



# HP ProCurve 1800 Switches

## Management and Configuration Guide

July 2009



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Management and Configuration Guide

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### **Applicable Products**

HP ProCurve Switch 1800-8G (J9029A)

HP ProCurve Switch 1800-24G (J9028B)

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# Contents

## 1 Getting Started

<b>Introduction</b> .....	1-1
<b>Related Publications</b> .....	1-1
<b>Getting Documentation From the Web</b> .....	1-2
<b>Sources for More Information</b> .....	1-3
To Set Up and Install the Switch in Your Network .....	1-3

## 2 Using the ProCurve Web Browser Interface

<b>Overview</b> .....	2-1
<b>Navigating the Web Browser Interface</b> .....	2-1
Home Page .....	2-1
Configuration Options .....	2-2
Panel Display .....	2-3
Main Menu .....	2-3
<b>Web Configuration</b> .....	2-5
Displaying System Information .....	2-5
Displaying the System Name .....	2-8
Setting the Switch's IP Address .....	2-8
Configuring the Logon Password .....	2-10
Rate Limits .....	2-11
Port Configuration .....	2-12
Port Mirroring .....	2-13
Showing Port Statistics .....	2-15
Trunk Membership .....	2-17
Aggregation Mode .....	2-17
Defining the Members of a Trunk .....	2-18
Deleting the Members of a Trunk .....	2-18
Trunk Configuration .....	2-20
Modifying Trunk Settings .....	2-20

LACP Settings .....	2-21
Enabling LACP .....	2-21
Disabling LACP .....	2-21
LACP Status .....	2-23
VLAN Setup .....	2-25
Introduction to VLANs .....	2-25
Creating a VLAN .....	2-25
Modifying a VLAN .....	2-26
Deleting a VLAN .....	2-26
VLAN Port Config .....	2-27
LLDP Configuration .....	2-30
LLDP Neighbor Table .....	2-32
SNMP Configuration .....	2-33
Ping Test .....	2-34
Restore to Factory Defaults .....	2-35
Reboot Switch .....	2-36
Upload/Download Configuration .....	2-37
Download Text Readable Configuration/Status File .....	2-38
Update Software .....	2-38
Support .....	2-39

### **3 Troubleshooting**

<b>Basic Troubleshooting Tips .....</b>	<b>3-1</b>
<b>Forgotten IP Address or Password .....</b>	<b>3-2</b>
<b>Testing the Switch by Resetting It .....</b>	<b>3-2</b>
<b>HP Customer Support Services .....</b>	<b>3-2</b>
Before Calling Support .....	3-3

### **Index**

# Getting Started

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## Introduction

This *Management and Configuration Guide* is intended to support the following switches:

- ProCurve Switch 1800-8G
- ProCurve Switch 1800-24G

This guide describes how to use the Web browser interface to configure, manage, and monitor switch operation. A troubleshooting chapter is also included.

## Related Publications

**Installation and Getting Started Guide.** Use the *Installation and Getting Started Guide* shipped with your switch to prepare for and perform the physical installation. This guide also steps you through connecting the switch to your network and assigning IP addressing, as well as describing the LED indications for correct operation and trouble analysis.

You can download a copy of this guide from the ProCurve Web site, <http://www.hp.com/go/procurve>. (See “Getting Documentation From the Web” on page 1-2.)

**Release Notes.** Release notes are posted on the ProCurve Web site and provide information on new software updates:

- New features and how to configure and use them
- Software management, including downloading software to the switch
- Software fixes addressed in current and previous releases

To view and download a copy of the latest release notes for your switch, see “Getting Documentation From the Web” on page 1-2.

# Getting Documentation From the Web

1. Go to the ProCurve Web site at  
<http://www.hp.com/go/procurve/manuals>
2. Click on the product for which you want to view or download a manual.

The screenshot shows the HP ProCurve Networking website. At the top, there is a navigation bar with the HP logo, 'ProCurve Networking', and links for 'Contact', 'Why ProCurve?', 'Find a Partner', and 'How to Buy'. Below this is a secondary navigation bar with 'Products', 'Solutions', 'Support', and 'Training' tabs, along with a search bar. The main content area is titled 'ProCurve Networking manuals' and includes a 'Customer Care' sidebar with links to warranty, software, and manuals. The main content area features a 'Manuals overview' section with a photo of a man at a laptop and a text box explaining that ProCurve posts its product documentation online. Below this is a list of product categories with links to manuals, including 'HP ProCurve Secure Routers', 'HP ProCurve Network Security', 'HP ProCurve Routing Switches and Modules', 'HP ProCurve Interconnect Fabric Switches', 'HP ProCurve ONE Services zl Module', and 'HP ProCurve Switches and Modules'. A callout box labeled '2' points to the 'HP ProCurve Secure Routers' category.



## Sources for More Information

### To Set Up and Install the Switch in Your Network

Use the *Installation and Getting Started Guide* shipped with your switch for the following:

- Instructions for physically installing the switch in your network.
- Quickly assigning an IP address, subnet mask, and gateway, set a Manager password, and (optionally) configure other basic features.
- Interpreting LED behavior.
- Notes, cautions, and warnings related to installing and using the switch.

For the latest version of the *Installation and Getting Started Guide* and other documentation for your switch, visit the ProCurve Web site. (Refer to “Getting Documentation From the Web” on page 1-2.)



# Using the ProCurve Web Browser Interface

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## Overview

This switch provides an embedded HTTP Web agent. Using a Web browser you can configure the switch and view statistics to monitor network activity. The Web agent can be accessed by any computer on the network using a standard Web browser (Internet Explorer 5.5 or above).

Prior to accessing the switch from a Web browser, be sure you have first performed the following tasks:

1. Configure the switch with a valid IP address, subnet mask, and default gateway. (Defaults: IP address 192.168.2.10; Subnet mask 255.255.255.0; Gateway 0.0.0.0)
2. Set a new password using the Web interface (the default is no password). Access to the Web interface is controlled by the password.

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**Note**

If you cannot remember the switch's IP address, you can restore the original settings by following the procedure described in the "Troubleshooting" section.

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**Note**

If the Web Browser Interface is inactive for more than 300 seconds, the Web Browser logs out the administrator and returns to the Login page.

