qos-scheduler

**Policy qos-scheduler**—Configure a QoS scheduler for a forwarding class (on vEdge routers only).

A scheduler can apply to unicast and multicast traffic.

VManage Feature Template

For vEdge routers:

Configuration ► Policies ► Localized Policy

**Command Hierarchy**

```
policy
  qos-scheduler scheduler-name
    bandwidth-percent percentage
    buffer-percent percentage
    burst packets
    class class-name
    drops (red-drop | tail-drop)
    scheduling (llq | wrr)
```

**Options**

- **Scheduler Name**
  
  `scheduler-name`

  Name of the QoS scheduler for a forwarding class. It can be a text string from 1 through 32 characters long.

- **Bandwidth Percentage**
  
  `bandwidth-percent percentage`

  Percentage of the interface's bandwidth to allocate to the forwarding class. The sum of the bandwidth on all forwarding classes on an interface should not exceed 100 percent.

- **Buffer Percentage**
  
  `buffer-percent percentage`

  Percentage of the interface's buffering capacity to allocate to the forwarding class. The sum of the buffering capacity of all forwarding classes on an interface should not exceed 100 percent.

- **Burst Rate**
  
  `burst packets`

  Maximum number of packets in a burst.

  *Range*: 5000 through 10000000 packets

  *Default*: 5000 packets

- **Class**
  
  `class class-name`

  Name of the forwarding class. `class-name` can be a text string from 1 through 32 characters long. The common class names correspond to the per-hop behaviors AF (assured forwarding), BE (best effort), and EF (expedited forwarding).

- **Packet Drops**
  
  `drops (red-drop | tail-drop)`

  https://sdwan-docs.cisco.com/Product_Documentation/Command_Reference/Command_Reference/18.4_Commands/qos-scheduler
Method to use to drop packets that exceed the bandwidth or buffer percentage. Packets can be dropped either randomly (red-drop) or from the end of the queue (tail-drop). If you configure low-latency queuing (scheduling llq), you cannot configure the red-drop drop mechanism. If you attempt to configure both mechanisms, an error message is displayed when you try to validate the configuration, and the commit operation does not continue.

**Queue Scheduling**

**scheduling (llq | wrr)**

Algorithm to use to schedule interface queues. It can be either low-latency queuing (llq) or weighted round-robin (wrr). If you use LLQ, you cannot configure RED packet drops.

### Operational Commands

- `show policy qos-map-info`
- `show policy qos-scheduler-info`

### Example

Create a QoS scheduler and QoS map, and apply it to an interface in VPN 1:

```
vEdge(config)# show config policy
policy
  qos-scheduler afl
    class afl
    bandwidth-percent 20
    buffer-percent 20
    drops red-drop
  !
  qos-map test-qos-map
  qos-scheduler afl
  !

vEdge(config)# show config vpn 1
vpn 1
  interface ge0/0
    qos-map test-qos-map
    !
```

### Release Information


Starting in Release 16.2.3, if you attempt to configure LLQ and red drops, an error message is displayed when you try to validate the configuration, and the commit operation does not continue.

In Release 16.3, add support for multicast traffic.

In Release 18.3.1, add **burst** command.

### Additional Information

See the Configuring Localized Data Policy, Forwarding and QoS Overview, and Forwarding and QoS Configuration Examples articles for your software release.

- `access-list`
- `class-map`