10

Port Status and Basic Configuration

Contents

Overview

This chapter describes how to view the current port configuration and how to configure ports to non-default settings, including

- Enable/Disable
- Mode (speed and duplex)
- Flow Control
- Broadcast Limit

Viewing Port Status and Configuring Port Parameters

Port Status and Configuration Features

Feature	Default	Menu	CLI	Web
viewing port status	n/a	page 10-6	page 10-8	page 10-18
configuring ports	Refer to Table 10-1 on pages 10-3 thru 10-5	page 10-7	page 10-9	page 10-18
configuring auto-mdix			page 9-11	

Note On Connecting Transceivers to Fixed-Configuration Devices

If the switch either fails to show a link between an installed transceiver and another device, or demonstrates errors or other unexpected behavior on the link, check the port configuration on both devices for a speed and/or duplex (mode) mismatch. To check the mode setting for a port on the switch, use either the Port Status screen in the menu interface (page 10-6) or **show interfaces brief** in the CLI (page 10-8).

Table 10-1. Status and Parameters for Each Port Type

Status or Parameter	Description
Enabled	**Yes** (default): The port is ready for a network connection. **No:** The port will not operate, even if properly connected in a network. Use this setting, for example, if the port needs to be shut down for diagnostic purposes or while you are making topology changes.
Status (read-only)	**Up**: The port senses a link beat. **Down**: The port is not enabled, has no cables connected, or is experiencing a network error. For troubleshooting information, refer to the installation manual you received with the switch. Refer also to appendix C, "Troubleshooting" (in this manual).
Mode	The port's speed and duplex (data transfer operation) setting. **10/100Base-T Ports:** • **auto-mdix** (default): Senses speed and negotiates with the port at the other end of the link for data transfer operation (half-duplex or full-duplex). **Note:** Ensure that the device attached to the port is configured for the same setting that you select here. Also, if "Auto" is used, the device to which the port is connected must operate in compliance with the IEEE 802.3u "Auto Negotiation" standard for 100Base-T networks. If the other device does not comply with the 802.3u standard, or is not set to Auto, then the port configuration on the switch must be manually set to match the port configuration on the other device. To see what the switch negotiates for the Auto setting, use the CLI **show interfaces brief** command or the "**3. Port Status"** option under "**1. Status and Counters"** in the menu interface. • **mdi:** Sets the port to connect with a PC using a crossover cable (Manual mode—applies only to copper port switches using twisted-pair copper Ethernet cables) • **mdix:** Sets the port to connect with a PC using a straight-through cable (Manual mode—applies only to copper port switches using twisted-pair copper Ethernet cables) • **Auto-10:** Allows the port to negotiate between half-duplex (HDx) and full-duplex (FDx) while keeping speed at 10 Mbps. Also negotiates flow control (enabled or disabled). ProCurve recommends Auto-10 for links between 10/100 auto-sensing ports connected with Cat 3 cabling. (Cat 5 cabling is required for 100 Mbps links.). • **10HDx:**10 Mbps, Half-Duplex • **10FDx:** 10 Mbps, Full-Duplex • **100HDx:** 100 Mbps, Half-Duplex • **100FDx:** 100 Mbps, Full-Duplex **100FX Ports**: • **100HDx:** 100 Mbps, Half-Duplex • **100FDx** (default): 100 Mbps, Full-Duplex

— Continued —

Status or Parameter	Description
	— Continued From Previous Page — **100/1000Base-T Ports:** • **auto-mdix** (default): Senses speed and negotiates with the port at the other end of the link for port operation (MDI-X or MDI). To see what the switch negotiates for the Auto setting, use the CLI **show interfaces brief** command or the **"3. Port Status"** option under **"1. Status and Counters"** in the menu interface. • **mdi:** Sets the port to connect with a PC using a crossover cable (Manual mode—applies only to copper port switches using twisted-pair copper Ethernet cables) • **mdix:** Sets the port to connect with a PC using a straight-through cable (Manual mode—applies only to copper port switches using twisted-pair copper Ethernet cables) • **Auto-100:** Uses 100 Mbps and negotiates with the port at the other end of the link for other port operation features. • **Auto-1000:** Uses 1000 Mbps and negotiates with the port at the other end of the link for other port operation features. • **100Hdx:** Uses 100 Mbps, half-duplex. • **100Fdx:** Uses 100 Mbps, Full-Duplex **Notes:** • Changing the port speed on a transceiver port requires a reboot of the switch. • Ensure that the device attached to the port is configured for the same setting that you select here. Also, if "Auto" is used, the device to which the port connects must also be configured to "Auto" and operate in compliance with the IEEE 802.3ab "Auto Negotiation" standard for 1000Base-T networks.
	10/100/1000Base-T Ports: • **auto-mdix** (default): Senses speed and negotiates with the port at the other end of the link for port operation (MDI-X or MDI). To see what the switch negotiates for the Auto setting, use the CLI **show interfaces brief** command or the **"3. Port Status"** option under **"1. Status and Counters"** in the menu interface. • **mdi:** Sets the port to connect with a PC using a crossover cable (Manual mode—applies only to copper port switches using twisted-pair copper Ethernet cables) • **mdix:** Sets the port to connect with a PC using a straight-through cable (Manual mode—applies only to copper port switches using twisted-pair copper Ethernet cables) • **Auto-10:** Allows the port to negotiate between half-duplex (HDx) and full-duplex (FDx) while keeping speed at 10 Mbps. Also negotiates flow control (enabled or disabled). ProCurve recommends Auto-10 for links between 10/100 auto-sensing ports connected with Cat 3 cabling. (Cat 5 cabling is required for 100 Mbps links.). • **10HDx:**10 Mbps, Half-Duplex • **10FDx:** 10 Mbps, Full-Duplex • **Auto-100:** Uses 100 Mbps and negotiates with the port at the other end of the link for other port operation features. • **Auto-1000:** Uses 1000 Mbps and negotiates with the port at the other end of the link for other port operation features. • **100Hdx:** Uses 100 Mbps, half-duplex. • **100Fdx:** Uses 100 Mbps, Full-Duplex *— Continued on Next Page —*