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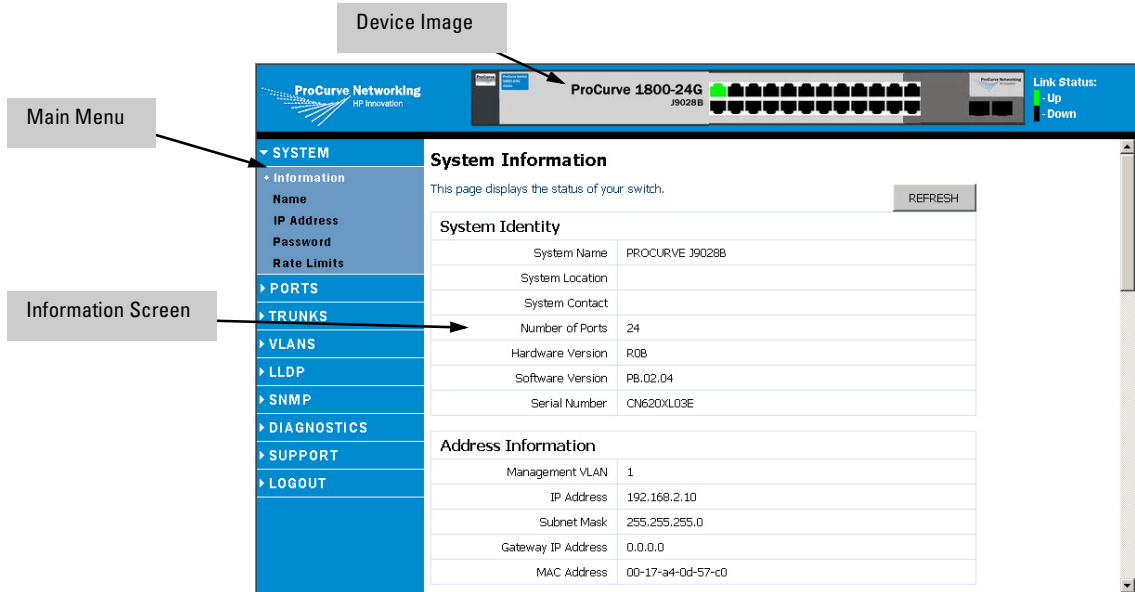
## Navigating the Web Browser Interface

### Home Page

When your Web browser connects with the switch's Web agent, the home page is displayed as shown below. The home page displays the Main Menu on the left side of the screen, System Information on the right side, and Device Image on the top bar. The Main Menu links are used to navigate to other menus, and display configuration parameters and statistics.

## Using the ProCurve Web Browser Interface

### Navigating the Web Browser Interface



### Note

The examples in this chapter are based on the 24-port switch. Other than the number of fixed ports, there are no major differences between the 8-port and 24-port switch.

## Configuration Options

Configurable parameters have a dialog box or a drop-down list. Once a configuration change has been made on a page, be sure to click on the Apply button to confirm the new setting. The following table summarizes the Web page configuration buttons.

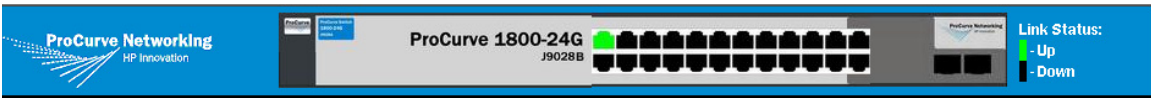
Button	Action
Apply	Sets specified values to the system.
Cancel	Discards all changes and restores current values.
Help	Links directly to Web help

**Note**

To ensure proper screen refresh, be sure that Internet Explorer is configured as follows: Under the menu “Tools / Internet Options / General / Temporary Internet Files / Settings,” the setting for item “Check for newer versions of stored pages” should be “Every visit to the page.”

## Panel Display

The Web agent displays an image of the switch’s ports. The port will turn green when the corresponding front-panel port is in connection with another device. To show the port number, place mouse pointer onto the intended port.



## Main Menu

Using the onboard Web agent, you can define system parameters, manage and control the switch, and all its ports, or monitor network conditions. The following table briefly describes the selections available from the Web-browser interface.

Menu	Description	Page
SYSTEM		2-5
Information	Provides basic system description, including system name, IP address, port, trunk, LACP, and VLAN information.	2-5
Name	Sets the name of the switch.	2-8
IP Address	Sets the IP address, subnet mask, and gateway IP address.	2-8
Password	Changes the password.	2-10
Rate Limits	Sets the storm control parameters.	2-11
PORTS		2-12
Configuration	Configure the speed and duplex mode of ports.	2-12
Port Mirroring	Sets up the port mirroring features of the switch to enable traffic monitoring.	2-13
Statistics	Shows statistics for each port on the switch.	2-15

## Using the ProCurve Web Browser Interface

### Navigating the Web Browser Interface

Menu	Description	Page
TRUNKS		2-17
Membership	Selects ports to group into static trunks.	2-17
Configuration	Configures static trunk connection settings.	2-20
LACP Setup	Configures Link Aggregation Control Protocol (LACP) on the switch.	2-21
LACP Status	Displays aggregation information and LACP port status.	2-23
VLANS		2-25
VLAN Setup	Create up to 64 VLANs.	2-25
VLAN Port Config	Configures VLAN behavior for individual ports and trunks.	2-27
LLDP		2-30
Configuration	Configures Transmitted TLVs settings and LLDP state.	2-30
Neighbor	Monitors LLDP neighbor information.	2-32
SNMP		2-33
Configuration	Configures the Simple Network Management Protocol.	2-33
DIAGNOSTICS		2-34
Ping Test	Sends a ping to other devices from the switch.	2-34
Factory Defaults	Force the switch to perform a power reset and restore the original factory settings.	2-35
Reboot Switch	Reboots the switch.	2-36
SUPPORT		2-37
Configuration File	Upload or download the switch configuration file.	2-37
Support File	Download the switch system configuration and status information in text file format.	2-38
Update Software	Updates the switch system software using a file provided by ProCurve.	2-38
ProCurve Web Site	Link to ProCurve Web site.	2-39
LOGOUT	Quits to the Login page.	

# Web Configuration

## Displaying System Information

You can display a complete summary of identity, IP Address, port, Trunk/LACP, and VLAN information for the switch.

### Field Attributes

#### *System Identity*

- **System Name** – Name assigned to the switch system.
- **System Location** – Description of the switch location.
- **System Contact** – Contact information assigned to the switch.
- **Number of Ports** – Number of built-in ports.
- **Hardware Version** – Hardware version of the main board.
- **Software Version** – Version number of the code.
- **Serial Number** – The serial number of the switch.

#### *Address Information*

- **Management VLAN** – ID of a configured VLAN. By default, all ports on the switch are members of VLAN 1. However, the management station can be attached to a port belonging to any VLAN, as long as that VLAN has been assigned an IP address.
- **IP Address** – Address of the VLAN to which the management station is attached. (Note that the management station must always be in the Management VLAN.)
- **Subnet Mask** – This mask identifies the host address bits used for routing to specific subnets. (Default: 255.255.255.0)
- **Gateway IP Address** – IP address of the gateway router between the switch and management stations that exist on other network segments. (Default: 0.0.0.0)
- **MAC Address** – The physical layer address of the switch.

#### *Port Information*

- **Port** – Indicates the port number.
- **Type** – Indicates the port type (10/100/1000T or M).
- **Link Status** – Indicates if the link is Up or Down.

