

Selecting a Management Interface

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Overview

This chapter describes the following:

- Management interfaces for the switches covered in this guide
 - Advantages of using each interface
-

Understanding Management Interfaces

Management interfaces enable you to reconfigure the switch and to monitor switch status and performance. The switch offers the following interfaces:

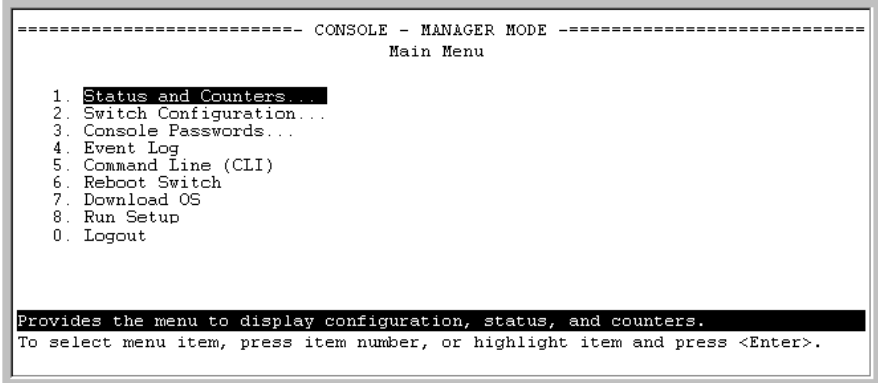
- **Menu interface**—a menu-driven interface offering a subset of switch commands through the built-in VT-100/ANSI console—**2-3**
- **CLI**—a command line interface offering the full set of switch commands through the VT-100/ANSI console built into the switch—**2-4**
- **Web browser interface**—a switch interface offering status information and a subset of switch commands through a standard web browser (such as Netscape Navigator or Microsoft Internet Explorer)—**2-5**
- **ProCurve Manager (PCM)**—a windows-based network management solution included in-box with all manageable ProCurve devices. Features include automatic device discovery, network status summary, topology and mapping, and device management.
- **ProCurve Manager Plus (PCM+)**—a complete windows-based network management solution that provides both the basic features offered with PCM, as well as more advanced management features, including in-depth traffic analysis, group and policy management, configuration management, device software updates, and advanced VLAN management. (ProCurve includes a copy of PCM+ in-box for a free 30-day trial.)

This manual describes how to use the menu interface (Chapter 3), the CLI (Chapter 4), the web browser interface (Chapter 5), and how to use these interfaces to configure and monitor the switch.

For information on how to access the web browser interface Help, see “Online Help for the Web Browser Interface” on page 5-11.

To use ProCurve Manager or ProCurve Manager Plus, refer to the *Getting Started Guide* and the *Administrator's Guide*, which are available electronically with the software for these applications. For more information, visit the ProCurve Networking web site at www.procurve.com.

Advantages of Using the Menu Interface



```
----- CONSOLE - MANAGER MODE -----
                          Main Menu

1. Status and Counters...
2. Switch Configuration...
3. Console Passwords...
4. Event Log
5. Command Line (CLI)
6. Reboot Switch
7. Download OS
8. Run Setup
0. Logout

Provides the menu to display configuration, status, and counters.
To select menu item, press item number, or highlight item and press <Enter>.
```

Figure 2-1. Example of the Console Interface Display

- **Provides quick, easy management access** to a menu-driven subset of switch configuration and performance features:

- IP addressing
- VLANs and GVRP
- Port Security
- Port and Static Trunk Group
- Spanning Tree
- System information
- Local passwords
- SNMP communities
- Time protocols

The menu interface also provides access for:

- Setup screen
- Event Log display
- Switch and port status displays
- Switch and port statistic and counter displays
- Reboots
- Software downloads

- **Offers out-of-band access** (through the RS-232 connection) to the switch, so network bottlenecks, crashes, lack of configured or correct IP address, and network downtime do not slow or prevent access

- **Enables Telnet (in-band) access** to the menu functionality.
- **Allows faster navigation**, avoiding delays that occur with slower display of graphical objects over a web browser interface.
- **Provides more security**; configuration information and passwords are not seen on the network.

