Read Me First

for the ProCurve Routing Switches
9304M, 9308M, and 9315M

Covering Software Releases 07.8.00a or Greater (June 2005)

ProCurve Networking
HP Innovation

WARNING

9304M Exceeds 40 lbs. (18.1 kg)
9308M Exceeds 55 lbs. (24.9 kg)

9315M Exceeds 80 lbs. (35 kg) without modules and power supplies installed. To avoid personal injury, reduce weight of chassis by removing all modules and power supplies from chassis prior to lifting or moving.

When handling, two or more people are required.

Contents:

Software Updates Are *Free*!

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

Hewlett-Packard periodically provides *free* software updates on the ProCurve website for various, managed ProCurve networking products you may have in your network. To access the latest software updates, go to the ProCurve website at **http://www.procurve.com**, then click on **Software updates** to go to the **ProCurve Networking software updates** page.

Register for Automatic Notification of Updates. From the **free software updates** page you can also register to automatically receive email notice of new updates for your managed ProCurve networking products. Just follow the instructions on that page for how to receive the update notices.

To determine whether you have the latest software, compare the software version that is available on the website with the version that is currently installed in the management module(s) in your routing switch.

HP periodically updates the software and documentation for your routing switch products. Refer to “Downloading Switch Software and Documentation from the Web” on page 2.

Downloading Switch Software and Documentation from the Web

To Download a Software Version:

1. Go to HP's ProCurve website at **http://www.procurve.com.**
2. Click on **Software updates**.
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. You can download the latest version from Adobe at **http://www.adobe.com**.

1. Go to HP's ProCurve website at **http://www.procurve.com.**
2. Click on **Technical support**, then **Product manuals**.
3. Click on the name of the switch product for which you want documentation. (For a module, click on the name of the switch product with which it is used.)
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.

Updating to Software Release 07.8.00a

This section explains how to update the software used on M2, M4, and EP redundant management modules on an HP 9304M, HP 9308M, or HP 9315M routing switch to release 07.8.00a.

Note:

Newer software versions require newer versions of boot code. Software versions use a five-digit number in the format: xx.x.xx; for example, 07.8.00a. Boot code versions use a six-digit number in the format: xx.xx.xx; for example, 07.06.05.

Different procedures are used to update an M2, M4, or EP management module, depending on the version of software running on the module:

- A software release earlier than 07.6.01b
- Software release 07.6.01b or greater

Note:

M1 Management modules (discontinued) do not support software releases 07.x.xx, and are, therefore, not described in this section. The latest software release supported on an M1 management module is 06.6.36.

Restrictions

- Software release 07.8.00a requires boot code version 07.06.05 to support all hardware modules and decompress new software images.

  A new compression algorithm was introduced in software releases greater than 07.6.01b to generate software images. The new compression algorithm allows a software image to contain more features.

  Software release 07.6.01b was introduced as a special release that is used as an intermediate step when you update to a later software release. After you install release 07.6.01b and reboot a routing switch, the switch is able to copy the latest software images to flash memory.

- On an M2, M4, or EP redundant management module, boot code is not automatically copied from the active to the standby management module. (However, software code is automatically copied to a standby management module.)

  To copy boot code from the active to a standby management module, you must enter the **sync boot** command.

- On a ProCurve 9315M, software release 07.5.04 is the earliest release supported. If a management module is running software earlier than release 07.5.04, you cannot update the module in a 9315M chassis. Instead, you must update it in a 9304M or 9308M chassis.

Updating to Software Release 07.8.00a: Overview

To update an M2, M4, or EP management module to release 07.8.00a, you must follow these general steps:

A. Update the boot code on the management module to version 07.06.05. If necessary, use the **sync boot** command to copy boot code from the active to a standby management module in the routing switch. Then reboot the routing switch to load boot code 07.06.05.

B. If the routing switch is running software EARLIER than release 07.6.01b, copy release 07.6.01b to flash memory. Then reboot the device to load the 07.6.01b software.

