

Network Storage Server (NSS) *HC Series SAN Appliances*

Intelligent storage virtualization

FalconStor[®] Network Storage Server (NSS) HC Series SAN Appliances deliver enterprise-level Fibre Channel (FC) and iSCSI storage with dual controllers for full redundancy, and offers virtualization, provisioning, high performance, and centralized storage management for today's medium and large organizations.

Highlights

Dual controller active/active high availability (HA) with low-cost scalability

The only SAN able to virtualize other iSCSI or FC SANs

- > High return on assets: Enables latest storage services out of legacy storage investments
- > No vendor lock-in: Real-time data migration by synchronous mirroring
- > Scale at a minimum cost: Scalable up to 224 or 448 HDDs by SAS or SATA

I/O acceleration with SSD, SAS, and SATA tiering

WAN-optimized replication

- > Cost-efficient: Replicates only sector changes with compression support
- > Adaptive: Automatic switching between continuous and delta replication modes
- > Resilient: Built-in quality of service (QoS) and network throttling support

VMware vCenter Site Recovery Manager support with failback automation

Microsoft Windows Server 2008 multi-site cluster support with Microsoft Hyper-V

Backup acceleration for both physical and virtual environments

Maximum availability and performance

FalconStor NSS HC Series SAN Appliances offer high availability (HA) through fully redundant platforms including an active/active controller configuration to provide maximum system and data availability. Its multi-port platform provides massive bandwidth scalability, load balancing, and efficiency. In addition to SAS and SATA capacity expansion options, solid-state drive (SSD) expansion options are available to further enhance critical application performance based on HotZone[®] technology from FalconStor. HotZone keeps the most frequently accessed data in SSD to increase input/output operations per second (IOPS) with shorter response times.

Thin Provisioning for effective disk utilization

FalconStor NSS HC Series SAN Appliances offer storage virtualization and Thin Provisioning, which allocates physical storage space on an as-needed basis, using less physical storage than what is represented by virtual disks. This maximizes disk utilization while reducing storage costs and power consumption.

Heterogeneous SAN virtualization

FalconStor NSS is a unique SAN platform able to virtualize other iSCSI and FC SANs to enable the latest storage services out of legacy storage investments. It brings the benefits of server virtualization to the storage layer. FalconStor NSS technology enables consolidation across heterogeneous storage platforms, enhances the utilization rate of storage resources, minimizes infrastructure management costs, and ensures data protection and mobility at both the server and storage levels. More than other pure storage virtualization devices, FalconStor NSS HC Series SAN Appliances offer capacity expansions to satisfy future data growth in a standardized and cost-effective manner.

Cost-effective disaster recovery (DR)

FalconStor NSS solutions offer IP-based WAN-optimized replication, which includes encryption for security and compression for reduced bandwidth consumption. WAN-optimized replication uses patented MicroScan[™] technology from FalconStor, which detects changes at the sub-block level, reducing bandwidth consumption by as much as 99%.

Virtual storage for virtual servers

FalconStor NSS HC Series SAN Appliances deliver a shared storage pool to enable VMware-based enterprise services such as VMotion, Distributed Resource Scheduling (DRS), VMware High Availability, and Fault Tolerance (vSphere 4.0). Built-in functions include online data migration, real-time mirroring, Thin Provisioning, application-aware snapshot agents, and replication. FalconStor NSS integrates with VMware infrastructures and associated business applications. Application-aware snapshot agents take point-in-time copies with 100% transactional consistency to enable instant recovery. The FalconStor Snapshot Director for VMware is designed to coordinate snapshots among all virtual machines in a VMware ESX Server. This tight integration at the application and virtual machine level provides full system consistency. Granular data recovery is automated and streamlined through recovery agents, enabling you to instantly recover the same set of virtual machines in the local or remote site.

Through integration with VMware Infrastructure and hosted applications, FalconStor NSS HC Series SAN Appliances deliver advanced data protection with 100% transactional integrity for virtualized applications. This solution reduces recovery times and enables continuous data availability during storage or system failure. Integration with VMware vCenter Site Recovery Manager further streamlines DR processes and enables automated, reliable failover and failback operations.



Specifications

NSS HC630

NSS HC650

NSS HC600

Physical Characteristics			
Base form factor	iSCSI	iSCSI/FC	Capacity expansion unit
Number of storage controllers	Dual storage controllers for HA, dual RAID controllers for each		
Platform Rack 4U, 3U	Rack 4U, 3U		
RAM included	16GB		
Storage RAID level	0, 1, 5, 6, 10		
Maximum storage capacity	256TB		
Disk type	SSD, SAS, SATA		16x SATA, 16x SAS, 2x SSD + 14x SATA, 16x SSD
Maximum # of disks supported	448		
CPU cores	4	8	
Dimensions (mm)	Controller: 6.89 x 17.40 x 29.53" (175 x 442 x 750 mm) Disk Cabinet: 5.16 x 16.97 x 28.98" (131 x 431 x 736 mm)		5.16 x 16.97 x 28.98" (131 x 431 x 736 mm)
Weight	Controller: 101.41 lb (46 kg) Fully-loaded disk cabinet: 88.18 lb (40 kg)		Fully-loaded disk cabinet: 88.18 lb (40 kg)
Power supply	AC voltage: 200 to 240 V — 100 to 127 V; Frequency: 50/60 HZ		
Maximum power consumption	Power consumption of controller: 900 W Power consumption of fully-loaded disk cabinet: 520 W		Fully-loaded disk cabinet: 520 W
Temperature	10°C to 35°C (50°F to 95°F)		
Humidity	20% to 80%, noncondensing		
Altitude	Operating: -200 to 10,000 ft (-60.96 to 3048 m) Idle: -200 to 40,000 ft (-60.96 to 12192 m)		
Host Connections			
# of iSCSI ports	16	8	
# of Fibre Channel (FC) ports	0	8 x 4 Gb/s	
Advanced Features			
Thin Provisioning	Included		
Synchronous data mirroring	Included		
Replication (continuous or periodic) with compression and encryption	Included		
Snapshots (TimeMark®/TimeView®) per LUN	256 with snapshot agents from Microsoft Windows/Linux		
Email alerts	Included		
Centralized client management	Included		
Support for VMware vCenter Site Recovery Manager with automated failback	Included		

Snapshot agents are available for the following environments: Microsoft Exchange Server, Microsoft SQL Server, Microsoft VSS, IBM DB2, IBM Informix, Lotus Notes/Domino, Oracle, Sybase, MySQL, Ingres, SAP, Novell GroupWise, Pervasive.SQL, SAP MaxDB, and VSS, as well as file systems (Linux, HP-UX, Solaris, AIX, Microsoft Windows, Novell NetWare).

For more information, visit www.falconstor.com/NSS or contact your local FalconStor representative.

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