

Monitoring and Analyzing Switch Operation

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Overview

The switches covered by this guide have several built-in tools for monitoring, analyzing, and troubleshooting switch and network operation:

- **Status:** Includes options for displaying general switch information, management address data, port status, port and trunk group statistics, MAC addresses detected on each port or VLAN, and STP, IGMP, and VLAN data (*page B-4*).
- **Counters:** Display details of traffic volume on individual ports (*page B-10*).
- **Event Log:** Lists switch operating events (“Using the Event Log To Identify Problem Sources” on *page C-27*).
- **Alert Log:** Lists network occurrences detected by the switch—in the Status | Overview screen of the web browser interface (*page 5-16*).
- **Configurable trap receivers:** Uses SNMP to enable management stations on your network to receive SNMP traps from the switch. (Refer to “SNMPv1 and SNMPv2c Trap Features” on *page 15-19*.)
- **Port monitoring (mirroring):** Copy all traffic from the specified ports to a designated monitoring port (*page B-23*).

Note

Link test and ping test—analysis tools in troubleshooting situations—are described in appendix C, “Troubleshooting”. See “Diagnostic Tools” on *page C-45*.

Status and Counters Data

This section describes the status and counters screens available through the switch console interface and/or the web browser interface.

Note

You can access all console screens from the web browser interface via Telnet to the console. Telnet access to the switch is available in the Device View window under the **Configuration** tab.

Status or Counters Type	Interface	Purpose	Page
Menu Access to Status and Counters	Menu	Access menu interface for status and counter data.	B-5
General System Information	Menu, CLI	Lists switch-level operating information.	B-5
Management Address Information	Menu, CLI	Lists the MAC address, IP address, and IPX network number for each VLAN or, if no VLANs are configured, for the switch.	B-6
Module Information	Menu, CLI	Lists the module type and description for each slot in which a module is installed.	B-8
Port Status	Menu, CLI, Web	Displays the operational status of each port.	B-9
Port and Trunk Statistics and Flow Control Status	Menu, CLI, Web	Summarizes port activity and lists per-port flow control status.	B-10
VLAN Address Table	Menu, CLI	Lists the MAC addresses of nodes the switch has detected on specific VLANs, with the corresponding switch port.	B-13
Port Address Table	Menu, CLI	Lists the MAC addresses that the switch has learned from the selected port.	B-13
STP Information	Menu, CLI	Lists Spanning Tree Protocol data for the switch and for individual ports. If VLANs are configured, reports on a per-VLAN basis.	B-17
IGMP Status	Menu, CLI	Lists IGMP groups, reports, queries, and port on which querier is located.	B-19
VLAN Information	Menu, CLI	For each VLAN configured in the switch, lists 802.1Q VLAN ID and up/down status.	B-20
Port Status Overview and Port Counters	Web	Shows port utilization and counters, and the Alert Log.	B-22

Menu Access To Status and Counters

Beginning at the Main Menu, display the Status and Counters menu by selecting:

1. Status and Counters

```
===== CONSOLE - MANAGER MODE =====  
Status and Counters Menu  
  
1. General System Information  
2. Switch Management Address Information  
3. Module Information  
4. Port Status  
5. Port Counters  
6. Vlan Address Table  
7. Port Address Table  
8. Spanning Tree Information  
0. Return to Main Menu...  
  
Displays switch management information including software versions.  
To select menu item, press item number, or highlight item and press <Enter>.
```

Figure B-1. The Status and Counters Menu

Each of the above menu items accesses the read-only screens described on the following pages. Refer to the online help for a description of the entries displayed in these screens.

General System Information

Menu Access

From the console Main Menu, select:

1. Status and Counters

1. General System Information

```
----- CONSOLE - MANAGER MODE -----  
Status and Counters - General System Information  
  
System Contact      :  
System Location    :  
  
Firmware revision  : E.08.30          Base MAC Addr   : 0001e7-a09900  
ROM Version        : E.05.04          Serial Number   : S2600017409  
  
Up Time           : 2 hours           Memory - Total  : 24,588,136  
CPU Util (%)      : 1                 Free           : 19,613,568  
  
IP Mgmt - Pkts Rx : 0                 Packet - Total  : 832  
          Pkts Tx : 0                 Buffers  Free   : 793  
                                         Lowest   : 769  
                                         Missed   : 0  
                                         24,588,1 6  
  
Actions->  Back  Help  
Return to previous screen.  
Use arrow keys to change action selection and <Enter> to execute action.
```

Figure B-2. Example of General Switch Information

This screen dynamically indicates how individual switch resources are being used. See the online Help for details.

