

SteelCentral Transaction Analyzer

Deep packet-based transaction analysis enabling rapid root cause and “what if” analysis

Business Challenge

In today’s complex application architectures, a single transaction can involve many server tiers and the exchange of thousands of messages between them. Finding the sources of delay for an individual transaction in such multi-tiered environments can be like finding a needle in a haystack. As a result, IT operations staff spend significant time analyzing packet traces and performance metrics, often arriving at different and conflicting conclusions on the cause of performance problems that further delay problem resolution.

SteelCentral Transaction Analyzer

Riverbed® SteelCentral™ Transaction Analyzer provides powerful, detailed analysis of a single (user-level) transaction through powerful visualization and advanced analytical techniques to help you quickly and conclusively determine the root cause of a performance problem.

You can use it to collate packet traces between multiple tiers of servers involved in individual user transactions to build a single multi-tier view of application and network message exchanges. Then you can visualize how each pair of communicating systems contributed to the overall

behavior and performance of that transaction, and easily communicate key findings to application stakeholders. This multi-tier view lets you picture application performance, including application message exchanges, turns, and system performance statistics to accurately identify the primary sources of transaction delay.

In pre-deployment environments, SteelCentral Transaction Analyzer is the industry-leading solution for network readiness testing.

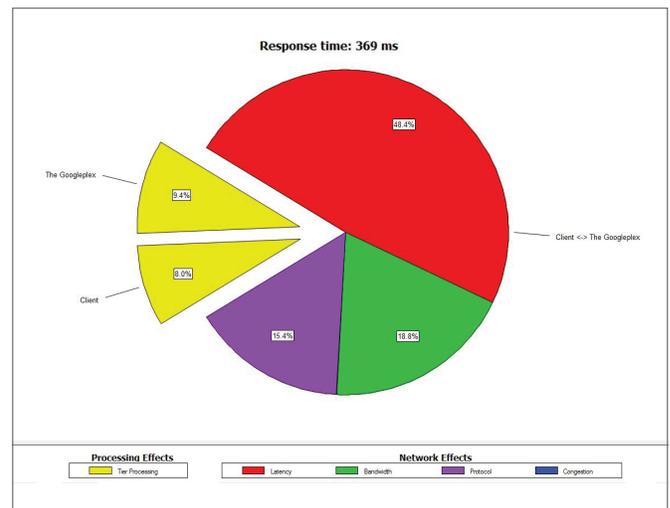


Figure 1
SteelCentral Transaction Analyzer’s AppDoctor feature automatically diagnoses performance bottlenecks.

With SteelCentral Transaction Analyzer, you can

- Study the impact of multi-tier transactions on performance
- Automatically diagnose network (latency, bandwidth, protocol, congestion) and application (tier processing) performance bottlenecks
- Conduct “what if” analyses to predict the impact of network changes on response times and end user experience or to validate proposed solutions prior to deployment
- Quantify the effects of WAN optimization on your application performance

SteelCentral Transaction Analyzer includes a license of Riverbed® SteelCentral™ Packet Analyzer Plus. Packet Analyzer Plus is a network analysis solution that has an intuitive user interface that streamlines packet analysis. It rapidly isolates the specific packets needed by Transaction Analyzer to diagnose and troubleshoot complex

performance issues. It enables users to quickly analyze multi-terabyte packet recordings from SteelCentral AppResponse 11 or other packet capture engines. Because SteelCentral Packet Analyzer Plus uses indexing to speed analysis, it can quickly dissect large trace files to focus on specific transactions for detailed analysis.

For more information on SteelCentral Packet Analyzer Plus, [click here](#).

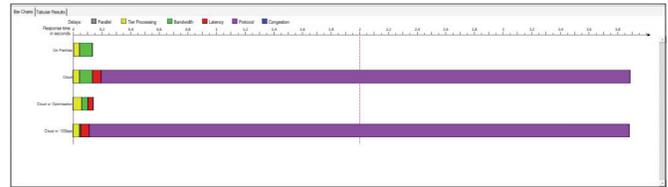


Figure 2

SteelCentral Transaction Analyzer’s QuickPredict feature predicts response times in numerous what-if scenarios, such as how WAN optimization and upgrading to 10 GbE affect moving to the cloud.

