Sangfor SD-WAN

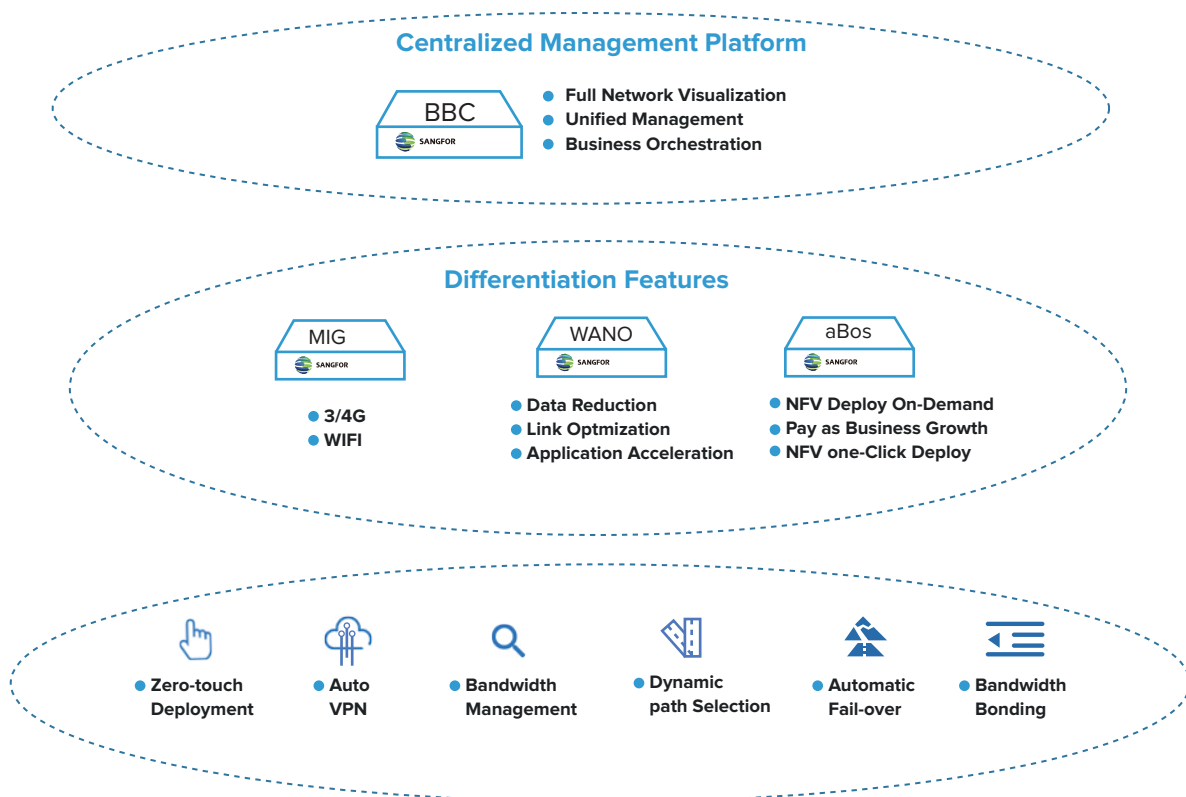## Sangfor Battlecard for Silver Peak

SANGFOR

Company Overview

Sangfor Technologies is a leading global vendor of IT infrastructure solutions specializing in Cloud Computing, Network Security and Network Optimization. A number of Sangfor products are listed in Gartner Magic Quadrant for WAN Optimization, Enterprise Network Firewalls and Secure Web Gateways, proving Sangfor's powerful WAN optimization and network security capabilities. With a primary focus on Asian market until recently, Sangfor's products are developed internally and trusted by customers in a wide array of key verticals and Sangfor is the #1 vendor in China for the WAN Optimization and VPN market.
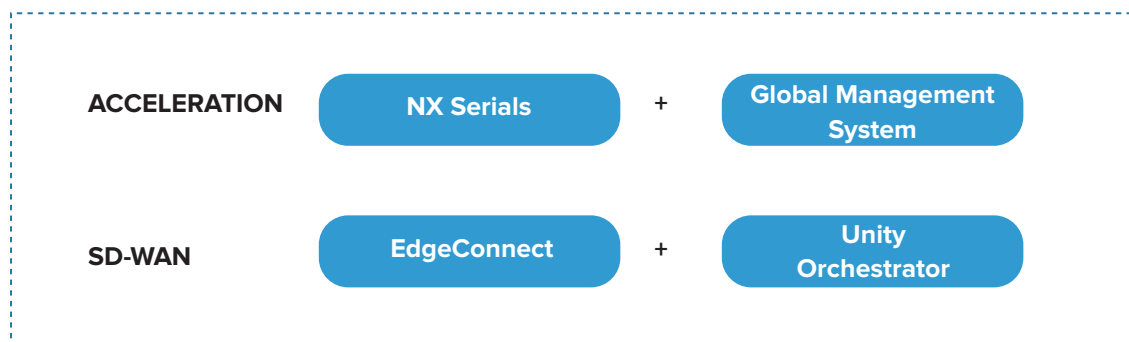
Silver Peak primarily develops products for wide area networks (WANs) with Its technology augmenting or replacing Multiprotocol Label Switching (MPLS) networks with secure Internet connectivity, marketed as an SD-WAN. After David Hughes founded Silver Peak in 2004, it's first product, the NX-series hardware appliance, was shipped in September 2005, while their first SD-WAN solution, EdgeConnect, was first made available in June 2015.

WAN Solution Overview

Sangfor provides SD-WAN and acceleration (WAN optimization) features, 2-in-1 product WANO, NFV (security & acceleration), deploy on-demand aBOS, NGFW and their centralized management product BBC, to comprehensively manage all Sangfor network products for enterprises, providing a one-stop centralized management solution for the issues of network connectivity, transmission and security.

Centralized Management Platform

BBC
SANGFOR
- Full Network Visualization
- Unified Management
- Business Orchestration

Differentiation Features

MIG
SANGFOR
- 3/4G
- WIFI

WANO
SANGFOR
- Data Reduction
- Link Optmization
- Application Acceleration

