

StoreVault S500 Solution Brief

CONSOLIDATE DIRECT-ATTACHED STORAGE (DAS) ONTO THE STOREVAULT S500

Dramatically improve storage utilization and simplify storage management while achieving nearly an enterprise level of data protection.

challenges

- Storage devices are proliferating, creating multiple points of management that eat up more and more of your time
- Backup procedures are complex and there are multiple points of failure
- Servers are inefficiently utilized, with some maxed out and others with excess capacity
- Planning for growth is complicated, and scaling is difficult and time-consuming

solution

- Consolidate multiple heterogeneous, direct-attached storage devices onto a single StoreVault S500

primary benefits

- Provides one central location from which to control and manage all storage
- Makes backup much easier using new native or existing third-party tools
- Uses Snapshot™ technology to provide instant backups and restores
- Maximizes utilization for lower capital and operating costs using FlexVol™ technology
- Provides easy scalability with no disruption to operations, so planning becomes simple

implementation

Data consolidated on the S500 is easier to protect (using RAID-DP™ and Snapshot copies), easier to manage (it is all in one place, so a single command—such as backing it up or creating a Snapshot copy—affects all your data), and easier to backup (no more pulling data over

the LAN). Most importantly, management costs drop due to fewer servers, licenses, OS updates, and hardware or software failures. You can consolidate using a NAS approach, a Storage Area Network (SAN) approach—iSCSI or Fibre Channel—or NAS and SAN simultaneously.

Higher availability.

System integrity is assured with dual redundant, hot-swappable power, cooling and drives. Choose from multiple levels of RAID protection, including RAID-DP, which delivers 10,000 times more protection than traditional RAID 5. Even if two disks fail simultaneously, you won't lose data.

Instant restores.

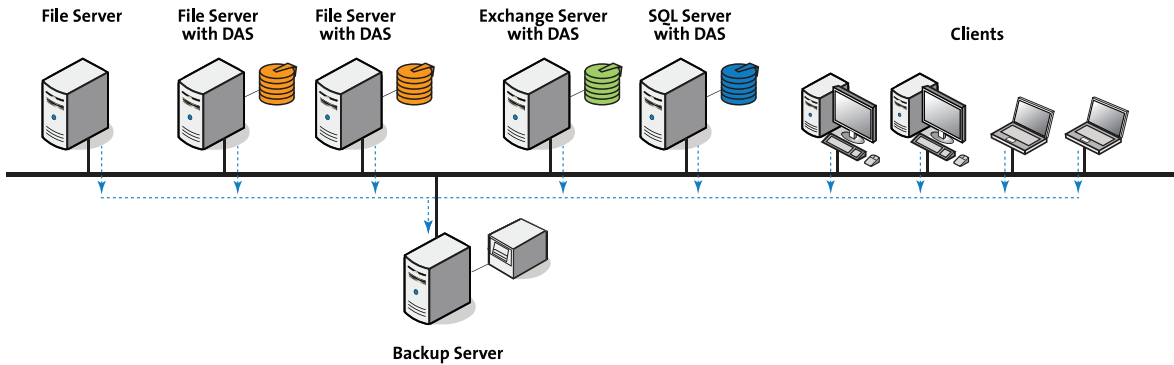
The advanced Snapshot technology captures point-in-time images of the file system. These allow you to restore lost data almost instantly, without digging through tape archives. The S500 is capable of storing up to 250 Snapshot copies—more than any other competing system—so you could schedule Snapshot copies to be made hourly and still have a full month of data available for instant recovery, without losing more than 1 hour of activity. To provide this level of storage availability on multiple servers could cost tens of thousands of dollars and require days of integration work.

Centralized management.

