SteelConnect

The Future of Networking is here. It's Application-Defined for the Cloud Era.

SD-WAN | Cloud Networks | Branch LAN/WLAN

The Business Challenge

Delivery of applications is becoming more complex for the enterprise. Businesses want to deliver more and richer applications like video, collaboration, and cloud services. Network architects are struggling to provide more bandwidth while ensuring application performance, and juggling security concerns such as URL filtering and securing connectivity with VPNs.

In the past, IT had to worry about only local branch and data center applications and, more recently, SaaS as well as IaaS clouds. Now enterprise edges—fragile and insecure—have become communication hubs, where IT must make rapid decisions around the right transport paths to balance performance, availability, costs, and security for applications.

And users—impressed by the agility and ease of use of consumer applications like Dropbox, email, and ample bandwidths at home—are now demanding that enterprise IT deliver applications, services, and changes at the same pace and quality.

IT organizations need to respond—easily, fast, and cost-effectively—better managing applications of all kinds, networks, clouds, and users while meeting the imperative for lower expenses and costs, user productivity, and business agility resulting in new opportunities and increased revenues.

Riverbed Application-Defined SD-WAN

Riverbed is the first to bring Application-Defined Networking for the Cloud Era. With Riverbed's Application-Defined Networking, the network environment adapts to the application requirements. IT then can manage network segments that are part of SD-WAN's unified networking fabric (WANS/LANS/Cloud), optimize and accelerate apps, and see into and troubleshoot application and network performance based on that application intelligence. As a result, Riverbed can deliver enterprise- level Visibility, Optimization, and Control over any network to any cloud or users no matter where they work.

Riverbed uniquely delivers these capabilities:

- SD-WAN
- Cloud Connectivity
- Cloud Managed LAN
- WAN Optimization
- Cloud Visibility

SteelConnect

Design first. Deploy when ready. Change with ease.

SD-WAN | Cloud Networks | Branch LAN/WLAN

Riverbed® SteelConnect™ is the cornerstone of Riverbed's strategy for next-generation, application-defined enterprise networking. SteelConnect is a complete SD-WAN system for securely connecting users and business to the applications they need, wherever they reside—on a remote LAN, in a data center, or in the cloud.

SteelConnect offers several differentiators—ubiquitous and unified connectivity across LAN, WAN, and the Cloud; business aligned orchestration for fast, agile, and secure application delivery; and unique cloud-centric workflow, easy menu-driven network design of sites, zones, uplinks, and rules, and centralized, business intent-based policy management—all within a simple graphical user interface—for ease of use and greater business agility.

SteelConnect provides:

- WAN optimization and SD-WAN capabilities

- Identification and classification of over 1300 applications with deep packet inspection

- Optimization and acceleration of applications—on premises and cloud—leveraging data (scalable data referencing or SDR), transport, and application streamlining

- Centralized network management capabilities based on a single intent-and user-based "plain-language" global business policy

- The ability to enforce application policy (path quality, path selection, network QoS, and security)

- Pre-defined Application Groups (for example, business critical) for traffic path rule and security policy creation, as well as scalability with fewer policy rules. Add custom applications and leverage a constantly updated catalog of public applications to identify applications for advanced classification

- Instant, single-click provisioning to the cloud with SteelHead™ CX for Cloud to automate cloud networking and accelerate cloud performance

- Automated zero touch provisioning of devices

- Dynamic Native Routing – branch- and WAN-side— to eliminate routers and reduce complexity

- Path monitoring and quality-based, Hybrid WAN path selection

- Integrated and third-party security providers

- Scalability (up to a 1000 branches/sites)

- Cloud (AWS and Microsoft Azure) and self-hosting in a physical or virtual data center (for example, VMware)

- End-to-end visibility with unified views, plus reporting and troubleshooting of application and network performance

With SteelConnect, Riverbed is integrating its centralized, policy-based management and core SD-WAN capabilities with its industry-leading network and application optimization, enterprise-class scalability and end-to-end visibility into clouds, thus extending Riverbed's Application-Defined Networking and End-to-End Unified Visibility for large-scale enterprises.

SD-WAN and WAN Optimization

Riverbed SteelConnect and SteelHead appliances integrate SD-WAN and WAN optimization, thus providing SD-WAN to the installed base of SteelHead CX xx70s appliances and WAN optimization to users of SteelConnect SD-WAN while maintaining end-to-end application centricity.

SteelConnect SD-WAN and WAN Optimization for data center deployments helps enterprises with highly complex infrastructures requiring high throughput and high availability for resilience.

The SteelConnect SDI-5030 Data Center Gateway appliance enables seamless and large-scale deployment of SD-WAN with support for horizontal scale and high-availability clustering.

With the new SteelConnect SDI-5030 Data Center Gateway appliance, Riverbed is leveraging its industry experience, integrating WAN optimization services into many of the most complex and secure data center networks in the world, to provide a seamless and scalable solution for unifying connectivity between remote sites, data centers and cloud environments.

