Release Notes:
Version I.08.61 Software
for the HP ProCurve 2800 Series

Release I.08.61 supports these switches:

- HP ProCurve Switch 2824 (J4903A)
- HP ProCurve Switch 2848 (J4904A)

These release notes include information on the following:

- Downloading switch documentation and software from the Web (page 1)
- Clarification of operating details for certain software features (page 8)
- Software features available in release I.07.*xx* and I.08.*xx* (page 11)
- A listing of software fixes included in releases I.07.31 through I.08.61 (page 21)

Boot ROM Update Required

A successful update to I.08.*xx* requires updating the 2800 with the current Boot ROM version, I.08.04. The I.08.04 Boot ROM image was automatically installed on any switch running the I.07.64 software. If your 2800 is currently running a pre-I.07.64 software version, you must update the Boot ROM before installing I.08.*xx*. Load the I.07.64 software and reboot your switch from the I.07.64 software image. NOTE: a copy of the I.07.64 software is included in the I.08.*xx* zip file on the ProCurve web site. See "Release I.07.64 Enhancements" on page 17 for more information.

Caution

The startup-config file saved under version I.08.*xx* or greater, is NOT backward-compatible with previous software versions. Users are advised to save a copy of the pre-I.08.*xx* startup-config file BEFORE UPGRADING to I.08.*xx* or greater, in case there is ever a need to revert to pre-I.08.*xx* software. Instructions for saving a copy of the startup-config file are found in the "Transferring Switch Configurations" section of Appendix A in the *Management and Configuration Guide* (included in PDF format on the Product Documentation CD-ROM) shipped with the switch, and also available on the HP ProCurve web site. (Refer to "To Download Product Documentation:" on page 1.)

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Applicable Product

HP ProCurve Switch 2824	(J4903A)
HP ProCurve Switch 2848	(J4904A)

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http:// www.openssh.com.

SSL on HP ProCurve Switches is based on the OpenSSL software toolkit. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. For more information on OpenSSL, visit

http://www.openssl.org.

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com)

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Software Management

Downloading Switch Documentation and Software from the Web

You can download software updates and the corresponding product documentation from HP's ProCurve web site as described below.

To Download a Software Version:

1. Go to HP's ProCurve web site at:

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

2. Click on **software updates** (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 web site at http://www.hp.com/go/hpprocurve.
2. Click on **technical support**, then **Product 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

Caution

The startup-config file generated by the latest software release may not be backward-compatible with the same file generated by earlier software releases. Refer to the "Caution" on the front page.

HP periodically provides switch software updates through the HP ProCurve web site (**http://www.hp.com/go/hpprocurve**). After you acquire the new software file, you can use one of the following methods for downloading the software 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 ProCurve Manager
- A switch-to-switch file transfer

Note

Downloading a new software version 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 software to the switch. You can also use the menu interface for software 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 a software file named I_08_55.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 I_08_55.swi
Device will be rebooted, do you want to continue [y/n]?  y
02304K _
```

2. When the switch finishes downloading the software file from the server, it displays this progress message to indicate the switch is writing the downloaded software to flash memory:

```
Validating and Writing System Software to FLASH...
```

3. After the switch writes the downloaded software to flash memory (approximately three minutes), you will see this screen:

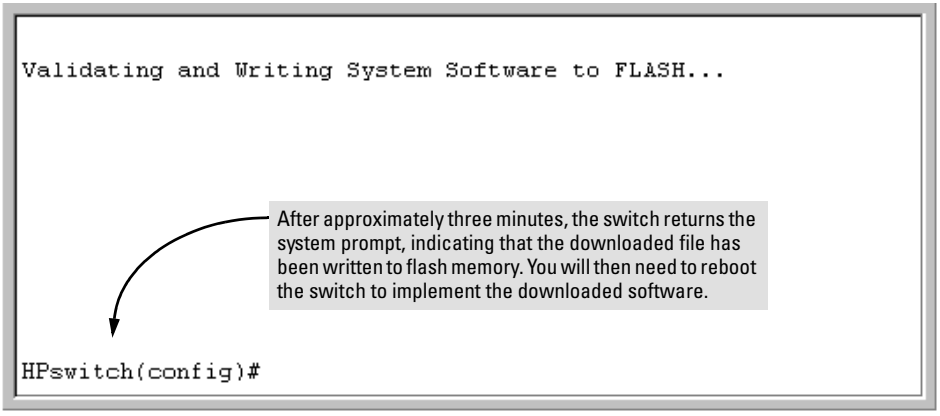


Figure 1. The System Prompt Indicates the Switch Is Ready To Activate the Downloaded Software

4. Type the **show flash** command to verify that the new software version has been downloaded to flash:

```
HPswitch# show flash
Image              Size(Bytes)    Date    Version
-----              -----------  --------  -------
Primary Image    :  2844743    10/22/04 I.08.55   <-- Software Version in Primary Flash
Secondary Image  :  2434782    10/22/04 I.07.64
Boot Rom Version:  I.08.02
Current Boot     :  Primary
```

Figure 2. Example of Show Flash Display of Software Versions in Flash Memory

5. Use the CLI **boot** command to reboot the switch.

```
HPswitch(config)# boot
Device will be rebooted, do you want to continue [y/n]?
```

   To continue the boot process, press the **[Y]** key (for "yes"). 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 software 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 Microsoft Windows NT® terminal emulator, you would use the **Send File** option in the **Transfer** drop-down menu.)

Syntax: copy xmodem flash < unix | pc >

For example, to download a software file from a PC:

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

```
HPswitch(config)# console baud-rate 57600
HPswitch(config)# write memory
```

   Reboot your switch and re-establish a console session at the higher baud rate. 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 software version.

4. To confirm that the software downloaded correctly:

```
HPswitch> show system
```

Check the **Firmware revision** line.