- **Speed/Duplex Status** – Shows the current speed and duplex mode.
  - 10HDX
  - 10FDX
  - 100HDX
  - 100FDX
  - 1000FDX
- **Flow Control Status** – Indicates whether flow control is enabled or disabled.
- **Auto-negotiation** – Shows if auto-negotiation is enabled or disabled.
- **Frame Type** – Either “Tagged” or “All.” “Tagged” means that the port will only receive VLAN-tagged packets. When set to “All,” the port will also receive untagged packets.
- **PVID** – The VLAN ID assigned to untagged frames received on the interface. Outgoing frames are tagged unless the frame’s VLAN ID is the same as the PVID. When the PVID is set to “None,” all outgoing frames are tagged. (Default: 1)

#### *Trunk/LACP Information*

- **Trunk/LACP** – The trunk label. “T1” through “T12” on the 24-port switch and “T1” through “T4” on the 8-port switch are used as trunk labels.
- **Type** – Displays the trunk type as “Static” or “Dynamic.”
- **Trunk/LACP Status** – Indicates the speed and duplex setting of the trunk.
  - 10HDX
  - 10FDX
  - 100HDX
  - 100FDX
  - 1000FDX
- **Ports** – The ports that are members of the trunk.

#### *VLAN Information*

- **VLAN ID** – A number in the range 1 - 4094 which identifies the VLAN.
- **VLAN Member** – A list of the ports that are members of the VLAN. By default, all ports are members of VLAN 1.



## Web - Click System, Information.

**System Information**

This page displays the status of your switch. REFRESH

---

**System Identity**

System Name	PROCURVE J90288
System Location	
System Contact	
Number of Ports	24
Hardware Version	ROB
Software Version	PB.02.04
Serial Number	CN620XL03E

---

**Address Information**

Management VLAN	1
IP Address	192.168.2.10
Subnet Mask	255.255.255.0
Gateway IP Address	0.0.0.0
MAC Address	00-17-a4-0d-57-c0

---

**Port Information**

Port	Type	Link Status	Speed/Duplex Status	Flow Control Status	Auto-negotiation	Frame Type	PVID
1	10/100/1000-T	Up	100FDX	Disabled	Enabled	All	1
2	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
3	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
4	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
5	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
6	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
7	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
8	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
9	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
10	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
11	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
12	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
13	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
14	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
15	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
16	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
17	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
18	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
19	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
20	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
21	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
22	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
23	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1
24	10/100/1000-T	Down	Auto	Disabled	Enabled	All	1

---

**Trunk/LACP Information**

Trunk/LACP	Type	Trunk/LACP Status	Ports
No Trunks Configured or No LACP alive			

---

**VLAN Information**

VLAN ID	VLAN Members
1	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24

HELP REFRESH

## Displaying the System Name

You can identify the system by displaying the device name, location, and contact information.

### Field Attributes

- **System Name** – A name assigned to the switch system.
- **System Location** – Description of the switch location.
- **System Contact** – The contact name for the switch.

**Web** – Click System, Name.

### System Name

This page allows you to provide a system name, location, and contact information for your switch, so that you can easily identify it when managing your network remotely

System Name	<input type="text" value="PROCURVE J9028B"/>
System Location	<input type="text"/>
System Contact	<input type="text"/>

## Setting the Switch's IP Address

This section describes how to configure an IP interface for management access over the network. The IP address for this switch is 192.168.2.10 by default. To manually configure an address, make sure the DHCP Enabled box is unchecked, then change the switch's default settings (IP address 192.168.2.10 and netmask 255.255.255.0) to values that are compatible with your network. You may also need to establish a default gateway between the switch and management stations that exist on another network segment.

### Field Attributes

- **DHCP Enabled** – Enable or disable DHCP. If enabled, the IP address will be acquired from a DHCP server. If disabled, the IP address must be manually set by the user. (Default: Disabled)
- **Switch IP Address** – Address of the IP interface that is allowed management access. Valid IP addresses consist of four numbers, 0 to 255, separated by periods. (Default: 192.168.2.10)

- **Subnet Mask** – This mask identifies the host address bits used for routing to specific subnets. (Default: 255.255.255.0)
- **Gateway IP Address** – IP address of the gateway router between this device and management stations that exist on other network segments. (Default: 0.0.0.0)
- **Management VLAN** – ID of the configured VLAN (1-4093, no leading zeroes). By default, all ports on the switch are members of VLAN 1. However, the management station can be attached to a port belonging to any VLAN, as long as that VLAN has been assigned an IP address.

**Note**

Be sure to keep a record of the switch's IP address. If you cannot remember the switch's IP address, you can restore the original settings by following the procedure described in the "Troubleshooting" section.

If you change the switch IP address, you must close the Web interface and start a new session using the new IP address.

**Web** – Click System, IP Address. Enter the IP address, subnet mask, gateway, and select the Management VLAN, then click APPLY

**IP Address**

This page allows you to configure the IP address used to access your switch through the web.

DHCP Enabled	<input type="checkbox"/>
Switch IP Address	<input type="text" value="192"/> <input type="text" value="168"/> <input type="text" value="2"/> <input type="text" value="10"/>
Subnet Mask	<input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="255"/> <input type="text" value="0"/>
Gateway IP Address	<input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/>
Management VLAN	<input type="text" value="1"/>

## Configuring the Logon Password

The administrator has write access for all parameters governing the embedded Web agent. You should therefore assign a new administrator password as soon as possible, and store it in a safe place.

### Field Attributes

#### *Change Password*

- **Current Password** – Input the current password. (Default is no password)
- **New Password** – Specifies the new user password. (Range: 1-16 characters plain text, case sensitive)
- **Confirm New Password** – Re-enter in the new password for confirmation.

---

### Note

Be sure to keep a record of the switch's password. If you cannot remember the password, you can restore the original settings by following the procedure described in the "Troubleshooting" section.

**Web** – Click System, Password. To change the password for the administrator, enter the current password, the new password, confirm it by entering it again, then click APPLY.

### Password Settings

Use this page to set the password on the switch's Web Interface.

---

#### Change Password

Current Password	<input type="text"/>
New Password	<input type="text"/>
Confirm New Password	<input type="text"/>

**Note:** The password is case sensitive.

**Note:** If you forget your password, you will have to manually reset the switch to its factory defaults. See Help for more details. Power cycle will not reset the password.

## Rate Limits

Broadcast storms may occur when a device on your network is malfunctioning, or if application programs are not well designed or properly configured. If there is too much broadcast traffic on your network, performance can be severely degraded, or everything can come to a complete halt.

You can protect your network from broadcast storms by setting a threshold for broadcast traffic for each port. Any broadcast packets exceeding the specified threshold will then be dropped.

---

### Note

---

Rate limiting is not supported on the ProCurve Switch 1800-8G due to a hardware limitation.

