



NetQoS[®] SuperAgent

Gain Visibility In to How Well Your Network is Delivering Application Services

Understanding application response times between clients and servers is critical to managing end-user experience and is an essential step in a Performance-First approach. True end-to-end response time monitoring provides insight into the duration, frequency, pervasiveness and severity of performance problems.

NetQoS SuperAgent, the end-to-end application response time monitoring module of the NetQoS Performance Center, tracks and measures end-user response time—without desktop or server agents. It monitors all the TCP application packets as they travel from the network through the data center and out again, providing a way to measure network round trip time, server response time, data transfer time, and much more.

SuperAgent breaks response time into its basic components - application, server, and network delay - enabling rapid troubleshooting of network performance bottlenecks and quantification of application performance. It continually measures and analyzes performance for all transactions, compares the response time against the baselines and thresholds that it calculates, and alerts when performance deteriorates. SuperAgent automatically investigates the cause of problems as they occur and provides key diagnostic data to help you quickly solve performance problems.

SuperAgent monitors application performance providing a consistent and common set of service quality metrics for your internal users and external service providers, even if no formal service level agreements (SLAs) are in place.

How Will NetQoS SuperAgent Help You?

Mitigate risks from planned changes and unexpected events with before and after analysis

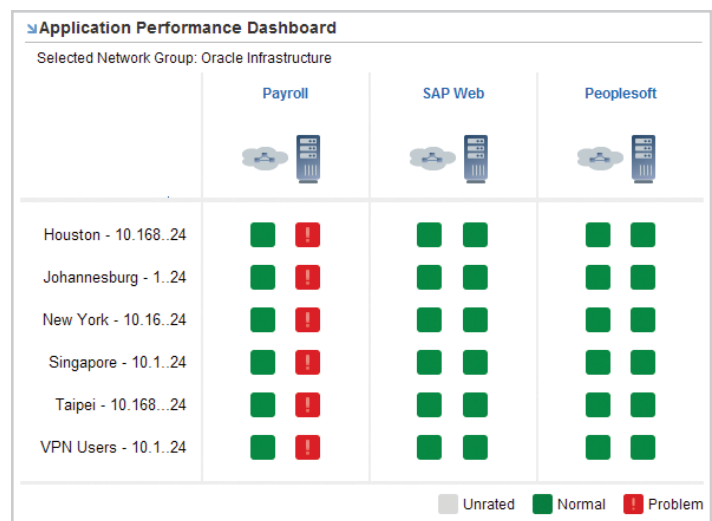
- « Measure the impact of infrastructure changes and new applications on end user application performance
- « Validate the effectiveness of an MPLS migration, VoIP deployment, WAN optimization, QoS policy change, load balancing, and link and server upgrades

Solve performance problems faster by isolating the source to the application, server, or network

- « Understand normal performance through intelligent baselines
- « Receive automatic alerts when performance degrades
- « Quickly identify the source of performance problems
- « Automatically gather diagnostic data through filtered packet captures, SNMP polling, and traceroutes

Prove the performance of applications delivered over the enterprise network with service level reporting

- « Evaluate how the network infrastructure is delivering applications to users
- « Provide both performance and availability SLA measurements
- « Monitor SLAs by measuring all user transactions in the enterprise, without synthetic tests, probes, or agents



SuperAgent response time metrics are used to calculate status for the Application Performance Dashboard, permitting at-a-glance understanding of network and server performance across locations and applications.

“SuperAgent’s rich performance data demystifies what is usually complex. It details which users have been impacted by a sluggish application, server, or network. It shows the duration and the severity of the condition measured against baseline values and user-defined SLAs.”

Network Computing

“Only a SuperAgent Will Do”



Automated Troubleshooting

SuperAgent automatically identifies network, server, and application performance problems, triggers investigations to find the cause, and provides the detailed analysis needed to quickly resolve issues. Integrated workflows with NetQoS GigaStor, the long-term packet capture and analysis module of the NetQoS Performance Center, provides the ability to quickly drill down from response-time issues to expert packet-level analysis.

For Network Issues:

When SuperAgent detects a network performance issue, it automatically launches a TCP or ICMP traceroute to identify the slowest hop in the data path. It also polls the network devices along the path, collecting information such as CPU utilization, memory usage, and interface statistics (errors/discards).

For Server Issues:

When SuperAgent detects a server performance issue, it automatically polls the affected server(s) for top processes, CPU utilization, memory usage, disk usage, and interface statistics. If it detects a potential server availability issue, it actively tests the affected server and applications to verify their status.

