

Dynamic 802.1Q VLAN Overview

You can identify VLANs statically or dynamically.

For Ethernet, Fast Ethernet, Tri-Rate Ethernet copper, Gigabit Ethernet, 10-Gigabit Ethernet, and aggregated Ethernet interfaces supporting VPLS, the JUNOS Software supports a subset of the IEEE 802.1Q standard for channelizing an Ethernet interface into multiple logical interfaces. Many hosts can be connected to the same Gigabit Ethernet switch, but they cannot be in the same routing or bridging domain.

To identify VLANs statically, you can reference a static VLAN interface in a dynamic profile. To identify subscribers dynamically, you use a variable to specify an 802.1Q VLAN that is dynamically created when a subscribers accesses the network.

Static VLAN Configuration

Static VLAN configuration is not described in this guide. For information about how to statically configure VLANs and stacked VLANs, see the *JUNOS Network Interfaces Configuration Guide*. For an example of how to configure static VLANs in a subscriber access network, see the *JUNOS Broadband Subscriber Management Solutions Guide*.

Dynamic VLAN Configuration

You can configure the router to dynamically create VLANs when a client accesses an interface and requests a VLAN ID that does not yet exist. When a client accesses a particular interface, the router instantiates a VLAN dynamic profile that you have associated with the interface. Using the settings in the dynamic profile, the router extracts information about the client from the incoming packet (for example, the interface and unit values), saves this information in the routing table, and creates a VLAN or stacked VLAN ID for the client from a range of VLAN IDs that you configure for the interface.

Dynamically configuring VLANs or stacked VLANs requires the following general steps:

1. Configure a dynamic profile for dynamic VLAN or dynamic stacked VLAN creation.

See Configuring VLAN Dynamic Profiles.

2. Associate the VLAN or stacked VLAN dynamic profile with the interface.

See Configuring VLAN Interfaces to Use Dynamic Profiles.

3. Specify the Ethernet packet type that the VLAN dynamic profile accepts.

See Configuring Which VLAN Ethernet Packet Types Dynamic Profiles Can Accept.

4. Define VLAN ranges for use by the dynamic profile when creating VLAN IDs.

See Configuring VLAN Ranges for Use with Dynamic Profiles.