MAC Address Management

Contents

Overview

The switch assigns MAC addresses in these areas:

■ For management functions, one Base MAC address is assigned to the default VLAN (VID = 1). (All VLANs on the switches covered in this guide use the same MAC address.)

■ For internal switch operations: One MAC address per port (Refer to "CLI: Viewing the Port and VLAN MAC Addresses" on page D-5.)

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 switch.

Determining MAC Addresses

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-4	D-5	—
view port MAC addresses (hexadecimal format)	n/a	—	D-5	—

■ **Use the menu interface** to view the switch's base MAC address and the MAC address assigned to any VLAN you have configured on the switch. (The same MAC address is assigned to VLAN1 and all other VLANs 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. This is true for dynamic VLANs as well; the base MAC address is the same across all VLANs.

■ **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.

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 in this guide, the VID (VLAN identification number) for the default VLAN is always "1", *and cannot be changed*.

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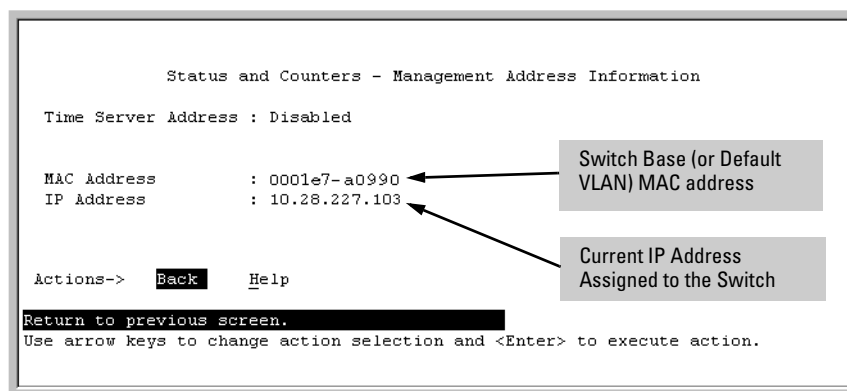
Figure D-1. Example of the Management Address Information Screen

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.

Switch Series	MAC Address Allocation
8212zl	The switch allots 24 MAC addresses per slot. For a given slot, if a four-port module is installed, then the switch uses the first four MAC addresses in the allotment for that slot, and the remaining 18 MAC addresses are unused. If a 24-port module is installed, the switch uses the first 24 MAC addresses in the allotment, and so-on.
All Models	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. (All VLANs in the switch have the same 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:
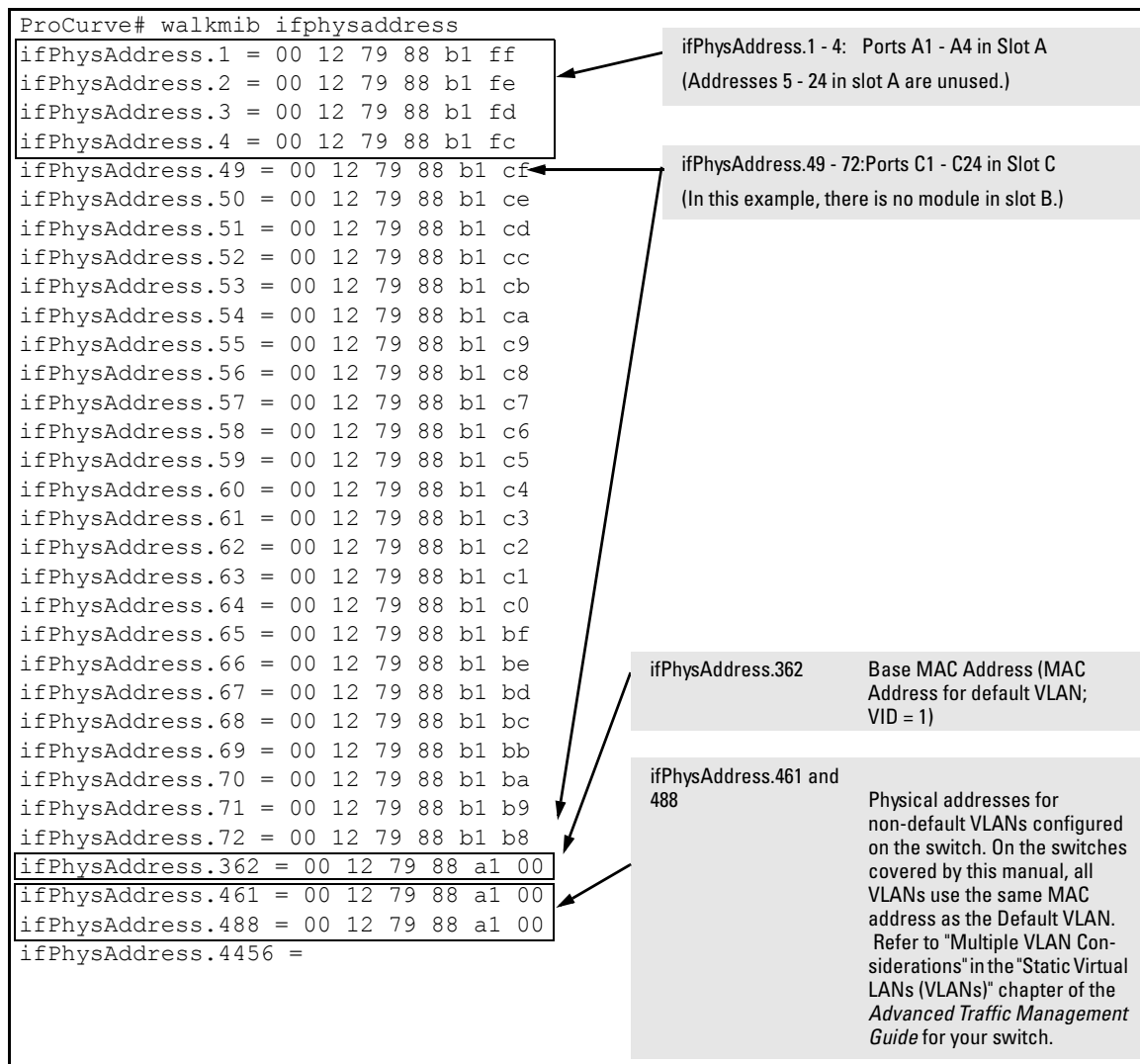
   ProCurve# walkmib ifPhysAddress