For Application Issues:

When SuperAgent detects an application performance issue, it automatically collects a packet trace filtered for the affected applications and servers. The packet capture can be exported to third-party packet analyzers or modeling tools for further analysis. If it detects a potential application availability issue, it actively launches an application port connect to verify service availability.

“NetQoS significantly reduces the time and effort it previously took to identify and resolve issues with our enterprise applications.”

- Service Corporation International

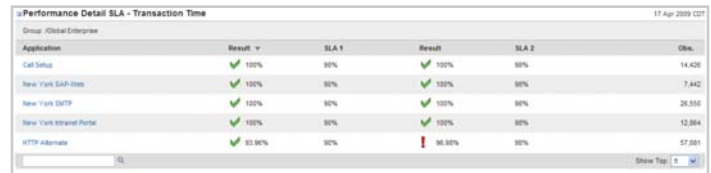
A Look at SuperAgent

NetQoS SuperAgent identifies where the problems are within the infrastructure, and provides detailed analysis to understand the cause of performance degradation.

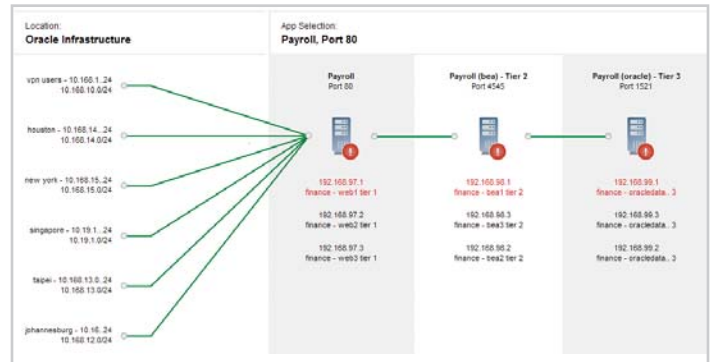
Evaluate Performance with Application Performance Dashboards, Scorecards and SLA Reports



SuperAgent provides a convenient application scorecard for an at-a-glance view of critical application performance.



SuperAgent SLA reporting summarizes either performance or availability of applications.

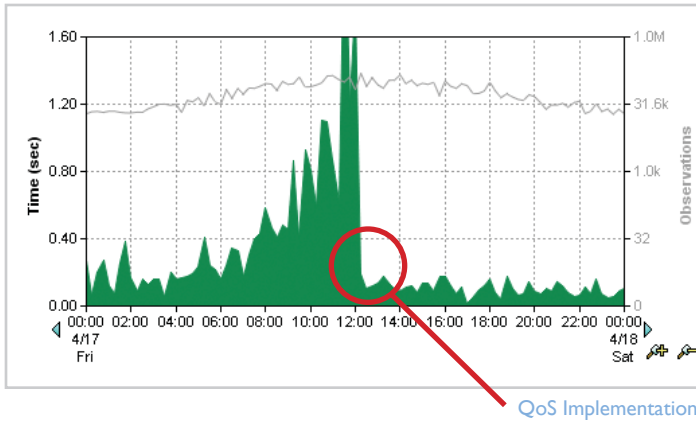


The Application Performance Diagram highlights where performance problems reside by network segment and server tier.

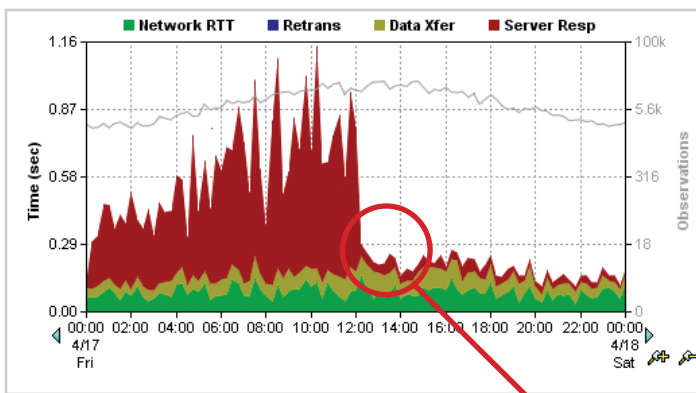


Validate Infrastructure Changes

With SuperAgent, users can measure the before and after impact of infrastructure changes on end-user application performance.

