**appletalk-cable-vlan**

Configures an AppleTalk cable VLAN within a port-based VLAN.

**EXAMPLE:**

To configure AppleTalk cable VLAN 1 in port-based VLAN 10, then configure the routing parameters for the VLAN, enter the following commands.

```
HP9300(config-vlan-10)# appletalk-cable-vlan 1 name cable-one
HP9300(config-vlan-10)# static ethe 2/1 ethe 3/1 to 3/2
HP9300(config-vlan-10)# router-interface ve 1
HP9300(config-vlan-10)# interface ve 1
HP9300(config-vlan-10)# appletalk cable-range 10 - 19
HP9300(config-vlan-10)# appletalk address 10.1
HP9300(config-vlan-10)# appletalk zone-name AA
HP9300(config-vlan-10)# appletalk routing
```

**Syntax:** `appletalk-cable-vlan <vlan-id> [name <string>]`

The `<vlan-id>` can be from 1 – 8.

The `name <string>` parameter specifies a name and can be a string up to 32 characters long.

**Possible values:** VLAN ID 1 – 8; name up to 32 characters long

**Default value:** N/A

**atalk-proto**

Creates an AppleTalk protocol VLAN within a switch or routing switch port-based VLAN when entered at the VLAN Level. All ports are assumed by default to be members of the VLAN when initially created. Protocol VLAN membership can be modified using the `dynamic`, `static`, or `exclude` commands.

**EXAMPLE:**

To create an AppleTalk protocol VLAN with permanent port membership of 9 and 13 (module 3) and no dynamic ports within an already defined port-based VLAN 2, enter the following commands.

```
HP9300(config)# vlan 2
HP9300(config-vlan-2)# atalk-proto
```
NOTE: If configuring this on a switch, enter `vlan 2 by port` at the CONFIG Level versus `vlan 2`, as shown in the example above.

**Syntax:** `atalk-proto [name <string>]`

The name can be up to 16 characters long and can contain blanks. The name appears in VLAN show displays.

To specify a VLAN name, use the `name` keyword followed by a string. The `name` keyword and string are the last arguments in the command. For example, to name an AppleTalk VLAN, enter the following command:

```
HP9300(config)# atalk-proto name "Ship and Recv"
```

This example shows how to specify a name that contains a blank. Use double quotation marks before and after the name.

**Possible values:** N/A

**Default value:** N/A

---

**decnet-proto**

Creates a Decnet protocol VLAN within a switch or routing switch port-based VLAN, when entered at the VLAN Level. All ports are assumed by default to be members of the VLAN when initially created. Protocol VLAN membership can be modified using the `dynamic`, `static`, or `exclude` commands.

**EXAMPLE:**

To create a Decnet protocol VLAN with permanent port membership of 15 and 16 with port 17 as dynamic member port (module 3), within VLAN 5, enter the following commands.

```
HP9300(config)# vlan 5
HP9300(config-vlan-5)# decnet-proto
HP9300(config-vlan-decnet-proto)# exclude e 3/1 to 3/14 e 3/18
```

NOTE: If configuring this on a switch, enter `vlan 5 by port` at the CONFIG Level versus `vlan 5`, as shown in the example above.

**Syntax:** `decnet-proto [name <string>]`

The name can be up to 16 characters long and can contain blanks. The name appears in VLAN show displays.

To specify a VLAN name, use the `name` keyword followed by a string. The `name` keyword and string are the last arguments in the command. The name can contain blank spaces if you use double quotation marks before and after the name.

**Possible values:** N/A

**Default value:** N/A

---

**default-vlan-id**

When you enable port-based VLAN operation, all ports are assigned to VLAN 1 by default. As you create additional VLANs and assign ports to them, the ports are removed from the default VLAN. All ports that you do not assign to other VLANs remain members of default VLAN 1. This behavior ensures that all ports are always members of at least one VLAN.

