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# SD-WAN & WAN Edge Infrastructure with SteelConnect EX Series

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Every day, enterprises and organizations depend on a complex web of applications to drive business performance, including SaaS, IaaS, Data Center, Branch and Mobile.

Interconnecting all these services is the wide-area network (WAN) which is more critical to the success of businesses than ever before, but which has become too complex to manage with conventional device-centric and CLI-based means. Riverbed® SD-WAN and WAN Edge Infrastructure with SteelConnect EX changes the game, providing a fast, agile and secure network fabric that meets the modern needs of the cloud and digital era.

## Challenges Facing Modern Day WAN and WAN Edge Infrastructure

### Network Complexity

Conventional approaches to enterprise networking no longer meet the needs of businesses today. An insatiable demand for WAN capacity and adoption of cloud-based applications has led to new WAN architectures at remote locations, which incorporate Internet broadband in combination with or even in place of MPLS connectivity. The result is a hybrid and more

complex network, which is untenable to manage with conventional device-centric and CLI-based means. Furthermore, modern networks must support heightened requirements for agility, efficiency, scalability, and performance as businesses embark on digital transformation strategies to remain competitive and grow.

### New Security Risks

The expanding use of Cloud, Internet, and mobile devices is increasing vulnerability to malicious activity. Managing security is easiest when Internet access is constrained to a single, central point of ingress/egress. However, there is a performance trade-off for cloud-based applications. SaaS vendors recommend using Internet breakout points that are close to end users to minimize latency. IT must find ways to extend the security perimeter to every remote site, so branch-direct Internet access can be provided.

### Unpredictable Performance

Workforce productivity and business velocity depends on the performance of critical applications, which is subject to network performance. Paths between end users and application servers are longer and more complicated than ever. Performance becomes unpredictable when applications hosted in hybrid IT environments must traverse multiple paths and technologies before reaching remote and mobile users.

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## Riverbed SD-WAN & WAN Edge Infrastructure Accelerates Digital Transformation

Riverbed® SteelConnect™ EX provides a flexible, extensible and software-defined network architecture that enables enterprises to provide agile and cost-effective WAN connectivity across the modern hybrid IT landscape. SteelConnect EX enables enterprises to increase WAN capacity, streamline the deployment and management of remote sites and applications, boost network uptime and reliability, accelerate application performance, and secure user access and data, all while reducing WAN circuit costs and boosting operational efficiency.

SteelConnect EX expands SD-WAN with industry-leading application acceleration and advanced software-defined security (SD-Security) including next-generation firewall (NGFW) and unified threat management (UTM) services. Enterprises can combine SD-WAN, Application Acceleration and SD-Security to create a software-defined branch (SD-Branch) experience that is fast, agile, secure and simple to operate.

### Software-Defined WAN (SD-WAN)

SteelConnect EX SD-WAN enables enterprises to quickly deploy an application-driven and secure hybrid enterprise WAN to increase performance and reliability, while reducing the operational complexities of legacy WAN architecture.

- Dynamically create secure tunnels between locations with any topology, independent of the underlying transport
- Flexible secure topologies supporting direct, regional and hub Internet breakouts
- Steer traffic for over 2700+ applications in real-time and improve cloud and SaaS user experience with centrally-managed application policies
- Automate the deployment of new branches with zero-touch provisioning

### Software-Defined Security (SD-Security)

SteelConnect EX SD-Security enables enterprises to dynamically deploy and secure WAN access and application delivery. With a unified and centrally managed policy and security services framework, SteelConnect EX provides a powerful and efficient means to protect the ever-changing virtual perimeter of distributed enterprises and organizations.

- Fully integrated and layered security services deepen and simplify branch security
- Broad set of security functions, including Next-Generation Firewall (NGFW), Secure Web Gateway (SWG), Antivirus (AV), and Intrusion Detection and Protection Services (IDS/IPS)
- Hierarchical, per-tenant granular segmentation policy and enforcement to address critical and business application requirements

### Cloud and Application Acceleration\*

Riverbed® SteelHead™ cloud and application acceleration is best-in-class – the only solution that optimizes networks and applications across the entire hybrid landscape: branch, data center, cloud (IaaS) and software-as-a-service (SaaS), increasing application and data transfer performance by up to 100x while reducing bandwidth utilization by up to 95%.

