



Release Notes for the Cisco Catalyst Blade Switch 3040 for FSC, Cisco IOS Release 12.2(50)SE and Later

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Cisco IOS Release 12.2(50)SE and later runs on the Cisco Catalyst Blade Switch 3040 for FSC, referred to as the *switch*. The switch is installed in the Fujitsu Siemens Computers (FSC) PRIMERGY BX600 system, referred to as the *BX600 system*.

Unless otherwise noted, the term *switch* refers to a standalone switch.



Note

Before you install the switch in the BX600 system, upgrade the BX600 system management software to version 1.68 or later for the switch to operate properly.

Check for updates to this document at this URL for information about compatibility with the BX600 system software:

http://www.cisco.com/en/US/products/ps8743/prod_release_notes_list.html



Note

If you wish to use Device Manager to upgrade the switch from Cisco IOS Release 12.2(35)SE through Cisco IOS Release 12.2(40)SE1 (the LAN Base image) to Cisco IOS Release 12.2(50)SE or later (the IP base image), you must first upgrade to Cisco IOS Release 12.2(40)SE2.

These release notes include important information about Cisco IOS Release 12.2(50)SE and any limitations, restrictions, and caveats that apply to them. Verify that these release notes are correct for your switch:

- If you are installing a new switch, see the Cisco IOS release label on the switch packaging.
- If your switch is on, use the **show version** privileged EXEC command. See the “[Finding the Software Version and Feature Set](#)” section on page 3.
- If you are upgrading to a new release, see the software upgrade filename for the software version. See the “[Deciding Which Files to Use](#)” section on page 4.



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For the complete list of Cisco Catalyst Blade Switch 3040 for FSC documentation, see the “[Related Documentation](#)” section on page 25.

You can download the switch software from this site (registered Cisco.com users with a login password):

<http://tools.cisco.com/support/downloads/go/MDFTree.x?butype=switches>

This software release is part of a special release of Cisco IOS software that is not released on the same 8-week maintenance cycle that is used for other platforms. As maintenance releases and future software releases become available, they will be posted to Cisco.com in the Cisco IOS software area.

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System Requirements

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Hardware Supported

The hardware supported on this release is the Cisco Catalyst Blade Switch 3040.

Device Manager System Requirements

- “[Hardware Requirements](#)” section on page 3
- “[Software Requirements](#)” section on page 3

Hardware Requirements

Table 1 lists the minimum hardware requirements for running the device manager.

Table 1 Minimum Hardware Requirements

Processor Speed	DRAM	Number of Colors	Resolution	Font Size
233 MHz minimum ¹	512 MB ²	256	1024 x 768	Small

1. We recommend 1 GHz.
2. We recommend 1 GB DRAM.

Software Requirements

These are the supported operating systems and browsers for the device manager:

- Windows 2000, XP, Vista, and Windows Server 2003
- Internet Explorer 5.5, 6.0, 7.0, Firefox 1.5, 2.0 or later

The device manager verifies the browser version when starting a session, and it does not require a plug-in.

Upgrading the Switch Software

- [“Finding the Software Version and Feature Set” section on page 3](#)
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Finding the Software Version and Feature Set

The Cisco IOS image is stored as a bin file in a directory that is named with the Cisco IOS release. A subdirectory contains the files needed for web management. The image is stored on the system board flash device (flash:).

You can use the **show version** privileged EXEC command to see the software version that is running on your switch. The second line of the display shows the version.

You can also use the **dir filesystem:** privileged EXEC command to see the directory names of other software images that you might have stored in flash memory.

Deciding Which Files to Use

The upgrade procedures in these release notes describe how to perform the upgrade by using a combined tar file. This file contains the Cisco IOS image file and the files needed for the embedded device manager. You must use the combined tar file to upgrade the switch through the device manager. To upgrade the switch through the command-line interface (CLI), use the tar file and the **archive download-sw** privileged EXEC command.



Note

If you wish to use Device Manager to upgrade the switch from Cisco IOS Release 12.2(35)SE through Cisco IOS Release 12.2(40)SE1 (the LAN Base image) to Cisco IOS Release 12.2(50)SE or later (the IP base image), you must first upgrade to Cisco IOS Release 12.2(40)SE2.

Table 2 lists the filenames for this software release.

Table 2 Cisco IOS Software Image Files

Filename	Description
cbs30x0-ipbase-tar.122-50.se3.tar	Cisco Catalyst Blade Switch 3040 for FSC image file and device manager files. This image has Layer 2+ features.
cbs30x0-ipbasek9-tar.122-50.se3.tar	Cisco Catalyst Blade Switch 3040 for FSC cryptographic image file and device manager files. This image has the Kerberos and SSH features.

Archiving Software Images

Before upgrading your switch software, make sure that you have archived copies of the current Cisco IOS release and the Cisco IOS release to which you are upgrading. You should keep these archived images until you have upgraded all devices in the network to the new Cisco IOS image and until you have verified that the new Cisco IOS image works properly in your network.

Cisco routinely removes old Cisco IOS versions from Cisco.com. See *Product Bulletin 2863* for more information:

http://www.cisco.com/en/US/products/sw/iosswrel/ps5187/prod_bulletin0900aecd80281c0e.html

You can copy the bin software image file on the flash memory to the appropriate TFTP directory on a host by using the **copy flash: tftp:** privileged EXEC command.



Note

Although you can copy any file on the flash memory to the TFTP server, it is time consuming to copy all of the HTML files in the tar file. We recommend that you download the tar file from Cisco.com and archive it on an internal host in your network.

You can also configure the switch as a TFTP server to copy files from one switch to another without using an external TFTP server by using the **tftp-server** global configuration command. For more information about the **tftp-server** command, see the “Basic File Transfer Services Commands” section of the *Cisco IOS Configuration Fundamentals Command Reference, Release 12.2* at this URL:

http://www.cisco.com/en/US/products/sw/iosswrel/ps1835/products_command_reference_book09186a00800811e0.html

Upgrading a Switch by Using the Device Manager

You can upgrade switch software by using the device manager. For detailed instructions, click **Help**.