You can change the VLAN ID for the default VLAN by entering the following command at the global CONFIG level of the CLI:

```
HP9300(config-vlan-2)# default-vlan-id 4095
```

You must specify a valid VLAN ID that is not already in use. For example, if you have already defined VLAN 10, do not try to use “10” as the new VLAN ID for the default VLAN. Valid VLAN IDs are numbers from 1 – 4095.
NOTE: Changing the default VLAN name does not change the properties of the default VLAN. Changing the name allows you to use the VLAN ID “1” as a configurable VLAN.

end

Moves activity to the privileged EXEC level from any level of the CLI except the user EXEC level.

EXAMPLE:
To move to the privileged EXEC level, enter the following from any level of the CLI.

HP9300(config-vlan-decnet-proto)# end
HP9300#

Syntax: end

Possible values: N/A
Default value: N/A

exit

Moves activity up one level from the current level. In this case, activity will be moved to the port-based VLAN level if configuring a protocol VLAN. If configuring a port-based VLAN, activity would be moved to the global level.

EXAMPLE:

HP9300(config-vlan-decnet-proto)# exit
HP9300(config)#

Syntax: exit

Possible values: N/A
Default value: N/A

ip-proto

Creates an IP protocol VLAN on a switch or routing switch within a port-based VLAN, when entered at the VLAN Level.

When configuring on a switch, all ports are dynamically allocated to the VLAN. You can modify port membership by using the static or exclude commands.

When configuring on a routing switch, ports must be added to the VLAN with the static command if you configure routing information on the port. Otherwise, you can add ports dynamically.

EXAMPLE:

To assign ports 1, 2, 6 and 8 (module 2) to an IP protocol VLAN within VLAN 7, enter the following:

HP9300(config)# vlan 7
HP9300(config-vlan-7)# ip-proto
HP9300(config-vlan-ip-proto)# static e 3/1 to 3/2 e 3/6 e 3/8

NOTE: If configuring this on a switch, enter vlan 7 by port at the CONFIG Level versus vlan 7, as shown in the example above.

NOTE: An IP protocol and IP sub-net VLAN cannot both be configured to operate on an HP switch or routing switch at the same time. This restriction is also true for IPX and IPX network VLANs.

Syntax: ip-proto [name <string>]

The name can be up to 16 characters long and can contain blanks. The name appears in VLAN show displays.
To specify a VLAN name, use the name keyword followed by a string. The name keyword and string are the last arguments in the command. The name can contain blank spaces if you use double quotation marks before and after the name.

**Possible values:** N/A

**Default value:** N/A

### ip-subnet

Creates an IP sub-net protocol VLAN on a switch or routing switch within a port-based VLAN, when entered at the VLAN Level. This allows you to define additional granularity than that of an IP protocol VLAN, by partitioning the broadcast domains by sub-net. In creating an IP sub-net VLAN, an IP address is used as identifier.

When configuring on a switch, all ports are dynamically allocated to the VLAN. You can modify port membership by using the static or exclude commands.

When configuring on a routing switch, ports must be added to the VLAN with the static command if you configure routing information on the port. Otherwise, you can add ports dynamically.

**EXAMPLE:**

To create an IP sub-net of IP address 192.75.3.0 with permanent port membership of 1 and 2 (module 2), within VLAN 10, enter the following commands.

```
HP9300(config)# vlan 10
HP9300(config-vlan-10)# ip-subnet 192.75.3.0 255.255.255.0
HP9300(config-vlan-ip-subnet)# static e 2/1 to 2/2
```

**NOTE:** If configuring this on a switch, enter `vlan 10 by port` at the CONFIG Level versus `vlan 10`, as shown in the example above.

**NOTE:** An IP protocol and IP sub-net VLAN cannot both be configured to operate simultaneously on an HP switch or routing switch. This restriction is also true for IPX and IPX network VLANs.

#### Syntax: `ip-subnet <ip-addr> <ip-mask> [name]`

The name can be up to 16 characters long and can contain blanks. The name appears in VLAN show displays.

To specify a VLAN name, use the name keyword followed by a string. The name keyword and string are the last arguments in the command. The name can contain blank spaces if you use double quotation marks before and after the name.

