Lucent Technologies
Bell Labs Innovations

Release Notes Supporting
Cajun P220, P550, and P550R Switches

Software Release 4.0.1

November 1999

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Release 4.0.1 Notes Supporting the Cajun P220, Cajun P550, and Cajun P550R Switches

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Chapter 1 Read Me First

This section of the Release Notes Supporting the Cajun P220 and Cajun P550 family of switches contains information that is crucial to know before proceeding to install or use the Cajun switch. Please review the following release notes before continuing to the Overview section.

> **CAUTION:** Release 4.0.1 embedded software requires a **MINIMUM** of **16 MB DRAM** (Dynamic Random Access Memory) to run on a Cajun P550 Layer 2 supervisor module. **BEFORE upgrading**, ensure that the switch meets this 16 MB DRAM requirement. A memory upgrade is not required for a Cajun P550 Layer 3 supervisor module, or the Cajun P220.

CAUTION: Release 4.0.1 introduces a new ASCII configuration file format that replaces the traditional binary (*.cfg) files used to store and restore saved configurations. You must save your binary configuration before upgrading the switch to Release 4.0.1 or rebooting the switch for the first time using Release 4.0.1. For information about saving your binary configuration, refer to the "Installation" section of these release notes.

CAUTION: When making configuration changes to the switch, explicitly save changes by copying the running configuration to the startup configuration to ensure that the changes persist after the switch is restarted.

Chapter 2 Overview

This set of release notes supports the Cajun P220, Cajun P550, and Cajun P550R switches. For detailed information about your product, refer the basic set of user documentation. These release notes are intended to get you up and running as quickly as possible. The following topics are covered:

- Read Me First

- Overview

- New Features

- Product Binaries

- Installation

- Problems and Workarounds

- Functional Restrictions

- Bug Fixes

- Additional Undocumented Commands

Chapter 3 New Features

This section covers features specified for Release 4.0.1 of the Cajun P220, Cajun P550, and Cajun P550R switches. All supporting documentation is available from the Lucent Technologies Web site at *HTTP://pubs.lucentctc.com.*

The Cajun P550R switch, which supports Layer 3 technology, contains features that are not available in the Layer 2 Releases of the switch.

The following new features are available in Release 4.0.1 through the Enhanced Command Line Interface or the Web Agent:

- VTP eavesdropping (Cisco compatibility)

- LDAP Release 3 client necessary for RealNet Rules support

- Support for the following MIBs:

    - Policy capabilities MIB (proprietary)

    - RIP v1/v2 (RFC1724)

    - OSPFv2 (RFC1850)

    - IGMP – Internet Group Management Protocol MIB (draft-ietf-edmr-igmp-mib-12.txt)

    - IP Interface (proprietary)

    - IP Forwarding/Route Table (RFC2096)

    - IP ARP (RFC2011)

    - DVMRP (draft)

    - AppleTalk (RFC1243)

    - IP Access List (proprietary)

    - IPX Interfaces (proprietary)

- VRRP (Virtual Redundant Router Protocol, RFC 2338)

- Multiple configuration images – Multiple configuration files may be stored in NVRAM and loaded into the switch at a later date

- IPX Multinetting

- ASCII text configuration files with upload/download

- Redundant backplane support for Cajun P550R switches

- SNTP (Simple Network Time Protocol)

- AppleTalk Routing

- Hexadecimal addressing – subnet masks may be represented by a hexadecimal value

- Access lists

    - Source and destination IP address wildcarding and TCP/UDP ranges

    - TCP established connection filtering

- Configuration scripting via command line execution

Additional Undocumented Features

Features in this section are not documented in the released product documentation.

BOOTP/DHCP Relay Gateway

You can Enable or Disable the BOOTP/DHCP Relay Gateway from the Enhanced CLI in Interface mode using the command '[no] ip bootp-dhcp gateway'. From the Cajun Switch Web Agent, this setting is located in the IP Interfaces dialog box. To open the IP Interfaces dialog box, in the IP Configuration section of the Web Agent, click Interfaces. The default for this parameter is Disable.

This parameter affects how the router chooses a source interface for the reception of BOOTP/DHCP requests received on a VLAN, as this source interface determines the value that is inserted by the router into the giaddr field and designates the IP subnet pool that the DHCP server uses to assign an address.

The source interface is determined as follows:

Table 1-1: Source Interface Determination: BOOTP/DHCP Relay Gateway

Number of Interfaces on VLAN	Number of Interfaces with Parameter Enabled	Source Interface
1	N/A	The interface itself.
1	0	The first UP interface found.
1	1	Preferred interface if UP; otherwise, first UP interface found.
1	1	First preferred UP interface found; otherwise, first UP interface found.

Chapter 4 Product Binaries

The following table shows the binary files that contain embedded software for the Release 4.0.1 Cajun P220, Cajun P550, and Cajun P550R switches.

Table 1-2:   Product Binary Files

Type of Switch	Binary File
Cajun P220	m2200_v4.0.1.bin
Cajun P550	m5500_v4.0.1.bin
Cajun P550R	m5500r_v4.0.1.bin

Chapter 5 Installation

> CAUTION: Release 4.0.1 embedded software requires a **MINIMUM** of **16 MB DRAM** (Dynamic Random Access Memory) to run on a Cajun P550 Layer 2 supervisor module. **BEFORE upgrading**, ensure that the switch meets this 16 MB DRAM requirement. A memory upgrade is not required for a Cajun P550 Layer 3 supervisor module, or the Cajun P220.

NOTE: Release 4.0.1 introduces a new ASCII configuration file format that replaces the traditional binary (*.cfg) files used to store and restore saved configurations. Before upgrading the switch to Release 4.0.1, review the Installation section of these release notes.

The following memory upgrade kits are available through your local sales representative:

Table 1-3:   Module Descriptions

Description	Model Number
16 MB Memory Upgrade Kit	M5500-MEM16
32 MB Memory Upgrade Kit	M5500-MEM32

Use the following procedure to upgrade from Release 3.1 to Release 4.0.1 of the Cajun P220, Cajun P550, or Cajun P550R switch. For more detailed installation procedures, refer to the *Cajun P550/P220 Switch Installation Guide*.

Downgrading to a Previous Release

1. In the **CLI Configuration** section of the Web Agent, click **Config File Management**. In the Configuration File Management dialog box, save your Release 4.0.1 Running Configuration (running.txt) to a TFTP server for potential later use.

2. From the Release 4.0.1 Enhanced CLI, clean the current configuration by issuing the `nvram init` command.

3. Configure the switch to select the APP that contains the previous code release.

4. Reset the switch.

5. Use the CLI `setup` command to configure the switch.

6. Restore the binary configuration files of the release (3.1 or previous) you want to restore. **These configuration files do not reflect any changes you made to the running configuration while using Release 4.0.1.**

Problem: Release 4.0.1 of the Cajun switch contains new range-checking procedures that may be reasonably more restrictive than those of previous releases.

