Cisco Bandwidth Quality Manager 4.0

PB430271

Product Overview

Cisco® Bandwidth Quality Manager (BQM) 4.0 is a next-generation network performance management product that helps enable customers to monitor and provision their network for controlled levels of latency and loss performance. The control of network latency and loss is a vital ingredient in delivering maximum performance for networked applications.

- Data centers hosting desktop virtualization applications like Citrix and Web 2.0 services often exhibit poor performance if the network exhibits uncontrolled or intermittently high levels of latency.
- Collaborative applications like Cisco Telepresence require consistent delivery of controlled latency and low jitter in the network.
- Algorithmic trading and distributed grid computing require ultralow levels of network latency and loss (typically less than 5 milliseconds and no packet loss).

Cisco BQM 4.0 implements a broad set of patented and patent-pending traffic measurement and network analysis technologies that give the user unprecedented visibility and understanding of how to optimize the network for maximum application performance.

Cisco BQM is part of the Cisco Network Application Performance Analysis Solution. This solution is a set of tools and services that help customers quickly isolate application performance problems and optimize their networks for current and future applications to help ensure that they meet their information technology performance and cost objectives.

Cisco BQM is now supported on the product family of Cisco Application Deployment Engine (ADE). The Cisco ADE product family is the platform of choice for Cisco network management applications.

Tables 1 and 2 summarize Cisco BQM functions and business benefits.

Table 1. Cisco BQM Functions

Function	Description
Network Service Quality	Cisco BQM measures the loss, latency, and jitter experienced by the actual application traffic by passively observing packets between any two BQM appliances and sending “out-of-band” timing information to a designated BQM appliance. Cisco BQM supports one-way measurements in both directions. To compute absolute one-way measurement, Cisco BQM supports a GPS-based time synchronization interface.
Expected Quality	Cisco BQM calculates in real time the level of loss and queuing delay for each packet across hundreds of configured classes or site interfaces. The Cisco BQM Network Service Indicator condenses this information into a single number, which reflects the performance of each site and between sites relative to the network performance objectives.
Event analysis	Cisco BQM provides event tracing wherein a rolling real-time trace is always kept. If any congestion event is detected, a 10-second section of the trace around the event is recorded for later analysis. Cisco BQM provides analysis capabilities at the site, class, application, conversation, or even packet level. This helps enable rapid pinpointing of the culprit that is causing the service objective violation.
Bandwidth sizing	Cisco BQM recommendations give clear, plain-language guidelines on class and link bandwidth requirements, queue-limit sizing, and policy settings. Each recommendation takes into account the amount of dynamic congestion that applications or classes can tolerate.

Traffic insight	Cisco BQM traffic insight provides a millisecond-level view and real-time analysis of the use of network resources to support the network application environment. Cisco BQM traffic insight identifies traffic microbursts of programmable duration from 5 milliseconds to 1 second, top talkers, listeners, and conversations and reports average link use, packet rate, and packet size distribution.
Quality alarms	Cisco BQM detection and analysis of congestion is made available to external systems through fully configurable Simple Network Management Protocol (SNMP) traps, syslog streaming, and e-mail alerts.

Table 2. Cisco BQM Business Benefits

Function	Description
Increases network application uptime	Cisco BQM helps network managers ensure that network applications are performing by protecting against network congestion in converged WANs. Cisco BQM monitors, analyzes, and recommends corrective actions against network application congestion.
Reduces application downtime and troubleshooting expense	Through its unique ability to monitor and analyze traffic at the micro level, Cisco BQM diagnoses traffic-induced performance problems that many competing tools miss or misdiagnose.
Mitigates risk of making expensive bandwidth upgrade decisions	Cisco BQM determines whether a bandwidth upgrade or quality of service (QoS) or traffic management policy is the preferred action based on the unique algorithms of Cisco BQM. These algorithms take into account whether an upgrade action may result in no improvement to network quality.
Builds on investment made in Cisco QoS infrastructure	Cisco BQM models Cisco router QoS mechanisms, so network managers can unleash the power of QoS without having to deploy yet another packet-processing appliance.

Availability

Cisco BQM 4.0 will be available on the Cisco ADE 1010 and 2120 Series on October 15, 2007, and Cisco ADE 2130 and 2140 on October 31, 2007. Customers can order these products and fully attached services through their normal sales channels beginning October 5, 2007.

Ordering Requirements

Cisco BQM 4.0 is offered on the Cisco Application Deployment Engine. Cisco ADE is a high-performance platform for Cisco network management applications. Customers can select the Cisco ADE platform that meets their application needs. Additional information can be found at http://www.cisco.com/go/ade.

Cisco BQM 4.0 is available on the Cisco ADE 1010, Cisco ADE 2120, Cisco 2130, and Cisco 2140 Series. Cisco BQM 4.0 is also supported on the Cisco BQM 1180 engine.