Advantages of Using the CLI

ProCurve>	Prompt for Operator Level
ProCurve#	Prompt for Manager Level
ProCurve (config) #	Prompt for Global Configuration Level
ProCurve (<context>) #	Prompt for Context Configuration Levels
For example:	
ProCurve (eth-1-5) #	
ProCurve (vlan-1) #	
ProCurve (pim) #	
ProCurve (rip) #	

Figure 2-2. Command Prompt Examples

General Benefits

- Provides access to the complete set of the switch configuration, performance, and diagnostic features.
- Offers out-of-band access (through the RS-232 connection) or Telnet (in-band) access.
- Enables quick, detailed system configuration and management access to system operators and administrators experienced in command prompt interfaces.
- Provides help at each level for determining available options and variables.

Information on Using the CLI

- For information on how to use the CLI, refer to Chapter 4. “Using the Command Line Interface (CLI)”.

- To perform specific procedures (such as configuring IP addressing or VLANs), use the Contents listing at the front of the manual to locate the information you need.
- For monitoring and analyzing switch operation, refer to Appendix B.
- For information on individual CLI commands, refer to the Index or to the online Help provided in the CLI interface.

Advantages of Using the Web Browser Interface

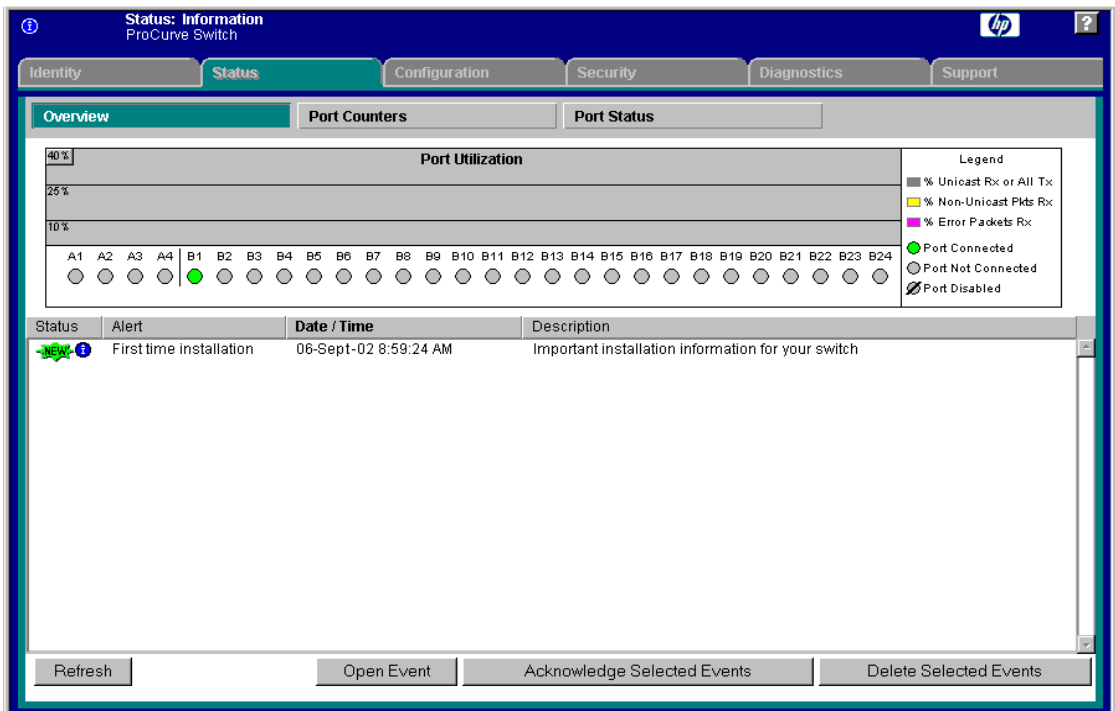


Figure 2-3. Example of the Web Browser Interface

- **Easy access** to the switch from anywhere on the network
- **Familiar browser interface**—locations of window objects consistent with commonly used browsers, uses mouse clicking for navigation, no terminal setup

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Advantages of Using the Web Browser Interface

- **Many features have all their fields in one screen** so you can view all values at once
- **More visual cues**, using colors, status bars, device icons, and other graphical objects instead of relying solely on alphanumeric values
- **Display of acceptable ranges of values available** in configuration list boxes

Advantages of Using ProCurve Manager or ProCurve Manager Plus

You can operate ProCurve Manager and ProCurve Manager Plus (PCM and PCM+) from a PC on the network to monitor traffic, manage your hubs and switches, and proactively recommend network changes to increase network uptime and optimize performance. Easy to install and use, PCM and PCM+ are the answers to your management challenges.