Workaround: If you have a parameter in 3.1 that is outside the 4.0 range, it will be noted in the Script Log File. After the second reboot the switch, check the Script Log File to find out if any errors occurred as the script executed. To check the Script Log File, click **Script Log File** in the **CLI Configuration** section of the Web Agent. If errors were found, scroll up to find the particular error message. If you prefer to use the Enhanced CLI, at the system prompt, type: `show file logfile.txt`.

NOTES:

- Some of the associated CLI command incorrectly list "Multilayer" and "3Com". These are not supported by the Cajun P550 48-Port 10/100 Media Module (M5548E-100TC).

- In Release 4.0.1 of the Cajun switch, the Web Agent provides a new set of dialog boxes in which you can:

    - View startup and running configuration files

    - View script execution log files

    - Copy and manage configuration files

Ensure that you copy configuration files to a TFTP server or other storage location using the Configuration File Management dialog box.

Upgrading from Release 3.1 or Previous Releases

Use the following procedure to upgrade the switch from Release 3.1 to Release 4.0.1.

NOTE: The Cajun switch does not support a direct upgrade to Release 4.0.1 from releases prior to Release 3.0. If your switch runs a release prior to 3.0, upgrade the switch to Release 3.0 or 3.1. Then, use the following procedure to upgrade the switch from Release 3.0 or 3.1 to Release 4.0.1.

7. Save your Release 3.1 binary configuration file:

    a. In the **Memory Subsystems** section of the Web Agent, click **TFTP Update**.

    b. In the **TFTP Server IP Address** field, enter the IP address of the TFTP server to which you will upload the 3.1 binary configuration file.

    c. In the **Filename** field, specify the destination path and filename of the configuration file. This is the TFTP server path.

    d. In the **TFTP Target Section** pull-down menu, select **Save Configuration (binary)**.

    e. Click the **Update** button.

    f. Click the **Status** button. View the **Transfer Completed** message in the System Status frame of the TFTP Update dialog box.

8. In the **Memory Subsystems** section of the Web Agent, click **TFTP Update**. In the TFTP Update dialog box, download V4.0 onto your switch (into either APP1 or APP2).

9. Configure the switch to choose the appropriate APP (that contains V4.0 code) at the next reboot.

10. Reset the switch to load the V4.0 image.

11. Refresh your Web browser window.

12. Verify the existence of the startup.txt file in NVRAM: in the **CLI Configuration** section of the Web Agent, click **Startup Config**.

NOTE: The script log file (a new feature of Release 4.0.1) records the output of scripts executed on the system, including the startup.txt file. Upon initial upgrade to Release 4.0.1, the script is generated but not run, and output is not initially recorded in the file.

13. In the **CLI Configuration** section of the Web Agent, click **Script Log File**. Scroll to the bottom of the Script Log File to find out if any errors occurred as the script executed. If errors were found, scroll up to find the particular error message.

Chapter 6 Problems and Workarounds

The following problems and workarounds generally apply to all Cajun switches unless expressly specified.

Cajun 48-Port 10/100 Media Module

Problem: Due to the positioning of the Cajun P550 48-Port Media Module (M5548E-100TC) as a high-density desktop connectivity module, the following functionality is not supported:

- Multi-layer and 3Com trunk mode

- Link aggregation (hunt groups)

- Port mirroring

- 3Com mapping table selection

- Flow control setting of "Enable with Aggressive Backoff"

- PACE priority mode

- Spanning tree mode (disabled by factory default; enabled in other cases)

- Port statistics: intra-BCM5308 unicast frames not reflected

Additionally, flow control and rate limiting available only on a per-module basis

Workarounds:

- If link aggregation is required over a 10/100TX Link, use a Cajun P550 20-port Module (M5520-100TX) or a Cajun P550 Layer 3 12-port Copper Module (M5512R-100TX).

- If a port is inadvertently configured to use Multilayer tagging, reconfigure the port to use either Clear or IEEE 802.1Q tagging. To reconfigure the port from the Enhanced CLI, enter the following command at the system prompt:

```
set port trunking-format {<mod-num>|<mod-port-range>}[...[,]{<mod-
num>|<mod-port-range>}] { clear | ieee-802.1Q}
```

If a port is inadvertently configured to use 3Com tagging, use the following procedure:

1. Reconfigure the port to use either Clear or IEEE 802.1Q tagging.

2. Copy (Save) the Running-Config to the Startup-Config.

3. Reboot the switch.

NOTES:

- 3Com VLT Tagging is not supported but can be enabled on the Cajun P550 48-port Media Module's (M5548E-100TC) internal switch ports by using the Web or CLI management interface.

- The Cajun P550 48-port Media Module (M5548E-100TC) has been optimized for desktop connections. Spanning Tree topology change convergence time can be lengthy. This could lead to loss of connectivity and/or wrongful flow of data.

Command Line Interface

The command `"set vlan <vlan-id> <port>"` is used to bind additional ports to a VLAN if trunking is enabled on that port. To set the port default VLAN for a port, use `"set port vlan {<mod-num>|<mod-port-range>}[...[,]{<mod-num>|<mod-port-range>}] <vlan-id>"`.

Cajun DocServer

NOTE: Release notes for the Cajun DocServer incorrectly excludes mention of the P550 platform. Both the Cajun P550 and P220 platforms are supported.

DVRMP

NOTE: The Cajun P550R Switch may lose a small number of DVMRP neighbor-to-neighbor probe messages which may cause multicast routing instability under heavy loads.

Front Panel Display

Problem: The 'lastlink' application on the front panel display does not work on the Cajun P220FE or P220G.

Workaround: Currently, no workaround is available.

Hardware

Frames Transmitted with CRC Errors

For the Cajun P550 20-port Module, Model M5520-100TX (P/N 311-0020-000: Revision Level A or B), and the Cajun P550 12-port Module, Model M5512R-100TX, a temperature sensitivity problem has been found when operating at 10Mbps. This sensitivity will result in the port transmitting frames with CRC errors. These frames, since they have CRC errors, are then dropped by the receiving station. Note that this problem only occurs at 10Mbps. 100Mbps operation is not affected.

Software Release v1.0.17 (or later) has implemented a new configuration that disables the power saving mode of the Phy chip. Disabling the power saving mode has the effect of moving the operational temperature of the part past the problem range. Testing this software configuration is 100% successful in resolving the error.

