Release Notes:
Version G.05.02 Operating System
for the HP Procurve Series 4100GL Switches

These release notes include information on the following:

- Downloading switch software and Documentation from the Web
- Enhancements in Release G.05.02
  - Support for the HP Procurve Switch GL Mini-GBIC Module (J4893A) — (page 6)
  - Support for the new HP Procurve Switch 4104GL (J4887A) — (page 7)
- Software fix listings for the HP Procurve Series 4100GL software releases (page 9)

Caution: Archive Pre-G.05.02 Configuration Files

A configuration file saved while using release G.05.02 or later software is not backward-compatible with earlier software versions. For this reason, HP recommends that you archive the most recent configuration on switches using software releases earlier than G.05.02 before you update any switches to software release G.05.02 or later.

Connectivity Note Regarding Gigabit-SX and -LX Port Settings for Links Between an HP Series 4100GL Switch and Other Switch Models:

In the HP 1600M/2400M/2424M/4000M/8000M switches, and also in other vendors' switches, the default port mode setting for the Gigabit-SX and Gigabit-LX ports is forced 1000FDx (Gigabit full-duplex). However, the default port mode for the Gigabit-SX and -LX ports in the HP 4108GL is Auto. In earlier software releases, the HP 4108GL tolerated this mismatch and allowed SX and LX links with these other switches to exist. The HP 4108GL (when running software release G.04.04 or greater) now complies with the Gigabit-SX and -LX standard that disallows linkbeat to be enabled when there is a mismatch. (The HP 4104GL, introduced with software release G.05.02, also complies with this requirement.) Thus, mismatched links between Gigabit-SX and -LX ports on an HP Series 4100GL switch and the HP 1600M/2400M/2424M/4000M/8000M switches or other switches that were formerly allowed will now fail. To avoid this problem either reconfigure the Gigabit-SX and -LX ports to Auto on the HP 1600M/2400M/2424M/4000M/8000M switches or other switches, or reconfigure the Gigabit-SX and -LX ports on the HP Series 4100GL switches to 1000FDx.

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Applicable Product

HP Procurve Switch 4104GL (J4887A)
HP Procurve Switch 4108GL (J4865A)

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SSH in the HP Procurve switches is based on the OpenSSH software toolkit. For more information on OpenSSH, visit http://www.openssh.com.

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Software Management

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Downloading Switch Documentation and Software from the Web

You can download software version G.04.05 and the corresponding product documentation from HP's Procurve website as described below.

To Download a Software Version:

1. Go to HP's Procurve website at **http://www.hp.com/go/hpprocurve.**
2. Click on **software** (in the sidebar).
3. Under **latest software**, click on **switches**.

To Download Product Documentation: You will need the Adobe® Acrobat® Reader to view, print, and/or copy the product documentation.

1. Go to HP's ProCurve website at **http://www.hp.com/go/hpprocurve.**
2. Click on **technical support**, then **manuals**.
3. Click on the name of the product for which you want documentation.
4. On the resulting web page, double-click on a document you want.
5. When the document file opens, click on the disk icon  in the Acrobat® toolbar and save a copy of the file.

Downloading Software to the Switch

HP periodically provides switch operating system (OS) updates through the HP Procurve website (**http://www.hp.com/go/hpprocurve**). After you acquire the new OS file, you can use one of the following methods for downloading the operating system (OS) code to the switch:

- For a TFTP transfer from a server, do either of the following:
  - Click on **Download OS** in the Main Menu of the switch's menu interface and use the (default) **TFTP** option.
  - Use the **copy tftp** command in the switch's CLI (see below).
- For an Xmodem transfer from a PC or Unix workstation, do either of the following:
  - Click on **Download OS** in the Main Menu of the switch's menu interface and select the **Xmodem** option.
  - Use the `copy xmodem` command in the switch's CLI (page 4).
- HP's SNMP Download Manager included in HP TopTools for Hubs & Switches
- A switch-to-switch file transfer

Note

Downloading a new OS does not change the current switch configuration. The switch configuration is contained in a separate file that can also be transferred, for example, for archive purposes or to be used in another switch of the same model.

This section describes how to use the CLI to download an OS to the switch. You can also use the menu interface for OS downloads. For more information, refer to the *Management and Configuration Guide* for your switch.