Note

When using the device manager to upgrade your switch, do not use or close your browser session after the upgrade process begins. Wait until after the upgrade process completes.

Upgrading a Switch by Using the CLI

This procedure is for copying the combined tar file to the switch. You copy the file to the switch from a TFTP server and extract the files. You can download an image file and replace or keep the current image.

To download software, follow these steps:

-
- Step 1** Use [Table 2 on page 4](#) to identify the file that you want to download.
- Step 2** Download the software image file. If you have a SmartNet support contract, go to this URL, and log in to download the appropriate files:

<http://www.cisco.com/kobayashi/sw-center/sw-lan.shtml>

- Step 3** Copy the image to the appropriate TFTP directory on the workstation, and make sure that the TFTP server is properly configured.

For more information, see Appendix B in the software configuration guide for this release.

- Step 4** Log into the switch through the console port or a Telnet session.

- Step 5** (Optional) Ensure that you have IP connectivity to the TFTP server by entering this privileged EXEC command:

```
Switch# ping tftp-server-address
```

For more information about assigning an IP address and default gateway to the switch, see the software configuration guide for this release.

- Step 6** Download the image file from the TFTP server to the switch. If you are installing the same version of software that is currently on the switch, overwrite the current image by entering this privileged EXEC command:

```
Switch# archive download-sw /overwrite /reload
tftp: [[/location]/directory]/image-name.tar
```

The **/overwrite** option overwrites the software image in flash memory with the downloaded one.

The **/reload** option reloads the system after downloading the image unless the configuration has been changed and not saved.

For *//location*, specify the IP address of the TFTP server.

For */directory/image-name.tar*, specify the directory (optional) and the image to download. Directory and image names are case sensitive.

This example shows how to download an image from a TFTP server at 198.30.20.19 and to overwrite the image on the switch:

```
Switch# archive download-sw /overwrite tftp://198.30.20.19/imagename.tar
```

You can also download the image file from the TFTP server to the switch and keep the current image by replacing the `/overwrite` option with the `/leave-old-sw` option.

Recovering from a Software Failure

For additional recovery procedures, see the “Troubleshooting” chapter in the software configuration guide for this release.

Installation Notes

You can assign IP information to your switch by using these methods:

- The Express Setup program or the BX600 Management Blade WEB GUI described in the getting started guide.
- The CLI-based setup program, as described in the hardware installation guide.
- The DHCP-based autoconfiguration, as described in the software configuration guide.
- Manually assigning an IP address, as described in the software configuration guide.

New Software Features

- Network Edge Access Topology (NEAT) with 802.1X switch supplicant, host authorization with CISP, and auto enablement to authenticate a switch outside a wiring closet as a supplicant to another switch.
- IEEE 802.1x with open access to allow a host to access the network before being authenticated.
- IEEE 802.1x authentication with downloadable ACLs and redirect URLs to allow per-user ACL downloads from a Cisco Secure ACS server to an authenticated switch.
- Flexible-authentication sequencing to configure the order of the authentication methods that a port tries when authenticating a new host.
- Multiple-user authentication to allow more than one host to authenticate on an 802.1x-enabled port.
- Cisco EnergyWise to manage the energy usage of power over Ethernet (PoE) entities.
- Wired location service to send location and attachment tracking information for connected devices to a Cisco Mobility Services Engine (MSE).
- CPU utilization threshold trap to monitor CPU utilization.
- Support for the Cisco IOS Configuration Engine, previously referred to as the Cisco IOS CNS agent.
- LLDP-MED network-policy profile time, length, value (TLV) for creating a profile for voice and voice-signalling by specifying the values for VLAN, class of service (CoS), differentiated services code point (DSCP), and tagging mode

- RADIUS server load balancing to allow access and authentication requests to be distributed evenly across a server group.
- Support for the SCP attribute in the CONFIG_COPY MIB.
- Support for the CISCO-AUTH-FRAMEWORK-MIB, CISCO-MAC-AUTH-BYPASS, and LLDP MIBs.

Limitations and Restrictions

You should review this section before you begin working with the switch. These are known limitations that will not be fixed, and there is not always a workaround. Some features might not work as documented, and some features could be affected by recent changes to the switch hardware or software.

- [“Cisco IOS Limitations” section on page 7](#)
- [“Device Manager Limitations” section on page 11](#)

Cisco IOS Limitations

- [“Configuration” section on page 7](#)
- [“Dynamic ARP Inspection” section on page 8](#)
- [“Ethernet” section on page 8](#)
- [“IP” section on page 8](#)
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Configuration

- A static IP address might be removed when the previously acquired DHCP IP address lease expires.

This problem occurs under these conditions:

- When the switch is booted without a configuration (no config.text file in flash memory).
- When the switch is connected to a DHCP server that is configured to give an address to it (the dynamic IP address is assigned to VLAN 1).
- When an IP address is configured on VLAN 1 before the dynamic address lease assigned to VLAN 1 expires.

The workaround is to reconfigure the static IP address. (CSCe71176 and CSCdz11708)

- When connected to some third-party devices that send early preambles, a switch port operating at 100 Mp/s full duplex or 100 Mp/s half duplex might bounce the line protocol up and down. The problem is observed only when the switch is receiving frames.

The workaround is to configure the port for 10 Mp/s and half duplex or to connect a hub or a nonaffected device to the switch. (CSCed39091)

- When port security is enabled on an interface in restricted mode and the **switchport block unicast interface** command has been entered on that interface, MAC addresses are incorrectly forwarded when they should be blocked

The workaround is to enter the **no switchport block unicast** interface configuration command on that specific interface. (CSCee93822)

- A traceback error occurs if a crypto key is generated after an SSL client session.
There is no workaround. This is a cosmetic error and does not affect the functionality of the switch. (CSCef59331)
- When you enter the **boot host retry timeout** global configuration command to specify the amount of time that the client should keep trying to download the configuration and you do not enter a timeout value, the default value is zero, which should mean that the client keeps trying indefinitely. However, the client does not keep trying to download the configuration.