CLI Access

Syntax: show system-information

Switch Management Address Information

Menu Access

From the Main Menu, select:

- 1 Status and Counters ...**
- 2. Switch Management Address Information**

```
----- CONSOLE - MANAGER MODE -----  
Status and Counters - Management Address Information  
  
Time Server Address : Disabled  
  
VLAN Name      MAC Address      IP Address  
-----  
DEFAULT VLAN   0001e7-a09900    10.28.227.101  
VLAN-22        0001e7-a09900    Disabled  
VLAN-33        0001e7-a09900    Disabled  
  
Actions->      Back           Help  
  
Return to previous screen.  
Use arrow keys to change action selection and <Enter> to execute action.
```

Figure B-3. Example of Management Address Information with VLANs Configured

This screen displays addresses that are important for management of the switch. If multiple VLANs are *not* configured, this screen displays a single IP address for the entire switch. See the online Help for details.

Note

As shown in figure B-3, all VLANs on the switches covered by this guide use the same MAC address. (This includes both the statically configured VLANs and any dynamic VLANs existing on the switch as a result of GVRP operation.)

Also, the switches covered by this guide use a multiple forwarding database. When using multiple VLANs and connecting a switch to a device that uses a single forwarding database, such as a Switch 4000M, there are cabling and tagged port VLAN requirements. For more on this topic, refer to the section titled “Multiple VLAN Considerations” in the “Static Virtual LANs (VLANs)” chapter of the *Advanced Traffic Management Guide* for your switch.

CLI Access

Syntax: show management

Module Information

Use this feature to determine which slots have modules installed and which type(s) of modules are installed.

Menu: Displaying Port Status

From the Main Menu, select:

1. Status and Counters ...
3. Module Information

```
HPswitch
-----
                        Status and Counters - Module Information
-----
Slot      Module Type      Module Description
-----
A         HP J4878A  4x MiniGBIC module
B         HP J4820A  10/100Base-TX module
C         Slot Available
D         Slot Available
E         Slot Available
F         Slot Available
G         Slot Available
H         Slot Available

Actions->  Back      Help

Return to previous screen.
Use up/down arrow keys to scroll to other entries, left/right arrow keys to
change action selection, and <Enter> to execute action.
```

Figure B-4. Example of Module Information in the Menu Interface

CLI Access

Syntax: show module

Port Status

The web browser interface and the console interface show the same port status data.

Menu: Displaying Port Status

From the Main Menu, select:

1. **Status and Counters ...**
4. **Port Status**

```

-----
                        Status and Counters - Port Status
-----
Port      Type      Intrusion
Alert     Enabled  Status   Mode     Flow
Ctrl
-----
A1                No        Yes      Down    off
A2                No        Yes      Down    off
A3                No        Yes      Down    off
A4                No        Yes      Down    off
B1      10/100TX  No        Yes      Up       100FDx  off
B2      10/100TX  No        Yes      Down    10FDx   off
B3      10/100TX  No        Yes      Down    10FDx   off
B4      10/100TX  No        Yes      Down    10FDx   off
B5      10/100TX  No        Yes      Down    10FDx   off
B6      10/100TX  No        Yes      Down    10FDx   off
B7      10/100TX  No        Yes      Down    10FDx   off

Actions->  Back      Intrusion log  Help

Return to previous screen.
Use up/down arrow keys to scroll to other entries, left/right arrow keys to
change action selection, and <Enter> to execute action.

```

Figure B-5. Example of Port Status on the Menu Interface

CLI Access

Syntax: show interfaces brief

Web Access

1. Click on the **Status** tab.
2. Click on **[Port Status]**.

Viewing Port and Trunk Group Statistics and Flow Control Status

Feature	Default	Menu	CLI	Web
viewing port and trunk statistics for all ports, and flow control status	n/a	page B-11	page B-12	page B-12
viewing a detailed summary for a particular port or trunk	n/a	page B-11	page B-12	page B-12
resetting counters	n/a	page B-11	page B-12	page B-12

These features enable you to determine the traffic patterns for each port since the last reboot or reset of the switch. You can display:

- A general report of traffic on all LAN ports and trunk groups in the switch, along with the per-port flow control status (On or Off).
- A detailed summary of traffic on a selected port or trunk group.

You can also reset the counters for a specific port.

The menu interface and the web browser interface provide a dynamic display of counters summarizing the traffic on each port. The CLI lets you see a static “snapshot” of port or trunk group statistics at a particular moment.

As mentioned above, rebooting or resetting the switch resets the counters to zero. You can also reset the counters to zero for the current session. This is useful for troubleshooting. See the “Note On Reset”, below.