### Field Attributes

- **Enable Rate Limits** – Click to select the box to enable rate limits. (Default: Disabled)
- **Limit (number of frames per second)** – Threshold of port bandwidth measured in number of frames per second. From the drop down menu you can choose the desired limit. The value specifies the size of the available input bandwidth that can be made available for broadcast and multicast traffic. The same limit size is applied to every port on the switch. When the limit size is exceeded, packets are dropped, irrespective of the flow control settings.

**Web** – Click System, Rate Limits. This page enables you to set the broadcast storm control parameters for the switch.

### Rate Limits

This page enables you to limit the bandwidth that is allowed for Broadcasts and Multicasts.

Type	Enable Rate Limits	Limit (number of frames per second)
Broadcast and Multicast Rate	<input type="checkbox"/>	1k ▾

HELP

APPLY

CANCEL

## Port Configuration

You can use the Port Configuration page to manually set the speed, duplex mode, and flow control. You can enable jumbo frames to support data packets 9216 bytes in size.

### Field Attributes

- **Enable Jumbo Frames** – Click box to enable jumbo frames.
- **Port** – The port number.
- **Speed/Duplex** – Allows you to manually set the port speed and duplex mode.
- **Flow Control** – Allows flow control to be enabled or disabled. When the box is checked, flow control is enabled.
- **Trunk** – Indicates if a port is a member of a trunk.

**Web** – Click Ports, Configuration.

Port	Speed/Duplex	Flow Control	Trunk
1	Auto	<input type="checkbox"/>	
2	Auto	<input checked="" type="checkbox"/>	T1
3	Auto	<input type="checkbox"/>	
4	Auto	<input type="checkbox"/>	
5	Auto	<input type="checkbox"/>	
6	Auto	<input type="checkbox"/>	
7	Auto	<input type="checkbox"/>	
8	Auto	<input type="checkbox"/>	

### Note

Ports within a trunk cannot be configured individually. However, you can use the Trunk Configuration page to manually set the same speed, duplex mode, and flow control for every port in a trunk.

## Port Mirroring

You can mirror (copy) incoming and outgoing packets on multiple source ports to a single target port for real-time analysis. You can then attach a network analyzer or RMON probe to the target port and study the traffic crossing the source ports in a completely unobtrusive manner.

### Field Attributes

#### *Port to Mirror to*

- **Port to Mirror to** – The port that will be used to “mirror” another port’s incoming and outgoing packets. Data packets will be dropped when data coming in is greater than the port can handle.

---

### Note

---

If the total ingress bandwidth exceeds the mirror port’s egress bandwidth, packets will eventually be dropped on ingress to the switch, which means they will not reach the mirror port or their intended destination port. Input rate-limiting in conjunction with port flow-control should be used to ensure that the total ingress bandwidth never exceeds the egress bandwidth.

#### *Ports to Mirror*

- **Mirroring Enabled** – A port whose traffic will be monitored. If enabled, the incoming and outgoing packets on this port will be mirrored. (Default: Disabled)

**Web – Click Ports, Port Mirroring.**

### Port Mirroring

This page enables you to set up the port mirroring features of the switch to enable traffic monitoring.

Port to Mirror to

#### Ports to Mirror

Port	Mirroring Enabled	Port	Mirroring Enabled
1	<input checked="" type="checkbox"/>	13	<input type="checkbox"/>
2	<input type="checkbox"/>	14	<input type="checkbox"/>
3	<input type="checkbox"/>	15	<input type="checkbox"/>
4	<input type="checkbox"/>	16	<input type="checkbox"/>
5	<input type="checkbox"/>	17	<input type="checkbox"/>
6	<input type="checkbox"/>	18	<input type="checkbox"/>
7	<input type="checkbox"/>	19	<input type="checkbox"/>
8	<input type="checkbox"/>	20	<input type="checkbox"/>
9	<input type="checkbox"/>	21	<input type="checkbox"/>
10	<input type="checkbox"/>	22	<input type="checkbox"/>
11	<input type="checkbox"/>	23	<input type="checkbox"/>
12	<input type="checkbox"/>	24	<input type="checkbox"/>



## Showing Port Statistics

You can display statistics on network traffic from the ports. These statistics can be used to identify potential problems with the switch (such as a faulty port or unusually heavy loading). All values displayed for a port have been accumulated since the last system reboot, but can be reset to zero by clicking the CLEAR button. Clicking the CLEAR button will only reset the statistics of the current port. The statistics on this page will auto-refresh. If you wish to pause the auto-refresh operation, click the PAUSE button. To resume the auto-refresh operation, click the CONTINUE button.

Parameter	Description
<i>Port Statistics</i>	
Port Number	From the drop down menu, choose the port you would like to view.
Port Speed/Duplex	Displays the port speed and duplex mode.
Received Octets	The total number of octets received on the port, including framing characters.
Received Packets	The number of subnetwork-unicast packets delivered to a higher-layer protocol.
Received Broadcast/Multicast Packets	The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were addressed to a broadcast/multicast address at this sub-layer.
Received Errors	The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol.
Transmitted Octets	The total number of octets transmitted out of the port, including framing characters.
Transmitted Packets	The total number of packets that higher-level protocols requested be transmitted to a subnetwork-unicast address, including those that were discarded or not sent.
Transmitted Broadcast/Multicast Packets	The total number of packets that higher-level protocols requested be transmitted, and which were addressed to a broadcast/multicast address at this sub-layer, including those that were discarded or not sent.
Transmitted Errors	The number of outbound packets that could not be transmitted because of errors.

**Web** – Click Ports, Statistics.

### Statistics

This page displays the statistics for each port on your switch.

#### Port Statistics

Port Number	1
Port Speed/Duplex	100FDX

Counters will auto-refresh

Received Octets	682176	Transmitted Octets	1248749
Received Packets	5778	Transmitted Packets	4071
Received Broadcast/Multicast Packets	11	Transmitted Broadcast/Multicast Packets	119
Received Errors	0	Transmitted Errors	0

HELP

PAUSE

CLEAR

## Trunk Membership

This page allows you to create static trunks. Trunking allows you to assign physical links to one logical link (trunk) that functions as a single, higher-speed link providing dramatically increased bandwidth. This capability applies to connections between backbone devices as well as to connections in other network areas where traffic bottlenecks exist.

Port Trunking Support	ProCurve 1800-8G	ProCurve 1800-24G
Ports per trunk (maximum)	8	8
Trunks per switch (maximum)	4	12

The Membership Table has one row for each port and a column for each trunk, plus an additional column for ports that are not members of a trunk. Each row contains radio buttons that are used to indicate which trunk (if any) the port belongs to.

## Aggregation Mode

When incoming data frames are forwarded by the switch over a trunk, the switch must determine which port link in the trunk to use for each outgoing frame. To maintain the frame sequence for traffic flows between devices in the network, the switch also needs to ensure that frames in each “conversation” are mapped to the same trunk link. In order to meet this requirement and to distribute a balanced load across all links in a trunk, the switch uses an algorithm based on the frame source or destination addresses to calculate an output link member in the trunk. However, depending on the device to which a trunk is connected and the traffic flows in the network, this load-balance algorithm may result in traffic being distributed mostly to one port in a trunk.

