



## B Commands

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## bandwidth (QoS)

To allocate a minimum percentage of the interface bandwidth to a queue and configure the bandwidth on both ingress and egress queues, use the **bandwidth** command. To remove a bandwidth configuration, use the **no** form of this command.

**bandwidth** {*rate* [**bps** | **kbps** | **mbps** | **gbps**]} **percent** *percent*}

**no bandwidth** {*rate* [**bps** | **kbps** | **mbps** | **gbps**]} **percent** *percent*}

### Syntax Description

<i>rate</i>	Bandwidth rate. The range is from 1 to 10000000000.
<b>bps</b>	(Optional) Specifies the units of bits per second.
<b>kbps</b>	(Optional) Specifies the units of 1000 bits per second.
<b>mbps</b>	(Optional) Specifies the units of megabits per second.
<b>gbps</b>	(Optional) Specifies the units of gigabits per second.
<b>percent</b>	Specifies the percentage of bandwidth of the underlying link rate.
<i>percent</i>	Percent value in the range from 1 to 100.

### Command Default

None

### Command Modes

Policy map type queuing class configuration

### Command History

Release	Modification
4.0	This command was introduced.

### Usage Guidelines

You can use the system-defined ingress or egress queue class for the type of module to which you want to apply the policy map. For more information about system-defined type queuing class maps, see the following table.

**Table 1: System-Defined Type Queuing Class Maps**

Class Map Queue Name	Description	Default CoS Values
<b>1 Gigabit Module Ingress: 2 queues with 4 thresholds per queue</b>		
2q4t-in-q1	Ingress queue 1 of 2q4t type	5-7
2q4t-in-q-default	Ingress default queue of 2q4t type	0-4
<b>1 Gigabit Module Egress: 1 strict priority queue and 3 normal queues with 4 thresholds per queue</b>		
1p3q4t-out-pq1 <sup>1</sup>	Egress priority queue of 1p3q4t type	5-7
1p3q4t-out-q2	Egress queue 2 of 1p3q4t type	–
1p3q4t-out-q3	Egress queue 3 of 1p3q4t type	–
1p3q4t-out-q-default	Egress default queue of 1p3q4t type	0-4
<b>10 Gigabit Module Ingress: 8 queues with 2 thresholds per queue</b>		
8q2t-in-q1	Ingress queue 1 of 8q2t type	5-7
8q2t-in-q2	Ingress queue 2 of 8q2t type	–
8q2t-in-q3	Ingress queue 3 of 8q2t type	–
8q2t-in-q4	Ingress queue 4 of 8q2t type	–
8q2t-in-q5	Ingress queue 5 of 8q2t type	–
8q2t-in-q6	Ingress queue 6 of 8q2t type	–
8q2t-in-q7	Ingress queue 7 of 8q2t type	–
8q2t-in-q-default	Ingress default queue of 8q2t type	0-4
<b>10 Gigabit Module Egress: 1 strict priority queue and 7 normal queues with 4 thresholds per queue</b>		
1p7q4t-out-pq1 <sup>2</sup>	Egress priority queue of 1p7q4t type	5-7
1p7q4t-out-q2	Egress queue 2 of 1p7q4t type	–
1p7q4t-out-q3	Egress queue 3 of 1p7q4t type	–
1p7q4t-out-q4	Egress queue 4 of 1p7q4t type	–
1p7q4t-out-q5	Egress queue 5 of 1p7q4t type	–

Class Map Queue Name	Description	Default CoS Values
1p7q4t-out-q6	Egress queue 6 of 1p7q4t type	–
1p7q4t-out-q7	Egress queue 7 of 1p7q4t type	–
1p7q4t-out-q-default	Egress default queue of 1p7q4t type	0-4

- <sup>1</sup> These are either priority or normal queues. If you use the priority keyword in your configuration, these are used as priority queues. Otherwise, they are used as normal queues.
- <sup>2</sup> These are either priority or normal queues. If you use the priority keyword in your configuration, these are used as priority queues. Otherwise, they are used as normal queues.

**Note**

After you use this command in a specified policy map, you cannot use the **priority** or **shape** command in the same policy map.

This command does not require a license.

**Examples**

This example shows how to specify a bandwidth rate for a queue:

```
switch(config)# policy-map type queuing my_policy1
switch(config-pmap-que)# class type queuing 1p7q4t-out-pq1
switch(config-pmap-c-que)# bandwidth 10 mbps
```

This example shows how to remove a bandwidth rate for a queue:

```
switch(config)# policy-map type queuing my_policy1
switch(config-pmap-que)# class type queuing 1p7q4t-out-pq1
switch(config-pmap-c-que)# no bandwidth 10 mbps
```

**Related Commands**

Command	Description
<b>bandwidth remaining</b>	Configures the bandwidth remaining on the interface in a queue.
<b>show class-map</b>	Displays class maps.
<b>show policy-map</b>	Displays policy maps and statistics.

# bandwidth remaining

To configure the percentage of the bandwidth remaining on the interface after other allocations are configured on both ingress and egress queues, use the **bandwidth remaining** command. To remove the remaining bandwidth allocation, use the **no** form of this command.

**bandwidth remaining percent** { *percent* }

**no bandwidth remaining percent** { *percent* }

## Syntax Description

<i>percent</i>	Percentage of remaining bandwidth on the underlying link. Valid values are from 0 to 100.
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## Command Default

None

## Command Modes

Policy map type queuing class configuration

## Command History

Release	Modification
4.0	This command was introduced.

## Usage Guidelines

You can use the system-defined ingress or egress queue class for the type of module to which you want to apply the policy map. For more information about system-defined type queuing class maps, see [Table 1: System-Defined Type Queuing Class Maps, on page 3](#). You can use this command with the **priority** command.

For more information on using this command, see the *Cisco Nexus 7000 Series NX-OS Quality of Service Configuration Guide, Release 5.0*.

This command does not require a license.

## Examples

This example shows how to set the bandwidth remaining for the specified queue:

```
switch(config)# policy-map type queuing my_policy1
switch(config-pmap-que)# class type queuing lp7q4t-out-pq1
switch(config-pmap-c-que)# bandwidth remaining percent 25
```

This example shows how to remove the bandwidth remaining for the specified queue:

```
switch(config)# policy-map type queuing my_policy1
switch(config-pmap-que)# class type queuing lp7q4t-out-pq1
switch(config-pmap-c-que)# no bandwidth remaining percent 25
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>bandwidth</b>	Allocates a minimum percentage of the interface bandwidth to a queue.
<b>show class-map</b>	Displays class maps.
<b>show policy-map</b>	Displays policy maps and statistics.