

Network Storage Server (NSS) Virtual Appliance

Intelligent storage virtualization

The FalconStor® Network Storage Server (NSS) Virtual Appliance for VMware vSphere is a pre-configured, production-ready virtual machine that provides a cost-effective, feature-rich virtual SAN solution for small-to-medium business (SMB) and remote/branch office (ROBO) environments.

Highlights

- > Open architecture integrates seamlessly with VMware vSphere
- > Simple virtual iSCSI SAN from internal DAS or external SAN storage
- > Enterprise-class storage features: Mirroring, snapshots, replication
- > Supports VMware Infrastructure 3.5 and VMware vSphere 4.1, as well as VMware vCenter Site Recovery Manager
- > Enables key VMware vSphere enterprise features including VMotion, High Availability, and Distributed Resource Scheduler
- > Supports VMware vStorage Data Protection API via HyperTrac™ Backup Accelerator
- > WAN-optimized replication with compression and encryption for fast, efficient remote DR and ROBO data consolidation
- > Thin provisioning maximizes disk utilization while reducing storage costs
- > Centralized management console
- > Automated DR for physical and virtual environments via RecoverTrac™ technology
- > Integrated Microsoft Exchange and Lotus Notes message recovery
- > Compliant with Microsoft VSS

Leveraging VMware for server virtualization is very attractive for SMB and ROBO environments, but it demands a highly available infrastructure. Since a single physical server hosts multiple applications, the loss of that server means that many applications will be down at the same time. VMware provides a set of advanced, enterprise-class features to address these needs, such as VMotion, High Availability, and Distributed Resource Scheduler. However, these features require shared storage in order to function. Building a SAN, even a small one, can be costly and complex, and limits the disaster recovery (DR) options for SMBs and ROBOs.

The FalconStor NSS Virtual Appliance knocks down all these barriers to server virtualization and brings intelligent storage virtualization and virtual SAN technology within the reach of any organization.

A cost-effective virtual iSCSI SAN solution

The FalconStor NSS Virtual Appliance creates a virtual SAN on VMware ESX Servers by turning internal or direct attached disk resources into a shareable pool of storage. Storage can be provisioned and securely allocated via the iSCSI protocol. If the FalconStor NSS Virtual Appliance is deployed on a single VMware ESX Server, that server can share storage resources with other servers in the environment. This is accomplished without the need for external storage arrays, SAN switches, or costly host bus adapters (HBA). Internal data drives are detected by the software and incorporated into the management console through a simple GUI. At that point, storage can be provisioned and securely allocated via the iSCSI protocol, which operates over standard Ethernet cabling.

To enable high availability (HA), the FalconStor NSS Virtual Appliance can be deployed on two VMware ESX Servers that can share storage with each other as well as additional VMware ESX Servers. In this configuration, each FalconStor NSS Virtual Appliance maintains mirrored data from the other server. If one of the servers is lost, all virtual machines that were running on the failed server can restart using the storage resources of the remaining server. Downtime is kept to a minimum as applications are quickly brought back online.

By consolidating all of the elements in a shared storage environment, the FalconStor NSS Virtual Appliance provides a cost-effective solution for delivering highly available shared storage to a VMware ESX Server environment. Thin provisioning technology and space-efficient snapshots further decrease costs by minimizing consumption of physical storage resources.

Enterprise-class data protection

The FalconStor NSS Virtual Appliance provides enterprise-class data protection features including application-aware, space-efficient snapshot technology that can maintain up to 255 point-in-time copies of each volume.



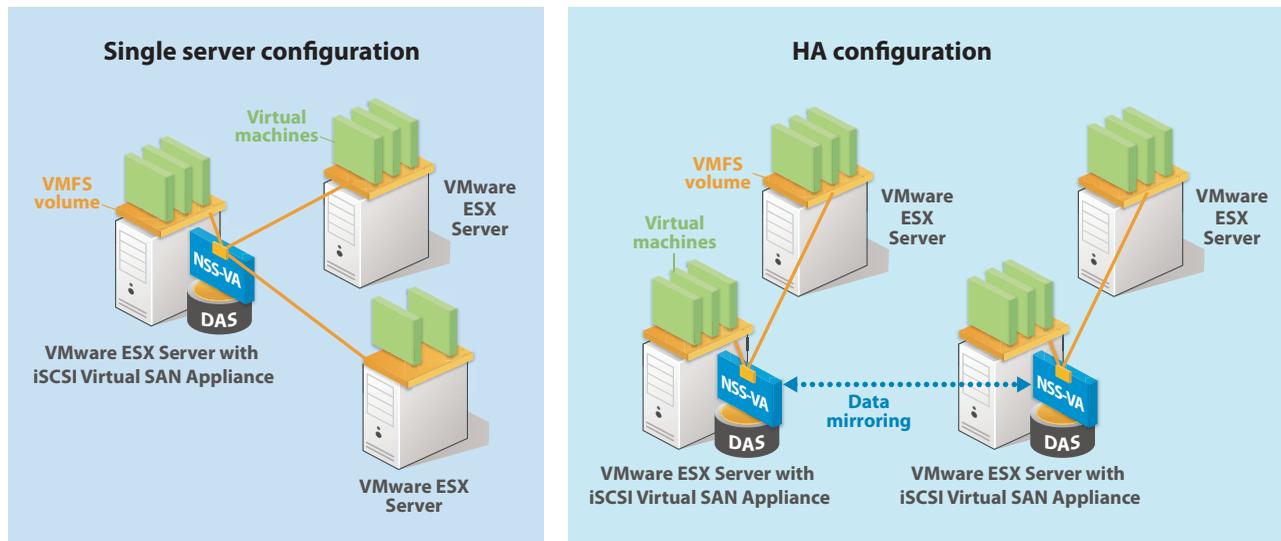
Snapshot images have many uses:

- > Quickly recover lost or corrupted data
- > Provide 100% transactionally consistent copies of application data for testing, development, auditing, reporting, etc.
- > Serves as a source for third-party backup software, limiting impact on VMware ESX production servers

WAN-optimized data replication minimizes bandwidth utilization by sending only unique data blocks over the wire.

Built-in compression and encryption reduce bandwidth consumption and enhance security, without requiring specialized network devices to connect remote locations with the data center or DR site. Tape backup for multiple remote offices can be consolidated to a central site, eliminating the need for distributed tape autoloaders and associated management headaches and overhead. These features make the FalconStor NSS Virtual Appliance an ideal ROBO solution.

FalconStor NSS Virtual Appliance can be deployed on a single server for storage pooling, or on two servers for HA



Specifications

Form factor	Virtual Appliance
Host connections	iSCSI
Virtual platforms supported	VMware Infrastructure 3.5 (VMware ESX Server 3.5 Update 5 and ESXi 3.5 Installable Update 5), VMware vCenter Site Recovery Manager, VMware vSphere 4 (VMware ESX Server 4.0 and ESXi 4.0), VMware vSphere 4.1 (VMware ESX Server 4.1 and ESXi 4.1)
# of virtual appliances required for HA configuration	2
Memory required (minimum)	2GB RAM
Storage space required (minimum)	28GB for installation, 100GB for virtual storage
Snapshots per volume	Up to 255
Total storage capacity	Up to 4TB using internal SAS storage; up to 10TB using external shared disks (SAN)
Replication with compression and encryption	Included