



# Tofab QoS Queues per Egress Line Card on Cisco 12000 Series Routers

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## Feature History

Release	Modification
12.0(32)S	This feature was introduced on the Cisco 12000 series routers.

This feature module contains the following sections:

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## Tofab QoS Queues per Egress ISE SPA or ISE Line Card Feature Overview

Integrated Services Engine (ISE) line cards on Cisco 12000 series routers running Cisco IOS Release 12.0(32)S provide 8 queues per bay. The user can configure 8 local output queues on each physical port on any bay carrying an ISE SPA or ISE line card.

There are no new QoS commands for Tofab QoS Queues per Egress ISE SPA or ISE Line Card.

There are no changes to the QoS CLI commands for ingress Class of Service (CoS).

All high priority traffic and multicast traffic transmitted from SPAs to multiservice engine line cards must still go through the high priority or multicast queues.

Class of Service (CoS) configuration for the queues is still done per line card, using the legacy CoS CLI command, **cos-queue-group**. The **cos-queue-group** command configures the following items:

- Precedence traffic (priority 0 to 6) on all 8 queues for a bay, normal priority queues, the low latency queue (LLQ), and all 7 Random Early Detection (RED) labels
- Random Early Detection (RED) configuration for the RED labels
- Deficit Round Robin (DRR) weights for all normal priority queues
- Strict priority for the low latency queue

Class of Service (CoS) policies can be configured for specific slots and multicast queues, using the **slot-table-cos** command. After a Class of Service (CoS) table is defined for a specific slot, using the **slot-table-cos** command, the Class of Service (CoS) table can be applied to that slot's queues, using the **rx-cos-slot** command.

The Tofab queue allocations are static. When a new line card is inserted into the router, the route processor sends a message to all the existing line cards. The existing line cards then configure their own Tofab queues to include the newly inserted line card.

## Benefits

Multiservice engine line cards on Cisco 12000 series routers running Cisco IOS Release 12.0(32)S provide 8 queues per bay.

## Restrictions

None.

## Related Features and Technologies

Quality of Service (QoS) on Cisco 12000 series routers

## Related Documents

For further information on configuring Cisco 12000 series routers, refer to the following documents:

- *Cisco 12000 Series Router Configuration Guide for Cisco IOS*
- Installation and Configuration Guide for the specific router

## Supported Platforms

The Tofab QoS Queues per Egress ISE SPA or ISE Line Card feature is supported on the following multiservice engine SPAs and line cards on Cisco IOS Release 12.0(32)S on Cisco 12000 series routers:

- 10-port Gigabit Ethernet SPA
- 1-port 10-Gigabit Ethernet SPA
- 5-port Gigabit Ethernet SPA

- 8-port Fast Ethernet Line Card
- 1-port OC-192 POS SPA
- 2-port OC48 DPT Line Card
- 1-port Channelized OC-12/STM1 Line Card
- 8-port Channelized T1/E1 SPA
- 2-port T3/E3 Serial SPA
- 4-port T3/E3 Serial SPA
- 2-port Channelized T3 to DS0 SPA
- 4-port Channelized T3 to DS0 SPA

## Supported MIBs

None.

## Prerequisites

None.

## Configuration Tasks

No configuration is necessary for the Tofab QoS Queues per Egress ISE SPA or ISE Line Card feature.

## Monitoring Tofab QoS Queues per Egress ISE SPA or ISE Line Card

Use the following commands to display information about the Tofab queues:

Command	Purpose
Router# <b>show controller tofab queue</b> <destination slot> <port>	Displays memory used, queued packets, dropped packets, etc.
Router# <b>show controller tofab queue</b> <destination slot> <port> <b>drp</b>	Displays memory used, queued packets, dropped packets, etc. for Deficit Round Robin (DRR)
Router# <b>show controller tofab queue</b> <destination slot> <port> <b>red</b>	Displays memory used, queued packets, dropped packets, etc. for Random Early Detection (RED).

## Command Reference

There are no new or modified QoS commands for the Tofab QoS Queues per Egress ISE SPA or ISE line cards feature.

There are no changes to the QoS CLI commands for ingress Class of Service (CoS) for the Tofab QoS Queues per Egress ISE SPA or ISE Line Card feature. See the [Tofab QoS Queues per Egress ISE SPA or ISE Line Card Feature Overview](#) section for details.

## Glossary

DRR	Deficit Round Robin
ISE	Integrated Services Engine
LLQ	Low latency queue
RED	Random Early Detection
SPA	Shared port adapter. A SPA is a modular, platform-independent port adapter that inserts into a subslot of a compatible SIP carrier card to provide network connectivity and increased interface port density. The SPA provides the interface between the network and the SIP.
Tofab	Toward the fabric or ingress direction.

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