Status or Parameter	Description
	— Continued From Previous Page —
	Gigabit Fiber-Optic Ports (Gigabit-SX, Gigabit-LX, and Gigabit-LH): • **1000FDx:** 1000 Mbps (1 Gbps), Full Duplex only • **Auto** (default): The port operates at 1000FDx and auto-negotiates flow control with the device connected to the port.
	10-Gigabit CX4 Copper Ports: • **Auto**: The port operates at 10 gigabits FDx and negotiates flow control. Lower speed settings or half-duplex are not allowed.
	10-Gigabit SC Fiber-Optic Ports: • **Auto**: The port operates at 10 gigabits FDx and negotiates flow control. Lower speed settings or half-duplex are not allowed.
Auto-MDIX	The switch supports Auto-MDIX on 10Mb, 100Mb, and 1 Gb T/TX (copper) ports. (Fiber ports and 10-gigabit ports do not use this feature.) • **Automdix:** Configures the port for automatic detection of the cable type (straight-through or crossover). • **MDI:** Configures the port to connect to a switch, hub, or other MDI-X device with a straight-through cable. • **MDIX:** Configures the port to connect to a PC or other MDI device with a straight-through cable.
Flow Control	• **Disabled** (default): The port does not generate flow control packets, and drops any flow control packets it receives. • **Enabled:** The port uses 802.3x Link Layer Flow Control, generates flow control packets, and processes received flow control packets. With the port mode set to **Auto** (the default) and Flow Control enabled, the switch negotiates Flow Control on the indicated port. If the port mode is not set to Auto, or if Flow Control is disabled on the port, then Flow Control is not used. You must enable flow control globally on the switch before enabling it on individual ports. Also, you must disable flow control on the individual ports before disabling it globally on the switch. Note that flow control must be enabled on both ends of a link.
Broadcast Limit	Specifies the percentage of the theoretical maximum network bandwidth that can be used for broadcast and multicast traffic. Any broadcast or multicast traffic exceeding that limit will be dropped. Zero (0) means the feature is disabled. **Series 5300xl and Series 4200vl Switches:** The broadcast-limit command operates at the global configuration context level to set the broadcast limit for all ports on the switch. **Series 3400cl and Series 6400cl Switches:** The broadcast-limit command operates at the port context level to set the broadcast limit on a per-port basis. **Note:** This feature is not appropriate for networks that require high levels of IPX or RIP broadcast traffic.

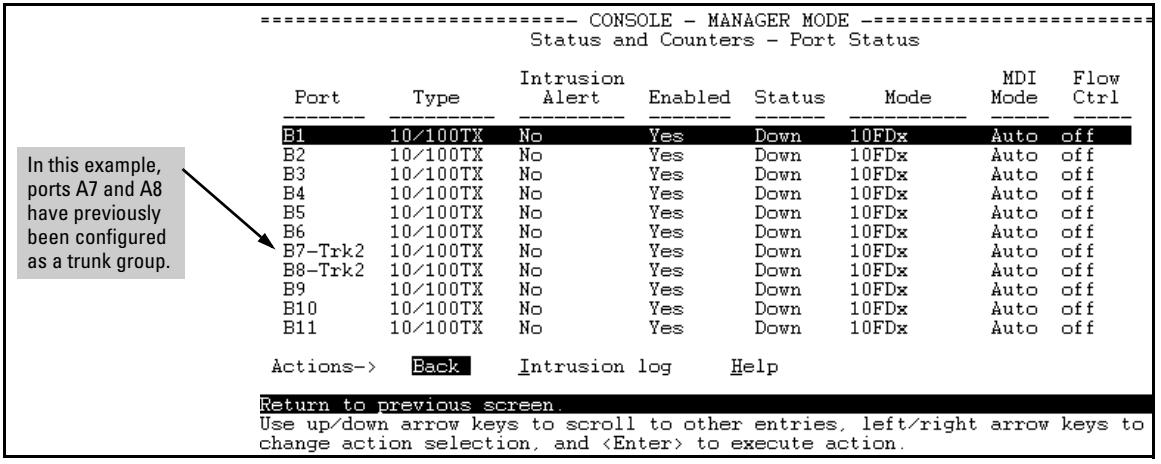
Menu: Port Configuration

From the menu interface, you can view and change the port configuration.

Using the Menu To View Port Configuration. The menu interface displays the configuration for ports and (if configured) any trunk groups.

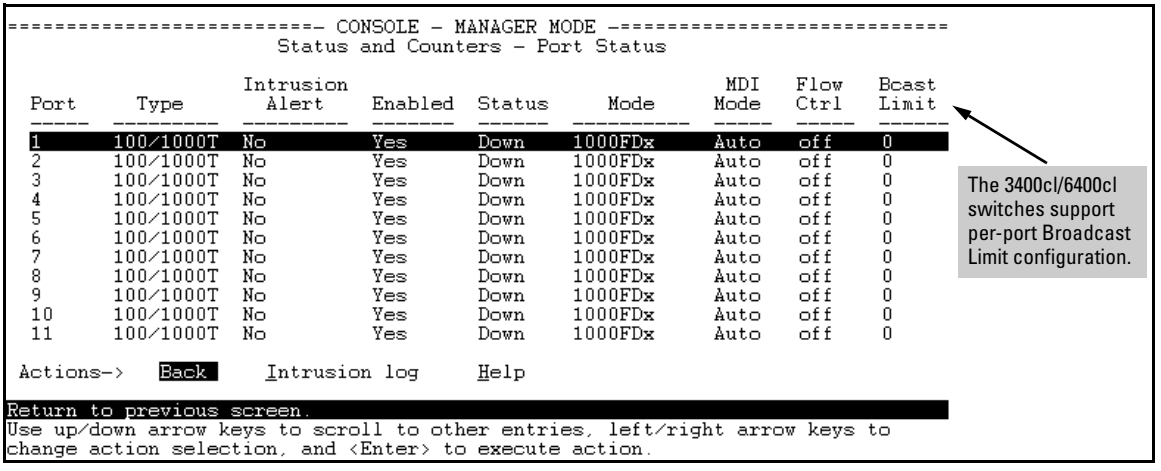
From the Main Menu, select:

1. **Status and Counters ...**
   3. **Port Status** *(3400cl and 6400cl switches)*
      — or —
   4. **Port Status** *(5300cl and 4200vl switches)*



Port	Type	Intrusion Alert	Enabled	Status	Mode	MDI Mode	Flow Ctrl
B1	10/100TX	No	Yes	Down	10FDx	Auto	off
B2	10/100TX	No	Yes	Down	10FDx	Auto	off
B3	10/100TX	No	Yes	Down	10FDx	Auto	off
B4	10/100TX	No	Yes	Down	10FDx	Auto	off
B5	10/100TX	No	Yes	Down	10FDx	Auto	off
B6	10/100TX	No	Yes	Down	10FDx	Auto	off
B7-Trk2	10/100TX	No	Yes	Down	10FDx	Auto	off
B8-Trk2	10/100TX	No	Yes	Down	10FDx	Auto	off
B9	10/100TX	No	Yes	Down	10FDx	Auto	off
B10	10/100TX	No	Yes	Down	10FDx	Auto	off
B11	10/100TX	No	Yes	Down	10FDx	Auto	off

Figure 10-1. Example of a 5300xl Port Status Screen



Port	Type	Intrusion Alert	Enabled	Status	Mode	MDI Mode	Flow Ctrl	Bcast Limit
1	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
2	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
3	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
4	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
5	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
6	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
7	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
8	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
9	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
10	100/1000T	No	Yes	Down	1000FDx	Auto	off	0
11	100/1000T	No	Yes	Down	1000FDx	Auto	off	0

Figure 10-2. Example of a 3400cl Port Status Screen

Using the Menu To Configure Ports.

Note

The menu interface uses the same screen for configuring both individual ports and port trunk groups. For information on port trunk groups, refer to chapter 13, “Port Trunking” .

1. From the Main Menu, Select:
   2. Switch Configuration...
   2. Port/Trunk Settings

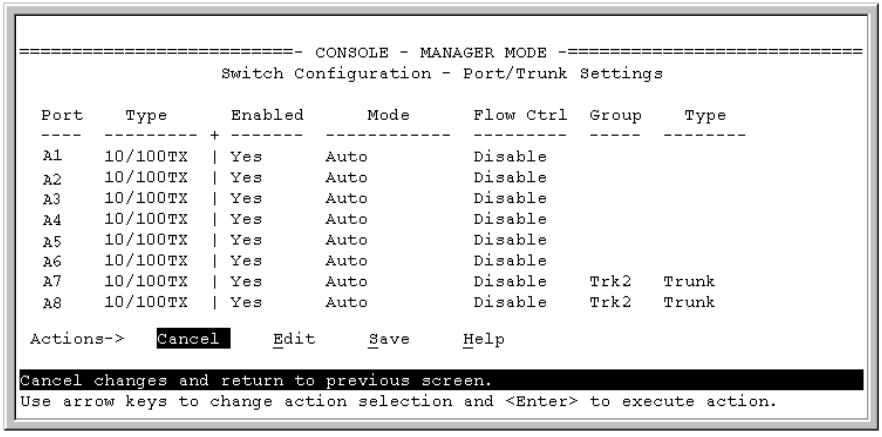


Figure 10-3. Example of Port/Trunk Settings with a Trunk Group Configured

2. Press **[E]** (for Edit). The cursor moves to the **Enabled** field for the first port.
3. Refer to the online help provided with this screen for further information on configuration options for these features.
4. When you have finished making changes to the above parameters, press **[Enter]**, then press **[S]** (for **Save**).

CLI: Viewing Port Status and Configuring Port Parameters

Port Status and Configuration Commands

From the CLI, you can configure and view all port parameter settings and view all port status indicators.

Using the CLI To View Port Status. Use the following commands to display port status and configuration.

Syntax: show interfaces [brief | config | < *port-list* >]

brief: *Lists the current operating status for all ports on the switch.*

config: *Lists a subset of configuration data for all ports on the switch; that is, for each port, the display shows whether the port is enabled, the operating mode, and whether it is configured for flow control.*

< *port-list* >: Shows a summary of network traffic handled by the specified ports.

Series 3400cl and Series 6400cl switches include per-port broadcast limit settings in the **show interfaces** *and* **show interfaces brief** *display outputs.*

The next two figures list examples of the output of the above two command options for the same port configuration.

```
ProCurve(config)# show interfaces brief

 Status and Counters - Port Status

                     | Intrusion                                    MDI    Flow   Bcast
  Port  Type         | Alert      Enabled Status Mode          Mode   Ctrl | Limit |
  ----- ---------- + ---------- -------- ------ ------------ ----- ----- ------
  1      100/1000T  | No          Yes      Down   1000FDx      Auto   off    0
  2      100/1000T  | No          Yes      Down   1000FDx      Auto   off  | 0
  3      100/1000T  | No          Yes      Down   1000FDx      Auto   off    0
  4      100/1000T  | No          Yes      Down   1000FDx      Auto   off    0
  5      100/1000T  | No          Yes      Down   1000FDx      Auto   off    0
  6      100/1000T  | No          Yes      Down   1000FDx      Auto   off    0
  .          .          .           .        .        .          .      .    .
  .          .          .           .        .        .          .      .    .
  24     100/1000T  | No          Yes      Down   1000FDx      Auto   off    0
  25     10GbE-CX4  | No          Yes      Down   10-Gig       n/a    off  | 0
  26     10GbE-LR   | No          Yes      Down   10-Gig       n/a    off    0
```

