

Backup Express with Network Appliance

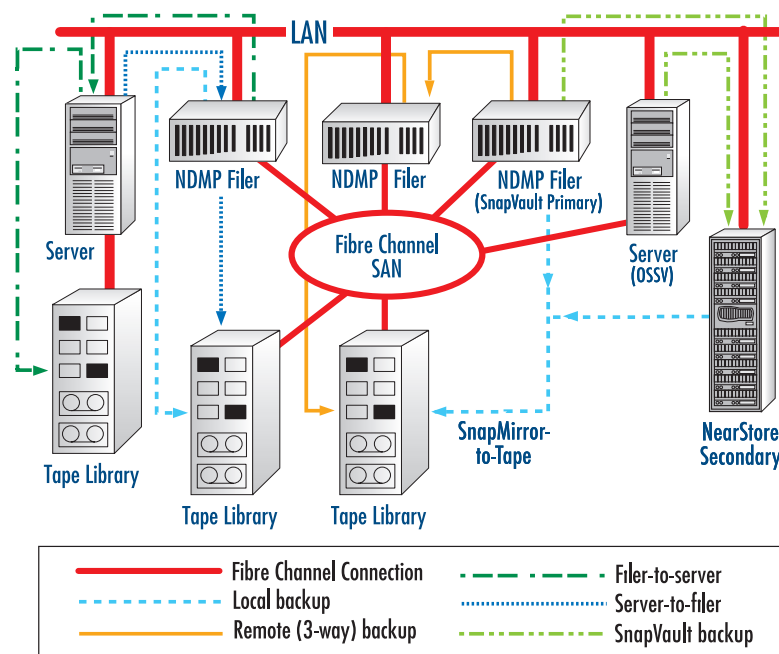
Network Attached Storage (NAS) and disk-based protection strategies are growing rapidly. Network Appliance (NetApp) storage systems are taking over functions previously run by traditional servers, and NetApp NearStore secondary storage is increasingly relied on for high-speed disk-based backup of NetApp filers and open systems.

NetApp provides an extensive, robust product line that consolidates data from multiple environments (UNIX, Windows, NetWare) in a single, centralized location. NetApp NearStores provide economical, ATA-based storage for high-speed backup and fast restores from disk.

Backup Express, from Syncsort, utilizes NDMP, SnapVault technology, and advanced snapshot techniques for fast, reliable tape or disk backup of filers and open systems. The Backup Express Advanced Protection Manager includes a powerful set of next-generation, SnapVault-based, disk-to-disk protection capabilities, all managed from the Backup Express Internet Explorer-based GUI. Backup Express architecture – including single catalog, centralized browser-based control, and exceptional flexibility for SANs and clusters – ensures high-performance, easily managed backups and fast, dependable, point-in-time recovery in NetApp environments.

Technical Capabilities

- **SnapVault Management.** Backup Express provides fully integrated management of NetApp SnapVault hardware and software plus Open Systems SnapVault (OSSV). SnapVault backs up data from filers or other primary systems to NetApp NearStore or other secondary systems. (See *Backup Express and SnapVault* on reverse side.)
- **Advanced Protection Manager.** Exploits block-level backup technology to provide comprehensive disk-to-disk data protection. (See *Advanced Protection Manager* on reverse side.)
- **High-Speed Local Backup.** Backs up data from NetApp filers directly to SCSI-attached or Fibre Channel-attached tape drives or robotic tape libraries.
- **Three-Way Backup.** Backs up secondary filers to a primary filer's locally attached tape device or library.
- **Filer-to-Server Backup.** Backs up data from a NetApp filer through the network to a tape device or library connected to a server.
- **Server-to-Filer Backup.** Backs up data from a server through the network to a tape device or library that's locally attached to a filer.
- **SnapMirror-to-Tape.** Protects and archives filer and NearStore volumes by replicating to tape.
- **Multi-Host Tape Libraries.** Multiple hosts (UNIX, Windows, and NetWare servers, and NetApp filers) can be directly connected with individual SCSI devices to a single, multi-drive tape library.
- **File History.** Rapidly displays the different versions of a file contained in the catalog to allow you to select the most useful one to restore.
- **Concurrent Processing.** Enables multiple volumes to be backed up simultaneously to multiple drives.
- **Enhanced Snapshot.** Enables logical open file back-ups.
- **Selection Granularity.** Back up at node group, node, volume, or directory level; browse down to file level for restores.
- **Incremental Support.** Supports all levels of NDMP incremental backup.
- **Complete Enterprise Backup/Restore Solutions.** Backup Express provides a single solution for UNIX, Windows, Linux, and NetWare, including online backup for Oracle, Sybase, Informix, MS Exchange, MS SQL Server, DB2, Lotus Notes/Domino, and SAP/R3.
- **SAN Support.** Through its SAN Resource Sharing Option (SRS), Backup Express attaches machines (UNIX, Windows, Linux, and NetWare servers, and NetApp filers) to tape devices in a SAN environment and dynamically shares tape drives.