While other solutions can require thousands of line of configuration updates and/or firmware upgrades to core data center routers, Riverbed SD-WAN leverages the Interceptor appliance to non-disruptively integrate

SD-WAN and WAN Optimization services into hybrid networks—without complex router configuration and without data center router rip and replace or upgrade.
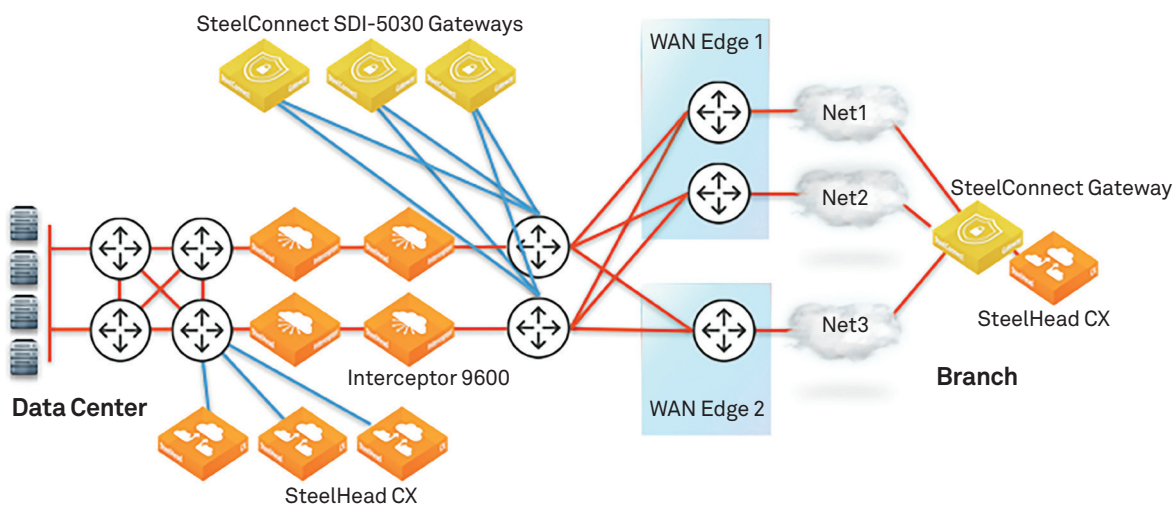
SteelConnect for data center deployments includes SteelConnect Manager, SteelConnect SDI-5030 Gateway, Interceptor 9600, and SteelHead CXxx70s, plus integrated SteelCentral™ Insights for visibility. The branch side includes a SteelHead appliance and a SteelConnect physical or virtual Gateway.

SteelConnect Data Center Improvements SDI-5030 Gateway

The new SteelConnect SDI-5030 Gateway offers enterprise-class SD-WAN for large-scale deployments with Microsoft Azure and Amazon Web Services (AWS) integration and high availability (hardware and software).

It offers support for complex networks (for example, split data centers and split campuses); n+k HA (with a minimum 2 SDI-5030s plus one redundant SDI-5030); higher throughput up to 5 Gbps; and redundant power supplies, all in a 1RU appliance. The new SteelConnect Gateway SDI-1030 delivers up to 1 Gbps throughput at edge locations.

SteelConnect Data Center Deployment

SteelConnect SDI-5030 Gateways — WAN Edge 1 — Net1 — Net2 — Net3 — SteelConnect Gateway — SteelHead CX — Branch — Data Center — Interceptor 9600 — SteelHead CX — WAN Edge 2

Scalability and SD-WAN with Interceptor

Interceptor 9600 integrates with SteelConnect to combine Interceptor's load balancing and SteelConnect's traffic redirection functionality. Interceptor facilitates complex network integration without complex router configuration changes for SD-WAN and keeps the in-path devices fast, simple, and robust. Interceptor offers the same well-known graceful failover options as before (dual, quad, octal 1GbE or 10GbE with both fail-to-wire and fail-to-block options), thus enabling SteelConnect to perform at an enterprise-level. The addition of SD-WAN functionality is a free upgrade, and no additional license is required.

High Availability for Branch Gateways

SteelConnect offers high availability gateways for the branch, including the SDI-130, SDI-130W and SDI-330. The gateways must be paired—with one reserved for redundancy. High availability is also ensured through data center high availability via clustering of the SteelConnect SDI-5030 Gateway, load balancing of links, and path selection to failed links.

Single-Click Cloud Connectivity

SteelConnect's single click cloud connectivity capabilities allow customers to automate cloud networking and accelerate cloud performance. SteelConnect offers elegant AWS Virtual Private Cloud (VPC) and Azure VNET management and interconnects physical networks to VPCs in seconds. It securely connects sites, branches, and users to AWS or Azure and delivers unified policy across regions and multiple clouds. Now you can add cloud optimization (app acceleration) with the click of a button.

SteelConnect vGateway orchestrates SteelHead for Cloud in a virtual private cloud (VPC) and auto discovers the cloud SteelHead. The design supports high availability and fault tolerance with redundant instances deployed. It can be used for cloud-to-cloud optimization and enterprise data center/ branch-to-cloud optimization.