Key Benefits

- Faster diagnosis of multi-tier application problems
- Quantify the effects of changes on your network and application performance before deployment
- Gain ubiquitous visibility across servers, desktops, even the cloud using lightweight capture agents

Transaction Analyzer Agents

SteelCentral Transaction Analyzer Agents (also called “capture agents”), are installed on existing user workstations and servers, physical, virtual or in the cloud. They are used to collect packet traces from one or more of those vantage points. These packet traces are imported into SteelCentral Transaction Analyzer to create a transaction analyzer model for analysis and troubleshooting. Typically, large groups of capture agents are managed through SteelCentral Transaction Analyzer Packet Trace Warehouse.

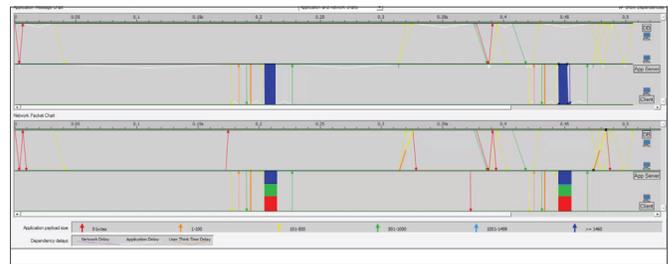


Figure 3

Use Transaction Analyzer to collate packet traces from multiple points to build a multi-tier view of the transaction and visualize/analyze how each part of the system contributes to the overall behavior and performance of that application.

Transaction Analyzer Packet Trace Warehouse

SteelCentral Transaction Analyzer Packet Trace Warehouse (PTW) enables centralized management of enterprise-wide capture agents and secure web-based packet captures from end-user workstations and servers. Sophisticated security and administrative controls enable IT staff to deploy lightweight capture agents across thousands of servers, desktops, even the cloud. When end-users have an issue with an application, they can

securely log on to the Transaction Analyzer Packet Trace Warehouse web portal to identify and submit the necessary packet captures for troubleshooting. Troubleshooting staff can then diagnose the problem quickly and access packet captures via the web portal—typically downloading the captures to SteelCentral Transaction Analyzer for detailed analysis.

Key Features: SteelCentral Transaction Analyzer

Capture operations

- Offline, in-depth transaction analysis leveraging packet traces obtained from a wide variety of sources, including SteelCentral appliances, tcpdump, windump, and other solutions that support .pcap, .pcap-ng, or .enc file formats
- Continuous capture capability for troubleshooting intermittent problems
- Secure communications with Transaction Analyzer Agents

TreeView Multi-Tier Analysis

- Joins packet traces from multiple vantage points to form a single transaction view
- Coordinated, multi-tier packet capture, and automatic trace synchronization to visualize traffic flows between tiers
- Powerful, graphical diagrams for visualizing application behavior
- Support for applications hosted in virtual environments

Decodes

- Hundreds of application and network protocol decodes, including Citrix, DB2, FTP, HTTP, SQL databases, NFS, Oracle, SMB/CIFS, SOAP, SSL, TLS, and VoIP
- Unique Citrix ICA protocol analysis for visibility into Citrix virtual channels

Remote captures start and stop captures from

- Capture agents
- Riverbed® SteelCentral™ AppResponse
- Riverbed® SteelHead™ / Riverbed® SteelHead™ SD
- Cisco Network Analysis Module
- F5 BIG-IP
- UNIX (no agent installed)

AppDoctor Automated Diagnosis

- Understand application messages and dependencies impacting performance
- Automated diagnostic reports that pinpoint performance bottlenecks and summarize sources of delay, including latency, bandwidth, protocol, congestion, and tier processing bottlenecks
- Actionable performance recommendations for web transactions with page intelligence