The software configuration command is only available from the CLI. It is saved in NVRAM. Users should only disable the power saving mode for ports that are experiencing this problem. Disabling the power saving mode for parts that are operating at a lower temperature than the problem range may accidentally *raise* the temperature into the problem range. In **legacy-cli mode**, use the following command to disable the power saving mode for ports:

```
Cajun> port set DisablePowerSave <slot>.<port> on
```

NOTE: To enter legacy mode, type `legacy-cli` at the command prompt. To return to the Enhanced CLI from legacy mode, type `exit` at the command prompt.

Hot Swap Modules

Hot swapping modules may cause SEPROM and SMAC panic messages to appear in the event log. These messages are for informational purposes only and should be ignored.

Loopback Tests

Loopback tests on ports may fail when there is traffic present on the link at start-up.

M5520-TX Loopback Tests During Cold Start

Occasionally M5520-TX (P/N M5520-100TX) boards with a Quality Phy will fail loopback tests when the board initially is started. The problem corrects itself as the board warms up.

M5520-TX Auto-negotiation with Xircom Adapter Cards

M5520-TX (P/N M5520-100TX) boards manufactured with a Quality Phy do not autonegotiate with Xircom brand adapter cards. If you are having this problem, disable auto-negotiation on the affected ports, and set the port speed and duplex state manually.

Oversized Packets

Oversized packets are not counted in itemized statistics if the packet size is between 1519 and 1548 bytes.

Short Cables May Cause Auto-negotiation Problems

You may experience difficulties with auto-negotiation between some releases of the 10/100Base-TX Module (M5510-100FX, M5520-100TX, M5510R-100FX, M5512R-100TX) and adapter cards using physical interfaces manufactured by National Semiconductor. The symptom is loss of connectivity. You can address this problem by either disabling auto-negotiation, or using a patch cable longer that 5 meters. Use the following Enhanced Command Line Interface command in **legacy mode** to correct the situation:

```
Cajun> port set NationalPhyMode <slot>.<port> enable
```

NOTE: To enter legacy mode, type `legacy-cli` at the command prompt. To return to the Enhanced CLI from legacy mode, type `exit` at the command prompt.

NOTE: The factory default for ports now sets the National Phy mode to enabled.

Intelligent Multicasting

Problem: Intelligent Multicasting can block protocols to non-multicast routers. If you have enabled Intelligent Multicasting and configured a VLAN attached to one or more non-multicast routers or multicast-capable endstations, Intelligent Multicasting will configure router ports where multicast-enabled routers reside. These multicast router ports are necessary to allow all multicast packets to the adjacent multicast routers. Non-multicast enabled routers will not be considered router ports, and will not receive multicast traffic for which an Intelligent Multicast session was created. The problem can arise when multiple IP multicast addresses map to the same multicast MAC address, resulting in protocol packets not being sent to the adjacent non-multicast enabled routers.

EXAMPLE:

The unicast routing protocol in use on all connected routers is OSPF, and all ports are on the same VLAN. An endstation joins the IP multicast group 226.128.0.5 on port 1. The MAC address for the group is 01:00:5E:00:00:05. IGMP snooping creates a session for this MAC address, with port 1 as the client port. There is a non-multicast OSPF router attached to port 2. OSPF uses the IP multicast link-scoped group 224.0.0.5, which also maps to a MAC address of 01:00:5E:00:00:05. Because port 2 is not a router port, and it is not part of the 01:00:5E:00:00:05 session, the switch will only pass OSPF messages out port 1.

Other protocols, such as the Service Location Protocol (RFC 2608), use 224.0.1.22 and 224.0.1.35, which can be blocked by endstations joining sessions that map to the same MAC address.

Workaround: Make certain that all ports connected to a router are configured as router ports to ensure that all router-to-router messages will not be blocked. If other non-router protocols such as the Server Location service are in use, create static sessions as needed. Also, do not create static sessions that will conflict with the protocols in use on your network. For a complete list of internet multicast addresses recognized by the IANA, go to http://www.isi.edu/in-notes/iana/assignments/multicast-addresses.

NOTE: By default, the default "Rate Limiting" state for 10/100 Megabit ports is **Enabled**, and multicast traffic is rate-limited (to 20%) on 10/100 Megabit ports. When transmitted from these ports, multicast traffic is rate-limited unless Intelligent Multicasting is enabled. If Intelligent Multicasting is enabled, the multicast traffic for which the Intelligent Multicast session was created will not be subject to rate limiting unless the rate limiting state is set to **Enabled (all multicast included)**. If you do not want to enable rate limiting of multicast traffic on a port, either 1)Enable Intelligent Multicasting, or 2) Disable Rate-limiting on the port.

OSPF

Problem: Upgrading the switch from a Release 3.1 or other previous release to Release 4.0.1 may cause the loss of your virtual link configuration.

Workaround: After upgrading and resetting the switch, view your running configuration to ensure that virtual links are intact. (To view your running configuration, click **Running Config** in the CLI Configuration section of the Web Agent.) If the virtual link configuration is lost, reconfigure the virtual links.

NOTES:

- When the Cajun P550 first boots up as an ABR or ASBR, it may send an ASBR advertisement for itself. This advertisement is later flushed by the system.

- When changing the OSPF Router ID, the Cajun P550R does not immediately flush the advertisements with the original Router ID. Instead these advertisements will be flushed when they are aged from the database.

- When a virtual link is created on the Cajun P550R router, the router cannot detect if the remote router is an ABR to area 0.0.0.0.

- There may be a loss of Web connectivity for about 10 seconds during LSA updates in a large OSPF network.

Piggyback Ports

NOTE: If a router port for intelligent multicasting is mirrored with a piggyback port, the piggyback port is listed instead of the router port.

RMON

NOTE: On Gigabit Ethernet port, under heavy utilization, 30 minute RMON stats always show utilization as 0.

SNMP

NOTES:

- Cold start traps cannot be transmitted out of inband interfaces when Spanning Tree is enabled.

- ipAddrTable does not display inactive interfaces (VLANs). An inactive interface occurs when there are no active ports on a VLAN.

- You cannot have more than 10 SNMP community strings per switch.

Spanning Tree

NOTES:

- The Cajun P550 48-port Media Module (M5548E-100TC) supports Spanning Tree for each group of eight ports at the internal switch port. Spanning Tree functionality is disabled by default. If per-port STP is required, it is recommended that you use a Cajun P550 20-port Module (M5520-100TX) or Cajun P550 Layer 3 12-port Copper Module (M5512R-100TX).

- Release 4.0.1 does not allow modification of the Spanning Tree and Fast Start features on the CPU switch port. When you modify all switch ports, the Spanning Tree and Fast Start features will be not be applied for the CPU switch port and the corresponding status line does not display.

- Spanning tree convergence may take longer than 30 seconds in complex networks after a topology change

Problem: When IEEE 802.1D spanning tree is used with hunt groups, the non-flood ports are shown as forwarding, even if the hunt group is blocked.

