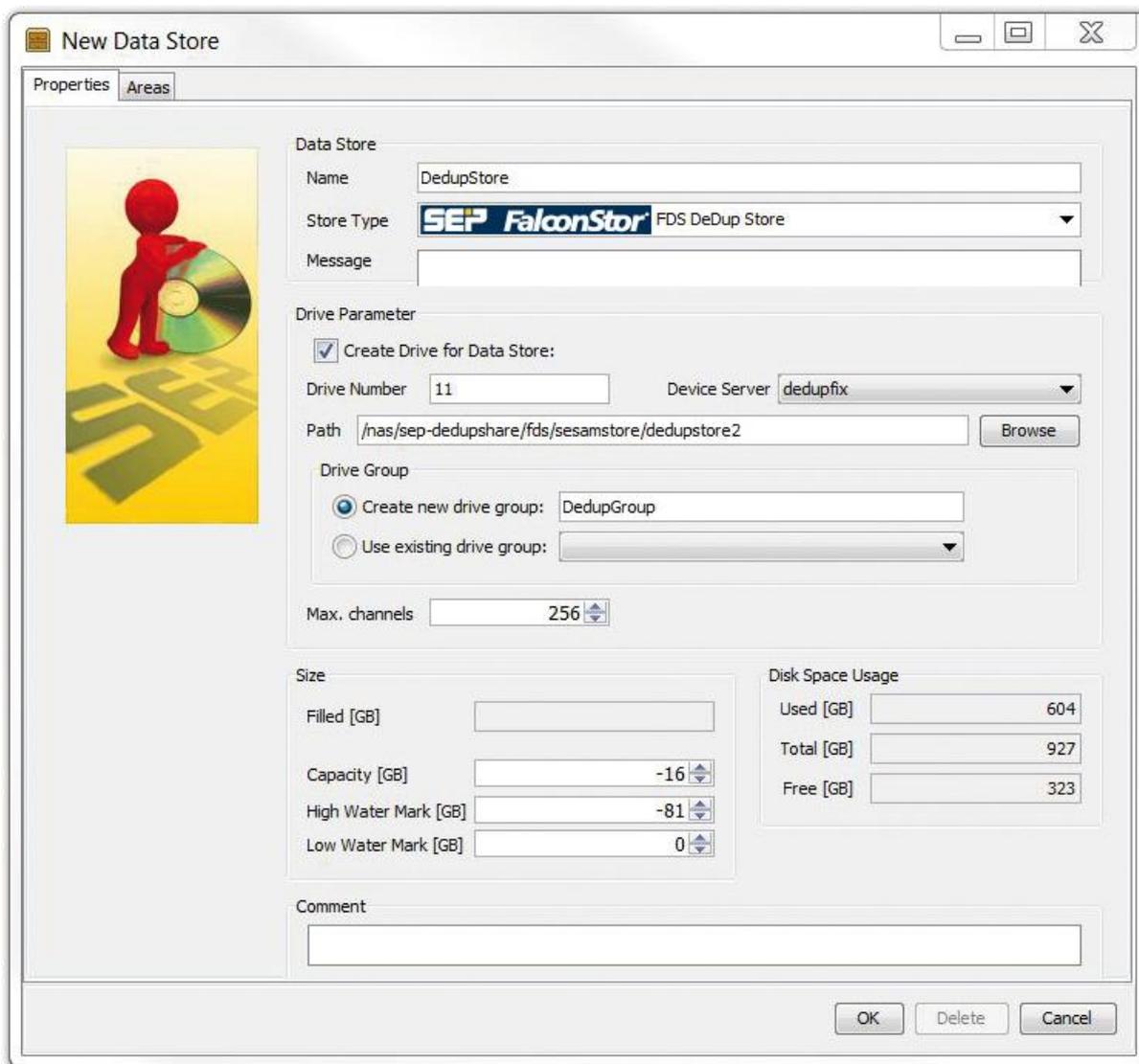


## SEP File-Interface Deduplication System (VA)

### Using SEP FDS DeDup Store for SEP sesam

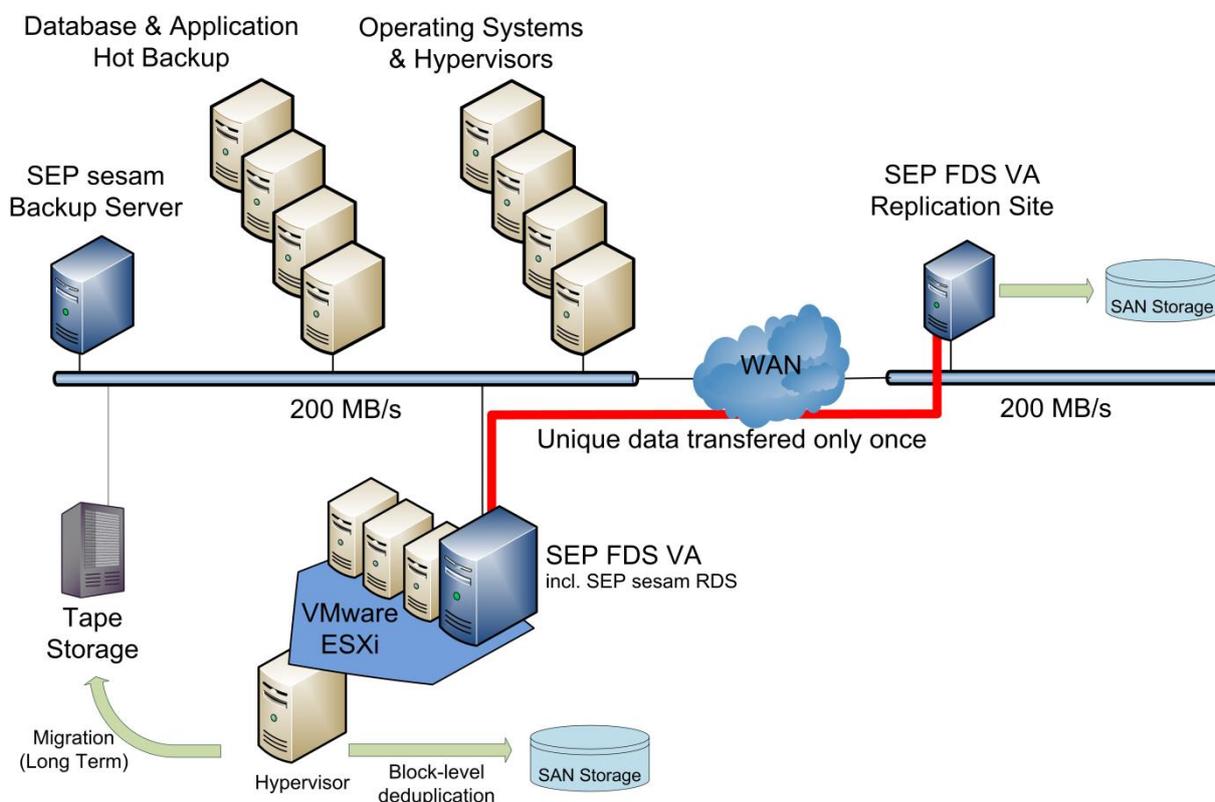
SEP FDS VA (SEP File-Interface Deduplication System Virtual Appliance, powered by FalconStor) is a block-level data deduplication and replication solution that provides a space-efficient repository for SEP sesam DataStores. SEP FDS VA can reduce your backup management costs by dramatically reducing your disk storage needs, data center power consumption (air conditioning costs), reducing your dependency on tape, and reducing off site tape storage costs by enabling you to achieve longer retention periods on disk and facilitating replication of your backups to meet off-site requirements.



## SEP Deduplication Architecture

The typical backup deduplication architecture is made of three major components.

1. SEP sesam RDS communicates with the SEP sesam backup clients to collect the data.
2. The File-Interface Deduplication System performs scheduled offline deduplication for fast multiplex backups and restores and handles replication between SEP FDS appliances.
3. The third component is the disk used by the SEP FDS appliance to store the deduplicated backup data.



## Benefits

In today's business environments, many administrators face increased challenges in protecting their vital data from loss, theft, corruption and disaster. Traditional backup operations constantly reproduce data for protection and recovery purposes, therefore the amount of data keeps increasing and IT costs for disk storage keep rising.

With the introduction of SEP FDS VA, it is now possible to control data growth resulting from producing multiple copies of the same backup data. SEP FDS VA is a block-level data deduplication tool that provides a space-efficient backup repository for all kinds of data.

SEP FDS VA can reduce your disk storage needs dramatically up to 1:24 (example of a generation backup strategy with full and incremental backups in an average company), allowing you to maintain far more data on disk while incurring minimal additional storage costs.

SEP FDS VA supports many-to-one data replication, providing a cost-effective disaster recovery solution. Only deduplicated data is sent over the WAN, providing bandwidth savings. Smaller offices and remote sites can eliminate tape backup entirely using the SEP FDS VA repository.

SEP FDS VA comes with an internal SEP sesam Remote Device directly attached to the SEP sesam DataStore. This allows an unlimited number of parallel data streams to increase the backup speed tremendously.

