Silver Peak and Aerohive Networks Solution Brief

Building an end-to-end enterprise network with Aerohive Networks, Silver Peak and Dell EMC Networking.

Digital transformation and the rapid adoption of mobility, IoT and BYOD challenge IT in connecting and managing devices and users quickly and securely based on business intent. Legacy WANs are complex to manage and inherently incapable of supporting the business agility that is prized in the context of digital transformation, which compounds the challenge of connecting users to applications across the distributed enterprise.

The network connects users, devices and applications, and the ability to incorporate business intent like security, performance and availability requirement is critical in order to maximize business outcomes. For example, enterprise networks typically serve multiple applications, each with specific requirements for service level, security and topology. Therefore, to support digital transformation and business agility, the network must be application-driven with a software-defined approach. Since most employees and customers are served at branch offices, the ability to centrally define, apply and manage policies across the entire enterprise is necessary to deliver agile and reliable network services.

End-to-end
NETWORK SEGMENTATION

High-bandwidth
WAN TO MATCH WAVE 2 AP'S STAT

Joint solution
OFFERED BY DELL EMC

Solution

Aerohive Networks and Silver Peak solutions, together deliver a software-defined branch network architecture that is flexible, adaptable, open and cost-effective, all interconnected using Dell Networking's N-Series enterprise switching products.

Access	Wide Area
Adaptable access to provide wireless-first connectivity	High-performance, secure, real time visibility and extensibility to reduce cost
Aerohive NETWORKS	silver peak™
SD-LAN	SD-WAN

In this model, both the LAN and WAN are application-driven and software defined, enabling IT to manage the needs of the business in an efficient way. The software-defined LAN (SD-LAN) approach manages applications, devices and users on the wired and wireless infrastructure in the branch, while the software-defined Wide Area Network (SD-WAN) manages applications and connectivity on the WAN between branch offices, the corporate data center and the public cloud.

The unified architectural advantages of the solution include:

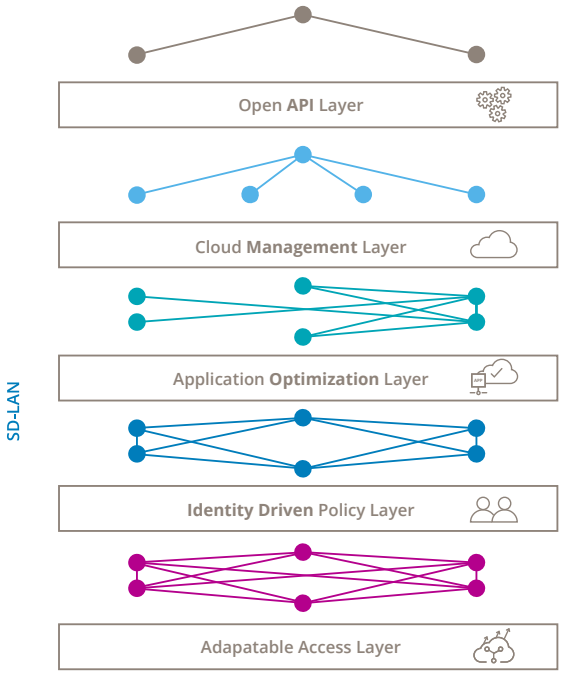
- Centralized management for Wi-Fi, LAN and WAN
- Virtual networks in all domains ensuring traffic isolation
- High Wi-Fi/LAN bandwidths maintained thru business-class internet in the SD-WAN

This unified architecture results in a number of positive impacts for the business:

- Increased network performance resulting in improved application performance
- High-reliability with easy, automated provisioning of the infrastructure
- Maintaining security from client-edge to WAN-edge

A closer look at each technology.