The workaround is to always enter a non zero value for the timeout value when you enter the **boot host retry timeout** *timeout-value* command. (CSCsk65142)

Dynamic ARP Inspection

- When dynamic ARP inspection is configured on a VLAN, and the ARP traffic on a port in the VLAN is within the configured rate limit, the port might go into an error-disabled state. (CSCse06827)

Ethernet

- Traffic on EtherChannel ports is not perfectly load-balanced. Egress traffic on EtherChannel ports are distributed to member ports on load balance configuration and traffic characteristics like MAC or IP address. More than one traffic stream might map to same member ports, based on hashing results calculated by the ASIC.

If this happens, traffic distribution is uneven on EtherChannel ports.

Changing the load balance distribution method or changing the number of ports in the EtherChannel can resolve this problem. Use any of these workarounds to improve EtherChannel load balancing:

- for random source-ip and dest-ip traffic, configure load balance method as **src-dst-ip**
- for incrementing source-ip traffic, configure load balance method as **src-ip**
- for incrementing dest-ip traffic, configure load balance method as **dst-ip**
- Configure the number of ports in the EtherChannel so that the number is equal to a power of 2 (for example, 2, 4, or 8)

For example, with load balance configured as **dst-ip** with 150 distinct incrementing destination IP addresses, and the number of ports in the EtherChannel set to either 2, 4, or 8, load distribution is optimal. (CSCeh81991)

IP

- When the rate of received DHCP requests exceeds 2,000 packets per minute for a long time, the response time might be slow when you are using the console. The workaround is to use rate limiting on DHCP traffic to prevent a denial of service attack from occurring. (CSCeb59166)

IP Telephony

- After you change the access VLAN on a port that has IEEE 802.1x enabled, the IP phone address is removed. Because learning is restricted on IEEE 802.1x-capable ports, it takes approximately 30 seconds before the address is relearned. No workaround is necessary. This limitation is unlikely to affect the Cisco Catalyst Blade Switch 3040 for FSC because IP phones are not usually connected to the switch uplink ports. (CSCea85312)

Multicasting

- If the number of multicast routes and Internet Group Management Protocol (IGMP) groups are more than the maximum number specified by the **show sdm prefer** global configuration command, the traffic received on unknown groups is flooded in the received VLAN even though the **show ip igmp snooping multicast-table** privileged EXEC command output shows otherwise. The workaround is to reduce the number of multicast routes and IGMP snooping groups to less than the maximum supported value. (CSCdy09008)
- IGMP filtering is applied to packets that are forwarded through hardware. It is not applied to packets that are forwarded through software. Hence, with multicast routing enabled, the first few packets are sent from a port even when IGMP filtering is set to deny those groups on that port. There is no workaround. (CSCdy82818)
- If an IGMP report packet has two multicast group records, the switch removes or adds interfaces depending on the order of the records in the packet:
 - If the **ALLOW_NEW_SOURCE** record is before the **BLOCK_OLD_SOURCE** record, the switch removes the port from the group.
 - If the **BLOCK_OLD_SOURCE** record is before the **ALLOW_NEW_SOURCE** record, the switch adds the port to the group.

There is no workaround. (CSCec20128)

- When IGMP snooping is disabled and you enter the **switchport block multicast** interface configuration command, IP multicast traffic is not blocked.

The **switchport block multicast** interface configuration command is only applicable to non-IP multicast traffic.

There is no workaround. (CSCee16865)

- Incomplete multicast traffic can be seen under either of these conditions:
 - You disable IP multicast routing or re-enable it globally on an interface.
 - A switch mroute table temporarily runs out of resources and recovers later.

The workaround is to enter the **clear ip mroute** privileged EXEC command on the interface. (CSCef42436)

After you configure a switch to join a multicast group by entering the **ip igmp join-group group-address** interface configuration command, the switch does not receive join packets from the client, and the switch port connected to the client is removed from the IGMP snooping forwarding table.

Use one of these workarounds:

- Cancel membership in the multicast group by using the **no ip igmp join-group group-address** interface configuration command on an SVI.
- Disable IGMP snooping on the VLAN interface by using the **no ip igmp snooping vlan vlan-id** global configuration command. (CSCeh90425)

- A switch drops unicast traffic under these conditions:
 - The switch belongs to a Layer 2 ring.
 - More than 800 Mbps of multicast traffic is sent in both directions on the interface.

When multicast traffic is sent in one direction and unicast traffic is sent in another, unicast traffic is dropped at the multicast traffic source port.

The workaround is to apply a policy map so that the least significant traffic is discarded. (CSCsq83882)

QoS

- Some switch queues are disabled if the buffer size or threshold level is set too low with the **mls qos queue-set output** global configuration command. The ratio of buffer size to threshold level should be greater than 10 to avoid disabling the queue. The workaround is to choose compatible buffer sizes and threshold levels. (CSCea76893)
- When auto-QoS is enabled on the switch, priority queuing is not enabled. Instead, the switch uses shaped round robin (SRR) as the queuing mechanism. The auto-QoS feature is designed on each platform based on the feature set and hardware limitations, and the queuing mechanism supported on each platform might be different. There is no workaround. (CSCee22591)
- A QoS service policy with a policy map containing more than 62 policers cannot be added to an interface by using the **service-policy** interface configuration command.