## How it works

During deduplication, the system analyzes blocks of data and determines whether the data is unique or has already been copied to the SEP FDS VA repository. The process then passes only single instances of unique data to the SEP FDS VA repository and replaces each deduplicated file with a stub file, whose function is to point to the repository and is used to retrieve stored data.

The SEP sesam Management Interface displays the backed up files in their real format to make the restore process usual simple. A reason for block-level type deduplication instead of a file-based deduplication is that a block-level solution examines small sub-blocks and this is making it far more effective at reducing storage consumption.

## SEP FDS VA in detail

### High-performance backup:

SEP FDS VA was built with performance in mind. Its post processing and concurrent block-level deduplication technology is optimized to ingest backup data without affecting backup speed. Its concurrent processing options allow the deduplication process to take place in the background while its file interface maintains the high performance characteristics needed to meet the backup window.

### **Flexible deduplication:**

Deduplication processes can be set by the SEP sesam Management Interface to start immediately after the backup or can be scheduled to occur at a set time on a regular basis. This flexibility allows the end user to accommodate different operations on non-duplicated data such as data copies, restore operations, or other operations such as migration to tape storages for long term repositories.

### **High-performance restore:**

SEP FDS VA is optimized to enable high-performance data access for both non-deduplicated data as well as deduplicated data. This allows quick backup data restore processes when needed. Data is striped across the deduplication repository to maximize read operation performance. In addition, the data deduplication repository has direct block-level access with no file system overhead, resulting in no performance degradation during read operations.

### **Flexible, scalable architecture:**

SEP FDS VA can scale from a small footprint deployment up to petabytes of logical storage capacity. Its physical managed capacity can scale from 1 TB up to 64 TB of deduplication repository in a single node.

### **Multi-site Disaster Recovery:**

SEP FDS VA offers global deduplication capability for quick and cost-effective disaster recovery deployments. Connecting remote offices via SEP FDS VA appliances allows organizations to eliminate tape shipments between sites and ensures that data is readily available online when needed. SEP FDS VA is enabled with intelligent global data replication technology. Unique data is sent only once from remote sites to the main SEP sesam Backup Server. This WAN-optimization method allows cost effective data replication and significant bandwidth savings - up to 97% reduction in production bandwidth usage.