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Gain Comprehensive Visibility into SteelHead WAN Optimization

One challenge for IT managers is the need to optimize and accelerate business-critical application performance.

Yet they often have no clear picture of which applications are running across the network, who's using them, and how well they are performing. How can they gain that critical end-to-end visibility?

Application Visibility Challenging in Optimized Networks

Network operations teams are increasingly being asked to measure and ensure application performance for end users across their networks— whether that network is a traditional WAN, an optimized WAN, or a complex hybrid network that includes Internet connections to the cloud. Without complete application awareness, these teams are handicapped by limited application visibility. The result is inefficient performance troubleshooting, longer time to resolution, and an overall lack of critical application intelligence.

When your organization uses WAN optimization to improve application performance that can complicate your network visibility story. WAN optimization can mask many of the details necessary to monitor end-to-end response time, QoS changes, application details, and more.

Leverage SteelHeads for Visibility

Using Riverbed® SteelHead™ WAN optimization together with Riverbed® Network Performance Management (NPM) helps you not only accelerate your application delivery but also enhance your monitoring and troubleshooting of applications.

SteelHeads provide deep packet inspection (DPI) into more than 2,000 popular applications to accurately identify applications by name and also allows you to identify custom applications. SteelCentral NPM leverages this DPI and displays it so it's easy to determine business-critical from recreational traffic. Gain insight into application type and usage— who used it, when they used it, and from where.

SteelHeads also utilizes SteelFlow, Riverbed's proprietary version of network flow. SteelFlow provides rich information into optimization metrics to NetProfiler, Riverbed's enterprise flow monitoring and analysis solution. This information includes application mapping, bandwidth reduction, optimized traffic latency, QoS, and retransmission metrics.

SteelHead CXs also contain on-board packet capture. This packet capture is on-demand, which enables rich and cost-effective remote site troubleshooting without having to add an additional appliance.

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As a result of these innate SteelHead performance management capabilities, you can gain:

- Deep application intelligence and network visibility to see all applications everywhere they run

- WAN visibility into utilization for every location

- Centralized remote site network troubleshooting

Riverbed NPM Enhances SteelHead

In order to take full advantage of the visibility capabilities within SteelHead, it's best to pair it with NetProfiler. NetProfiler flow monitoring and analysis solution can utilize the SteelFlow metrics to provide enhanced visibility in SteelHead WAN optimized networks and applications.

Some of the unique capabilities that NetProfiler provides for WAN optimization analysis, includes:

- Centralized quality of service (QoS) policy configuration and visibility. NetProfiler aligns QoS with business objectives using QoS rules based on NetProfiler data. Understand whether your inbound and outbound quality of service settings are meeting expectations by application or site. Ensure that your investment in expensive bandwidth is returning the business value you expect.

- Accurate response time analysis of optimized applications. Using WAN optimization breaks your response time up into three distinct parts: (client $\rightarrow$ cSH); (cSH $\rightarrow$ sSH2); (sSH2 $\rightarrow$ server). NetProfiler and SteelFlow stiches the pieces together so that you get an accurate response time metric from the client $\rightarrow$ server.

- Optimized network performance. Report on all SteelHead optimization results simultaneously, and uncover additional optimization opportunities.

- Understand the end-to-end picture of your optimized network and applications for faster troubleshooting

- Understand bandwidth reduction benefits. Report on SteelHead ROI and uncover additional optimization opportunities to keep your remote users happy and productive.
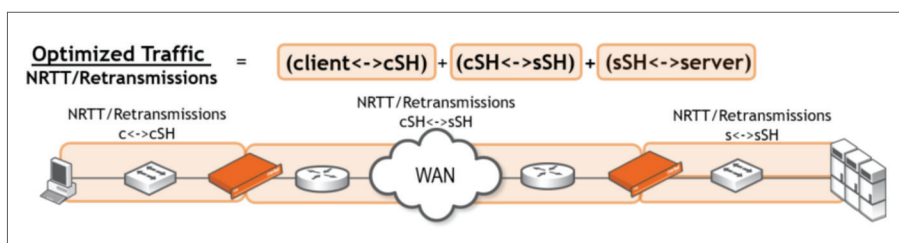

Figure 1
When measuring network round trip time (NRTT), optimized traffic response gets broken up into three parts: (client $\rightarrow$ cSH); (cSH$\rightarrow$sSH2); (sSH2 $\rightarrow$ server). NetProfiler stitches the three part together so you get a true NRTT.

The Bottom Line—Application Visibility with Acceleration and Control

Customers already taking advantage of SteelHead WAN optimization technology will find additional benefits from this tight integration with visibility technology. In remote sites with SteelHeads deployed, the integrated NPM solution will help to reduce remote branch costs and extend visibility.

- Leverage your existing investment in SteelHead for acceleration, bandwidth reduction, and cost-effective, remote visibility

- Understand the end-to-end picture of your optimized network and application performance for faster troubleshooting with Riverbed NPM

- Keep critical applications running at peak performance—all the time, in all places—not just across the WAN

- Identify performance issues earlier, as soon as they start, to avoid business-impacting issues

- Troubleshoot problems quickly and efficiently, no matter where they occur

For more information on how Riverbed NPM can provide integrated visibility into SteelHead WAN optimization, click here.
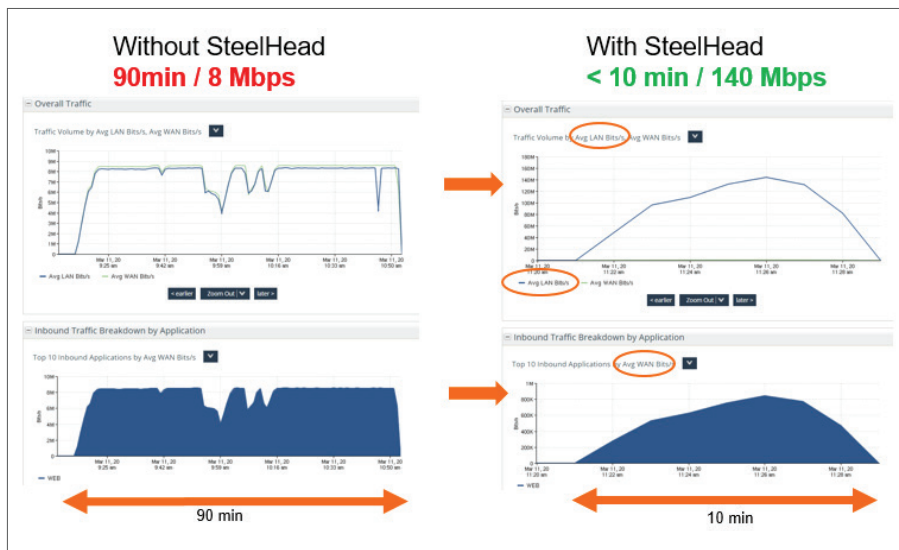

Figure 2
This series of NetProfiler reports compares the transaction time and traffic volume before and after implementing SteelHead WAN optimization. Note with SteelHead, the transfer time of the file drops from 90 mins to less than 10 because the transfer is accelerated across the WAN (8 Mbps vs 140 Mbps).

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.

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