

Video Solution Brief

Streaming Video Distribution on Riverbed Services Platform (RSP)

As enterprises grow globally, the most cost-effective way to run marketing, training or internal communications is via video. However, transporting these video files to a global workforce, whether streamed or downloaded, can create tremendous network bottlenecks and strain.

The typical challenges faced by most enterprises with video streaming can be categorized into two buckets – distribution and consumption. Video communication simply isn't effective if employees or customers can't easily play videos without jitter or excessive buffering. As the amount of video content increases, it becomes more difficult to manage, search and distribute the content efficiently. In addition, allowing employees to produce, capture, and encode content on their own is a challenge. As the workforce becomes more global, enterprises also need the ability to dynamically control internet video streaming regardless of where the video originates and the size or location of the audience.

In order to solve these challenges, Riverbed® has partnered with industry leaders to deliver a solution for streaming video distribution across the enterprise. Delivered on the Riverbed Services Platform (RSP), Riverbed and these industry leaders are able to deliver a truly integrated "best-of-breed" video solution.

The enhanced Riverbed Services Platform (RSP) provides customers with the capability to run up to five additional services, such as Windows Servers, DNS/DHCP, print and security, and applications virtually on VMware in a protected partition on the Steelhead® appliance. This allows organizations to further eliminate redundant servers and reduce hardware, software and maintenance costs and IT complexity. Moreover, customers have the flexibility to run an RSP Partners' application or they can run their own application without a forklift upgrade to their existing Riverbed Steelhead hardware.

The video solution from Riverbed can help enterprises with video production, content management and distribution. These various solutions can run seamlessly on the RSP to provide a complete end to end video solution.

- **Centralized Video Production and Management**

The solution can help centrally manage the production and delivery of all video resources, regardless of the source of the video. The creation and management of video assets is secure, network-efficient, and automated, guaranteeing maximum ROI for users.

- **Delivering High Quality Video**

Delivering high quality video is becoming a clear differentiator for content providers. Riverbed Steelhead appliances enable video to be delivered in a high quality, cost effective, non-network intensive way while retaining high video and audio quality, meeting or exceeding the expectations of the end users.

- **Stream Splitting**

For live content, the Riverbed Steelhead will host an edge media server that can perform remote site stream-splitting. This will reduce the number of streams over the WAN to one stream per remote location and, therefore, tremendously reduce the amount of WAN bandwidth required to serve live streaming. Users may benefit from higher quality streams that can be sent over the WAN,

riverbed Think fast.®
RSP

KEY BENEFITS:

- Industry leading WAN optimization and best of breed streaming video distribution solution in one appliance
- Cost savings by consolidating servers and IT management footprint, and conserving power at the branch
- Easy to use integrated solution that helps reduce the impact of video traffic on the network, supporting both windows media and flash video formats.

since WAN bandwidth will not be as constrained.

Content Prepositioning

For on-demand streaming, the Riverbed Steelhead appliance utilizes the patented data streamlining technology to store downloaded content so that subsequent remote users can obtain a local copy of the video. This technology leverages the large data stores in the Steelhead appliances to find and store repeated data patterns across all TCP based applications, and replace them with very small labels when traversing the WAN. In addition, Riverbed Steelhead appliances will optimize content delivered repeatedly over clear text methods, such as http streaming.

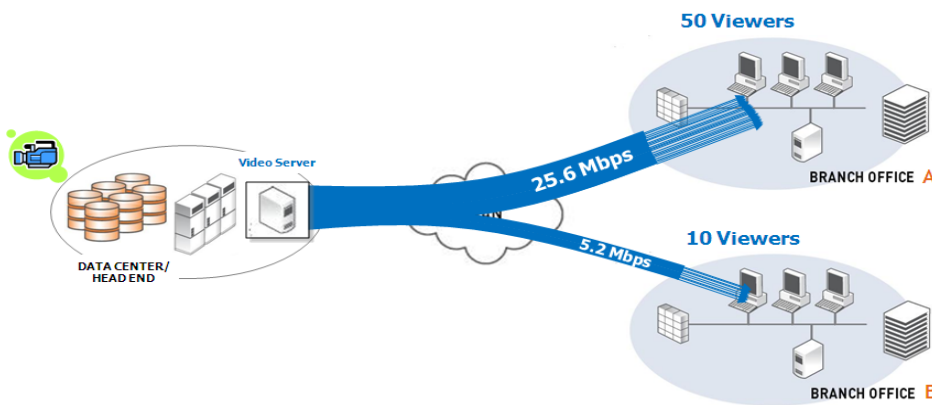
- **Quality of Service and Bandwidth Reduction**

The Riverbed Steelhead appliances will significantly reduce the amount of bandwidth consumed by other enterprise applications. Riverbed's patented Data streamlining, transport streamlining and application streamlining technology apply to all TCP-based traffic traversing the WAN, thus freeing up more room on the WAN pipe for streaming applications. Riverbed Steelhead appliances also support robust quality of service (QoS) capabilities to ensure that video and other real-time traffic can be prioritized.