To ensure that the switch traffic load is distributed evenly across all links in a trunk, the source or destination addresses used in the load-balance calculation can be selected to provide the best result for trunk connections. The switch provides six load-balancing modes that apply for both static and dynamic trunks:

- **SMAC:** All traffic with the same source MAC address is output on the same link in a trunk. This mode works best for switch-to-switch trunk links where traffic through the switch is received from many different hosts.

- **DMAC:** All traffic with the same destination MAC address is output on the same link in a trunk. This mode works best for switch-to-switch trunk links where traffic through the switch is destined for many different hosts. Do not use this mode for switch-to-router trunk links where the destination MAC address is the same for all traffic.
- **SMAC XOR DMAC:** The four least significant bits of the source and destination MAC addresses in a frame are used to determine the output link in the trunk. This mode works best for switch-to-switch trunk links where traffic through the switch is received from and destined for many different hosts. (This mode is the default setting.)
- **SMAC XOR DMAC XOR IP-Info:** The source and destination MAC addresses and IP information in a frame are used to determine the output link in the trunk. This mode works best for switch-to-switch trunk links where traffic through the switch is received from and destined for many different hosts.
- **Pseudo-randomized:** The output link in the trunk is randomly selected. This mode is useful for networks where frame ordering within conversations can be neglected and where a high utilization of aggregated links is important.
- **IP-Info:** The source and destination IP addresses and TCP/UDP ports in a frame are used to determine the output link in the trunk. This mode works best for switch-to-router trunk links where traffic through the switch is received from and destined for many different hosts.

## Defining the Members of a Trunk

1. On the Trunks Membership page, click on the radio button in any one of these columns of the corresponding trunk.

For example, if you want ports 2, 3, 4, and 5 to become members of Trunk 2, click the radio buttons for 2, 3, 4, and 5 under the column labeled “Trunk T2.”

2. Click APPLY.

## Deleting the Members of a Trunk

1. On the Trunks Membership page, click on the radio button under the column labeled “Not a Trunk Member” for any port you want to remove from a trunk. To delete a trunk, remove all port members from that trunk.

For example, if you want to remove ports 2, 3, 4, and 5 from Trunk 2, click the radio buttons for 2, 3, 4, and 5 under the column labeled “Not a Trunk Member”.

2. Click APPLY.

**Note**

For the 8-port switch, you can only create up to a maximum of 4 trunks of up to 8 ports each.

**Field Attributes**

- **Port** – The port number.
- **Not a Trunk Member** – If the radio button in this column is selected, the port is not a member of any trunks. This is the default state.
- **Trunk T1-T12** – These columns correspond to the trunks that are supported by the switch. To assign a port to a trunk, click on the radio button in any one of these columns of the corresponding trunk and then click APPLY.

**Web** – Click Trunks, Membership. To assign a port to a trunk, click the required trunk number, then click APPLY.

**Trunk Membership**

This page enables you to configure trunks on the switch.

Aggregation Mode		SMAC XOR DMAC <input type="button" value="v"/>			
Port	Not a Trunk Member	Trunk T1	Trunk T2	Trunk T3	Trunk T4
1	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Trunk Configuration

You can use the Trunk Configuration page to manually set the speed, duplex mode, and flow control.

### Modifying Trunk Settings

1. On the Trunks Configuration page, modify any of the following settings:
  - **Speed Duplex** – Allows auto-negotiation to be enabled or disabled. When auto-negotiation is disabled, you can force the settings for speed, duplex mode, and flow control.
  - **Flow Control** – Allows automatic or manual selection of flow control.
2. Click APPLY.

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#### Note

All the ports in the trunk will have the same speed, duplex mode, and flow control as defined by the trunk. Once the trunk is deleted, the ports will no longer be a member of that trunk but will retain the speed, duplex mode, and flow control setting of that trunk.

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#### Field Attributes

- **Trunk** – Indicates trunk identification.
- **Speed/Duplex** – Allows you to manually set the port speed and duplex mode for all ports in the trunk.
- **Flow Control** – Allows flow control to be enabled or disabled. When the box is checked, flow control is enabled.
- **Member Ports** – Indicates which ports belong to the trunk.

**Web** – Click Trunks, Configuration.

Trunk	Speed/Duplex	Flow Control	Member Ports
T1	Auto	<input type="checkbox"/>	2

HELP   APPLY   CANCEL

## LACP Settings

The switch supports both static trunking and dynamic Link Aggregation Control Protocol (LACP), which is specified in IEEE 802.3ad. Static trunks have to be manually configured at both ends of the link, on the other hand, LACP configured ports can automatically negotiate a trunked link with LACP-configured ports on another device. You can configure any number of ports on the switch as LACP, as long as they are not already configured as part of a static trunk. If ports on another device are also configured as LACP, the switch and the other device will negotiate a trunk link between them. If an LACP trunk consists of more than eight ports, all other ports will be placed in a standby mode. Should one link in the trunk fail, one of the standby ports will automatically be activated to replace it.

You can use the LACP Setting page to configure LACP for each port.

### Enabling LACP

1. On the LACP Setting page, click the box under the column labeled “LACP Enabled on Port” for the ports you want to enable LACP.
2. Input a key value for the Link Aggregate Group.
3. Click APPLY.

### Disabling LACP

1. On the LACP Setting page, click the box under the column labeled “LACP Enabled on Port” to remove the check mark for the ports you want to disable LACP.
2. Click APPLY.

### Field Attributes

- **Port** – The port number.
- **LACP Enabled on Port** – Allows LACP to be enabled or disabled. When the box is checked, LACP is enabled.
- **Key Value (0..255, 0 means autogenerated key)** – Ports in an aggregated link group must have the same LACP port Key. For a port to be allowed to join an aggregated group, the port Key must be set to the same value. When set to zero, the port Key is automatically set by the switch.

### Web – Click Trunks, LACP Setup.

#### LACP Setting

This page enables you to setup the configuration of LACP on all or some ports. LACP (IEEE 802.3ad Link Aggregation Protocol) provides a way to set up aggregation automatically between switches.

