

CiscoWorks Quality of Service Policy Manager 4.1.2

Q. What is CiscoWorks Quality of Service Policy Manager (QPM)?

A. CiscoWorks QPM facilitates centralized management of quality of service (QoS). It provides comprehensive QoS provisioning and monitoring capabilities so that network administrators can manage and fine-tune the delay, delay variation (jitter), bandwidth, and packet loss parameters required for successful deployment and optimal utilization of network resources.

Q. What network management problem area does CiscoWorks QPM address?

A. Designing, deploying, and monitoring QoS is a complex process that requires enterprise-grade automation. CiscoWorks QPM provides network administrators with comprehensive QoS provisioning and monitoring capabilities, allowing them to manage and fine-tune the delay, delay variation (jitter), bandwidth, and packet loss parameters required for successful end-to-end deployment and optimal utilization of network resources. The end result is networkwide intelligent, consistent, and sophisticated QoS that allows performance protection for voice, video, and Internet business applications while reducing costs and optimizing the utilization of network resources.

Q. Who should deploy CiscoWorks QPM?

A. Enterprises and service providers requiring comprehensive QoS management capabilities will find great value in CiscoWorks QPM. CiscoWorks QPM provides centralized management of QoS policy creation, validation, deployment, and monitoring to facilitate the secure and predictable delivery of business applications, such as video, voice over Internet Protocol (VoIP), and critical data center applications.

Q. How does CiscoWorks QPM help users meet their QoS policy modeling and provisioning requirements?

A. CiscoWorks QPM helps users significantly reduce cost and time required for efficient design and deployment of QoS across thousands of devices and hundreds of thousands of interfaces on a broad range of Cisco® routers and switches. The sophisticated modeling capabilities of CiscoWorks QPM alleviate the need for scarce expertise by abstracting the complexity of QoS technology and providing high-level knobs such as QoS Policy Templates to automate the process of configuring QoS without error and with consistency.

Q. How does CiscoWorks QPM help users monitor QoS statistics and the impact of QoS policies on network traffic?

A. CiscoWorks QPM helps users achieve visibility into the performance of converged network applications on an ongoing basis. Through Cisco network-based application recognition (NBAR) protocol discovery, CiscoWorks QPM can report and monitor the performance of application traffic running across the network in real time or historically. CiscoWorks QPM also provides measurement of traffic throughput for top applications and service classes. It helps ensure compliance of applications, such as Cisco Unified Communications, with QoS. Users can also be alerted of QoS violations such as performance threshold excesses and out-of-band QoS configuration changes.

Q. What kind of traffic analysis capabilities does CiscoWorks QPM provide?

A. CiscoWorks QPM monitoring is used to baseline-profile traffic for top applications (for example, SAP, Oracle, PeopleSoft, Cisco Unified Communications, custom applications) and Differentiated Services (DiffServ) classes (for example, real time, business critical, best effort) and to validate QoS settings and results (for example: Is the "silver" service class for business-critical applications getting 40 percent of the link? Are rate-limiting bandwidth applications such as Gnutella working?). Historical analysis monitors traffic, with a start and end time, for all policies on one or more interfaces, polling on a regular basis and storing the gathered data. Real-time

analysis monitors traffic for all policies on one interface continuously, in real time (no data is stored). Information is presented in bits or packets per second and graphed as a line or bar chart. Analysis includes displaying traffic statistics (including NBAR filters) before and after QoS policy deployment and charting QoS action statistics. Examples of QoS statistics that can be graphically reported on include:

- Policies
 - Traffic matched per class prior to QoS actions
 - Traffic matched per class after QoS actions
 - Traffic matched per class discarded by QoS
- Filters: Distribution of matching traffic by policy filter statements
- QoS actions: Queuing, Weighted Random Early Detection (WRED), traffic shaping, and policing

Q. What new features are available in CiscoWorks QPM 4.1.2?

A. CiscoWorks QPM 4.1 and CiscoWorks QPM 4.1.2 introduce the following new features:

- **New in 4.1.2:** Cisco TelePresence™ and enterprise video QoS policy-creation tool based on RFC-4594, Cisco QoS best practices, and Places in the Network (PIN) reference designs
- **New in 4.1.2:** Additional CiscoWorks QPM informational portlets and updated dashboard
- **New in 4.1.2:** Additional device support; see Cisco.com or click [here for details](#).
- Server support for Solaris10 and VMware ESX 3.0.1 and 3.5
- Client support for Microsoft Windows Vista
- Coexistence with CiscoWorks LAN Management Solution (LMS) 3.1
- Continued integration support with Cisco Access Control Server 4.1
- Utilizes CiscoWorks Common Services 3.2, including:
 - Support for Simple Network Management Protocol Version 3 (SNMPv3) NoAuthNoPriv, AuthNoPriv, and AuthPriv
 - Support for secondary Device Credentials Repository (DCR)
 - Support for Secure Shell Protocol Version 2 (SSHv2)
- Integration with CiscoWorks Network Compliance Manager (NCM) 1.3 for QoS policy change reporting and impact analysis
- New usability enhancements, including a user interface based on Cisco User Experience Standards
- Customizable dashboard: You can customize the layout and content of the CiscoWorks QPM dashboard page.
- New northbound APIs for threshold management and event management
- New Cisco TelePresence QoS policy templates: CiscoWorks QPM will walk users through the configuration of Cisco TelePresence specific QoS policies and monitoring thresholds for circuit utilization and class utilization to help optimize Cisco TelePresence deployments.
- Support for real-time and historical Cisco NBAR protocol discovery monitoring for traffic baselining, to separately monitor the application traffic inbound and outbound from device interfaces.
- Support for port QoS monitoring: Provides monitoring capabilities on a per port basis. Both real-time charts and historical monitoring charts are displayed to provide the QoS statistical information on a per port basis for supported devices.
- Support for ATM PVC monitoring: Real-time and historical monitoring of ATM multipoint subinterfaces with virtual circuits and permanent virtual circuits (PVCs). Users can select virtual-circuit and PVC bundles configured on the interface for monitoring.

