SteelFusion

Software-Defined Edge Solution Purpose-Built for ROBO IT

Riverbed® SteelFusion™ is the first and only hyper-converged infrastructure that delivers local performance while enabling data centralization, instant provisioning/recovery, and lower TCO for distributed organizations. SteelFusion converges server, storage, and network infrastructure into a single dedicated appliance or via software running on compliant commercial off the shelf servers. SteelFusion eliminates the challenges of remote office/branch office (ROBO) IT by consolidating data, applications, services, and operations to the data center or public cloud (AWS, Azure, SoftLayer) while reducing the storage footprint at remote locations.

SteelFusion features an industry-first storage delivery architecture that allows organizations to eliminate servers, storage and inefficient backup processes from remote sites and branch offices. Unlike traditional Do-It-Yourself (DIY) approaches or Hyper-converged Infrastructures (HCI), SteelFusion enables "stateless" branch services.

Users access applications running locally in the branch while primary data is stored in the data center, eliminating the risk of data loss. Decoupling compute from storage, SteelFusion hyper-converged edge infrastructure delivers local performance and capacity without requiring a storage-intensive architecture in the branch. This significantly reduces required branch infrastructure and centralizes management of edge IT services.

SteelFusion delivers IT agility with instant provisioning, backup, and instant recovery for branch offices, and ensures continuous operations when disasters occur such as inclement weather, fire, and human-induced outages. Integrated into SteelFusion is the industry-leading SteelHead technology for WAN Optimization, which enables unrivaled performance and applications that simply work for employees and customers located at remote sites, who are the growth engine to any business. With SteelFusion, businesses can instantly provision new services and restore operations in a matter of minutes vs. days, centrally protect and secure data, deliver the kind of performance expected from locally run applications, and significantly lower the TCO of branch and remote offices.

SteelFusion Consists of Two Components:

SteelFusion Edge

A dedicated hyper-converged edge appliance or SteelFusion software installed on prescribed 3rd party servers which uniquely integrates server, storage, network, and virtualization to run local ROBO applications, eliminating the need for additional branch infrastructure.

SteelFusion Core

A storage delivery controller that interfaces with a storage area network (SAN) in the data center, or public cloud-based storage for additional flexibility. As depicted in the diagram on page 4, there are three deployment options to choose from when consolidating ROBO data, apps, and services: 1) Data center storage 2) IBM's cloud (Softlayer) with SteelFusion Core in the cloud 3) AWS or Azure via cloud gateways.

Business Challenge

Enterprises pull from a global talent pool and establish branch offices and remote sites to remain close to customers, partners, and key components of their supply chain. As the number of remote locations grow, organizations deploy more and more infrastructure to deliver applications and data efficiently and reliably and maintain an acceptable level of productivity. As business grows, important company data stored in remote locations multiplies exponentially, and is left unprotected, leaving the company at risk.

This proliferation results in islands of distributed remote infrastructure that are necessary to meet local performance and reliability needs, but that are costly, risky, and inefficient to manage. Companies rarely have the IT expertise in remote sites to easily maintain such distributed infrastructure. This increases business risk due to outages, obsolescence, and data loss. When remote sites go down because of natural or man-made disasters or human error the costs are huge. It can take days, weeks, or longer to fully recover.

Key Benefits

Security and Data Protection

Mitigate risks associated with data in remote locations.

Control

- Control data in the data center, removing sensitive information from high-risk locations
- Render data on stolen appliances or drives inaccessible without admin authentication

Encryption

- Ensure data at rest is safe using AES 256-bit encryption, compliant with HIPAA and Top Secret standards
- Protect data in-flight with industry-standard SSL or IPSEC encryption
- Reduce risk by maintaining only a limited set of active data blocks at remote locations

Productivity

Deliver superior application performance for branch and remote office productivity.

Optimization, Visibility, Control

- Increases application and data transfer performance up to 100x
- Improves visibility with application, network, and end user monitoring
- Dynamically selects the best application path based on business intent and network availability

Business Continuity

Improve disaster recovery readiness and reduce downtime.

Disaster Recovery and Avoidance

- Reduce data loss with near real-time synchronization of data to the data center
- Rapidly recover from disasters by deploying VMs from the data center to the branch
- Start VMs in the data center when remote locations experience or expect interruption

Data Protection

- Centralize data protection to benefit from mature enterprise-class practices
- Eliminate the need to purchase, install, and manage dedicated branch backup solutions

Hardware Flexibility

- Deploy software to meet customized compute and connectivity needs
- Application delivery on commercial off the shelf servers

Agility

Reduce capital and operational costs, simplify IT practices, and deliver new services with velocity and ease.

