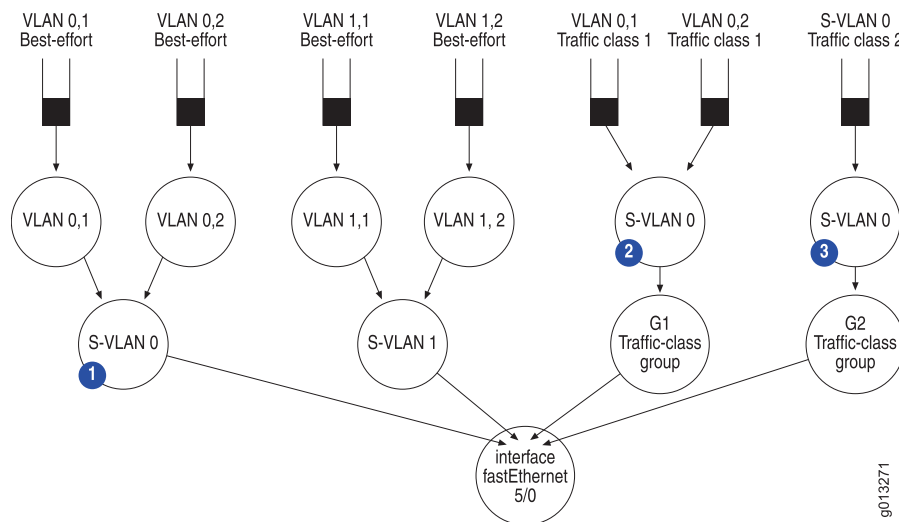


Example: Simple Shared Shaping for Ethernet

In a typical triple-play network configuration over Ethernet, individual subscribers are represented on the B-RAS by VLANs and DSLAMs by SVLANs. In this example, the provider shapes the subscriber aggregate of voice, video, and data to a single rate.

In this example, S-VLAN 0 has traffic in three traffic-class groups: the default group, the TC1 traffic class in the G1 group, and the TC2 traffic class in the G2 traffic-class group.

Figure 1: Hierarchical Simple Shared Shaping over Ethernet



In Figure 1, the S-VLANs labeled 1, 2, and 3 indicate the possible constituents for S-VLAN 0. The active constituents for the simple shared shaper are the three nodes for S-VLAN 0 in the three traffic-class groups.



NOTE: This example uses QoS parameters to configure shared shaping.

1. Configure the traffic classes and traffic-class groups.

```
(config)#traffic-class tc1
(config)#exit
(config)#traffic-class tc2
(config)#exit
(config)#traffic-class-group g1
(config-traffic-class-group)#traffic-class tc1
(config-traffic-class-group)#exit
(config)#traffic-class-group g2 extended
(config-traffic-class-group)#traffic-class tc2
(config-traffic-class-group)#exit
```

2. Configure the parameter definitions.

```
(config)#qos-parameter-define vlan-g1-max-rate
(qos-parameter-define)#controlled-interface-type vlan
(qos-parameter-define)#instance-interface-type vlan
(qos-parameter-define)#exit
(config)#qos-parameter-define svlan-g1-max-rate
(qos-parameter-define)#controlled-interface-type svlan
(qos-parameter-define)#instance-interface-type svlan
(qos-parameter-define)#instance-interface-type ethernet
(qos-parameter-define)#exit
(config)#qos-parameter-define vlan-max-rate
(qos-parameter-define)#controlled-interface-type vlan
(qos-parameter-define)#instance-interface-type vlan
(qos-parameter-define)#instance-interface-type svlan
(qos-parameter-define)#exit
(config)#qos-parameter-define svlan-max-rate
(qos-parameter-define)#controlled-interface-type svlan
(qos-parameter-define)#instance-interface-type svlan
(qos-parameter-define)#instance-interface-type ethernet
(qos-parameter-define)#exit
```

3. Configure the shared shaper by referencing parameter definitions in the **shaping-rate** command.

```
(config)#scheduler-profile vlan-be
(config-scheduler-profile)#shared-shaping-rate vlan-max-rate simple
(config-scheduler-profile)#exit
(config)#scheduler-profile svlan-be
(config-scheduler-profile)# shared-shaping-rate svlan-max-rate simple
(config-scheduler-profile)#exit
(config)#scheduler-profile svlan-g1
(config-scheduler-profile)#shaping-rate svlan-g1-max-rate
(config-scheduler-profile)#exit
(config)#scheduler-profile vlan-g1
(config-scheduler-profile)#shaping-rate vlan-g1-max-rate
(config-scheduler-profile)#exit
(config)#scheduler-profile svlan-g2
(config-scheduler-profile)#shaping-rate svlan-max-rate % 50
(config-scheduler-profile)#exit
```

4. Configure the QoS profile.

```
(config)#qos-profile svlan-4.1
(config-qos-profile)#vlan queue traffic-class best-effort
(config-qos-profile)#vlan node scheduler-profile vlan-be
(config-qos-profile)#svlan node scheduler-profile svlan-be
(config-qos-profile)#vlan queue traffic-class tc1
(config-qos-profile)#svlan node scheduler-profile svlan-g1 group g1
(config-qos-profile)#svlan queue traffic-class tc2
(config-qos-profile)#svlan node scheduler-profile svlan-g2 group g2
(config-qos-profile)#ethernet group g2 scheduler-profile default
```

5. Attach the QoS profile to the S-VLANs on Fast Ethernet interface 11/0.

```
(config)#interface fastEthernet 11/0
```

```
(config-if)#svlan 0 qos-parameter svlan-max-rate 4000000
(config-if)#svlan 0 qos-profile svlan-4.1
(config-if)#encapsulation vlan
(config-if)#exit
(config)#interface fastEthernet 11/0.1
(config-if)#svlan id 0 1
(config-if)#ip address 1.2.1.1 255.255.255.0
(config-if)#exit
(config)#interface fastEthernet 11/0.2
(config-if)#svlan id 0 2
(config-if)#ip address 1.3.1.1 255.255.255.0
(config-if)#exit
```

- Related Topics**
- Configuring Simple Shared Shaping
 - Simple Shared Shaping Overview

Published: 2010-03-21