The workaround is to use policy maps with 62 or fewer policers. (CSCsc59418)

SPAN and RSPAN

- Egress SPAN routed packets (both unicast and multicast) show the incorrect source MAC address. For remote SPAN packets, the source MAC address should be the MAC address of the egress VLAN, but instead the packet shows the MAC address of the RSPAN VLAN. For local SPAN packets with native encapsulation on the destination port, the packet shows the MAC address of VLAN 1. This problem does not appear with local SPAN when the **encapsulation replicate** option is used. This limitation does not apply to bridged packets. The workaround is to use the **encapsulate replicate** keywords in the **monitor session** global configuration command. Otherwise, there is no workaround. This is a hardware limitation. (CSCdy81521)
- During periods of very high traffic when two RSPAN source sessions are configured, the VLAN ID of packets in one RSPAN session might overwrite the VLAN ID of the other RSPAN session. If this occurs, packets intended for one RSPAN VLAN are incorrectly sent to the other RSPAN VLAN. This problem does not affect RSPAN destination sessions. The workaround is to configure only one RSPAN source session. This is a hardware limitation. (CSCea72326)
- Cisco Discovery Protocol (CDP), VLAN Trunking Protocol (VTP), and Port Aggregation Protocol (PAgP) packets received from a SPAN source are not sent to the destination interfaces of a local SPAN session. The workaround is to use the **monitor session session_number destination {interface interface-id encapsulation replicate}** global configuration command for local SPAN. (CSCed24036)

Trunking

- The switch treats frames received with mixed encapsulation (IEEE 802.1Q and Inter-Switch Link [ISL]) as frames with FCS errors, increments the error counters, and the port LED blinks amber. This happens when an ISL-unaware device receives an ISL-encapsulated packet and forwards the frame to an IEEE 802.1Q trunk interface. There is no workaround. (CSCdz33708)
- IP traffic with IP options set is sometimes leaked on a trunk port. For example, a trunk port is a member of an IP multicast group in VLAN X but is not a member in VLAN Y. If VLAN Y is the output interface for the multicast route entry assigned to the multicast group and an interface in VLAN Y belongs to the same multicast group, the IP-option traffic received on an input VLAN interface other than one in VLAN Y is sent on the trunk port in VLAN Y because the trunk port is forwarding in VLAN Y, even though the port has no group membership in VLAN Y. There is no workaround. (CSCdz42909).
- For trunk ports or access ports configured with IEEE 802.1Q tagging, inconsistent statistics might appear in the **show interfaces counters** privileged EXEC command output. Valid IEEE 802.1Q frames of 64 to 66 bytes are correctly forwarded even though the port LED blinks amber, and the frames are not counted on the interface statistics. There is no workaround. (CSCec35100).

VLAN

- If the number of VLANs times the number of trunk ports exceeds the recommended limit of 13,000, the switch can fail.
The workaround is to reduce the number of VLANs or trunks. (CSCeb31087)
- When dynamic ARP inspection is configured on a VLAN, and the ARP traffic on a port in the VLAN is within the configured rate limit, the port might go into an error-disabled state. The workaround is to configure the burst interval to more than 1 second. (CSCse06827)

Device Manager Limitations

- When you are prompted to accept the security certificate and you click *No*, you only see a blank screen, and the device manager does not start.
The workaround is to click *Yes* when you are prompted to accept the certificate. (CSCef45718)

Important Notes

- [“Cisco IOS Notes” section on page 11](#)
- [“Device Manager Notes” section on page 12](#)

Cisco IOS Notes

- The behavior of the **no logging on** global configuration command changed in Cisco IOS Release 12.2(18)SE and later. You can only use the **logging on** and then the **no logging console** global configuration commands to disable logging to the console. (CSCec71490)

- In Cisco IOS Release 12.2(25)SEC, the implementation for multiple spanning tree (MST) changed from the previous release. Multiple STP (MSTP) complies with the IEEE 802.1s standard. Previous MSTP implementations were based on a draft of the IEEE 802.1s standard.
- If the switch requests information from the Cisco Secure Access Control Server (ACS) and the message exchange times out because the server does not respond, a message similar to this appears:

```
00:02:57: %RADIUS-4-RADIUS_DEAD: RADIUS server 172.20.246.206:1645,1646 is not responding.
```

If this message appears, make sure that there is network connectivity between the switch and the ACS. You should also make sure that the switch has been properly configured as an AAA client on the ACS.

- Cisco IOS Release 12.2(40)SE and later

If the switch has interfaces with automatic QoS for voice over IP (VoIP) configured and you upgrade the switch software to Cisco IOS Release 12.2(40)SE (or later), when you enter the **auto qos voip cisco-phone** interface configuration command on another interface, you might see this message:

```
AutoQoS Error: ciscophone input service policy was not properly applied
policy map AutoQoS-Police-CiscoPhone not configured
```

If this happens, enter the **no auto qos voip cisco-phone** interface command on all interface with this configuration to delete it. Then enter the **auto qos voip cisco-phone** command on each of these interfaces to reapply the configuration.

Device Manager Notes

- We recommend this browser setting to more quickly display the device manager from Microsoft Internet Explorer.

From Microsoft Internet Explorer:

1. Choose **Tools > Internet Options**.
 2. Click **Settings** in the Temporary Internet files area.
 3. From the Settings window, choose **Automatically**.
 4. Click **OK**.
 5. Click **OK** to exit the Internet Options window.
- The HTTP server interface must be enabled to display the device manager. By default, the HTTP server is enabled on the switch. Use the **show running-config** privileged EXEC command to see if the HTTP server is enabled or disabled.
 - If you are *not* using the default method of authentication (the enable password), you need to configure the HTTP server interface with the method of authentication used on the switch.

Beginning in privileged EXEC mode, follow these steps to configure the HTTP server interface:

	Command	Purpose
Step 1	<code>configure terminal</code>	Enter global configuration mode.
Step 2	<code>ip http authentication {aaa enable local}</code>	Configure the HTTP server interface for the type of authentication that you want to use. <ul style="list-style-type: none"> • aaa—Enable the authentication, authorization, and accounting feature. You must enter the aaa new-model interface configuration command for the aaa keyword to appear. • enable—Enable password, which is the default method of HTTP server user authentication, is used. • local—Local user database, as defined on the Cisco router or access server, is used.
Step 3	<code>end</code>	Return to privileged EXEC mode.
Step 4	<code>show running-config</code>	Verify your entries.