**Possible values:** N/A

**Default value:** N/A

### ipx-network

Creates an IPX network VLAN on a switch or routing switch within a port-based VLAN, when entered at the VLAN Level. This allows you to define additional granularity than that of the IPX protocol VLAN, by partitioning the broadcast domains by IPX network number. In creating an IPX network VLAN, an IPX network number is used as identifier. The frame type must also be specified.

When configuring on a switch, all ports are dynamically allocated to the VLAN. You can modify port membership by using the static or exclude commands.

When configuring on a routing switch, ports must be added to the VLAN with the static command if you configure routing information on the port. Otherwise, you can add ports dynamically.

**EXAMPLE:**

To create an IPX network VLAN with a network number of 500 and frame type of 802.2 with permanent port membership of 10 and 14 (module 2) within port-based VLAN 15, enter the following commands.

```
HP9300(config)# vlan 15
```
HP9300(config-vlan-15)# ipx-network 500 ethernet_802.2
HP9300(config-vlan-ipx-proto)# static e 1/10 e 1/14

Syntax: ipx-network <ipx-network-number> <frame-type>

NOTE: If configuring this on a switch, enter vlan 15 by port at the CONFIG Level versus vlan 15, as shown in the example above.

NOTE: An IPX network and IPX protocol VLAN cannot both be configured to operate simultaneously on an HP switch or routing switch. This restriction is also true for IP protocol and IP sub-net VLANs.

Possible values: Frame type: ethernet_ii, ethernet_802.2, ethernet_802.3, ethernet_snap

Default value: N/A

ipx-proto

Creates an IPX protocol VLAN on a switch or routing switch within a port-based VLAN, when entered at the VLAN Level.

When configuring on a switch, all ports are dynamically allocated to the VLAN. You can modify port membership by using the static or exclude commands.

When configuring on a routing switch, ports must be added to the VLAN with the static command if you configure routing information on the port. Otherwise, you can add ports dynamically.

EXAMPLE:
To assign ports 1, 2, 6 and 8 (module 2) to an IPX protocol VLAN within port-based VLAN 22, enter the following:
HP9300(config)# vlan 22
HP9300(config-vlan-22)# ipx-proto
HP9300(config-vlan-ipx-proto)# static e 2/1 to 2/2 e 2/6 e 2/8

NOTE: If configuring this on a switch, enter vlan 22 by port at the CONFIG Level versus vlan 22, as shown in the example above.

NOTE: An IPX protocol and IPX network VLAN cannot both be configured to operate simultaneously on an HP switch or routing switch. This restriction is also true for IP and IP sub-net VLANs.

Syntax: ipx-proto [<name>]

The name can be up to 16 characters long and can contain blanks. The name appears in VLAN show displays.

To specify a VLAN name, use the name keyword followed by a string. The name keyword and string are the last arguments in the command. The name can contain blank spaces if you use double quotation marks before and after the name.

Possible values: N/A

Default value: N/A

netbios-proto

Creates a NetBIOS protocol VLAN on a switch or routing switch within a port-based VLAN, when entered at the VLAN Level.

All ports are dynamically allocated to a NetBIOS VLAN when it is created. VLAN Membership can be modified using the dynamic, static, or exclude commands.

EXAMPLE:
To create a NetBIOS protocol VLAN with permanent port membership of 4 and 5 and ports 8 – 12 as dynamic member ports (module 2), within port-based VLAN 25, enter the following commands.
HP9300(config)# vlan 25
HP9300(config-vlan-25)# netbios-proto
HP9300(config-vlan-netbios-proto)# static e 2/4 e 2/5
HP9300(config-vlan-netbios-proto)# exclude e 2/1 to 2/3 e 2/6 e 2/7 e 2/13 to 2/18

**NOTE:** If configuring this on a switch, enter **vlan 25 by port** at the CONFIG Level versus **vlan 25**, as show in the example above.

**Syntax:** netbios-proto [<name>]

The name can be up to 16 characters long and can contain blanks. The name appears in VLAN show displays.

