VERITAS NetBackup DataCenter™ 4.5

REDEFINING ENTERPRISE BACKUP AND RECOVERY

As the recognized leader for enterprise-class backup and recovery, **VERITAS NetBackup DataCenter™** is designed to help provide complete data protection for the most complex UNIX, Windows, Linux and NetWare environments. Intuitive graphical user interfaces help enable organizations to manage all aspects of backup and recovery and help facilitate consistent backup policies to be set across your enterprise. VERITAS NetBackup DataCenter provides database- and application-aware backup and recovery solutions for Oracle, SAP R/3, IBM DB2 UDB, Informix, Sybase, Microsoft SQL Server, Microsoft Exchange Server, Microsoft SharePoint Portal Server and Lotus Notes and Domino Server.

VERITAS NetBackup DataCenter's sophisticated media management features enable organizations to perform all aspects of media management, from tape duplication to library and drive sharing. In addition, NetBackup delivers real-time and historical analysis of all backup and recovery operations.

Product Highlights

• **Unlimited Scalability** — Centralized management and control, high-performance technology and a flexible multitier architecture enable NetBackup DataCenter to adapt to the growing needs of the modern data center.

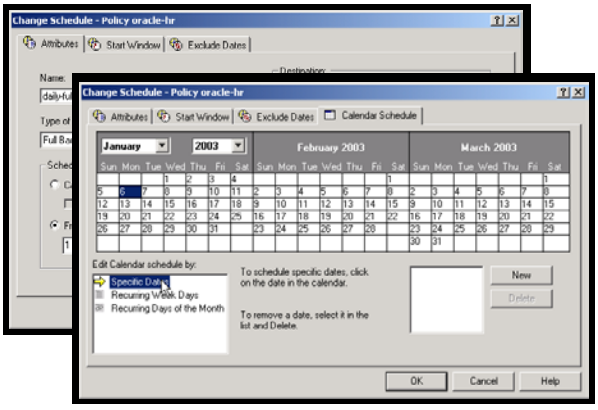
• **Platform Independence** — Helps protect virtually every popular computing platform, including all major UNIX variants, Windows, Linux, NetWare, Macintosh and many others. Hosts backup devices on UNIX, Linux or Windows servers to achieve optimal performance. You can expect similar performance and functionality regardless of platform.

• **Centralized, Policy-Based Administration** — Central console provides a single point of administration with an intuitive interface that enables backup administrators to manage a larger number of servers much more efficiently. Automates enterprise backup operations for thousands of users across multiple servers and helps consolidate management of all storage devices.

• **Unparalleled Performance** — Multiplex up to 32 different data streams to a single tape drive to realize the maximum rated throughput of your storage hardware. Leverage parallelism by sending multiple data streams to multiple tape devices or by spawning multiple data streams automatically from a single backup job.

• **Transparent, Nondisruptive Backups** — Database-aware technologies help enable secure, reliable protection of mission-critical databases without compromising application availability. Highly efficient design results in marginal CPU utilization during backup operations. Integration with hardware-based or software-based split-mirror and snapshot technologies enables complete transparency of backup operations.

• **Leverage the Latest Storage Hardware** — NetBackup DataCenter supports a broad range of tape library, tape drive and Storage Area Network (SAN) interconnect technologies from leading vendors. Dynamically share individual tape drives over SCSI or a SAN, or utilize the optional NetBackup for NDMP agent to help protect popular network attached storage (NAS) devices. NetBackup DataCenter utilizes Network Data Management Protocol (NDMP) to control and initiate backup and recovery activities for NAS systems that support NDMP.



Frequency-based techniques may be combined with calendar-based techniques for extremely flexible scheduling of automated backups

"VERITAS NetBackup DataCenter has proved itself as a strong and reliable mainframe-class backup and recovery solution for our multi-operating system platforms. VERITAS Software provides us with one comprehensive solution to protect our data throughout the enterprise."

— John Reina
Director of Infrastructure Services, KPMG

Scalable Architecture

There are many products that perform backup and recovery for open-system environments. However, very few are designed to handle the amount of data in the modern data center. Once the sole domain of mainframes, modern data centers are now built around large UNIX and Windows servers and clusters where organizations run their business-critical applications.

VERITAS NetBackup DataCenter has a core three-tier architecture that, when combined with sophisticated media management and high performance, helps address the requirements of the largest data center installations.

- The NetBackup Master Server represents the first tier. The Master Server is the "intelligence" for all data protection activities, from scheduling and tracking client backups to managing tape media and file catalogs. The Master Server may also have one or more storage devices attached for backing up data from multiple clients or may be clustered for availability.

- Organizations with data in several locations or with data-intensive applications, such as data warehouses, may implement Media Servers, the second tier, to locally back up large applications while backing up other client systems over the network. A Media Server may share a tape library with the Master Server or another Media Server, or may work with its own tape devices. If a Media Server is unavailable, the attached client's backups can be routed to another Media Server.