aBos
SANGFOR
- NFV Deploy On-Demand
- Pay as Business Growth
- NFV one-Click Deploy

- Zero-touch Deployment
- Auto VPN
- Bandwidth Management
- Dynamic path Selection
- Automatic Fail-over
- Bandwidth Bonding

Silver Peak provides WAN optimization and SD-WAN solution as two separate products and uses two different centralized management platforms. Silver Peak has limited security capability, requiring a third-party security vendor to satisfy any deeper-level customer security requirements.

| ACCELERATION | NX Serials | + | Global Management System |
| SD-WAN | EdgeConnect | + | Unity Orchestrator |

Solution Competition Overview

Standard: N/A 1, Poor 2, Normal 3, Good 4, Excellent 5

— Sangfor — Silver Peak

Reference: https://www.silver-peak.com/products/wan-optimization/nx-physical-appliances

Reference: https://www.silver-peak.com/sites/default/files/infoctr/silver-peak-datasheet-edgeconnect_sd-wan-family-0918_0.pdf

Deployment

The Sangfor WANO product supports various network environments, gateways, single bridge/double bridge and single arm/double arm, not requiring any network changes in bridge mode for customers to upgrade their network to the SD-WAN solution. Sangfor WANO provides simplified deployment using a zero-touch feature via email, simply requiring the IT manager to pre-config in the centralized management platform (BBC) and send a URL link containing the configuration to branch users. Branch users simply connect their PC to the device and click the email link to import the configuration. It is suitable for new internet environments and any average branch user can

Silver Peak NX serials only support in-line bridge mode and out-of-path mode, meaning if one site deploys an NX device they also require a gateway device, even in small branches, increasing customer device costs and single point failure risk.