```
HPswitch(config)# show system

 Status and Counters - General System Information

  System Name         : HPswitch
  System Contact      :
  System Location     :

  MAC Age Time (sec)  : 300

  Time Zone           : 0
  Daylight Time Rule  : None


  Firmware revision   : I.08.60          Base MAC Addr       : 000a57-fdae40
  ROM Version         : I.08.04          Serial Number       : SG00001588

  Up Time             : 23 hours         Memory    - Total   : 33,126,240
  CPU Util (%)        : 7                           Free    : 25,376,264

  IP Mgmt  - Pkts Rx  : 12               Packet    - Total   : 1998
             Pkts Tx  : 0                Buffers     Free    : 1643
                                                     Lowest  : 1613
                                                     Missed  : 0
```

Software Revision

Figure 3. Example of Using the CLI 'show system' Command to Verify the Software Revision

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, 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)
H	Series 2600 Switches (2626, 2650, 2626-PWR, and 2650-PWR) and Switch 6108
I	Series 2800 Switches (2824 and 2848)
M	Series 3400cl Switches (3400cl-24G and 3400cl-48G) and Series 6400cl (CX4 6400cl-6XG and X2 6400cl-6XG)
N/A	Series 9300 Routing Switches (9304M, 9308M, and 9315M), the Switch 6208M-SX, and the Switch 6308M-SX (These devices use a software version number only; no alphabetic prefix. For example: 07.6.04.

Minimum Software Versions for Series 2800 Switch Features

For Software Features. To view a tabular listing of major switch software features and the minimum software version each feature requires:

1. Visit the HP ProCurve web site at **http://www.hp.com/go/hpprocurve**.
2. Click on **software updates.**
3. Click on **Minimum Software Version Required by Feature**.

For Switch 2800 Hardware Accessories.

HP ProCurve Device	Minimum Supported Software Version
J4858A Gigabit-SX-LC Mini-GBIC	I.07.31
J4859A Gigabit-LX-LC Mini-GBIC	I.07.31
J4860A Gigabit-LH-LC Mini-GBIC	I.07.31
J8168A HP ProCurve 600 RPS/EPS	I.07.31

Clarifications

IGMP

Note: the following information updates and clarifies information in Chapter 4, “Multimedia Traffic Control with IP Multicast (IGMP)” in the *Advanced Traffic Management Guide*—part number 5990-8853, October 2004. Please review this chapter for a detailed explanation of IGMP operation.

Supported Standards and RFCs

The following are supported:

- RFC2236 (IGMP V.2, with backwards support for IGMP V.1)
- Interoperability with RFC3376 (IGMPv3)
- IETF draft for IGMP and MLD snooping switches (for IGMP V1, V2 V3)

The switch provides full IGMPv2 support as well as full support for IGMPv1 Joins. The switch is interoperable with IGMPv3 Joins as it forwards packets for the joined group from all sources. It does not support IGMPv3 “Exclude Source” or “Include Source” options in the Join Reports. The switch can operate in IGMPv2 Querier mode on VLANs with an IP address.

IGMP is supported in the HP MIB, rather than the standard IGMP MIBs, as the latter reduce Group Membership detail in switched environments.

IGMP, Multicast Filters, and Configured VLANs

On the Series 2800 Switches, the number of multicast filters available for use by IGMP is a function of the number of VLANs and the number of IGMP-enabled VLANs configured on the switch. When the number of multicast groups on the network exceeds the number of multicast filters available on the switch, excess multicast group traffic is flooded to all ports on the affected VLAN, to ensure that clients can receive their multicast traffic.

There are 255 multicast filters available in the switch. A filter is used each time a VLAN is configured and each time IGMP is enabled on a VLAN. The table below shows examples of the number of multicast filters available for IGMP use, based on the number of configured VLANs and IGMP-enabled VLANs.

Configured VLANs	IGMP-Enabled VLANs	Multicast Filters Available for IGMP	Average Number of Multicast Filters Available for IGMP per IGMP-Enabled VLAN
256	1	255 - 256 - 1 = -2	None. IGMP does not operate.
64	64	255 - 64 - 64 = 127	< 2
30	30	255 - 30 - 30 =195	6.5
64	8	255 - 64 - 8 = 183	< 23
100	2	255 - 100 - 2 = 153	76

Using Delayed Group Flush

This feature continues to filter IGMP-Left groups for a specified additional period of time. This is beneficial in switches such as the Series 2600 or 4100gl, where Data-Driven IGMP is not supported. The delay in flushing the group filter prevents stale traffic from being forwarded by the server. Delayed Group Flush is enabled or disabled for the entire switch.

As the Series 2800 Switches use Data-Driven IGMP with IGMP Fast-Leave always enabled, HP does **not** recommend that the Delayed Group Flush feature be used on the Series 2800 Switches. Note that this command must be executed in the configuration context.

Syntax: igmp delayedflush <*time period*>

Enables the switch to continue to flush IGMP-Left groups for a specified period of time (0 - 255 seconds). The default setting is **Disabled**. *To disable, reset the time period to zero.*

Syntax: Show igmp delayedflush

Displays the current setting for the switch.

Setting Fast-Leave and Forced Fast-Leave from the CLI

In previous software versions, Fast-Leave and Forced Fast-Leave options for a port were set through the MIB. The following commands now allow a port to be configured for fast-leave or forced fast-leave operation from the CLI. Note that these command must be executed in a VLAN context

Syntax: [no] ip igmp fastleave <*port-list*>

Enables IGMP Fast-Leave on the specified ports in the VLAN (the default setting). In the Config context, use the VLAN specifier, for example, **vlan <** *vid* **> ip igmp fastleave <***port-list***>***. The "no" form disables Fast-Leave on the specified ports.*

[no] ip igmp forcedfastleave <*port-list*>

Forces IGMP Fast-Leave on the specified ports in the VLAN, even if they are cascaded. The "no" form disables Forced Fast-Leave on the specified ports.

