

Examples: Setting Up Forwarding Preferences

We provide two examples for setting up forwarding preferences.

Setting Up Forwarding Preferences by Using CoS on JUNOS Routing Platforms

The sample data provides an implementation that supports CoS features on the JUNOS routing platform. This implementation provides:

- Basic BoD services to apply a JUNOS policer only to best-effort traffic
- BoD services to assign traffic to forwarding classes other than best-effort
- Policing for best-effort traffic

Table 1 on page 1 lists the services and policies in the sample data. You can locate the services in *l = ent/junos*, *o = Scopes*, *o = umc*. You can customize the policies and services as needed. For general information about configuring policies and services, see *Configuring Basic BoD Policies* and *Configuring BoD Policies*.

Table 1: Integrated BoD and Basic BoD Services in Sample Data

Name of Service	Category of Service	Name of Policy Group	Description of Service
1.0 Mbps	basic BoD	basic BoD	Specifies that a bandwidth of 1.0 Mbps be available to a specified access link for best-effort traffic.
3.0 Mbps	basic BoD	basic BoD	Specifies that a bandwidth of 3.0 Mbps be available to a specified access link for best-effort traffic.
5.0 Mbps	basic BoD	basic BoD	Specifies that a bandwidth of 5.0 Mbps be available to a specified access link for best-effort traffic.
Silver	BoD	BoD	Marks associated traffic as belonging to an assured forwarding class.
Gold	BoD	BoD	Marks associated traffic as belonging to an expedited forwarding class.

Billing can be established for traffic in the assured forwarding class and in the expedited forwarding class because the SRC software can account for traffic in each of these forwarding classes separately from other forwarding classes. Traffic in the assured forwarding class and in the expedited forwarding class is not included in the accounting data for the currently selected basic BoD service.

Setting Up Forwarding Preferences by Allocating a Percentage of a Link's Bandwidth to a Service

The following example shows another way to use BoD and basic BoD services to provide BoD services. In this example, a percentage of an access link's bandwidth is allocated to a specified service.

This configuration provides:

- Three bandwidth levels available to access links: 1.0 Mbps, 1.5 Mbps, and 2.0 Mbps.
- Three service levels defined to use a specified percentage of the bandwidth set for the access link: best effort 20 %, Silver 30 %, and Gold 50 %.

Each traffic class uses only the bandwidth assigned to it and does not share bandwidth with other traffic classes.

For an SRC configuration to support this scenario, you could create policies such as the following and assign these policies to services:

- Policies that provide a local policy parameter, `bw`, whose value is set by the service that references the policy:

For policy 1.0 Mb, `bw = 1000000`

For policy 1.5 Mb, `bw = 1500000`

For policy 2.0 Mb, `bw = 2000000`

- The transmission rate, bandwidth allocation, and priority scheduling for specified forwarding classes as shown in Table 2 on page 2.

Table 2: Policies to Specify Forwarding Treatment for Specified Traffic Classes

Forwarding Class	Transmission Rate	Exact	Priority Scheduling
Best effort	$bw * 0.2 \text{ bps}$	true	Low
Silver (assured forwarding)	$bw * 0.3 \text{ bps}$	true	Medium
Gold (expedited forwarding)	$bw * 0.5 \text{ bps}$	true	High

By setting `exact` to true, you can ensure that the sum of the transmission rates is less than the bandwidth allocated to the access link.