Workaround: The flood port of the hunt group shows the actual state of the spanning tree. View the flood port to see the actual state of the spanning tree.

PPP and Telnet

NOTES:

- A Telnet session to the serial port via PPP may time out during attempts to transfer large files, such as executable images, to a TFTP server over the same link. However, the file transfer is not terminated. An in-progress TFTP file transfer continues and ends only after the file transfer is completed.

- File transfer via TFTP over PPP links may terminate before completion if the dialin PC is used TFTP server.

- A new baud rate may take effect before the current PPP connection is terminated if the relevant baud rate change command is entered more than once resulting in termination of PPP connection. This requires re-establishment of a PPP connection.

Time Zones

Problem: The System Clock may be incorrect after an upgrade to 4.0.

Workaround: Check the System Clock and reset it, if necessary. For information about resetting the System Clock, refer to the *Cajun P550/P220 Switch Operations Guide*.

Problem: To support SNTP, the internal clock was changed from local time to GMT. The System Clock is now displayed by converting the internal representation (GMT) to local time by accounting for time-zone and summer-time hour configurations.

An upgrade routine has been added that changes the System Clock for all switches running 3.0 or higher, given the following assumptions:

- The switch is running Release 3.x,

- The time-zone is set properly in the 3.x image, and

- The time-zone defined supports the North American Daylight Savings Time rules.

If any of these assumptions are false, the System Clock will be incorrect.

Workaround: Check the System Clock and reset it, if necessary. For information about resetting the System Clock, refer to the *Cajun P550/P220 Switch Operations Guide*.

VLAN Issues

NOTE: If the Switch Port attribute Automatic VLAN Creation is set to Enabled, the Allow Learning attribute must also be set to Enabled.

Configuring VLANs

NOTES:

- In certain large configurations, the switch powers up very slowly.

- If you set a port's VLAN trunking mode to **Clear**, make sure not to change the VLAN Binding Type from the default value: **Static**.

- If you are using both the VLAN auto-learning feature and the Binding Type **Bind to Received or Bind to All**, make sure that you set the binding type before you set Auto-learn to **enable** or else the port may not be automatically added to the VLAN.

Duplicate VLAN Error Message

NOTE: When you add a VLAN and then refresh your browser page, you may receive an error message stating that the VLAN name is already in use.

IEEE 802.1Q Packets

Problem: When a tagged IEEE 802.1Q packet arrives on a port that is "bind-to-all" and the VLAN does not exist on the switch, the packet is forwarded on to the VLAN assigned to the port default VLAN for that port.

Workaround: To prevent unintended forwarding of unknown VLAN traffic to the port default VLAN, configure the port default VLAN to the "discard" VLAN. However, please note that automatic VLAN creation will not work if the port default VLAN is the "discard" VLAN, because the switch does not learn for this VLAN.

Chapter 7 Functional Restrictions

This section provides information on all of the functional restrictions of the Release 4.0.1 switch software. The functional restrictions are documented alphabetically by functional area (for example, VLANs, DVMRP, IP).

Hardware

Gigabit Ports Do Not Perform Auto-negotiation

Cajun Gigabit Ethernet ports operate at 1 Gbps, full duplex and have been widely tested for interoperability with other devices. Currently, these ports do not support auto-negotiation. If you connect a Cajun gigabit port to a device that supports auto-negotiation, you must disable auto-negotiation on the non-Cajun device to ensure proper operation.

Hot Swapping Modules

If your switch supports a large configuration file, such as the startup.txt file, inserting and configuring a new module while the switch is operational may cause console and telnet CLI sessions to pause momentarily.

Link Status

When a large number of VLANs or endstations are on a hunt group, it may take several seconds for the link status LED to change upon failure.

Ping

Unable to Ping the Inband Interface on a Layer 2 device. This problem does not occur with Layer 3 devices or with the Out of Band Interface.

Redundant Controller Support

In the event that the redundant switch controller fails, the switch will reset itself.

Auto-Negotiation

Some network cards do not auto-negotiate correctly with older releases of the 10/100TX modules. This is evidenced by the reception of CRC errors on the mirror port. To avoid this situation, disable auto-negotiation and manually configure the speed and duplex of the mirror port and network card.

Spanning Tree

IEEE 802.1D Spanning Tree

IEEE 802.1D spanning tree does not work with 3Com tags.

Web Configuration

The Disable Spanning Tree option available from the "spanning tree> vlan> port" the Cajun Switch Web Agent disables the port. To disable Spanning Tree mode for the port, use the "Modules and Ports > Switch Ports" Web page. When disabling the Spanning Tree for a port, BPDUs received on that port are ignored and BPDUs are not generated by the switch for that port. The port will move directly into the forwarding state from the disabled state. The port does not trigger a topology detection change.

Setting the Spanning Tree Mode

When the Spanning Tree mode is set to IEEE 802.1D, BPDUs are sent out ports in Clear (non-trunked) format even if the port has a trunking format (3Com, IEEE 802.1Q, or Dual-Layer) defined.

For ports that have a 3Com trunking format, the receiving end of the trunked port attempts to interpret the clear BPDUs as trunked packets. Consequently, these BPDUs are discarded at the receiving end. For Spanning Tree to function properly with 3Com trunked ports, the Spanning Tree mode should be set to **per-VLAN**. In per-VLAN Spanning Tree, there is one instance of Spanning Tree for each VLAN and the BPDUs are tagged with the VLAN ID, ensuring they are interpreted correctly on the receiving end.

> **NOTE:** Although this restriction does not apply to ports that use IEEE 802.1Q or Multi-Layer trunking modes, it is still recommended that you set Spanning Tree to per-VLAN when using trunked ports. This prevents an entire link from being blocked when there is a loop in one VLAN.

TFTP

File Naming Standard for Embedded NVRAM File System

> **NOTE:** All NVRAM files must use an 8.3 format for file names.

When downloading code to the NVRAM file system, use standard 8.3 file naming conventions (the default download file names do not use this convention).

TFTP Download Status Delay

It takes a few seconds before the Status button on the TFTP Download screen returns accurate information.

Chapter 8   Bug Fixes

The following bugs issued in Release 3.1 were fixed in Release 4.0.1.

- Switch crashes with a large number of OSPF LSA's (over 3000) on the L3 Switch. This has only occurred for one very large customer network and can be easily identified by the crash log submitted to technical support.

- Secondary IP Addresses on L3 switch do no display the correct index value via SNMP.

- You cannot specify a subdirectory when TFTP saving a configuration.

- The DHCP Proxy agent on the L3 Switch does not forward a NACK response from a DHCP server.

- Hung HTTP Processes can cause a loss of TCP Connectivity over time.

