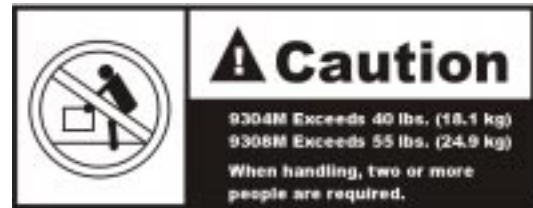


Read Me First

for the HP ProCurve Routing Switch 9304M and Routing Switch 9308M

Contents:

- Software Updates Are *Free!*
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- Module Installation
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Warning: Do not use the handles on the power supply units to lift or carry the routing switch.

Software Updates Are *Free!*



Help Us Help You...Register Now To Keep Up-To-Date on the Latest Software!

Hewlett-Packard provides *free* software updates on the HP ProCurve website. To automatically receive notice from HP via email of new software releases, just fill out and mail the postage-paid card attached to the TopTools CD package included with your routing switch. (Look for the CD sleeve with *Your Free Ticket to Proactive Networking* on the cover.)

To determine whether you have the latest software, and to access documentation and software updates on the web, go to HP's ProCurve website at

<http://www.hp.com/go/procurve>

Then click on **Free Software Updates** to access updates for ProCurve Routing Switch software or HP TopTools for Hubs & Switches software.

To load a new software image into your routing switch, see chapter 3, "Updating Software Images and Configuration Files", in the manual you received with the routing switch.

Note that the current HP ProCurve Routing Switch product manual and updates describing how to use any recently released software updates are also available on the above website (click on **Technical Support**, then **Manual**).

New Software Release 05.0.84 Is Now Available with the Following Features

- Border Gateway Protocol, version 4 (BGP4)
- Local Access Control for defining up to 16 user accounts
- Loopback Interfaces associated with IP addresses (instead of physical ports)
- Enhanced Supernetting, providing greater Content Addressable Memory (CAM) capacity
- IP Load Sharing Over Default Routes
- Multiple Port-Based VLANs with a Single IP Interface
- Increased Table Sizes for OSPF LSAs
- Commands for displaying system parameter defaults, listing and clearing web management sessions, implementing IP multicast and trunk port enhancements, displaying the running-config file
- Configurable page-display mode from User EXEC and Privileged Exec CLI levels
- Source IP Addresses Listed in SNMP Authentication Traps
- Automatic reduction in MAC table size if available memory is insufficient to support a table size requested by the system-max command
- Other features and software fixes

For more information, refer to *Release Notes for Version 05.0.84 of the HP ProCurve Routing Switch 9304M and 9308M Operating System*. This booklet is included with routing switches shipped from the factory (beginning mid-August, 1999), and is also available on HP's ProCurve website at <http://www.hp.com/go/procurve> (click on **Technical Support**, then **Manual**).

Module Installation

Caution

To avoid hardware damage during module installation, be careful to properly line up the edges of the module board with the guides built into the module slot on the chassis.

Getting Started

You can initially access the routing switch in either of the following ways:

- Via Telnet or FTP *through port 1 on the management module*, using the factory default IP address (209.157.22.254) and subnet mask (255.255.255.0)
- By connecting a terminal device to the serial port on the management module

Note: HP recommends that you use the console cable provided with the routing switch. If you need to use a different cable, please see the "Console Cable" entry under "Accessory Parts List" on the next page.

After you have accessed the routing switch, change the default IP address and subnet mask to correspond to your network's addressing scheme. For more on assigning an IP address and other topics, see the following:

Topic	Location in the <i>Installation and Configuration Guide</i>
Installation Procedures and Precautions	Chapter 2
Attaching a Terminal Assigning an IP Address	Chapter 2
System Boot from a Bootp Server	Appendix B
Software Overview	Chapter 4
Hardware Overview and Specifications	Chapter 5
Enabling Telnet	Chapter 7

Your *Free* Ticket to Proactive Networking!

HP TopTools for Hubs & Switches is a breakthrough in network management software that gives you more network with less work. The TopTools for Hubs & Switches CD is included at no extra charge with your HP ProCurve routing switch. See the system requirements printed on the sleeve containing the HP TopTools CD.

Accessory Parts List

The following accessories are included with your HP ProCurve routing switch.

