# MAC Address Management

## Contents

# Overview

The switch assigns MAC addresses in these areas:

■ For management functions:

  • One Base MAC address assigned to the default VLAN (VID = 1)

  • Additional MAC address(es) corresponding to additional VLANs you configure in the switch

■ For internal switch operations: One MAC address per port (See "CLI: Viewing the Port and VLAN MAC Addresses" on page D-4.)

MAC addresses are assigned at the factory. The switch automatically implements these addresses for VLANs and ports as they are added to the switch.

**N o t e**    The switch's base MAC address is also printed on a label affixed to the back of the switch.

# Determining MAC Addresses in the Switch

**MAC Address Viewing Methods**

| Feature | Default | Menu | CLI | Web |
|---|---|---|---|---|
| view switch's base (default vlan) MAC address and the addressing for any added VLANs | n/a | D-3 | D-4 | — |
| view port MAC addresses (hexadecimal format) | n/a | — | D-4 | — |

■ **Use the menu interface** to view the switch's base MAC address and the MAC address assigned to any non-default VLAN you have configured on the switch.

**N o t e**    The switch's base MAC address is used for the default VLAN (VID = 1) that is always available on the switch.

- ■ **Use the CLI** to view the switch's port MAC addresses in hexadecimal format.

## Menu: Viewing the Switch's MAC Addresses

The Management Address Information screen lists the MAC addresses for:

- ■ Base switch (default VLAN; VID = 1)
- ■ Any additional VLANs configured on the switch.

Also, the Base MAC address appears on a label on the back of the switch.

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**N o t e**     The Base MAC address is used by the first (default) VLAN in the switch. This is usually the VLAN named "DEFAULT_VLAN" unless the name has been changed (by using the VLAN Names screen). On the switches covered by this guide, the VID (VLAN identification number) for the default VLAN is always "1", *and cannot be changed.*

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**To View the MAC Address (and IP Address) assignments for VLANs Configured on the Switch:**

1.  From the Main Menu, Select

    **1. Status and Counters**

        **2. Switch Management Address Information**

    If the switch has only the default VLAN, the following screen appears. If the switch has multiple static VLANs, each is listed with its address data.
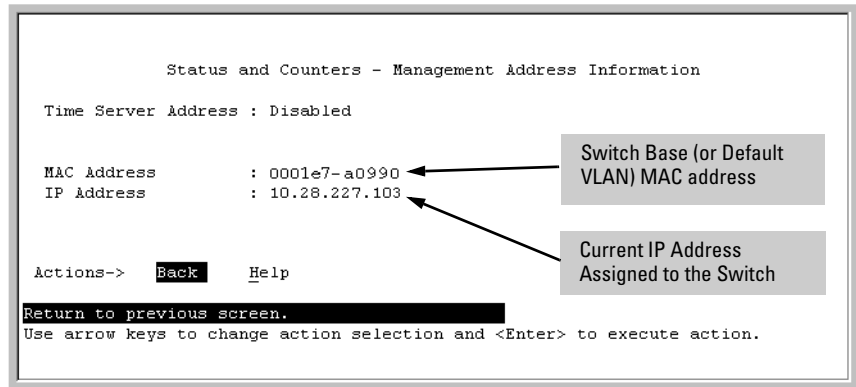
```
              Status and Counters - Management Address Information

   Time Server Address : Disabled


   MAC Address           : 0001e7-a0990   ◄─────     Switch Base (or Default
   IP Address            : 10.28.227.103                VLAN) MAC address



                                                     Current IP Address
   Actions->   Back      Help                        Assigned to the Switch
  Return to previous screen.
  Use arrow keys to change action selection and <Enter> to execute action.
```

**Figure D-1. Example of the Management Address Information Screen**

# CLI: Viewing the Port and VLAN MAC Addresses

The MAC address assigned to each switch port is used internally by such features as Flow Control and the Spanning Tree Protocol. Using the **walkmib** command to determine the MAC address assignments for individual ports can sometimes be useful when diagnosing switch operation.

