CiscoWorks Quality of Service Policy Manager 4.0

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 enable 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. It provides measurement of traffic throughput for top applications and service classes. It enables troubleshooting by providing real-time and historical QoS feedback, and it helps ensure compliance of applications, such as Cisco Unified Communications, with QoS. Users can also be alerted of QoS violations such as user-defined threshold excesses.

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 network-based application recognition [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 4.0?

A. CiscoWorks QPM 4.0 is a major release that introduces the following new features:

- Significant platform upgrades: new Solaris 8/9 version, Windows 2003, CiscoWorks Common Services Software 3.0.5, import from CiscoWorks Device Credential Repository (DCR), compatibility with CiscoWorks LAN Management Solution (LMS) 2.5.1/2.6
- Availability of Monitoring Only mode
- Threshold setting and threshold violation alerting capabilities
- New QoS features: hierarchical QoS, NBAR packet description language module (PDLM), virtual channel bundle, and time-based access control lists (ACLs)
- Simplified high-level workflows for network selection, QoS provisioning, QoS monitoring, and reporting

Q. How does CiscoWorks QPM fit within the Cisco network modeling, configuration, fault, performance, and Cisco Unified Communications Management product portfolio?

A. CiscoWorks QPM is complementary to other Cisco network modeling, configuration, fault, performance, and Cisco Unified Communications Management products, such as CiscoWorks Network Compliance Manager (NCM), the Resource Management Essentials (RME) module of CiscoWorks LAN Management Solution (LMS), Cisco Unified Communications Operations Manager (UCOM), and Cisco Performance Visibility Manager (PVM).

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 wide-area network (WAN) and local-area network (LAN) networking equipment. QoS statistics can be monitored for all Cisco

devices supporting the following management information databases (MIBs): the Class-Based QoS (CBQoS) MIB for modular QoS policies and the Committed Access Rate (CAR) MIB for nonmodular QoS policies. Version 4.0 provides a comprehensive device/OS upgrade support package, including up-to-date support of the QoS command-line interface (CLI) on all Cisco routers except high-end routers and on all Cisco Catalyst® switches at the current OS level. CiscoWorks QPM can be easily upgraded to support new devices as they become available or to meet market demand.

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

A. No. CiscoWorks QPM is not a multivendor product.

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 features 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 2000 or 2003 Enterprise Edition
- Sun Solaris 8
- Sun Solaris 9

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 4.0 from an earlier version?

A. Yes. CiscoWorks QPM 3.x users can migrate their installation to CiscoWorks QPM 4.0 by ordering product number QPM-3to4-UPGR-K9, which includes a license to manage up to 500 devices. The network and QoS configuration database will be preserved through the migration.

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 4.0 allow monitoring of QoS regardless of how QoS has been configured. You can purchase a QoS Monitoring Only version by ordering part number QPM-4.0-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-M2C-UPGR-K9.

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 e-mail to ask-qpm-pm@cisco.com.

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