

Rethink Branch IT with Riverbed and EMC Platforms

EMC VMAX, EMC VNX, and Riverbed SteelFusion

A new approach to Simplify Branch IT

Organizations worldwide have successfully consolidated IT infrastructure into state-of-the-art data centers and enabled agile private cloud infrastructures with server virtualization and storage networking. The benefits of these investments often remain out of reach for edge locations—branch and remote offices. As a result, islands of infrastructure including application servers, storage, and backup are deployed close to users to solve availability and performance challenges. Managing infrastructure at the edge can be costly, increasing the IT support burden and introducing risk and challenges in today's efforts to roll out new, business-relevant services in a timely fashion.

Riverbed® SteelFusion™ branch converged infrastructure empowers IT organizations to pull back data from the branch office and manage it on EMC storage systems in the data center. This new architectural approach enables organizations to consolidate branch servers and data

back into the data center taking advantage of data center storage platforms, data protection solutions and ensuring local performance for remote users. In the data center, EMC® VMAX®, and EMC VNX® storage systems provide the ideal platform for managing centralized data, delivering unmatched efficiency, reliability, and scalability.

Riverbed SteelFusion—storage projection

SteelFusion enables IT to decouple storage from servers, even over thousands of miles, making possible the complete consolidation of servers and storage to the data center while delivering local performance to the edge of your organization. SteelFusion solves the challenge of delivering storage over distance, overcoming bandwidth and latency, making it possible to project servers, applications, and data from the data center to edge locations. With SteelFusion, end users get uncompromised performance, while IT organizations benefit from data protection, instant recovery, provisioning, and centralized management.

EMC VMAX—the world’s most trusted storage platform

The EMC VMAX storage arrays are the world’s most powerful, trusted, and intelligent storage systems. Based on the Virtual Matrix Architecture, the EMC VMAX family scales performance and capacity to unprecedented levels and delivers non-disruptive operations, which greatly simplifies and automates the management and protection of information. Fully Automated Storage Tiering for Virtual Pools (FAST VP) automatically maximizes performance and reduces costs by placing the right data in the right place at the right time from Flash Drive capacity for high IOPS workloads to SATA drives for capacity intensive applications.

EMC VNX—next-generation unified storage

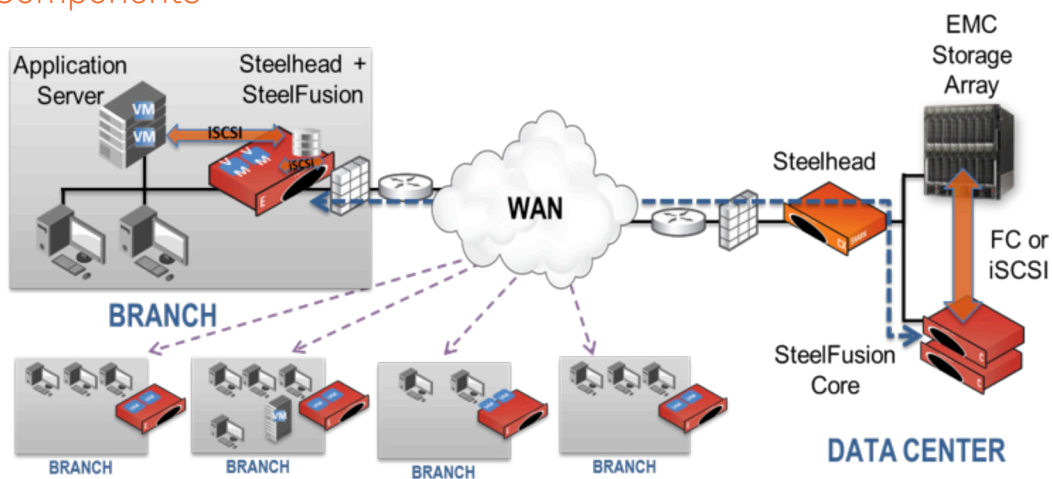
The EMC VNX family delivers industry-leading innovation and enterprise capabilities for file, block, and object storage in a scalable, easy-to-use solution.

This next-generation storage platform combines powerful and flexible hardware with advanced efficiency, management, and protection software to meet the demanding needs of today’s enterprises.

