

# 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 WAN optimization solutions, you can achieve extraordinary application performance gains and lightening-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.

**ACCELERATION EVERYWHERE...  
WITH IT VISIBILITY AND  
CONTROL.**

Powered by the Riverbed® Optimization System (RiOS®)

## CENTRALIZE AND REDUCE OPERATIONAL OVERHEAD WHILE IMPROVING END-USER SATISFACTION

Our award winning Steelhead® WAN optimization products 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 end-user expectations regardless of device, location, or application all while enhancing control and visibility over their entire networks.

### KEY BENEFITS

- » **Increase performance on the WAN** for TCP applications up to 100 times, and, for specific apps, 100 times 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 end-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 location

“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.”

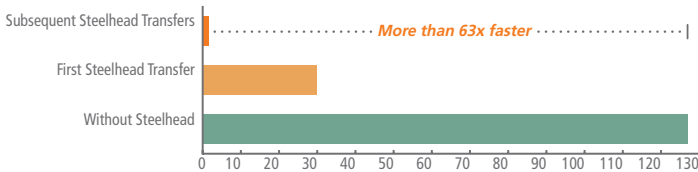
- Kurt Anderson, CIO, GeoEngineers

# 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)**



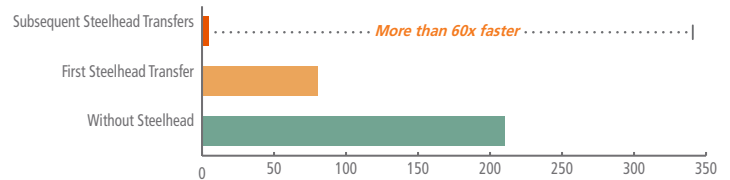
Boomerang Email — 63 times faster with Steelhead WAN optimization.

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 offsets 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 - 60 times faster performance for 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 end users across the WAN and Internet.

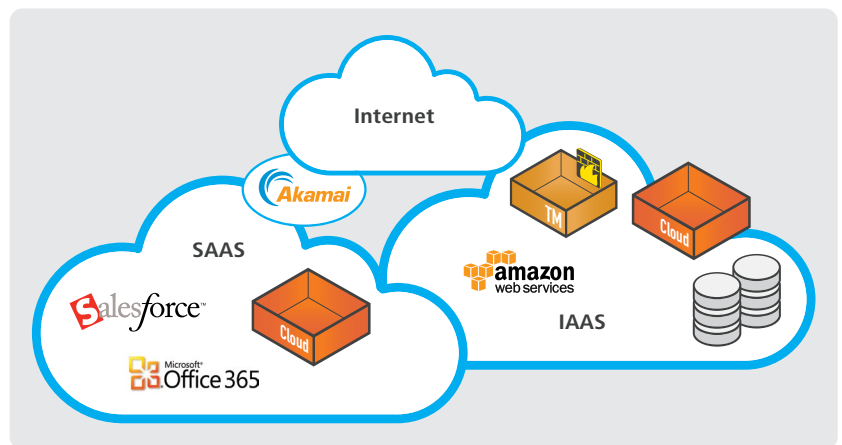
Putting Steelhead appliances in place also can help optimize your VMware® vSphere or Microsoft® Hyper-V edge services, such as printing or security.

In these scenarios, with no more 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 or outsourcing to Software-as-a Service providers such as Salesforce.com or Office 365, the limitations on network bandwidth and latency still remain. End 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 appliances 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 end users to applications.



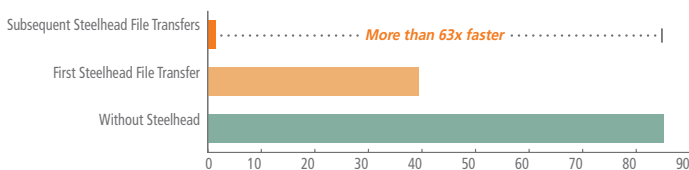
Steelhead Cloud WAN optimization regardless of location — you decide where the data lives. We'll make sure it's optimized.

## MOBILITY AND DISASTER RECOVERY

Our mobile WAN optimization solution can help you address the inherent problems of a distributed workforce, such as high-latency and inconsistent connectivity from changing locations. This enables you to increase employee productivity wherever employees work. Steelhead appliances will also help your organization optimize continuity and recovery across a range of backup, replication, and cloud storage mechanisms without disrupting your current infrastructure — 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 (788Kbps with ~200ms RTT latency) – Time to Complete (in seconds)**



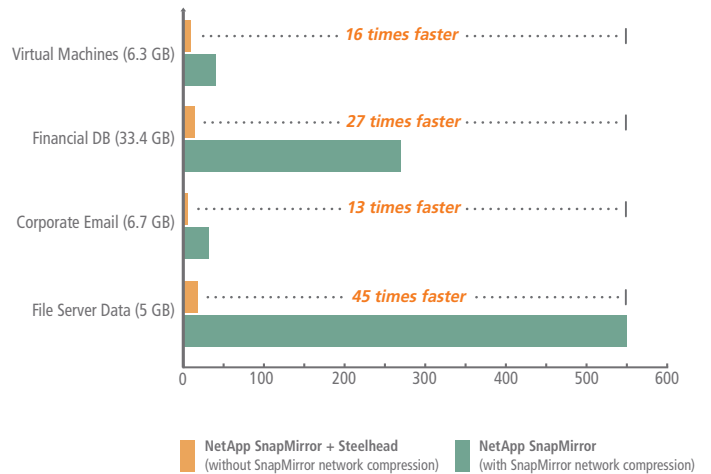
SharePoint HTTP File Save — 63 times faster with Steelhead Mobile.

