usage guidelines, restrictions, and troubleshooting information that apply to multicast protocols and traffic on the switch.

- Due to a conflict with the Hot Standby Router Protocol (HSRP), Cisco Group Management Protocol (CGMP) leave processing is disabled by default.

  To enable CGMP leave processing, enter the **set cgmp leave enable** command.

  Note If both HSRP and CGMP leave processing are enabled, you might experience some unicast packet flooding.

- When CGMP leave processing is enabled, the Catalyst5000 family switch learns router ports through PIM-v1, HSRP, and CGMP self-join messages. When CGMP leave processing is disabled, the Catalyst5000 family switch learns router ports through CGMP self-join messages only.
- CGMP does not prune multicast traffic for any IP multicast address that maps into the Media Access Control (MAC) address range of 01-00-5E-00-00-00 to 01-00-5E-00-00-FF. The reserved IP multicast addresses, in the range 224.0.0.0 to 224.0.0.255, are used to forward local IP multicast traffic in a single Layer3 hop.

Documentation Updates for Software Release 4.5

This section describes caveats for the Catalyst5000 family software release4.5 documentation. These changes will be included in the next update to the documentation.

The April 1999 version of the *Catalyst 5000 Series Module Installation Guide* incorrectly includes information about the two-slot, 48-port 10/100BASE-TX Fast Ethernet switching module (WS-X5239-RJ21) with RJ-45 connectors. This module is not shipping and there are no future plans to release this module.

Documentation Updates for Software Release 4.3

This section describes caveats for the Catalyst5000 family software release4.3 documentation. These changes will be included in the next update to the documentation.

- The *Catalyst 5000 Series Command Reference* publication does not mention the following supported commands:
  - **clear config extendedrmon**—If you have a Network Analysis Module (WS-X5380) installed, you can use this command to clear the extended RMON configuration for the module from NVRAM.
  - **set standbyports** {**enable** | **disable**}—This command allows you to control whether the uplink ports on the standby supervisor engine (if present) are active or disabled. For more information, see the "New Features for Supervisor Engine Software Release 4.3" section on page13.
  - **show standbyports**—This command displays the current configuration for the standby uplink ports. For more information, see the "New Features for Supervisor Engine Software Release 4.3" section on page13.
- The *Catalyst 5000 Series Software Configuration Guide* publication for releases 4.3 and earlier incorrectly describes the behavior of packet-based (software) broadcast suppression. The document states:

  "Broadcast/multicast suppression uses filtering that measures broadcast/multicast activity on a LAN over a one-second time period and compares the measurement with a predefined threshold. If the threshold is reached, further broadcast activity is suppressed for the duration of a specified time period."

  This description is accurate for bandwidth-based (hardware) suppression. However, for packet-based suppression, *all* traffic activity (broadcast, multicast, and unicast) is suppressed for the duration of the time period.
- The November 1998 and earlier revisions of the *Catalyst 5000 Series Installation Guide* and the *Catalyst 5000 Series Supervisor Engine Installation Guide* incorrectly state that the Supervisor Engine III, III FSX, and III FLX are supported in the Catalyst 5002 chassis. Only the Supervisor Engine I and II are supported in the Catalyst 5002 chassis. For detailed information about which supervisor engines are supported in which chassis, see the "Release 4.x Supervisor Engine Support Matrix" section on page4

Documentation Updates for Software Release 4.2

This section describes caveats for the Catalyst5000 family software release4.2 documentation. These changes will be included in the next update to the documentation.

- In the *Catalyst 5000 Series Software Configuration Guide*, on page 5-2 of Chapter 5, "Configuring VLAN Trunks on Fast Ethernet and Gigabit Ethernet Ports," the second paragraph of the "Understanding How VLAN Trunks Work" section states:

  "Fast Ethernet VLAN trunks use Cisco's ISL or industry-standard IEEE802.1Q encapsulation to carry traffic for multiple VLANs over a single link. Gigabit Ethernet trunks use only ISL encapsulation."

  This section should state:

  "Fast Ethernet and Gigabit Ethernet VLAN trunks use Cisco's ISL or industry-standard IEEE802.1Q encapsulation to carry traffic for multiple VLANs over a single link."

- In the *Catalyst 5000 Series Software Configuration Guide*, on page 5-10 of Chapter 5, "Configuring VLAN Trunks on Fast Ethernet and Gigabit Ethernet Ports," the third paragraph of the "IEEE 802.1Q Trunk Configuration Example" section states:

  "To properly configure an IEEE 802.1Q trunk in software release 4.1, the trunk type (encapsulation), trunk mode, and native VLAN must be the same on both ends of the link."

  This statement is correct. However, the native VLAN restriction applies not just to software release4.1 but to all subsequent software releases, including software release 4.2. When you configure an IEEE802.1Q trunk, the native VLAN must be the same on both ends of the trunk link.