This screen shows current port operating status.
Note: The (per-port) **Bcast Limit** column appears only on the 3400cl an 6400cl switches. (The 5300xl switches apply a global broadcast limit

3400cl/ 6400cl Switches Only

Figure 10-4. Example of a Show Interfaces Brief Command Listing

```
ProCurve(config)# show interface config
 Port Settings
  Port   Type       | Enabled Mode          Flow Ctrl MDI
  -----  ---------- + ------- ------------ --------- ----
  1      100/1000T  | Yes     Auto          Disable   Auto
  2      100/1000T  | Yes     Auto          Disable   Auto
  3      100/1000T  | Yes     Auto          Disable   Auto
  4      100/1000T  | Yes     Auto          Disable   Auto
  5      100/1000T  | Yes     Auto          Disable   Auto
  6      100/1000T  | Yes     Auto          Disable   Auto
  .          .          .        .              .         .
  .          .          .        .              .         .
  24     100/1000T  | Yes     Auto          Disable   Auto
  25     10GbE-CX4  | Yes     Auto          Disable
  26     10GbE-LR   | Yes     Auto          Disable
```

This screen shows current port configuration.

Figure 10-5. Example of a Show Interfaces Config Command Listing

Using the CLI To Enable or Disable Ports and Configure Port Mode

You can configure one or more of the following port parameters. For details, refer to table 10-1 on pages 10-3 thru 10-5.

Syntax: [no] interface < *port-list* >

[< disable | enable >]

Disables or enables the port for network traffic. Does not use the **no** *form of the command. (Default:* **enable***.)*

[speed-duplex < auto-10 |10-full | 10-half | 100-full | 100-half |auto| auto-100 | 1000-full >]

Specifies the port's data transfer speed and mode. Does not use the **no** *form of the command. (Default:* **auto***.)*

Note that in the above syntax you can substitute an "**int**" for "**interface**"; that is: **int < *port-list* >**.

For example, to configure ports C1 through C3 and port C6 for 100Mbps full-duplex, you would enter these commands:

```
ProCurve(config)# int c1-c3,c6 speed-duplex 100-full
```

Similarly, to configure a single port with the above command settings, you could either enter the same command with only the one port identified, or go to the *context level* for that port and then enter the command. For example, to enter the context level for port C6 and then configure that port for 100FDx:

```
ProCurve(config)# int e c6
ProCurve(eth-C6)# speed-duplex 100-full
```

If port C8 was disabled, and you wanted to enable it and configure it for 100FDx with flow-control active, you could do so with either of the following command sets. (Note that to enable flow control on individual ports, you must first enable it globally, as shown in these examples.)

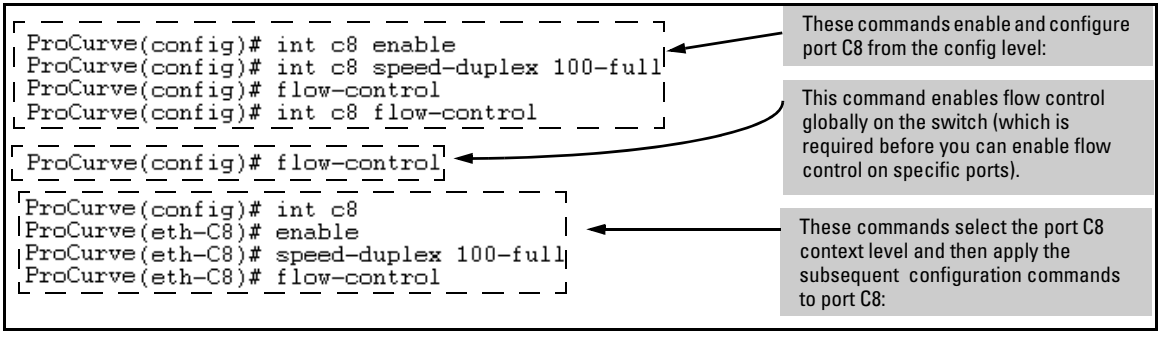


Figure 10-6. Examples of Two Methods for Changing a Port Configuration

Refer to "Enabling or Disabling Flow Control" on page 10-11 for more on flow control.

Enabling or Disabling Flow Control

- **3400cl/6400cl Switches:** Flow-Control on these switches is enabled and disabled on a per-port basis.
- **5300xl and 4200vl Switches:** You must first enable flow-control globally on the switch, and then enable it on the desired ports.

Note

You must enable flow control on both ports in a given link. Otherwise, flow control does not operate on the link, and appears as **Off** in the **show interfaces brief** port listing, even if flow control is configured as enabled on the port in the switch. (Refer to figure 10-4 on page 10-9.) Also, the port (speed-duplex) mode must be set to **Auto** (the default).

Flow Control on the 3400cl/6400cl Switches.

Syntax: [no] interface < *port-list* > flow-control

Enables or disables flow control packets on < *port-list* > *ports. The "***no***" form of the command disables flow control. (Default: Disabled.)*

Use the show interfaces brief command *(figure 10-4 on page 10-9) to view the current per-port flow-control configuration.*

Flow Control on the 5300xl and 4200vl Switches. As mentioned earlier, flow control operates on individual 5300xl and 4200vl switch ports after you first enable global flow control and then per-port flow control. The reverse is true for disabling flow control on all ports. (Disable per-port flow control, and then disable global flow control.) To disable flow control on some ports, while leaving it enabled on other ports, just disable it on the individual ports you want to exclude.

Syntax: [no] flow-control

Enables or disables flow-control globally on the switch, and is required before you can enable flow control on specific ports. To use the no form of the command to disable global flow-control, you must first disable flow-control on all ports on the switch. (Default: Disabled)

[no] interface < *port-list* > flow-control

*Enables or disables flow control packets on the port. The "***no***" form of the command disables flow control on the individual ports. (Default: Disabled.)*

For example, suppose that:

1. You want to enable flow control on ports A1-A6.
2. Later, you decide to disable flow control on ports A5 and A6.
3. As a final step, you want to disable flow control on all ports.