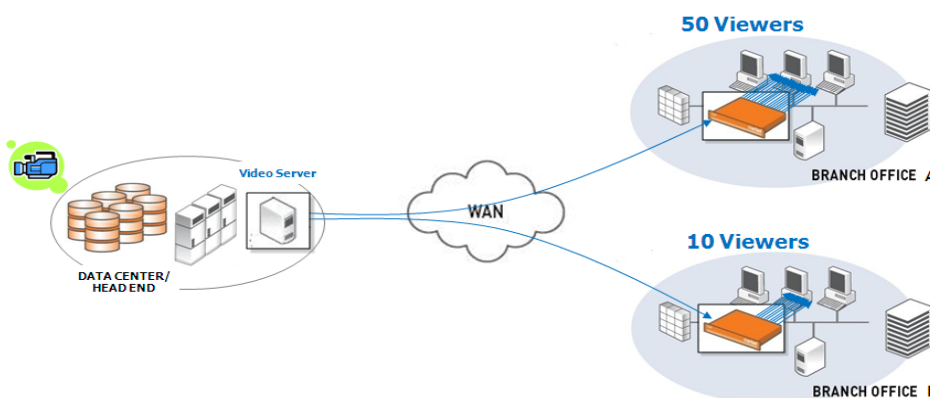
Between data streamlining and compression Riverbed can reduce 60-95% of other traffic thereby providing more bandwidth for the video traffic. Even after that if customers are still bandwidth constrained and if there is a situation where video solutions are fighting with other applications for network space, QoS policies can be implemented thereby by guaranteeing the bandwidth for video. This can be used in two ways: the video traffic can be given the maximum bandwidth, at the cost of other applications or video traffic can be given the highest priority. The Riverbed hierarchical QoS will dynamically assign bandwidth based on usage thereby avoiding the hard coding of bandwidth limitations. Riverbed products can also integrate with other third party QoS devices that organizations might already have.

- **Performance Scaling**

Whether a customer had five or 500 users at branch offices, they can expect a dramatic improvement in end-user performance and bandwidth reduction with Riverbed's WAN Optimization and video solution.



Streaming Video across the WAN consumes a lot of bandwidth



Video solution deployed on the RSP reduces video traffic across the WAN by up to 98%

Video is predicted to comprise 90% of consumer Internet traffic by 2012.

Riverbed has partnered with the following vendors to offer its video solution:



Windows Media Services 2008 is an industrial-strength platform for streaming live or on-demand audio and video content to clients over the Internet or an intranet. Use Windows Media Services 2008 to configure and manage one or more Windows Media servers running on the Windows Server 2008 operating system. **For more information, visit <http://www.microsoft.com/windows/windowsmedia/forpros/server/server.aspx>**



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Qumu, the leader in enterprise video, enables organizations to easily capture, manage, and distribute live and on-demand video content. The company provides a single web services based software solution that seamlessly manages all video applications, and leverages existing video, storage, teleconferencing, and distribution hardware and software infrastructure. **For more information, visit www.qumu.com/**



Accordent Technologies offers the most trusted platform for high-volume, mission critical delivery of rich media to global audiences. With its landmark rich media content management system, it offers a complete solution that enhances the way organizations communicate, train and teach online. **For more information visit www.accordent.com**

About Riverbed

Riverbed is the IT infrastructure performance company for networks, applications and storage. Our award-winning line of wide area network (WAN) optimization solutions liberate businesses from common IT constraints by increasing application performance, enabling consolidation, and providing enterprise-wide network and application visibility — all while eliminating the need to increase bandwidth, storage or servers. Thousands of companies with distributed operations trust Riverbed to make their IT infrastructure faster, less expensive and more responsive. **For more information, visit <http://www.riverbed.com>**