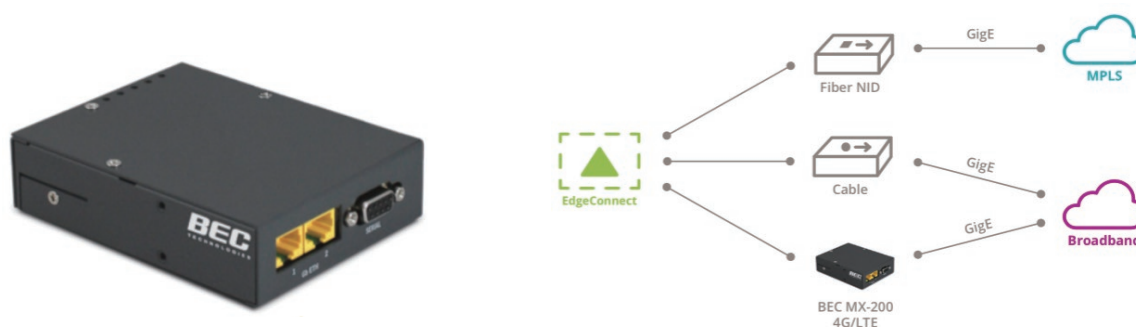| Deployment	
In-line Bridge Mode	In-line between L2 switch and WAN router with fail-to -wire in case of failure
Out-of-Path(Router)Mode	Attached to WANrouter out-of-path with PBR re-direction,WCCP,and VRRP

The Silver Peak EdgeConnect device only supports in-line router mode, requiring replacement of the original gateway device or significatn network changes. EdgeConnect provides a zero-touch feature which requires network and DHCP. SD-WAN edge must obtain a IP address from DHCP server and then synchronize with the cloud centralized platform. It is only suitable for internet ready environments.

Deployment	
In-line Bridge Mode	In-line as next-hop gateway at site perimeter,connected to a broadband internet modem for zero-touch provisioning eith wan hardening or stateful firewall

Integration Capability

For distant branches or stores with no internet cable, customers need 3/4G internet access. The Sangfor SD-WAN solution provides an integrated product MIG with SD-WAN features, integrating 3/4G USB broadband and WIFI, all in one small and reasonably priced appliance.
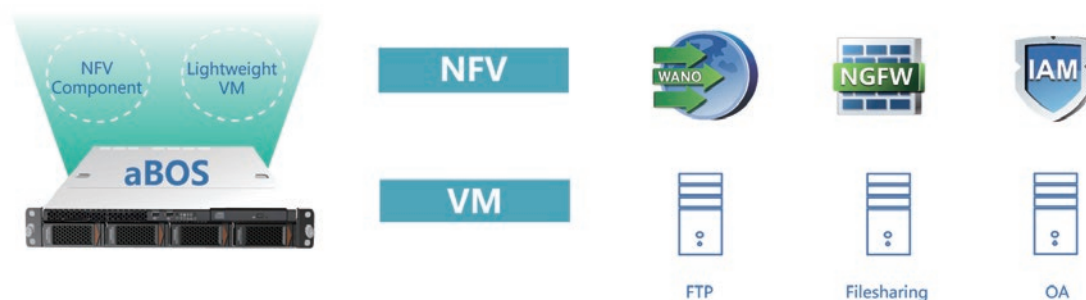
The Silver Peak solution provides 3/4G features by adding a 3/4G modem but without WIFI.