Assuming that flow control is currently disabled on the switch, you would use these commands:

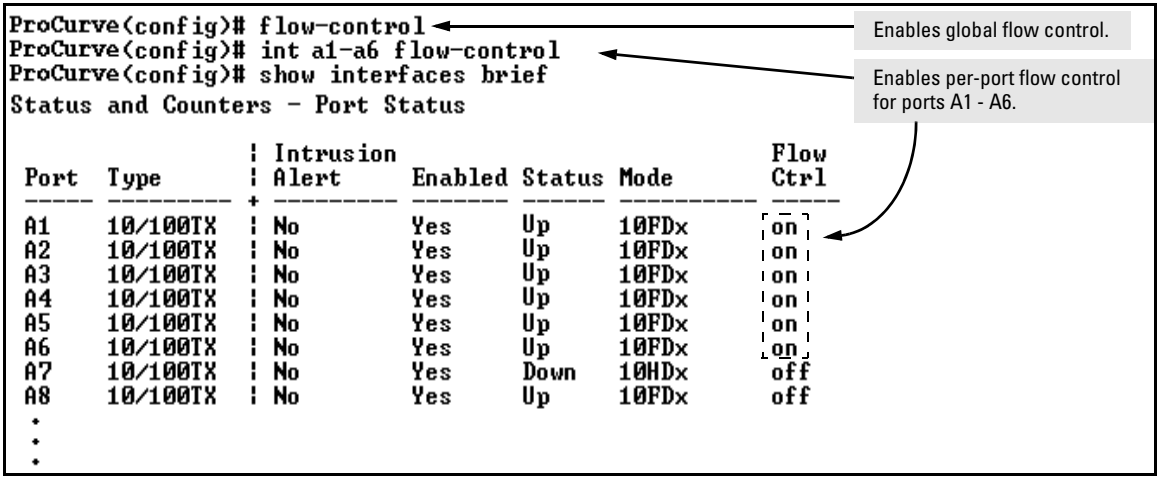


Figure 10-7. Example of Configuring Flow Control for a Series of Ports

```
 .
ProCurve(config)# no int a5-a6 flow-control
ProCurve(config)# show interfaces brief

Status and Counters - Port Status

                   | Intrusion                                Flow
 Port   Type       | Alert      Enabled Status Mode          Ctrl
 -----  ---------- + ---------  ------- ------ ----------    -----
 A1     10/100TX   | No         Yes     Down   10FDx          on
 A2     10/100TX   | No         Yes     Down   10FDx          on
 A3     10/100TX   | No         Yes     Down   10FDx          on
 A4     10/100TX   | No         Yes     Down   10FDx          on
 A5     10/100TX   | No         Yes     Down   10FDx          off
 A6     10/100TX   | No         Yes     Down   10FDx          off
 A7     10/100TX   | No         Yes     Up     10HDx          off
 A8     10/100TX   | No         Yes     Down   10FDx          off
 .
 .
 .
```

Disables per-port flow control on ports A5 and A6.

Figure 10-8. Example Continued from Figure 10-7

```
ProCurve(config)# no int a1-a4 flow-control
ProCurve(config)# no flow-control
ProCurve(config)# show interfaces brief
Status and Counters - Port Status

                   | Intrusion                                Flow
 Port   Type       | Alert      Enabled Status Mode          Ctrl
 -----  ---------- + ---------  ------- ------ ----------    -----
 A1     10/100TX   | No         Yes     Down   10FDx          off
 A2     10/100TX   | No         Yes     Down   10FDx          off
 A3     10/100TX   | No         Yes     Down   10FDx          off
 A4     10/100TX   | No         Yes     Down   10FDx          off
 A5     10/100TX   | No         Yes     Down   10FDx          off
 A6     10/100TX   | No         Yes     Down   10FDx          off
 A7     10/100TX   | No         Yes     Up     10HDx          off
 A8     10/100TX   | No         Yes     Down   10FDx          off
 .
 .
 .
```

Disables per-port flow control on ports A1 through A4 and global flow control. Flow control is now disabled on the switch.

Ports formerly configured for flow control.

Figure 10-9. Example Continued from Figure 10-8

Configuring a Broadcast Limit on the Switch

- **3400cl/6400cl Switches:** Broadcast-Limit on these switches is configured as a percentage on a per-port basis.
- **5300xl and 4200vl Switches:** Broadcast-Limit on these switches is configured globally (on all ports) as a fixed limit.

Broadcast-Limit on the 3400cl/6400cl Switches.

Syntax: interface < *port-list* > broadcast-limit < 0 - 99 > *(3400cl/6400cl Switches)*

Configures the theoretical maximum bandwidth percentage that the specified switch ports use to limit broadcasts and multicasts. The switch drops any broadcast or multicast traffic exceeding that limit. Zero (0) disables the feature.

Note: *This feature is not appropriate for networks requiring high levels of IPX or RIP broadcast traffic.*

For example, to configure a broadcast limit of 70% on ports 1-12:

```
ProCurve(config)# interface 1-12 broadcast-limit 70
```

To later disable broadcast limiting on ports 11 and 12:

```
ProCurve(config)# interface 11-12 broadcast-limit 0
```

Broadcast-Limit on the 5300xl and 4200vl Switches.

Syntax: [no] broadcast-limit

Enables or disables broadcast limiting for outbound broadcasts on all ports on the switch. When enabled, this command limits outbound broadcast packets to 1,000 per second on each port, regardless of packet size.

Note: *This feature is not appropriate for networks requiring high levels of IPX or RIP broadcast traffic.*

Syntax: show config

Displays the startup-config file. The broadcast limit setting appears here if enabled and saved to the startup-config file.