TFTP Download from a Server

Syntax: copy tftp flash <*ip-address*> <*remote-os-file*> [< primary | secondary >]

Note that if you do not specify the flash destination, the TFTP download defaults to the primary flash.

For example, to download an OS file named G_05_02.swi from a TFTP server with the IP address of 10.28.227.103:

1. Execute the copy command as shown below:

```
HPswitch # copy tftp flash 10.28.227.103 G_05_02.swi
Device will be rebooted, do you want to continue [y/n]?  y
00224K _
```

2. When the switch finishes downloading the OS file from the server, it displays this progress message:

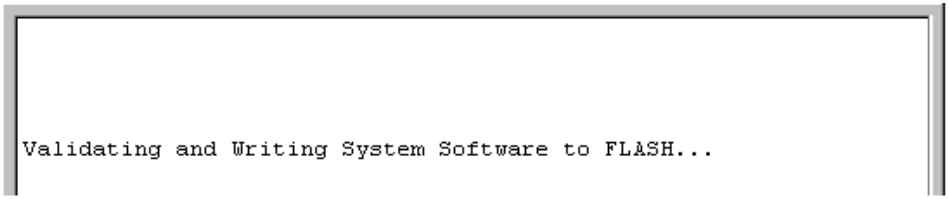

Figure 1. Message Indicating the Switch Is Writing the Downloaded Software to Flash Memory

3. After the switch writes the downloaded software to flash memory you will see this screen:

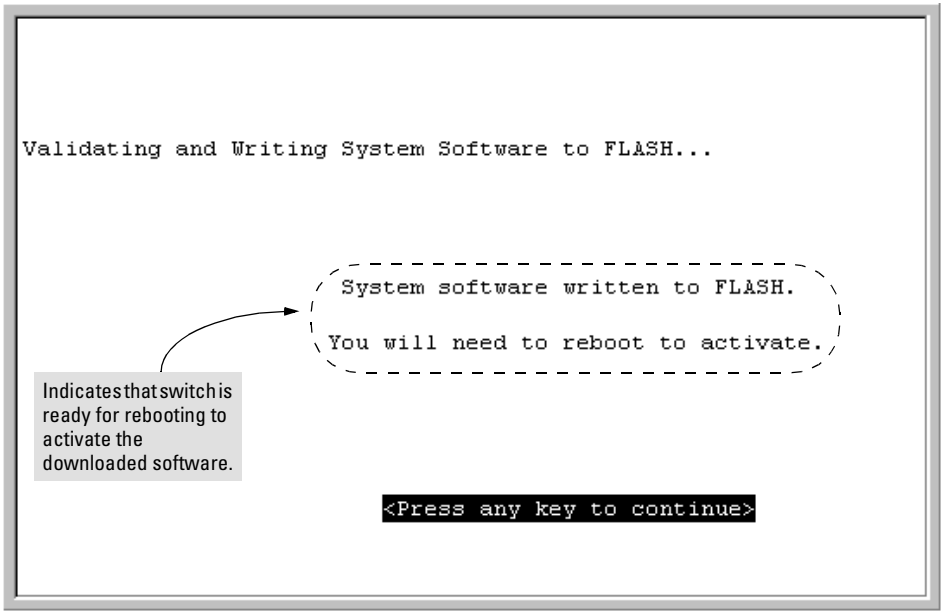

Figure 2. Message Indicating the Switch Is Ready To Activate the Downloaded Software

4. Reboot the switch.

   After the switch reboots, it displays the CLI or Main Menu, depending on the **Logon Default** setting last configured in the menu's Switch Setup screen.

Xmodem Download From a PC or Unix Workstation

This procedure assumes that:

- The switch is connected via the Console RS-232 port on a PC operating as a terminal. (Refer to the Installation Guide you received with the switch for information on connecting a PC as a terminal and running the switch console interface.)
- The switch operating system (OS) is stored on a disk drive in the PC.
- The terminal emulator you are using includes the Xmodem binary transfer feature. (For example, in the Windows NT terminal emulator, you would use the **Send File** option in the **Transfer** dropdown menu.)