Note on Reset

The **Reset** action resets the counter display to zero for the current session, but does not affect the cumulative values in the actual hardware counters. (In compliance with the SNMP standard, the values in the hardware counters are not reset to zero unless you reboot the switch.) Thus, using the **Reset** action resets the displayed counters to zero for the current session only. Exiting from the console session and starting a new session restores the counter displays to the accumulated values in the hardware counters.

Menu Access to Port and Trunk Statistics

To access this screen from the Main Menu, select:

1. Status and Counters ...

4. Port Counters

```

=====  CONSOLE - MANAGER MODE  =====
                        Status and Counters - Port Counters
-----
Port      Total Bytes  Total Frames  Errors Rx  Drops Tx  Flow
-----
A1        195,072    323           0           0         off
A2        651,816    871           0           0         off
A3-Trk1   290,163    500           0           0         off
A4-Trk1   260,134    501           0           0         off
C1        859,363    5147          0           0         off
C2        674,574    1693          0           0         off
C3         26,554     246           0           0         off
C4        113,184     276           0           0         off
C5         0           0             0           0         off
-----
Actions->  Back      Show details  Reset      Help
-----
Return to previous screen.
Use up/down arrow keys to scroll to other entries, left/right arrow keys to
change action selection, and <Enter> to execute action.

```

Figure B-6. Example of Port Counters on the Menu Interface

To view details about the traffic on a particular port, use the  key to highlight that port number, then select **Show Details**. For example, selecting port A2 displays a screen similar to figure B-7, below.

```

=====  CONSOLE - MANAGER MODE  =====
                        Status and Counters - Port Counters - Port A2
-----
Link Status      : up

Bytes Rx         : 630,746           Bytes Tx         : 21,070
Unicast Rx       : 568              Unicast Tx       : 285
Bcast/Mcast Rx   : 18              Bcast/Mcast Tx   : 0

PCS Rx           : 0                Drops Tx         : 0
Alignment Rx     : 0                Collisions Tx    : 0
Runts Rx         : 0                Late Colln Tx   : 0
Giants Rx        : 0                Excessive Colln : 0
Total Rx Errors  : 0                Deferred Tx      : 0

Actions->  Back      Reset      Help
-----
Return to previous screen.
Use arrow keys to change action selection and <Enter> to execute action.

```

Figure B-7. Example of the Display for Show details on a Selected Port

This screen also includes the **Reset** action for the current session. (See the “Note on Reset” on page B-10.)

CLI Access To Port and Trunk Group Statistics

To Display the Port Counter Summary Report.

Syntax: show interfaces

This command provides an overview of port activity for all ports on the switch.

To Display a Detailed Traffic Summary for Specific Ports. .

Syntax: show interfaces < port-list >

This command provides traffic details for the port(s) you specify

To Reset the Port Counters for a Specific Port.

Syntax: clear statistics < port-list >

This command resets the counters for the specified ports to zero for the current session. (See the “Note on Reset” on page B-10.)

Web Browser Access To View Port and Trunk Group Statistics

1. Click on the **Status** tab.
2. Click on **[Port Counters]**.
3. To refresh the counters for a specific port, click anywhere in the row for that port, then click on **[Refresh]**.

Note

The reset the port counters to zero, you must reboot the switch.

Viewing the Switch's MAC Address Tables

Feature	Default	Menu	CLI	Web
viewing MAC addresses on all ports on a specific VLAN	n/a	page B-13	page B-16	—
viewing MAC addresses on a specific port	n/a	page B-15	page B-16	—
searching for a MAC address	n/a	page B-15	page B-16	—

These features help you to view:

- The MAC addresses that the switch has learned from network devices attached to the switch
- The port on which each MAC address was learned

Menu Access to the MAC Address Views and Searches

Per-VLAN MAC-Address Viewing and Searching. This feature lets you determine which switch port on a selected VLAN is being used to communicate with a specific device on the network. The per-VLAN listing includes:

- The MAC addresses that the switch has learned from network devices attached to the switch
- The port on which each MAC address was learned

