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RIVERBED STEELHEAD PRODUCT FAMILY

IMPROVE PRODUCTIVITY AND ENABLE GLOBAL COLLABORATION

Today, tens of thousands of organizations rely on WAN optimization as the foundation for delivering application and data transfer performance.

With Riverbed® SteelHead™ optimization solutions, you can achieve extraordinary application performance gains and lightning-fast data transfer over hybrid networks. You can overcome bandwidth and geographical limitations, improve productivity, and enable global collaboration across consolidated data centers and distributed branch offices, in virtualized and cloud environments, and on the go.

APPLICATION OPTIMIZATION WITH VISIBILITY AND CONTROL

Powered by Riverbed® SteelHead™

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CENTRALIZE AND REDUCE OPERATIONAL OVERHEAD WHILE IMPROVING USER SATISFACTION

Our award-winning SteelHead optimization solutions have been proven to dramatically speed up applications in some of the most demanding customer environments. Companies of all sizes depend on Riverbed to help meet user expectations regardless of device, location, or application while enhancing control and visibility over hybrid networks.

KEY BENEFITS

» **Increase performance over hybrid networks** for TCP applications up to 100x, and, for specific apps, 100x or more

» **Select the best path** for application acceleration everywhere, using deep packet inspection (DPI)-based application awareness to distinguish between business-critical and recreational traffic

» **Cut complexity and improve user experience** by consolidating files, email and application servers, and storage across branches

» **Defer costly network bandwidth upgrades** by reducing bandwidth utilization up to 99%

» **Reduce risk** by enabling speedy, resilient, and secure replication and backup over the WAN (often reducing replication times from hours to minutes)

» **Comply with regulations, such as SOX, HIPAA, and PCI** by optimizing SSL traffic without compromising the end-to-end trust model

» **Gain visibility and control** by determining where problems exist, what is causing the problems, and how best to solve those problems

» **Deliver local-quality performance to remote workers** regardless of their locations

"Microsoft SharePoint is vital to our success, and Riverbed WAN optimization has played a critical role in enabling our distributed employees to be productive and collaborative. With the new SharePoint 2013 optimization from Riverbed, we will be able to take advantage of the new features in SharePoint, which is a strategic part of our continued success and growth."

- Kurt Anderson, CIO, GeoEngineers

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AN INTEGRATED APPROACH TO DELIVERING OPTIMIZED PERFORMANCE

Our SteelHead solutions help organizations run faster and more efficiently, ensuring consistent service levels while cutting IT infrastructure costs.

IT consolidation: LAN-like performance over the WAN

**Boomerang Email: 6.4 MB email attachment over T1 WAN – Time to Complete (in seconds)**
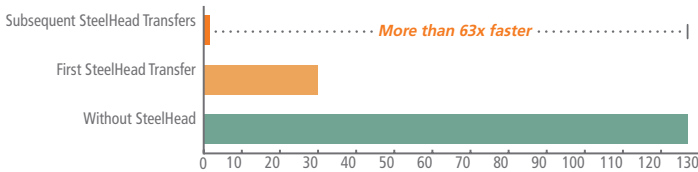
Boomerang Email – 63x faster with SteelHead WAN optimization

Consolidated IT infrastructure can simplify management, increase resource utilization, and reduce costs. But it can often result in diminished application performance and user productivity, which offset any cost savings.

With SteelHead, users can access consolidated IT resources without compromising performance.

Virtualization: The "serverless" branch office

MS Excel, Word, PPT, and EXE File Transfer (25.9 MB Total) over T1 WAN - Time to Complete (in seconds)
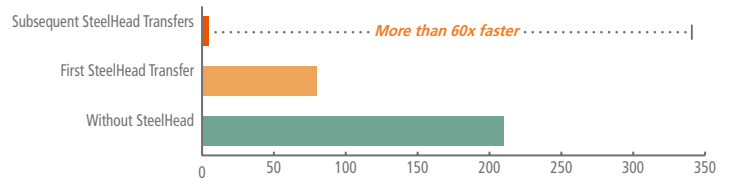
File Transfers in Seconds Using SMB3 – 60x faster performance for subsequent SteelHead transfers with SteelHead WAN Optimization

Moving servers and storage out of the branch and into data centers – where they can be more efficiently aggregated, managed, and secure – allows you to deliver more cost-effective access back to users across the WAN and Internet.