Item	Notes
Power Cord Kit	The HP ProCurve 9304M: Includes three power cords; one each for the U.S.A., the U.K., and continental Europe. The HP ProCurve 9308M: Includes six power cords; two each for the U.S.A., the U.K., and continental Europe. Caution: If the installation requires a different power cord than the one supplied with the routing switch, be sure to use a shielded power cord displaying the mark of the safety agency that defines the regulations for power cords in your country. The mark is your assurance that the power cord can be used safely with the routing switch.
Console Cable	Connects terminal, PC, or modem to serial port on any HP 9300 management module for direct-connect or modem access management using the Command Line Interface (CLI), or console. If you need to use a different cable, select a "straight-through" serial cable with a female DB-9 connector for the connection to the routing switch. For more information, see "Attaching a PC or Terminal" in chapter 2, "Installation".
Rack Mount Kit	Contains two mounting brackets and the screws required to attach the brackets to the routing switch chassis.
HP TopTools for Hubs & Switches CD	For system requirements, see the sleeve containing the CD.
Product Documentation	<ul style="list-style-type: none">• <i>Installation and Configuration Guide</i>• <i>Release Notes and Manual Supplements describing software features (if any) added after the last revision of the Installation and Configuration Guide (For the latest information, go to http://www.hp.com/go/procurve, click on Technical Support, and then click on Manual.)</i>• <i>Declaration of Conformity</i> (for product shipments in Europe)
Warranty Booklet	—

Safety

Laser
Class 1 Laser Product
Laser Klasse 1
Complies with IEC 825-2: 1993

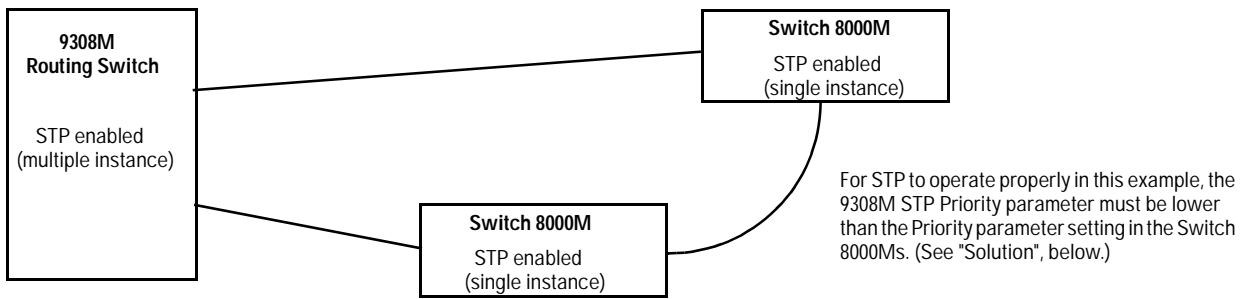
For additional specifications, see chapter 5 in the *Installation and Configuration Guide* provided with your routing switch.

Troubleshooting, Errata, and Operating Notes

Spanning Tree Protocol (STP) Implementation in a Tagged VLAN Environment

Condition. The HP ProCurve 9304M and 9308M routing switches use multiple-instance spanning tree. The HP ProCurve 1600M, 2400M, 2424M, 4000M, and 8000M switches use single-instance spanning tree. In a network that includes both single-instance STP-enabled switches and multiple-instance STP-enabled routing switches, STP will fail on a connection between a switch and a routing switch if the STP Priority parameter settings are left at their defaults. That is, if one or more of the single-instance STP-enabled switches in the network uses the default STP Priority parameter setting (32768), then one of these switches will become the root bridge (due the MAC addresses in these

switches being lower than the MAC addresses in the routing switches). When this occurs, STP fails on any links between the (root bridge) switch and any 9304M or 9308M routing switch to which the switch is connected.



Solution. Interoperability testing indicates that the STP configuration allows for proper interoperation between a 9300M routing switch and a 1600M, 2400M, 2424M, 4000M, or 8000M switch in a tagged VLAN environment.

1. Install 9300M routing switch software release 05.0.84 or later, available in the Support area of HP's ProCurve website at <http://www.hp.com/go/procurve>.
2. Disconnect the 9300M routing switch from all 1600M, 2400M, 2424M, 4000M, and 8000M switches.
3. Configure the 9300M routing switch to be the root bridge. Do this by changing the STP Priority parameter to a value that is lower than the default setting of 32768. (This assumes that the STP Priority parameter in the 1600M, 2400M, 2424M, 4000M, and 8000M switch(es) is either set at the default or is set to a higher value than the Priority setting you are using in the 9300M routing switch.)
4. Connect the 9300M routing switch to the switch(es) that were disconnected in step 2 and bring up the network.

Operating Notes for Using the 9300M Routing Switches in a Tagged VLAN Environment.

If there is more than one 9300M routing switch in the network, the root (primary) routing switch must have an STP Priority setting that is lower than the other routing switch(es) in the network. This ensures that the secondary routing switch will become the root if the primary routing switch fails.

Caution

If there is more than one 9300M routing switch in a tagged VLAN environment with STP enabled, STP will fail if the link between the primary and secondary routing switch fails while both devices continue to route packets. An STP failure will cause broadcast storms and will result in a catastrophic failure of the network. For this reason, using STP in a tagged VLAN environment with multiple 9300M routing switches is not recommended.

The following scenarios will cause STP to fail:

- The 9300M routing switch is not configured to be the root bridge, as described above. In this case, STP fails between the routing switch and the ProCurve switch(es).
- If there is more than one 9300M routing switch in the network and they are not directly connected, STP will fail between the routing switches. Multiple routing switches must be directly connected to each other in order to correctly interpret each other's BPDU (bridge protocol data unit) packets.