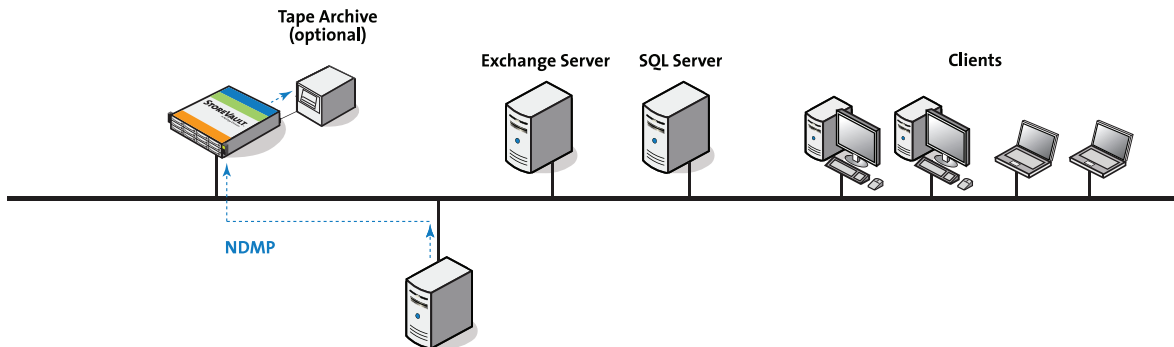
Manage the system from a single console using one utility. The S500 utility features a Windows-like GUI that makes adding, allocating, and provisioning storage an easy point-and-click process.

Maximum utilization.

Most organizations find that storage utilization improves by about 40 percent after consolidation (from 50 percent utilization in DAS environments to approximately 80 percent in network storage environments). In addition, after consolidating, you will no longer need to purchase new servers solely to house hard disks as you add storage capacity. This helps reduce server purchase requirements by as much as one-third.



BEFORE CONSOLIDATION: Data is scattered over multiple file servers, application servers and clients. Storage and the ability to scale is limited by the capacity of each individual server. Adding storage may require paying for a server just to hang hard disks on. Data is isolated on individual "islands," which introduces multiple points of management and multiple points of failure. Scaling storage requires shutting down servers and interrupting operations. All backup data must move over the LAN, causing congestion and slowdowns which could prevent completion of backup jobs within a shrinking backup window.



AFTER CONSOLIDATION: File servers are eliminated. File and application data are consolidated on the StoreVault S500 (running NAS and SAN simultaneously). All 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 and new capacity can be added to the S500 on the fly, without shutting down 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 I use both NAS file-serving and SAN at the same time?

A. Yes. In fact, you may use all functionality simultaneously: CIFS, NFS, iSCSI, and FC SAN from one single device!

Q. How do I move the data over to the StoreVault?

A. The StoreVault presents itself to the network as a Windows or UNIX server. Simply map a drive or mount an export and you are ready to drag and drop folders. For SAN LUNs, you may drag and drop data between folders on a mapped host server. No new tools must be used and no new tasks must be learned.

Q. Isn't consolidation putting all of my eggs into one basket?

A. Yes, exactly. Consider that this basket is made of steel, includes seat belts for your eggs and is generously cushioned with Eiderdown. StoreVault's Advanced Protection Architecture has been created based on years of experience installing datacenters that support the most demanding storage applications. Features like RAID-DP, Block Checksums, and FlexVol technology make a StoreVault a much safer data repository than a single server with a RAID array behind it.

Q. Can I create backups of this consolidated data?

A. Of course, using several smart technologies. First, Snapshot technology is included with all StoreVaults. Secondly, data can be moved to a tape drive using either the integrated StoreVault tools or industry-standard third-party backup software and the NDMP protocol. Read our white papers for more information on intelligent disk-to-disk-to-tape solutions.

Q. Will my performance suffer?

A. No. In fact, many customers find that the higher efficiencies realized by offloading file servers and network traffic actually improve performance. More disk spindles are usually involved, making read and write times better, and SAN protocols can often move faster than internal hard drive processes!

system requirements

hardware

- StoreVault S500 (NAS or iSCSI SAN)
- OPTION: Fibre Channel SAN
 - Third-party Fibre Channel HBA(s) to your server(s)
 - StoreVault Fibre Channel HBA to the S500

software

- 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



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