Putting SteelHeads in place can also help optimize your VMware vSphere or Microsoft Hyper-V edge services, such as printing or security.

Without complex build-outs or remote servers to buy, install, and manage, you can set up your branches more quickly and efficiently while also lowering overhead and increasing user productivity.

Cloud computing: Moving into the cloud

Whether you are creating a private cloud infrastructure, utilizing infrastructure-as-a-service (IaaS) providers such as Amazon Web Services (AWS), or outsourcing to software-as-a-service (SaaS) providers such as Salesforce.com or Office 365, the limitations on network bandwidth and latency still remain. Users are far away from the data and applications they are trying to access, resulting in poor user response and inefficient application and data delivery.

Deploying SteelHead solutions is a great way to defeat both these problems, while also saving money on costly bandwidth upgrades. In short, they can be the driving force to enable consolidation to private or public cloud architectures and a faster path from users to applications.
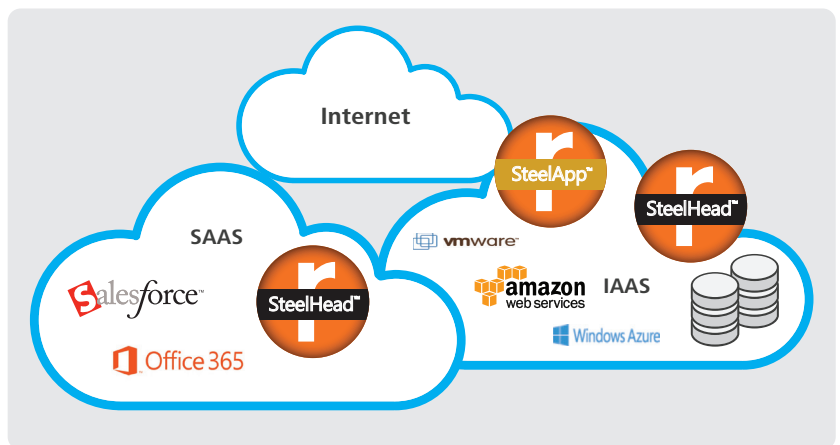

SteelHead optimization regardless of location — you decide where the data and applications live. We'll make sure they are optimized.

MOBILITY AND DISASTER RECOVERY

Our mobile optimization solution can help you address the inherent problems of a distributed workforce, such as high-latency and inconsistent connectivity from changing your locations. This enables you to increase employee productivity wherever employees work. SteelHead solutions will also help your organization optimize continuity and recovery across a range of backup, replication, and cloud storage mechanisms without disrupting your current infrastructure – thus ensuring the protection of existing investments.

Mobility and BYOD:
Enabling a remote workforce

SharePoint HTTP File Save: 6.14 MB file via Verizon Wireless v620 Broadband Card (788 Kbps with ~200ms RTT latency) – Time to Complete (in seconds)
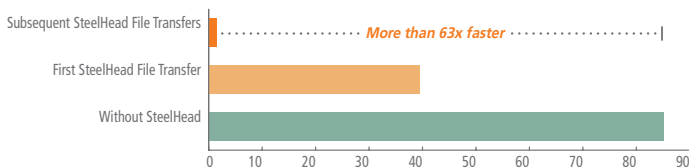

SharePoint HTTP File Save — 63x faster with SteelHead Mobile

It can be a struggle to support mobile users who need access to corporate data and applications. In fact, mobile users often have to accept sub-optimal performance.

SteelHead™ Mobile extends our award-winning technology to any PC or laptop to deliver acceleration wherever users connect. With SteelHead Mobile, applications run faster and remote workers have the applications they need anytime, anywhere. Now, bring your own device (BYOD) and desktop virtualization solutions can be optimized for use on all kinds of networks.