Syntax: copy xmodem flash < unix | pc >

For example, to download an OS file named F_02_03.swi from a PC:

1. To reduce the download time, you may want to increase the baud rate in your terminal emulator and in the switch to a value such as 57600 bits per second. (The baud rate must be the same in both devices.) For example, to change the baud rate in the switch to 57600, execute this command:

   ```
   HP4108(config)# console baud-rate 57600
   ```

   (If you use this option, be sure to set your terminal emulator to the same baud rate.)

2. Execute the following command in the CLI
   :

   ```
   HPswitch(config)# copy xmodem flash pc
   Device will be rebooted, do you want to continue [y/n]?  y
   Press 'Enter' and start XMODEM on your host...
   ```

3. Execute the terminal emulator commands to begin the Xmodem transfer.

   The download can take several minutes, depending on the baud rate used in the transfer.

   When the download finishes, the switch automatically reboots itself and begins running the new OS version.

4. To confirm that the operating system downloaded correctly:

   ```
   HPswitch> show system
   ```

   Check the **Firmware revision** line.

5. If you increased the baud rate on the switch (step 1), use the same command to return it to its previous setting. (HP recommends a baud rate of 9600 bits per second for most applications.)

   (Remember to return your terminal emulator to the same baud rate as the switch.)

Saving Configurations While Using the CLI

The switch operates with two configuration files:

- **Running-Config File:** Exists in volatile memory and controls switch operation. Rebooting the switch erases the current running-config file and replaces it with an exact copy of the current startup-config file. To save a configuration change, you must save the running configuration to the startup-config file.
- **Startup-Config File:** Exists in flash (non-volatile) memory and preserves the most recently-saved configuration as the "permanent" configuration. When the switch reboots for any reason, an exact copy of the current startup-config file becomes the new running-config file in volatile memory.

When you use the CLI to make a configuration change, the switch places the change in the running-config file. If you want to preserve the change across reboots, you must save the change to the startup-config file. Otherwise, the next time the switch reboots, the change will be lost. There are two ways to save configuration changes while using the CLI:

- Execute **write memory** from the Manager, Global, or Context configuration level.
- When exiting from the CLI to the Main Menu, press [Y] (for `Yes`) when you see the "save configuration" prompt:

```
Do you want to save current configuration [y/n] ?
```

HP Procurve Switch Software Key

Software Letter	HP Procurve Switch
C	1600M, 2400M, 2424M, 4000M, 8000M
E	Series 5300XL (5304XL and 5308XL)
F	Series 2500 (2512 and 2524)
G	Series 4100GL (4104GL and 4108GL)

Enhancements in Release G.05.02

Release G.05.02 provides these enhancements:

Enhancement	Summary	Page
Supports New MiniGBIC Module	After you install release G.05.02 (or greater) in an HP 4108GL switch, you can install and use the new HP Procurve Switch GL MiniGBIC Module (J4893A). Since the new HP Procurve 4104GL switches (see below) are shipped from the factory with G.05.02 already loaded, you can begin using the J4893A MiniGBIC Module as soon as you install the module in the switch.	Below
Supports New 4-Slot Series 4100GL Switch	Provides the minimum software (OS) release for operating the new HP Procurve Switch 4104GL (J4887A), as well as a software upgrade for the existing HP Procurve Switch 4108GL (J4865A). (HP refers to these two switches together as the *HP Procurve Series 4100GL switches*.)	Below

The HP Procurve Switch Mini-GBIC GL Module (J4893A)

Provides six mini-GBIC slots for installing any of the supported HP Procurve mini-GBICs. As of the production date for this document, HP offers the following supported mini-GBICs:

- Gigabit-SX LC mini-GBIC (J4858A)
- Gigabit-LX LC mini-GBIC (J4859A)

For more information on these products, visit

http://www.hp.com/go/hpprocurve

The HP Procurve Switch 4104GL

The 4104GL is a four-slot version of the HP Procurve 4108GL, and operates with the same software (release G.05.02 or greater) as the 4108GL. A partial list of software features includes:

- 30 Port-Based VLANs, GVRP, and 802.1Q tagging
- GVRP
- IP Multicast (IGMP)
- These access security features:
  - TACACS+
  - RADIUS Authentication and Accounting
  - Secure Shell (SSH) Authentication
  - Port-Based Access Control (802.1x)
  - Port Security using MAC address lockdown
  - Authorized IP Managers
  - Local Manager and Operator passwords
- Trunking: LACP (802.3ad) static and dynamic, HP static trunking, and FEC (Fast EtherChannel®)
- STP and RSTP
- 802.1p Traffic Prioritization
- SNMP network management
- HP Procurve Stack Management
- RMON and switch monitoring (SMON)
- "Friendly" port naming
- Secure Management VLAN
- CDP-v1 support

For documentation describing the software features available in the Series 4100GL switches, refer to the *HP Procurve Product Documentation CD-ROM* shipped with the switch, or visit the HP Procurve website. (To help you navigate in the website, see "To Download Product Documentation:" on page 1.)