A combined solution for consolidation, control, and agility

The combination of EMC’s VMAX or VNX with SteelFusion ensures that organizations gain centralized control of applications and data while delivering local speed and access. It allows centralized IT staff the ability to instantly provision, monitor performance, control and remotely boot VM’s from the data center. With SteelFusion, your business is protected from branch disasters and you have the ability to rapidly recover to all business locations over the WAN.

Solution Components



EMC VMAX

EMC VMAX

- Highly reliable, high-performing storage for consolidated branch office data
- Expands quickly and easily to accommodate business growth
- Delivers unmatched availability and information-centric security

EMC VNX

EMC VNX

- High-performing unified storage providing simplicity and efficiency
- Data efficiency services reduce your capacity requirements up to 50%
- Flash-optimized with auto-tiering to ensuring superior performance

Riverbed SteelFusion

EMC SteelFusion

- Connects to VMAX or VNX storage in the data center and presents data—including entire VMs—over the WAN to edge locations
- Predicts and pre-fetches blocks for the remote office
- Enables high-availability access to data center storage solution

Solution Architecture

Use cases and benefits

Bridging the gap between the data center and global offices, SteelFusion appliances in combination with EMC VMAX and EMC VNX storage solutions eliminate up to 50% of the costs associated with managing distributed infrastructure and enable you to:

- **Consolidate server and storage infrastructure—** Performance demands and WAN issues often complicate the consolidation of server and storage infrastructure. Countering these challenges, SteelFusion edge appliances have VMWares ESXi hypervisor embedded. This allows the complete consolidation of servers, applications, and management back into the data center. This provides the ability to remotely boot VMs from the data center across the WAN and deliver local performance to remote office users—even during WAN outages.
- **Get rid of remote backup—** Backing up data at remote locations can be unreliable, and the job tends to fall on non-IT employees. Often many remote locations rely on outdated tape-based backup systems that are expensive and difficult to use. Now you can back up everything at your central data center, where it is safe, reliable, and efficient.
- **Eliminate data from high-risk places—** Whether its natural disasters, hacking, political turmoil, or theft, remote locations can pose risk to valuable data assets. With SteelFusion appliances, data is stored where it's safest, in your data center on EMC storage arrays.
- **Instantly provision and recover—** When disaster strikes recovery can be a time consuming process impacting users and your business. With SteelFusion, centrally managed servers can be booted-over-the-WAN into the branch in minutes. SteelFusion enables IT to instantly provision servers where needed and improve branch availability through rapid recovery.
- **Deliver high-performance VDI to the branch—** Keeping virtual desktop infrastructure (VDI) deployments running efficiently can prove challenging when WAN connectivity issues occur; such as latency, limited bandwidth, and outages. Organizations are susceptible to lost productivity when user virtual desktop performance is slow and unreliable. With SteelFusion technology you can project virtual desktops to distant end users, eliminating WAN challenges while giving IT central control and security.

Together Riverbed and EMC offer organizations enhanced agility, cost savings, and significant operational benefits. SteelFusion, EMC VMAX, and EMC VNX extend the benefits of the data center to global branch offices and transform the delivery of IT services to the edge. Organizations can now embrace a more fluid architecture, overcoming the barriers of distance while maintaining the service levels and round-the-clock business operations.

About EMC

EMC is a global leader in enabling businesses and service providers to transform their operations and deliver IT as a service. Fundamental to this transformation is cloud computing. Through innovative products and services, EMC accelerates the journey to cloud computing, helping IT departments to store, manage, protect, and analyze their most valuable asset—information—in a more agile, trusted, and cost-efficient way.

About Riverbed

Riverbed, at more than \$1 billion in annual revenue, is the leader in application performance infrastructure, delivering the most complete platform for the hybrid enterprise to ensure applications perform as expected, data is always available when needed, and performance issues can be proactively detected and resolved before impacting business performance. Riverbed enables hybrid enterprises to transform application performance into a competitive advantage by maximizing employee productivity and leveraging IT to create new forms of operational agility. Riverbed's 26,000+ customers include 97% of the *Fortune* 100 and 98% of the *Forbes* Global 100. Learn more at riverbed.com.

The Riverbed logo consists of the word "riverbed" in a bold, lowercase, sans-serif font. The letters are a vibrant orange color. The 'i' and 'e' have a small dot above them, and the 'd' has a small vertical line extending from its top.