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 2.0 provides:

- WAN optimization and SD-WAN capabilities

- Identification and classification of over 1300 applications with deep pack 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 later 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 2.0, 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

SteelConnect and SteelHead integrate with an automatic and seamless service chain for SD-WAN and WAN optimization, thus providing SD-WAN to the installed base of SteelHead CX xx70s and WAN optimization to users of SteelConnect. The product provides a smooth transition from WAN Optimization to Hybrid Networking to SD-WAN. CX xx70s specifically address current enterprise needs and initiatives like cloud and SaaS with 5x more bandwidth, 100% of limit for Secure Socket Layer (SSL) connections without performance impact, direct Internet optimization and latest SaaS acceleration and 100% Solid State Drives (SSD).

With SteelConnect 2.0, users have app-aware integration with SteelHead CX xx70 and SteelConnect on the new Riverbed SteelOS runtime environment. SteelConnect Manager and SteelConnect virtual gateway (as a VM) on SteelOS will include basic SD-WAN services and hybrid networking (path selection, QoS and next-gen firewall) and will not require any additional license for WAN optimization. It offers the maximum in flexibility and branch sizing. The SteelHead will provide WAN Op with SDR (data compression), SaaS/cloud acceleration, and web proxy. SteelOS employs a modular software infrastructure, allows in service software upgrades, and provides flexible service chaining and ultra-fast data path.

SteelConnect Data Center Improvements SDI-5030 Gateway

The new SteelConnect SDI-5030 Gateway offers enterprise-class SD-WAN for large-scale deployments with Azure integration, Amazon Web Services (AWS) high availability and AWS SteelHead for Virtual provisioning. It offers higher throughput than existing SteelConnect gateways and support for complex networks (for example, split data centers and split campuses); 1+1 high availability, up to 10 Gbps throughput; and 1 RU redundant power supplies. The new SteelConnect Gateway SDI-1030 delivers up to 1 Gbps throughput at edge locations.

Scalability and SD-WAN with Interceptor

Interceptor 9600 integrates with SteelConnect to combine Interceptor's load balancing and SteelConnect's traffic re-direction functionality. Interceptors facilitate complex network integration without complex router configuration changes for SD-WAN and keep 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 license is additionally required.

High Availability for Branch Gateways

SteelConnect is now offering 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 Deployment

SteelConnect with single click cloud deployment capabilities allow customers to automate cloud networking and accelerate cloud performance. SteelConnect offers elegant AWS Virtual Private Cloud (VPC) management and interconnects physical networks to VPCs in seconds. Now you can add Cloud Optimization (app acceleration) with click of a button.

SteelConnect orchestrates SteelHead CX for Cloud in a VPC and auto discovers SteelHead CX for Cloud via AWS route table manipulation. The design for SteelHead CX for Cloud supports High Availability. It can be used for cloud-to-cloud optimization and enterprise data center/ branch to cloud optimization.

SteelCentral Visibility Integration NetProfiler

SteelConnect 2.0 will include support for Riverbed SteelFlow export (all flow data) to SteelCentral NetProfiler, enabling SteelConnect and SteelCentral NetProfiler to communicate and exchange information with each other.

With SteelCentral NetProfiler, IT has a centralized, dynamic view and understanding of an enterprise's application and SD-WAN performance environments. SteelCentral NetProfiler provides analysis of the flow data into information reports and problem–focused troubleshooting. It now offers path quality and QoS reporting with events overlaid on reports and four SteelConnect SD-WAN specific views and reports: Organization, Site, Application, and User Summary. This enables you to understand minute-by-minute consumption of applications; report application-specific performance by network, site, and user; and make path and quality of service decisions quickly.

SteelConnect Dynamic Native Routing

SteelConnect now 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 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. Utilizing 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. It 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.
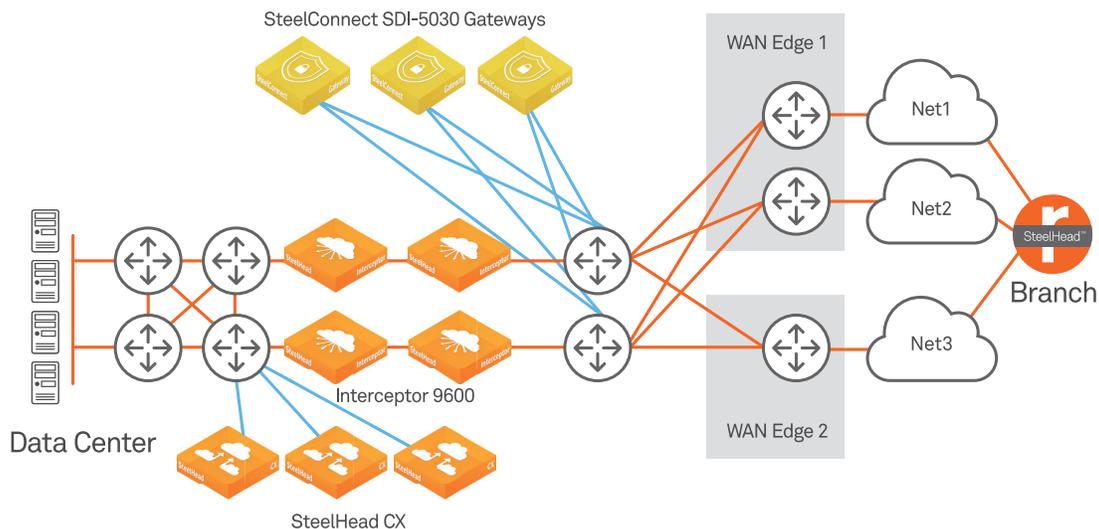
Security

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 2.0 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 than enable enterprise-class, multi-site Wi-Fi for visitors, employees, and the Internet of Things

The product is built from the ground up for maximum performance and offers quick boot time, maximum throughput, and a fanless design. SteelConnect 2.0 will be available starting October 2016, with feature enhancements released throughout the remainder of the year.

SteelConnect Data Center Solution

riverbed®