1. From the Main Menu, select:

- 1. Status and Counters**
- 5. VLAN Address Table**

2. The switch then prompts you to select a VLAN.

```
Select VLAN : DEFAULT VLAN
```

3. Use the Space bar to select the VLAN you want, then press **[Enter]**. The switch then displays the MAC address table for that VLAN:

```
----- CONSOLE - MANAGER MODE -----  
Status and Counters - Address Table  
  
MAC Address  Located on Port  
-----  
0030c1-7f49c0 A3  
0030c1-7fec40 A1  
0030c1-b29ac0 A3  
0060b0-17de5b A3  
0060b0-880a80 A2  
0060b0-df1a00 A3  
0060b0-df2a00 A3  
0060b0-e9a200 A3  
009027-e74f90 A3  
080009-21ae84 A3  
080009-62c411 A3  
080009-6563e2 A3  
  
Actions->  Back  Search  Next page  Prev page  Help  
  
Return to previous screen.  
Use up/down arrow keys to scroll to other entries, left/right arrow keys to  
change action selection, and <Enter> to execute action.
```

Figure B-8. Example of the Address Table

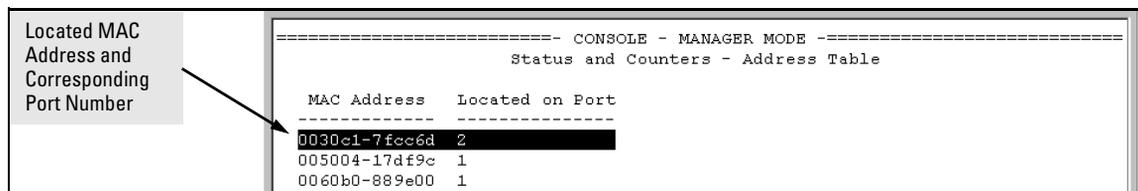
To page through the listing, use **N**ext page and **P**rev page.

Finding the Port Connection for a Specific Device on a VLAN. This feature uses a device's MAC address that you enter to identify the port used by that device.

1. Proceeding from figure B-8, press **[S]** (for **S**earch), to display the following prompt:

Enter MAC address: _

2. Type the MAC address you want to locate and press **[Enter]**. The address and port number are highlighted if found. If the switch does not find the MAC address on the currently selected VLAN, it leaves the MAC address listing empty.



```
----- CONSOLE - MANAGER MODE -----  
Status and Counters - Address Table  
  
MAC Address  Located on Port  
-----  
0030c1-7fcc6d 2  
005004-17df9c 1  
0060b0-889e00 1
```

Figure B-9. Example of Menu Indicating Located MAC Address

3. Press **[P]** (for **P**rev page) to return to the full address table listing.

Port-Level MAC Address Viewing and Searching. This feature displays and searches for MAC addresses on the specified port instead of for all ports on the switch.

1. From the Main Menu, select:

1. Status and Counters
7. Port Address Table

```
===== CONSOLE - MANAGER MODE =====
                        Status and Counters Menu

1. General System Information
2. Switch Management Address Information
3. Module Information
4. Port Status
5. Port Counters
6. Vlan Address Table
7. Port Address Table
8. Spanning Tree Information
0. Return to Main Menu...

Select port : A1
Type port number or press <Space> to scroll ports. Press <Enter> to select.
To select menu item, press item number, or highlight item and press <Enter>.
```

Prompt for Selecting
the Port To Search

Figure B-10. Listing MAC Addresses for a Specific Port

2. Use the Space bar to select the port you want to list or search for MAC addresses, then press **[Enter]** to list the MAC addresses detected on that port.

Determining Whether a Specific Device Is Connected to the Selected Port. Proceeding from step 2, above:

1. Press **[S]** (for **S**earch), to display the following prompt:
Enter MAC address: _
2. Type the MAC address you want to locate and press **[Enter]**. The address is highlighted if found. If the switch does not find the address, it leaves the MAC address listing empty.
3. Press **[P]** (for **P**rev page) to return to the previous per-port listing.

CLI Access for MAC Address Views and Searches

Syntax: show mac-address
 [vlan <vlan-id >]
 [<port-list >]
 [<mac-addr >]

To List All Learned MAC Addresses on the Switch, with The Port Number on Which Each MAC Address Was Learned.

```
ProCurve> show mac-address
```

To List All Learned MAC Addresses on one or more ports, with Their Corresponding Port Numbers. For example, to list the learned MAC address on ports A1 through A4 and port A6:

```
ProCurve> show mac-address a1-a4,a6
```

To List All Learned MAC Addresses on a VLAN, with Their Port Numbers. This command lists the MAC addresses associated with the ports for a given VLAN. For example:

```
ProCurve> show mac-address vlan 100
```

Note

The switches covered by this guide operate with a multiple forwarding database architecture. For more on this topic, refer to “Duplicate MAC Addresses on Different Switches” on page C-14