- The L2 Fault Tolerant switch may fail over to a Redundant Controller under heavy sustained traffic loads. If a subsequent incorrect failure is detected on the second Controller, networking problems could occur.

Chapter 9 Additional Undocumented Commands

The following sections list and describe commands that are not included in the *Cajun P550/P220 Switch Command Line Reference Guide* for Release 4.0.1.

> **NOTE:** Refer to the Lucent online documentation web site at HTTP://pubs.lucentctc.com, for an updated release of the *Cajun P550/P220 Switch Command Line Reference Guide* that has been updated after the release date.

Buffering Commands

Table 1-4 shows new and changed buffering commands added to Release 4.0.1.

Table 1-4:   Buffering Commands

Old Command	New Command	New Definition/Argument
`set buffering fabric-port <fabric-port-spec> [routing] {input|output} age-timer {160-to-320|640-to-1280}`	N/A	**<fabric-port-spec>** – fabric port specifier - #/#, #/FORE, #/#-#/# on P550/P550R, CPU,G1,G2,G3,G4,G5,G6,G7,A1 on P220G CPU,G1,A1,1-12,13-24 on P220.
`set buffering fabric-port <fabric-port-spec> [routing] {input|output} hipri-alloc {10|20|30|40|50}`	N/A	The switch must be rebooted in order for changes to this parameter to become effective. **<fabric-port-spec>** – fabric port specifier (#/#, #/FORE, #/#-#/# on P550/P550R) (CPU,G1, G2,G3,G4,G5,G6,G7,A1 on P220G) (CPU,G1,A1,1-12,13-24 on P220).
`set buffering fabric-port <fabric-port-spec> [routing] {input|output} hipri-service-ratio {3-to-1|99-to-1| 999-to-1|9999-to-1}`	N/A	**<fabric-port-spec>** – fabric port specifier - #/#, #/FORE, #/#-#/# on P550/R550R. CPU, G1, G2, G3, G4, G5, G6, G7, A1 on P220G. CPU, G1, A1, 1-12, 13-24 on P220.

Table 1-4: Buffering Commands (Continued)

Old Command	New Command	New Definition/Argument
`set buffering fabric-port <fabric-port-spec> [routing] {input|output} pri-threshold {1| 2|3|4|5 |6|7|all-frames-normal-priority}`	N/A	**`<fabric-port-spec>`** – fabric port specifier - (#/#, #/FORE, #/#-#/# on P550/P550R) (CPU,G1,G2, G3,G4,G5,G6,G7,A1 on P220G) (CPU,G1,A1,1-12,13-24 on P220).
`set buffering port <mod-port-spec> output age-timer {21|42|84| 168|336|672|1340}`	`set buffering port <mod-swport-spec> output age-timer {21| 42|84|168|336|672| 1340}`	Default: 168 **`<mod-swport-spec>`** – switch port specifier - (#/# on P550/P550R) (A1...A4 on P220G) (A1...A4, 1...24 on P220).
`set buffering port <mod-port-spec> output hipri-alloc {10|20| 30 |40|50}`	`set buffering port <mod-swport-spec> output hipri-alloc {10 |20|30|40|50}`	The switch must be rebooted in order for changes to this parameter to become effective. Default: 20 **`<mod-swport-spec>`** - switch port specifier - (#/# on P550/P550R) (A1...A4 on P220G) (A1...A4, 1...24 on P220).
`set buffering port <mod-port-spec> output hipri-service-ratio {1-to-1|3-to-1|7-to-1|15-to-1| 31-to-1|63-to-1|127-to-1|255-to-1|511-to-1| 1023-to-1|2047-to-1| 4095-to-1|8191-to-1| 16383-to-1|32767-to-1}`	`set buffering port <mod-swport-spec> output hipri-service-ratio {1-to-1|3-to-1 |7-to-1|15-to-1| 31-to-1|63-to-1| 127-to-1|255-to-1| 511-to-1|1023-to-1| 2047-to-1|4095-to-1| 8191-to-1|16383-to-1| 32767-to-1}`	Default: 1023-to-1 **`<mod-swport-spec>`** - switch port specifier - (#/# on P550/P550R) (A1...A4 on P220G) (A1...A4, 1...24 on P220).
`set buffering port <mod-port-spec> output pri-threshold {1|2|3|4|5|6|7| all-frames-normal-priority}`	`set buffering port <mod-swport-spec> output pri-threshold {1|2|3|4|5|6|7| all-frames-normal-priority}`	Default: 4 **`<mod-swport-spec>`** – switch port specifier - (#/# on P550/P550R) (A1...A4 on P220G) (A1...A4, 1...24 on P220).

Table 1-4: Buffering Commands (Continued)

Old Command	New Command	New Definition/Argument
`show buffering fabric-port [<fabric-port-spec> [...,<fabric-port-spec>]]`	N/A	**<fabric-port-spec>** – fabric port specifier - (#/#, #/FORE, #/#-#/# on P550) (CPU,G1,G2,G3,G4,G5,G6,G7,A1 on P220G) (CPU,G1,A1,1-12,13-24 on P220).
`show buffering port [<mod-port-spec> [...,<mod-port-spec>]]`	`show buffering port [<mod-swport-spec> [...,<mod-swport-spec>]`	**<mod-swport-spec>** – switch port specifier - (#/# on P550/P550R) (A1...A4 on P220G) (A1...A4, 1...24 on P220).

DVMRP Commands

Table 1-5 shows new and changed DVMRP Commands in Release 4.0.1:

Table 1-5:   DVMRP Commands

Old Command	New Command	New Definition/Argument
To Enable: `ip dvmrp interface type {broadcast|nonEncapsulatedTunnel|IPIPTunnel}` To Disable: `[no] ip dvmrp interface type`	N/A	A tunnel endpoint address must be set before a DVMRP interface is configured to be a tunnel. Use the `[no] ip dvmrp remote-tunnel-address <IP-address>` command to set the tunnel endpoint address.
To Enable: `ip multicast ttl-threshold <ttl-thresh>` To Disable: `[no] ip multicast ttl-threshold`	To Enable: `ip multicast ttl-threshold {0,127,255}` To Disable: `no ip multicast ttl-threshold`	**{0,127,255}** – The TTL (time-to-live) threshold.
`show ip dvmrp forwarding cache`	N/A	**System Supported**: P550R

IGMP Commands

Table 1-6 shows new and changed IGMP (Internet Group Management Protocol MIB, draft-ietf-edmr-igmp-mib-12.txt) commands in Release 4.0.1:

Table 1-6: IGMP Commands

Old Command	New Command	New Definition/Argument

To Enable:
`ip igmp process-leaves`
 	
To Disable:
`[no] ip igmp process-leaves`
	To Enable:
	`ip igmp process-leaves {0,1}`
	
	To Disable:
	`[no] ip igmp process-leaves`
		• **1** – Enables the processing of leave requests on an interface.
		• **0** – Disables the processing of leave requests on an interface.
		