- The August 1998 *Catalyst 5000 Series Module Installation Guide* has incorrect information regarding the availability of Gigabit Interface Converters (GBICs). There is no 1000BASE-LX GBIC.

  Instead, Cisco is shipping the 1000BASE-LX/LH GBIC (WS-G5486), in addition to the 1000BASE-SX GBIC (WS-G5484). The Cisco 1000BASE-LX/LH interfaces fully comply with the IEEE 802.3z 1000BASE-LX standard, and their higher optical quality allows them to reach 10km over single-mode fiber (SMF) versus the 5 km specified in the standard.

- The August 1998 *Catalyst 5000 Series Module Installation Guide* has incorrect information regarding the availability of the 10/100BASE-T Telco Ethernet switching module (WS-X5227P). This module is not yet available.

Documentation Updates for Software Release 4.1

This section describes caveats for the Catalyst5000 family software release4.1 documentation. These changes will be included in the next update to the documentation.

- In the *Catalyst 5000 Series Command Reference* publication, the **set spantree portvlancost** command section has been updated. The cost parameter should have the following definition:

cost *cost*	(Optional) Keyword that indicates the path cost. The portvlancost applies only to trunk ports.

- In the *Catalyst 5000 Series Command Reference* publication, the **set snmp rmon** command section has been updated. The "Usage Guidelines" section should contain the following information:
  - RMON is enabled for Ethernet, Fast Ethernet, Gigabit Ethernet, and Token Ring switch ports.
  - When RMON is enabled, the supported RMON groups for Ethernet, Fast Ethernet, and Gigabit Ethernet ports are Statistics, History, Alarms, and Events, as specified in RFC 1757.
  - When RMON is enabled, the supported RMON groups for Token Ring ports are MAC-Layer Statistics, Promiscuous Statistics, MAC-Layer History, Promiscuous History, Ring Station Control, Ring Station Order Table, Alarms, and Events, as specified in RFC 1513 and RFC1757.
- In the *Catalyst 5000 Series Command Reference* publication, the **traceroute** command section has been updated. The "traceroute Error Messages" table should contain this information.

ICMP Error Code	Meaning
!N	No route to host. The network is unreachable.
!H	No route to host. The host is unreachable.
!P	Connection refused. The protocol is unreachable.
!F	Fragmentation needed but do not fragment (DF) bit was set.
!S	Source route failed.
!A	Communication administratively prohibited.
?	Unknown error occurred.

- In the *Catalyst 5000 Series Module Installation Guide*, the description of the Gigabit Ethernet module in Chapter 4 has been updated. The two LEDs (LW and SW) next to each port on the Gigabit Ethernet module have been removed. You can identify the type of GBIC module installed in the port using the **show port** command.

Additional Documentation

The following documents are available for the Catalyst5000 family switch:

- *Quick Installation Guides*—Available for the Catalyst5002, Catalyst5000 and Catalyst 5005, Catalyst5509, and Catalyst5500
- *Catalyst5000 Series Quick Software Configuration*
- *Catalyst5000 Series Installation Guide*
- *Catalyst5000 Series Supervisor Engine Installation Guide*
- *Catalyst5000 Series Module Installation Guide*
- *Software Configuration Guide – Catalyst 5000, 4000, 2948G, 2926G, 2926 Series Switches*
- *Command Reference – Catalyst 5000, 4000, 2948G, 2926G, 2926 Series Switches*
- *System Message Guide – Catalyst 5000, 4000, 2948G, 2926G, 2926 Series Switches*
- *Enterprise MIB User Quick Reference* (online only)

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The following sections provide sources for obtaining documentation from Cisco Systems.

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Technical Assistance Center

The Cisco TAC website is available to all customers who need technical assistance with a Cisco product or technology that is under warranty or covered by a maintenance contract.

Contacting TAC by Using the Cisco TAC Website

If you have a priority level 3 (P3) or priority level 4 (P4) problem, contact TAC by going to the TAC website:

http://www.cisco.com/tac

P3 and P4 level problems are defined as follows:

- P3—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.
- P4—You need information or assistance on Cisco product capabilities, product installation, or basic product configuration.

In each of the above cases, use the Cisco TAC website to quickly find answers to your questions.

To register for Cisco.com, go to the following website:

http://www.cisco.com/register/

If you cannot resolve your technical issue by using the TAC online resources, Cisco.com registered users can open a case online by using the TAC Case Open tool at the following website:

http://www.cisco.com/tac/caseopen

Contacting TAC by Telephone

If you have a priority level 1(P1) or priority level 2 (P2) problem, contact TAC by telephone and immediately open a case. To obtain a directory of toll-free numbers for your country, go to the following website:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

P1 and P2 level problems are defined as follows:

- P1—Your production network is down, causing a critical impact to business operations if service is not restored quickly. No workaround is available.
- P2—Your production network is severely degraded, affecting significant aspects of your business operations. No workaround is available.

This document is to be used in conjunction with the documents listed in the "Additional Documentation" section.