Release Notes for the Catalyst 2975 Switch, Cisco IOS Release 12.2(46)EX

November 24, 2008

Cisco IOS Release 12.2(46)EX and later runs on all Catalyst 2975 switches.

The Catalyst 2975 switches support stacking through Cisco stack technology. Unless otherwise noted, the term *switch* refers to a standalone switch and to a switch stack.

These release notes include important information about Cisco IOS Release 12.2(46)EX and later and any limitations, restrictions, and caveats that apply to the release. 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 rear panel of your switch.
- If your switch is on, use the **show version** privileged EXEC command. See the "Finding the Software Version and Feature Set" section on page 4.
- 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.

For the complete list of switch documentation, see the "Related Documentation" section on page 17.

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

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

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Contents

System Requirements

Hardware Supported

Table 1 Catalyst 2975 Switch Supported Hardware

Switch	Description	Cisco IOS Release
Catalyst 2975GS-48PS-L	48 10/100/1000 PoE ports[1] and 4 SFP[2] module slots	Cisco IOS Release 12.2(46)EX
SFP modules	1000BASE-BX, -LX, SX, -ZX, -T	Cisco IOS Release 12.2(46)EX
	CWDM[3]	Cisco IOS Release 12.2(46)EX
	100BASE-FX MMF[4] (GLC-GE-100FX)	Cisco IOS Release 12.2(46)EX
Redundant power systems	Cisco Redundant Power System 2300	All software releases
	Cisco Redundant Power System 675	

1. PoE = Power over Ethernet.
2. SFP = small form-factor pluggable.
3. CWDM = coarse wavelength-division multiplexer.
4. MMF = multimode fiber.

Device Manager System Requirements

Hardware

Table 2 Minimum Requirements for Running Device Manager

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

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

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

Cluster Compatibility

You cannot create and manage switch clusters through the device manager. To create and manage switch clusters, use the command-line interface (CLI) or the Cisco Network Assistant application.

When creating a switch cluster or adding a switch to a cluster, follow these guidelines:

- When you create a switch cluster, configure the highest-end switch in your cluster as the command switch.
- If you are managing the cluster through Network Assistant, configure the switch with the latest software as the command switch.

For additional information about clustering, see *Getting Started with Cisco Network Assistant* and *Release Notes for Cisco Network Assistant*, the software configuration guide, and the command reference on Cisco.com.

Cisco Network Assistant

Cisco Network Assistant version 5.4 does not provide specific device support for the Catalyst 2975 switch. For more information about Cisco Network Assistant, see the *Release Notes for Cisco Network Assistant* on Cisco.com.

Upgrading the Switch Software

For additional software download procedures, see the "Troubleshooting" chapter in the switch software configuration guide for this release.

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.

Table 3 Cisco IOS Software Image Files

Filename	Description
c2975-lanbase-tar.122-46.EX.tar	Catalyst 2975 image file and device manager files. This image has Layer 2+ features.
c2975-lanbasek9-tar.122-46.EX.tar	Catalyst 2975 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_chapter09186a00800ca744.html

Using the Device Manager or Network Assistant

You can upgrade switch software by using the device manager or Network Assistant. 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.

Using the CLI

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

Step 1 Use Table 3 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

To download the image for a Catalyst 2975 switch, click **Catalyst 2975 software**. To obtain authorization and to download the cryptographic software files, click **Catalyst 2975 3DES Cryptographic Software**.

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 a 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 image.

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/c2975-lanbase-tar.122-46.EX.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.

For additional software download procedures, see the "Troubleshooting" chapter in the switch software configuration guide for this release.

Installation Notes

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

- Express Setup program, described in the switch getting started guide.
- CLI-based setup program, described in the switch hardware installation guide.
- DHCP-based autoconfiguration, described in the switch software configuration guide.
- Manual assigned IP address, described in the switch software configuration guide.