- The device manager uses the HTTP protocol (the default is port 80) and the default method of authentication (the enable password) to communicate with the switch through any of its Ethernet ports and to allow switch management from a standard web browser.

If you change the HTTP port, you must include the new port number when you enter the IP address in the browser **Location** or **Address** field (for example, `http://10.1.126.45:184` where 184 is the new HTTP port number). You should write down the port number through which you are connected. Use care when changing the switch IP information.

- If you use Internet Explorer Version 5.5 and select a URL with a nonstandard port at the end of the address (for example, `www.cisco.com:84`), you must enter `http://` as the URL prefix. Otherwise, you cannot start the device manager.

Open Caveats

This section describes the open severity 3 Cisco IOS configuration caveats with possible unexpected activity in this software release:

- CSCso96778

When you use the **ipv6 address dhcp** interface configuration command on an interface that is configured in router mode, other addresses on the prefix associated with the new address might not be accessible.

The workaround is to use the **ipv6 address dhcp** interface configuration command on an interface that is configured in host mode, or configure a static route to the prefix through the interface.

- CSCta57846

The switch unexpectedly reloads when copying a configuration file from a remote server or from flash memory containing logging file flash:

The workaround is to enter the **logging file flash:filename** global configuration command to configure logging to flash instead of copying to flash.

Resolved Caveats

- “Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE3” section on page 14
- “Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE2” section on page 16
- “Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE1” section on page 16
- “Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE” section on page 17

Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE3

- CSCsI72774
Memory allocation errors no longer occur when the Cisco Express Forwarding (CEF) consistency checkers have been enabled. The CEF consistency checkers have been enabled by default. They can also be enabled by using these global configuration commands:
cef table consistency-check ipv4
cef table consistency-check ipv6
- CSCso57496
A switch no longer fails when you enter the **configure replace** privileged EXEC command, and a banner is already present in the switch configuration.
- CSCso90107
You can now query the bgpPeerTable MIB for VPN/VRF interfaces.
- CSCsq51052
The output of the **show ip ssh** privileged EXEC command no longer displays *SSH Enabled - version 2.99*. Instead, a correct SSH version (*1.5*, *1.99* or *2.0*) now appears.
- CSCsx49718
Re-authentication now occurs on a port under these conditions:
 - The port is in single-host mode.
 - The port is configured with the **authentication event no-response action authorize vlan vlan-number** command.
 - An EAPOL start packet is sent to the port.
- CSCsx70889
Cisco devices running affected versions of Cisco IOS Software are vulnerable to a denial of service (DoS) attack if configured for IP tunnels and Cisco Express Forwarding.
Cisco has released free software updates that address this vulnerability.
This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-tunnels.shtml>.
- CSCsy07555
Cisco IOS devices that are configured for Internet Key Exchange (IKE) protocol and certificate based authentication are vulnerable to a resource exhaustion attack. Successful exploitation of this vulnerability may result in the allocation of all available Phase 1 security associations (SA) and prevent the establishment of new IPsec sessions.
Cisco has released free software updates that address this vulnerability.
This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-ipsec.shtml>

- CSCsy15227
Cisco IOS Software configured with Authentication Proxy for HTTP(S), Web Authentication or the consent feature, contains a vulnerability that may allow an unauthenticated session to bypass the authentication proxy server or bypass the consent webpage.
There are no workarounds that mitigate this vulnerability.
This advisory is posted at the following link:
<http://www.cisco.com/warp/public/707/cisco-sa-20090923-auth-proxy.shtml>
- CSCsy66686
The switch no longer reloads when the default port cost of service (CoS) value is updated on a port that has a policy map configured and CoS override enabled with the **mls qos cos override** privileged EXEC command.
- CSCsy72669
If a link failure occurs on a secondary edge port, preemption now occurs after the link comes up.
- CSCsz12381
When open1x authentication and MAC authentication bypass are enabled on a port, an IP phone is connected to the port, and DHCP snooping is enabled on the switch, DHCP traffic is now forwarded on the voice VLAN before open 1x authentication times out and the switch uses MAC authentication bypass to authorize the port.
- CSCsz13490
The switch no longer reloads when you enter several key strokes while in interface-range configuration mode.
- CSCsz14369
If MAC authentication bypass is enabled and the RADIUS server is not available, the switch now tries to re-authenticate a port after a server becomes available.
- CSCsz77920
If you are configuring Flexible Authentication Ordering with web authentication on a switch port and the switch uses 802.1x to authenticate the host, Address Resolution Protocol (ARP) now works properly.
- CSCsz79652
A memory leak no longer occurs when Cisco Network Assistant is polling the switch and the **ip http server** or **ip http-secure-server** global configuration command is enabled.
- CSCta32597
A switch no longer fails when a host moves from a dynamically assigned VLAN to a configured VLAN.
- CSCta36155
A switch configured with 802.1x and port security on the same ports no longer might inappropriately put the ports into an error-disabled state.
- CSCta56469
Moving a PC between two IP Phones without disconnecting either phone from the switch no longer triggers a port-security violation.
- CSCta67777

A port security violation error no longer occurs when MAC address sticky learning is enabled on a port and a CDP is enabled on a connected IP Phone.

Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE2

- CSCsq24002
Cisco IOS Software contains a vulnerability that could allow an attacker to cause a Cisco IOS device to reload by remotely sending a crafted encryption packet. Cisco has released free software updates that address this vulnerability. This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090923-tls.shtml>.
- CSCsy48370
The switch no longer fails when you use the **vacant-message** line configuration command.
- CSCsz81762
If you enable automatic server testing through the **radius-server host ip-address [test username name]** global configuration command, the switch no longer sends requests to the RADIUS server if the server is not available.
- CSCsw45277
Third-party IP phones now automatically power up when reconnected to enabled PoE ports on the switch.
- CSCsy27389
The switch now changes the time in an EnergyWise recurrence event when the local time changes to daylight saving time.
- CSCsy57970
When IEEE 802.1x multiple authentication mode is configured on a port, two PCs have been authenticated, and the first PC is disconnected, the second PC now receives and forwards traffic on the port.
- CSCsy91579
A switch no longer randomly resets due to memory corruption.

Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE1

- CSCsb46724
If the connection to a primary AAA server fails, the backup server is now queried for login access.
- CSCsr92741
When a TCP packet with all flags set to zero (at the TCP level) is sent to a remote router, the remote (destination) router no longer returns an ACK/RST packet back to the source of the TCP segment.
- CSCsy24510
The switch now accepts an encrypted secret password.
- CSCsy41470
The switch no longer runs out of memory when an snmpwalk, snmpget, or snmpbulkwalk is run on the CISCO-ENERGYWISE-MIB.

Cisco IOS Caveats Resolved in Cisco IOS Release 12.2(50)SE

- CSCsv04836

Multiple Cisco products are affected by denial of service (DoS) vulnerabilities that manipulate the state of Transmission Control Protocol (TCP) connections. By manipulating the state of a TCP connection, an attacker could force the TCP connection to remain in a long-lived state, possibly indefinitely. If enough TCP connections are forced into a long-lived or indefinite state, resources on a system under attack may be consumed, preventing new TCP connections from being accepted. In some cases, a system reboot may be necessary to recover normal system operation. To exploit these vulnerabilities, an attacker must be able to complete a TCP three-way handshake with a vulnerable system.

In addition to these vulnerabilities, Cisco Nexus 5000 devices contain a TCP DoS vulnerability that may result in a system crash. This additional vulnerability was found as a result of testing the TCP state manipulation vulnerabilities.

Cisco has released free software updates for download from the Cisco website that address these vulnerabilities. Workarounds that mitigate these vulnerabilities are available.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20090908-tcp24.shtml>.

- CSCsw65548

Switch ports no longer attempt authentication at the interval configured for the port security timer instead of the configured IEEE 802.1x timer.

- CSCsw68528

On switches running Cisco IOS Release 12.2(44)SE or 12.2(46)SE, when you enter the **show mvr interface interface-id members** privileged EXEC command to see status of an MVR port, an MVR member port that is not connected always shows as *ACTIVE*.

The workaround is to use the **show mvr interface interface-id** or the **show mvr members** privileged EXEC command. These command outputs show the correct status of an MVR port.

- CSCsw69015

When you enter the **mvr vlan vlan-id** global configuration command to create an MVR VLAN and enable MVR on the switch by entering the **mvr** global configuration command, if you enter the **show mvr interface interface-id members** privileged EXEC command, the output shows the MVR groups on the interface. However, if you enable MVR first and then create the MVR VLAN, the MVR groups are not displayed correctly.

The workaround, if the groups are not displaying correctly, is to create the MVR VLAN *before* enabling MVR. The configuration then displays correctly.

- CSCsq26873

The server no longer attempts re-authentication every ten minutes when a switch is configured with the **dot1x timeout reauth-period server** interface configuration command.

- CSCsq67398

Traffic is now forwarded to the interfaces that are configured with static multicast MAC addresses after the switch is reloaded.



Note

You cannot configure the static MAC address (unicast or multicast) entries on EtherChannel member interfaces, or add an interface into the EtherChannel if that interface is associated with a static MAC address entry.

- CSCsq89564
If the switch uses 802.1x authentication with VLAN assignment, it no longer uses the VLAN assignment with different authorization attempts, such as user authentication or re-authentication.
- CSCsr50766
When keepalive is disabled on an interface, the interface is no longer put in an error-disabled state when it receives keepalive packets.
- CSCsr64007
The Switched Port Analyzer (SPAN) destination port no longer detects IPv6 multicast packets from a VLAN that is not being monitored by SPAN.
- CSCsr65689
This message no longer appears in the log during the system bootup on a switch that is running Cisco IOS 12.2(50)SE:
- CSCsu10065
When SFP ports are configured as status multicast router ports, IPv6 Multicast Listener Discovery (MLD) snooping now works after the switch reloads.
- CSCsu45951
A link is now established between a server and a switch when the server port is configured to *not* autonegotiate the speed.
- CSCsu59214
The *Set TxPortFifo SRR Failed* message no longer appears when you enter both the **srr-queue bandwidth shape 200 0 2 200** and the **priority-queue out** interface configuration commands on the same interface.
- CSCsu88168
The switch no longer reloads when the Forwarding Information Base (FIB) adjacency table is added.
- CSCsv64023
A switch port configured for IGMP snooping no longer lose its group membership when the port receives a query comes from an upstream device that is not configured for IGMP snooping.
- CSCsv89005
A switch configured with class-based policies that are applied and active on at least one interface no longer might reload or display CPU hog messages during SNMP polling for the ciscoCBQoS MIB.
- CSCsv91358
When you have entered the **vlan dot1q tag native** global configuration command to configure a switch to tag native VLAN frames on 802.1Q trunk ports, and you configure a new voice VLAN on an access port, the MAC address of a connected PC is now correctly relearned.
- CSCsw30249
When a switch virtual interface (SVI) is configured as unnumbered and is pointing to a loopback interface, the switch no longer fails when the SVI receives a packet.
- CSCsw45337
When LLDP is enabled and a voice VLAN is configured, the L2 Priority and DSCP Value fields in the LLDP type, length, and value descriptions (TLVs) are now correctly marked to give the voice traffic the correct DSCP and Layer 2 priority.

