

SteelCentral AppResponse

Network-Based Application Performance Management with Real User Experience Monitoring

The Business Challenge

In a real sense, business performance depends on application performance. Problems can happen anywhere—at the end-user device, on the network, or across application infrastructures and networks. IT operations staff often know there's a problem but can't get to the right level of analysis quickly or easily enough. Frequently, expert staff must be taken off key projects in order to troubleshoot the issue.

IT operations teams need a performance management solution that provides visibility across the entire application delivery environment. They need intelligence into the end-user experience, application transactions, and network performance to quickly diagnose root cause before the enterprise is impacted.

The Riverbed Solution

Riverbed® SteelCentral™ AppResponse is network-based application performance management with real user experience monitoring. It joins together advanced application and transaction insight, comprehensive

end-user experience monitoring, and deep network intelligence into a single appliance to provide broad visibility into your application performance problems.

SteelCentral AppResponse passively monitors the network and collects packet, application, and transaction data for continuous monitoring and fast troubleshooting. Using high-speed packet acquisition and multi-stage analytic processing, it delivers powerful capabilities, such as automatic application discovery and rich application insights, end-user experience monitoring for Web and Non-Web applications, and response time decomposition.

Moreover, it delivers real-time and historical application transaction analytics, VoIP and video quality monitoring, and deep network intelligence.

AppResponse is an integral part of the SteelCentral solution suite for end-to-end performance management. With a holistic view of application performance plus the ability to contextually drill into domain-specific details, companies are better able to reduce the number of hand offs between IT domain groups, and improve resolution time for application and network outages.

In addition, AppResponse directly integrates with SteelCentral AppInternals, code-level APM, to facilitate collaborative troubleshooting across network and application teams for faster problem diagnosis and resolution of complex performance issues.

Key Benefits

Minimize downtime

- Rapidly identify and triage problems
- Detect emerging performance issues before users are impacted
- Ensure performance of Web transactions

Improve IT productivity

- Enable operational consistency
- Reduce “finger pointing” among IT teams
- Proactively manage usage and performance trends

Reduce costs

- Protect user experience and minimize impact of downtime on business
 - Reduce risks and avoid costs through strategic planning
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Key Features

End-user experience monitoring

- Monitor end-user experience for all users, all applications, all the time
- Geographic heat map displays end-user experience for Web apps and page views
- Its agent-less approach introduces zero overhead
- Break down application response time into contributing sources of delay
- Monitor and analyze performance of Web applications at the page level

Support for large-scale deployments

- Supports up to one million connections through an intelligent and scale-as-you-grow performance architecture
- Improves ROI by increasing throughput and number of connections in a single box by 50 percent

Application visibility

- Automatically discover applications
- Track performance by application, user, transactions, business division, and location
- Measure performance of VoIP calls while they are in progress, including Microsoft Lync VoIP
- Monitor and troubleshoot high-definition video quality, such as Cisco TelePresence, Cisco Tandberg, and Polycom telepresence systems

Transaction analysis

- Report Web application performance for all individual transactions
- Trace user transactions over Citrix XenApp servers for end-to-end visibility
- Monitor performance of database transactions, pinpointing specific SQL statements responsible for application delays
- Supports Oracle, SQL Server, DB2/ UDB, Teradata, Sybase ASE, and Informix databases

Network analysis

- Network traffic monitoring
- Troubleshoot DNS and network-layer issues
- Troubleshoot quality of service (QoS) issues and DHCP
- Monitor microburst activity and alert with microsecond granularity
- Support for IPv6

Web console

- Out-of-the-box Quick Views
- Flexible, user-defined, custom views

SteelHead™ integration

- Monitor end-user experience for on-premise, SteelHead-optimized Web applications
- Report on the benefit of SteelHead WAN optimization in terms of end-user experience
- Monitor the performance of SaaS apps (SalesForce) when optimized by SteelHead

Miscellaneous

- One-minute resolution for aggregated performance statistics is more precise than the typical 5- and 15-minute collection intervals

- Stores performance and forensic data in large capacity, long-term storage for sub-sequent troubleshooting, trending, and capacity planning
- Alert against SLA violations using dynamic thresholds that automatically adjust limits based on historical performance
- Seamlessly drill down from dashboards to details for fast root cause analysis
- Export flow data to Riverbed SteelCentral NetProfiler for end-to-end network monitoring, troubleshooting and reporting

Deployment and customization

- Flexible deployment options include both hardware and virtual appliances
- Diverse family of appliances supports a broad range of throughput and storage requirements
- Virtual appliances restore visibility of traffic between virtual machines within a server
- Dashboards and reports are easily customizable to provide application-specific, intuitive screens and workflows adapted to your needs

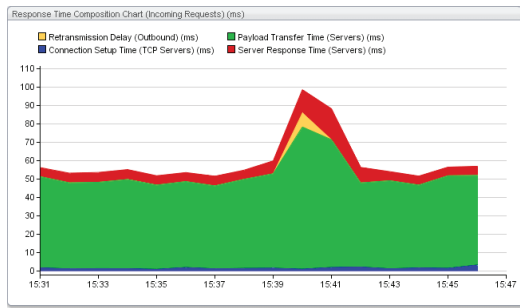


Figure 1
SteelCentral AppResponse automatically calculates a breakdown of user response time into network and server delay so you can quickly determine where the problem is occurring.