To view the IGMP Forced Fast-Leave status of a port use the **show running-config** or **show configuration** commands.

IGMP Operating Notes

- Review the number of VLANs and the number of IGMP-enabled VLANs you plan to use to determine if you have the sufficient multicast filters available for your expected IGMP groups. If you don't, excess multicast groups are not filtered and are flooded to all ports on the VLAN.
- Do not use Delayed Group Flush for Series 2800 Switches, as this behavior provides no additional benefits when Data-Driven IGMP is supported.
- Forced fast leave can be used when there are multiple devices attached to a port.

Displaying Spanning Tree Configuration Detail

A new CLI command has been added to provide more detailed statistics on spanning tree operation.

Syntax: show spanning-tree <*port-list*> detail

Lists 802.1D and 802.1w port operating statistics for all ports, or those specified.

Enhancements

Unless otherwise noted, each new release includes the features added in all previous releases.

Release I.08.61 Enhancements

Software fixes only; no new enhancements.

Release I.08.60 Enhancements

I.08.60 Enhancement	Overview
RADIUS Authentication for Switch 2800 Web Browser Access	The **aaa authentication** command now allows the optional use of RADIUS as the primary password authentication method for the Web browser interface on Series 2800 switches (as well as for the Series 2600, 2600-PWR, and 5300xl switches). Refer to "RADIUS Authentication for Web Browser Access", below
CLI Local Terminal Mode Command	This new command enables changing from one terminal mode to another without changing the terminal mode configuration or having to reboot the switch. The command is not persistent across reboots, and affects only the current console session. Refer to "CLI Local Terminal Mode" on page 12.
DHCP Option 82	Enables a network administrator using a DHCP server supporting DHCP Option 82 to IP addressing policies based on the network area from which a client DHCP request originates. Refer to "DHCP Relay Information Option (Option 82)" on page 13.

RADIUS Authentication for Web Browser Access

The following switch models now support use of RADIUS as a primary password authentication method for the Web browser interface:

- Series 2800 (Release I.08.60 and greater)
- Series 2600 and 2600-PWR (Release H.08.58 and greater)
- Series 5300xl (Release E.09.*xx* and greater)

Syntax: aaa authentication < console | telnet | ssh | web > < enable | login > radius

Configures RADIUS as the primary password authentication method for the switch's console, Telnet, SSH, and/or the Web browser interface.

[< local | none >]

Provides options for secondary authentication (Default: **none***)*

For more on using RADIUS authentication, refer to the chapter titled "RADIUS Authentication and Accounting" in the *Access Security Guide* for your switch.

CLI Local Terminal Mode

This new command enables temporary and non-disruptive changes to the terminal mode without forcing a change in the switch's terminal mode configuration.

Prior to release I.08.60. You could invoke a terminal mode change only with the **console terminal** command, then use **write memory** and reboot the switch. With this older method, you can return the switch to its previous mode only by repeating the whole process. Also, after using **console terminal** to reconfigure the terminal mode, it applies to all console terminal sessions.

Beginning with release I.08.60. This release adds the **console local-terminal** command, which dynamically changes only the console session from which it is executed, does not require **write memory** and a reboot, and does not persist across a reboot.

Syntax: console local-terminal < vt100 | none | ansi >

Dynamically converts the terminal mode of a console session to the selected mode. Executing **console local-terminal** *affects only the console session from which it is executed. Rebooting the switch returns the terminal mode for the affected console session to the configured terminal mode. This command does not change the configured console terminal mode configuration. (To change the configured terminal mode, use the* **console terminal < vt100 | none | ansi >** *command, which requires execution of* **write memory**, *followed by a switch reboot, to take effect.)*

vt100

When invoked in a console session, changes the terminal mode to VT-100 for that console session. Use this option when the configured terminal mode is either **none** *(scripting mode) or* **ansi**, *and you want to temporarily use the VT-100 mode. (VT-100 is the default terminal mode configuration setting.)*

none

When invoked in a console session, changes the terminal mode to "raw" (scripting mode) for that console session. (Scripting mode eliminates unwanted control characters that may appear in some scripting languages.) Use this option when the configured terminal mode is either **vt100** *or* **ansi**, *and you want to temporarily use the scripting mode.*

ansi

When invoked in a console session, changes the terminal mode to ANSI for that console session. Use this option when the configured terminal mode is either **vt100** *(scripting mode) or* **none**, *and you want to temporarily use the ANSI mode.*

DHCP Relay Information Option (Option 82)

(For an updated version of this information, check the ProCurve Web site during March, 2005.)

The routing switch can operate as a *DHCP relay agent* to enable communication between a client and a DHCP server on a different subnet. With option 82 enabled, the routing switch inserts an Option 82 information field in client-originated DHCP packets before forwarding the packets to a DHCP server. The Option 82 field includes these two sub-options:

- The *circuit ID*, which is the identity of the port through which the routing switch received the client DHCP packet
- The *remote ID*, which is either the MAC address or the IP address of the VLAN on which the client DHCP packet entered the switch