Documentation Updates

- [“Updates to the Command Reference” section on page 19](#)
- [“Updates to the System Message Guide” section on page 21](#)
- [“Updates to the Getting Started Guide” section on page 25](#)

Updates to the Command Reference

debug authentication

Use the **debug authentication** privileged EXEC command to enable debugging of the authentication settings on an interface. Use the **no** form of this command to disable debugging.

```
debug authentication {all | errors | events | sync | feature [all] [acct] [auth_fail_vlan]
                    [auth_policy] [autocfg] [critical] [dhcp] [guest_vlan] [mab_pm] [mda] [multi_auth]
                    [switch_pm] [switch_sync] [vlan_assign] [voice] [webauth] [all | errors | events]}
```

```
no debug authentication {all | errors | events | sync | feature [all] [acct] [auth_fail_vlan]
                       [auth_policy] [autocfg] [critical] [dhcp] [guest_vlan] [mab_pm] [mda] [multi_auth]
                       [switch_pm] [switch_sync] [vlan_assign] [voice] [webauth] [all | errors | events]}
```

Syntax Description

acct	(Optional) Display authentication manager accounting information.
all	(Optional) Display all authentication manager debug messages.
auth_fail_vlan	(Optional) Display authentication manager errors for the restricted VLAN.
auth_policy	(Optional) Display authentication policy messages.
autocfg	(Optional) Display autoconfiguration authentication manager debug messages.
critical	(Optional) Display the inaccessible authentication bypass messages. Note The inaccessible authentication bypass feature is also referred to as critical authentication or the authentication, authorization, and accounting (AAA) fail policy.
dhcp	(Optional) Display authentication manager debug messages on DHCP dynamic address-enable interfaces.
errors	(Optional) Display all authentication manager error debug messages.
events	(Optional) Display all authentication manager event debug messages, including registry and miscellaneous events.
feature	(Optional) Display authentication manager feature debug messages
guest_vlan	(Optional) Display guest VLAN authentication manager messages.
mab_pm	(Optional) Display MAC authentication manager bypass authentication debug messages.
mda	(Optional) Display multidomain authentication manager debug messages.
multi_auth	(Optional) Display multi-authentication manager debug authentication messages.
switch_pm	(Optional) Display switch port manager messages.

switch_sync	(Optional) Display synchronization messages between the switch, the authentication server, and the connected devices.
sync	(Optional) Display operational synchronization authentication manager debug messages.
vlan_assign	(Optional) Display the VLAN-assignment debug messages.
voice	(Optional) Display the voice-VLAN debug messages.
webauth	(Optional) Display web authentication manager debug messages.

Defaults

Authentication debugging is disabled.

Command Modes

Privileged EXEC

Command History

Release	Modification
12.2(50)SE	This command was introduced.

Usage Guidelines

The **undebg authentication** command is the same as the **no debug authentication** command.

Related Commands

Command	Description
authentication control-direction	Configures the port mode as unidirectional or bidirectional.
authentication event	Sets the action for specific authentication events.
authentication fallback	Configures a port to use web authentication as a fallback method for clients that do not support IEEE 802.1x authentication.
authentication host-mode	Sets the authorization manager mode on a port.
authentication open	Enables or disables open access on a port.
authentication order	Sets the order of authentication methods used on a port.
authentication periodic	Enables or disables reauthentication on a port.
authentication port-control	Enables manual control of the port authorization state.
authentication priority	Adds an authentication method to the port-priority list.
authentication violation	Configures the violation modes that occur when a new device connects to a port or when a new device connects to a port after the maximum number of devices are connected to that port.
show authentication	Displays information about authentication manager events on the switch.

Updates to the System Message Guide

- [“New System Messages” section on page 21](#)
- [“Deleted System Messages” section on page 23](#)

New System Messages

Error Message ACLMGR-2-NOVMR: Cannot generate hardware representation of access list [chars]

Explanation There are insufficient resources available to create a hardware representation of the ACL. A lack of available logical operation units or specialized hardware resources can cause this problem. Logical operation units are needed for a TCP flag match or a test other than **eq (ne, gt, lt, or range)** on TCP, UDP, or SCTP port numbers.

Recommended Action Modify the ACL configuration to use fewer resources, or rename the ACL with a name or number that alphanumerically precedes the other ACL names or numbers.

Error Message %DOT1X-5-FAIL: Authentication failed for client ([chars]) on Interface [chars]

Explanation Authentication was unsuccessful. The first [chars] is the hostname, and the second [chars] is the interface.

Recommended Action No action is required.

Error Message %DOT1X-5-SUCCESS: Authentication successful for client ([chars]) on Interface [chars]

Explanation Authentication was successful. The first [chars] is the host name, and the second [chars] is the interface.

Recommended Action No action is required.

Error Message %DOT1X_SWITCH-4-PROC_START_ERR: Unable to start dot1x switch process.

Explanation The software could not start the 802.1x authentication process.

Recommended Action Use the **reload** privileged EXEC command to reload the switch.

Error Message %EC-5-MINLINKS_MET: Port-channel [chars] is up as its bundled ports ([dec]) meets min-links

Recommended Action The administrative configuration of minimum links is equal to or less than the number of EtherChannel ports. The port channel is up. [chars] is the EtherChannel, and [dec] is the EtherChannel group number.

Recommended Action No action is required.

Error Message %EC-5-MINLINKS_NOTMET: Port-channel [chars] is down bundled ports ([dec]) doesn't meet min-links

Explanation The administrative configuration of minimum links is greater than the number of bundled ports. The port channel is down. [chars] is the EtherChannel, and [dec] is the EtherChannel group number.

Recommended Action Reduce the value of the minimum-links configuration parameter for an EtherChannel, or add more ports to the EtherChannel to create a bundle.

Error Message %PAGP_DUAL_ACTIVE-3-OBJECT_CREATE_FAILED: Unable to create [chars]

Explanation The switch cannot create the specified managed object. [chars] is the object name.

Recommended Action No action is required.