Clarification of Time Zone Issue

Starting with release G.05.*xx*, the method of configuring the Time Zone for TimeP or SNTP configuration has been updated. Previous switch software, for all HP Procurve switches, used positive time offset values for time zones that are West of GMT and negative values for time zones that are East of GMT. The standards indicate that time zones West of GMT should be designated by negative offset values, and time zones East of GMT by positive values. Software version G.05.*xx* updates this configuration method, but if you use the same values for indicating time zones as you did for previous HP Procurve switches, the time will be set incorrectly on your Series 4100GL switch. For example, for previous HP Procurve switches, the US Pacific time zone was configured by entering **+480**. With software version G.05.*xx*, the US Pacific time zone must now be configured by entering **-480**.

Enhancements in Release G.04.05

For information on these enhancements and the other features available in your switch, refer to the following publications:

- *Management and Configuration Guide for the HP Procurve Series 4100GL Switches*
- *Access Security Guide for the HP Procurve Series 4100GL Switches*

For copies of the above guides, refer to either the Product Documentation CD-ROM shipped with the switch or (for the latest version of any HP switch documentation) visit the HP Procurve website. (See "To Download Product Documentation:" on page 1.)

Enhancement	Summary
Friendly Port Names	Enables you to assign optional, meaningful names to physical ports on the switch.
Security Enhancements	
SSH Security	Provide remote access to management functions on the switches via encrypted paths between the switch and management station clients capable of SSHv1 operation.
RADIUS	Protect access to the switch and monitor use of network resources through a centralized client authentication and accounting service.
Port-Access (802.1x)	Provide access control along with the ability to control user profiles from a central RADIUS server while allowing users access from multiple points within the network
IP Preserve	Enable retention of the current IP address and subnet mask (for the switch's default VLAN), and the default gateway address when downloading a configuration file and rebooting the switch. (Operates on switches that use the Manual IP addressing instead of the default DHCP method.)
QoS Priority	Enable assignment of non-default priority settings to inbound, untagged packets received on the switch.
Terminating Remote Sessions	Provides a kill command to terminate remote Telnet and SSH sessions.
Port Security	Provides port access control on the basis of device MAC addresses.
Rapid Spanning-Tree (802.1w) (RSTP)	Provides the functionality for the new Spanning Tree standard, IEEE 802.1w (RSTP), which is supported by the G.04.05 (or greater) release of your switch software
Fast-Uplink spanning tree (STP) mode for 802.1d spanning-tree operation	In a standard 802.1d spanning tree environment with redundant links, if the active link fails, the typical convergence time for a backup link to become the active, forwarding link is 30 seconds. Fast-uplink STP reduces the convergence time to approximately ten seconds.
show tech command	Outputs, in a single listing, switch operating and running configuration details from several internal switch sources.

Software Fixes

Release G.03.08 was the first software release for the HP Procurve Switch 4108GL.

Release G.03.09 (Beta Release Only)

Fixed in release G.03.09

- **CDP** — The switch's CDP packets have been modified to better interoperate with older Cisco IOS versions. Certain legal CDP packets sent from the Procurve switch could result in Cisco routers, running older IOS versions, to crash.

  Note: The Procurve switch's CDP packets are legal both before and after this modification.

- **IGMP** — With IGMP enabled, toggling IGMP off and then on again causes all querier intervals to be cut in half.

- **IGMP** — Switch may stop sending IGMP queries on some VLANs.

- **LACP** — Ports are put into Standby mode when they shouldn't be.

- **LACP** — Dynamic LACP creates 2 trunks when it should only create one.

- **LACP** — When an LACP port is put into Standby mode, MAC address learning on the switch may stop.

Release G.03.10

Fixed in release G.03.10

Performance enhancements to the message system, address learning, and SNMP.

