

# Riverbed 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.

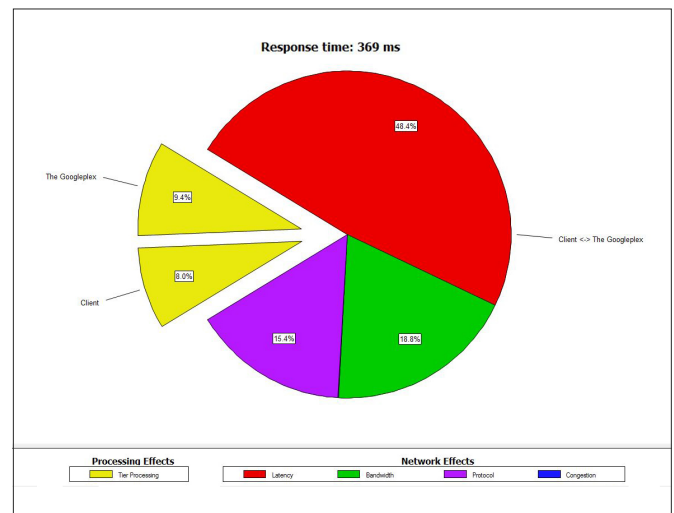
## Riverbed Transaction Analyzer

Riverbed® 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.

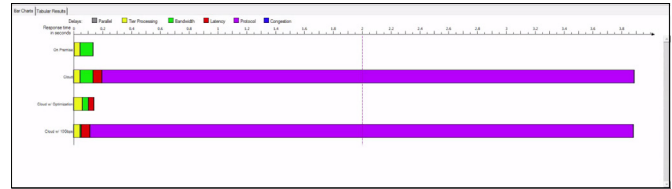
In pre-deployment environments, Transaction Analyzer is the industry-leading solution for network readiness testing.



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

With Riverbed 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



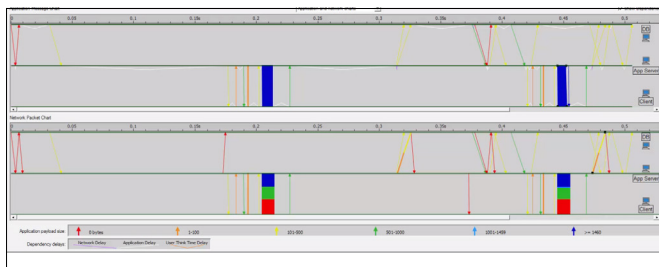
**Figure 2:** Transaction Analyzer’s QuickPredict feature predicts response times in numerous what-if scenarios , such as how WAN optimization and upgrading to 10 GbE affect moving to the cloud.

## 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

Riverbed 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 Transaction Analyzer to create a transaction analyzer model for analysis and troubleshooting. Typically, large groups of capture agents are managed through Riverbed 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

Riverbed 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 Transaction Analyzer for detailed analysis.

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## Key Features: Riverbed Transaction Analyzer

### Capture operations

- Offline, in-depth transaction analysis leveraging packet traces obtained from a wide variety of sources, including
- Riverbed 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® 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

- **Riverbed AppResponse** is integrated network and application performance monitoring to speed identification and resolution of performance issues
- **SteeHead and SteelHead SD** combines SD-WAN and cloud networking capabilities with industry-leading WAN optimization
- **Riverbed 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

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### About Riverbed

Riverbed enables organizations to maximize performance and visibility for networks and applications, so they can overcome complexity and fully capitalize on their digital and cloud investments. The Riverbed Network and Application Performance Platform enables organizations to visualize, optimize, remediate and accelerate the performance of any network for any application. The platform addresses performance and visibility holistically with best-in-class WAN optimization, network performance management (NPM), application acceleration (including Office 365, SaaS, client and cloud acceleration), and enterprise-grade SD-WAN. Riverbed's 30,000+ customers include 99% of the *Fortune* 100. Learn more at [riverbed.com](http://riverbed.com).

The Riverbed logo consists of the word "riverbed" in a lowercase, sans-serif font. The letters "river" are in a dark blue color, and the letters "bed" are in a bright orange color. A registered trademark symbol (®) is located at the top right of the letter "d".