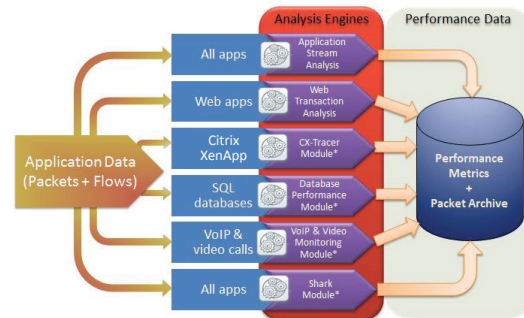


Figure 2
The SteelCentral AppResponse appliance provides end-user experience monitoring, transaction analysis, and deep network intelligence, allowing IT operations teams to deploy a single appliance in key locations to monitor and troubleshoot performance problems faster and more easily.

Add-on Modules

A variety of optional modules provide specialized analysis capabilities, including:

Deep network intelligence

AppResponse NetShark module adds rich network intelligence to supplement the existing end-user experience monitoring and transaction analysis provided by AppResponse. It speeds troubleshooting with streamlined workflows and deeper network insight, letting you get to the right level of information needed to solve advanced network problems quickly and easily.

Per-user Citrix transaction analysis

CX-Tracer module provides unprecedented end-to-end visibility into Citrix XenApp user transactions, enabling you to quickly pinpoint the root cause of Citrix performance problems. CX-Tracer automatically correlates front-end-user sessions to their back-end counterparts, enabling end-to-end analysis of individual Citrix XenApp user sessions to quickly determine why performance is slow and whether the problem originates with the client, network, server, or application.

Database transaction analysis

Database performance module identifies the impact of the database on end-to-end application performance. By monitoring database performance at the transaction level, you can identify the particular SQL statement or database call responsible for application delay and equip your database team with actionable information. Its agentless approach introduces zero overhead on database operation and does not require privileged access to database systems or database diagnostics logging.

VoIP and video quality monitoring

Unified communications module monitors and reports on live VoIP and video call quality, enabling you to proactively manage the performance and user experience for a broad range of VoIP and video services for enterprise and call center environments. Proactively resolve communication issues by monitoring IP voice, video, and data traffic side-by-side to determine how application services are being delivered and compete for common resources.

Related Products

SteelCentral NetProfiler

- Application-aware network management solution provides enterprise-wide reporting and analysis, combining data from SteelCentral Flow Gateway, NetShark, SteelHead, and AppResponse appliances, as well as virtual solutions into a single, integrated view

SteelCentral Packet Analyzer

- Enables you to quickly analyze multi-terabyte packet recordings on remote SteelCentral AppResponse appliances without having to transfer large packet capture files across the network

SteelCentral Transaction Analyzer

- Using code-level and network-level forensic data from AppResponse and other sources, it builds a detailed transaction model for root-case analysis and predictive studies

SteelCentral NetSensor

- Software provides broad infrastructure monitoring for a more complete picture of the application's operating environment. It uses remote instrumentation interfaces to capture performance information from servers, application components, the application delivery network, and vendor-specific management systems.

SteelCentral AppInternals

- AppResponse provides object load times to SteelCentral AppInternals to enable collaborative troubleshooting across network and application teams to streamline problem diagnosis and resolution of complex performance issues

Riverbed SteelHead

- AppResponse is the only solution to measure end-user experience for both SteelHead-optimized and non-optimized enterprise Web and SaaS applications for faster, more effective monitoring and troubleshooting

SteelCentral Portal

- AppResponse provides SteelCentral Portal with network, end-user experience and other performance-related metrics to contribute toward a true end-to-end view of application performance

Product Models

Riverbed AppResponse Appliance Family		
Model	Monitoring Interfaces	Storage
ARX 2200	3 x 1G (Fiber / Copper) 1 x RJ45 (10 / 100 / 1K)	3TB
ARX 3300	4 x 1G (Fiber / Copper)	6TB
ARX 3800	4 x 1G (Fiber / Copper)	16TB
ARX 4300	4 x 1G (Fiber / Copper)	29TB; expands to 173TB
ARX 5100	2 x 10G (Fiber)	42TB; expands to 186TB
ARX 6000	2 x 10G (Fiber)	48TB; expands to 264TB

Riverbed AppResponse Hardware Options	
Model	Description
AppResponse Director 300	Central administration for multiple physical / virtual Riverbed AppResponse appliances
ARX Expansion Chassis 300	Optional 72TB expansion chassis for AR X 4300, 5100 and 6000 appliances

Riverbed AppResponse Hardware Software	
Model	Description
AppResponse VMon	Virtual appliance that runs as guest VM on ESX/ESXi servers; Available in 60GB and 260GB versions
AppResponse v2000	Available in 60GB and 260GB versions

Gartner Magic Quadrant Recognition

Riverbed is a leader in the Gartner Network Performance Monitoring and Diagnostics (NPMD) magic quadrant.*

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About Riverbed

Riverbed Technology, the leader in application performance infrastructure, provides the most complete platform for the hybrid enterprise to ensure applications perform as expected, data is always available when needed, and performance issues can be proactively detected and resolved before impacting business performance. Learn more at riverbed.com.