Syntax: show running-config

Displays the running-config file. The broadcast limit setting appears here if enabled. If the setting is not also saved to the startup-config file, rebooting the switch returns broad cast limit to the setting currently in the startup-config file.

For example, the following command enables broadcast limiting on all ports on the switch:

```
ProCurve(config)# broadcast-limit
```

Configuring Auto-MDIX

Copper ports on the switch can automatically detect the type of cable configuration (MDI or MDI-X) on a connected device and adjust to operate appropriately.

This means you can use a "straight-through" twisted-pair cable or a "crossover" twisted-pair cable for any of the connections—the port makes the necessary adjustments to accommodate either one for correct operation. The following port types on your switch support the IEEE 802.3ab standard, which includes the "Auto MDI/MDI-X" feature:

Series 5300xl and Series 4200vl Switches	Series 3400cl Switches
10/100-TX xl module ports	10/100/1000-T ports
100/1000-T xl module ports	
10/100/1000-T xl module ports	

(MDI/MDI-X does not apply to the optional 10-gigabit ports on the Series 3400cl switches or the 10-gigabit ports on the Series 6400cl switches.)

Using the above ports:

- If you connect a copper port using a straight-through cable on a Series 5300xl, Series 4200vl, or Series 3400cl switch to a port on another switch or hub that uses MDI-X ports, the 5300xl, 4200vl, or 3400cl switch port automatically operates as an MDI port.
- If you connect a copper port using a straight-through cable on a Series 5300xl, Series 4200vl, or Series 3400cl switch to a port on an end node, such as a server or PC, that uses MDI ports, the 5300xl, 4200vl, or 3400cl switch port automatically operates as an MDI-X port.

HP Auto-MDIX was developed for auto-negotiating devices, and was shared with the IEEE for the development of the IEEE 802.3ab standard. HP Auto-MDIX and the IEEE 802.3ab Auto MDI/MID-X feature are completely compatible. Additionally, HP Auto-MDIX supports operation in forced speed and duplex modes.

If you want more information on this subject please refer to the *IEEE 802.3ab Standard Reference*.

For more information on MDI-X, refer to the appendix titled "Switch Ports and Network Cables" in the *Installation and Getting Started Guide* for your switch.

Manual Override. If you require control over the MDI/MDI-X feature you can set the switch to either of two non-default modes:

- Manual MDI
- Manual MDI-X

Table 10-2 shows the cabling requirements for the MDI/MDI-X settings.

Table 10-2. Cable Types for Auto and Manual MDI/MDI-X Settings

Setting	MDI/MDI-X Device Type	
	PC or Other MDI Device Type	Switch, Hub, or Other MDI-X Device
Manual MDI	Crossover Cable	Straight-Through Cable
Manual MDI-X	Straight-Through Cable	Crossover Cable
Auto-MDI-X (The Default)	Either Crossover or Straight-Through Cable	

The Auto-MDIX features apply only to copper port switches using twisted-pair copper Ethernet cables.

Syntax: interface < *port-list* > mdix-mode < auto-mdix | mdi | mdix >

auto-mdix *is the automatic, default setting. This configures the port for automatic detection of the cable (either straight-through or crossover).*

mdi *is the manual mode setting that configures the port for connecting to either a PC or other MDI device with a crossover cable, or to a switch, hub, or other MDI-X device with a straight-through cable.*

mdix *is the manual mode setting that configures the port for connecting to either a switch, hub, or other MDI-X device with a crossover cable, or to a PC or other MDI device with a straight-through cable.*

Syntax: show interfaces config

Lists the current per-port Auto/MDI/MDI-X configuration.

Syntax: show interfaces brief

Where a port is linked to another device, this command lists the MDI mode the port is currently using. In the case of ports configured for **Auto** (**auto-mdix**)*, the MDI mode appears as either* **MDI** *or* **MDIX**, *depending upon which option the port has negotiated with the device on the other end of the link. In the case of ports configured for* **MDI** *or* **MDIX**, *the mode listed in this display matches the configured setting. If the link to another device was up, but has gone down, this command shows the last operating MDI mode the port was using. If a port on a given switch has not detected a link to another device since the last reboot, this command lists the MDI mode to which the port is currently configured.*

For example, **show interfaces config** displays the following data when port A1 is configured for **auto-mdix**, port A2 is configured for **mdi**, and port A3 is configured for **mdix**.