Backup Express with Network Appliance

Backup Express, NDMP, and DAR

Backup Express backs up and restores data on Network Appliance filers with the **Network Data Management Protocol (NDMP)**, an industry standard co-developed by Network Appliance. NDMP enables the communication of backup and restore commands between NDMP-compliant software, such as Backup Express, and NDMP appliances, such as NetApp filers. Backup Express NDMP software can be installed on UNIX, Linux, Windows, or NetWare device servers.

Direct Access Restore (DAR) provides rapid restore of files backed up with NDMP. Unlike other products, Backup Express lets you immediately drill down to the file level and displays all backed up versions and their dates, allowing you to select precisely the file to be restored. With DAR, Backup Express restores any file without having to load and stream through every tape in a multi-tape backup to search for the file. DAR dramatically reduces the time required to locate files for restore.

Backup Express and SnapVault

Backup Express provides comprehensive, fully integrated management of NetApp SnapVault hardware and software plus open systems agents. All backup and restore functions – including source/destination relationships, scheduling, backup level, and retention – are easily implemented from the Backup Express GUI.

SnapVault is a disk-based storage backup feature that backs up filers and open systems (such as Windows, UNIX, and Linux) to a central NearStore or other secondary storage system. The data is saved as a snapshot in read-only format. The data can be restored from the secondary storage system more rapidly and reliably than with conventional tape backups.

SnapVault management through the Backup Express GUI provides seamless SnapVault backup from filers and other primary systems. NetApp OSSV support provides backup of Windows NT/2000/2003, AIX, HP-UX, SGI-IRIX, Solaris, and Redhat Linux primaries. For Windows systems, Backup Express offers its own high-performance OSSV agent, Syncsort OSSV.

Advanced Protection Manager

Backup Express Advanced Protection Manager exploits block-level technology while providing advanced capabilities that comprise a comprehensive disk-to-disk enterprise backup solution. Advanced Protection Manager includes:

- **Integrated SnapVault management.** All SnapVault and Open Systems SnapVault (OSSV) functions are controlled from the IE-based Backup Express GUI, and all backups and operations are tracked in a single catalog.

- **SyncSort OSSV.** High-performance OSSV agent for Windows bypasses the file system to access the disk directly for backup. Supports Windows NT/2000/XP/2003.
- **Instant Availability.** Provides rapid temporary access for Windows systems from SnapVault secondaries for data and application continuity.
- **OSSV database backup.** Block-level hot backup of SQL Server and Exchange databases exploits SnapVault technology for fast backup and restore down to the database or mailbox level.
- **ExpressDR.** Provides fast, one-step bare metal recovery for Windows nodes from OSSV backups.
- **Express Image.** Utilizes block-level snapshot technology for high-performance backup to tape or disk for Windows and Solaris nodes, while supporting fast file-level restores.

Backup Express architecture – including single catalog, centralized browser-based control, and exceptional flexibility for SANs and clusters – is particularly suited for disk-based data protection strategies.

Requirements/Compatibility

- **Backup Express Software.** NDMP is supported in Backup Express release 2.1.5 and higher. Advanced Protection Manager requires Backup Express 2.3 or higher.
- **Supported NDMP Host Platforms.** Backup Express supports Solaris, AIX, HP-UX, Irix, Tru64, Linux, and Windows NT/2000/XP/2003.
- **SnapVault.** SnapVault support requires NetApp Data ONTAP release 6.5 or higher.
- **NetApp Licenses.** All SnapVault operations require NetApp SnapVault secondary and primary licenses. For Backup Express Instant Availability, the storage device also requires NetApp iSCSI.
- **Supported Peripherals.** Backup Express is fully certified with most SAN, NAS, disk, library, switch and operating system vendors and supports most storage media and automated tape libraries. For up-to-date listings, visit www.syncsort.com/bex/technology.htm.



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