The Option 82 DHCP server can use the Option 82 field in the client's DHCP packet to enhance control over server responses to client requests. For example, the server can be configured to:

- Respond with different IP addressing policies for client requests received from different routing switches.
- Limit the number of IP addresses assigned to clients through any one routing switch, which can help to avoid excessive traffic flooding and spoofing.

The DHCP server response packet includes an IP address policy for the client and an exact copy of the Option 82 field it received in the client request. The response is routed back to the routing switch, which uses this information to validate the server response. For a validated response, the routing switch strips off the Option 82 field and forwards the packet out the port indicated in the response as the circuit ID (client access port).

Note
The switch's DHCP Relay Information (Option 82) feature can be used in networks where the DHCP server capability includes Option 82 data fields in response packets. Use of this feature with DHCP servers that do not include Option 82 data fields in response packets is not supported. (Refer to the documentation provided for your DHCP server(s).

Requirements for Option 82 Operation

- IP routing is enabled on the routing switch.
- A route is open between the routing switch and a DHCP server supporting Option 82.
- In each VLAN that includes a client needing DHCP support, there is an IP Helper address configured with the IP address or subnet of an Option 82 DHCP server.

Option 82 Field Definition

The option 82 field (if present) in a client DHCP packet includes the following data:

1. The *switch circuit ID*: This is the port on which the client's inbound DHCP packet enters the switch
2. The *switch remote ID*: This can be either of the following identifiers associated with the VLAN on which the switch received the client's DHCP packet:
   - The incoming VLAN's MAC address (This is the default selection.) Note that all VLANs configured on a Series 2800 switch use the same MAC address.
   - The incoming VLAN's IP address

Option 82 disabled by default.

Syntax: dhcp-relay option 82 < append [validate] | replace [validate] | drop [validate] | keep > [ip | mac]

append: *Configures the routing switch to append an option 82 field to the client DHCP packet. If the client packet has any existing option 82 field(s) assigned by another device, then the new field is appended to the existing field(s).*

The appended option 82 field includes the switch circuit ID (inbound port number) associated with the client DHCP packet, and the switch remote ID. The default switch remote ID is the MAC address of the VLAN on which the packet was received from the client. To use the incoming VLAN's IP address instead of its MAC address for the switch remote ID, use the **ip** *option (below).*

replace: *Configures the routing switch to replace any existing option 82 field(s) in an inbound client DHCP packet with one option 82 field for the current routing switch.*

The replacement option 82 field includes the switch circuit ID (inbound port number) associated with the client DHCP packet, and the switch remote ID. The default switch remote ID is the MAC address of the VLAN on which the packet was received from the client. To use the incoming VLAN's IP address instead of its MAC address for the switch remote ID, use the **ip** *option (below).*

drop: *Configures the routing switch to unconditionally drop any client DHCP packet received with existing option 82 field(s). This means that such packets will not be forwarded. Use this option where access to the routing switch by untrusted clients is possible.*

If the routing switch receives a client DHCP packet without an option 82 field, it adds an Option 82 field to the client and forwards the packet. The added option 82 field includes the ***switch circuit ID*** *(inbound port number) associated with the client DHCP packet, and the* ***switch remote ID****. The default switch remote ID is the MAC address of the VLAN on which the packet was received from the client. To use the incoming VLAN's IP address instead of its MAC address for the switch remote ID, use the ip option (below).*

keep: *For any client DHCP packet received with existing option 82 field(s), configures the routing switch to forward the packet as-is, without replacing or adding to the existing option 82 field(s).*

[validate]: *This option requires the routing switch to verify that a DHCP server response packet is a response to a DHCP client packet forwarded from the routing switch. Where one Option 82 field was included in the forwarded client packet, then the Option 82 fields in the client packet and the server response must match. Where multiple Option 82 fields were included in the forwarded client packet, then one Option 82 field in the server response must match one of the Option 82 fields in the client packet.*

[ip | mac]

This option specifies the remote ID the routing switch is to use in Option 82 packets added or appended to DHCP client packets.

ip: *Specifies the IP address of the VLAN on which the client DHCP packet enters the switch.*

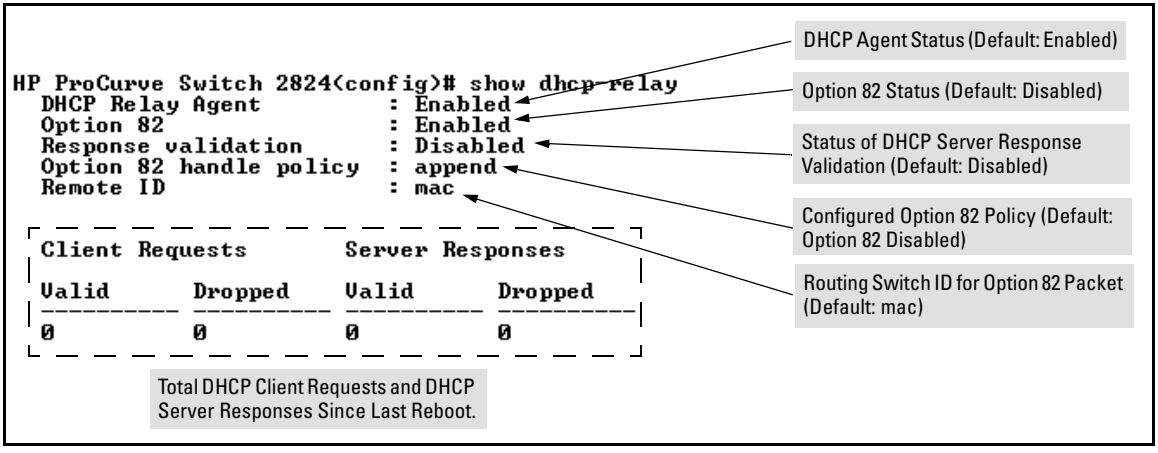
mac: *Specifies the MAC address of the VLAN on which the client DHCP packet enters the switch. This is the default choice.*

Note on Default Remote ID Selection: *Executing the Option 82 command without specifying either ip or mac configures the remote ID as the MAC address of the VLAN on which the packet was received from the client.*

Displaying DHCP Relay Agent Option 82 Status and Statistics

Syntax: show dhcp-relay

This command displays the current DHCP-Relay configuration, including the Option 82 state and statistics.



Example of DHCP Relay Agent Option 82 Status

Operating Notes for Option 82