- Transport Streamlining overcomes latency and WAN quality challenges across a wide-range of network protocols including TCP, SCPS and UDP
- Data Streamlining dramatically reduces bandwidth utilization and network roundtrips through the combination of advanced scalable data referencing (data deduplication) and compression of all network data, including secure support for SSL/TLS/HTTPS-based protocols
- Application Streamlining transforms the behavior of the richest set of application protocols to dramatically accelerate performance and end-user experience for on-premises, SaaS and IaaS-hosted applications

\*Feature requires a future release of SteelConnect

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## Software-Defined Branch (SD-Branch)

SteelConnect EX SD-Branch transforms the enterprise branch with an extensible uCPE services platform that streamlines and automates the deployment and management of network services in remote sites.

- Multi-tenant services platform with IP networking and security services
- Flexible deployment choices at the branch, hub or cloud utilizing physical, virtual or cloud instances
- Distributed services and centralized control for unmatched elasticity and simplicity
- Fully virtualized stack of services providing for underlay networking, SD-WAN, application acceleration and SD-Security services

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## Key Benefits

### Agility

Quickly respond to the needs of your business with application-defined, business intent-based policies that are centrally managed and applied network-wide across all remote locations, including zero touch provisioning and rapid change management. Utilize comprehensive routing and application aware path control to easily manage your global network.

### Performance

Deliver superior application performance to your business with industry-leading application optimization, end-to-end unified visibility with industry-leading network performance monitoring (NPM), scalability, high availability, dynamic native routing, integrated security, and cloud and self-hosting management.

### Security

Leverage secure network services and integrated NG firewall, UTM, content/URL filtering, secure web gateways, and web proxy capabilities to ensure the secure delivery of all applications across your hybrid enterprise.

### Reliability

Create a highly available WAN architecture that virtualizes and dynamically leverages multiple links at remote locations. Retain end-to-end visibility of network performance and end-user experience for troubleshooting and problem resolution.

### Reduced Costs

Maximize the use of redundant and lower cost connectivity options with zero-touch provisioning and centralized management to reduce the cost of deploying and maintaining hybrid WAN networks (MPLS and Internet) and hybrid architectures—on premises, private cloud (for example, VMware), and public cloud (for example, AWS and Azure).

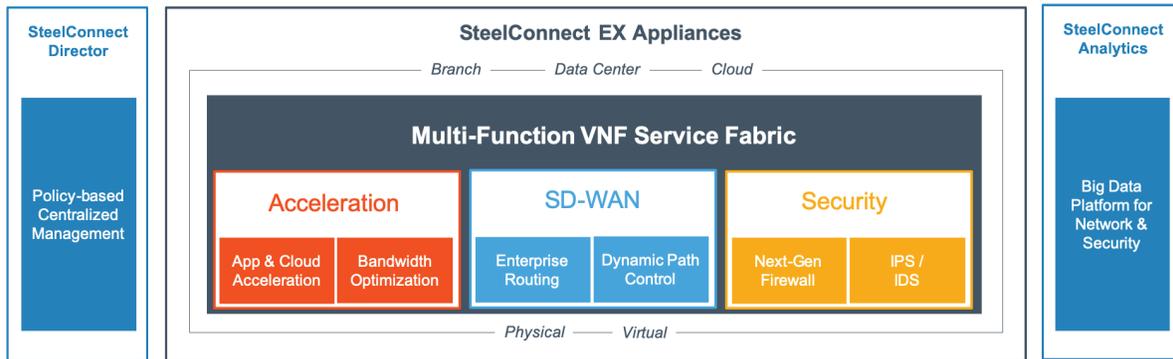
# Solution Components

## SteelConnect EX

Riverbed SteelConnect EX provides the broadest set of software-based networking and security including:

- Advanced routing, SD-WAN, CGNAT, NGFW, UTM
- Appliance, VM, DC/private/public cloud deployments
- Zero-touch provisioning (ZTP) for IT workflow simplification
- Dynamic application-based traffic steering
- End to End segmentation and encryption
- Integrated hypervisor for hosting 3rd party network or security services

