Riverbed and VMware Partner Solution Brief

VMware Virtualization and Riverbed WAN Optimization

Companies all over the world are turning to WAN optimization and virtualization to accelerate business operations and improve productivity while cutting costs. VMware® is the global leader in virtualization solutions, and Riverbed Technology is the leading WAN optimization vendor, offering proven wide area network (WAN) optimization solutions that 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 widely distributed businesses use Riverbed® to make their IT infrastructure faster, less expensive, and more responsive, and with more than 190,000 customers and 25,000 partners, VMware helps organizations of all sizes lower costs, preserve freedom of choice, and leverage IT resources while saving energy. Combining VMware's virtualization solutions with award-winning WAN optimization products from Riverbed allows organizations to cut the costs of operating IT infrastructure while gaining better visibility into how well applications are performing.

IT Consolidation with VMware and Riverbed

Organizations are increasingly looking to consolidate their file/application server infrastructure from remote offices to reduce costs, simplify management, and meet compliance demands. In addition, they are looking to increase server utilization and lower their total cost of ownership. Riverbed unlocks the true potential of virtualization by enabling the consolidation of IT resources from branch offices to central sites or data centers without negatively impacting the end user experience. Together, VMware and Riverbed allow the enterprise to consolidate servers and implement green IT initiatives. Organizations can reduce the capital costs of acquiring new servers and the operational costs of deploying them in remote locations while gaining the ability to manage them from a central site.

By consolidating and virtualizing IT resources, the enterprise can reduce capital and operational costs by enabling seamless and accelerated collaboration among remote employees via a centralized IT environment. They can benefit from streamlined backup and data compliance within the organization but they need to ensure consistent response times for remote users. As companies look to efficiently roll out virtualization solutions across the enterprise, bandwidth and latency limitations of the WAN can be detrimental to the success of the effort. Companies need powerful visibility tools to map the environmental dependencies, and they need WAN optimization solutions that enable "LAN-like" performance for remote locations.

Each workload that previously required a dedicated physical server can be placed in a VMware virtual machine, making it simple to consolidate multiple workloads onto fewer physical servers. Riverbed Steelhead® appliances allow the enterprise to accelerate the performance over the WAN so the enterprise can consolidate remote servers onto VMware virtual machines. Steelhead products optimize both application and transport protocol chattiness, and offer unprecedented bandwidth optimization. These optimizations work in harmony with each other to provide the highest levels of performance improvement. With this kind of "LAN-like" performance, site consolidation projects can proceed without impacting performance for remote users accessing information over the WAN. VMware infrastructure combined with Riverbed WAN optimization allows the enterprise to consolidate application and file servers to central sites, resulting in the elimination of redundant remote IT infrastructure.

Accelerate VMware View over the WAN

WAN optimization is also an essential tool for improving the response time and quality of virtual desktop solutions. Riverbed Steelhead appliances, Virtual Steelhead and Steelhead Mobile software enable significant improvements in application and desktop performance across the WAN, overcoming the

A Joint Solution by Riverbed and

vmware®
FORUM 2011

BENEFITS

Together, Riverbed and VMware enable the enterprise to:

➤ Consolidate file and application server infrastructure

➤ Free up bandwidth while enabling strong application performance

➤ Deliver "LAN-like" performance of centralized applications

➤ Reduce both capital and operating costs by consolidating multiple workloads onto each physical server

➤ Deploy virtual desktop solutions and accelerate all native and virtual data access over the WAN without deploying additional branch server infrastructure

➤ Dramatically accelerate VMware replication and disaster recovery

➤ Reduce costs by delivering virtualized branch services in a protected partition on a Steelhead appliance

challenge of an increasing amount of data running across the same old network. Extensive testing has shown that Riverbed WAN optimization can reduce bandwidth utilization for desktop virtualization environments while also improving end user response times.

Riverbed enables customers to deploy VMware View™ desktop virtualization in a cost-effective manner by optimizing current network connections. Reducing the impact of added traffic and deduplicating application bandwidth requirements on the WAN help improve return on investment by avoiding expensive network upgrades. Built on VMware's industry-leading virtualization platform, VMware View is a Universal Client solution that lets you manage operating systems, hardware, applications, and users independently of each other, wherever they may reside.