To Find the Port On Which the Switch Learned a Specific MAC Address. For example, to find the port on which the switch learns a MAC address of 080009-21ae84:

```
ProCurve# show mac-address 080009-21ae84
Status and Counters - Address Table - 080009-21ae84
  MAC Address : 080009-21ae84
  Located on Port : A2
```

Spanning Tree Protocol (STP) Information

Menu Access to STP Data

From the Main Menu, select:

1. Status and Counters ...
8. Spanning Tree Information

STP must be enabled on the switch to display the following data:

```
----- CONSOLE - MANAGER MODE -----  
                Status and Counters - Spanning Tree Information  
  
STP Enabled           : Yes  
Switch Priority       : 32,768  
Hello Time           : 2  
Max Age              : 20  
Forward Delay        : 15  
  
Topology Change Count : 3  
Time Since Last Change : 4 mins  
  
Root MAC Address     : 0030c1-7fcc40  
Root Path Cost       : 0  
Root Port            : This switch is root  
Root Priority         : 32768  
  
Actions->  Back   Show ports   Help  
  
Return to previous screen.  
Use arrow keys to change action selection and <Enter> to execute action.
```

Figure B-11. Example of Spanning Tree Information

Use this screen to determine current switch-level STP parameter settings and statistics.

You can use the **Show ports** action at the bottom of the screen to display port-level information and parameter settings for each port in the switch (including port type, cost, priority, operating state, and designated bridge) as shown in figure B-12.

```
----- CONSOLE - MANAGER MODE -----  
Status and Counters - Spanning Tree - Port Information  
  
Port      Type      Cost    Priority   State      Designated Bridge  
-----  
A1      100/1000T    5      128    Forwarding 0001e7-a09900  
A2      100/1000T    5      128    Forwarding 0001e7-a09900  
A3      100/1000T    5      128    Disabled  
A4      100/1000T    5      128    Disabled  
A5      100/1000T    5      128    Disabled  
A6      100/1000T    5      128    Disabled  
C1      1000SX       5      128    Forwarding 0001e7-a09900  
C2      1000SX       5      128    Forwarding 0001e7-a09900  
C3      1000SX       5      128    Forwarding 0001e7-a09900  
  
Actions->  Back      Help  
  
Return to previous screen.  
Use up/down arrow keys to scroll to other entries, left/right arrow keys to  
change action selection, and <Enter> to execute action.
```

Figure B-12. Example of STP Port Information

CLI Access to STP Data

This option lists the STP configuration, root data, and per-port data (cost, priority, state, and designated bridge).

Syntax: show spanning-tree

ProCurve> show spanning-tree

Internet Group Management Protocol (IGMP) Status

The switch uses the CLI to display the following IGMP status on a per-VLAN basis:

Show Command	Output
show ip igmp	Global command listing IGMP status for all VLANs configured in the switch: <ul style="list-style-type: none"> • VLAN ID (VID) and name • Active group addresses per VLAN • Number of report and query packets per group • Querier access port per VLAN
show ip igmp <vlan-id>	Per-VLAN command listing above IGMP status for specified VLAN (VID)
show ip igmp group <ip-addr>	Lists the ports currently participating in the specified group, with port type, Access type, Age Timer data and Leave Timer data.

For example, suppose that **show ip igmp** listed an IGMP group address of 224.0.1.22. You could get additional data on that group by executing the following:

```

HPswitch> show ip igmp group 224.0.1.22

IGMP ports for group 224.0.1.22

  Port Type      Access      Age Timer  Leave Timer
  ----
  3    10/100TX  host        0          0
  
```

Figure B-13. Example of IGMP Group Data

VLAN Information

The switch uses the CLI to display the following VLAN status:

Show Command	Output
show vlan	Lists: <ul style="list-style-type: none">• Maximum number of VLANs to support• Existing VLANs• Status (static or dynamic)• Primary VLAN
show vlan <vlan-id>	For the specified VLAN, lists: <ul style="list-style-type: none">• Name, VID, and status (static/dynamic)• Per-Port mode (tagged, untagged, forbid, no/auto)• "Unknown VLAN" setting (Learn, Block, Disable)• Port status (up/down)

For example, suppose that your switch has the following VLANs:

Ports	VLAN	VID
A1 - A12	DEFAULT_VLAN	1
A1, A2	VLAN-33	33
A3, A4	VLAN-44	44

The next three figures show how you could list data on the above VLANs.

Listing the VLAN ID (VID) and Status for ALL VLANs in the Switch.

```
ProCurve> show vlan
Status and Counters - VLAN Information
VLAN support : Yes
Maximum VLANs to support : 9
Primary VLAN: DEFAULT_VLAN

802.1Q VLAN ID Name          Status  --
-----
1          DEFAULT_VLAN  Static
33         VLAN-33      Static
44         VLAN-44      Static
```

Figure B-14. Example of VLAN Listing for the Entire Switch

Listing the VLAN ID (VID) and Status for Specific Ports.