Cisco IOS Release for Major Features

Table 4 Cisco IOS Release Major Features

Feature	Cisco IOS Release	Switch
Generic message authentication support with the SSH Protocol and compliance with RFC 4256	12.2(46)EX	2975
Generic message authentication support	12.2(46)EX	2975
Disabling MAC address learning on a VLAN	12.2(46)EX	2975

Table 4 Cisco IOS Release Major Features (continued)

Feature	Cisco IOS Release	Switch
PAgP Interaction with Virtual Switches and Dual-Active Detection	12.2(46)EX	2975
DHCP server port-based address allocation	12.2(46)EX	2975
IPv6 default router preference (DRP)	12.2(46)EX	2975
Dynamic voice virtual LAN (VLAN) for multidomain authentication (MDA)	12.2(46)EX	2975
IEEE 802.1x Authentication with ACLs and the RADIUS Filter-Id Attribute	12.2(46)EX	2975
IEEE 802.1x readiness check	12.2(46)EX	2975
DHCP-based autoconfiguration and image update	12.2(46)EX	2975
Configurable small-frame arrival threshold	12.2(46)EX	2975
HTTP and HTTP(s) support over IPV6	12.2(46)EX	2975
Simple Network and Management Protocol (SNMP) configuration over IPv6 transport	12.2(46)EX	2975
IPv6 stateless autoconfiguration	12.2(46)EX	2975
Flex Link Multicast Fast Convergence	12.2(46)EX	2975
Configuration replacement and rollback	12.2(46)EX	2975
Link Layer Discovery Protocol Media Extensions (LLDP-MED)	12.2(46)EX	2975
Automatic quality of service (QoS) Voice over IP (VoIP)	12.2(46)EX	2975
MLD snooping	12.2(46)EX	2975
IPv6 host	12.2(46)EX	2975
IP phone detection enhancement	12.2(46)EX	2975
Link Layer Discovery Protocol (LLDP) and LLDP Media Endpoint Discovery (LLDP-MED)	12.2(46)EX	2975
VLAN aware port security option	12.2(46)EX	2975
VLAN Flex Links load balancing	12.2(46)EX	2975
Web authentication	12.2(46)EX	2975
MAC inactivity aging	12.2(46)EX	2975
Stack MAC persistent timer and archive download enhancements	12.2(46)EX	2975
DHCP Option 82 configurable remote ID and circuit ID	12.2(46)EX	2975
NAC Layer 2 IEEE 802.1x validation	12.2(46)EX	2975
IEEE 802.1x with restricted VLAN	12.2(46)EX	2975
Multiple spanning-tree (MST) based on the IEEE 802.1s standard	12.2(46)EX	2975
Unique device identifier (UDI)	12.2(46)EX	2975
IEEE 802.1x with wake-on-LAN	12.2(46)EX	2975
Configuration logging	12.2(46)EX	2975
Secure Copy Protocol	12.2(46)EX	2975
Support for configuring an IEEE 802.1x restricted VLAN	12.2(46)EX	2975
IGMP leave timer	12.2(46)EX	2975

Table 4 Cisco IOS Release Major Features (continued)

Feature	Cisco IOS Release	Switch
IGMP snooping querier	12.2(46)EX	2975
Support for DSCP transparency	12.2(46)EX	2975
Device manager	12.2(46)EX	2975
Support for SSL version 3.0 for secure HTTP communication (cryptographic images only)	12.2(46)EX	2975
IEEE 802.1x accounting and MIBs (IEEE 8021-PAE-MIB and CISCO-PAE-MIB)	12.2(46)EX	2975
Flex Links	12.2(46)EX	2975
Software upgrade (device manager or Network Assistant only)	12.2(46)EX	2975
Switch stack offline configuration	12.2(46)EX	2975
Stack-ring activity statistics	12.2(46)EX	2975
Smartports macros	12.2(46)EX	2975
Flex Links Preemptive Switchover	12.2(46)EX	2975

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

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 up 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. (CSCea71176 and CSCdz11708)

- When connected to some third-party devices that send early preambles, a switch port operating at 100 Mb/s full duplex or 100 Mb/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 Mb/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 the **logging event-spanning-tree** interface configuration command is configured and logging to the console is enabled, a topology change might generate a large number of logging messages, causing high CPU utilization. CPU utilization can increase with the number of spanning-tree instances and the number of interfaces configured with the **logging event-spanning-tree** interface configuration command. This condition adversely affects how the switch operates and could cause problems such as STP convergence delay.

  High CPU utilization can also occur with other conditions, such as when debug messages are logged at a high rate to the console.

  Use one of these workarounds:

  - Disable logging to the console.
  - Rate-limit logging messages to the console.
  - Remove the **logging event spanning-tree** interface configuration command from the interfaces. (CSCsg91027)

- The far-end fault optional facility is not supported on the GLC-GE-100FX SFP module.

  The workaround is to configure aggressive UDLD. (CSCsh70244).