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.

Riverbed Steelhead® Mobile software 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), mobility initiatives, and desktop virtualization solutions can be optimized for use on the WAN.

### 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, you can perform WAN-based backups or data replication without struggling to finish jobs in a tight backup window. It supports leading enterprise storage solutions, including EMC<sup>2</sup>, Hitachi Data Systems®, as well as NetApp® SnapMirror® data replication and disaster recovery solutions.

With accelerated replication — up to 45 times — you can take more frequent snapshots and dramatically improve your recovery time in the event of a failure. We have advanced features for high-end, data-center-to-data-center disaster recovery, including enhancements for optimized throughput, tunable compression, and clustering for high availability and scalability. You also can use Steelhead appliances 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.

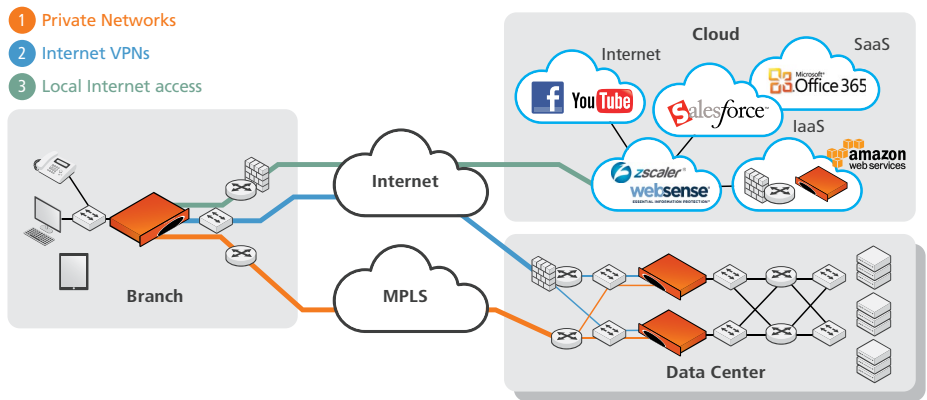
## RiOS: THE POWER BEHIND THE FAMILY

All Steelhead products are built on the Riverbed® Optimization System (RiOS®), which powers the product family through a combination of TCP optimization, application-level protocol optimizations, path selection, and patent-pending data reduction. These technologies, along with the RiOS management capabilities, provide a comprehensive solution for enterprise WAN optimization.

### Hybrid networks: Greater application reliability and performance

With path selection technology in the latest version of RiOS (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 deep packet inspection (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 the WAN 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 other performance management tools that we provide without complex and tightly coupled router configurations.



Riverbed Path Selection Technology enables IT organizations to deploy and manage hybrid networks to deliver greater applications reliability, performance, and cost-savings in data centers, branch offices, and clouds while retaining control and minimizing complexity.

### RiOS: Four streamlining technologies

#### » Data streamlining

- Reduces bandwidth utilization by up to 99%
- Industry leading scalability and patented de-duplication
- 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 to 98%
- Enables the acceleration of SSL-encrypted traffic throughout the enterprise to eliminate the security and performance trade-off
- 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 such applications 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)

#### » 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



## PRODUCTS FOR ANY ENVIRONMENT AND ORGANIZATION

### Steelhead Appliances

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

- » Scalable for the deployment needs of any size
- » Riverbed Granite and VSP capable for full branch office consolidation
- » Deploy in minutes without changes to the existing IT infrastructure
- » Support thousands of users with a device

### Interceptor

Easily load balance and scale your network-wide throughput with the Riverbed Interceptor® appliance. Cluster up to 25 Steelhead appliances to manage 40 GBps of throughput.

### Central Management Console (CMC)

Easily configure, monitor, upgrade, and report on groups of Steelhead, Virtual Steelhead, and Interceptor appliances — all through one easy-to-use web interface. Available as a standalone appliance or CMC virtual edition for deployment flexibility.

### Virtual Steelhead

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

- » Same application performance and data transfer benefits in a virtual appliance
- » Increase capacity on demand

### Cloud Steelhead

Extend subscription-based WAN optimization to infrastructure as a service (IaaS) clouds. Authorized servers redirect connections to the appropriate cloud appliance to accelerate performance.

- » Supported on Amazon Web Services and VMware ESX-based clouds
- » Accelerate migration and access to the cloud
- » Elastic sizing and easy cloning for the scale-as-you-go infrastructure

### Steelhead Cloud Accelerator

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

- » Extend WAN optimization to cloud services/ Software as a Service (SaaS) to manage business-critical data and content delivery and ensure peak application performance
- » Improve the performance of SaaS applications, such as Salesforce.com and Office 365® by up to 100x
- » Benefit from the Akamai deployment footprint and Akamai SureRoute technology to reduce distance, latency and packet loss

### Steelhead Mobile

Improve mobile and remote user productivity and experience with WAN optimization designed for Windows and Mac based laptops.

- » Improve remote employee access to files and applications more than 19 times faster
- » Easily scale network performance to hundreds of thousands of remote users
- » Manage the policies that determine what optimizations take place per user or groups of users

### Steelhead Mobile Controller

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

- » Gain real-time visibility into application and WAN performance
- » Access a single source for monitoring and license management
- » Receive one-touch software upgrades and health alerts

## LEARN MORE

Our award-winning WAN optimization products strategically enable IT to centralize and reduce operational overhead and expense, while improving end-user satisfaction. Our products have been proven in some of the most demanding and complex networks in the world, with thousands of customer deployments.

To learn more about Riverbed Steelhead products, please visit [riverbed.com/steelhead](http://riverbed.com/steelhead).