Because ports A1 and A2 are not members of VLAN-44, it does not appear in this listing.

```
ProCurve>show vlan ports A1-A2
Status and Counters - VLAN Information - for ports A1,A2
802.1Q VLAN ID Name          Status
-----
1             DEFAULT_VLAN  Static
33            VLAN-33     Static
```

Figure B-15. Example of VLAN Listing for Specific Ports

Listing Individual VLAN Status.

```
ProCurve>show vlan 1
Status and Counters - VLAN Information - Ports - VLAN 1
802.1Q VLAN ID : 1
Name           : DEFAULT_VLAN
Status         : Static

Port Information Mode      Unknown VLAN Status
-----
A1             Untagged Learn      Up
A2             Tagged   Learn      Up
A3             Untagged Learn      Up
A4             Untagged Learn      Down
A5             Untagged Learn      Down
*             *             *             *
*             *             *             *
*             *             *             *
```

Figure B-16. Example of Port Listing for an Individual VLAN

Web Browser Interface Status Information

The “home” screen for the web browser interface is the Status Overview screen, as shown below. As the title implies, it provides an overview of the status of the switch, including summary graphs indicating the network utilization on each of the switch ports, symbolic port status indicators, and the Alert Log, which informs you of any problems that may have occurred on the switch.

For more information on this screen, refer to chapter 5, “Using the Web Browser Interface” .

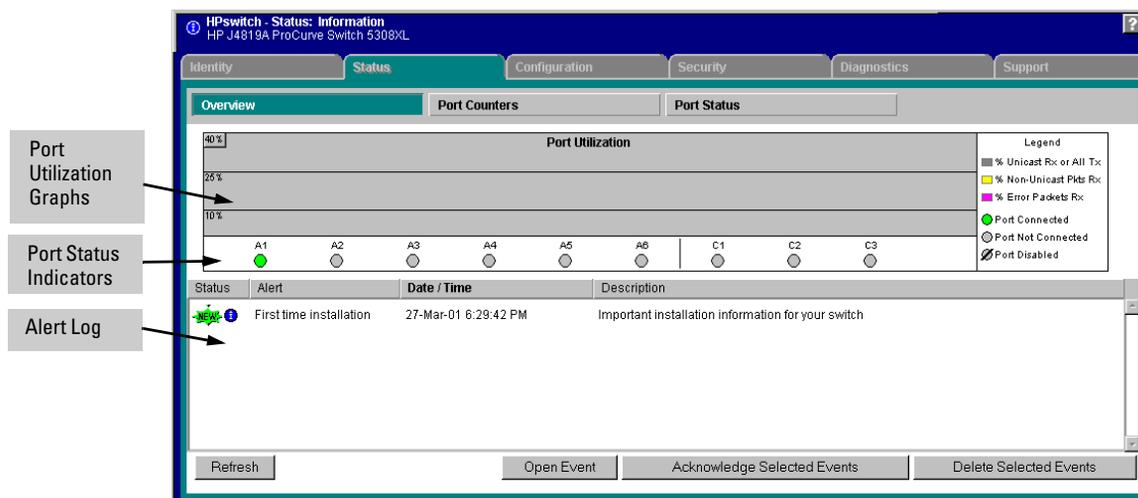


Figure B-17. Example of a Web Browser Interface Status Overview Screen

Interface Monitoring Features

Port Monitoring Features

Feature	Default	Menu	CLI	Web
display monitoring configuration	disabled	page B-24	page B-26	page B-29
configure the monitor port(s)	ports: none	page B-24	page B-27	page B-29
selecting or removing ports	none selected	page B-24	page B-28	page B-29

You can designate monitoring of inbound and outbound traffic on:

- **Ports and static trunks:** Allows monitoring of individual ports, groups of contiguous ports, and static port trunks.
- **Meshed ports:** Allows traffic monitoring on all ports configured for meshing on the switch.
- **Static VLANs:** Allows traffic monitoring on one static VLAN (*5300xl switches and 4200vl switches only*).

The switch monitors network activity by copying all traffic inbound and outbound on the specified interfaces to the designated monitoring port, to which a network analyzer can be attached.

Note

VLANs, a switch mesh, and port trunks cannot be used as a monitoring port.

The switch can monitor static LACP trunks, but not dynamic LACP trunks.