- 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)

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 may map to same member ports based on hashing results calculated by the ASIC.

If this happens, uneven traffic distribution will happen 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 (i.e. 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)

HSRP

When the active switch fails in a switch cluster that uses Hot Standby Routing Protocol (HSRP) redundancy, the new active switch might not contain a full cluster member list. The workaround is to ensure that the ports on the standby cluster members are not in the spanning-tree blocking state. To verify that these ports are not in the blocking state, see the “Configuring STP” chapter in the software configuration guide. (CSCec76893)

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. (CSCea85312)
- The switch uses the IEEE classification to learn the maximum power consumption of a powered device before powering it. The switch grants power only when the maximum wattage configured on the port is less than or equal to the IEEE class maximum. This ensures that the switch power budget is not oversubscribed. There is no such mechanism in Cisco prestandard powered devices.

  The workaround for networks with pre-standard powered devices is to leave the maximum wattage set at the default value (15.4 W). You can also configure the maximum wattage for the port for no less than the value the powered device reports as the power consumption through CDP messages. For networks with IEEE Class 0, 3, or 4 devices, do not configure the maximum wattage for the port at less than the default 15.4 W (15,400 milliwatts). (CSCee80668)

- Phone detection events that are generated by many IEEE phones connected to the switch ports can consume a significant amount of CPU time if the switch ports cannot power the phones because the internal link is down.

  The workaround is to enter the **power inline never** interface configuration command on all the Fast Ethernet ports that are not powered by but are connected to IP phones if the problem persists. (CSCef84975, Cisco EtherSwitch service modules only)

- Some access point devices are incorrectly discovered as IEEE 802.3af Class 1 devices. These access points should be discovered as Cisco pre-standard devices. The **show power inline** user EXEC command shows the access point as an IEEE Class 1 device. The workaround is to power the access point by using an AC wall adaptor. (CSCin69533)

- The Cisco 7905 IP Phone is error-disabled when the phone is connected to wall power.

  The workaround is to enable PoE and to configure the switch to recover from the PoE error-disabled state. (CSCsf32300)

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 the stack master is power cycled immediately after you enter the **ip mroute** global configuration command, there is a slight chance that this configuration change might be lost after the stack master changes. This occurs because the stack master did not have time to propagate the running configuration to all the stack members before it was powered down. This problem might also affect other configuration commands. There is no workaround. (CSCea71255)

- 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)

SPAN and RSPAN

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)

Stacking

- If the stack master is immediately reloaded after adding multiple VLANs, the new stack master might fail. The workaround is to wait a few minutes after adding VLANs before reloading the stack master. (CSCea26207)

- If the console speed is changed on a stack, the configuration file is updated, but the baud rate is not. When the switch is reloaded, meaningless characters might appear on the console during bootup before the configuration file is parsed and the console speed is set to the correct value. If manual bootup is enabled or the startup configuration is deleted after you change the console speed, you cannot access the console after the switch reboots. There is no workaround. (CSCec36644)
- If a member is removed from a stack and either the configuration is not saved or another switch is added to the stack at the same time, the configuration of the first member switch might be lost. The workaround is to save the stack configuration before removing or replacing any switch in the stack. (CSCed15939)
- If one switch in a stack requires more time than the other switches to find a bootable image, it might miss the stack master election window. However, even if the switch does not participate in the stack master election, it will join the stack as a member.

  The workaround is to copy the bootable image to the parent directory or first directory. (CSCei69329)
- When the path cost to the root bridge is equal from a port on a stacked root and a port on a non stack root, the BLK port is not chosen correctly in the stack when the designated bridge priority changes. This problem appears on switches running in PVST, Rapid-PVST, and MST modes.

  The workaround is to assign a lower path cost to the forwarding port. (CSCsd95246)
- If a new member joins a stack within 30 seconds of a command to copy the switch configuration to the running configuration of the stack master being entered, the new member might not get the latest running configuration and might not operate properly.

  The workaround is to reboot the new member. Use the **remote command all show run** privileged EXEC command to compare the running configurations of the stack members. (CSCsf31301)
- The error message `DOT1X_SWITCH-5-ERR_VLAN_NOT_FOUND` might appear for a switch stack under these conditions:
  - IEEE 802.1 is enabled.
  - A supplicant is authenticated on at least one port.
  - A new member joins a switch stack.