The switch allots 24 MAC addresses per slot. For a given slot, if a three-port module is installed, then the switch uses the first three MAC addresses in the allotment for slot 1, and the remaining 21 MAC addresses are unused. If a six-port module is installed, the switch uses the first six MAC addresses in the allotment, and so-on. The switch's base MAC address is assigned to VLAN (VID) 1 and appears in the **walkmib** listing after the MAC addresses for the ports. If multiple VLANs are configured, the MAC addresses assigned to these VLANs appear after the base MAC address.

To display the switch's MAC addresses, use the **walkmib** command at the command prompt:

**N o t e**

This procedure displays the MAC addresses for all ports and existing VLANs in the switch, regardless of which VLAN you select.

1.  If the switch is at the CLI Operator level, use the **enable** command to enter the Manager level of the CLI.

2.  Type the following command to display the MAC address for each port on the switch:

    ProCurve# walkmib ifPhysAddress

    (The above command is not case-sensitive.)

For example, with a six-port module in slot 1, a three-port module in slot 3, and three VLANs present:

```
ProCurve# walkmib ifPhysAddress
ifPhysAddress.1 = 00 01 e7 a0 99 ff
ifPhysAddress.2 = 00 01 e7 a0 99 fe
ifPhysAddress.3 = 00 01 e7 a0 99 fd
ifPhysAddress.4 = 00 01 e7 a0 99 fc
ifPhysAddress.5 = 00 01 e7 a0 99 fb
ifPhysAddress.6 = 00 01 e7 a0 99 fa
ifPhysAddress.49 = 00 01 e7 a0 99 cf
ifPhysAddress.50 = 00 01 e7 a0 99 ce
ifPhysAddress.51 = 00 01 e7 a0 99 cd
ifPhysAddress.205 = 00 01 e7 a0 99 00
ifPhysAddress.226 = 00 01 e7 a0 99 01
ifPhysAddress.237 = 00 01 e7 a0 99 02
```

ifPhysAddress.1 - 6: Ports A1 - A6 in Slot 1

(Addresses 7 - 24 in slot 1 and 25 - 48 in slot 2 are unused.)

ifPhysAddress.49 - 51: Ports C1 - C3 in Slot 3

(Addresses 52 - 72 in slot 3 are unused.)

ifPhysAddress.205 Base MAC Address (MAC Address for default VLAN; VID = 1)

ifPhysAddress.226 & 237 MAC Addresses for non-default VLANs.

**Figure D-2. Example of Port MAC Address Assignments**

# Viewing the MAC Addresses of Connected Devices on Series 2600/ 2600-PWR, 2800 and 4100gl Switches

*Syntax:*   show mac-address [ | *mac-addr* |

> *Lists the MAC addresses of the devices the switch has detected, along with the number of the specific port on which each MAC address was detected.*

[ *port-list* ]

> *Lists the MAC addresses of the devices the switch has detected, on the specified port(s).*

[ *mac-addr* ]

> *Lists the port on which the switch detects the specified MAC address. Returns the following message if the specified MAC address is not detected on any port in the switch:*
>
> MAC address < *mac-addr* > not found.

[ vlan < *vid* > ]

> *Lists the MAC addresses of the devices the switch has detected on ports belonging to the specified VLAN, along with the number of the specific port on which each MAC address was detected.*

To list the MAC addresses of devices the switch has detected, use the **show mac-address** command. For example,

```
ProCurve# show mac-address
 Status and Counters - Port Address Table
  MAC Address    Located on Port
  0001e6-09620c  11
  0001e7-61d4c0  12
  0001e7-6025c0  13
  0001e7-6d5a30  14
  0001e7-7932c0  15
  0001e7-7b4300  16
  0001e7-cc24c0  17
  000480-376a70  18
  0004ea-26c6c0  19
  0004ea-2f9320  19
  0004ea-68d900  19
```

**Figure D-3.   Displaying MAC Addresses Detected by a Switch**