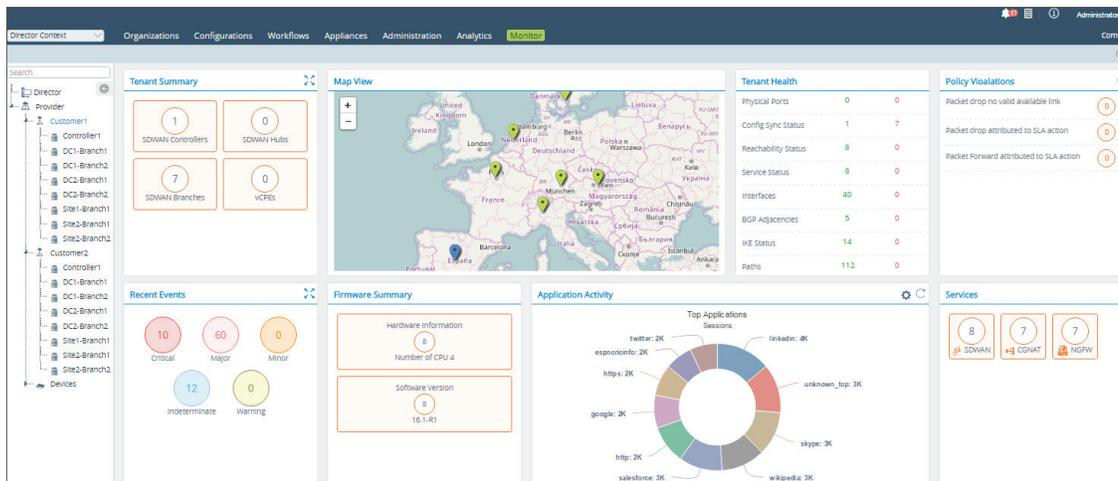
### SteelConnect EX Solution Components



## SteelConnect Director

The SteelConnect Director provides the essential management, monitoring and orchestration capabilities needed to deliver software-defined services from a centralized console. The services include:

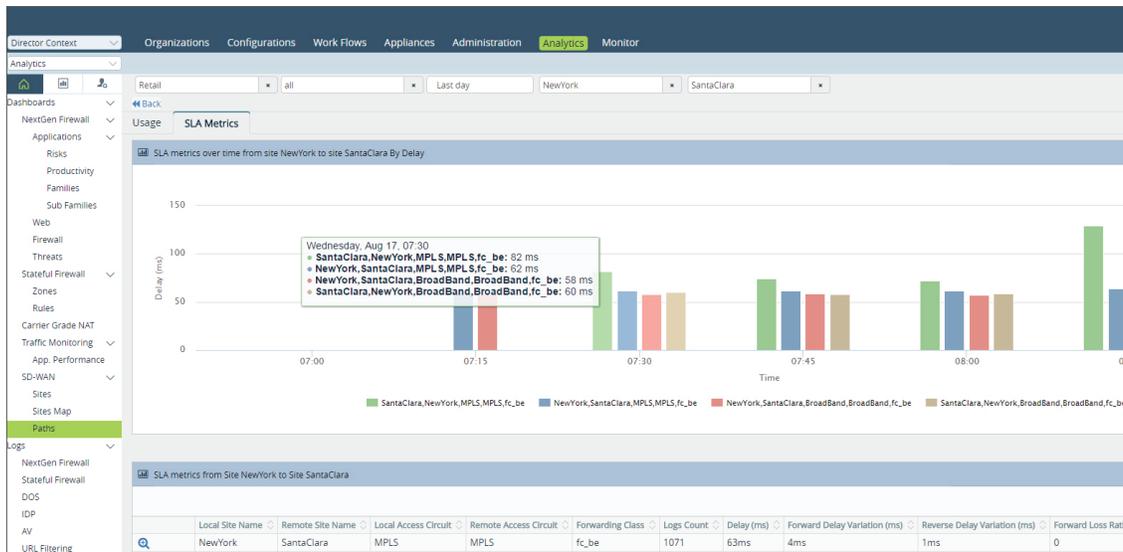
- Life-cycle management and CRUD operations
- Multi-tenancy, multi-organizational support and management
- Centralized application policy management
- Integrated with 3rd party Orchestration, SDN and Management tools
- Multi-Service chain definition, deployment and management of physical and virtual services



## SteelConnect Analytics

SteelConnect Analytics is a big data solution that provides real-time and historical visibility, baselining, correlation, prediction and closed-loop feedback for SteelConnect EX software- defined solutions. The key features include:

- Policy driven data logging framework
- Real-time and Historical traffic usage and anomaly detection
- Reporting for multiple network and security services
- Multi-organizational reporting
- 3rd party Application and monitoring tool integration



### About Riverbed

Riverbed enables organizations to maximize performance and visibility for networks and applications, so they can overcome complexity and fully capitalize on their digital and cloud investments. The Riverbed Network and Application Performance Platform enables organizations to visualize, optimize, remediate and accelerate the performance of any network for any application. The platform addresses performance and visibility holistically with best-in-class WAN optimization, network performance management (NPM), application acceleration (including Office 365, SaaS, client and cloud acceleration), and enterprise-grade SD-WAN. Riverbed's 30,000+ customers include 99% of the *Fortune* 100. Learn more at [riverbed.com](http://riverbed.com).