It is possible, when monitoring multiple interfaces in networks with high traffic levels, to copy more traffic to a monitor port than the link can support. In this case, some packets may not be copied to the monitor port.

Menu: Configuring Port and Static Trunk Monitoring

This procedure describes configuring the switch for monitoring when monitoring is disabled. (If monitoring has already been enabled, the screens will appear differently than shown in this procedure.)

1. From the Console Main Menu, Select:
 - 2. Switch Configuration...**
 - 3. Network Monitoring Port**

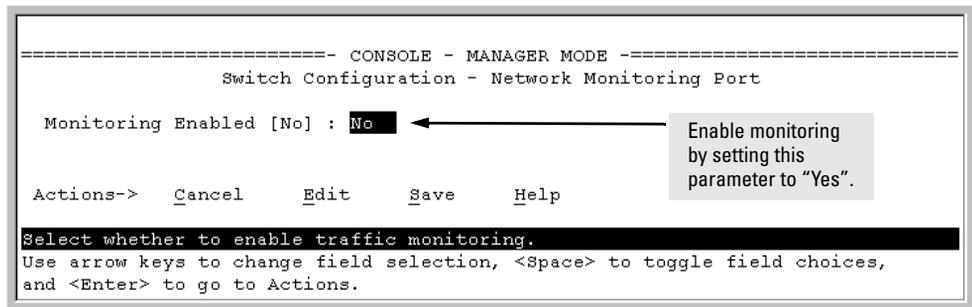


Figure B-18. The Default Network Monitoring Configuration Screen

2. In the Actions menu, press [E] (for Edit).
3. If monitoring is currently disabled (the default) then enable it by pressing the Space bar (or [Y]) to select Yes.
4. Press the down arrow key to display a screen similar to the following and move the cursor to the **Monitoring Port** parameter.

```

ProCurve
----- CONSOLE - MANAGER MODE -----
Switch Configuration - Network Monitoring Port

Monitoring Enabled [No] : Yes
Monitoring Port : A1
Monitor : Ports

Port   Type   Action | Port   Type   Action
-----+-----+-----|-----+-----+-----
A1    10/100TX |      | A10   10/100TX |
A2    10/100TX |      | A11   10/100TX |
A3    10/100TX |      | A12   10/100TX |
A4    10/100TX |      | A13   10/100TX |
A5    10/100TX |      | A14   10/100TX |
A6    10/100TX |      | A15   10/100TX |
A7    10/100TX |      | A20   10/100TX |
A8    10/100TX |      | Trk1  Trunk   |

Actions->  C a n c e l   E d i t   S a v e   H e l p

Select the port that will act as the Monitoring Port.
Use arrow keys to change field selection, <Space> to toggle field choices,
and <Enter> to go to Actions.
  
```

Figure B-19. How To Select a Monitoring Port

5. Use the Space bar to select the port to use for monitoring.
6. Highlight the Monitor field and use the Space bar to select the interfaces to monitor:

Ports: Use for monitoring ports, static trunks, or the mesh.

VLAN: Use for monitoring a VLAN (*5300xl and 4200vl switches*).

7. Do one of the following:
 - If you are monitoring ports, static trunks, or the mesh, go to step 8.
 - If you are monitoring a VLAN on a 5300xl switch:
 - i. Press **[Tab]** or the down arrow key to move to the **VLAN** field.

```

ProCurve
----- CONSOLE - MANAGER MODE -----
Switch Configuration - Network Monitoring Por

Monitoring Enabled [No] : Yes
Monitoring Port : A1
Monitor : VLAN
VLAN : VLAN 20
  
```

- ii. Use the Space bar to select the VLAN you want to monitor.
 - iii. Go to step 10.
8. Use the down arrow key to move the cursor to the **Action** column for the individual ports and position the cursor at a port you want to monitor.
 9. Press the Space bar to select **Monitor** for each port and trunk that you want monitored. (Use the down arrow key to move from one interface to the next in the **Action** column.)
 10. When you finish selecting ports to monitor, press **[Enter]**, then press **[S]** (for **Save**) to save your changes and exit from the screen.
 11. Return to the Main Menu.

CLI: Configuring Port, Mesh, and Static Trunk Monitoring

Port, Mesh, and Static Trunk Monitoring Commands Used in This Section

show monitor	below
mirror-port	page B-27
monitor	page B-28

You must use the following configuration sequence to configure port and static trunk monitoring in the CLI:

1. Assign a monitoring (mirror) port.
2. Designate the port(s), mesh, and/or static trunk(s) to monitor.

Displaying the Monitoring Configuration.