Release G.03.13

Fixed in release G.03.13

- **XMODEM —** If the CLI **copy xmodem flash** command is used to download the OS, the switch incorrectly displays one of the two following messages after the validate and write process completes:

  - `User timeout, must hit ENTER before starting XMODEM Transfer.`

  or

  - `Transfer terminated due to timeout.`

- **Inter-module communication problems —** When the switch's MAC address learning function detects the same MAC address on two different modules within a small interval of time (this could happen if two end nodes have the same MAC address or if there is a loop in the network), the address tables on the modules may get out of sync. This can cause module-to-module communication problems for devices connected to the modules whose address tables have become out of synchronization.

Release G.04.01 (Beta Release Only)

Fixed in release G.04.01

- **Crash** — Switch may crash with a message similar to:

```
->Software exception at bcm56xxDmaPoll.c:342--in 'sal_dpc_hi'
->Msg loss detected
```

- **Crash/Bus Error —** A Get request of a specific long OID can result in a bus error, an agent hang, or a switch crash with a message similar to:

  A Get request of a specific long OID can result in a bus error, an agent hang, or a switch crash with a message similar to:

```
->Software exception at svc_misc.s:379 -- in mCdpCtrl
 malloc_else_fatal() ran out of memory
```

  This crash has been associated with the CERT SNMPV1 "Req-app" test suite.

- **CLI —** The crash history is lost after the "reload" command is performed from the CLI.

- **CLI —** The response to an incomplete trunk configuration command did not produce the proper message "Incomplete input: Trunk."

- **Flow Control —** Changing Flow Control setting on a port is not reflected in Auto-negotiation's advertised capability.
- **Menu/Web-Browser Interface —** Display of mirror port configuration is inconsistent between menu and WEB interface.
- **Port Configuration —** Changing a port setting from one Auto mode to another may not be reflected in Auto-negotiation's advertised capability without a switch reset, or module hot-swap.
- **Port Monitoring —** Port monitoring does not work correctly after a TFTP transfer of the configuration from the switch to the server and then back to the switch.
- **Stack Management —** Master switch was not properly making security checks when passing information along to a member switch.
- **TFTP —** Menu and browser displays of switch configuration are not accurate after a TFTP transfer of the switch config file to the switch. Only occurs when a port is configured for network monitoring.
- **VARIOUS: Crash/Bus Error —** A Get request of a specific long OID can result in a bus error, an agent hang, or a switch crash with a message similar to:

```
-> Software_exception at svc_misc.s:379 -- in mCdpCtrl

  malloc_else_fatal() ran out of memory
```

- **Web-Browser Interface —** Web display of port utility window did not display port H24.
- **Web-Browser Interface —** Incorrect font size used in VLAN configuration screen.
- **Web-Browser Interface —** User could input an invalid MAC address, i.e. multicast or broadcast address, in the security policy field.

Release G.04.02 (Beta Release Only)

Fixed in release G.04.02

- **Corrupted Flash —** An SNMP set, during the OS download operation of TopTools, while the switch is writing new OS to flash may result in corrupted flash and switch may boot up in LAN Monitor mode.

Release G.04.03 (Beta Release Only)

Fixed in release G.04.03

Modification of Lab troubleshooting commands.

Release G.04.04 (Beta Release Only)

Fixed in release G.04.04

Modification of Lab troubleshooting commands.

Release G.04.05

Fixed in release G.04.05

Modification of Lab troubleshooting commands.

Release G.05.01

Fixed in release G.05.01

Modification of Lab troubleshooting commands.

- **Agent Hang —** Agent processes (such as console, telnet, STP, ping, etc.) may stop functioning when the IGMP querier function is disabled, and then re-enabled, on a VLAN that does not have an IP address configured.
- **Agent Hang —** Agent processes (such as console, telnet, STP, ping, etc.) may stop functioning. This agent hang has been associated with the CERT SNMPv1 "encoding" test #1150.
- **Agent Hang —** Agent processes (such as console, telnet, STP, ping, etc.) may stop functioning. This agent hang has been associated with the X2 SSH utility.
- **CLI —** The CLI command "show arp" displays the wrong port number for some ARP entries.
- **CLI —** The CLI command "show trunks" lists incorrect information for dynamic trunks.
- **CLI —** The CLI command "getmib" with no parameters returns the message