Business continuity and disaster recovery:
Enhanced data protection

NetApp SnapMirror Network Compression and Riverbed SteelHead WAN Optimization over 155 Mbps WAN – Time to Complete (in minutes)
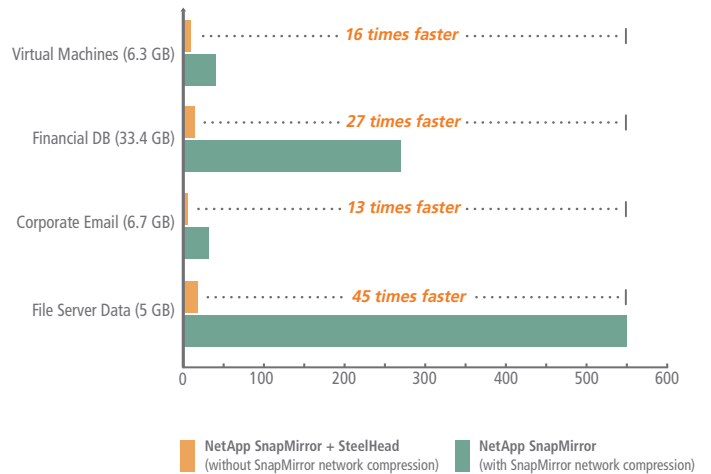
NetApp SnapMirror Data Replication – LAN-like performance with SteelHead WAN Optimization

With SteelHead solutions, you can perform WAN-based backups or data replication rapidly without struggling to finish jobs in a tight backup window. They support leading enterprise storage solutions, including EMC[2], Hitachi Data Systems, as well as NetApp SnapMirror data replication and disaster recovery solutions.

With accelerated replication – up to 45x – you can dramatically improve your recovery time in the event of a failure. Advanced features for high-end, data-center-to-data-center disaster recovery include enhancements for optimized throughput, tunable compression, and clustering for high availability and scalability. You also can use SteelHead solutions to dynamically adapt to "fill the pipe" for high-bandwidth environments, or to adopt higher compression, deduplication, QoS, traffic identification, and path selection to limit the impact on bandwidth for other applications on a shared WAN.

"Without Riverbed, we would have had to make a substantial investment in bandwidth. Now, we are saving an average of USD $144,000 per month and have seen a return on investment within seven months."

**- Riad Mounir, director of IT, Zain Group Architectures**

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STEELHEAD: THE POWER BEHIND THE FAMILY

All SteelHead solutions offer a combination of TCP optimization, application-level protocol optimizations, path selection, and patented scalable data referencing. These technologies, along with the SteelHead management capabilities, provide a comprehensive solution for enterprise optimization.

Hybrid networks: Greater application reliability and performance

With path selection technology beginning with SteelHead 8.5, IT organizations can deploy and manage hybrid networks that combine the strengths of a highly reliable MPLS network with the benefits of the Internet – ubiquity, price, and speed. This delivers greater application reliability, performance, and cost savings in data centers, branch offices, and private or public clouds while retaining IT control and minimizing complexity.

Path selection identifies the applications using DPI-based application awareness to distinguish between business-critical and recreational traffic. You can use it to map applications to the appropriate paths available across hybrid networks and, in the case of performance issues, dynamically reroute applications to ensure no impact to users. It is simple to configure and can be used with Riverbed performance management tools – without complex and tightly coupled router configurations.

1 Private Networks
2 Internet VPNs
3 Local Internet access
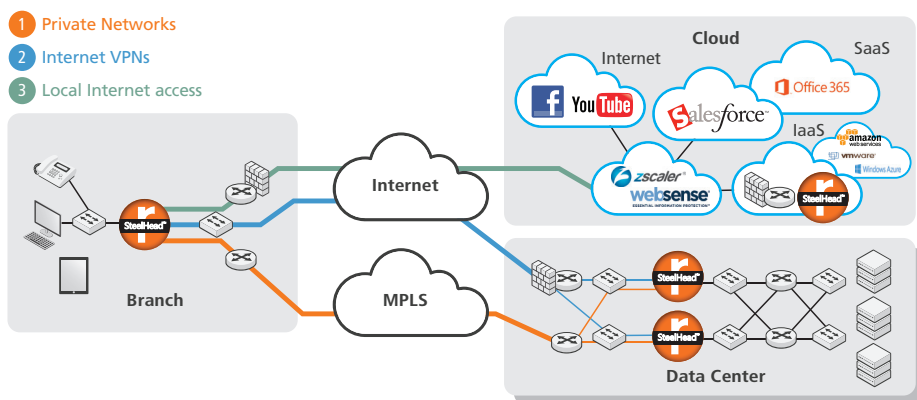
Riverbed Path Selection Technology enables IT organizations to deploy and manage hybrid networks to deliver greater application reliability, performance, and cost-savings in data centers, branch offices, and clouds while retaining control and minimizing complexity.