		Use the **no** form of this command to set the command back to the default, which is **1 enabled**.

To Enable:
`ip igmp querier`
 	
To Disable:
`[no] ip igmp querier`
	To Enable:
	`ip igmp querier {0,1}`
	
	To Disable:
	`[no] ip igmp querier`
		• **1** – The interface is a group querier on the interface.
		• **0** – The interface is not a group querier on the interface.
		
		Use the **no** form to set the command back to its default, which is **0 not group membership querier**.
		
		This command is for IGMP release 1 only.

`N/A`	`show ip igmp interface`	Display IGMP multicast-related information for all IGMP interfaces. **Command Mode**: User **System Supported**: P550R

IP Commands

Table 1-7 shows new and changed IP Commands in Release 4.0.1:

Table 1-7: IP Commands

Old Command	New Command	New Definition/Argument

To Enable:
`arp <ip-address> <hardware-address>`
 	
To Disable:
`[no] arp <ip-address> <hardware-address>`
	N/A	**System Supported**: P550R

`clear ip route {<network> [<mask>] *}`	`N/A`	**System Supported**: P550R

Table 1-7: IP Commands (Continued)

Old Command	New Command	New Definition/Argument
N/A	`clear tcp all`	Clear all TCP connections that aren't in the listening state. **Command Mode**: Configuration
N/A	`clear tcp local <ip-address> <tcp-port> remote <ip-address> <tcp-port>`	Clear the TCP connection specified by the local IP address and port and remote IP address and port. **Command Mode**: Configuration

N/A	To Enable:
	`ip bootp-dhcp gateway`
	
	To Disable:
	`[no} ip bootp-dhcp gateway`
		Enable or disable the designation of this interface as the preferred receiver of BOOTP/DHCP requests received on a VLAN.
		
		This is useful with multinetted interfaces. If no multinetted interface has this parameter set to Enabled or is not UP, the router chooses an interface to receive the BOOTP/DHCP request.
		
		Command Mode: Interface
		
		System Supported: P550R

`ip max-arp-entries <value>`	To Enable: N/A To Disable: `[no] ip max-arp-entries`	The **no** form of this command restores the maximum number of ARP cache entries to the default, which is 16384. **System Supported**: P550R
`ip max-route-entries <value>`	To Enable: N/A To Disable: `[no] ip max-route-entries`	The **no** form of this command restores the maximum number of routes to the default which, is 16384. **System Supported**: P550R

To Enable:
`ip redirects`
 	
To Disable:
`[no] ip redirects`
	N/A	The default state is enabled, unless **VRRP** is configured.
		
		System Supported: P550R

`ip telnet inactivity-period <timeout>`	To Enable: N/A To Disable: `[no] ip telnet inactivity-period`	Use the **no** form of this command to restore the default, which is **900 seconds**, or **15 minutes**. **System Supported**: P550R
N/A	`show arp [<ip addr>][<if-name>][static]`	Display the Address Resolution Protocol (ARP) cache. This command is equivalent to the `show ip arp` command. • **ip-addr** – the IP address. • **if-name** – the interface name. • **static** – displays static arp information. **Command Mode**: User **System Supported**: P550R

Table 1-7: IP Commands (Continued)

Old Command	New Command	New Definition/Argument
`show ip arp [static]`	`show ip arp` **`[<ip-addr>]`** **`[<if-name>]`** `[static]`	This command is equivalent to the `show arp` command. • **`ip-addr`** – the IP address. • **`if-name`** – the interface name. **System Supported**: P550R
`show ip interface [<interface-name>]`	N/A	**System Supported**: P550R
`show ip traffic`	N/A	**System Supported**: P550R
`show udp statistics`	N/A	**System Supported**: P550R

IPX Commands

Table 1-8 shows new and changed IPX Commands in Release 4.0.1:

Table 1-8: IPX Commands

Old Command	New Command	New Definition/Argument
N/A	To Enable: **`ipx max-route-entries`** **`<max-route-entries>`** To Disable: **`[no] ipx max-route-entries`**	Specify the maximum number of IPX routes in the route table. Use the no form of the command to return to the default value of **2048**. If the maximum number of routes is decreased, the switch must be rebooted for the value to take effect. If the value is increased, the change occurs immediately. **`<max-route-entries>`** – the maximum number of routes that can appear in the IPX route table. The value must be in the range **1 to 10240**. The value you enter is rounded up to the nearest multiple of 256. **Command Mode**: Configuration **System Supported**: P550R

Table 1-8: IPX Commands (Continued)

Old Command	New Command	New Definition/Argument

`N/A`	To Enable:
	`ipx max-service-entries`
	`<max-service-entries>`
	
	To Disable:
	`[no] ipx max-service-`
	`entries`
		Specify the maximum number of IPX services in the service table. Use the **no** release of the command to return to the default value of **2048**.
		
		If the maximum number of services is decreased, the switch must be rebooted for the value to take effect. If the value is increased, the change occurs immediately.
		
		`<max-service-entries>` – the maximum number of IPX services that can appear in the service table. The value must be in the range **1 to 10240**. The value you enter is rounded up to the nearest multiple of 256.
		
		Command Mode: Configuration
		
		System Supported: P550R

`N/A`	To Enable:
	`ipx ping-default`
	`{novell|diagnostic}`
	
	To Disable:
	`[no] ipx ping-default`
		Set the type of IPX ping packet issued by the router when the `ipx ping` command is issued. Use the **no** form of the command to return to the default ping type; **novell**.
		
		• **novell** – transmits standard Novell pings.
		• **diagnostic** – transmits diagnostic request/response pings.
		
		Command Mode: Configuration
		
		System Supported: P550R

To Enable:
`ipx type-20-`
`propagation`
`{both|inbound|outbound`
`|disabled}`
 	
To Disable:
`[no] ipx type-20-`
`propagation`
	To Enable:
	`N/A`
	
	To Disable:
	`[no] ipx type-20-`
	`propagation`
	`{both|inbound|outbound|`
	`disabled}`
		• **both** – The interface accepts and forwards type 20 propagation broadcast packets. This is the default.
		• **inbound** – The interface only accepts type 20 broadcast packets.
		• **outbound** – The interface only forwards type 20 propagation broadcast packets to other network segments.
		• **disabled** – The interface does not accept or forward type 20 propagation broadcast packets.

LDAP Commands

Table 1-9 shows new and changed LDAP commands in Release 4.0.1:

Table 1-9:   LDAP Commands

Old Command	New Command	New Definition/Argument
`ldap debug <debug-level>`	`N/A`	Command removed from CLI.