Auto-Negotiation Between the HP 9300M Routing Switches and Extreme Summit™ Switches

Condition. Auto-Negotiation between the HP 9300M routing switches and Extreme Summit switches may sometimes fail.

Solution. Disable auto-gig on the routing switch port(s) attached to the Extreme Summit switch.

For example, use the following CLI commands to disable auto-gig on port 2 in slot 1 of the HP J9304M Routing Switch:

```
HP 9304M (config)# int e 1/2
HP 9304M (config-if-1/2)# no auto-gig
```

Web Management Interface Running Slow or Failing To Respond

Condition. The Web management interface on the routing switch times out or does not respond. This can occur when the routing switch CPU is processing an excessive amount of broadcast traffic.

Solution. The Web management interface recovers automatically when the CPU is sufficiently free of broadcast traffic. Because the Web management interface is a low priority for the CPU, you may want to take steps to reduce the broadcast traffic on your network. One method for doing this is to use TopTools for Hubs & Switches (version N.01.03 or later) to determine the "top talkers" on your network, then create VLANs to segment the network for optimum traffic control.

Web Management Interface "Not Available" or "In Use"

Condition. You are unable to access the Web management interface.

Solution. A routing switch allows only one session of the Web management interface at any given time. Thus, if one user is accessing the routing switch via the Web, the not available or in use messages will appear to another user who is trying to access that routing switch through the Web management interface. You can, however, limit access via the Web management interface by assigning a password to the routing switch. With a password set, access via the Web management interface will be available only to users who can enter the password. For more on passwords, refer to the *Installation and Configuration Guide* you received with the routing switch.

VRRP (Virtual Redundant Router Protocol)

Condition. VRRP is not documented in the Installation and Configuration Guide you received with your HP J9300M Routing Switch.

Solution. VRRP was added to the routing switch after the release of the manual. A new booklet, the *Manual Supplement for the HP ProCurve Routing Switch 9304M and 9308M*, which describes both VRRP configuration and QoS algorithms, is now available. Beginning with July, 1999, this booklet is shipped with HP 9300M routing switches and is also available in portable document format (PDF) on HP's ProCurve website at

<http://www.hp.com/go/procurve>

Error in Description of Maximum IP Route Command

Condition. In the system-max description on page B-80 in the Installation and Configuration Guide, the Maximum value for the system-max ip-route command is *incorrectly* stated as 220,000. The correct value is 180,000. Having more than 180,000 routes on the routing switch can cause a memory overload condition, which will cause the routing switch to crash and then go into a repeating boot-up/crash cycle.

Solution. If the routing switch goes into the repeating boot-up/crash cycle, you can recover by doing the following:

1. Using a straight-through cable, directly connect a PC or terminal to the serial port on the routing switch. (For more information on attaching a PC or terminal, refer to chapter 2, "Installation", in the *Installation and Configuration Guide*.)
2. While the routing switch is booting up, enter **b** at the CLI prompt.
3. Enter the following commands:
 - a. boot> use default config

(Use the basic default configuration, not the configuration written to the device, upon next boot-up.)

- b. boot> boot system primary
(Boots the system using the OS currently in the primary flash memory.)
- c. HP9308> system-max ip-route 180000



Note

The above steps will not overwrite the original configuration. Once the system has successfully booted, the configuration setting that is causing the error must be removed. In this specific case, the command to correct the Maximum IP Routes would be as shown in step c, above.

Device Will Not Boot Up Due to Corrupt Operating System

Condition. The operating system (OS) is corrupt on both the primary and secondary flash memory, and the routing switch will not boot up.

Solution. The routing switch will first try to boot up using the primary OS written to flash memory. If this fails, the device automatically tries to boot from the secondary flash memory. If this also fails, the routing switch then tries to connect to a TFTP server and boot from there. This will fail if a TFTP server is not configured to support the routing switch, or is not found. You can perform this solution only if you have access to a TFTP server. Otherwise, there are TFTP applications (available on the World Wide Web) that you can use to enable your PC to appear as a TFTP server to the routing switch. One website where such software can be found is <http://www.walusoft.co.uk>.

1. Using a straight-through cable, directly connect a PC or terminal to the serial port on the routing switch. (For more information on attaching a PC or terminal, refer to chapter 2, "Installation", in the *Installation and Configuration Guide*.)
2. Reboot the routing switch.
3. While the system is booting up, enter **b** at the CLI to go into the boot monitor mode.
4. Enter the following commands:
 - a. boot> ip address <ip address> <subnet mask>
 - b. boot> ip default_gateway <ip address of tftp server --or-- default gateway to get to tftp server>
 - c. boot> boot system tftp <ip address of tftp server> <configuration file name>

The routing switch will now be able to boot up over the network. a new copy of the operating system can now be downloaded to the primary and secondary flash memories via the TFTP server.