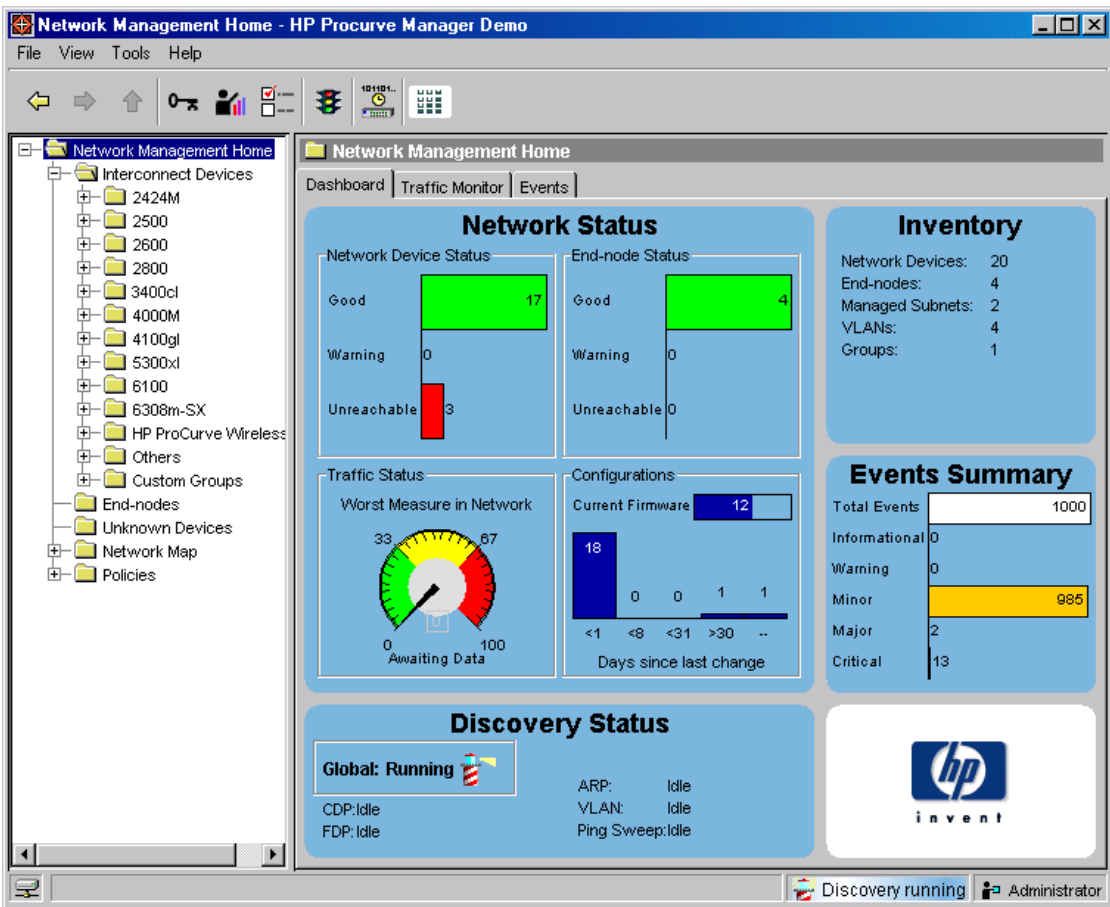


Figure 2-4. Example of the Home Page for ProCurve Manager Plus

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Advantages of Using ProCurve Manager or ProCurve Manager Plus

PCM and PCM+ enable greater control, uptime, and performance in your network:

- Features and benefits of ProCurve Manager:
 - **Network Status Summary:** Upon boot-up, a network status screen displays high-level information on network devices, end nodes, events, and traffic levels. From here, users can research any one of these areas to get more details.
 - **Alerts and Troubleshooting:** An events summary screen displays alerts to the user and categorizes them by severity, making it easier to track where bottlenecks and issues exist in the network. Alerts present detailed information on the problem, even down to the specific port.
 - **Automatic Device Discovery:** This feature is customized for fast discovery of all ProCurve manageable network devices. The user can define which IP subnets to discover.
 - **Topology and Mapping:** This feature automatically creates a map of discovered network devices. Maps are color-coded to reflect device status and can be viewed at multiple levels (physical view, subnet view, or VLAN view).
 - **Device Management:** Many device-focused tasks can be performed directly by the software, or the user can access web-browser and command-line interfaces with the click of a button to manage individual devices from inside the tool.
- Features and benefits of ProCurve Manager Plus:
 - **All of the Features of ProCurve Manager:** Refer to the above listing.
 - **In-Depth Traffic Analysis:** An integrated, low-overhead traffic monitor interface shows detailed information on traffic throughout the network. Using enhanced traffic analysis protocols such as Extended RMON and sFlow, users can monitor overall traffic levels, segments with the highest traffic, or even the top users within a network segment.
 - **Group and Policy Management:** Changes in configuration are tracked and logged, and archived configurations can be applied to one or many devices. Configurations can be compared over time or between two devices, with the differences highlighted for users.
 - **Advanced VLAN Management:** A new, easy-to-use VLAN management interface allows users to create and assign VLANs across the entire network, without having to access each network device individually.

- **Device Software Updates:** This feature automatically obtains new device software images from ProCurve and updates devices, allowing users to download the latest version or choose the desired version. Updates can be scheduled easily across large groups of devices, all at user-specified times.
- **Investment Protection:** The modular software architecture of ProCurve Manager Plus will allow ProCurve to offer network administrators add-on software solutions that complement their needs.

Custom Login Banners for the Console and Web Browser Interfaces

You can now configure the switch to display a login banner of up to 3070 characters when an operator initiates a management session with the switch through any of the following methods:

- Telnet
- serial connection
- SSHv2
- Web browser

The default banner displays product registration information; the copyright splash is no longer displayed.

If a banner is configured, the banner page is displayed when you access the Web user interface. The default product registration information is not displayed as there is already a product registration prompt displayed in the Web user interface.

Banner Operation with Telnet, Serial, or SSHv2 Access

When a system operator begins a login session, the switch displays the banner above the local password prompt or, if no password is configured, above the **Press any key to continue prompt**. Entering a correct password or, if no password is configured, pressing any key clears the banner from the CLI and displays the CLI prompt. (Refer to Figure 2-5 on page 2-11.)

Banner Operation with Web Browser Access

When a system operator uses a Web browser to access the switch, the text of a non-default banner configured on the switch appears in a dedicated banner window with a link to the Web agent home page. Clicking on **To Home Page**

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Advantages of Using ProCurve Manager or ProCurve Manager Plus

clears the banner window and prompts the user for a password (if configured). Following entry of the correct username/password information (or if no username/password is required), the switch then displays either the Registration page or the switch's home page. Note that if the banner feature is disabled or if the switch is using the factory-default banner shown in figure 2-5, then the banner page does not appear in the Web browser when an operator initiates a login session with the switch.

Configuring and Displaying a Non-Default Banner

You can enable or disable banner operation using either the switch's CLI or an SNMP application. The steps include:

1. Enable non-default banner operation and define the endpoint delimiter for the banner.
2. Enter the desired banner text, including any specific line breaks you want.
3. Enter the endpoint delimiter.

Use **show banner motd** to display the current banner status.

Syntax: banner motd < delimiter >
no banner motd

*This command defines the single character used to terminate the banner text and enables banner text input. You can use any character except a blank space as a delimiter. The **no** form of the command disables the login banner feature.*

< banner-text-string >

*The switch allows up to 3070 banner characters, including blank spaces and CR-LF ([Enter]). (The tilde "~" and the delimiter defined by **banner motd <delimiter>** are not allowed as part of the banner text.) While entering banner text, you can backspace to edit the current line (that is, a line that has not been terminated by a CR-LF.) However, terminating a line in a banner by entering a CR-LF prevents any further editing of that line. To edit a line in a banner entry after terminating the line with a CR-LF requires entering the delimiter described above and then re-configuring new banner text.*

The banner text string must terminate with the character defined by banner motd < delimiter >.