To specify a VLAN name, use the **name** keyword followed by a string. The **name** keyword and string are the last arguments in the command. The name can contain blank spaces if you use double quotation marks before and after the name.

**Possible values:** N/A

**Default value:** N/A

**no**

Disables other commands. To disable a command, place the word **no** before the command.

**other,proto**

Creates an other-protocol VLAN on a switch or routing switch within a port-based VLAN, when entered at the VLAN Level.

All ports of the switch or routing switch are by default dynamically assigned to a newly created “other-protocol” VLAN. VLAN Membership can be modified using the **dynamic**, **static**, or **exclude** commands.

You can use this option to define a protocol-based VLAN for protocols that do not require a singular protocol broadcast domain or are not currently supported on the HP switch or routing switch.

**EXAMPLE:**

On an 8-port switch ports 7 – 8 represent protocols Decnet and AppleTalk. You do not need to separate traffic by protocol into separate broadcast domains. Instead, create an other-protocol VLAN, with just those ports as members, within port-based VLAN 50.

HP 6208M-SX(config)# vlan 50
HP 6208M-SX(config-vlan-50)# other-proto
HP 6208M-SX(config-vlan-other-proto)# static e7 to 8
HP 6208M-SX(config-vlan-other-proto)# exclude e1 to 6

**NOTE:** If configuring this on a switch, enter **vlan 50 by port** at the CONFIG Level versus **vlan 50**, as show in the example above.

**Syntax:** other-proto [<name>]

The name can be up to 16 characters long and can contain blanks. The name appears in VLAN show displays.

To specify a VLAN name, use the name keyword followed by a string. The **name** keyword and string are the last arguments in the command. The name can contain blank spaces if you use double quotation marks before and after the name.

**Possible values:** N/A

**Default value:** N/A
priority
This assigns a higher priority to a VLAN so that in times of congestion, it will receive precedence over other transmissions. Up to eight levels of priority can be assigned to a VLAN.

**EXAMPLE:**
HP9300(config)# vlan 25
HP9300(config-vlan-25)# priority 5

**Syntax:** priority <0-7>
**Possible values:** N/A
**Default value:** N/A

quit
Returns you from any level of the CLI to the User EXEC mode.

**EXAMPLE:**
HP9300(config-ip-subnet)# quit
HP9300>

**Syntax:** quit
**Possible values:** N/A
**Default value:** N/A

router-interface
Defining a router interface for a VLAN allows traffic to be routed between VLANs.

**EXAMPLE:**
To configure a router interface for an IP sub-net VLAN, enter the following:
HP9300(config)# ip-subnet 192.75.3.0 255.255.255.0
HP9300(config-ip-subnet)# static e 5/1 to 5/3
HP9300(config-ip-subnet)# router-interface ve 3

**NOTE:** Once a router interface is assigned to a VLAN, it must be assigned an IP address at the interface level.

**Syntax:** router-interface ve <portnum>
**Possible values:** N/A
**Default value:** N/A

show
Displays a variety of configuration and statistical information about the switch or routing switch. See “Show Commands” on page 20-1.

spanning-tree
Spanning Tree bridge and port parameters are configurable using one command set at the global level for VLANs.

**NOTE:** When port-based VLANs are not operating on the system, spanning tree is set on a system level at the Global CONFIG Level.

**EXAMPLE:**
Suppose you want to change the hello-time value of VLAN 3 from the default value. Additionally, you want to change the path and priority costs for port 5, a member of VLAN 3. Enter the following commands:
HP9300(config)# vlan 3
HP9300(config-vlan-3)# span hello-time 8
HP9300(config)# span ethernet 5 path-cost 15 priority 64

**NOTE:** You do not need to configure values for the spanning tree parameters. All parameters have default values as noted below. Additionally, all values will be globally applied to all ports on the system or port-based VLAN for which they are defined.