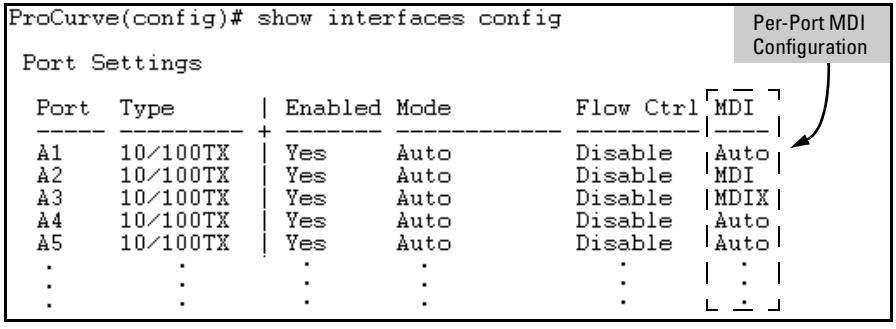


Figure 10-10. Example of Displaying the Current MDI Configuration

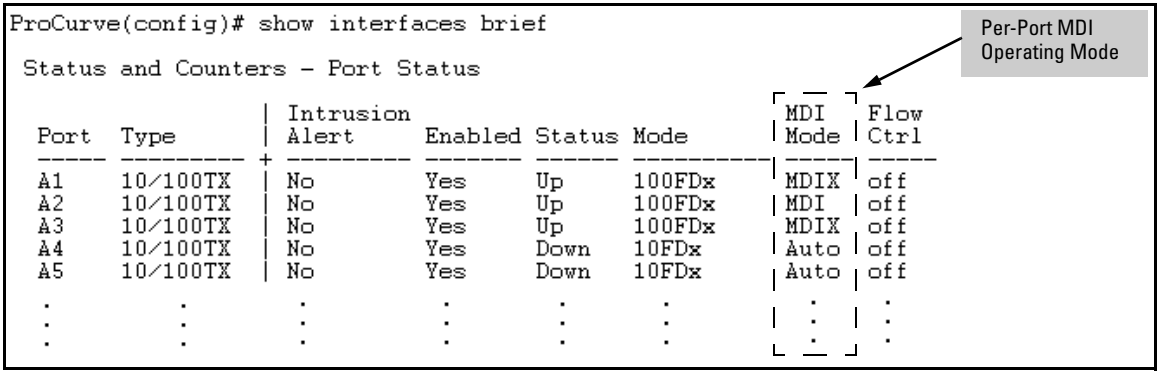


Figure 10-11. Example of Displaying the Current MDI Operating Mode

Note

Upgrading the Switch Series 5300xl Operating System from E_07.*XX* or earlier:

1. Copper ports in auto-negotiation still default to **auto-mdix** mode.
2. Copper ports in forced speed/duplex default to **mdix** mode.

For a fresh installation of the operating system, **auto-mdix** is the default.

Web: Viewing Port Status and Configuring Port Parameters

In the web browser interface:

1. Click on the **Configuration** tab.
2. Click on **[Port Configuration]**.
3. Select the ports you want to modify and click on **[Modify Selected Ports]**.
4. After you make the desired changes, click on **[Apply Settings]**.

Note that the web browser interface displays an existing port trunk group. However, to configure a port trunk group, you must use the CLI or the menu interface. For more on this topic, refer to chapter 13, “Port Trunking” .

Using Friendly (Optional) Port Names

Feature	Default	Menu	CLI	Web
Configure Friendly Port Names	Standard Port Numbering	n/a	page 19	n/a
Display Friendly Port Names	n/a	n/a	page 21	n/a

This feature enables you to assign alphanumeric port names of your choosing to augment automatically assigned numeric port names. This means you can configure meaningful port names to make it easier to identify the source of information listed by some **Show** commands. (Note that this feature *augments* port numbering, but *does not replace* it.)

Configuring and Operating Rules for Friendly Port Names

- At either the global or context configuration level you can assign a unique name to a port. You can also assign the same name to multiple ports.
- The friendly port names you configure appear in the output of the **show name [** ***port-list*****]**, **show config**, and **show interface <** ***port-number*****>** commands. They do not appear in the output of other show commands or in Menu interface screens. (See "Displaying Friendly Port Names with Other Port Data" on page 10-21.)
- Friendly port names are not a substitute for port numbers in CLI commands or Menu displays.
- Trunking ports together does not affect friendly naming for the individual ports. (If you want the same name for all ports in a trunk, you must individually assign the name to each port.)
- A friendly port name can have up to 64 contiguous alphanumeric characters.
- Blank spaces within friendly port names are not allowed, and if used, cause an **invalid input** error. (The switch interprets a blank space as a name terminator.)
- In a port listing, **not assigned** indicates that the port does not have a name assignment other than its fixed port number.
- To retain friendly port names across reboots, you must save the current running-configuration to the startup-config file after entering the friendly port names. (In the CLI, use the **write memory** command.)

Configuring Friendly Port Names

Syntax: interface < *port-list* > name < *port-name-string* >
Assigns a port name to port-list.

Syntax: no interface < *port-list* > name
Deletes the port name from port-list.

Configuring a Single Port Name. Suppose that you have connected port A3 on the switch to Bill Smith's workstation, and want to assign Bill's name and workstation IP address (10.25.101.73) as a port name for port A3:

```
ProCurve(config)# int A3 name Bill_Smith@10.25.101.73
ProCurve(config)# write mem
ProCurve(config)# show name A3
 Port Names
  Port : A3
   Type : 10/100TX
   Name : Bill_Smith@10.25.101.73
```

Figure 10-12. Example of Configuring a Friendly Port Name

Configuring the Same Name for Multiple Ports. Suppose that you want to use ports A5 through A8 as a trunked link to a server used by a drafting group. In this case you might configure ports A5 through A8 with the name "Draft-Server:Trunk".

```
ProCurve(config)# int A5-A8 name Draft-Server:Trunk
ProCurve(config)# write mem
ProCurve(config)# show name 5-8
 Port Names

  Port : A5
   Type : 10/100TX
   Name : Draft-Server:Trunk

  Port : A6
   Type : 10/100TX
   Name : Draft-Server:Trunk

  Port : A7
   Type : 10/100TX
   Name : Draft-Server:Trunk

  Port : A8
   Type : 10/100TX
   Name : Draft-Server:Trunk
```

Figure 10-13. Example of Configuring One Friendly Port Name on Multiple Ports

Displaying Friendly Port Names with Other Port Data

You can display friendly port name data in the following combinations:

- **show name**: Displays a listing of port numbers with their corresponding friendly port names and also quickly shows you which ports do not have friendly name assignments. (**show name** data comes from the running-config file.)
- **show interface <*port-number*>**: Displays the friendly port name, if any, along with the traffic statistics for that port. (The friendly port name data comes from the running-config file.)
- **show config**: Includes friendly port names in the per-port data of the resulting configuration listing. (**show config** data comes from the startup-config file.)

To List All Ports or Selected Ports with Their Friendly Port Names.

This command lists names assigned to a specific port.