   (The above command is not case-sensitive.)

For example, a ProCurve 8212zl switch with the following module configuration shows MAC address assignments similar to those shown in figure D-2:

■ a 4-port module in slot A, a 24-port module in slot C, and no modules in slots B and D

■ two non-default VLANs configured

```
ProCurve# walkmib ifphysaddress
ifPhysAddress.1 = 00 12 79 88 b1 ff
ifPhysAddress.2 = 00 12 79 88 b1 fe
ifPhysAddress.3 = 00 12 79 88 b1 fd
ifPhysAddress.4 = 00 12 79 88 b1 fc
ifPhysAddress.49 = 00 12 79 88 b1 cf
ifPhysAddress.50 = 00 12 79 88 b1 ce
ifPhysAddress.51 = 00 12 79 88 b1 cd
ifPhysAddress.52 = 00 12 79 88 b1 cc
ifPhysAddress.53 = 00 12 79 88 b1 cb
ifPhysAddress.54 = 00 12 79 88 b1 ca
ifPhysAddress.55 = 00 12 79 88 b1 c9
ifPhysAddress.56 = 00 12 79 88 b1 c8
ifPhysAddress.57 = 00 12 79 88 b1 c7
ifPhysAddress.58 = 00 12 79 88 b1 c6
ifPhysAddress.59 = 00 12 79 88 b1 c5
ifPhysAddress.60 = 00 12 79 88 b1 c4
ifPhysAddress.61 = 00 12 79 88 b1 c3
ifPhysAddress.62 = 00 12 79 88 b1 c2
ifPhysAddress.63 = 00 12 79 88 b1 c1
ifPhysAddress.64 = 00 12 79 88 b1 c0
ifPhysAddress.65 = 00 12 79 88 b1 bf
ifPhysAddress.66 = 00 12 79 88 b1 be
ifPhysAddress.67 = 00 12 79 88 b1 bd
ifPhysAddress.68 = 00 12 79 88 b1 bc
ifPhysAddress.69 = 00 12 79 88 b1 bb
ifPhysAddress.70 = 00 12 79 88 b1 ba
ifPhysAddress.71 = 00 12 79 88 b1 b9
ifPhysAddress.72 = 00 12 79 88 b1 b8
ifPhysAddress.362 = 00 12 79 88 a1 00
ifPhysAddress.461 = 00 12 79 88 a1 00
ifPhysAddress.488 = 00 12 79 88 a1 00
ifPhysAddress.4456 =
```

ifPhysAddress.1 - 4:   Ports A1 - A4 in Slot A
(Addresses 5 - 24 in slot A are unused.)

ifPhysAddress.49 - 72:Ports C1 - C24 in Slot C
(In this example, there is no module in slot B.)

ifPhysAddress.362   Base MAC Address (MAC Address for default VLAN; VID = 1)

ifPhysAddress.461 and 488   Physical addresses for non-default VLANs configured on the switch. On the switches covered by this manual, all VLANs use the same MAC address as the Default VLAN. Refer to "Multiple VLAN Considerations" in the "Static Virtual LANs (VLANs)" chapter of the *Advanced Traffic Management Guide* for your switch.

Figure D-2.   Example of Port MAC Address Assignments on a Switch

Viewing the MAC Addresses of Connected Devices

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.