



## SILVER PEAK NX APPLIANCES



Disaster recovery, data center consolidation, virtual desktops, unified communications, cloud computing – nearly every major IT initiative today depends on a high performing and reliable wide area network (WAN). Yet all too often, limited WAN bandwidth, long distances, and network congestion prevent these initiatives from succeeding.

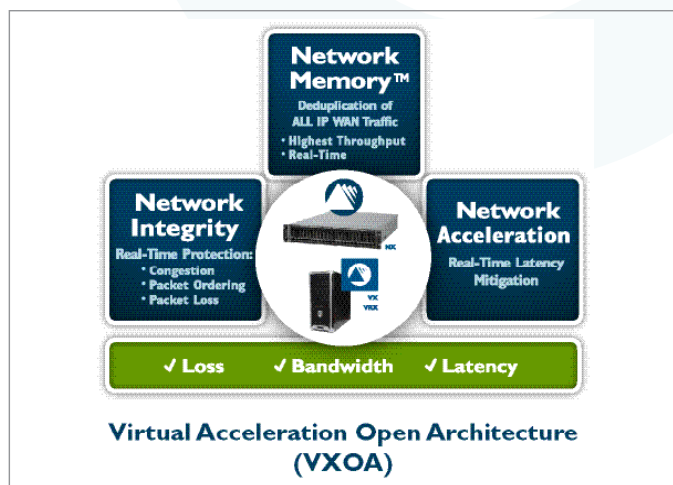
NX appliances use a variety of real-time network optimization techniques to overcome these common WAN challenges, resulting in maximum WAN performance with minimal ongoing bandwidth costs. With Silver Peak's application agnostic approach to WAN optimization, the company's NX appliances improve the performance of all applications running across the enterprise. With the industry's leading capacity, NX appliances are the most cost effective solution for distributed enterprises and high capacity networks. These characteristics make Silver Peak's NX appliances a true "data center class" solution, uniquely designed to meet the rigors of today's demanding enterprise.

## A UNIQUE NETWORK APPROACH TO WAN OPTIMIZATION

Silver Peak's NX appliances leverage the company's Virtual Acceleration Open Architecture (VXOA) to deliver Silver Peak's award winning optimization techniques in a purpose built plug and play platform. VXOA leverages various real-time network optimization working primarily at the network (IP) layer, which ensures the maximum performance across the widest range of applications and WAN environments. These techniques include:

**Network Acceleration:** Silver Peak mitigates the impacts of latency across the WAN by using various protocol acceleration techniques, including the adjustment of TCP window sizes, selective TCP acknowledgements, and CIFS read-ahead and write-behinds. These tools help to overcome protocol chattiness that can otherwise prevent applications from working properly over long distances.

**Network Integrity:** Silver Peak is the only WAN optimization vendor to properly address packet delivery issues common to shared WAN technologies, such as MPLS, internet VPNs, and cloud. This is achieved using adaptive Forward Error Correction (FEC) and Packet Order Correction (POC) to rebuild lost and out-of-order packets in real-time, advanced Quality of Service (QoS) techniques to prioritize traffic, and granular traffic shaping policies to guarantee network resources.



**Network Memory:** Silver Peak's patented solution for disk based WAN deduplication maximizes available WAN bandwidth across an enterprise. Network Memory inspects all traffic at the byte level and stores copies of content in high-capacity disk drives and SSDs. Advanced finger-printing techniques recognize repetitive patterns for local delivery, eliminating the transfer of duplicate data across the WAN for improved application performance and maximum WAN utilization. Cross-flow payload and header compression provide additional gains on first-time data transfers and non-repetitive traffic. Network Memory is the only deduplication solution that operates at the network layer, supporting all IP-based protocols and application versions (including SSL encrypted traffic).

## A "DATA CENTER CLASS" SOLUTION

**Accelerate all applications:** Silver Peak optimizes all IP traffic, regardless of transport protocol, latency sensitivity, or application version. This ensures the best Return on Investment (ROI) for WAN optimization.

**Industry's highest capacity:** The NX family of appliances scales from Mbps to multi Gbps of WAN capacity, with 500 GB to several TB of local data store for deduplication, and support for 8,000 to 512,000 simultaneous sessions per appliance. This is over five times (5x) the capacity of competing WAN optimization solutions, making Silver Peak the best solution for all enterprise locations, from small remote offices to the largest data center.



## Silver Peak Uniquely Optimizes All IP Applications Across a WAN

APPLICATION CATEGORIES:	EXAMPLES:
Backup and recovery applications	Asynchronous backup/replication tools from EMC, HDS, Dell, IBM, HP, NetApp, and other leading vendors.
Traditional TCP Applications	File sharing (CIFS, NFS, FTP, Apple), Email (MS Exchange, Notes, SMTP), MS Sharepoint, Web HTTP(s), SAP, and many more.
Non TCP applications	VMware VDI, Sunray, MIMIX, Aspera, FCIP, Voice/Video, VPLEX, and more.
Interactive applications	Virtual Desktop Infrastructures (VMware, Citrix, Microsoft, Sun, ...), SQL (Oracle, MS, MySQL, Sybase, Informix, IBM, ...)
Real-time applications	Voice over IP (VoIP), video conferencing, video streaming, and other unified communications.