  You can use one of these workarounds:
  - Enter the **shutdown** and the **no shutdown** interface configuration commands to reset the port.
  - Remove and reconfigure the VLAN. (CSCsi26444)
- After a stack bootup, the spanning tree state of a port that has IEEE 802.1x enabled might be blocked, even when the port is in the authenticated state. This can occur on a voice port where the Port Fast feature is enabled.

  The workaround is to enter a **shutdown** interface configuration command followed by a **no shutdown** command on the port in the blocked state. (CSCsl64124)

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 line rate traffic is passing through a dynamic port, and you enter the **switchport access vlan dynamic** interface configuration command for a range of ports, the VLANs might not be assigned correctly. One or more VLANs with a null ID appears in the MAC address table instead.

  The workaround is to enter the **switchport access vlan dynamic** interface configuration command separately on each port. (CSCsi26392)

Device Manager Limitation

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 launch.

The workaround is to click *Yes* when you are prompted to accept the certificate. (CSCef45718)

Important Notes

Switch Stack

Always turn off a switch before adding or removing it from a switch stack.

Cisco IOS

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, check that there is network connectivity between the switch and the ACS. You should also check that the switch has been properly configured as an AAA client on the ACS

Device Manager

- You cannot create and manage switch clusters through the device manager. To create and manage switch clusters, use the CLI or Cisco Network Assistant.
- When the switch is running a localized version of the device manager, the switch displays settings and status only in English letters. Input entries on the switch can only be in English letters.
- For device manager session on Internet Explorer, popup messages in Japanese or in simplified Chinese can appear as garbled text. These messages appear properly if your operating system is in Japanese or Chinese
- The Legend on the device manager incorrectly includes the 1000BASE-BX SFP module.
- We recommend this browser setting to speed up the time needed to 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.

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

	Command	Purpose
Step 1	**configure terminal**	Enter global configuration mode.
Step 2	**ip http authentication** {**aaa** | **enable** | **local**}	Configure the HTTP server interface for the type of authentication that you want to use. • **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	**end**	Return to privileged EXEC mode.
Step 4	**show running-config**	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 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	**configure terminal**	Enter global configuration mode.
Step 2	**ip http authentication** {**enable** | **local** | **tacacs**}	Configure the HTTP server interface for the type of authentication that you want to use. • **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. • **tacacs**—TACACS server is used.
Step 3	**end**	Return to privileged EXEC mode.
Step 4	**show running-config**	Verify your entries.

- 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 launch the device manager.

Open Caveats

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  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.

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  If the console or telnet session is in the interface-range configuration mode while you enter configuration commands on a web-based interface such as Device Manager, the switch might reload.

  The workaround is to close or end your telnet or console session, and then use the web-based interface.

Related Documentation

These documents provide complete information about the Catalyst 2975 switch and are available at Cisco.com:

http://www.cisco.com/en/US/products/ps10081/tsd_products_support_series_home.html

- *Catalyst 2975 Switch Software Configuration Guide*
- *Catalyst 2975 Switch Command Reference*
- *Catalyst 3750, 3560, 3550, 2975, 2970, and 2960 Switch System Message Guide*
- *Catalyst 2975 Switch Hardware Installation Guide*
- *Catalyst 2975 Switch Getting Started Guide*
- *Regulatory Compliance and Safety Information for the Catalyst 2975 Switch*

For other information about related products, see these documents:

- Device manager online help (available on the switch)
- *Getting Started with Cisco Network Assistant*
- *Release Notes for Cisco Network Assistant*
- *Cisco Redundant Power System 2300 Hardware Installation Guide*
- *Cisco Redundant Power System 675 Hardware Installation Guide*
- *Cisco Small Form-Factor Pluggable Modules Installation Notes*
- *Cisco CWDM GBIC and CWDM SFP Installation Note*
- Compatibility matrix documents from this Cisco.com site:

http://www.cisco.com/en/US/products/hw/modules/ps5455/products_device_support_tables_list.html

  - *Cisco Gigabit Ethernet Transceiver Modules Compatibility Matrix*
  - *Cisco 100-Megabit Ethernet SFP Modules Compatibility Matrix*
  - Cisco Small Form-Factor Pluggable Modules Compatibility Matrix
  - *Compatibility Matrix for 1000BASE-T Small Form-Factor Pluggable Modules*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, 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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This document is to be used in conjunction with the documents listed in the "Related Documentation" section.