- Support for monitoring of child policies: Users can monitor the interfaces based on the child policy available under a parent policy deployed on the interfaces.

Q. Can CiscoWorks QPM use the device inventory data stored in DCR?

- A.** Yes. CiscoWorks QPM can automatically discover the devices available in the enterprise network and QoS configurations already deployed thereon. Additionally, device inventory can be imported into CiscoWorks QPM from CiscoWorks DCR, helping ensure consistency between the two CiscoWorks products.

Q. Which types of network devices are supported by CiscoWorks QPM?

- A.** CiscoWorks QPM supports an extensive range of Cisco WAN and LAN networking equipment. QoS statistics can be monitored in real time or historically for all Cisco devices supporting the following MIBs: the Class-Based QoS (CBQoS) MIB for monitoring modular QoS policies, the Cisco NBAR protocol discovery MIB for application-level discovery and traffic statistics monitoring, the Cisco Port QoS MIB for per port QoS monitoring, the Committed Access Rate (CAR) MIB for nonmodular QoS policies. CiscoWorks QPM provides a comprehensive device/OS upgrade support package, including up-to-date support of the QoS command-line interface (CLI) on a majority of Cisco routers (including Cisco IOS[®] Software XR-based devices such as the Cisco Carrier Routing System-1) and Cisco Catalyst[®] switches running Cisco IOS Software. For a complete list of supported devices, please visit the CiscoWorks QPM product page on Cisco.com or click [here](#). CiscoWorks QPM is periodically updated to support new devices as they become available or to meet market demands.

Q. Does CiscoWorks QPM support devices other than those from Cisco?

- A.** No. CiscoWorks QPM supports only Cisco networking devices.

Q. How is CiscoWorks QPM licensed?

- A.** The CiscoWorks QPM software is licensed on the basis of the number of devices to be managed and the feature options selected: combined QoS provisioning and monitoring, or monitoring only. Customers must purchase a software license for the CiscoWorks QPM feature options selected and for the appropriate device count increments for the desired count of managed devices. Additionally, a small and medium-sized business (SMB) version is available.

Q. What server operating systems does CiscoWorks QPM support?

- A.** CiscoWorks QPM is available on the following platforms:

- Microsoft Windows Server 2003 Enterprise Edition
- Sun Solaris 9
- Sun Solaris 10

Q. How do I prepare my network for the deployment of CiscoWorks QPM?

- A.** CiscoWorks QPM communicates with devices using a combination of protocols and ports. Please refer to the CiscoWorks QPM installation checklist in the Get Started Guide for detailed information on preparing your network for CiscoWorks QPM deployment.

Q. Can I migrate to CiscoWorks QPM 4.1 from an earlier version?

- A.** Yes. CiscoWorks QPM 4.0 customers with an active CiscoWorks QPM software maintenance contract can download from Cisco.com an upgrade to CiscoWorks QPM 4.1. Any licenses purchased for 4.0 will transfer over to 4.1.

If migrating from CiscoWorks QPM 3.X, users must first upgrade to CiscoWorks QPM 4.0 by purchasing product number QPM-3to4-UPGR-K9, which includes CiscoWorks QPM 4.0 software and a license to manage up to 500 devices. After upgrading to CiscoWorks QPM 4.0, users can then download from Cisco.com the upgrade to CiscoWorks QPM 4.1. The network and QoS configuration database will be preserved through the migration.

Maintenance release patches can be downloaded from the CiscoWorks QPM product page on Cisco.com, <http://www.cisco.com/go/qpm>.

Q. Can CiscoWorks QPM monitor QoS statistics on a network for which QoS has been configured by a method other than CiscoWorks QPM (for example, manually or through the use of scripts)?

- A.** Yes. The monitoring capabilities of CiscoWorks QPM 4.1 allow monitoring of QoS regardless of how QoS has been configured. You can purchase a QoS Monitoring Only version by ordering part number QPM-4.1-MON-K9, which includes a license to manage up to 500 devices.

Q. Can I upgrade from the QoS Monitoring Only version to the full Combined QoS Provisioning and Monitoring version?

- A.** Yes. This can be accomplished by ordering part number QPM-4.1-M2C-UPGR.

For More Information

For more information about CiscoWorks Quality of Service Policy Manager, visit <http://www.cisco.com/go/qpm>, contact your local account representative, or send an email to ask-qpm-pm@cisco.com.



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