## A Complete Solution for Enterprise WAN Optimization

CAPACITY	NX-11K	NX-10K	NX-9000	NX-8000	NX-7000
WAN Capacity (All Features)	5 Gbps	2.5 Gbps	1 Gbps	622 Mbps	200 Mbps
Certified Connections	512,000	512,000	256,000	256,000	128,000

Head End / Data Center

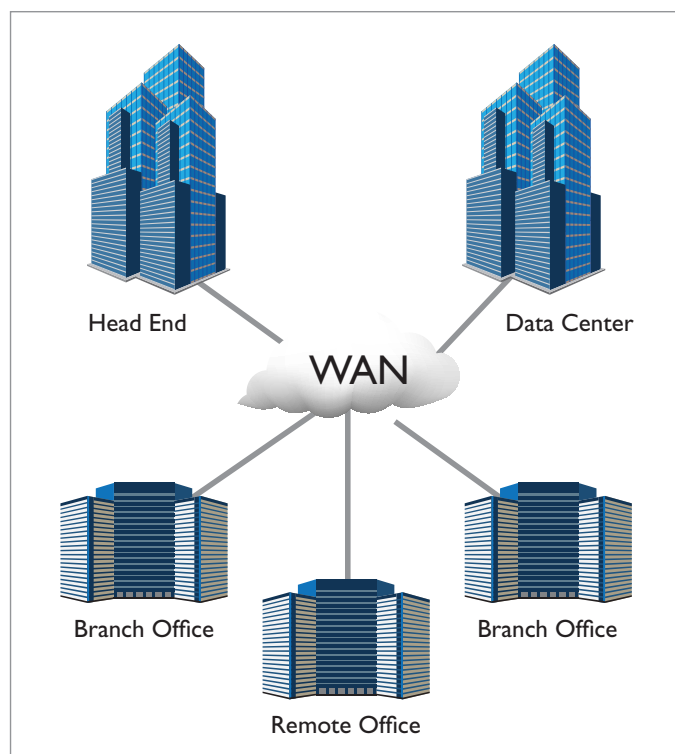
CAPACITY	NX-5000	NX-3000	NX-2000	NX-1000
WAN Capacity (All Features)	50 Mbps	20 Mbps	10 Mbps	4 Mbps
Certified Connections	64,000	64,000	64,000	8,000

Branch / Regional Office      Small / Remote Office



**Best performance on shared WANs.** As enterprises move to MPLS, Internet VPNs, and the cloud, packet delivery challenges are inevitable due to increased network and application congestion. This is especially problematic as voice, video, data and storage traffic are all converged onto a single network infrastructure. Only Silver Peak overcomes these challenges with the company's unique Network Integrity features, ensuring the best performance on shared WANs.

**Enterprise Grade Security:** Silver Peak uses AES encrypted disk drives to protect data stored on the NX appliance. IPSec encryption protects all data sent between appliances. Advanced algorithms ensure that data security is achieved with no impact on application performance.



## EASY TO DEPLOY, MANAGE AND OPERATE

NX appliances are standalone devices that seamlessly fit into any enterprise network, sitting between network resources and the WAN infrastructure that is used to connect them to remote users. Deployment of NX appliances requires absolutely no client, server, or application reconfiguration. (If virtual appliances are desired, Silver Peak's VX and VRX families offer the same functionality as the NX appliances in software-only platforms.)

**Flexible deployment options:** Silver Peak NX appliances can be deployed in-line between a WAN router and LAN devices such as Ethernet or FCIP switches, or out-of-path using Policy-Based- Routing (PBR) redirection, Web Cache Coordination Protocol (WCCP), or Virtual Router Redundancy Protocol (VRRP). Typical deployment takes less than 30 minutes per appliance.

**Easy to Configure and Manage:** An intuitive Graphical User Interface (GUI) simplifies network monitoring, policy provisioning, and device management. Powerful wizards simplify configuration of NX appliances. A full-featured CLI is available over the DB-9 console port or via SSH.

Larger deployments can easily be managed using Silver Peak's Global Management System (GMS), which is a cost effective platform for centrally managing distributed Silver Peak appliances. GMS contains intuitive templates for policy configuration and enforcement, making enterprise-wide roll out of the Silver Peak solution easy, efficient, and error free.

**Granular visibility and control.** When Silver Peak's Global GMS is deployed in conjunction with the NX appliances, IT administrators have detailed visibility into all aspects of application delivery across a distributed enterprise, including application behavior and WAN performance (bandwidth utilization, latency and loss). Real-time alerts assist with troubleshooting and historical reports ensure accurate ongoing analysis.

For more information, visit [www.silver-peak.com](http://www.silver-peak.com)