QuickPredict “What-if” Analysis

- Conduct “what if” analyses to predict the impact of network changes on response times or to validate proposed solutions prior to deployment
- Simulate the effect of WAN optimization on user transactions

Reporting

- Out-of-the-box and customizable reports for key stakeholders, including application developers, network engineers, and management

Integrations

- **SteelCentral AppResponse** is integrated network and application performance monitoring to speed identification and resolution of performance issues
- **SteelHead and SteelHead SD** combines SD-WAN and cloud networking capabilities with industry-leading WAN optimization
- **SteelCentral Packet Analyzer Plus** streamlines the analysis of large, multi-terabyte trace files
- **Wireshark** is the world’s most widely-used network protocol analyzer

Transaction Analyzer Agents

- Augment appliance-based captures with agent-based capture for complete visibility
- Unlimited, free, lightweight, and secure packet capture agents
- Supports a wide range of platforms, including servers, desktops, VMs, and cloud

Packet Trace Warehouse

Web-based capture operations

- Centralized management and control of hundreds of Transaction Analyzer agents
- Start and stop packet captures
- Preview capture buffers remotely
- Download captures
- Configure and save capture templates

Agent discovery

- Automatic discovery of all installed Transaction Analyzer agents
- Centralized inventory of installed agents

User management

- Set user roles and privileges
- Maintain audit log of all agent activity
- Secure access to agents via AD/LDAP, TACACS+, and Radius

System Requirements

SteelCentral Transaction Analyzer requires, at a minimum, the following:

SteelCentral Transaction Analyzer

Operating Systems	Windows 10 Windows 8 (KB2883200 required for Windows 8.1) Windows 7, Service Pack 1 Windows Server 2012 R2 (KB2883200 also required) Windows Server 2008, Service Pack 2 (32-bit and 64-bit) Windows Server 2016 (32-bit and 64-bit)
Host Hardware	x86 or EM64T (2.0 GHz or better) x86 AMD or AMD64 (2.0 GHz or better)
RAM	4 GB (recommended); 2 GB (minimum)
System File Space	5.5 GB; Up to an additional 2 GB of free disk space may be needed during installation
Working File Space	100 MB or more for temporary and log files
Display	1024 x 768 minimum resolution Video card capable of running DirectX 9
Compatible Software	Wireshark v2.6.4

Table 1 System requirement for running SteelCentral Transaction Analyzer.

SteelCentral Transaction Analyzer Packet Trace Warehouse requires, at a minimum, the following:

SteelCentral Transaction Analyzer Packet Trace Warehouse

Operating Systems	Windows Servers 2008 Windows Server 2012 R2
Host Hardware	x86 or EM64T (2.0 GHz or better) x86 AMD or AMD64 (2.0 GHz or better)
RAM	2 GB (recommended); 512 MB (minimum)
System File Space	20 GB (recommended); 10 GB (minimum)
Display	1280 x 1024 resolution (recommended) 1024 x 768 resolution (minimum)
Compatible Browsers	Internet Explorer 11 Google Chrome 51 Mozilla Firefox ESR 52

Table 2 System requirement for running SteelCentral Transaction Analyzer Packet Trace Warehouse.

SteelCentral Transaction Analyzer Agents

Vendor	OS	Processor
Apple	Mac OS X 10.7 – 10.13 (32 or 64-bit)	Intel
IBM	AIX 6.1 – 7.2 (64-bit)	PowerPC
Microsoft	Windows Clients 7, 8.1 or 10 (32 or 64-bit) Windows Servers 2008 (64-bit) Windows Servers 2012 (64-bit) Windows Servers 2016 (64-bit)	Intel, except Itanium
RedHat	RedHat Enterprise Linux 5,6,7 (32 or 64-bit)	Intel, except Itanium

Table 3 System requirements for Transaction Analyzer Agents.

Gartner Magic Quadrant Recognition

Riverbed is a five-time leader in the Gartner Network Performance Monitoring and Diagnostics (NPMD) [magic quadrant](#).*

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