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SOLUTION BRIEF

Why Upgrade to RiOS 10: Secure Acceleration with Actionable Data Movement Insights

Security Built Into the Foundation of Acceleration

Modern enterprises are moving more data than ever before. Cloud applications, SaaS platforms, distributed workforces, AI initiatives and increasing data-intensive workloads have placed unprecedented demands on corporate networks and their security.

Historically, organizations often viewed network acceleration and security as competing priorities. Security teams wanted encrypted communications and strict controls, while networking teams sought visibility into traffic to maximize performance.

RiOS 10 eliminates this compromise by embedding advanced security capabilities directly into the SteelHead platform, allowing organizations to accelerate data without weakening their security posture.

With the introduction of RiOS 10, Riverbed has fundamentally reimagined acceleration for the AI era, combining industry-leading performance with a modern security architecture designed to protect data wherever it moves.

Organizations that continue to operate older versions of RiOS are missing significant advances in performance, security, encrypted traffic optimization and cloud readiness that can help them meet today's business demands and prepare for tomorrow's threats.

Securing and Accelerating Encrypted Traffic

Encryption has become the default for virtually every enterprise application. While this is essential for protecting data, it also creates a challenge for network optimization. Traditional acceleration technologies typically cannot optimize encrypted traffic because they cannot safely inspect the data stream.

The Challenge

Organizations today face a difficult balancing act. Business success increasingly depends on moving data quickly between users, applications, data centers, cloud environments, and AI platforms. At the same time, that data must be protected against growing cyber threats, regulatory requirements, and emerging risks such as quantum-enabled attacks. As a result, enterprises can no longer treat performance and security as separate priorities.

Paradoxically, since most enterprise traffic is now encrypted, this limits the effectiveness of traditional optimization techniques because acceleration solutions cannot optimize traffic they cannot safely inspect.

Consequently, organizations often experience higher bandwidth consumption, slower application performance, increased cloud costs, and reduced productivity despite investments in network optimization.

Meanwhile, AI initiatives, cloud migrations, SaaS adoption, and distributed workforces are driving unprecedented volumes of data across wide area networks. Delays in data movement directly impact application responsiveness, user experience, and business outcomes. Yet security teams must ensure data remains protected in transit, during processing, and against future threats.

Organizations need a new approach that combines acceleration and security, a platform capable of optimizing encrypted traffic, protecting sensitive data with modern security controls, and preparing for emerging threats without compromising application performance. What's more, the solution needs to provide demonstrable proof of the value it delivers to the business.

Riverbed Acceleration is that solution.

How Keystone Server Works

With the explosive growth of encrypted traffic many businesses find the network has once again become a critical bottleneck to productivity, innovation and growth without sacrificing security or governance. For many organizations, encrypted traffic represents the largest remaining acceleration opportunity.

RiOS 10 addresses this challenge through integration with Riverbed Keystone Server, a centralized TLS and signing service designed specifically to help organizations optimize encrypted traffic without compromising security controls. Keystone and RiOS 10 make it possible to unlock that opportunity while maintaining the governance, visibility and security controls that modern enterprises require.

Rather than distributing cryptographic keys across the network, Keystone centralizes trust management and keeps private keys securely contained within the service. Security teams manage Keystone server, and networking teams manage SteelHeads. SteelHeads directly use the Keystone server securely by their configuration, so security teams retain complete control over which traffic can be accelerated with Keystone services.

This approach mirrors the same trusted security models already used by firewalls, secure web gateways and application delivery controllers. By allowing encrypted traffic to be safely decrypted, optimized and then re-encrypted, organizations can dramatically expand the benefits from SteelHead acceleration. The result is improved application responsiveness, reduced network utilization, better end-user experiences and greater value from existing network infrastructure.

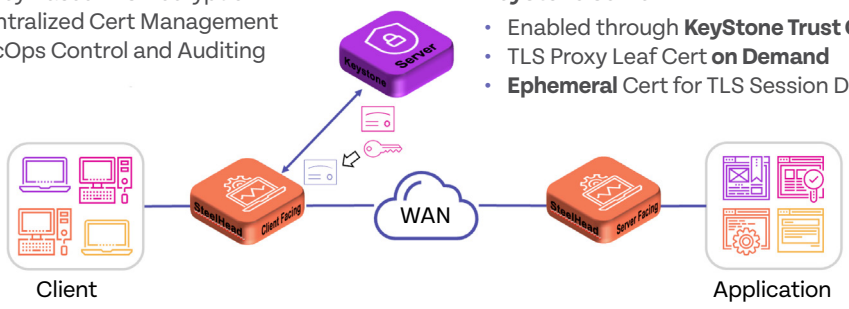
Riverbed Keystone TLS Services

Policy Based TLS Traffic Access and Secure Certificate Management

- Policy Based TLS Decryption
- Centralized Cert Management
- SecOps Control and Auditing

KeyStone Server

- Enabled through **KeyStone Trust CA**
- TLS Proxy Leaf Cert **on Demand**
- **Ephemeral** Cert for TLS Session Decrypt



Allows secure interception and optimization of TLS traffic without manual certificate handling, enabling near-zero-touch deployment and seamless acceleration across client-server flows.