  `"Incomplete input: - EOI -".`
- **CLI —** When reaching the inactivity timeout expiration after typing the CLI command "enable" in a telnet session at operator mode, the text in the CLI prompt may get corrupted with text similar to "gfs_alp_104Null Varbind".
- **CLI —** Unrelated information was shown at the end of the CLI command "show vlan 1" output.
- **CLI —** Command "no qos" did not reset port priority to "0".
- **CLI —** The CLI command "show tech" causes an error message when the command is executed from within config mode.
- **CLI —** The prompt for saving the config does not handle a DISC character appropriately.

- **CLI/Timezone —** The switch time is wrong if CLI used to set timezone and timezone may not operate properly after switch is rebooted. West of GMT is now a negative offset and east of GMT is now a positive offset.
- **Crash —** If dynamic trunks are configured and the switch is rebooted, the switch may crash with a message similar to:

  ```
  -> Software exception at rstp_dyn_reconfit.c:243 in -- 'Lpmgr'
  ```

- **Crash —** When hot-swapping transceivers multiple times, the switch may crash with a message similar to:

  ```
  -> Software exception at port_sm.c:378 in -- 'mPmSlvCtrl'
  ```

- **Event Log —** Log messages for trunks and trunk members enhanced to be easier to read.
- **GARP/Event log —** Garp event log messages may be garbled.
- **IGMP —** Interoperability issues with some Cisco devices (such as some Cisco Catalyst 5000 & 6000 series switches) cause IGMP groups to be aged out of the switch's IGMP tables prematurely.
- **LACP —** LACP maintains a dynamic trunk with only 1 port configured for the trunk group.
- **LACP/802.1x —** 802.1x and LACP trunks can co-exist on the same port. (The fix is to make these trunks mutually exclusive.)
- **Menu —** The switch may not display the complete forwarding table while performing a MAC address search.
- **Menu —** Incorrect error message is displayed when attempting to create a VLAN which exceeds the maximum number of VLANs supported. [Fix is to display an error message similar to "Maximum number of VLANs (8) has already been reached."]
- **Menu —** Menu does not allow a port configuration change from a full-duplex/flow control setting to a half-duplex/no flow control setting.
- **Menu —** Menu does not allow trunks to be configured on transceiver ports that have never had a transceiver installed before.
- **Menu/CLI —** Modified help message for RSTP.
- **Menu/VLAN —** The VLAN help text has been modified.
- **STP Fast Mode —** A port configured for STP fast mode behaves like a standard STP port.
- **STP/RSTP —** Port path cost is reset even though path cost is configured for "Auto".
- **STP/Running-Config —** STP path-cost is not written to the configuration when using the CLI.

- **STP/Startup-Config —** When a startup-config file containing an 802.1d STP configuration is reloaded that was saved off from the switch, an error similar to the following occurs:

  ```
  Line: 13. Invalid input: stp802.1d

  Corrupted download file.
  ```

- **TACACS+ —** When logging into the switch via TACACS+ encrypted authentication, the packet header has the 'encryption' field set to 'TAC_PLUS_CLEAR' when the body of the packet is actually encrypted.
- **XRMON —** The switch incorrectly reports XRMON support to TopTools query.
- **NNM/Stacking —** If stacking is configured, NNM cannot discover the device as a generic switch.

Release G.05.02

Fixed in release G.05.02

- **Continuous module reset —** The J4893A Procurve Switch GL mini-GBIC module will go into a continual reset loop when both of the following conditions are met:

  a. The module is inserted in slot A; and

  b. Certain traffic condiditions occur on port 6 of the module

- **Crash —** The switch may crash with a message similar to:

  ```
  -> Software exception at alloc_free.c:545 -- in 'eDrvPoll'
  ```

- **Crash —** The switch may crash with a message similar to:

  ```
  -> Bus Error: HW Addr=0x0000000 IP=0x002fe640 Task='eTelnetd'
  ```

  This crash has been associated with security/vulnerability test applicationssuch as Nessus.

- **Loop/VTP —** The switch will incorrectly forward VTP packets from third party devices if that packet is received on a blocked port.
- **Web-Browser Interface —** After clearing the intrusion flag in the web-browser interface, the intruder flags are not removed.

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