Aerohive Networks delivers fast Wi-Fi access points that are Cloud managed, with an underlying SD-LAN architecture that creates an application and policy—driven wired and wireless network. This results in self-organizing and centrally managed networks that are simpler to operate, integrate, and scale. SD-LAN redefines the access network with five layers:



Enterprise-grade switches and Wi-Fi access panels

The application-driven SD-LAN prioritizes and dynamically changes the performance and behavior of the network, delivering network resources to users and applications in order to best meet the business objectives. Granular authentication uses policy and context to dynamically define which users, clients and devices can connect to the SD-LAN and the resources they are authorized to access. Access can be granted and revoked for all

users and devices or just for one. The physical access layer of the SD-LAN leverages adaptable control protocols, dual-5GHz access points and high capacity switches to deliver a self-optimizing, self-correcting and self-organizing network in the branch. A cloud-hosted management system (available to deploy in a public cloud, private cloud, or on-premises mode) provides simplified, centralized management of the wired and wireless SD-LAN. The SD-LAN APIs make the network infrastructure part of the application infrastructure, enabling the network to provide new insights as it responds to application requirements.

Dell Networking N-Series switches provide energy-efficient and cost-effective 1/10GbE switches designed for modernizing and scaling network infrastructure. The switches utilize a comprehensive enterprise-class Layer 2+ feature set, deliver consistent, simplified management and offer high-availability device and network design. Aerohive HiveManager NG provides a centralized, user friendly configuration, monitoring, troubleshooting and cloud management tool for Dell N-Series switches and Aerohive Access Points from a single pane of glass.

The Silver Peak Unity EdgeConnect SD-WAN solution delivers predictable application performance over any combination of WAN transport services including low-cost consumer broadband. EdgeConnect enables network managers to define business intent overlays – logical or virtual WAN overlays that reflect application QoS and security requirements relevant to the business.

Unity Orchestrator, part of EdgeConnect, orchestrates application-driven security policies enabling direct internet breakout on an app-by-app basis for trusted SaaS and web applications. Fully compatible with existing WAN infrastructure, EdgeConnect provides a graceful migration to an SD-WAN and ultimately to the Thin Branch, simplifying the WAN architecture. EdgeConnect high-performance SD-WAN solutions improve business productivity and customer responsiveness while significantly lowering WAN OPEX and CAPEX.

Overlay	Application	Virtual Topology	WAN Path	SLA	Path Conditioning	QoS	Security Policy	Boost
Real-Time	Cisco webex	Mesh	MPLS, Broadband, 4G LTE	1% Loss 150ms Jitter 300ms Latency	High Availability	Real Time	Trust	○
Credit Card Processing	VISA, DISCOVER, Square	Hub & Spoke	MPLS, Broadband	2% Loss 200ms Jitter 500ms Latency	High Throughput	Real Time	Trust	●
Enterprise Web Apps	Office 365, SAP, salesforce, workday.	Local Internet Breakout	Broadband, MPLS, 4G LTE	None	High Efficiency	Best Effort	Stateful Firewall	○
Guest WiFi	Wi Fi	Local Internet Breakout	Broadband Drop	None	High Efficiency	Best Effort	Send to SWG	○

Customer Success Story

Service King collision repair centers have grown from 49 locations in 2012 to more than 300 today. A key element of the Service King business model is centralized business functions such as claims processing and parts ordering. Each repair center relies on a WAN connection to the headquarters'-based data center. To keep pace with expansion and to boost WAN performance, Service King implemented a Silver Peak SD-WAN solution, Dell Networking switches and Aerohive SD-LAN solutions. The combined solution delivers a number of benefits that improve business productivity.

PRODUCTS

- Aerohive AP250 802.11ac access points
- Aerohive HiveManager NG
- Dell Networking N2048 1GbE switches
- Dell Networking S-Series switches
- Silver Peak Unity EdgeConnect SD-WAN Solutions

TECHNOLOGY CHALLENGE

Service King Collision Repair Centers wanted to support rapid growth and excellent customer service by enhancing its network to accelerate expansion, quickly bring new locations online, realize cost savings, and increase performance, redundancy, and security.

SOLUTION

The company implemented a Silver Peak SD-WAN solution to go with its Dell Networking technologies across its 300+ locations and also plans to add a Dell Aerohive wireless solution.

BUSINESS BENEFITS:

- Boosts network and application performance at more than 300 locations
- Improves application availability
- Enables double-digit cost reduction
- Improves application security and redundancy
- Supports future growth

Company Address

Silver Peak Systems, Inc
2860 De La Cruz Blvd.
Santa Clara, CA 95050

Phone & Fax

Phone: +1 888 598 7325
Local: +1 408 935 1800

Online

Email: info@silver-peak.com
Website: www.silver-peak.com