Port	LACP Enabled on Port	Key Value (0..255, 0 means autogenerated key)
1	<input checked="" type="checkbox"/>	<input type="text" value="0"/>
2	<input type="checkbox"/>	<input type="text" value="0"/>
3	<input checked="" type="checkbox"/>	<input type="text" value="15"/>
4	<input type="checkbox"/>	<input type="text" value="0"/>
5	<input type="checkbox"/>	<input type="text" value="0"/>
6	<input type="checkbox"/>	<input type="text" value="0"/>
7	<input type="checkbox"/>	<input type="text" value="0"/>
8	<input type="checkbox"/>	<input type="text" value="0"/>
9	<input type="checkbox"/>	<input type="text" value="0"/>
10	<input type="checkbox"/>	<input type="text" value="0"/>
11	<input type="checkbox"/>	<input type="text" value="0"/>
12	<input type="checkbox"/>	<input type="text" value="0"/>
13	<input type="checkbox"/>	<input type="text" value="0"/>
14	<input type="checkbox"/>	<input type="text" value="0"/>
15	<input type="checkbox"/>	<input type="text" value="0"/>
16	<input type="checkbox"/>	<input type="text" value="0"/>
17	<input type="checkbox"/>	<input type="text" value="0"/>
18	<input type="checkbox"/>	<input type="text" value="0"/>
19	<input type="checkbox"/>	<input type="text" value="0"/>
20	<input type="checkbox"/>	<input type="text" value="0"/>
21	<input type="checkbox"/>	<input type="text" value="0"/>
22	<input type="checkbox"/>	<input type="text" value="0"/>
23	<input type="checkbox"/>	<input type="text" value="0"/>
24	<input type="checkbox"/>	<input type="text" value="0"/>

HELP APPLY REFRESH



## LACP Status

Displays the status of the LACP groups.

### Field Attributes

#### *Aggregation Information*

- **Aggregation Group** – Displays the ID number of the LACP group.
- **Partner MAC Address** – Displays the MAC address of a device in the LACP group that is attached to this switch.
- **Local Port Aggregated** – Displays port member list of the local LACP group. The port members are port on this switch.
- **Seconds Since Last Changed** – Number of seconds since the last LACP was received.

#### *LACP Port Status*

- **Port** – The port number.
- **Protocol Active** – Indicates if the port is a member of an active LACP group.
- **Partner Port Number** – A list of port numbers assigned to the link by the LACP partner.
- **Operation Port Key** – The current operational value of the key for the LACP group.

**Web – Click Trunks, LACP Status.**

**LACP Status Overview**

This page shows the status of your LACP groups.

**Aggregation Information**

Aggregation Group	Partner MAC Address	Local Ports Aggregated	Seconds Since Last Change
No LACP alive			

**LACP Port Status**

Port	Protocol Active	Partner Port Number	Operational Port Key
1	yes	0	2
2	no		
3	no		
4	no		
5	no		
6	no		
7	no		
8	no		
9	no		
10	no		
11	no		
12	no		
13	no		
14	no		
15	no		
16	no		
17	no		
18	no		
19	no		
20	no		
21	no		
22	no		
23	no		
24	no		

## VLAN Setup

This page allows you to create up to 64 VLANs based on the 802.1Q standard. You can also delete or modify VLANs.

### Introduction to VLANs

VLANs are logical partitions of the physical LAN. You can use VLANs to increase network performance, improve internal network security, or create separate broadcast domains.

If the network has adequate performance and security for your current needs, it is recommended that you leave the VLAN settings in the default configuration. The default configuration is as follows:

- All ports are members of VLAN 1
- The switch management interface is on VLAN 1
- All ports have a Port VLAN ID (PVID) of 1
- All ports can send and receive both VLAN-tagged and untagged packets (that is, they are hybrid ports)

In the default configuration, any port is able to send traffic to any other port, and a PC connected to any port will be able to access the management interface. Broadcast traffic, for example, will be flooded to all ports on the switch.

The four VLAN parameters you can configure for each port on the switch include VLAN Aware Enabled, Ingress Filtering Enabled, Packet Type, and PVID. Note that the ports within a trunk cannot be configured individually; configure the trunk instead (trunks are labelled T1 to T12 for the 24-port switch, and T1 to T4 for the 8-port switch).

### Creating a VLAN

1. Use the VLAN Setup page to create VLANs on the Switch. In VLAN ID, input a number from 1 to 4094.
2. Click ADD.
3. Select the ports to be a member of this VLAN.
4. Click APPLY.

## Modifying a VLAN

1. Use the VLAN Setup page to modify a VLAN. Under the VLAN List section, click on the radio button of the VLAN you would like to modify.
2. Click MODIFY.
3. Select the ports to be added to or removed from this VLAN.
4. Click APPLY.

## Deleting a VLAN

1. Use the VLAN Setup page to delete a VLAN. Under the VLAN List section, click on the radio button of the VLAN you would like to delete.
2. Click DELETE.

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### Note

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Before deleting a VLAN, make sure that all the ports in this VLAN are also a member of another VLAN. Otherwise, the port will not be a member of any VLAN.

### Field Attributes

#### *Add VLAN*

- **VLAN ID** – Input a VLAN ID and click APPLY to create a new VLAN.

#### *VLAN List*

- **VLAN List** – The list of up to 64 VLANs. You can modify or delete these VLANs.

**Web** – Click VLANS, VLAN Setup.

### 802.1Q VLAN Setup

This page allows you to add up to 64 VLANs.

**Add VLAN**

VLAN ID

**VLAN List**

1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## VLAN Port Config

You can configure VLAN behavior for specific interfaces, including the default VLAN identifier (PVID) and accepted frame types. This page allows you to change the VLAN membership and behavior of individual ports. Each row of the table corresponds to one port or trunk; trunked ports cannot be configured individually.

### Field Attributes

#### *VLAN Per Port Configuration*

- **Port/Trunk** – The port number or the ID of a trunk.

- **VLAN Aware Enabled** – VLAN aware ports are able to use VLAN tagged frames to determine the destination of the frame. Click to enable or disable VLAN awareness mode for this port. (Default: Enabled)
- **Ingress Filtering Enabled** – If enabled, incoming frames for VLANs which do not include this ingress port in their member set will be discarded. (Default: Disabled)

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**Note**

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By default, Ingress Filtering is disabled on all ports. To prevent a port from receipt of Ingress VLAN packets from a VLAN that is not configured for that port, enable Ingress Filtering to drop those packets.

- **Packet Type** – Users can set the interface to accept all frame types, or only tagged frames.

If the Packet Type is set to “All,” the port can accept incoming tagged and untagged packets. Untagged packets will be associated with the VLAN identified by the PVID. Tagged packets will be dropped unless the port is a member of the VLAN identified by the VLAN tag in the packet.

If the Packet Type is set to “Tagged Only,” the port will drop untagged packets and will only receive tagged packets. Tagged packets will be dropped unless the port is a member of the VLAN identified by the VLAN tag in the packet. (Default: All)

- **PVID** – From a drop down menu, choose the VLAN ID that will be assigned to untagged frames received on this port. It is not possible to remove a port from VLAN 1 unless its PVID has been changed to something other than 1. You can only choose “None” for the VLAN ID when the packet type is set to “Tagged Only.” Outgoing packets are tagged unless the packet’s VLAN ID is the same as the PVID. When the PVID is set to “None,” all outgoing packets are tagged. (Default: 1)

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**Note**

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When selecting “Tagged Only” mode for a port, it is recommended to set the PVID to “None” as the standard configuration. Only set a PVID value for the port in exceptional cases.

