

StoreVault S500 Solution Brief

MIGRATE DATA ON MS EXCHANGE AND MS SQL SERVERS TO THE STOREVAULT S500

Scale without disrupting operations, greatly simplify storage management, and protect data better.

challenges

- It is often difficult to back up Exchange and SQL servers in the required time
- There is undesirable downtime when scaling storage capacity to keep pace with email or database growth
- Planning for disaster recovery with Exchange and/or SQL servers is very costly
- Investment is wasted when some database servers are severely over-utilized while others are under-utilized
- It is difficult to manage growth spikes (or declines)

solution

- Migrate data on MS Exchange/SQL servers to a StoreVault S500

primary benefits

- Eliminates issues with backup windows by using StoreVault Snapshot™ technology
- Scales your storage capacity on the fly with no downtime or disruption
- Ensures higher levels of data protection with less effort
- Simplifies management by using one centrally-managed storage pool
- Allows you to continue working with technologies that are familiar to you
- Uses StoreVault Replication to replicate data to alternate sites for disaster recovery

detail

The StoreVault S500 comes ready to store the block data generated by MS Exchange/SQL, thanks to its built-in support for an iSCSI Storage Area Network (SAN).

Easy scaling.

Add storage capacity for your Exchange mail store or SQL database without disrupting operations. Just plug a hot-swappable disk drive into the S500 and provision the new drive using the intuitive management GUI tool.

Instant restores.

To protect your data, the S500 offers advanced Snapshot technology, which captures point-in-time images of the file system. These allow you to restore lost data almost instantly, without digging through tape archives. The S500 is capable of storing up to 250 Snapshot copies—more than any other competing system—so you can schedule frequent Snapshot copies of your Exchange/SQL data. For example, if you scheduled a Snapshot copy to be taken every 15 minutes, you would be able to work for seven days without backing up to tape, yet still be able to recover any lost data instantly, without losing more than 15 minutes of activity.

Enhanced performance and data protection.

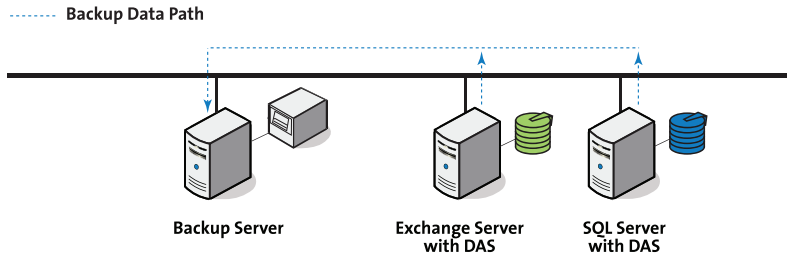
The S500 offers dual redundant, hot-swappable power, cooling and drives, and employs RAID arrays for faster performance and greater data protection. Choose from multiple levels of RAID protection, including RAID-DP™, which delivers 10,000 more times protection than traditional RAID 5.

Powerful management.

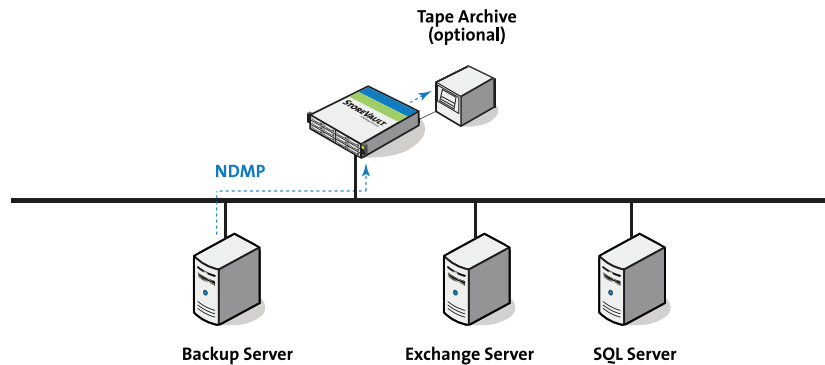
StoreVault software partnerships and product solutions can significantly enhance Exchange mail solutions. For example, a standard hardware platform with an iSCSI HBA can boot one of several virtual Exchange server configurations residing on a StoreVault and is supported by the Advanced Protection Architecture. Backup software agents for open files and for Exchange can capture both server configurations and application data, move this information to a StoreVault for Snapshot copies to be made and also back up the information to a tape archive.