SteelHead: Four streamlining technologies

» Data streamlining

- Reduces bandwidth utilization by up to 99%
- Industry-leading scalability and patented deduplication
- Works with TCP-based protocols and applications including: file sharing (Windows and NFS), email (Exchange and Lotus Notes), CAD, web-based HTTP and HTTPS applications, databases (Oracle), virtual desktops (Citrix and VMware) and collaboration software (SharePoint)
- Works with UDP-based file transfer applications, including Signiant, Aspera, and Symantec's Veritas Volume Replicator

» Transport streamlining

- Reduces the number of TCP packets required to transfer data by 65-98%
- Enables the acceleration of SSL-encrypted traffic throughout the enterprise to eliminate the security versus performance trade-offs
- Enables greater utilization of high-bandwidth links (long fat networks, such as OC3, OC12, and metrofiber) for HS-TCP and MX-TCP
- Supports satellite optimization for TCP links (based on SCPS extensions) over satellite connections that tend to be high latency, dynamic bandwidth, or lossy due to signal-to-noise ratio

» Application streamlining

- Offers the broadest support for application-specific modules to provide performance improvements on top of the data and transport streamlining optimization performed on all TCP traffic
- Reduces application protocol chattiness up to 98%
- Minimizes application overhead to provide massive throughput increases to applications such as file sharing (CIFS, SMB2/3, and NFS), collaboration software (Sharepoint), email (Exchange, including Office 365 and MAPI, and Lotus Notes), web (HTTP and HTTPS), database (MS-SQL and Oracle), and storage and disaster recovery (NetApp SnapMirror and EMC SRDF/A)

» Management streamlining

- Enables easy deployment through auto-discovery of peers and auto-interception of traffic – with no reconfiguration of clients, servers, or routers
- Simplifies ongoing management by providing simple but powerful web-based and command-line interfaces, in-depth reporting, and real-time NetFlow export
- Supports a vast array of network environments and topologies, including but not limited to MPLS, VoIP, video conferencing, QoS, VPN, satellite infrastructure, ATM, frame relay, microwave, and wireless

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SOLUTIONS FOR ANY ENVIRONMENT AND ORGANIZATION

SteelHead Solutions

Accelerate application performance and data transfer over hybrid networks, overcoming bandwidth and geographical limitations to improve productivity and enable global collaboration.

» Scale to fit any size deployment

» Deploy in minutes without changes to the existing IT infrastructure

» Support thousands of users with a device

SteelHead™ CX

A dedicated optimization solution reducing bandwidth up to 95% and accelerating performance up to 100x. Speeds the transfer of data and applications over the Internet and wide area networks (WANs) to and from branch offices of any size and datacenters.

» Offers multiple optimization techniques, including data reduction and application streamlining, as well as Quality of Service (QoS) and path selection

» Supports up to 1 million connections through an intelligent and scale-as-you-grow performance architecture

» Delivers packet capture, troubleshooting, and application-level visibility

» Seamlessly integrates with SteelCentral NetProfiler for end-to-end network monitoring and reporting

SteelHead™ CX for Virtual Deployments

Extend optimization and performance to VMware vSphere and Microsoft Hyper-V Server 2012-based virtual environments.

» Offers the same application performance and data transfer benefits in a virtual form factor

» Increases capacity on demand

» Seamlessly integrates with SteelCentral NetProfiler for end-to-end network monitoring and reporting

SteelHead™ CX for Cloud Deployments

Extend subscription-based optimization to IaaS clouds. Authorized servers redirect connections to the appropriate SteelHead CX to accelerate performance.

