

Cisco QoS Policy Manager Solution

The need for predictable performance of business-critical applications as well as the requirements for integrating latency-critical voice and video with bursty data services mandates differentiated handling of network traffic. By providing the tools to define end-to-end quality of service (QoS) policies on your network, the Cisco QoS Policy Manager (QPM) solution enables network administrators to ensure business-critical application performance, deploy new applications with confidence, scale the network as the business grows, and enforce service-level agreements (SLAs).

As an integral part of the Cisco end-to-end QoS and intelligent network services, QPM provides optimum traffic enforcement through application and user-aware, centralized policy management. A full-featured QoS policy system, QPM enables differentiated and signaled services, ensuring consistent QoS across the network infrastructure.

Features at a Glance

- *Centralized policy control*—A centralized, network-wide policy database eliminates device-by-device management for configuring, modifying, and deploying QoS in routing and switching environments.
- *Easy-to-use policy configuration*—QPM simplifies configuration of traffic classification and end-to-end QoS provisioning while providing rules-based policy validation.
- *Differentiated service for business-critical applications*—Defines different classes of service by application, enhanced by content-level application recognition.
- *Voice QoS support*—Guarantees performance of high-quality voice and video services.

- *Comprehensive QoS feature support*—Provides extensive congestion management, congestion avoidance, and traffic-shaping services that take advantage of intelligent QoS features.
- *Automated policy deployment*—Ensures controlled and reliable deployment of QoS policies to Cisco devices.

QoS Policy Manager Benefits

The goal of QoS is to provide consistent, predictable network services by delivering dedicated bandwidth, controlling jitter and latency, managing congestion, and improving traffic flow efficiency. As part of an enhanced intelligent network, QoS is essential throughout the enterprise. By automating the process of translating application performance requirements into QoS policy, QPM ensures reliable performance for business-critical applications, voice and multimedia traffic— all contending with noncritical traffic. QPM delivers the key benefits of enabling network-wide, content-based differentiated services, automating QoS configuration and deployment, and ensuring campus-to-WAN policy control.

Delivers Network-Wide Differentiated Service

Provisioning network resources based on the relative importance of application traffic is the most effective way to deliver QoS. Packet classification is a key capability that allows the appropriate packets traversing a network element or particular interface to be selected for QoS service. With QPM, an administrator can quickly construct rules-based QoS policies that identify and partition application traffic into multiple classes of service. When classified, these packets can then be marked for the appropriate IP Precedence or differentiated services code point (DSCP).

QPM supports fine-grained levels of traffic classification, including TCP/User Datagram Protocol (UDP) port and IP address. QPM also supports Cisco Content Networking via the enhanced classification capabilities of network-based application recognition (NBAR) in Cisco IOS® software. NBAR enables classification by application signatures, by specific content within the packet (including Web URLs), and by capturing dynamic protocols.

QPM allows you to build a network-wide QoS policy architecture that prioritizes applications by class of service at the perimeter of the network and then enforces this policy in the core using congestion-avoidance or congestion-management techniques.

Automates QoS Configuration and Deployment

Even with advanced, intelligent network devices, the task of manually deploying QoS policies on a network-wide basis can be an error-prone, time-consuming process. QPM automates the steps associated with policy definition, validation, configuration, and deployment. Using the QPM GUI, you can quickly and reliably deploy QoS policies without requiring a detailed understanding of QoS mechanisms. Using QPM, you can:

- Specify rules-based policies that establish differentiated traffic classes for applications and users
- Enable a rich set of QoS services, including congestion management, congestion avoidance, and traffic-shaping mechanisms
- Ensure policy consistency by having QPM efficiently translate policies to specific QoS configuration commands
- Validate policies prior to deploying them to the network
- Quickly and reliably distribute policies to LAN and WAN policy domains
- Generate Web-based reports of the QoS policies deployed in the network

Graphical Policy Administration Console

The QPM GUI abstracts the complexity of defining policy and validates complex QoS policy rules. The policy system maintains a knowledge base that stores attribute information on the QoS capabilities of each device. This knowledge base ensures that you define QoS policies only for QoS mechanisms supported by target devices and then translates these QoS policies into configuration commands specific to each interface. This policy abstraction and automation reduces repetitive tasks associated with defining policies for multiple devices and software releases, ensuring QoS policy integrity.

Guaranteed Voice and Video Services

QPM provides for rapid configuration and deployment of advanced voice and multimedia QoS features. Support includes:

- Priority to voice traffic using low-latency queuing (LLQ)
- Support for frame fragmentation
- Classification by IP Real-Time Transport Protocol (RTP)

By deploying Cisco AVVID networks, businesses today can reduce costs by combining voice traffic onto existing IP networks.

To provide the required voice quality, QoS must be part of the end-to-end network fabric. QPM, deployed in AVVID-enabled networks, gives VoIP traffic the service it needs, while providing optimal service levels for data traffic.

Service and Support

Cisco QoS Policy Manager solution is supported under Cisco Software Application Service (SAS) program. This service program offers customers contract-based, 7x24 access to the Cisco Technical Assistance Center (TAC), full Cisco Connection Online (CCO) privileges, and software maintenance updates.

A Software Application Service contract ensures that customers have easy access to the information and services needed to stay up-to-date with newly supported device packages, patches, and minor updates. For further information on additional service and support offerings, contact your local sales office.

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