C. Copy release 07.8.00a to flash memory, and reboot the routing switch to load 07.8.00a software.

A. Updating Boot Code on a Management Module to Version 07.06.05

To update the boot code on an M2, M4, or EP management module to version 07.06.05:

1. Store boot code version 07.06.05 (filename: M2B07605.bin) on a TFTP server that the routing switch can access.
2. Enter the following command at the privileged EXEC level of the CLI (for example: HP9300#) to copy the boot code from the TFTP server into the flash memory of the management module:

   copy tftp flash <*ip-addr*> <*image-file-name*> **boot**
3. Verify that the code has been successfully copied by entering the following command at any level of the CLI:

   show flash

   The boot code version is displayed on the line that begins with “Boot Image size”. Ensure that boot code version 07.06.05 is displayed for the active management module.
4. If a standby (redundant) management module is installed in the routing switch, synchronize the boot code on the standby management module by entering the **sync boot** command.

   Verify that boot code 07.06.05 has been successfully copied on the standby management module by entering the **show flash** command.
5. Reboot the routing switch to load boot code 07.06.05.

B. Updating Software on a Management Module From a Release Earlier than 07.6.01b

To update the software on an M2, M4, or EP management module from a release EARLIER than 07.6.01b to release 07.8.00a:

1. Verify the version of boot code installed on the management module by entering the **show flash** command.

   The boot code version is displayed at the end of the line that begins with "Boot Image size". Ensure that boot code version 07.06.05 is displayed.

   Notes:

   The **show flash** command only displays the version of boot code installed on the device. It does not display the version of boot code running on the device.

   If you rebooted the routing switch after installing boot code 07.06.05 (as described in "A. Updating Boot Code on a Management Module to Version 07.06.05"), the required boot code is running. If you are not sure, HP recommends that you reboot the device now.

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2. Store software release 07.6.01b (filename: H2R07601b.bin) on a TFTP server that the routing switch can access.
3. Update the software on the management module to version 07.6.01b by entering the following command:

   copy tftp flash <*ip-address*> **H2R07601b.bin** [**primary | secondary**]

   Where:

   primary copies software to the primary (default) storage area in flash memory.

   secondary copies software to the secondary area in flash memory.

   If no redundant management module is installed, the message `TFTP to Flash Done` is displayed when the update is complete.

   If a redundant management module is installed, the message `Sync Secondary code in flash...Done` is displayed when the flash images are synchronized and the update is complete.
4. Verify that the software has been successfully copied by entering the **show flash** command at any level of the CLI:
   - The software release in the primary flash is displayed at the end of the line that begins with "Compressed Pri Code Size".
   - The software release in the secondary flash is displayed at the end of the line that begins with "Compressed Sec Code Size".

   Ensure that software release 07.6.01b is stored in the primary or secondary flash area.
5. Reboot the routing switch to load software release 07.6.01b from the area of flash memory (primary or secondary) where you stored it.
6. Continue with "C. Updating Software on a Management Module From Release 07.6.01b or Greater" to update the software to release 07.8.00a.

C. Updating Software on a Management Module From Release 07.6.01b or Greater

To update the software on an M2, M4, or EP management module from release 07.6.01b or greater to release 07.8.00a:

1. Verify the version of boot code running on the management module by entering the **show flash** command.

   The boot code version is displayed at the end of the line that begins with "Boot Image size". Ensure that boot code version 07.06.05 is displayed.

   Notes:

   The **show flash** command only displays the version of boot code installed on the device. It does not display the version of boot code running on the device.

   If you rebooted the routing switch after installing boot code 07.06.05 (as described in "A. Updating Boot Code on a Management Module to Version 07.06.05"), the required boot code is running. If you are not sure, HP recommends that you reboot the device now.

2. Store software release 07.8.00a (filename: H2R07800a.bin) on a TFTP server that the routing switch can access.
3. Update the software on the management module to version 07.8.00a by entering the following command:

   copy tftp flash <*ip-address*> **H2R07800a.bin** [**primary | secondary**]

   Where:

   primary copies software to the primary (default) storage area in flash memory.

   secondary copies software to the secondary storage area.

   If no redundant management module is installed, the message `TFTP to Flash Done` is displayed when the update is complete.

   If a redundant management module is installed, the message `Sync Secondary code in flash...Done` is displayed when the flash images are synchronized and the update is complete.
4. Verify that the software has been successfully copied by entering the **show flash** command at any level of the CLI:
   - The software release in the primary flash is displayed at the end of the line that begins with "Compressed Pri Code Size".
   - The software release in the secondary flash is displayed at the end of the line that begins with "Compressed Sec Code Size".

   Ensure that software release 07.8.00a is stored in the primary or secondary flash area.
5. Reboot the routing switch to load software release 07.8.00a from the area of flash memory (primary or secondary) where you stored it.

