



## PFC QoS Overview

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This chapter provides an overview of quality of service (QoS) as implemented on the Policy Feature Card (PFC) and Distributed Forwarding Cards (DFCs) in Cisco IOS Release 15.1SY. The term “PFC QoS” refers to hardware accelerated QoS. PFC QoS is implemented on various switch components in addition to the PFC and any DFCs.



### Note

- For complete syntax and usage information for the commands used in this chapter, see these publications:  
[http://www.cisco.com/en/US/products/ps11846/prod\\_command\\_reference\\_list.html](http://www.cisco.com/en/US/products/ps11846/prod_command_reference_list.html)
- Cisco IOS Release 15.1SY supports only Ethernet interfaces. Cisco IOS Release 15.1SY does not support any WAN features or commands.
- For information about AutoQoS, see [Chapter 37, “AutoQoS.”](#)
- For information about QoS and MPLS, see [Chapter 38, “MPLS QoS.”](#)
- QoS in Cisco IOS Release 15.1SY (PFC QoS) uses some Cisco IOS modular QoS CLI (MQC). Because PFC QoS is implemented in hardware, it supports only a subset of the MQC syntax.



### Tip

For additional information about Cisco Catalyst 6500 Series Switches (including configuration examples and troubleshooting information), see the documents listed on this page:

[http://www.cisco.com/en/US/products/hw/switches/ps708/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/hw/switches/ps708/tsd_products_support_series_home.html)

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QoS makes network performance more predictable and bandwidth utilization more effective. Without QoS, networks operate on a *best-effort* delivery basis, which means that all traffic has equal priority and an equal chance of being delivered in a timely manner. When congestion occurs, all traffic has an equal chance of being dropped. QoS minimizes the chance that priority traffic would be dropped.

PFC QoS has these capabilities:

- Classification
- Marking
- Policing

- Congestion avoidance
- Mutation

You can configure two types of policies:

- Policies that define any combination of egress DSCP mutation, egress EXP mutation, classification, marking, and policing.
- Policies that define queueing.

Queueing configuration and classification, marking, and policing configuration are all optional.

Queueing configuration and classification, marking, and policing configuration have no common parameters or commands.

You configure QoS policies with the following commands:

- **class-map**—Defines a traffic class based on packet-matching criteria. Class maps are referenced in policy maps.
- **table-map**—Defines mapping from one set of traffic field values to another set of traffic fields values. Table maps are referenced in policy maps. Not used in queueing policies.
- **policy-map**—Defines or uses any combination of the following:
  - Class maps for classification
  - Table maps for marking and mutation
  - Policy trust mode
  - Policing
  - Queueing (cannot be combined with classification, marking, trust mode, or policing)
- **service-policy**—Applies policies to interfaces.

These chapters describe QoS:

- [Restrictions for PFC QoS, page 33-1](#)
- [Classification, Marking, and Policing, page 34-1](#)
- [Policy-Based Queueing, page 35-1](#)
- [QoS Global and Interface Options, page 36-1](#)



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