To configure a specific path-cost or priority value for a given Ethernet port, enter those values using the key words in the brackets [ ] shown in the syntax summary below. If you do not want to specify any specific values for any given Ethernet port, this portion of the command is not required.

**Syntax:** spanning-tree [ethernet <portnum> path-cost <value> priority <value>] forward-delay <value> hello-time <value> maximum-age <time> priority <value>

Bridge STP Parameters (applied to all ports within a VLAN):

- **Forward Delay:** the period of time a bridge will wait (the listen and learn period) before forwarding data packets. Possible values: 4 – 30 seconds. Default is 15.
- **Maximum Age:** the interval a bridge will wait for receipt of a hello packet before initiating a topology change. Possible values: 6 – 40 seconds. Default is 20.
- **Hello Time:** the interval of time between each configuration BPDU sent by the root bridge. Possible values: 1 – 10 seconds. Default is 2.
- **Priority:** a parameter used to identify the root bridge in a network. The bridge with the lowest value has the highest priority and is the root. Possible values: 0 – 255. Default is 128.

Port Parameters (applied to a specified port within a VLAN):

- **Path Cost:** a parameter used to assign a higher or lower path cost to a port. Possible values: 1 – 65535. Default is (1000/Port Speed) for Half-Duplex ports and is (1000/Port Speed)/2 for Full-Duplex ports.
- **Priority:** value determines when a port will be rerouted in relation to other ports. Possible values: 0 – 255. Default is 128.

**static-mac-address**

Allows you to define a static MAC addresses for a port on a switch or routing switch to ensure the device is not aged out. When defining the MAC address entry, you can also define the port’s priority and whether or not it is a router-type or host-type.

**EXAMPLE:**

To enter a static MAC address entry for port 5, that is also resident in port-based VLAN 4, enter the following:

```
HP9300(config)# vlan 4
HP9300(config-vlan-4)# static-mac-address 023.876.735 ethernet 5 high-priority router-type
```

**Syntax:** static-mac-address <mac-addr> ethernet <portnum> [priority <0-7>] [host-type | router-type]

**Possible values:** see above

**Default values:** priority 0; host-type

**tagged**

Once a port-based VLAN is created, port membership for that VLAN must be defined. To assign a port to a port-based VLAN, either the **tagged** or **untagged** command is used. When a port is tagged, it can be a member of multiple port-based VLANs.

When a port is tagged, it allows communication among the different VLANs to which it is assigned. A common use for this might be to place an email server that multiple groups may need access to on a tagged port, that in turn, is resident in all VLANs whose members need access to the server.
EXAMPLE:
Suppose you want to make port 5 (module 5), a member of port-based VLAN 4, a tagged port. Enter the following:

HP9300(config)# vlan 4
HP9300(config-vlan-4)# tagged ethernet 3/5

Syntax: tagged ethernet <portnum> [to <portnum> [ethernet <portnum>]]

Possible values: see above.
Default value: N/A

untagged
Once a port-based VLAN is created, port membership for that VLAN must be defined. To assign a port to a port-based VLAN, either the tagged or untagged command is used. When a port is 'untagged' it can be a member of only one VLAN.

EXAMPLE:
Suppose you want to assign all ports on a 16-port routing switch except port 5 (module 3) as untagged to a VLAN. To assign ports 1 – 4 and 6 – 16 to VLAN 4, enter the following:

HP9300(config)# vlan 4
HP9300(config-vlan-4)# untagged ethernet 3/1 to 3/4 e 3/6 to 3/16

Syntax: untagged ethernet <portnum> [to <portnum> ethernet <portnum>]

Possible values: see above.
Default value: N/A

write memory
Saves the running configuration into the startup-config file.

EXAMPLE:
HP9300(config-vlan-4)# wr mem

Syntax: write memory

Possible values: N/A
Default value: N/A

write terminal
Displays the running configuration of the HP switch or routing switch on the terminal screen.

NOTE: This command is equivalent to the show running-config command.

EXAMPLE:
HP9300(config-vlan-4)# wr term

Syntax: write terminal

Possible values: N/A
Default value: N/A