Note: When you reload the software after updating the software to release 07.8.00a, the routing switch displays a message to say that the configuration has changed and prompts you to save the changes. This message is displayed even if you do not make any configuration changes because the software records its release number in the running-config file when the software is loaded onto the switch. Enter **Y** to reload without saving the change or save the change and reload.

Product Documentation Set

HP periodically updates the ProCurve 9300/9400 Series Routing Switch documentation. For the latest version of any of these publications, visit the ProCurve website at:

http://www.procurve.com

Click on **Technical Support**, then **Product manuals**.

Read Me First

The "Read Me First" document, printed on bright yellow paper, is included with every chassis and module. It contains an overview of software release information, a brief "Getting Started" section, an accessory parts list, troubleshooting tips, operating notes, and other information that is not included elsewhere in the product documentation. It also includes:

- software update instructions
- operating notes for this release

Installation and Basic Configuration Guide for the ProCurve 9300 Series Routing Switches

This is an electronic (PDF) guide containing product safety and EMC regulatory statements as well as installation and basic configuration information, and software and hardware specifications. This guide is included on the Documentation CD shipped with your HP product. The latest version is also available on the ProCurve website.

Topics Specific to the 9300 Series Routing Switches

- Product mounting instructions
- Module installation
- Basic access and connectivity configuration (passwords, IP addresses)
- Redundant management module commands and file systems
- Cooling system commands and information
- Basic software feature configuration (SNMP, clock, mirror/monitor ports)
- Configuring for these features:
  - Uni-Directional Link Detection (UDLD)
  - Metro Ring Protocol (MRP)
  - Virtual Switch Redundancy Protocol (VSRP)
  - GVRP (dynamic VLANs)
- Software update instructions
- Hardware specs
- Software specs (e.g. RFC support, IEEE compliance)

Topics Covered for the 9300/9408sl Routing Switches

- Port settings
- VLANS
- Trunks
- Spanning Tree Protocol
- Syslog

Quick Start Guide for the ProCurve Series 9300 Routing Switches

This is a printed guide you can use as an easy reference to the installation and product safety information needed for out-of-box setup, plus the general product safety and EMC regulatory statements of which you should be aware when installing and using a Routing Switch. This guide is on the Documentation CD shipped with your HP product, and the latest version is also available on the ProCurve web site.

Installation and Basic Configuration Guide for the ProCurve 9408sl Routing Switch

This is a printed guide that describes the ProCurve 9408sl and provides procedures for installing modules and AC power supplies into the ProCurve 9408sl, cabling the 10 Gigabit Ethernet interface ports, and performing a basic configuration of the software. The guide explains how to perform tasks using the CLI.

Topics Specific to the 9408sl Routing Switch

- Product overview and architecture
- Product mounting instructions
- Module installation
- Basic access and connectivity configuration (passwords, IP addresses)
- Management Module redundancy and file systems
- Interacting with the cooling system, switch fabric module, and interface modules
- Basic software feature configuration (SNMP, clock, mirror/monitor ports)
- Hardware maintenance instructions
- Software update instructions
- Hardware specs
- Safety and regulatory statements
- Software specs (e.g. RFC support, IEEE compliance)

Advanced Configuration and Management Guide for the ProCurve 9300/9400 Series Routing Switches

This is an electronic (PDF) guide that contains advanced configuration information for routing protocols and Quality of Service (QoS). In addition, appendixes in this guide contain reference information for network monitoring, policies, and filters. This guide is included on the Documentation CD shipped with your HP product. The latest version is also on the ProCurve website.

Information on Configuring Features

- Quality of Service (QoS)
- Access Control Lists (ACLs)
- Rate limiting
- IPv4 routing
- RIP
- IP Multicast
- OSPF
- BGP4
- Mulitcast BGP (MBGP)
- Network Address Translation (NAT)
- VRRP and VRRPE (enhanced VRRP)

- IPX routing
- AppleTalk routing
- Rout health injection
- Standby Routing Protocol (SRP)
- RMON, Netflow, and Sflow monitoring

IPv6 Configuration Guide for the ProCurve Routing Switches

This is an electronic (PDF) guide that describes the IPv6 software and features. It provides conceptual information about IPv6 addressing and explains how to configure basic IPv6 connectivity and the IPv6 routing protocols. The software procedures explain how to perform tasks using the CLI. This reference is included on the Documentation CD shipped with your HP product and is also available on the ProCurve website.