No steep learning curve.

With an iSCSI SAN, you use the same IP networking and SCSI storage protocols you're familiar with. No new hardware is required and the iSCSI initiator software is free and easily available from Microsoft.



EXCHANGE/SQL SERVERS USING DIRECT-ATTACHED STORAGE: Storage and the ability to scale is limited by the capacity of individual servers. Data is isolated on individual "islands," which introduces multiple points of management and multiple points of failure. Scaling storage requires shutting down application servers and interrupting operations. Backup data must move over the LAN, causing congestion and slowdowns which could prevent completion of backup jobs within a shrinking backup window.



EXCHANGE/SQL USING AN iSCSI SAN: All application data is consolidated on the StoreVault S500's built-in iSCSI SAN. Data is more secure and more available thanks to the S500's Advanced Protection Architecture (RAID, Snapshots, redundant drives, power and cooling, etc.). Storage management and utilization improves dramatically. Capacity can be easily and dynamically provisioned from the S500's central pool of storage. Storage for application data can be scaled on the fly, without shutting down application servers or interrupting operations. The backup server can directly backup Snapshots of application data stored on the S500 to tape archive (optional) via NDMP. Traffic travels over local SCSI connection, not the LAN.

frequently asked questions

Q. Can the S500 support a SAN?

A. Definitely. This is one of the main reasons for using a StoreVault to store Exchange data. Advanced Protection Architecture now covers email application data and can be replicated offsite for maximum recovery speed. Existing backup software can handle open file backups of the database with no changes, and recovery can occur from snapshots instead of tapes. VMware solutions make this an even more powerful option by means of Exchange server virtualization and backup to disk.

Q. What about performance? Email is very important to me.

A. A fully-loaded StoreVault S500 system provides 12 disk drives with a best practice recommendation that 9 be used for data (as well as 2 for parity, leaving 1 hot spare). Microsoft's standard benchmarking tool for Exchange, MMB-3, indicates that over 700 mailboxes can be comfortably supported on one StoreVault S500.

Q. Can I take snapshots of my Exchange LUNs, either on iSCSI or Fibre Channel?

A. Yes. The latest version of StoreVault Manager allows you to create LUN snapshots. Please note that best practices are to quiesce the database application manually before taking the snapshot.

Q. What if I need to expand my LUN later on?

A. LUN expansion on the fly is a standard feature of the StoreVault S500. If your growth is faster than anticipated, available capacity can be added to an existing LUN with no downtime.

system requirements

StoreVault offers a variety of performance and price options for building storage networks for Exchange and SQL data. Starting with free iSCSI initiators, stepping up to iSCSI Host Bus Adapters and TCP/IP Offload Engines, and continuing all the way up to Fibre Channel equipment, you can choose the price and performance tier that fits your organization's budget.

hardware

- StoreVault S500 (iSCSI SAN)
- OPTION: For enhanced performance, you can add third-party iSCSI Host Bus Adapters (HBAs) to your Exchange and SQL servers (NOTE: HBAs are not required in order to implement an iSCSI SAN)
- OPTION: For maximum performance, you can create a Fibre Channel SAN:
 - Third-party Fibre Channel HBAs (for Exchange and SQL servers)
 - StoreVault Fibre Channel HBA (for S500)

software

- Free iSCSI initiator software (available on the Microsoft web site)
- OPTION: if you choose to install iSCSI or Fibre Channel HBAs, they will include device management software for installing and configuring your SAN

network

- Ethernet network
- OPTION: if you choose to deploy a Fibre Channel SAN, additional cabling, adapters, and one Fibre Channel switch will be required



Network Appliance, Inc.
495 East Java Drive
Sunnyvale, CA 94089

For sales support, contact us at 877-2STRVLT
or storevault@netapp.com.

For more information on StoreVault, a NetApp division,
go to www.storevault.com.

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