`To Enable:`
`ldap producer-signal <producer-signal>`
 	
`To Disable:`
`[no] ldap producer-signal <producer-signal>`
	`N/A`	Command removed from CLI.

`To Enable:`
`ldap search-base <search-base-dn>`
 	
`To Disable:`
`[no] ldap search-base <search-base-dn>`
	`To Enable:`
	`N/A`
	
	`To Disable:`
	`[no] ldap search-base`
		Please note the change to the **no** form of the command.

`To Enable:`
`ldap server primary <ip-addr> [<port-num>]`
 	
`To Disable:`
`[no] ldap server primary <ip-addr> [<port-num>]`
	`To Enable:`
	`N/A`
	
	`To Disable:`
	`[no] ldap server primary`
		The default port is **389**.
		
		Please note the change to the **no** form of the command.

`To Enable:`
`ldap server secondary <ip-addr> [<port-num>]`
 	
`To Disable:`
`[no] ldap server secondary <ip-addr> [<port-num>]`
	`To Enable:`
	`ldap server secondary <ip-addr> [<port-num>]`
	
	`To Disable:`
	`[no] ldap server secondary`
		The default IP address is **0.0.0.0**.
		
		Please note the change to the **no** form of the command.

Logging Commands

Table 1-10 shows new and changed logging commands in Release 4.0.1:

Table 1-10: Logging Commands

Old Command	New Command	New Definition/Argument

To Enable:
`logging console`
`[{start|system|config|`
`temp|`
`resource|fan|service_p`
`ort|user_port|auth_fai`
`lure|`
`bridge_stat|switch_fab`
`ric|protocol}]`
 	
To Disable:
`[no] logging console`
`[{start|system|config|`
`temp|`
`resource|fan|service_p`
`ort|user_port|auth_fai`
`lure|`
`bridge_stat|switch_fab`
`ric|protocol}]`
	To Enable:
	`N/A`
	
	To Disable:
	`[no] logging console`
		Please note the change to the **no** form of the command.

To Enable:
`logging history`
`[{start|system|config|`
`temp|`
`resource|fan|service_p`
`ort|user_port|auth_fai`
`lure|`
`bridge_stat|switch_fab`
`ric|protocol}]`
 	
To Disable:
`[no] logging history`
`[{start|system|config|`
`temp|`
`resource|fan|service_p`
`ort|user_port|auth_fai`
`lure|`
`bridge_stat|switch_fab`
`ric|protocol}]`
	To Enable:
	`N/A`
	
	To Disable:
	`[no] logging history`
		Please note the change to the **no** form of the command.

To Enable:
`logging history size`
`{128|512|1024|2048`
 	
To Disable:
`[no] logging history`
`size`
`{128|512|1024|2048}`
	To Enable:
	`N/A`
	
	To Disable:
	`[no] logging history`
	`size`
		Please note the change to the **no** form of the command.

Table 1-10: Logging Commands (Continued)

Old Command	New Command	New Definition/Argument

To Enable:
`logging shutdown size`
`{16|32|64|128}`
 	
To Disable:
`[no] logging shutdown`
`size {16|32|64|128}`
	To Enable:
	`N/A`
	
	To Disable:
	`[no] logging shutdown`
	`size`
		Please note the change to the **no** form of the command.

To Enable:
`logging traps`
`[{start|system|config|`
`temp|resource|`
`fan|service_port|user_`
`port|auth_failure|`
`bridge_stat|switch_fab`
`ric|protocol}]`
 	
To Disable:
`[no] logging traps`
`[{start|system|config|`
`temp|`
`resource|fan|service_p`
`ort|user_port|auth_fai`
`lure|`
`bridge_stat|switch_fab`
`ric|protocol}]`
	To Enable:
	`N/A`
	
	To Disable:
	`[no] logging traps`
		Please note the change to the **no** form of the command.

OSPF Commands

Table 1-11 shows new and changed OSPF Commands in Release 4.0.1:

Table 1-11: OSPF Commands

Old Command	New Command	New Definition/Argument

To Enable:
`ip ospf`
`authentication-key`
`<password>`
 	
To Disable:
`[no] ip ospf`
`authentication-key`
	`N/A`	**System Supported**: P550R

`show ip ospf interface` `[<interface-name>]`	`N/A`	**System Supported**: P550R
`show ip ospf virtual-` `links`	`N/A`	**System Supported**: P550R

Policy Commands

Table 1-12 shows new and changed Policy Commands in Release 4.0.1:

Table 1-12: Policy Commands

Old Command	New Command	New Definition/Argument

To Enable:
`ip access-group`
`<access-list-name>`
`[default-action-deny]`
 	
To Disable:
`[no] ip access-group`
	`N/A`	There is no default.

To Enable: `ip access-list` `<access-list-name>` `<access-list-index>` `{permit|deny|fwd[1-8]}` `{<source-ip-addr>` `[<source-wildcard>]` `|any|host <source-ip-` `addr>}`	To Enable: **`[ip]` `access-list`** `<access-list-name>` `<access-list-index>` `{permit|deny|fwd1-8}` **`<protocol-id>{<source-`** **`ip-addr> <source-`** **`wildcard>|any|host`** **`<source-ip-addr> }`** **`[{lt|eq|gt|range}`** **`<port> [<port>]]`** **`{<dest-ip-addr> <dest-`** **`wildcard>	any	host`** **`<dest-ip-addr> }`** **`[{lt|eq|gt|range}`** **`<port> [<port>]]`** **`[established]`**	• **`<protocol-id>`** – name or number of an IP protocol. It can be one of the keywords eigrp, gre, icmp, igmp, igrp, ip, ipinip, nos, ospf, tcp, or udp, or an integer in the range 0 to 255 representing an IP protocol number. To match any Internet protocol (including ICMP, TCP, and UDP) use the keyword ip. • **`<dest-ip-addr>`** – number of the network or host to which the packet is being sent. Use a 32-bit quantity in four-part, dotted-decimal format. Use the keyword any as an abbreviation for a dest and dest -wildcard of 0.0.0.0 and 255.255.255.255. Use "host <dest-ip-addr>" as an abbreviation for a destination with dest-wildcard of 0.0.0.0.

To Disable:
`[no] ip access-list`
`<access-list-name>`
`[<access-list-index>]`
	To Disable:
	`N/A`
		• **`<dest-wildcard>`** – wildcard bits to be applied to the destination. Use a 32-bit quantity in four-part, dotted-decimal format. Place ones in the bit positions you want to ignore.
		• **operator** – (Optional) Compares source or destination ports. Possible operands include: **lt** = less than, **gt** =greater than, **eq**=equal, **neq** =not equal, and **range** =inclusive range.
		
		If the operator is positioned after the source and source-wildcard, it must match the source port.
		
