

Architecture of Interface Sets for QoS

To configure groups of logical interfaces, you must configure both interface sets and interface supersets.

When an interface is grouped in an interface set, the logical interface column is modified, and interface set appears below the interface in the column. The interface superset appears below the interface set.

Although interface sets enable you to configure more types of scheduler nodes, the number of node and queue resources supported in the current scheduler hierarchy are the same.

Interface Set Parents and Types

When configuring an interface set, you must assign a parent and the types of member interfaces allowed in the set.

The parent of an interface set is an interface superset. The parent of the interface superset can be any type of interface over which IP can be configured, including ATM VP, Gigabit Ethernet, or 802.3ad LAG.

The parent of the interface superset controls the type of member interfaces you can have in an interface set. Currently, member interface types include VLAN, ATM-VC, and IP. For example, a interface superset with a Gigabit Ethernet or LAG parent interface can only be the parent of interface set that contains VLAN and IP member interfaces. In addition, all members of the interface set must have the same port.

Sample Interface Columns and Scheduler Hierarchies

Figure 1 on page 2 shows a sample interface column using interface sets and interface supersets for VLANs.

Figure 1: VLAN Interface Column with Interface Sets

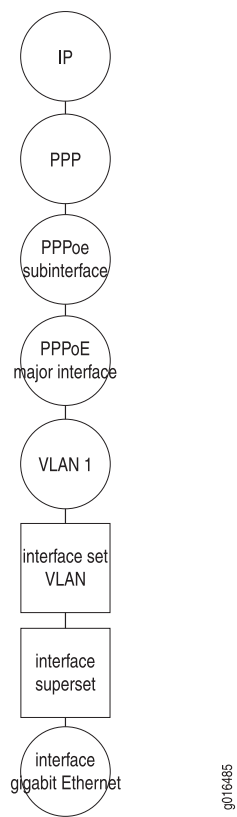
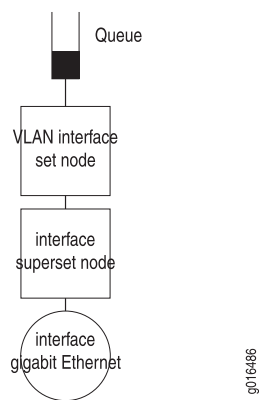


Figure 2 on page 2 shows a scheduler hierarchy with VLAN nodes at the interface set.

Figure 2: Scheduler Hierarchy with Nodes at Interface Set and Superset



Scheduling and Shaping Interface Sets

You can apply QoS to interface sets and interface supersets in the same way as a logical interface.

Each interface set or interface superset can have a shared shaper applied to it. The constituents of the shared shaper are the scheduler nodes and queues associated with the interface set.

You can use QoS profiles and QoS parameters to manage the scheduling and shaping in the interface set. When you attach a QoS profile to an interface set or an interface superset, the QoS profile applies to all of the interfaces in the set and the superset.

You can create parameter instances for an interface set or a superset by specifying the set or superset as a controlled-interface type and instance-interface type.

- Related Topics**
- Interface Sets for QoS Overview
 - Configuring Interface Sets for Scheduling and Queuing
 - For more information about scheduler resources, see Managing System Resources for Nodes and Queues