» Offers support on Amazon Web Services, Microsoft Azure, and VMware ESX-based clouds

» Accelerates migration and access to the cloud

» Provides elastic sizing and easy cloning for a scale-as-you-go infrastructure

» Seamlessly integrates with SteelCentral NetProfiler for end-to-end network monitoring and reporting

SteelHead™ DX

A purpose-built optimization solution for addressing the unique needs of data-center-to-data-center data and application transfer, replication, and recovery. Transfers and replicates more data more often with greater visibility and less cost and risk, ensuring rapid data recovery times and improved business continuity.

» Delivers up to 60x improvements in throughput across WANs that have high latency and packet loss, while reducing bandwidth requirements by up to 99%

» Offers 2 Gbps unrestricted optimized WAN capacity with no enforced optimized WAN bandwidth limit

» Includes a select set of application-streamlining capabilities for popular disaster recovery (DR) applications, such as NetApp SnapMirror and EMC SRDF/A, along with enhanced plug-and-play integration

» Provides new Turbo Data Streamlining option designed for higher data replication performance between data centers — available only for the DX solution

» Seamlessly integrates with SteelCentral NetProfiler for end-to-end network monitoring and reporting

SteelHead™ EX

A purpose-built branch office converged infrastructure solution combining optimization, storage delivery, and virtualization for complete branch consolidation.

» Provides Riverbed Virtual Services Platform (VSP) that consolidates branch services for the VMware vSphere virtualization platform on a SteelHead EX

» Acts as a SteelCentral probe, making it easy to provide branch application-level visibility and troubleshooting

» Seamlessly integrates with SteelCentral NetProfiler for end-to-end network monitoring and reporting

» Seamlessly integrates with the always-on SteelCentral™ NetShark for continuous network troubleshooting in real time

» Riverbed® SteelFusion™ Edge Enterprise Edition for the branch office, which includes SteelHead EX, consolidates remote servers and storage into the data center with no degradation in performance for users — even during WAN outages

SteelHead™ SaaS

Simplify optimization integration into cloud environments to more efficiently manage the delivery of business-critical data and content from a public cloud infrastructure.

» Extends WAN optimization to cloud services/SaaS to manage business-critical data and content delivery and ensure peak application performance

» Improves the performance of SaaS applications, such as Salesforce.com and Office 365 by up to 33x

» Ensures the fastest path from the user to the application

» Integrates with the globally distributed Akamai Intelligent Platform, which optimizes the routing of traffic across the public Internet

SteelHead™ Mobile

Improve mobile and remote user productivity and experience with optimization designed for Windows- and Mac-based laptops across hybrid networks.

- » Enables remote employees to access files and applications more than 19x faster
- » Scales network performance easily to hundreds of thousands of remote users
- » Allows you to manage the policies that determine what optimizations take place per user or groups of users

SteelHead™ Interceptor

Easily load balance and scale your network-wide throughput with Interceptor. Cluster up to 25 SteelHead solutions to manage 40 GBps of throughput.

SteelCentral™ Controller for SteelHead

Easily configure, monitor, upgrade, and report on groups of SteelHead appliances, SteelHead CX for virtual deployments, and SteelHead Interceptor – all through one easy-to-use web interface. Available as a standalone solution or a virtual edition for deployment flexibility. SteelCentral Controller also provides configuration, backup/restore, and upgrade support for:

- » SteelFusion Edge Standard and Enterprise
- » SteelFusion™ Core
- » SteelStore™
- » SteelCentral™ Controller for Steelhead Mobile

SteelCentral™ Controller for SteelHead Mobile

Manage SteelHead Mobile licenses and control the deployment, management, and reporting of SteelHead Mobile client software. Available in a standalone or virtual edition for deployment flexibility.

- » Provides real-time visibility into application and WAN performance
- » Offers a single source for monitoring and license management
- » Includes one-touch software upgrades and health alerts

LEARN MORE

Riverbed SteelHead is the industry's #1 WAN optimization solution that guarantees optimal service levels for applications among data centers, branch locations, cloud networks, and end users.

To learn more about Riverbed SteelHead products, please visit **riverbed.com/steelhead**.

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