Future-Proofing Your Acceleration Security

Post-Quantum Cryptography

One of the more significant future cyberthreats is quantum computing. While large-scale quantum computers may still be years away, cybersecurity experts increasingly warn about "harvest now, decrypt later" attacks, where encrypted information is intercepted today and stored until future quantum systems are capable of breaking traditional encryption methods.

RiOS 10 incorporates post-quantum cryptographic protections that help organizations begin preparing for this inevitable transition while protecting sensitive business communications against emerging threats.

For organizations in government, financial services, healthcare and other regulated industries, this capability represents a critical step toward future-proofing the security of their infrastructure.

Data Movement Outcome Insights that Matter

With RiOS 10, you will have access to SteelHead Data Insights Dashboard, a cornerstone in Riverbed's vision for intelligent data and application acceleration. It helps reduce administrative costs, improve performance and enables customers to make informed infrastructure decisions using actionable insights while maximizing the value of Riverbed's acceleration solutions.

As part of the SteelHead Central Controller, this dashboard enhances the value customers receive with Riverbed Acceleration solutions.

It allows customers to gain valuable insights across their entire Riverbed SteelHead fleet, such as quantified performance gains and time saved, surfaces granular analytics and trends and identifies inefficiencies and optimizes workflows.

Data Insights Dashboard:

- Delivers outcome-based visibility for file transfers across SMB, NFS and other similar protocols.
- Quantifies performance gains and time savings.
- Provides detailed insights on files transferred, data transferred, direction of transfer: upload or download data served locally and number of user sessions.
- Detects configuration inefficiencies, underutilized appliances, bypassed traffic both intentional and unintentional.
- Identifies top talkers, file types and transfer patterns.

The Business Case for Upgrading to RiOS 10

Beyond its security innovations, RiOS 10 delivers significant performance improvements across data center, branch, cloud and edge deployments. Riverbed reports performance gains of up to three times compared with earlier RiOS releases, enabling organizations to move larger datasets more efficiently, improve cloud application responsiveness and support emerging AI workloads that depend on rapid access to distributed data.

RiOS 10 also supports Riverbed FLEX licensing, which separates software entitlements from hardware platforms. This allows organizations to move licenses across physical appliances, virtual environments and cloud deployments as business requirements evolve.

The result is greater architectural flexibility, improved utilization of investments and a lower overall total cost of ownership.

Perhaps most importantly, upgrading to RiOS 10 positions organizations for the future. As data volumes continue to grow, AI-driven applications become mainstream and cybersecurity requirements become more demanding, businesses need infrastructure that can scale without sacrificing performance or protection. RiOS 10 delivers that foundation by combining high-performance acceleration, modern cryptography, cloud-ready architecture, centralized management and advanced security controls into a single platform.

Two Paths Forward for Better Secure Acceleration

Update to RiOS 10 to Increase ROI

By updating your existing SteelHead appliances to RiOS 10, you'll get game-changing features that provide latest security features, to meet the emerging cyber threats, new detailed insights to help improve data movement, new FLEX licensing flexibility and the ability to move and accelerate encrypted data.

Upgrade to SteelHead Series 90 for Performance

If you are looking for the absolute best performance for your data acceleration, your best option is to upgrade your existing appliances to our Series 90 Series appliances. You'll not only get all the great new RiOS 10 features I just mentioned, but you'll also see up to a 200% increase in performances.

Secure Acceleration Without Compromise

Upgrading to RiOS 10 empowers your organization with secure acceleration built for the AI era, combining centralized TLS optimization through Keystone Server, post-quantum cryptography, confidential computing and actionable Data Insights that quantify business outcomes and identify opportunities for greater efficiency.

Whether you choose a simple software upgrade or move to SteelHead 90 Series for maximum performance, RiOS 10 delivers stronger security, up to 3x greater acceleration performance, enhanced visibility into data movement, and the flexibility to adapt as your business evolves.

Don't let security requirements slow innovation. Modernize your SteelHead deployment today and unlock faster, safer, and more intelligent data movement across your enterprise. Reach out to your Riverbed **contact** or find out more at **riverbed.com/acceleration**.

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About Riverbed

Riverbed, the leader in AIOps for observability, helps organizations optimize their user's experiences by leveraging AI automation for the prevention, identification, and resolution of IT issues. With over 20 years of experience in data collection and AI and machine learning, Riverbed's open and AI-powered observability platform and solutions optimize digital experiences and greatly improves IT efficiency. Riverbed also offers industry-leading Acceleration solutions that provide fast, agile, secure acceleration of any app, over any network, to users anywhere. Together with our thousands of market-leading customers globally – including 95% of the FORTUNE 100 – we are empowering next-generation digital experiences. Learn more at riverbed.com.

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