- If the routing switch is not able to add an Option 82 field to a client's DHCP request due to the message size exceeding the MTU (Maximum Transmission Unit) size, then the request is forwarded to the DHCP server without Option 82 information and an error message is logged in the switch's Event Log.
- With DHCP Relay Option 82 enabled, the routing switch is in compliance with RFC 3046.
- When a routing switch configured as a DHCP-relay agent is the first-hop router between a client and a DHCP server, the switch inserts its IP address into the client's DHCP packet prior to forwarding the packet toward a DHCP server. (That is, the switch inserts the IP address of the VLAN on which the packet was received.)

Release I.08.55 Enhancements

Enhancement	Overview
Supports 256 VLANs	Previously, the maximum number of VLANs was 60.
DiffServ Codepoint (DSCP) Marking - L3/L4	Provide support for the following DSCP modes: RFC2474 DiffServ Precedence, RFC2597 DiffServ Assured Forwarding (AF), and RFC2598 DiffServ Expedited Forwarding (EF). (Refer to: Chapter 6, "Quality of Service (QoS): Managing Bandwidth More Effectively on the Series 2600/2600-PWR and Series 2800 Switches" in the *Advanced Traffic Management Guide*—part number 5990-8853, October 2004— on the HP ProCurve web site.*)
802.1s Multiple Spanning-Tree	Adds the option for running 802.1s Multiple Spanning-Tree on the switch to enable multiple spanning-tree instances. Interoperates with legacy 802.1D (STP) and 802.1w (RSTP) spanning-tree. (Refer to: Chapter 5, "Spanning-Tree Operation" in the *Advanced Traffic Management Guide*—part number 5990-8853, October 2004— on the HP ProCurve web site.*)
Jumbo Packets	On a VLAN configured for jumbo traffic, all ports belonging to that VLAN and operating at 1 Gbps or 10 Gbps allow inbound jumbo packets of up to 9220 bytes (includes four bytes for a VLAN tag). (Refer to: Chapter 10, "Port Status and Basic Configuration" in the *Management and Configuration Guide*—part number 5990-6023, October 2004— on the HP ProCurve web site.*
Web Authentication	Web authentication adds a new security option that uses a web page login to authenticate users via a RADIUS server for access to the network. (Refer to: Chapter 3, "Web and MAC Authentication for the Series 2600/2600-PWR and 2800 Switches" in the *Access Security Guide*—part number 5990-6024, October 2004— on the HP ProCurve web site.*)
MAC Authentication	MAC authentication adds a new security option that uses a device's MAC address to authenticate the device via a RADIUS server for access to the network. (Refer to: Chapter 3, "Web and MAC Authentication for the Series 2600/2600-PWR and 2800 Switches" in the *Access Security Guide*—part number 5990-6024, October 2004— on the HP ProCurve web site.*)
MAC Lockdown/Lockout	• MAC Lockdown enables the permanent assignment of a MAC address and VLAN to a specific port on the switch. • MAC Lockout causes the switch to drop any traffic to or from the specified MAC address(es). (Refer to: Chapter 9, "Configuring and Monitoring Port Security" in the *Access Security Guide*—part number 5990-6024, October 2004—on the HP ProCurve web site.*)

Enhancement	Overview (Continued)
Secure Copy and Secure FTP	Enables use of a secure, encrypted SSH session for transferring files to or from the switch. (Refer to: Appendix A, "File Transfers" in the *Management and Configuration Guide*—part number 5990-6023, October 2004— on the HP ProCurve web site.*)

* To download switch documentation for software release I.08.*xx*, refer to "To Download Product Documentation:" on page 1.

Front-Panel Security	Provides the option for enabling or disabling some of the functions of the Reset and Clear buttons on the switch's front panel. This feature also provides the ability to disable password recovery for situations requiring a higher level of security. (Refer to: Chapter 2, "Configuring Username and Password Security" in the *Access Security Guide*—part number 5990-6024, October 2004— on the HP ProCurve web site.*)
Auto-MDI-X manual mode	Provides CLI commands for changing the cable-configuration support on the switch's copper ports. The options include auto-MDIX (the default), MDI, and MDI-X. This also allows the manual configuration of port speed. (Refer to: Chapter 10, "Port Status and Basic Configuration" in the *Management and Configuration Guide*—part number 5990-6023, October 2004— on the HP ProCurve web site.*)
Flow sampling with sFlow	Adds sFlow as a flow-sampling method for use with applicable network management software. (Refer to the documentation provided with your network management software.)

* To download switch documentation for software release I.08.*xx*, refer to "To Download Product Documentation:" on page 1.

Release I.07.64 Enhancements

Boot ROM update

This release (and all subsequent releases) include a Boot ROM upgrade facility. If, during boot, it detects a version 7.*xx* or a version 8.02 Boot ROM image, it will upgrade the Boot ROM to version I.08.04. This Boot ROM reformats the Flash area to accept code images larger than 3 MB, and is required to be done prior to the next major release of software (expected winter, 2004).

No damage is done to the code stored in the secondary flash area. See the process description under Release I.07.58 below for details.

Release I.07.59 - I.07.63 Enhancements

Software fixes only; no new enhancements.

Includes the Boot ROM upgrade initially introduced in I.07.58 below.

Release I.07.58 Enhancements

Boot ROM update

This release (and all subsequent releases) include a Boot ROM upgrade facility. If, during boot, it detects a version 7.*xx* Boot ROM image, it will upgrade the Boot ROM to version I.08.02. This Boot ROM reformats the Flash area to accept code images larger than 3 MB, and is required to be done prior to the next major release of software (expected winter, 2004).

No damage is done to the code stored in the secondary flash area.

Once the user initially boots with this release (or later I.07.*xx* releases) the console screen will report that the Boot ROM is being updated:

```
Decompressing...done.


Initializing...

WARNING : This release includes a BootROM upgrade.
          Interupting this process will cause
          The switch to become unusable.

BootROM upgrade in progress...completed.
```

This process takes approximately 3 minutes to complete, including the normal time to boot up your switch. Note: previous versions of these release notes placed this Boot ROM upgrade facility in Release I.07.56.

Release I.07.53 - I.07.57 Enhancements

Software fixes only; no new enhancements.

Release I.07.52 Enhancements (Beta Only)

QOS Pass-Through Mode

Release I.07.52 introduced a new command to enhance the performance of line-rate traffic transfers through the 2800 Series switches. This feature should only be used in environments where Quality of Service (QoS) is not of major importance, but where lossless data transfers are key. This command essentially disables any discrimination of QoS queues for traffic, consolidating packet buffer memory to provide line-rate flows with no loss of data.

For more information, refer to the chapter titled "Port Status and Basic Configuration" in the *Management and Configuration Guide* for your switch (October 2004 version, or later). To download the latest version of switch documentation, refer to "Downloading Switch Documentation and Software from the Web" on page 1.

Release I.07.51 Enhancements

Software fixes only; no new enhancements.

Release I.07.50 Enhancements

Port Trunking

New Maximum for Number of Ports in a Trunk

Trunk groups can now be configured with up to 8 ports per trunk. (Formerly, the switches allowed only 4 ports per trunk.) Also, you can now configure up to 24 trunk groups per switch. (Formerly, the switches allowed only 6 port trunk groups).

Restriction on Grouping of Ports in a Trunk with IP Routing Enabled

Trunk groups can generally be specified as any grouping of ports on the switch. However, if IP routing is enabled on the switch, all of the ports in a given trunk group must be in the same range of ports. These ranges are as follows:

- 1-12
- 13-24
- 25-36 (applies only to the Switch 2848)
- 37-48 (applies only to the Switch 2848)

For more information, refer to the chapter titled "Port Trunking" in the *Management and Configuration Guide* for your switch (October 2004 version, or later). To download the latest version of switch documentation, refer to "Downloading Switch Documentation and Software from the Web" on page 1.

Port Monitoring

In software releases prior to release I.07.50, port monitoring sent only inbound (ingress) traffic to the monitor. Beginning with release I.07.50, the Series 2800 switches will now also send outbound (Egress) traffic to the mirror port when port monitoring is enabled.

Release I.07.32 Enhancements

Software fixes only; no new enhancements.

Software Fixes in Release I.07.*xx* - I.08.*xx*

Release I.07.31 was the first software release for the HP ProCurve 2800 Series.

Release I.08.61

Problems Resolved in Release I.08.61

- **CLI (PR_1000214598) —** The switch does not accept the CLI command "spanning-tree 1 mode fast".
- **Config (PR_1000216051) —** Reloading a previously saved startup-configuration with command "stack join (mac address)" to a member switch of the IP stack breaks the membership of that same stack. Commander hangs with member "mismatched".
- **Web (PR_80857)** — A problem with IE4 and WebAgent. Recompiled the Web Agent with a new Java Development Kit (1.2 - was 1.1)

Release I.08.60

Problems Resolved in Release I.08.60

- **ACL (PR_1000207620) —** The switch sometimes incorrectly permits TCP and UDP traffic in spite of an ACL configuration.
- **CLI (PR_1000202435) —** When IGMP fast-leave is configured via the CLI, the configuration is not displayed with the "show configuration" command.
- **Config (PR_1000087886) —** The CLI will display error message "Value 1000-full is not applicable to port <*port num*>", when trying to download a startup-configuration with a Mini-GBIC module configured at 1000 full duplex.
- **Crash (PR_1000205768) —** "null" System Name in the Web user interface may crash with: "Software exception at lldpSysNameTlv.c:251 -- in 'mlldpCtrl', >task ID = 0x12dc88 -> ASSERT: failed".
- **Crash (PR_1000200341) —** In some cases a protocol or feature may not function correctly.
- **Crash (PR_1000208530) —** Unpredictable results
- **Crash (PR_1000201614) —** When the switch is set with a 16 character manager password within the setup menu, a 'Bus error' crash may occur.

- **DHCP Enhancement (PR_1000207639) —** DHCP Option 82 implementation (DHCP Tracker).
- **DHCP Relay (PR_1000207419)** — The DHCP Relay agent was disabled by default in earlier Version 8 releases. With this fix, the DHCP Relay agent is enabled by default, as it was in I.07 releases.
- **IP Helper/DHCP Relay (PR_1000197046) —** The switch may not handle "DHCP Inform" relay messages properly from the client, resulting in a failed transaction.
- **Management enhancement (No PR) —** Non-Persistent console terminal mode.
- **Other PR_1000209839) —** Memory corruption of dmaStats do to off array boundary error.
- **Other PR_1000200341 —** Added an exception handler to prevent a case where the system may hang.
- **Open VLAN (PR_1000210932) —** Open VLAN mode (Unauthorized VLAN) does not work with any Port-Security Learn-Mode.
- **RMON (PR_1000196477) —** When RMON thresholds in the switch are exceeded no trap is generated.
- **SNMP (PR_1000196170) —** Traps are not buffered before the IP stack is initialized, causing the possibility of missing some traps generated during startup.
- **SNMP (PR_1000212170) —** The Switch transmits Warm and Cold Start traps with an agent address of 0.0.0.0.
- **Testmode (PR_1000212159) —** Added the testmode command 'memWatch'
- **Web Enhancement (NO PR) —** RADIUS for the Web browser interface.
- **Web UI/Port Security (PR_1000195894) —** The Web user interface does not allow the user to select multiple ports when configuring port-security.
- **Web UI (PR_1000191635) —** The Port column may not be sorted correctly in all Web user interface screens.
- **Web UI (PR_93721) —** Scroll bar does not work in Web Status screen.
- **Web UI (PR_1000210110) —** Slow Web UI performance.

Release I.08.58

Problems Resolved in Release I.08.58

- **802.1s (PR_1000207608) —** After the root bridge is agreed, the non-root switch continues to send out BPDUs claiming to be Root, resulting in possible instability in the STP topology.

Release I.08.57

Problems Resolved in Release I.08.57

- **Port Hang (PR_1000212920) —** Unpredictable switching and LED behavior where one or more ports may cease to forward traffic.
- **SNMP (PR_1000190654) —** Some of the fault finder events in the SNMP traps list a 0.0.0.0 IP address in the URL.

Release I.08.56

Problems Resolved in Release I.08.56

- **Port Hang (PR_1000207174) —** Reduces or eliminates the occurrence of "port hang" issues, where one or more ports may cease to forward traffic and the LEDs display status may be incorrect.

Release I.08.55

Problems Resolved in Release I.08.55

- **CLI PR_82258** — **sh ip igmp** command shows blank lines inter-mixed within the displayed table.
- **CLI PR_1*3169** — 2800: "port-security learn-mode configured " is shown as "static" in CLI.
- **CLI PR_1*11958** — Add CLI command to configure the outbound queue (2 or 4 queue).
- **CLI PR_1*18700** — **Show ip route** "IP Route Entries" not centered in output.
- **Config PR_92346** — Unable to delete empty VLAN.
- **Crash PR_91463** — Displays a crash message similar to the following:

  ```
  Software exception at ip_util.c:413 -- in 'ifInfo', task ID = 0x143fb60
  ```

- **Crash PR_93791** — Displays a crash message similar to the following:

  ```
  Software exception at bcmHwFeatures.c:108 -- in 'mAdMgrCtrl'
  ```

- **Crash PR_1*1537** — Memory leak on 2848, fatal exception in malloc_else_fatal().
- **Crash PR_1*5466** — Displays a crash message similar to the following:

  ```
  Software exception in ISR at bcm56xxDmaPoll.c:623 (top-of-tree)
  ```

- **Crash PR_1*20805** — Displays a crash message similar to the following:

  ```
  Software exception @ route.c:331 (attempting to free an already freed
  rtentry)
  ```

- **Crash PR_1*21853** — Displays a crash message similar to the following:

  ```
  Software exception @ radix.c:922, route does not exist in the tree
  ```

- **Help PR_98206** — Help file is not consistent with the actual usage.
- **Help PR_1*21395** — Help text incorrect for some ip icmp commands.
- **Hot Swap PR_1*18578** — Dual personality ports on 2800 and 2600 have hotswap out problem.
- **LACP PR_1*6404** — Dynamic LACP: Standby mode problem.
- **MCAST PR_1*6552** — Multicast pkts flooded on a VLAN w/ igmp enabled; hw & sw out of sync.
- **Menu PR_94905** — 2848 Configuration screen shows only 32 VLANs of configured 48.
- **Ping PR_1*19945** — Unable to ping through default gateway.
- **Routing PR_1*5961** — Layer 3 connectivity lost when address is moved across ASIC port group.
- **Routing PR_1*20234** — 2800 / I.07.53 / I.07.52: DD IGMP Squelches EIGRP when triggered by SSDP Packet.
- **SNMP PR_88716** — SNMP walk times out with large configuration.
- **SNMP PR_1*3361** — 'snmpv3' configtest failure.
- **Syslog PR_97016** — syslog word-complete options are not consistent between 6108 and 2800.
- **VLAN PR_90884** — VLAN PORT_UNTAGGEDMAP config not being set correctly.
- **VLAN PR_92413** — Broadcasting is forwarded outside the VLAN.
- **Web PR_1*1216** — Web UI, log error.
- **Web PR_1*12103** — Garbage in the Web UI Status | Overview screen.
- **Web PR_1*21294** — Stack Managenement Screen is blank.
- **Web PR_1*21867** — Web UI VLAN Configuration is broken.

Release I.07.68

Problems Resolved in Release I.07.68

- **Other PR_1000200341—** Added an exception handler to prevent a case where the system may hang.

Release I.07.67

Problems Resolved in Release I.07.67

- **Port Hang (PR_1000212920)** — Contains and automatically installs (after reboot) Boot ROM version I.08.05. This Boot ROM fixes the 'port hang' issue which can result in unpredictable switching and LED behavior.

Release I.07.66

Problems Resolved in Release I.07.66

- **Dead Port PR_1*207174 —** Reduces or eliminates the occurrences of the "dead-port" issue. "Dead-port" implies the following symptoms:
  - Some 2800 ports may not forward packets, while other ports continue to forward packets.
  - Link LED stays on when cable removed
  - Link LED stays off when cable attached.

Release I.07.65 (Not Released)

Problems Resolved in Release I.07.65

- **Other —** Added diagnostic code for isolating the "dead-port" issues at hot-site.

Release I.07.64

Problems Resolved in Release I.07.64

- **Boot ROM PR_1*202277** — Contains and installs the I.08.04 Boot ROM which fixes the 'port hang' problem when back-revving to software versions older than I.07.58 when running the I.08.03 Boot ROM. Also, improves on the 'reload hang' fix that is in I.08.03 by specifically addressing the 'boot hang' that can occur after the I.08.03 Boot ROM's patcher (the 'patcher' is the part of the software that installs the new Boot ROM) does a reboot.

Release I.07.63 (Beta Only)

- **Boot ROM PR_1*85713** — Introduced the I.08.03 Boot ROM patcher to address a 'boot hang' issue. This Boot ROM was later updated to I.08.04 (see Release I.07.64).

Release I.07.62 (Beta Only)

- **QOS PR_1*194538** — QOS-Pass -Through-Mode (introduced in I.07.52) does not work in software versions I.07.54-I.07.61

Release I.07.61

Problems Resolved in Release I.07.61

- **DHCP Relay PR_1*188635** — DHCP Relay sometimes preserves the incoming MAC SA in relayed packets.
- **HANG/WEB PR_1*190109** — Fix for cases where the Web interface would stop responding when the user enters the Configuration Screen. Once triggered, no access to the Web agent is possible from any client.

Release I.07.60

Problems Resolved in Release I.07.60

- **Auto-TFTP/Rebooting PR_1*20802** — Auto-TFTP causes constant rebooting, with no resulting crash files.
- **Auto-TFTP PR_1*187649 —** Auto-TFTP will not allow a forced download of software after Auto-TFTP is Disabled.

- **Hang PR_1*190119 —** Additional case of system hang found and addressed.

Release I.07.59 (Beta Only)

Release I.07.58 (Beta Only)

Problems Resolved in Release I.07.58

- **IGMP PR_1*06552 and 1*20234 —** The switch floods multicast packets on a VLAN when IGMP is enabled, due to h/w & s/w MAC tables being out of sync.
- **TELNET PR_1*19573 —** Switch reboots when telnet is disabled and port 1506 accessed. The switch produces no crash-log.
- **Web PR_89899 —** In the Web UI, port statistic counters are overwriting one another.
- **IGMP/EIGRP PR_1*20234 —** With IGMP enabled the switch drops EIGRP packets (when triggered by receiving an SSDP packet).
- **VLAN PR_95593 —** The switch will not allow the user to delete a VLAN that contained a mini-GBIC port that was removed.
- **CLI/Config PR_1*01628 —** In the CLI, switch reports “Inconsistent value” error when adding ports to a VLAN.
- **Hot-swap/Config PR_1*89150 —** Switch configuration is not properly updated on transceiver swap events

Release I.07.57 (Never Released)

Release I.07.56

Problems Resolved in Release I.07.56

- **Hang PR_1*87409, PR_1*6985 —** Symptoms vary, and can include any of the following:
  - Switch does not respond to pings, WEB access, Telnet, or Console access.
  - Pre-existing links prior to the “hang” still appear to transmit and receive data normally.
  - LED behavior on ports that establish link before the “hang” is erratic. For example, the LED remains lit even after dropping physical link.

- New links attempted after the “hang” do not transmit or receive traffic. Also that port's LED on the Switch 2800 remains dark, indicating no link while the neighbor device's LED may light up indicating that link is established.
- Front panel LED Mode, Reset, and Clear buttons, may not function properly.
- CPU-dependent features such as STP may not function properly.

A power cycle of the switch has been the only way to relieve these “hang” symptoms. Since the switch agent does not respond and the front panel buttons may not respond, it may be necessary to unplug and re-plug the power cable in order to reset the switch.

Release I.07.55 (Beta Only)

Problems Resolved in Release I.07.55

- **Crash PR_1*20824 —** Displays a crash message similar to the following:

```
SubSystem 0 went down: 01/02/90 22:33:36 NMI occurred: IP=0x003164b0
MSR:0x0000b032 LR:0x003164d4 Task='tDPC' Task ID=0x1ad2440 cr:
0x28000080 sp:0x01ad2380 xer:0x00000000.
```

- **Flow Control PR_98957 —** The switch honors PAUSE (flow control) frames that it receives, but it does not generate them.
- **Show Mac PR_82086 —** The CLI command **show mac** < *mac-address* > does not work.
- **OpenSSL/crash PR_1*12823 —** OpenSSL bus error vulnerability.

Release I.07.53 (Beta Only)

Problems Resolved in Release I.07.53

- **Crash PR_1*3390 —** Memory leak causing crash `sw_malloc.c:141` in snmpevt task.
- **Crash PR_1*13156 —** Master crash in memory system - memPartFree. The specific crash symptoms can vary widely.
- **RMON PR_1*11690 —** The switch does not send RMON trap PDUs.

Release I.07.52 (Beta Only)

Problems Resolved in Release I.07.52

- **GVRP PR_1*5082 —** Vague error message (`commit failed`) when trying to add more than the maximum number of allowed VLANs.
- **Performance PR_1*11958 —** Enhancement: Added the **qos-passthrough-mode** configuration option to the CLI to configure the number of outbound queues to use. Refer to "QOS Pass-Through Mode" on page 18.
- **Trunking PR_1*5962** — Unable to form LACP dynamic trunk across ASIC port groups without routing enabled.
- **sysUptime PR_1*4025 —** sysUptime wraps in approximately 49 days.
- **Web PR_1*4111 —** The Stack Management view has a scroll problem.
- **Web PR_1*3580 —** The web interface allows broadcast and multicast destination addresses.
- **Web PR_1*7144 —** VLAN Configuration Help link is not available.

Release I.07.50

Problems Resolved in Release I.07.50

- **CLI PR_97671 —** If the number of max-vlans is greater than 15 and the user tries to add new vlan the Switch reports `Commit failed`. In the Web user interface the Switch reports

  ```
  An error was encountered while attempting to add the VLAN entry.
  ```

  The message is changed to:

  ```
  Maximum number of VLANs (max-vlans) has already been reached.
  ```

- **CLI PR_1*3517 —** Counters. Various, related issues:
  - ifInDiscards (RX drops in the menu interface) includes outbound drops; fixed to display only true inbound drops.
  - ifOutDiscards does not report out-bound drops; fixed to display true outbound drops previously shown on ifInDiscards.
  - dot1dtpPortInDiscards includes outbound drops; fixed to display only inbound discards.
  - ipInDiscards includes outbound drops; fixed to show only inbound IP based discards.
- **Crash PR_95525 —** Various crashes, including:

  ```
  Bus error: HW Addr=0xe1f08796 IP=0x003a51b4 Task='mInstCtrl'  Task
  ID=0x1767af8 fp: 0x00000006 sp:0x01767988 lr:0x003979a4
  ```

- **Crash PR_1*2979 —** Software exception at rstp_port_role_sm.c:44 -- in mRstpCtrl.

- **GVRP PR_1*3124 —** Uncertain error message when trying to add more than max VLANs.
- **Port Monitoring PR_1*3540 Enhancement —** Add Egress (output) port monitoring.
- **RSTP PR_1*1612 —** Under some circumstances a port may take approximately 30 seconds to go into Forwarding state.
- **Services PR_1*3867 —** ICMP Redirects never age. Causes any incoming or outgoing agent communications such as ping, TELNET, Web, SNMP, etc. to fail with a message similar to the following:

  ```
  HW Addr=0x000-0000-0 IP=0x0-02a22d8 Task='tNetTask' Task ID=0xe2e740.
  ```

- **Trunks PR_1*3530 —** Enhancement: Increase the limit on trunks and ports per trunk to:
  - Up to 24 trunks, total; and
  - Up to 8 ports per trunk

  Refer to "New Maximum for Number of Ports in a Trunk" on page 19.
- **Web/IP Stack Management PR_92826 —** With an eight switch IP Stack Manangement stack, management of the switches with the Web interface can cause the commander switch to crash or hang. If the user selects options too quickly or moves from one option to another the Web user interface may freeze and become unresponsive. The Commander Switch may also crash with a Bus Error. Also, TELNET and Console interfaces may become unresponsive.
- **Web/IP Stack Management PR_97323 —** In the Web user interface the images displayed for the stack members are not correct.
- **Web PR_98500 —** Clicking on tabs in a certain order causes the browser window to close (terminate).
- **Web/SSL PR_98918 —** When creating an SSL certificate the Organization name and unit are switched in the web user interface display. Emphasis: This is only a display issue.
- **Web PR_81848 — The [Clear changes]** button does not work for the Default Gateway or VLAN selections
- **Web PR_82199 —** VLAN port modification shows misleading mode. In the Configuration - VLANs - Modify page, select a port, then set the "mode" modify pull-down menu to "tagged". Select another port. The "mode" pulldown field remains set to "tagged", which is misleading and incorrect, in general.
- **Web PR_97407 —** Port security error message is unclear with mac lockdown. The user interface may report "**Unable to add new MAC Address. MAC entry is either a multicast, broadcast or NULL address.**" when, in fact, the MAC address the user is specifying is locked down or locked out.
- **Web PR_1*452 —** Resetting the Switch leads to the URL **aol.co.uk**.

- **Web PR_90858 —** VLAN Name text field won't clear after 12 characters are entered.
- **Web PR_1*1702 —** Sometimes clicking on the **[Apply]** button on the Configuration/Monitor Port screen results in the message **Not enough params specified**.
- **Web PR_92078 —** After making changes under the Device Features tab, the page never fully loads.
- **Web PR_82039 —** If the user selects GVRP mode, selects a port, and then selects nothing as an option for the port mode, all ports below the selected port disappear. This does not affect the switch configuration.

Release I.07.32

Problems Resolved in Release I.07.32

- **Command Line Interpreter PR_95284** — A too long MAC addresses in a port-security CLI command results in:

  ```
  Software exception at exception.c:345 -- in 'mSess1', task ID = 0x141ae70
  -> Memory system error at 0x131b5a0 - memPartFree
  ```

  Here is an example command that would have crashed Version I_07.31:

  port-security 1 learn-mode static address-limit 1 mac-address 0800000000010000000

- **SSH PR_96648 —** CERT Advisory CA-2003-24: OpenSSH vulnerability. Fix implemented. For details, see CERT Advisory CA-2003-24 and associated vulnerability note “VU#333628” at http://www.cert.org/advisories/CA-2003-24.html.
- **System Log PR_95689** — Excessive Time Sync entries when using a Timep or SNTP server. The system software needed to be adjusted to properly keep synchronized with a configured SNTP server. In earlier versions of software, this resulted in an excessive number of Time Sync entries in the event log. This only applies to the 2800 Series switches running I_07.31 software.

Known Software Issues and Limitations

Issues

None at this time.

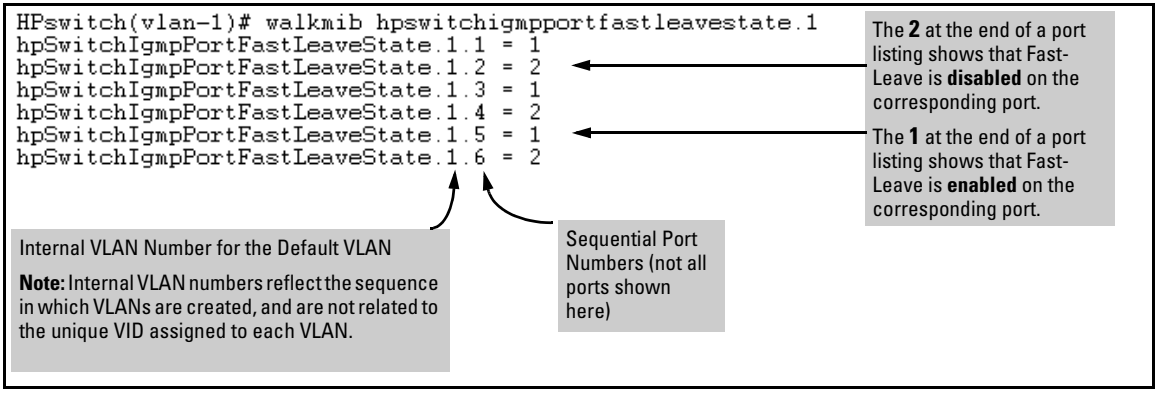
Limitations

Displaying the Fast-Leave Setting on a Port

Use the **walkmib** command, below, to display this setting for all switch ports or the ports on a specified VLAN.

Syntax:

walkmib hpSwitchIgmpPortFastLeaveState<.*vlan number*>



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