Syntax: show monitor

This command lists the port assigned to receive monitored traffic and the ports and/or trunks being monitored.

For example, if you assign port A6 as the monitoring port and configure the switch to monitor ports A1 - A3, **show monitor** displays the following:

```
ProCurve(config)# show monitor

Network Monitoring Port

Mirror Port: A6 ← Port receiving monitored traffic.

Monitoring sources
-----
A1 ← Monitored Ports
A2
A3
```

Figure B-20. Example of Monitored Port Listing

Configuring the Monitor Port.

Syntax: [no] mirror-port [< port-num >]

This command assigns or removes a monitoring port, and must be executed from the global configuration level. Removing the monitor port disables port monitoring and resets the monitoring parameters to their factory-default settings.

For example, to assign port A6 as the monitoring port:

```
ProCurve(config)# mirror-port a6
```

To turn off monitoring:

```
ProCurve(config)# no mirror-port
```

Selecting or Removing Monitoring Source Interfaces. After you configure a monitor port you can use either the global configuration level or the interface context level to select ports, static trunks, meshed ports, or (for the 5300xl switches or 4200vl switches) VLANs as monitoring sources. You can also use either level to remove monitoring sources.

Syntax: [no] interface < monitor-list > monitor
[no] vlan < vid > monitor

where:

< monitor-list > Includes port numbers, static trunk names, and meshing, such as **a4**, **c7**, **b5-b8**, **trk1**, and **mesh**.

< vid > Allows monitoring of one VLAN. (This option applies to the 5300xl and 4200vl switches.)

Identifies the switch elements to monitor through the currently configured monitor port. You can monitor the port(s), static trunk(s), and any switch mesh available on the switch or, on a 5300xl or 4200vl, one VLAN.

Note

Individual ports, static trunks, and meshing can all be monitored at the same time. However, if you configure the switch to monitor a VLAN (5300xl and 4200vl switches only), all other interfaces are removed from monitoring. Also, you can configure only one VLAN at a time for monitoring.

Elements in the monitor list can include port numbers, static trunk names, and the mesh at the same time.

For example, with a port such as port A6 configured as the monitoring (mirror) port, you would use either of the following commands to select these interfaces for monitoring:

- A1 through A3, and A5
- Trunks 1 and 2
- Meshing

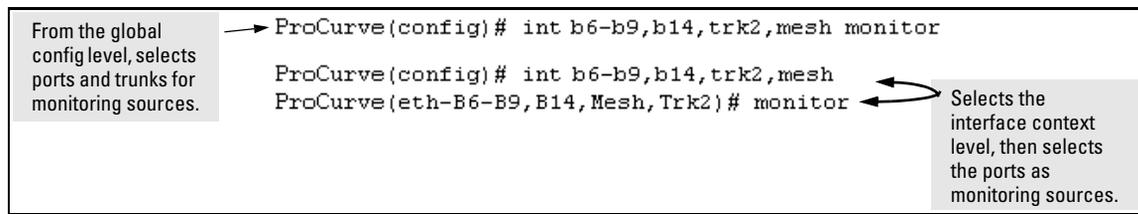


Figure B-21. Examples of Selecting Ports and Static Trunks as Monitoring Sources

To monitor a VLAN:

```
ProCurve(config)# vlan 20 monitor
ProCurve(config)# show monitor
Network Monitoring Port
Mirror Port: A1
Monitoring sources
-----
VLAN_20
```

Configure monitoring of VLAN 20.

Display current monitoring configuration:

- Monitor port
- Interface Being Monitored

Figure B-22. Example of Configuring VLAN Monitoring

```
ProCurve(eth-A1-A3,A5)# no int a5 monitor
ProCurve(eth-A1-A3,A5)# no monitor

ProCurve(config)# no int a5 monitor
ProCurve(config)# no int a1-a3,a5 monitor
```

These two commands show how to disable monitoring at the interface context level for a single port or all ports in an interface context level.

These two commands show how to disable monitoring at the global config level for a single port or a group of ports.

Figure B-23. Examples of Removing Ports as Monitoring Sources

Web: Configuring Port Monitoring

To enable port monitoring:

1. Click on the **Configuration** tab.
2. Click on **[Monitor Port]**.
3. To monitor one or more ports.
 - a. Click on the radio button for **Monitor Selected Ports**.
 - b. Select the port(s) to monitor.
4. Click on **[Apply Changes]**.

To remove port monitoring:

1. Click on the **[Monitoring Off]** radio button.
2. Click on **[Apply Changes]**.

For web-based Help on how to use the web browser interface screen, click on the **[?]** button provided on the web browser screen.

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