Command Line Interface Reference for ProCurve 9300/9400 Series Routing Switches

This is an electronic (PDF) guide that provides a dictionary of CLI commands and syntax. This reference is included on the Documentation CD shipped with your HP product and is also available on the ProCurve website.

Security Guide for the ProCurve 9300/9400 Series Routing Switches

This is an electronic (PDF) guide that provides procedures for securing management access to HP devices and for protecting against Denial of Service (DoS) attacks. This guide is included on the Documentation CD shipped with your HP product. The latest version is also available on the ProCurve website.

Diagnostic Guide for the ProCurve 9300/9400 Series Routing Switches

This is an electronic (PDF) guide that describes the diagnostic commands available on HP devices. The software procedures show how to perform tasks using the Command Line Interface (CLI). This guide is included on the Documentation CD shipped with your HP product.The latest version is also available on the ProCurve website.

Removing and Installing XENPAK Optics

This is a printed instruction sheet describing the correct preparation and procedure for removing and installing XENPAK optics on the J8174A 2-port 10 Gigabit Ethernet module. This sheet is shipped with the Procurve 9300M Management modules and is also available on both the Documentation CD shipped with your HP product and on the ProCurve website.

Release Notes

These documents describe features and other information that becomes available between revisions of the main product guides. New releases of such documents will be available on HP's ProCurve website. To register to receive email notice from HP when a new software release is available, visit:

http://www.procurve.com

Click on **My software**, then click on **Register Here**.

Product Documentation CD: A Tool for Finding Specific Information and/or Printing Selected Pages

This CD is shipped with your HP Routing Switch product and provides the following:

- A **README** file describing the CD contents and use, including easy instructions on how to search the book files for specific information
- A **Co ıtents** file to give you easy access to the documentation on the CD
- Sepa ate PDF files of the individual chapters and appendixes in the major guides, enabling you to easily print ndividual chapters, appendixes, and selected pages

- Single PDF files for each of the major guides, enabling you to use the Adobe® Acrobat® Reader to easily search for detailed information
- Additional files. These may include such items as additional Read Me files and release notes.

Module Installation

Caution—Routing Switch 9304M, 9308M,and 9315M

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.

Powering-Up a Device Having Multiple Power Supplies

When you power-up a device that requires multiple power supplies, make sure you apply power to all the supplies (or at least to the minimum number of supplies required for your configuration) at the same time. Otherwise, the device either will not boot at all, or will boot and then repeatedly display a warning message stating that you need to add more power supplies.

Getting Started

You must access the routing switch 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 “Included Components” on page 11.

After you have accessed the device, assign an IP address and subnet mask to correspond to your network's addressing scheme. For more on assigning an IP address, and other topics, refer to the following table:

Topic	Chapter or Appendix	Manual
Installation Procedures and Precautions	2, "Installation"	*Quick Start Guide* [1] *Installation and Basic Configuration Guide* [2]
Attaching a Terminal Device and Assigning an IP Address	2, "Installation"	Same as above.
Using Redundant Management Modules	3, "Using Redundant Management Modules"	*Installation and Basic Configuration Guide* [2]
Enhanced Performance (EP) Modules	A, "Enhanced Performance (EP) Modules	*Installation and Basic Configuration Guide* [2]
T-Flow Module	4, "Using the T-Flow Redundant Management Module"	*Installation and Basic Configuration Guide* [2]
2-Port 10 Gigabit Ethernet Module	5, "Using the 2-Port 10 Gigabit Ethernet Module	*Installation and Basic Configuration Guide* [2]
System Boot from a Bootp Server	5, "Privileged EXEC Commands"	*Command Line Interface Reference* [2]
Software Specifications	C, "Software Specifications"	*Installation and Basic Configuration Guide* [2]
Hardware Specifications	A, "Hardware Specifications"	*Quick Start Guide* [1]
Enabling Telnet	2, Securing Access to Management Functions	*Security Guide* [2]

[1] Shipped in printed form with all ProCurve Series 9300M chassis. Also included on the Documentation CD-ROM shipped with management modules. The latest version is available on the ProCurve website.

[2] Included on the *Documentation CD-ROM* shipped with management modules. The latest version is available on the ProCurve website.