Table 3 provides part numbers for ordering. Please note that Cisco BQM 4.0 features a base software license for monitoring 10 sites. Additional bandwidth processing licenses can be procured based on the amount of bandwidth that needs to be monitored. Cisco BQM 4.0 software is supported on the Cisco ADE 1010, 2120, 2130, and 2140 Series.

The Cisco ADE 1010 Series is the entry-level product, which provides for a single Gigabit Ethernet monitoring port. The Cisco ADE 2120 Series can be ordered with either fixed ports of 10/100/1000 Mbps or in a modular version. The modular version of the Cisco ADE 2120 Series can be configured with combinations of 1000BaseSX or LH (optical) Small Form-Factor Pluggables (SFPs) or 1000BaseT (electrical) SFPs. The ADE 2130 Series supports four Gigabit Ethernet in fixed RJ-45 ports or modular configurations using the above-mentioned SFPs. The ADE 2140 Series supports two 10-Gigabit Ethernet ports. The 10-Gigabit Ethernet ports are modular in nature and supports 10 Gigabit Small Form-Factor Pluggables (XFP).

Please refer to the Cisco BQM Q&A at http://www.cisco.com/go/bqm for additional ordering details.

Table 3. Ordering Information

Part Number	Description
CBQM-4.0-SW-K9	Cisco BQM Software licensed for up to 10 Mbps of monitored bandwidth – Up to 10 remote sites
CBQM-4.0-100BW-LC	Cisco BQM 100 Mbps Bandwidth Processing License
CBQM-4.0-1GBW-LC	Cisco BQM 1 Gbps Bandwidth Processing License
CBQM-4.0-100AC-LC	Cisco BQM 100 Mbps Accelerated Bandwidth Processing License (requires Accelerator card)
CBQM-4.0-1GAC-LC	Cisco BQM 1 Gbps Accelerated Bandwidth Processing License (requires Accelerator card)
CBQM-4.0-10GAC-LC	Cisco BQM 10 Gbps Accelerated Bandwidth Processing License (requires Accelerator Card)
CBQM-4.0-10ST-LC	Cisco BQM License – for additional 10 sites
CBQM-4.0-100ST-LC	Cisco BQM License – for additional 100 sites
CADE-2140-K9	Cisco Application Deployment Engine – 2140 (Includes 2 GB RAM + 147 GB hard disk drive)
CADE-2130-K9	Cisco Application Deployment Engine – 2130 (Includes 2 GB RAM + 147 GB hard disk drive)
CADE-2120-K9	Cisco Application Deployment Engine – 2120 (Includes 1 GB RAM + 250 GB hard disk drive)
CADE-1010-K9	Cisco Application Deployment Engine – 1010 (Includes 1 GB RAM + 250 GB hard disk drive)
CADE-RAM-15EU	Cisco Application Deployment Engine – 1 GB RAM (for 2120)
CADE-RAM-25EF	Cisco Application Deployment Engine – 2 GB RAM (for 2130/2140)
CADE-HDD-T3720250	Cisco Application Deployment Engine – 250 GB SATA hard disk drive (for 1010/2120)
CADE-HDD-A2100147	Cisco Application Deployment Engine – 147 GB SAS hard disk drive (for 2130/2140)
CADE-EXP-NXN4FR	Cisco BQM Accelerator card – PCI card with 4 port (RJ-45) 10/100/1000 Mbps
CADE-EXP-NXN4FM	Cisco BQM Accelerator card – Modular PCI card requires SFPs purchase
CADE-EXP-NXN2FM	Cisco BQM Accelerator card – PCI card with 2 active ports 10/100/1000 Mbps; 2 SFPs can be added
CADE-EXP-NXN2FG	Cisco BQM Accelerator card – 10 Gbps – requires XFP and Memory
CADE-XO-NX10GSLR1	Cisco BQM XFP – Long Reach (required for the 10 Gigabit Ethernet card)
CADE-XO-NX10GMSR1	Cisco BQM XFP – Short Reach (required for the 10 Gigabit Ethernet card)
CADE-XO-NRDR22GB1	Cisco BQM – 2 GB Onboard Memory for 10 Gigabit Ethernet card
CBQM-4.0-UPG-LC=	Cisco BQM 4.0 Upgrade Option from 3.x releases; maintains all previous 3.x entitlements – supports 1180 and ADE Series
GLC-LH-SM=	Gigabit Ethernet SFP, LC connector LX/LH transceiver (Spares)
GLC-SX-MM=	Gigabit Ethernet SFP, LC connector SX transceiver (Spares)
GLC-T=	Gigabit Ethernet SFP, 1000BASE-T (Spares)

For More Information

For more information about Cisco Bandwidth Quality Manager, visit http://www.cisco.com/go/bqm, send an e-mail to bqm-product-info@external.cisco.com, or contact your local Cisco Sales representative.

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