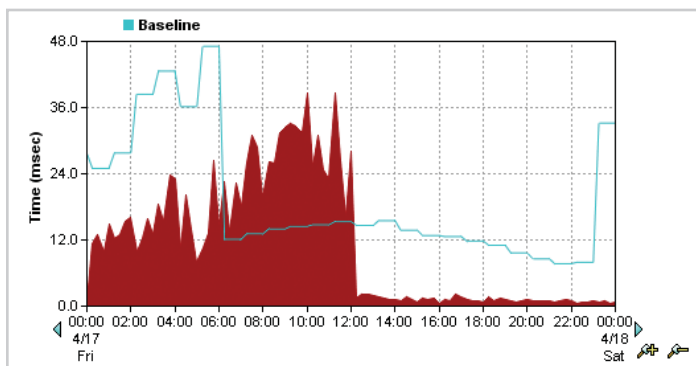


QoS Implementation



Server Upgrade

Isolate the Source of Problems



SuperAgent identifies a sudden spike in server response time. The decomposition of response time into its components helps to isolate problems.

Cisco Integration

NetQoS leverages embedded instrumentation and exclusive integration with Cisco technology to deliver the most efficient and comprehensive suite available to manage the network for application performance.

Optimize Application Delivery

NetQoS gives you the complete views into network and application performance you need to optimize application delivery and facilitate troubleshooting, capacity planning, and management reporting. The technology partnership between Cisco and NetQoS provides the most accurate, end-to-end application response time reporting available for WAN-optimized networks.

- « Leveraging exclusive integration, SuperAgent provides detailed, before-and-after performance metrics for **Cisco Wide-Area Application Services (WAAS)** to determine the effectiveness of each initiative. Network teams can see the impact of Cisco WAAS on end-user response times, transaction volume, bandwidth reduction and traffic composition on optimized links.
- « Using **Cisco Application Control Engine (ACE)** metrics, NetQoS provides insight into the effects of load balancing and WAN optimization with detailed performance, health, and connection diagnostics. NetQoS performance views help maintain application-specific visibility and control after data center upgrades and consolidation.

Performance Map by Server			17 Apr 2009 CDT
Server	Network Round Trip Time	Obs.	
SAP Web 11	469.03 ms	2,265,484	
SAP Web 6	464.15 ms	2,322,820	
SAP Web 10	462.20 ms	2,291,344	
SAP Web 8	455.52 ms	2,230,820	
SAP Web 3	453.17 ms	2,391,704	
SAP Web 2	449.77 ms	2,237,880	
SAP Web 7	447.46 ms	2,401,412	
SAP Web 5	436.03 ms	2,393,440	
SAP Web 9	432.56 ms	2,291,072	
SAP Web 1	421.41 ms	2,245,776	

NetQoS response-time metrics quantify the performance improvements associated with the deployment of an application delivery controller.



Isolate and Solve Problems Faster

The Cisco Network Analysis Module (NAM) is intelligent instrumentation that provides visibility into network and application performance to help ensure the consistent and efficient delivery of applications and services.

NetQoS can rely upon NAM as its sole data source for application response time or use it in combination with other collection devices. Response time analysis enables you to rapidly troubleshoot network performance bottlenecks and quantify application performance. Multiple NAM devices export data to NetQoS for the enterprise-wide analysis and view of application performance. Instrumentation embedded in the switch/router infrastructure is efficient and offers access to the best possible performance data.

NetQoS SuperAgent Features

- « Passive, server-side monitoring of all real user interactions for monitored applications
- « Engineering, operations, and management views into response time data
- « Intelligent baselines that factor in time-of-day, day-of-week, and day-of-month showing normal performance for applications
- « Percentile-based or static thresholds for alerting and actively gathering diagnostic data when upper boundaries of acceptable performance are crossed
- « Monitoring of all TCP-based applications including SAP, Oracle, Siebel, Microsoft Exchange, and custom applications, for all users, 24x7
- « Analysis of response time between each tier of multi-tier applications
- « Scalable distributed architecture to handle the world's largest enterprise networks
- « Web-based interface, unlimited users, no per-seat licenses
- « Full gigabit line speed support (up to 10 Gbps)
- « Pre-incident capture playback and interactive session analysis
- « Flexible deployment offering the choice of collection from any combination of dedicated collection and packet capture appliances as well as embedded instrumentation from Cisco
- « NetQoS anomaly detection capabilities analyze application response to profile your network and warn of any changes in behavior

More Reasons to Use NetQoS SuperAgent

To respond rapidly to performance problems while managing large distributed environments, management products must provide tangible benefits quickly. With full integration into the NetQoS Performance Center, NetQoS SuperAgent deploys in a matter of hours and provides the necessary contextual information you need to prioritize troubleshooting efforts.

“Super Agent is the tool that has given our SLA reporting credibility.”

- MPS Group

Request an evaluation of the NetQoS Performance Center today at www.netqos.com.

NetQoS, Inc.

With customer satisfaction ratings among the highest in the industry, NetQoS is the fastest-growing network performance management company. From financial services to energy to technology to government, over 1000 of the world's largest organizations depend on NetQoS products and services to manage their networks for optimal application performance.

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