Web – Click VLANS, VLAN Port Config.

**802.1Q Per Port Configuration**

This page allows you to configure the VLAN settings per port.

VLAN Per Port Configuration

Port/ Trunk	VLAN aware Enabled	Ingress Filtering Enabled	Packet Type	PVID
P1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
P3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P10	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P11	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P13	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P14	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P15	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P17	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P18	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P19	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P21	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P22	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P23	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
P24	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	1
T1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="radio"/> All <input type="radio"/> Tagged Only	None
T2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None
T12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="radio"/> All <input checked="" type="radio"/> Tagged Only	None

HELP

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## LLDP Configuration

This page allows you to configure the Link Layer Discovery Protocol (LLDP) configuration. LLDP allows devices on the network to share information about themselves for the reasons of simplified troubleshooting, enhanced network management, and maintaining an accurate network topology. LLDP-capable devices periodically transmit information in messages called Type Length Value (TLV) fields to neighbor devices.

### Field Attributes

#### *LLDP State*

- **Port** – The port number.
- **LLDP Enabled** – You can choose to disable or enable LLDP for each port. Enabling LLDP will allow the port to receive and transmit TLVs.



**Web** – Click LLDP, Configuration.

## LLDP Configuration

This page allows you to configure the LLDP configuration.

LLDP State	
Port	LLDP Enabled
1	<input checked="" type="checkbox"/>
2	<input checked="" type="checkbox"/>
3	<input checked="" type="checkbox"/>
4	<input checked="" type="checkbox"/>
5	<input checked="" type="checkbox"/>
6	<input checked="" type="checkbox"/>
7	<input checked="" type="checkbox"/>
8	<input checked="" type="checkbox"/>
9	<input checked="" type="checkbox"/>
10	<input checked="" type="checkbox"/>
11	<input checked="" type="checkbox"/>
12	<input checked="" type="checkbox"/>
13	<input checked="" type="checkbox"/>
14	<input checked="" type="checkbox"/>
15	<input checked="" type="checkbox"/>
16	<input checked="" type="checkbox"/>
17	<input checked="" type="checkbox"/>
18	<input checked="" type="checkbox"/>
19	<input checked="" type="checkbox"/>
20	<input checked="" type="checkbox"/>
21	<input checked="" type="checkbox"/>
22	<input checked="" type="checkbox"/>
23	<input checked="" type="checkbox"/>
24	<input checked="" type="checkbox"/>

HELP

APPLY

REFRESH

## LLDP Neighbor Table

This page displays the LLDP Neighbor Table. This table provides information on neighboring devices. The table contains the following seven columns:

### Field Attributes

- **Local Port** – The local port of the neighboring device.
- **Chassis ID** – The chassis information where the neighboring device is located.
- **Remote Port ID** – The remote port ID on the neighboring device.
- **System Name** – The neighboring device's full name.
- **Port Description** – The port description and information of the neighboring device.
- **System Capabilities** – The system capabilities information of the neighboring device.
- **Management Address** – Displays the management address of the neighboring device.

**Web** – Click LLDP, Neighbor.

**LLDP Neighbor Table**

This page allows you to monitor LLDP neighbor information.

Local Port	Chassis Id	Remote Port ID	System Name	Port description	System Capabilities	Management Address
No entries in table						

HELP REFRESH

## SNMP Configuration

This page allows you to configure the Simple Network Management Protocol (SNMP). The SNMP agent permits READ ONLY access to the switch. Any system in the network using management software can be used to discover the switch. You can set the following options:

### Field Attributes

- **SNMP Enabled** – Enables or disables SNMP. (Default: Enabled)
- **Read Community** – Community string for read access to the SNMP protocol.

**Web** – Click SNMP, Configuration.

### SNMP Configuration

This page allows you to set the configuration of SNMP.

SNMP Enabled	<input checked="" type="checkbox"/>
Read Community	<input type="text" value="public"/>

## Ping Test

This operation allows you to test the network connections by sending an Internet Control Message Protocol (ICMP) echo request packet from the switch to other devices on the network. The page will display the results of the operation.

### Field Attributes

#### *Ping Parameters*

- **Target IP Address** – The IP address of the device to ping on the network.
- **Count** – Number of packets to send. (Default: 1)
- **Time Out (in secs)** – Number of seconds to wait for a response. (Default: 1)

#### *Ping Results*

- **Target IP Address** – The IP address of the device to ping on the network.
- **Status** – Displays the current status of the ping operation.
- **Received replies** – Number of replies received.
- **Request timeouts** – Number of times the network device failed to respond in the given time.
- **Average Response Time (in ms)** – Average response time of all the packets.

**Web** – Click Diagnostics, Ping Test.

## Ping Test

This page allows the testing of the path between the switch and another device on the same or another IP network that can respond to IP packets.

Ping Parameters	
Target IP address	<input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>
Count	<input type="text" value="1"/> ▾
Time Out (in secs)	<input type="text" value="1"/> ▾

Ping Results	
Target IP address	0.0.0.0
Status	Test complete
Received replies	0
Request timeouts	0
Average Response Time (in ms)	0

## Restore to Factory Defaults

This operation allows you to either restore the switch back to the original factory default configuration, or to clear all configuration information except the IP Address, Subnet Mask and Gateway IP Address (see the SYSTEM > IP Address page).

### Field Attributes

- **Restore Entire Factory Default Configuration** – Restore the switch to the original factory default configuration.
- **Keep Current IP Address Only** – Restore the switch to the original factory default configuration, except for the IP Address, Subnet Mask and Gateway IP Address.

**Web** – Click Diagnostics, Factory Defaults.

## Restore to Factory Defaults

Options

- Restore Entire Factory Default Configuration
- Keep Current IP Address Only

- Press the **APPLY** button to reset the switch back to factory defaults.

HELP

APPLY

## Reboot Switch

Reboots the switch if the switch stops responding or functioning. This operation will not change any switch configuration settings. To reboot the switch, click **APPLY**. The reboot will be complete when the user interface displays the login page.

**Web** – Click Diagnostics, Reboot Switch.

## Reboot Switch

- Press the **APPLY** button to reboot the switch.  
The reboot will be complete when the power light stops blinking.

HELP

APPLY

## Upload/Download Configuration

Upload or download the switch system configuration file. Click to select either the “Upload” or “Download” box. If you click on “Upload,” then click on the “Browse” button to select the configuration file. If you click on “Download,” you will be prompted to save your file. Please enter a name for the configuration file. Finally, press the APPLY button to upload or download the configuration file.

---

### Note

After you have completely finished configuring the switch settings, it is important to download the configuration file. You can use this saved configuration file to restore the switch settings at a later point if the switch settings have been changed or restored to the default settings.

### Field Attributes

- **Operation** – To upload or download the configuration file.
- **Configuration File** – Click on the “Browse” button to select the configuration file. (Only available for the upload operation.)