Note: In redundant management, the banner is not seen on the standby module, only the active module.

Example of Configuring and Displaying a Banner

Suppose a system operator wanted to configure the following banner message on her company's switches:

```
This is a private system maintained by the
      Allied Widget Corporation.
Unauthorized use of this system can result in
      civil and criminal penalties!
```

In this case, the operator will use the [Enter] key to create line breaks, blank spaces for line centering, and the % symbol to terminate the banner message.

```
ProCurve(config)# banner motd %
Enter TEXT message. End with the character '%'
      This is a private system maintained by the
      Allied Widget Corporation.
      Unauthorized use of this system can result in
      civil and criminal penalties!%
ProCurve(config)# write memory
```

Figure 2-5. Example of Configuring a Login Banner

To view the current banner configuration, use either the **show banner motd** or **show running** command.

```
ProCurve(config)# show banner motd

Banner Information

Banner status: Enabled
Configured Banner:

      This is a private system maintained by the
      Allied Widget Corporation.
      Unauthorized use of this system can result in
      civil and criminal penalties!
```

Figure 2-6. Example of show banner motd Output

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Advantages of Using ProCurve Manager or ProCurve Manager Plus

```
ProCurve(config)# show running

Running configuration:

; J8697A Configuration Editor; Created on release #K.11.00

hostname "ProCurve"
module 1 type J8702A
module 2 type J8702A
snmp-server community "notpublic" Unrestricted
vlan 1
  name "DEFAULT_VLAN"
  untagged A1-A24,B1-B24
  ip address dhcp-bootp
  _exit_
banner motd "  This is a private system maintained by the
              Allied Widget Corporation.
              Unauthorized use of this system can result in
              civil and criminal penalties!"
password manager
password operator
```

Shows the current banner configuration.

Figure 2-7. The Current Banner Appears in the Switch's Running-Config File

The next time someone logs onto the switch's management CLI, the following appears:

```
Copyright (C) 1991-2005 Hewlett-Packard Co. All Rights Reserved.

                RESTRICTED RIGHTS LEGEND

Use, duplication, or disclosure by the Government is subject to restrictions
as set forth in subdivision (b) (3) (ii) of the Rights in Technical Data and
Computer Software clause at 52.227-7013.

                HEWLETT-PACKARD COMPANY, 3000 Hanover St., Palo Alto, CA 94303

[ This is a private system maintained by the
  Allied Widget Corporation.
  Unauthorized use of this system can result in
  civil and criminal penalties! ]

Password: █
```

The login screen displays the configured banner.
Entering a correct password clears the banner and displays the CLI prompt.

Figure 2-8. Example of CLI Result of the Login Banner Configuration

If someone uses a Web browser to log in to the switch interface, the following message appears:

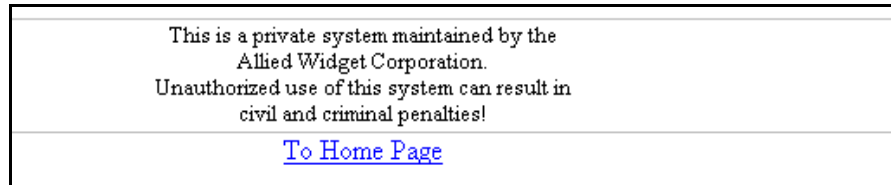


Figure 2-9. Example of Web Browser Interface Result of the Login Banner Configuration

Operating Notes

- The default banner appears only when the switch is in the factory default configuration. Using **no banner motd** deletes the currently configured banner text and blocks display of the default banner. The default banner is restored only if the switch is reset to its factory-default configuration.
- The switch supports one banner at any time. Configuring a new banner replaces any former banner configured on the switch.
- If the switch is configured with **ssh version 1** or **ssh version 1-or-2**, configuring the banner sets the SSH configuration to ssh version 2 and displays the following message in the CLI:

```
Warning: SSH version has been set to v2.
```

- If a banner is configured, the switch does not allow configuration with **ssh version 1** or **ssh version 1-or-2**. Attempting to do so produces the following error message in the CLI:

```
Banner has to be disabled first.
```

- If a banner is enabled on the switch, the Web browser interface displays the following link to the banner page:

Notice to all users

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Advantages of Using ProCurve Manager or ProCurve Manager Plus