		If the operator is positioned after the destination and destination-wildcard, it must match the destination port.

Table 1-12: Policy Commands (Continued)

Old Command	New Command	New Definition/Argument

N/A	`ip access-list -`
	`Continued from previous`
	`page`
		The range operator requires two port numbers. All other operators require one port number.
		• **port** – the decimal number or name of a TCP or UDP port. A port number is a number from **0 to 65535**.
		• **established** – for the TCP protocol only. Indicates an established connection. A match occurs if the TCP datagram has the ACK or RST bits set. The nonmatching case is that of the initial TCP datagram to form a connection.

N/A	`show [ip] access-group`	Display the current IP access group. **Command Mode**: User **System Supported**: P550R
`show ip access-lists` `[<access-list-name>]`	`show` **`[ip]`** `access-lists` `[<access-list-name>]`	The command description is unchanged.

Port Commands

Table 1-13 shows new and changed Port Commands in Release 4.0.1:

Table 1-13:   Port Commands

Old Command	New Command	New Definition/Argument
N/A	`show ethernet counters [{<mod-num>|<mod-swport-spec>}]`	Display ethernet interface statistics. • **`<mod-num>`** – specifies the chassis module number of the switch ports that are to have their ethernet statistics displayed. (Valid on 550 and 550R only) • **`<mod-swport-spec>`** – specifies a particular switch port whose specific ethernet statistics are to be displayed. If no `<mod-num>` or `<mod-swport-spec>` is specified then ethernet interface statistics is displayed for all ports on all modules in the chassis. If `<mod-num>` is specified then all switch ports on that module have their ethernet interface statistics displayed. If `<mod-swport-spec>` is specified that particular port's ethernet interface statistics are displayed. **Command Mode**: User
N/A	`show ethernet counters <mod-swport-spec> history <sample-interval>`	Display interface ethernet history samples. • **`<mod-num>`** – specifies the chassis module number of the switch ports that are to have their ethernet statistics displayed. (Valid on Cajun P550 and P550R only) • **`<mod-swport-spec>`** – specifies a particular switch port whose specific ethernet statistics are to be displayed. • **`<sample-interval>`** The history sample interval. If no `<mod-num>` or `<mod-swport-spec>` is specified then ethernet interface statistics is displayed for all ports on all modules in the chassis. If `<mod-num>` is specified then all switch ports on that module have their ethernet interface statistics displayed. If `<mod-swport-spec>` is specified that particular port's ethernet interface statistics are displayed. **Command Mode**: User

Table 1-13: Port Commands (Continued)

Old Command	New Command	New Definition/Argument
N/A	`show module counters [<mod-num>]`	Display the aggregate switch port statistics for a specified module or all modules on a Cajun P550 or P550R. • **mod-num** – Specifies the number of the module in the chassis for which aggregate switch port statistics are to be displayed. (Valid on Cajun P550 and P550R only) **Command Mode**: User
N/A	`show port physical[{<mod-num>|<mod-port-range>}[...,{<mod-num>|<mod-port-range>}]]`	Display the physical port configuration of the specified ports. • **mod-num** • **mod-port-range** **Command Mode:** User

SNMP Commands

Table 1-14 shows new and changed SNMP Commands in Release 4.0.1:

Table 1-14: SNMP Commands

Old Command	New Command	New Definition/Argument

N/A	To Enable:
	`snmp-server location <string>`
	
	To Disable:
	`[no] snmp-server location <string>`
		Set the system location string. Use the **no** form of this command to remove the system location string.
		
		<string> – the system location string.

Switch IP Commands

Table 1-15 shows new and changed Switch IP Commands in Release 4.0.1:

Table 1-15: Switch IP Commands

Old Command	New Command	New Definition/Argument
`set ip route {default|<dest-ip-addr> <mask>} <gateway-ip-addr>`	N/A	Default: The CLI searches for the matching interface as indicated by the gateway IP address and installs the default gateway on that interface.

Table 1-15: Switch IP Commands (Continued)

Old Command	New Command	New Definition/Argument
N/A	`set ip telnet inactivity-period <timeout>`	Specifies how many seconds a telnet session remains open with no activity. Setting it to **0** disables the timer so that sessions never close because of inactivity. The default is **900 seconds or 15 minutes**. `<timeout>` – the timeout period, in seconds. **Command Mode**: Configuration **System Supported**: P220, P550

System Commands

Table 1-16 shows new and changed System Commands in Release 4.0.1:

Table 1-16: System Commands

Old Command	New Command	New Definition/Argument

To Enable:
`ip http help server <url> <directory>`
 	
To Disable:
`[no] ip http help server`
	To Enable:
	`ip http help server {<url>|`**`ip <ip-addr>`**`} <directory>`
	
	To Disable:
	`N/A`
		ip <ip-addr> – the IP address.

`reload`	`N/A`	**Command Mode**: Privileged

UI Commands

Table 1-17 shows new and changed UI Commands in Release 4.0.1:

Table 1-17:   UI Commands

Old Command	New Command	New Definition/Argument
N/A	`ping <ip-addr> [<count> [<delay> [<size> [<timeout>[quiet]]]]]`	Check host reachability and network connectivity. • **`<ip-addr>`** – IP Address of the host to ping. • **`<count>`** – the number of ping attempts you want to perform with this operation. **The default is 5.** • **`<delay>`** – the number of milliseconds the switch waits between generating pings. **The default is 1.** • **`<size>`** – the size of the packet sent during a ping operation. **The default is 4.** • **`<timeout>`** – the number of seconds to wait for an ICMP reply. **The default is 2**. • **`quiet`** – specify this parameter to disable the display of the ping operation in progress. **Command Mode**: Privileged

Table 1-17: UI Commands (Continued)

Old Command	New Command	New Definition/Argument
N/A	`ping ipx <ipx-network.next-hop-node> [<count> [<delay> [<size> [<timeout>[quiet]]]]]`	Check the IPX host reachability and network connectivity. • **`<ipx-network.next-hop-node>`** – the IPX Address of the host to ping. IPX-network is a hexadecimal number between 1 and 8 digits long, and next-hop-node form is aa:bb:cc:dd:ee:ff. • **`<count>`** – the number of ping attempts you want to perform with this operation. The default is 1. • **`<delay>`** – the number of milliseconds the switch waits between generating pings. **The default is 1.** • **`<size>`** – the size of the packet, excluding the MAC, IPX and PING headers, sent during a ping operation. **The default is 256.** • **`<timeout>`** – the number of seconds to wait for a reply. **The default is 2.** • **`quiet`** – specify this parameter to disable the display of the ping operation in progress. **Command Mode**: Privileged **System Supported**: P550R
N/A	`show users`	Display a list of users who are currently logged into the switch. **Command Mode**: User