Scalability

For medium and large branches with multiple complex requirements (SD-WAN, acceleration and deep security), Sangfor provides aBOS, a pay-as-you-grow innovative device which supports NFV deploy on-demand and one-click deployment for all NFV.
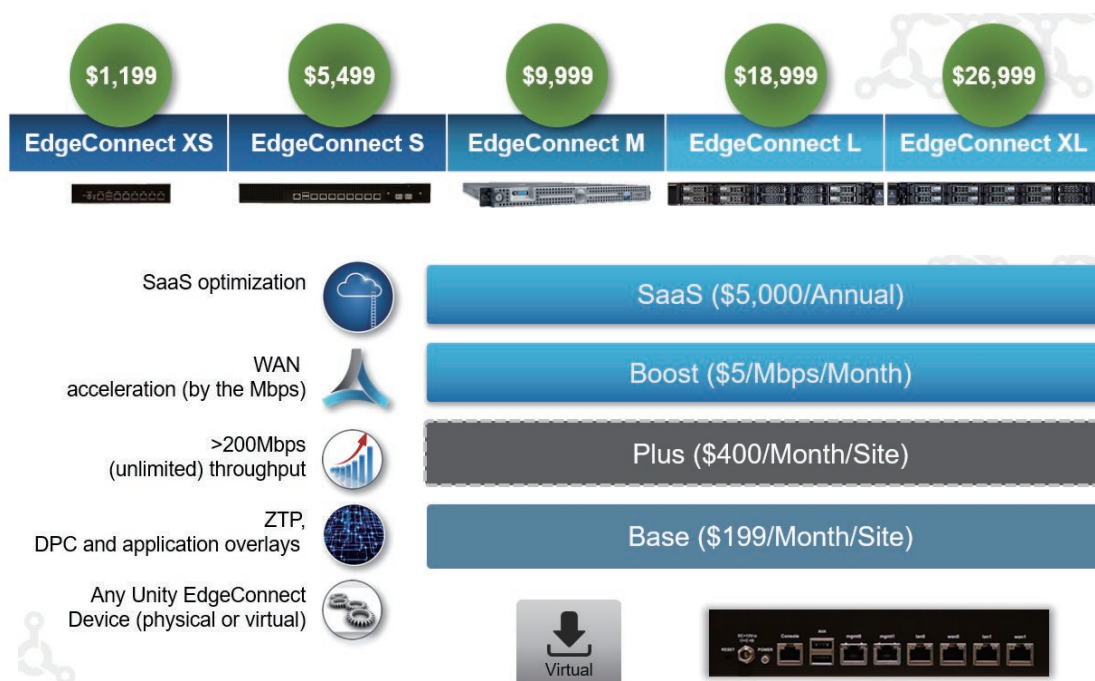
Silver Peak vNX serials and Unity EdgeConnect Virtual software requires cooperation with third-party vendors to satisfy complex customer requirements.

Price

The purchase of Silver Peak EdgeConnect includes hardware and software, with all software licenses requiring a separately billed subscription. For example, customers with a 10M site and 5M traffic who requires acceleration will pay the following amount for a 1 year software license:

Hardware 1199 + Base 199*12 + WAN acceleration 5*5*12 = $3884 USD

Sangfor SD-WAN products do not require a base SD-WAN license, keeping total cost low, especially for multi-year ROI comparison.

Sangfor	Optimization Bandwidth	Silver Peak	Optimization Bandwidth
S4000-QE-I	3M	NX700	2M
S5000-QE-I	6M	NX1700	4M
M5000-QE-I	15M	NX2700	10M
M5100-QE-I/M5200-W	30M	NX3700	20M
M5400-QE-I/M5400-W	60M	NX5700	50M
M5500-QE-I/M5500-W	100M	NX6700	100M
M5600-QE-I/M5600-W	200M	NX7700	200M
M58W	400M		
M59W	650M	NX8700	622M
M59WS	1.5G	NX9700	1G
		NX10700	2.5G
		NX11700	5G

Acceleration Scenario

Silver Peak	WAN Bandwidth	Boost Bandwidth
EC-US	1M-100M	25M
EC-XS	2M-200M	50M
EC-S	10M-1G	200M
EC-M	50M-2G	500M
EC-L	1G-5G	1G
EC-XL	2G-10G	5G

Sangfor	Model	Optimized Bandwidth	VPN Throughput
Small branch	MIG-1000/1000W	N/A	20M
	S4000-QE-I	3 Mbps	50M
	S5000-QE-I	6 Mbps	100M
Medium branch	M5000-QE-I	15 Mbps	100M
	M5100-QE-I	30 Mbps	150M
	M5400-QE-I	60 Mbps	300M
	M5500-QE-I	100 Mbps	350M
	M5600-QE-I	200 Mbps	400M
HQ/DC	M5200-WANO	30 Mbps	200M
	M5400-WANO	60 Mbps	350M
	M5500-WANO	100 Mbps	500M
	M5600-WANO	200 Mbps	800M
	M5800-WANO	400 Mbps	1G
	M5900-WANO	650 Mbps	1.4G
	M5900-WANO-S	1.5Gbps	3G