Syntax: show name [*port-list*]

Lists the friendly port name with its corresponding port number and port type. The **show name** *command without a port list shows this data for all ports on the switch.*

For example:

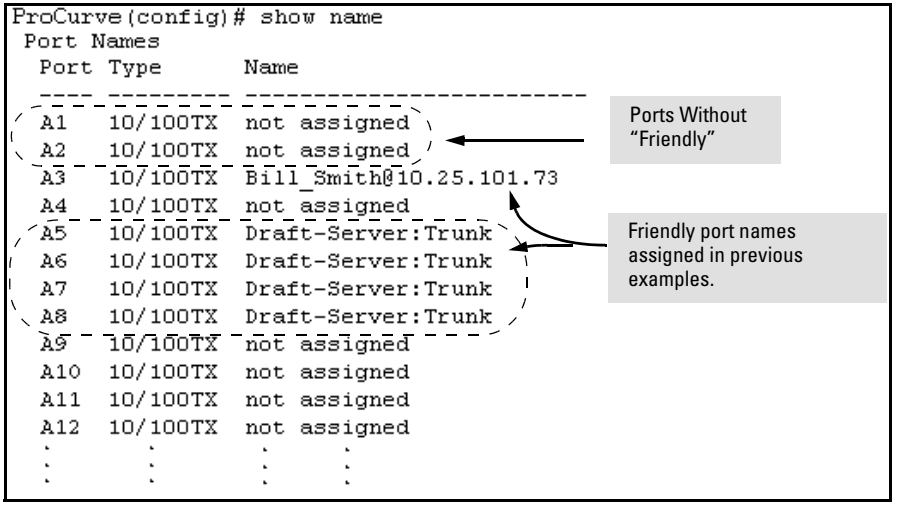


Figure 10-14. Example of Friendly Port Name Data for All Ports on the Switch

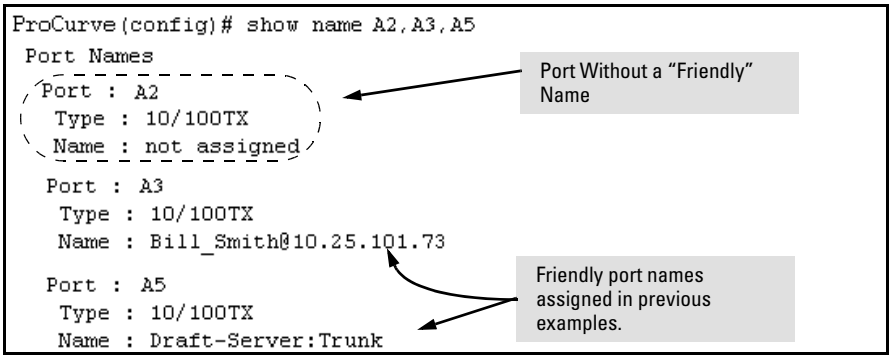


Figure 10-15. Example of Friendly Port Name Data for Specific Ports on the Switch

Including Friendly Port Names in Per-Port Statistics Listings. A friendly port name configured to a port is automatically included when you display the port's statistics output.

Syntax: show interface < *port-number* >

Includes the friendly port name with the port's traffic statistics listing.

For example, if you configure port A1 with the name "O'Connor_10.25.101.43", the show interface output for this port appears similar to the following:

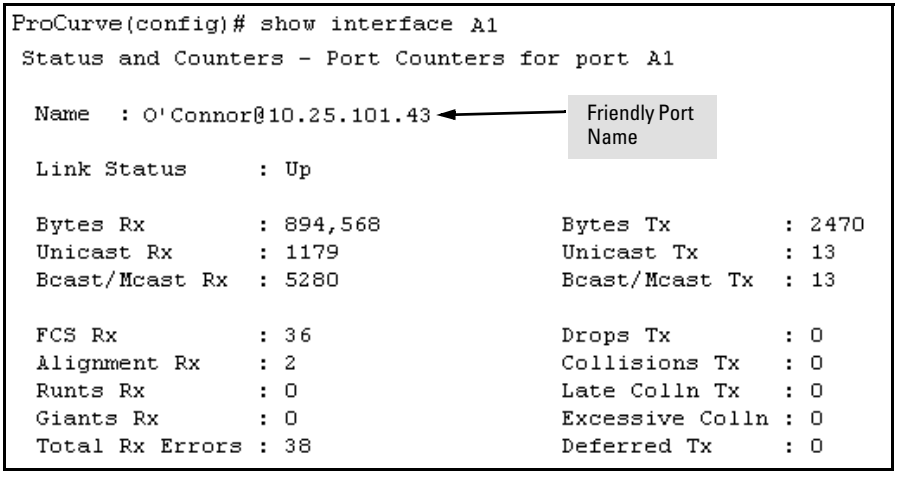


Figure 10-16. Example of a Friendly Port Name in a Per-Port Statistics Listing

For a given port, if a friendly port name does not exist in the running-config file, the `Name` line in the above command output appears as:

```
Name   :  not assigned
```

To Search the Configuration for Ports with Friendly Port Names.

This option tells you which friendly port names have been saved to the startup-config file. (**show config** does not include ports that have only default settings in the startup-config file.)

Syntax: show config

Includes friendly port names in a listing of all interfaces (ports) configured with non-default settings. Excludes ports that have neither a friendly port name nor any other non-default configuration settings.

For example, if you configure port A1 with a friendly port name:

```
ProCurve(config)# int A1 name Print Server@10.25.101.43
ProCurve(config)# write mem
ProCurve(config)# int A2 name Herbert's PC
ProCurve(config)# show config

Startup configuration:

; J4850A Configuration Editor; Created on release #E.08.30
hostname "HPswitch"
time daylight-time-rule None
no cdp run
interface A1
   name "Print_Server@10.25.101.43"
exit
snmp-server community "public" Unrestricted
vlan 1
   name "DEFAULT_VLAN"
   untagged 1-24
   ip address dhcp-bootp
   exit
no aaa port-access authenticator active
```

This command sequence saves the friendly port name for port A1 in the startup-config file. The name entered for port A2 is not saved because it was executed after **write memory**.

Listing includes friendly port name for port A1 only.

In this case, **show config** lists only port A1. Executing **write mem** after entering the name for port A2, and then executing show config again would result in a listing that includes both

Figure 10-17. Example Listing of the Startup-Config File with a Friendly Port Name Configured (and Saved)

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