Integrated Visibility – SteelCentral Insights for SteelConnect

SteelCentral™ Insights for SteelConnect integrates with SteelConnect to provide visibility into what is occurring in SteelConnect software-defined WAN environments. SteelCentral Insights collects data from SteelConnect Manager securely using SteelFlow™ (a Riverbed-specific form of NetFlow) and REST APIs.

SteelCentral Insights for SteelConnect uses this data to provide visibility into usage and availability about your overall network, specific sites, servers, applications, and users. With this information, network managers can make informed policy and deployment decisions, monitor and troubleshoot performance issues for large-scale software-defined infrastructure using detailed reports, and then plan for changes. For example, the Site Summary shows overlay and underlay views, QoS class breakdown of the traffic, top users and top site interactions.

Visibility is crucial for effective SD-WAN deployment and operation. The ability to validate policies are working as expected, troubleshoot problems quickly, and plan for changes can help ensure the success of your SD-WAN environment.

SteelConnect Dynamic Native Routing

SteelConnect can coexist with branch (customer edge) routers or replace the router with SteelConnect's native routing, thus eliminating time spent manually coding CLI for the legacy router configuration.

SteelConnect is adding WAN-side routing—eBGP (path vector) protocol, followed by OSPF—to deal with MPLS complexity and LAN side routing OSPF, followed by iBGP for reducing branch routing complexity. By using SteelConnect gateways as routers, customers benefit from SteelConnect's ability to eliminate network complexity with its design-first approach and centralized, policy-based management.

Path Quality Monitoring and Quality-Based Path Selection

SteelConnect's monitoring of the path quality provides visibility into the quality of each path in the overlay network including virtual paths, like QoS traffic classes, and reports on exceptions, as long as there are existing SLAs governing service expectations. There is minimal impact to customer traffic and gateway packet-rate performance.

With Quality-Based Path Selection, SteelConnect can define the application's path based on any of the following: global or site; sources such as zones, users, groups, and tags; destination; and guaranteed return path.

Using VPN maintenance packets with enhanced headers, SteelConnect can make path decisions based on maximizing application service needs, including link status, packet loss, latency, and jitter.

Path selection identifies applications using DPI-based application awareness to distinguish between business-critical and recreational traffic. Using a single global policy, you can map applications to the appropriate paths available across SD-WAN and hybrid networks and, in the case of performance issues, dynamically reroute applications to ensure no impact to users. Path Selection is simple to deploy based on a single, easy-to-use global policy—without doing complex and tightly coupled router configurations.

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.

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).

Performance

Deliver superior application performance to your business with industry-leading WAN optimization, end-to-end unified visibility with industry-leading APM and NPM, scalability, high availability, dynamic native routing, integrated and third-party security, and cloud and self-hosting management—all from Riverbed.

Security

Leverage secure network services and integrated firewall capabilities to ensure the secure delivery of all applications across your hybrid enterprise. Securely identify and manage the performance of today's modern and encrypted applications running over SSL, TLS, and HTTPS. Easily leverage unified security views and app-and user-based security policies.

SteelConnect Product Components

- **SteelConnect Manager**: A cloud-based, multi-tenant management portal hosted as a service within popular clouds—Amazon Web Services, Azure, and others, as well as self-hosted, that is, a physical or virtual appliance on the customer's premises or in the customer's private cloud, such as VMware. It provides a simplified workflow for designing and deploying networks, and features Rest APIs for northbound traffic

- **SteelConnect Gateway**: A line of physical and virtual secure WAN gateways that provide basic network services to zones, as well as policy enforcement, extended reporting, and automated VPN with state-of-the-art security

- **SteelConnect Switches**: A line of remote switches that automate LAN deployment, automate network trunking, eliminate manual configuration errors, enhance security with reduced attack surfaces, drive traffic prioritization for network availability with QoS, and enable cloud stacking through port management across the entire network as if working with a single switch

- **SteelConnect Access Points**: A line of access points that enable enterprise-class, multi-site Wi-Fi for visitors, employees, and the Internet of Things (IoT)

SteelConnect is built from the ground up for maximum performance and offers quick boot time, maximum throughput, and a fanless design. SteelConnect is available now, with feature enhancements released throughout the remainder of the year.

For more information about Riverbed SteelConnect SD-WAN, please visit: Riverbed.com/steelconnect. If you would like to test drive SteelConnect SD-WAN, please click here.

About Riverbed

Riverbed enables organizations to modernize their networks and applications with industry-leading SD-WAN, application acceleration, and visibility solutions. Riverbed's platform allows enterprises to transform application and cloud performance into a competitive advantage by maximizing employee productivity and leveraging IT to create new forms of operational agility. At more than $1 billion in annual revenue, Riverbed's 28,000+ customers include 97% of the *Fortune* 100 and 98% of the *Forbes* Global 100. Learn more at riverbed.com.

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