

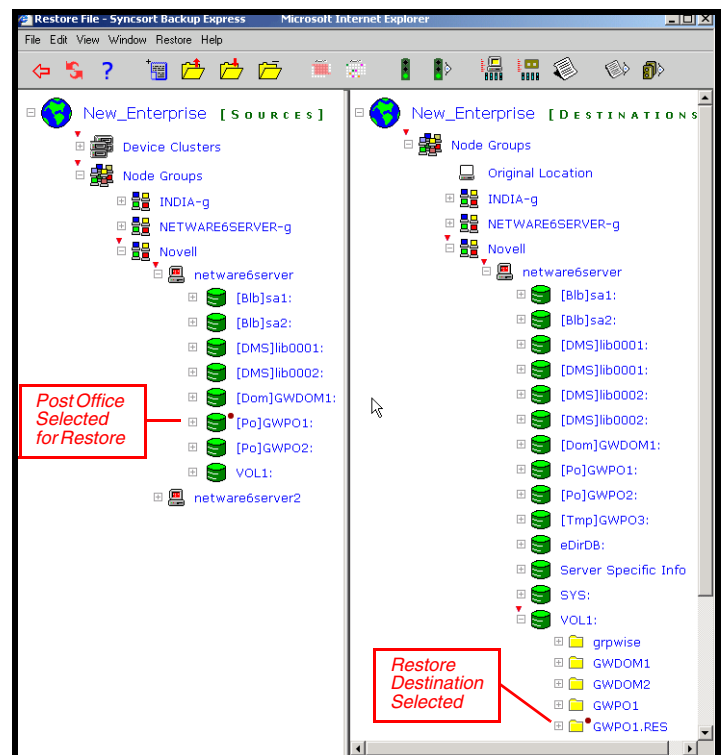
Backup Express for NetWare

NetWare is a robust platform for deploying business-critical, open-source solutions. It is a popular choice for hosting numerous services that increase network availability and user productivity. Backup Express, from Syncsort, is a high-performance enterprise data protection solution with innovative technology, flexibility, and manageability.

Advanced architecture – including a single catalog, centralized browser-based control, and unparalleled flexibility for SANs and clusters – has made Backup Express uniquely effective in NetWare environments. Working with Novell developers, Syncsort has pioneered advances in specialized backup performance and functionality for NetWare-based enterprises.

Technical Capabilities

- **Backups through TSA.** Backs up and restores all data exposed by NetWare TSAs (TSAFS, TSA600, TSANDS, and GWTA NLMs). Provides robust backups via NetWare TSA, including online backup and restore at the object level for NetWare NDS and eDirectory, GroupWise backup, backup to disk or tape, and backup in the same tape format as for other operating systems such as Windows, Linux, and UNIX.
- **Flexible SAN management.** Dynamically allocates drives in a SAN, with any combination of platforms, including NetWare, Novell Open Enterprise Server (OES), UNIX, Linux, and Windows, and NDMP/NAS -- all in the same SAN, dynamically sharing drives across all these platforms at the same time in the same SAN.
- **Advanced cluster support.** Provides job-in-progress automatic failover/failback intelligence for clustered NetWare servers. The cluster aware Backup Express management interface uses Single System Image (SSI) to intelligently display the shared resources as one virtual entity, ensuring data will not be skipped or backed up multiple times as volumes migrate. Backup Express supports both active-passive and active-active clustering.
- **Intelligent device management.** Optimized device selection and intelligent SCSI reserve/release features enable the use of SAN paths whenever possible, keeping data off the LAN. Device persistency ensures backups run if servers are rebooted and drives come up in a new order in the SAN.
- **Shared storage devices.** Efficiently manages devices and media used to back up and restore NetWare servers. You can share storage devices, including automated libraries, between NetWare and other device servers or between multiple NetWare device servers.
- **NetWare device servers.** Jukeboxes can be attached to NetWare device servers, enabling direct control of robotics.
- **Certification.** Backup Express is YES certified for NetWare.
- **Open files.** Integrates Open File Support for NetWare 4.x LFS, 5.x LFS, and 6.x LFS, and NSS operating systems. Provides both volume-level and file-level job options.
- **eDirectory.** Provides online data protection for NetWare eDirectory. The Application Agent supports incremental backups of NetWare eDirectory 8.7 at the database or disk level and includes eDirectory virtual disk and snapshot support.
- **NetWare 6.5.** Supports NetWare 6.5, including eDirectory virtual disk and snapshots. Utilizes the native NetWare snapshot driver, eliminating the need for third-party agents to back up open files. Supports pre- and post-snapshot scripts.
- **GroupWise.** The Backup Express GroupWise Application Agent provides online protection for GroupWise, including domains, post offices, libraries, and binary large objects.



Backup Express GroupWise Restore



Backup Express for NetWare

- **Novell Storage Services (NSS).** NSS volumes can be restored, assuring protection and easy transfer of critical security and permission metadata.
- **Device spanning.** Device spanning ensures a backup automatically continues on another device when a tape is filled.
- **Tape drives.** Uses all tape drives supported by native NetWare drivers, including LTO, LTO2, SDLT, and SuperAIT (SAIT) drives.
- **Parallel backup.** Concurrent backups of multiple volumes to multiple drives significantly reduces backup time.
- **Advanced, browser-based management interface.** Internet Explorer-based management interface allows you to work in multiple function windows at the same time, and to run, manage, and monitor multiple device related functions in parallel. Point-and-click, drag-and-drop features simplify configuration, backup definition, scheduling, and other functions.
- **Script facilities.** Automate cold database backup and other activities through the pre-job and post-job script facilities within Backup Express.
- **Multiple server support.** Multiple devices connected to multiple servers allow you to run many backups concurrently, dramatically accelerating processing and sharing the load among servers so no machine is I/O bound.
- **Simple installation.** Provides easy, management interface-based installation for all NetWare clusters and nodes.

Requirements/Compatibility

- **Backup Software.** Backup Express 2.1.5 or later. NetWare backup requires three components:
 - Master Server.** The Backup Express master server can run on 32-bit Windows 2000/2003 32-bit, Windows 2003 x64, UNIX, and Linux, including OES Linux. (Only one master server is required per Backup Express Enterprise.)
 - Target Service Agent (TSA).** Must be loaded on every NetWare node to be backed up. The TSA is installed during the installation of NetWare.
 - Backup Express Client.** Must be installed on every NetWare node that is IP-enabled and resides on a common network with the rest of the Backup Express Enterprise. Backup Express accommodates both IP and IPX NetWare nodes in any combination.
- **Management Interface Requirements.** The Backup Express management interface requires a workstation with Windows or Windows emulation running Internet Explorer 6.0 SP1 or higher.

- **NetWare Software.** NetWare 6.x.
- **Supported Peripherals.** Backup Express is fully certified with most SAN, NAS, disk, library, switch, and operating system vendors.

Backup Express supports most storage media, including 4mm, DDS, DAT72, 8mm, AIT, SuperAIT (SAIT), Mammoth, Ecrix VXA, vs80, DLT, SDLT, LTO, 9840x, 9940x, QIC, Sony DTF, Magstar, and IBM 348x/349x/35xx.

Backup Express supports all major automated tape libraries, including ADIC, Breece Hill, Compaq, Cybernetics, Dell, DSM, Exabyte, GRAU Data Storage, HP, IBM, Overland Storage, Plasmon, Qualstar, Quantum/ATL, Seagate, Sony, Spectra Logic, StorageTek, and Sun.

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