

File-interface Deduplication System (FDS) Virtual Appliance for VMware Infrastructure

Data deduplication made easy

The FalconStor[®] File-interface Deduplication System (FDS) Virtual Appliance for VMware Infrastructure is a pre-configured, production-ready virtual machine that provides disk-based data protection and integrated global data deduplication for small and medium business (SMB) and remote/branch office (ROBO) environments.

Highlights

Backup infrastructure optimization

- > Massive reduction of VMware backup storage requirements

Seamless implementation

- > Seamless integration with VMware Infrastructure
- > Certified with leading backup and archiving applications (see certification matrix on www.falconstor.com)
- > Can be set up and configured in minutes

Flexibility and manageability

- > Exclude data from deduplication based on folder, file type, file size, and age
- > Manually define share access or use domain authentication
- > Integrated reporting tools
- > SNMP integration and email alerts

Cost-effective DR

- > Multi-site data replication
- > Global deduplication for WAN cost reduction

The FalconStor FDS Virtual Appliance offers an easy-to-deploy, easy-to-manage capacity-optimized storage repository to help minimize online storage capacity requirements for backup and archiving applications. In addition, FalconStor replication technology enables cost-effective disaster recovery (DR) by sending only unique, deduplicated data across the WAN, significantly reducing bandwidth requirements and costs. Capacity requirements for disk-to-disk (D2D) backup applications can be reduced by as much as 20 times or more by eliminating data redundancies resulting from backup operations. With FalconStor FDS Virtual Appliance, organizations can retain more data online, longer, for quicker data restores.

Easy to deploy

The FalconStor FDS Virtual Appliance is qualified to work with all major D2D backup and archiving applications by presenting a file share (CIFS or NFS network interface). This ease of integration allows for a seamless deployment into the existing backup infrastructure with little or no change to existing D2D backup applications or to file and data archiving processes.

Delivered as a pre-configured virtual appliance for VMware ESX, FalconStor FDS deploys in minutes. A few simple setup steps are all that is needed to have the system up and running. All installation can be done remotely, simplifying delivery across multiple remote sites.

Significant storage savings for increased data retention

Data deduplication technology shrinks storage needs by eliminating duplicate data blocks that accumulate during the backup or archiving process. Since most of the data in any given backup is redundant, the savings are remarkable. Deduplication rates of 20 to 1 are common, which equates to a 95% savings on disk consumption. This means that you can store 20 times more logical backup data within the same disk footprint.

More data on disk means longer data retention periods for immediate data restores. Lengthy delays spent waiting for tapes to be retrieved from a storage facility are eliminated, shrinking the restore window and returning vital business services to operation faster than ever.

Multi-site DR

In addition to saving storage space, data deduplication also provides significant savings during data replication. Each FalconStor FDS Virtual Appliance can send data via an IP connection to another FalconStor FDS system (either a virtual appliance or physical appliance). Because only the deduplicated data set is shipped over the wire, bandwidth is reduced by 90% or more. Data compression can be enabled to further minimize the bandwidth requirements for replication. This WAN optimization method maximizes bandwidth savings for the most cost-effective data replication. In addition, data can be encrypted during the replication process to minimize risks and enhance security.

Eliminate or reduce physical tape

With extended data retention on disk, the FalconStor FDS Virtual Appliance can help you reduce or even eliminate tape creation. Replacing tape with the disk-based backup and data replication of FalconStor FDS Virtual Appliance is economical, efficient, and secure, particularly at remote sites where tape creation is error-prone, costly, and a constant security risk. If required for long term archival, tape can be created at the central site.

Flexible deduplication processes

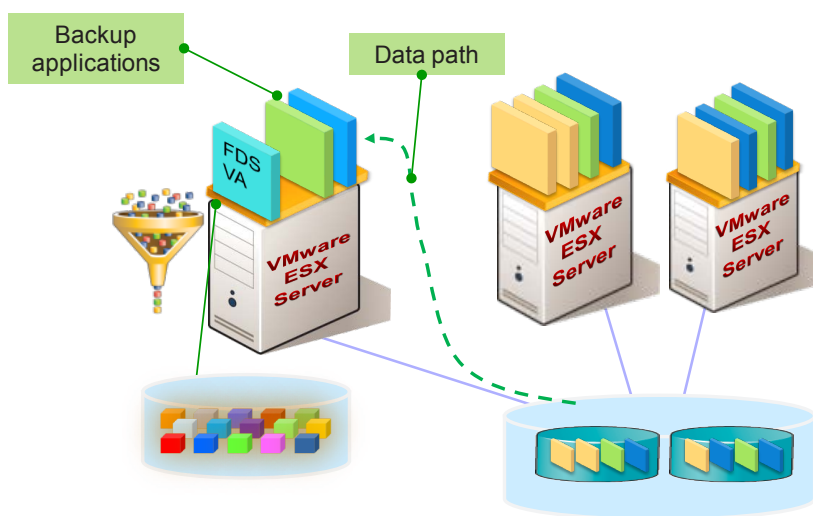
FalconStor FDS Virtual Appliance provides flexible, policy-driven data deduplication. Processes can be defined based on application and business needs. For example, deduplication processes can be

set to start immediately after files are received, or data can be staged without deduplication for a set period of time. This flexibility accommodates operations that may be more efficient when performed on non-deduplicated data, such as data copying, restore, data mining, and database testing.

High-performance restore

FalconStor FDS is optimized to enable high-performance data access for both deduplicated and non-deduplicated data. This accelerates data restore processes whenever necessary. Data blocks are striped across the deduplication repository to optimize the performance of read operations. In addition, the data deduplication repository uses direct block-level access during read operations with no file system overhead, preventing performance degradation.

Providing deduplication services for VMware Infrastructure



Specifications

Form factor	Virtual Appliance
Host connections	NFS, CIFS
VMware systems supported	VMware ESX/ESXi 3.5 Update 4, vSphere 4
Memory required (minimum)	7GB for the virtual machine
1TB Edition	Physical Capacity: 1TB of repository capacity and 800GB of file cache Logical Capacity: Up to 20TB of logical capacity based on 20:1 deduplication ratio
2TB Edition	Physical Capacity: 2TB of repository capacity and 800GB of file cache Logical Capacity: Up to 40TB of logical capacity based on 20:1 deduplication ratio

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

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