



RIVERBED AND WIND RIVER

Industry-Leading WAN Optimization and Carrier Grade NFV Infrastructure Delivers Superior Performance and Reliability

Riverbed Technology is the leader in application performance infrastructure and the provider of the leading wide area network (WAN) optimization solution Riverbed® SteelHead $^{\text{M}}$. SteelHead is now integrated with Wind River® Titanium Server, the industry's first fully integrated and feature-complete Network Functions Virtualization (NFV) software platform.

The SteelHead integration with Titanium Server is designed to equip service providers with complete application visibility, optimization, and control across software-defined WANs, resulting in superior application performance, reduced downtime, and an improved ability to meet and exceed service level agreements (SLAs) with their customers.

Together, Riverbed and Wind River allow communication service providers (CSPs) to realize the benefits of NFV architectures, including:

- **Resource flexibility:** Software-based networking services can be provisioned, de-provisioned, and re-provisioned on demand to meet ever-changing business requirements.
- **Cost reduction:** Capital expenses can be reduced by using commodity hardware, and operating expenses can be reduced through automation—while still being able to provide rich, value-added services.
- **Service scalability:** Services can be distributed across a virtualized, dynamic infrastructure providing an elastically scalable ability to meet changing customer demand.

ARCHITECTING NEXT-GENERATION NETWORKS

A network transformation is underway to enable better utilization through software-defined services. CSPs are seeking best-of-breed solutions that can help accelerate this transformation. They are also demanding solutions that provide seamless automation without compromising the "always on" reliability expected from carrier grade systems. Riverbed and Wind River now offer an integrated carrier grade NFV solution that enables CSPs to orchestrate the deployment of WAN optimization for accelerated network and application performance.

This solution enables service providers to orchestrate SteelHead so that they can take advantage of SteelHead's industry-leading WAN optimization capabilities, including:

- Application and network control with quality of service (QoS), path selection, and secure transport features
- Network visibility with end-user monitoring for all optimizing application traffic—including web-based, on-premises, and software-as-a-service (SaaS) applications
- Dynamic selection of the best application path (MPLS or Internet) based on network availability and business intent



The Application Performance Company

Ecosystem Component

VNF provider

Solution

• Riverbed SteelHead

Value

- Increases application and data transfer performance
- Reduces bandwidth utilization
- Provides complete application visibility

Solution Brief AGENTS OF CHANGE

With SteelHead you can:

- Increase application and data transfer performance up to 100X
- Reduce bandwidth utilization by up to 95%

AN ECOSYSTEM ENABLING THE PROMISE OF NFV FOR SERVICE PROVIDERS

Through the Wind River Titanium Cloud ecosystem, Wind River has collaborated with industryleading hardware and software companies to ensure the availability of interoperable standard NFV products optimized for deployment with Titanium Server. Utilizing solutions from the Titanium Cloud ecosystem will accelerate time-to-market, reduce risk, and significantly improve the deployment of an end-to-end NFV infrastructure.

ORCHESTRATING WAN OPTIMIZATION AS A VNF

By integrating SteelHead as a virtual network function (VNF) on top of Titanium Server, Riverbed and Wind River enable their customers to automate the deployment of WAN optimization capabilities. As part of an integrated NFV service, SteelHead accelerates the performance of all applications across the hybrid enterprise for organizations that want to deliver the best end user experience.

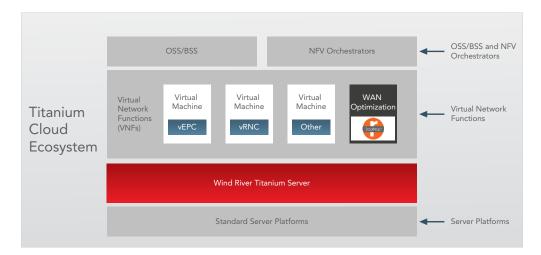


Figure 1: Titanium Cloud components with Riverbed SteelHead

RIVERBED: STEELHEAD

For organizations that want to deliver the best end user experience, SteelHead optimizes the performance of all applications, including on-premises, cloud, and SaaS, across hybrid WANs (MPLS, private VPN, and public Internet). SteelHead is designed for scalable performance, visibility, optimization, and consolidation to support the increased number of users, devices, and data centers.



MORE INFORMATION

Detailed technical information about Riverbed can be found at www.riverbed.com.

Detailed technical information about Wind River Titanium Server can be found at www.windriver.com/products/titanium-server or contact inquiries@windriver.com.

Additional information about the Titanium Cloud ecosystem can be found at www.windriver.com/announces/titanium_cloud_partner_program.

WIND RIVER: TITANIUM SERVER

A fully integrated and feature-complete NFV software platform, Titanium Server enables an NFV infrastructure to achieve the ultra-reliability and high performance mandated for telecom networks. It delivers six-nines (99.9999%) reliability, in contrast to the three nines of virtualized platforms based on common enterprise software. Combining open source and open industry standards, with required carrier grade extensions, Titanium Server is the only commercial server solution enabling service providers to maintain the rigorous uptime required as networks transition to a virtualized infrastructure. With Titanium Server, service providers can now meet the "always on" expectations of consumers.

SUMMARY

The Riverbed and Wind River partnership enables service providers to leverage NFV without sacrificing the reliability and performance of hardware networking solutions. By collaborating with Wind River through the Titanium Cloud ecosystem to provide interoperable networking services, Riverbed extends the industry-leading WAN optimization benefits of SteelHead to the next generation of CSP networks.