Consolidation and Centralization

- Centralize branch servers and storage while maintaining local performance
- Slash branch IT costs by eliminating the need to purchase and maintain branch servers and storage
- Drive greater utilization of data center storage investments

Simplified Management

- Reduce branch administration costs by leveraging standardized data center policies and procedures
- Centralize control to eliminate the need for remote IT personnel or “fly and fix” missions
- Quickly provision new applications, IT services to remote and branch offices, or entirely new sites in minutes from the data center

Cloud Services

- Completely replace or augment data center storage with public cloud storage for ROBO consumption
- Extend cloud services to ROBO edge without any performance penalty
- Enable storage consolidation strategy for hybrid cloud deployments
- Provide secondary storage options for additional capacity, cloud-based backups or storage tiering

Key Features of Virtual SteelFusion Edge

Out of the box, SteelFusion features three technologies that work together deliver local performance from the data center to the branch:

Integrated storage delivery: BlockStream™

BlockStream is a Riverbed-patented technology that centralizes data in the data center and projects a working set out to the branch. It combines three capabilities: 1) an authoritative block cache built into the SteelFusion Edge hyper-converged appliance; 2) a pre-fetch algorithm that predicts and delivers required data to branch locations; and 3) data deduplication technology that reduces the amount of data transferred between Edge and Core.

Branch-optimized virtualization: Virtual Services Platform (VSP)

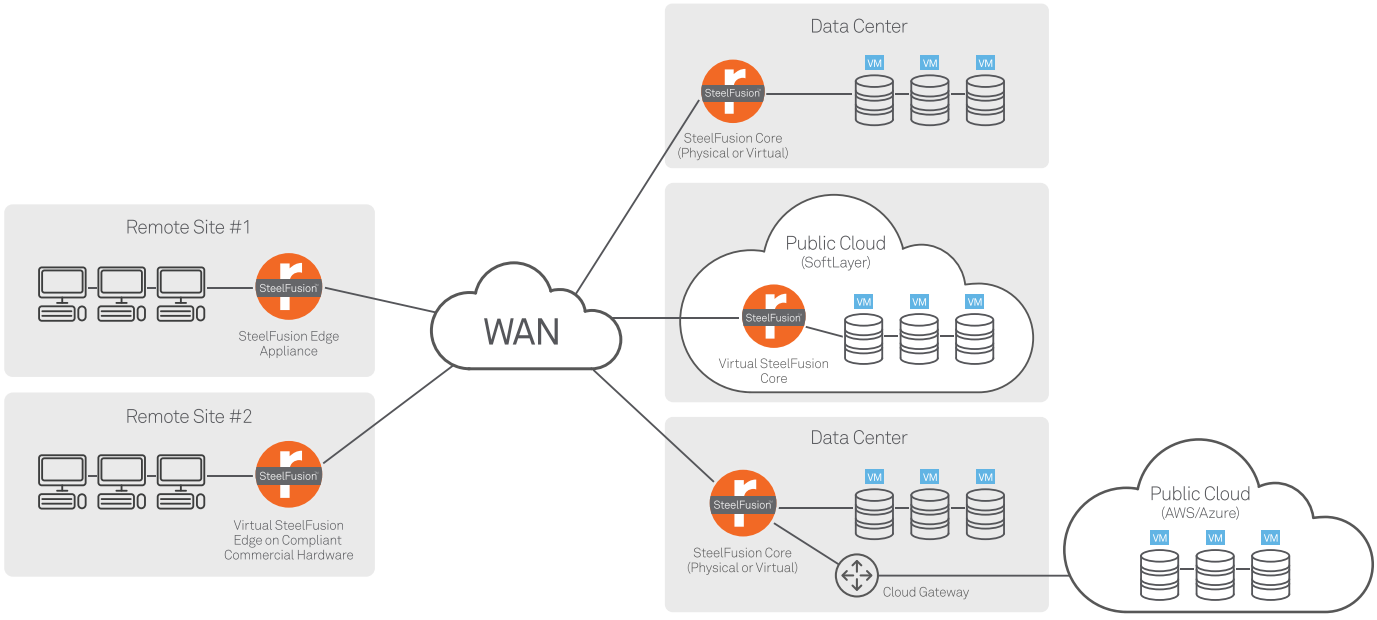
The SteelFusion Edge hyper-converged appliance contains a fully integrated instance of the VMware® vSphere® hypervisor, optimized to run remotely on a hardened branch appliance. Customers benefit from having the industry-standard virtualization platform, which can be managed with existing tools and capabilities. SteelFusion simply and seamlessly appears as a standard host in existing VMware vSphere and vCenter Server™ management tools.

Built-in WAN optimization: SteelHead™

SteelFusion contains an integrated instance of the industry's #1 WAN optimization solution — Riverbed SteelHead. WAN optimization helps further streamline branch infrastructure by accelerating all branch user application and data traffic at the fastest speeds across the optimal networks at the lowest cost

Data center Disaster Recovery: FusionSync™

SteelFusion contains an integrated instance of the industry's #1 WAN optimization solution — Riverbed SteelHead. WAN optimization helps further streamline branch and remote office IT by accelerating all branch user application and data traffic at the fastest speeds across the optimal networks, from on-premises locations as well as and cloud environments (SaaS/IaaS).



About Riverbed

Riverbed Technology, the leader in application performance infrastructure, provides 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. Learn more at riverbed.com.

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