By using Riverbed with VMware View, native and virtualized clients are simultaneously accelerated in a consolidated and secure environment. This allows the enterprise to: accelerate all data access (native and virtual) without additional branch server infrastructure, make more bandwidth available for virtual client traffic by reducing the impact of native clients, enable more users to access data without the need for costly bandwidth upgrades, optimize bandwidth for virtual client traffic by 30% or greater, and accelerate access to data for traveling users with Steelhead Mobile.

Low-Cost, High-Performance Disaster Recovery

Traditional disaster recovery (DR) plans require that recovery target hardware must exactly duplicate production hardware, effectively doubling hardware requirements for protected applications. In contrast, VMware virtual machines are hardware-independent so any physical server can serve as a recovery target for any virtual machine. Steelhead appliances minimize WAN costs and accelerate the complete DR process for VMware deployments. Steelheads will accelerate the DR process irrespective of where the data resides or what application is used. The data could be resident inside a virtual machine or in the VMware image files on an external storage device. The Riverbed Optimization System (RiOS®) simultaneously addresses bandwidth constraints by using fine-grain data reduction as well as compression to perform data streamlining, typically reducing bandwidth utilization by 60-95%. Transport streamlining and application streamlining can minimize protocol chattiness, eliminating 65 to 98% of packet round trips across the WAN. The Riverbed solution's ability to find data commonality across multiple VMware images and application data results in dramatically accelerated replication.

Deliver Virtualized Branch Services on Steelhead Appliances

The Riverbed Services Platform (RSP) provides customers with the capability to run up to five additional services and applications virtually on VMware in a protected partition on the Steelhead appliance. This revolutionary approach allows customers to deploy local services in all their branch offices without the need to deploy and maintain full-blown servers to run the applications. The business benefits are minimizing the hardware needed at the branch office, enabling companies to consolidate IT operations even further, reducing costs, and simplifying administration, all while still delivering high quality local services. The enterprise can combine RSP with the WAN optimization features of Steelhead appliances to achieve an efficient "branch office box" solution, along with the ability to run other services such as Microsoft Windows Server, video, security, or network management solutions. The Steelhead appliance is the only WAN optimization device to run industry-leading technology from VMware as the virtualization platform, taking advantage of the skills companies already have in house. Virtual servers run in a protected zone and do not impact the resources needed for peak Steelhead appliance operations. The RSP also enables customers to run up to five different virtual machines at once, eliminating many more servers from the branch office. By deploying joint solutions from Riverbed and VMware, organizations can benefit from the reduced IT complexity and agile service delivery of virtualization while allowing users to benefit from the efficiencies of application acceleration and WAN optimization.

About VMware

VMware delivers virtualization and cloud infrastructure solutions that enable IT organizations to energize businesses of all sizes. With the industry leading virtualization platform – VMware vSphere™ – customers rely on VMware to reduce capital and operating expenses, improve agility, ensure business continuity, strengthen security and go green. With 2009 revenues of $2 billion, more than 190,000 customers and 25,000 partners, VMware is the leader in virtualization, which consistently ranks as a top priority among CIOs. For more information, visit www.vmware.com.

About Riverbed

Riverbed delivers performance for the globally connected enterprise. With Riverbed, enterprises can successfully and intelligently implement strategic initiatives such as virtualization, consolidation, cloud computing, and disaster recovery without fear of compromising performance. By giving enterprises the platform they need to understand, optimize and consolidate their IT, Riverbed helps enterprises to build a fast, fluid and dynamic IT architecture that aligns with the business needs of the organization. For more information, visit www.riverbed.com.

Riverbed Technology, Inc.
199 Fremont Street
San Francisco, CA 94105
Tel: (415) 247-8800
www.riverbed.com

Riverbed Technology Ltd.
Farley Hall, London Rd., Level 2
Binfield
Bracknell. Berks RG42 4EU
Tel: +44 1344 354910

Riverbed Technology Pte. Ltd.
391A Orchard Road #22-06/10
Ngee Ann City Tower A
Singapore 238873
Tel: +65 6508-7400

Riverbed Technology K.K.
Shiba-Koen Plaza, Bldg. 9F
3-6-9, Shiba, Minato-ku
Tokyo, Japan 105-0014
Tel: +81 3 5419 1990