APPENDIX A

Recommendations for Upgrading a Catalyst 2950 Switch to a Catalyst 2960 Switch

This appendix describes the configuration compatibility issues and the feature behavior differences that you might encounter when you upgrade a Catalyst 2950 switch to a Catalyst 2960 switch.

This appendix consists of these sections:

Configuration Compatibility Issues

- The Catalyst 2950 switch runs Cisco IOS 12.1EA software, and the Catalyst 2960 switch runs Cisco IOS 12.2SE software.

  The switch families have different hardware.

If you use a Catalyst 2950 switch command, it might not be supported on the Catalyst 2960 switch. The Catalyst 2960 switch software handles the incompatible commands in these ways:

They are accepted and translated. A message appears.

They are rejected. A message appears.

In most cases, configuration files are loaded without rejections. Table A-1 lists the Catalyst 2950 exceptions. The features are listed in alphabetic order, with Catalyst 2950 commands and explanations, and the resulting action on the Catalyst 2960 switch.

Table A-1 Catalyst 2950 and 2960 Switch Configuration Incompatibilities

Feature	Catalyst 2950 Switch Command and Explanation	Result on the Catalyst 2960 Switch

	aaa preauth
	aaa processes *1-64*
	aaa route download *1-1440*
		When Cisco IOS 12.2E was restructured, these commands were intentionally removed and are not supported in Cisco IOS 12.2SE.
		The Catalyst 2960 switch rejects these commands, and this message appears:
		`Switch(config)# aaa processes 10`
		`^`
		`%Invalid input detected at '^' marker.`

	management VLAN. You can use this global configuration command to change it: **cluster management-vlan** *vlan-id*	**cluster management-vlan 2**
DHCP snooping	A Catalyst 2950 switch DHCP snooping feature limits the number of DHCP packets per second that an interface can receive. You use this interface configuration command to configure it: **ip dhcp snooping limit rate** *rate* The range is 1 to 4294967294, and by default, the rate limit is not configured.	In Cisco IOS 12.2SE, the range was changed to 1 to 2048 messages per second. The Catalyst 2960 switch accepts any range value. It changes the maximum value to 2048 (if it is more than 2048), and this message appears:
Flow control	The Catalyst 2950 switch supports pause frames on Gigabit Ethernet interfaces. You use this interface configuration command to configure it: **flowcontrol send** { | | }	The Catalyst 2960 switch accepts received pause frames but cannot send them. The command is not supported on the Catalyst 2960 switch. The Catalyst 2960 switch rejects the command, and this message appears: `Switch(config-if)# flowcontrol send desired` You can configure QoS to restrict data traffic without affecting the control traffic. With flow control, all traffic is stopped. For more information, see Chapter 32, "Configuring QoS."

IEEE 802.1x	In Cisco IOS 12.1EA, the Catalyst 2950 switch ranges for the IEEE 802.1x server-timeout, supp-timeout, and tx-period are 1 to 65535. You use these interface configuration commands to configure them: **dot1x timeout server-timeout** *seconds* *seconds* *seconds*	30 to 65535.
IGMP[1] snooping	The Catalyst 2950 switch implements IGMP snooping based on MAC addresses. You use this global configuration command to configure static groups: *mac-address* *interface-id* **ip igmp snooping source-only-learning** [*value*] **no ip igmp snooping mrouter learn pim v2**	**static 0002.4b28.c482 interface gigabitethernet0/1** **ip igmp snooping source-only-learning** **no ip igmp snooping mrouter learn pim v2**
		mac-address 0100.0ccc.cccc

2	There is limited QoS configuration compatibility between the Catalyst 2950 switch and the Catalyst 2960 switch. We recommend that you enable automatic QoS (auto-QoS) on the Catalyst 2950 switch by using the **auto qos voip cisco-phone cisco-softphone trust** **Note** required for your network, we recommend that you remove the QoS configuration on the Catalyst 2950 switch and create a new configuration on the Catalyst 2960 switch.	The Catalyst 2960 switch accepts the command and generates QoS commands that are appropriate for the Catalyst 2960 switch. The policer granularity is adjusted to 1 Mbps. For more information about the generated commands, see the command in the command reference for this release.
	Auto-QoS is not enabled on the Catalyst 2950 switch, but other QoS commands are configured.	These Catalyst 2950 switch commands might fail on the Catalyst 2960 switch: global configuration command global configuration command **wrr-queue cos-bandwidth** **mls qos trust cos pass-through dscp** **police**

RSPAN[3]	You have to specify one port as the reflector port with this global configuration command: *session_number* *vlan-id* *interface-id*	**monitor session** *session-number* **destination remote vlan** *vlan-id* **reflector-port** *interface-id* Note: Reflector port configuration is not required on this platform, ignoring the reflector port configuration
	UplinkFast on GBIC[4] interfaces. You enable the stack port with this interface configuration command: **spanning-tree stack-port**	**stack-port**

1. IGMP = Internet Group Management Protocol
2. QoS = quality of service
3. RSPAN = Remote Switched Port Analyzer
4. GBIC = Gigabit Interface Converter

Feature Behavior Incompatibilities

-
  -
  -
  -

QoS

The Catalyst 2960 switch uses different port hardware than the Catalyst 2950 switch, and more QoS features are offered on the Catalyst 2960 switch. For example, the Catalyst 2950 switch supports WRR scheduling, whereas the Catalyst 2960 switch supports SRR scheduling. Also, you must enable QoS globally on the Catalyst 2960 switch, whereas QoS is enabled by default on the Catalyst 2950 switch. For more information, see Chapter 32, "Configuring QoS."

RSPAN

The Catalyst 2950 switch uses an extra port, called the reflector port, for its RSPAN implementation. This is not necessary in the Catalyst 2960 switch RSPAN implementation. The Catalyst 2960 switch also supports VLANs as SPAN sources and can forward received packets on SPAN destination ports.

Multicast

The multicast forwarding decisions on the Catalyst 2960 switch are based on IP addresses. Some Catalyst 2950 switch workarounds to address platform limitations (such as the
global configuration command) are not required on the Catalyst 2960 switch.