**Web** – Click Support, Configuration File.

## Upload/Download Configuration

Operation	<input type="radio"/> Upload <input type="radio"/> Download
Configuration File	<input type="text"/> <input type="button" value="Browse..."/>

- Press the **APPLY** button to upload/download the switch configuration file.

**Note:** Please be patient as the configuration upload/download will take a few minutes to complete.

HELP

APPLY

## Download Text Readable Configuration/Status File

This page allows you to download the switch system configuration and status information in text file format. Select the type of information you would like to download. After you click the APPLY button, you will be prompted to save your file.

### Field Attributes

- **Options** – Select either general information, VLAN and MAC information, port statistics, or LACP and LLDP information.

**Web** – Click Support, Support File.

**Download Text Readable Configuration/Status File**  
This page allows you to download text readable configuration and status files for the switch.

Options

- Get General Information
- Get VLAN&MAC Information
- Get Port Statistics Information
- Get LACP&LLDP Information

- Press the **APPLY** button to download the switch configuration/status file.

HELP APPLY

## Update Software

Updates the switch software using a file provided by ProCurve. Click on the “Browse” button to select the software file. Press the APPLY button to update the selected switch software file. You can download software files for your switch from the support section of the ProCurve Web site at [www.hp.com/go/procurve](http://www.hp.com/go/procurve).

### Caution

After new software has been downloaded, the switch automatically reboots.

### Field Attributes

- **Current Software Version** – Displays the current software version in the switch.
- **Software File** – Click on the “Browse” button to select the software file.



**Web** – Click Support, Update Software.

## Update Software

Current Software Version	PB.02.04
Software File	<input type="text"/> <input type="button" value="Browse..."/>

- Press the **APPLY** button to update the selected switch software file.
- You can download software files for your switch from the Support section of [www.procurve.com](http://www.procurve.com).

**Note:** Please be patient as the software update will take a few minutes to complete.  
Expected duration is less than 5 minutes.

HELP

APPLY

## Support

This page directs you to the ProCurve Web site for further information.

**Web** – Click Support, ProCurve Web Site.

### ProCurve Web Site

This page provides a link to the ProCurve Networking Web Site

- Please go to [www.procurve.com](http://www.procurve.com) to get further information.



# Troubleshooting

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This section describes how to troubleshoot the switch. You can perform more in-depth troubleshooting on the switch using the software tools available with the switch, from the built-in Web browser interface.

This chapter describes the following:

- basic troubleshooting tips (page 3-1)
- forgotten IP address or password (page 3-2)
- testing the switch by resetting it (page 3-2)
- HP Customer Support Services (page 3-2)

## Basic Troubleshooting Tips

Common problems and their solution are listed in the following table.

For more information on possible network problems and their solutions, refer to the technical note “Troubleshooting LAN Performance and Intermittent Connectivity Problems”, which can be found on the ProCurve Web site, <http://www.hp.com/go/procurve>, in the Information Library section.

Problem	Resolution
Cannot connect using the Web browser.	<ul style="list-style-type: none"> <li>• Be sure you have configured the agent with a valid IP address, subnet mask and default gateway.</li> <li>• If you are trying to connect to the agent via the IP address for a tagged VLAN group, your management station must include the appropriate tag in its transmitted frames.</li> <li>• Check that you have a valid network connection to the switch.</li> <li>• Check network cabling between the management station and the switch.</li> </ul>

## Forgotten IP Address or Password

If you have forgotten the switch's IP address or administration password you can return the switch to its factory default state by following these steps:

1. Remove the power cord from the back of the switch.
2. Connect port 1 to port 2 on the front panel, using a standard network cable.
3. Reconnect the power cord to the rear of the switch.
4. Wait at least 40 seconds before disconnecting port 1 from port 2.

After completing this procedure, the password will be empty, the network address will be returned to the default 192.168.2.10, and all configuration settings will be returned to the original factory defaults.

## Testing the Switch by Resetting It

If you believe the switch is not operating correctly, you can reset the switch to test its circuitry and operating code. To reset a switch, unplug and plug in the power cord (power cycling)

Power cycling the switch cause the switch to perform its power-on self test.

## HP Customer Support Services

If you are still having trouble with your switch, ProCurve offers support 24 hours a day, seven days a week through the use of a number of automated electronic services. See the Customer Support/Warranty booklet that came with your switch for information on how to use these services to get technical support. The ProCurve Web site, <http://www.hp.com/go/procurve> also provides up-to-date support information.

Additionally, your ProCurve authorized network reseller can provide you with assistance, both with services they offer and with services offered by ProCurve.

## Before Calling Support

Before calling your networking dealer or HP Support, to make the support process most efficient, you first should have retrieved the following information:

Information Item	Information Location
<ul style="list-style-type: none"><li>product identification, including mini-GBICs (mini-GBIC is for the 24 port switch only)</li></ul>	the front of the switch, and on labels on the mini-GBICs (mini-GBIC is for the 24 port switch only)
<ul style="list-style-type: none"><li>details about the switch's status including the software (OS) version, a copy of the switch configuration, and information about port statistics</li></ul>	Web interface
<ul style="list-style-type: none"><li>copy of your network topology map, including network addresses assigned to the relevant devices</li></ul>	your network records



# Index

## A

administrator password ... 2-10

## B

basic troubleshooting tips ... 3-1

blinking LEDs

error indications ... 3-2

broadcast storm ... 2-11

## C

Configuration file

upload/download ... 2-37

## D

default settings ... 2-35

DHCP ... 2-8

## H

hardware version, displaying ... 2-5

## I

ingress filtering ... 2-28

IP address

DHCP ... 2-8

setting ... 2-8

## L

LEDs

error indications ... 3-2

LLDP

configuration ... 2-30

neighbor table ... 2-32

log in

Web interface ... 2-1

## M

main menu ... 2-3

mirror port, configuring ... 2-13

## P

Password ... 2-10

passwords

administrator setting ... 2-10

ports

broadcast storm, threshold ... 2-11

configuring ... 2-12

mirroring ... 2-13

statistics ... 2-15

## R

rate limits, setting ... 2-11

reboot switch ... 2-36

## S

SNMP

configuration ... 2-33

software version, displaying ... 2-5

software, update ... 2-38

statistics

port ... 2-15

statistics, switch ... 2-5

System Information ... 2-5

## T

tips for troubleshooting ... 3-1

troubleshooting ... 3-1

basic tips ... 3-1

common network problems ... 3-1

trunk

configuration ... 2-20

LACP Setting ... 2-21

LACP status ... 2-23

membership ... 2-17

## U

updating software ... 2-38

user password ... 2-10

## **V**

### VLANs

port configuration ... 2-27

setup ... 2-25

## **W**

### Web interface

configuration options ... 2-2

home page ... 2-1

main menu ... 2-3

panel display ... 2-3



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