Error Message %PAGP_DUAL_ACTIVE-3-RECOVERY_TRIGGER: PAgP running on [chars] informing virtual switches of dual-active: new active id [enet], old id [enet]

Explanation Port Aggregation Protocol (PAgP) received a new active ID on the specified interface, which means that all virtual switches are in a dual-active scenario. The interface is informing virtual switches of this, which causes one switch to go into recovery mode. [chars] is the interface. The first [enet] is the new active ID. The second [enet] is the ID that it replaces.

Recommended Action No action is required.

Error Message %PAGP_DUAL_ACTIVE-3-REGISTRY_ADD_ERR: Failure in adding to [chars] registry

Explanation The switch could not add a function to the registry. [chars] is the registry name.

Recommended Action No action is required.

Error Message %PM-6-EXT_VLAN_ADDITION: Extended VLAN is not allowed to be configured in VTP CLIENT mode.

Explanation The switch did not add a VLAN in VTP client mode.

Recommended Action Copy the message exactly as it appears on the console or in the system log. Research and attempt to resolve the error by using the Output Interpreter. Use the Bug Toolkit to look for similar reported problems. If you still require assistance, open a case with the TAC, or contact your Cisco technical support representative, and provide the representative with the gathered information. For more information about these online tools and about contacting Cisco, see the “Error Message Traceback Reports” section in the system message guides.

Error Message VQPCLIENT-2-TOOMANY: Interface [chars] shutdown by active host limit.

Explanation The system has shut down the specified interface because too many hosts have requested access to that interface. [chars] is the interface name.

Recommended Action To enable the interface, remove the excess hosts, and enter the **no shutdown** interface configuration command.

Error Message VQPCLIENT-3-VLANNAME: Invalid VLAN [chars] in response.

Explanation The VLAN membership policy server (VMPS) has specified a VLAN name that is unknown to the switch. [chars] is the VLAN name.

Recommended Action Ensure that the VLAN exists on the switch. Verify the VMPS configuration by entering the **show vmps** privileged EXEC command.

Error Message WCCP-5-CACHEFOUND: Web Cache [IP_address] acquired.

Explanation The switch has acquired the specified web cache. [IP_address] is the web cache IP address.

Recommended Action No action is required.

Error Message WCCP-1-CACHELOST: Web Cache [IP_address] lost.

Explanation The switch has lost contact with the specified web cache. [IP_address] is the web cache IP address.

Recommended Action Verify the operation of the web cache by entering the **show ip wccp web-cache** privileged EXEC command.

Deleted System Messages

Error Message ACLMGR-2-NOVMR: Cannot create VMR data structures for access list [chars].

Error Message DOT1X-5-INVALID_INPUT: Dot1x Interface parameter is Invalid on interface [chars].

Error Message DOT1X-5-SECURITY_VIOLATION: Security violation on interface [chars], New MAC address [enet] is seen.

Error Message DOT1X_SWITCH-5-ERR_VLAN_NOT_FOUND: Attempt to assign non-existent or shutdown VLAN [dec] to 802.1x port [chars]

Error Message DOT1X_SWITCH-5-ERR_VLAN_ROUTED_PORT: Attempt to assign VLAN [dec] to routed 802.1x port [chars]

Error Message UDLD-3-UDLD_IDB_ERROR: UDLD error handling [chars] interface [chars].

Error Message UDLD-3-UDLD_INTERNAL_ERROR: UDLD internal error [chars].

Error Message UDLD-3-UDLD_INTERNAL_IF_ERROR: UDLD internal error, interface [chars] [chars].

Error Message UDLD-4-UDLD_PORT_DISABLED: UDLD disabled interface [chars], [chars] detected.

Error Message UDLD-6-UDLD_PORT_RESET: UDLD reset interface [chars].

Error Message UFAST_MCAST_SW-3-PROC_START_ERROR: No process available for transmitting UplinkFast packets.

Error Message UFAST_MCAST_SW-4-MEM_NOT_AVAILABLE: No memory is available for transmitting UplinkFast packets on Vlan [dec].

Error Message VQPCLIENT-2-CHUNKFAIL: Could not allocate memory for VQP.

Error Message VQPCLIENT-2-DENY: Host [enet] denied on interface [chars].

Error Message %VQPCLIENT-2-INITFAIL: Platform-specific VQP initialization failed. Quitting

Error Message %VQPCLIENT-2-IPSOCK: Could not obtain IP socket

Error Message %VQPCLIENT-2-PROCFAIL: Could not create process for VQP. Quitting

Error Message %VQPCLIENT-2-SHUTDOWN: Interface [chars] shutdown by VMPS

Error Message VQPCLIENT-3-IFNAME: Invalid interface ([chars]) in response.

Error Message %VQPCLIENT-3-THROTTLE: Throttling VLAN change on [chars]

Error Message %VQPCCLIENT-7-NEXTSERV: Trying next VMPS [IP_address]

Error Message %VQPCCLIENT-7-PROBE: Probing primary server [IP_address]

Error Message %VQPCCLIENT-7-RECONF: Reconfirming VMPS responses

Updates to the Getting Started Guide

This information in the *Cisco Catalyst Blade Switch 3020 for HP Getting Started Guide* has been updated:

When you launch Express Setup, you are prompted for the switch password. Enter the default password, *cisco*. The switch ignores text in the username field. Before you complete and exit Express Setup, you must change the password from the default password, *cisco*.

Related Documentation

These documents provide complete information about the Cisco Catalyst Blade Switch 3040 for FSC and are available at Cisco.com:

http://www.cisco.com/en/US/products/ps8743/tsd_products_support_series_home.html

These documents provide complete information about the Cisco Catalyst Blade Switch 3040 for FSC:

- *Cisco Catalyst Blade Switch 3040 for FSC Getting Started Guide*
- *Regulatory Compliance and Safety Information for the Cisco Catalyst Blade Switch 3040 for FSC*
- *Cisco Catalyst Blade Switch 3040 for FSC Software Configuration Guide*
- *Cisco Catalyst Blade Switch 3040 for FSC Command Reference*
- *Cisco Catalyst Blade Switch 3040 for FSC System Message Guide*

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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