Included Components

Component	Notes
Power Cords	The ProCurve 9304M: One power cord. The ProCurve 9308M: Two power cords. The ProCurve 9315M: Two power cords.) **Caution:** If the installation requires a different power cord than the one supplied with the switch or 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 switch or 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). If you need to use a different cable, select a "straight-through" serial cable with a female DB-9 to DB-9 connector for the connection to the switch or routing switch. For more information, see "Attaching a PC or Terminal" in chapter 2, "Installation".
CESD Grounding Tap Kit	Use the Cable Electrostatic Discharge (CESD) Grounding Tap before connecting Category 5 or better UTP copper networking cables to the routing switch. Refer to the documentation provided with the kit.
ESD Strap	Helps to prevent electrostatic discharge between your body and routing switch modules or chassis.
Rack Mount Kit	Contains two mounting brackets and the screws required to attach the brackets to the routing switch.
Product Documentation (for software release 07.6.4 or later)	• *Read Me First* (this document): Updates are periodically posted on the ProCurve website.* • *Quick Start Guide* (Shipped with the 9304M, 9308M, and 9315 chassis.) A copy is also included on the documentation CD-ROM. The latest version of this guide is available on the ProCurve website.*
Installation Guide for XENPAK Optics	This single-sheet guide is included in the documentation set shipped with all ProCurve 9300 and 9400 modules.*
Warranty and Support	Included with routing switch chassis shipments.
Declaration of Conformity	Included with routing switch chassis shipments.

* Go to **http://www.procurve.com**, click on **Technical support**, then **Product manuals**. Click on **ProCurve Routing Switch 9300 series and 6308m-SX** and scroll to the publication you want to see.

Operating Notes and Troubleshooting

J4881B and J4889B Modules

The new "B" models of the ProCurve 9300 EP 48-port 10/100-TX modules (J4881B and J4889B) have the following boot code and software requirements:

- Boot code version 07.06.05 (or later) is required.
- Software version 07.8.00a (or later) is required.

Also, the J4881B and J4889B have the following restriction:

Condition. Half-duplex operation is not supported on the "B" models

Solution. Insert an autonegotiating 10/100 switch between the 9300 port and the connected device. The link between the 9300 port and the switch will autonegotiate to 100 Mbps full-duplex, and the link between the switch and the connected device will come up at half-duplex.

Redundant Management Module Operation

When two redundant management modules are installed in a Series 9300 routing switch, the two modules work together as active and standby management modules. If the active module becomes unavailable, the standby module automatically takes over system operation. If this occurs, the routing tables, ARP tables, etc. are all updated dynamically, as if the routing switch had been rebooted. As a result of this reconvergence, a noticeable, temporary network disruption occurs. The duration of the disruption depends on the number of routes being utilized through the device, and can be significant.

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

Condition. Auto-Negotiation between 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 9304M 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 a network management tool 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 managment interface.

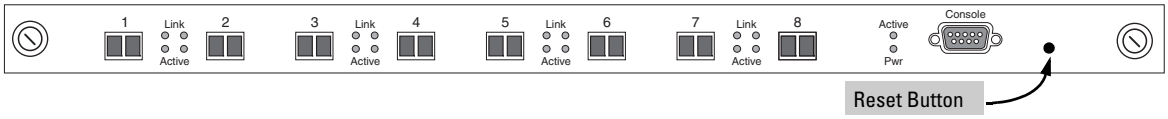
Solution. A routing switch allows only one session of the web management interface at any given time. Thus, if one user is accessing the routing switch via the web, the **not available** or **in use** messages will appear to another user who is trying to access that routing switch through the web management interface.

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 *Quick Start Guide* or the *Installation and Basic Configuration Guide.*)
2. Ensure that the OS version you want the switch to use is properly stored in your TFTP server.
3. Reboot the routing switch as follows.
   a. Execute the **reload** command or use the (recessed) reset button on the management module.



   b. Immediately after executing the boot command, enter Boot Monitor mode by pressing and holding the **[B]** key. You will then see this prompt:

```
BOOT MONITOR >
```

4. Assign an IP address to the routing switch:

```
BOOT MONITOR > ip address < ip-address > < subnet-mask >
```

5. If necessary, assign a default gateway IP address to the routing switch:

```
BOOT MONITOR > ip default_gateway < ip-address >
```

6. Boot the switch using the OS you previously copied into the TFTP server:

```
a. BOOT MONITOR > boot system tftp < server-ip-address > < 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.

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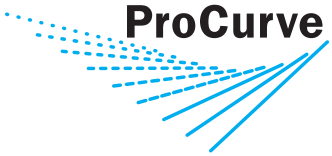

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