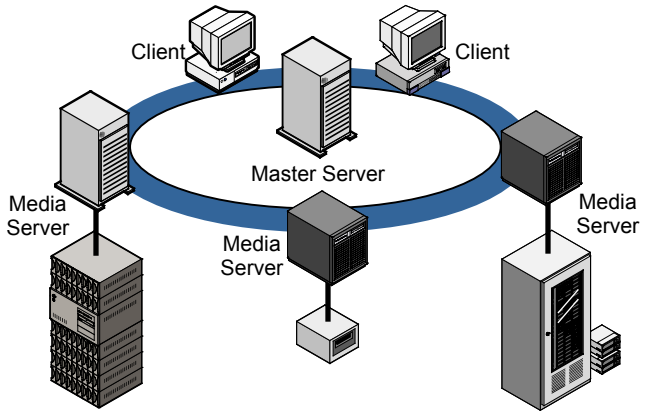
- The third tier are the Client agents that back up servers and workstations. Normally, this tier represents the largest number of individual machines but not necessarily the most data. Both the Media Servers and Clients may be centrally managed from the Master Server.

Global Management and Real-Time Reporting

The optional Global Data Manager™ for VERITAS NetBackup provides a new approach to global backup and recovery. Global Data Manager's graphical user interface quickly displays critical status views of virtually your entire backup and recovery environment from one console, enabling enterprises to exploit up-to-date information, while also being able to run real-time reports. From the dashboard, users also can create customized views of an entire environment or drill down into a specific location anywhere in the world.

Implementation Flexibility

The implementation of NetBackup policies and configurations are straightforward, simplified further by the extensive use of intuitive wizards. From a graphical interface, administrators may define automated backups that are frequency-based, calendar-based or both. Backups may initiate on a daily, weekly, monthly, or even hourly basis and may be configured to initiate only on specific days. A backup window may be specified so that backups do not run at certain times. In addition, administrators may give backup policies descriptive, multiword names for easier tracking and reporting.



VERITAS NetBackup DataCenter is based on a core three-tier architecture designed for performance and scalability.

Breakthrough Technology

VERITAS NetBackup DataCenter has several backup options that redefine traditional backup and restore. For example, VERITAS NetBackup FlashBackup™ delivers "snapshot" backups for data hosted on Sun Solaris (UNIX File System or VERITAS File System™) or HP-UX (OnlineJFS or VERITAS File System). NetBackup FlashBackup performs consistent, point-in-time backup with virtually none of the overhead associated with logical backups. Administrators may perform logical restores using NetBackup FlashBackup backups, at either the volume level or the individual file level.

VERITAS NetBackup Array Integration Option provides NetBackup integration with popular hardware snapshot methods from Hewlett-Packard, Hitachi Data Systems and EMC. With the Array Integration Option, NetBackup DataCenter may leverage HP Business Copy XP, Hitachi ShadowImage or EMC TimeFinder for backup of data hosted on Sun Solaris or HP-UX, or Oracle hosted on Sun Solaris or HP-UX, on supported file systems or raw devices.

With VERITAS NetBackup™ Instant Recovery, enterprises may further leverage disk-based restoration techniques. VERITAS NetBackup Instant Recovery enables extremely fast point-in-time recovery of file system data or Oracle from

disk, through software snapshot methods offered by VERITAS File System or VERITAS Volume Manager™.

VERITAS NetBackup Shared Storage Option continues to define storage device sharing. Shared Storage Option leverages SAN interconnections and is the premier heterogeneous dynamic drive sharing solution. Shared Storage Option allows individual tape drives to be shared as needed between multiple VERITAS NetBackup DataCenter servers, for both backup and restores. Tape drives are connected to each other via enabling hardware, such as switches, hubs or multiplexors. Shared Storage Option allows enterprises to leverage their peripheral investments more thoroughly through drive sharing, since individual drives need not be tied to a specific server anymore, and through better use of hardware resources.

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Eliminating the backup footprint on a production server is a requirement for many of today's online, all-the-time e-business applications. Even the slightest impact or downtime on these mission-critical systems translates into significant business losses.

For this reason, the VERITAS NetBackup ServerFree Agent was developed. The ServerFree Agent enables backup directly from disk to tape device, freeing corporate networks from backup traffic and in the process optimizing application host performance by releasing CPU cycles and I/O bandwidth once attributed to backup.

FEATURES	BENEFITS
Performance	
Unique, multitier architecture	The first product of its kind, based on a scalable, distributed architecture of Master Server, Media Server and Client, enabling high-performance backup to direct-attached devices or SAN-attached devices
Multiplexed backup	Ability to write multiple data streams from one or more clients/servers to a single tape drive for optimum performance
Parallel backup and restore	Ability to write and read multiple data streams from one or more clients/servers to one or more tape devices for optimum performance
Enhanced! Scalable image and media catalogs	Distributed, small-footprint catalog tracks backups and tape media based on a fast-access, segmented structure that can easily be backed up, restored or replicated
New! VERITAS NetBackup™ Instant Recovery	Optional, point-in-time, fast recovery from disk through NetBackup integration with VERITAS File System or VERITAS Volume Manager
Robust Instrumentation	
Backup Progression Bar	Quickly determine how far a backup has progressed
Enhanced! Integrated Troubleshooting Guide	Error explanations and recommended actions have been integrated into NetBackup interfaces to further simplify troubleshooting
Tape volume, drive and library viewing	Report on tape utilization, drive configuration and more
Error message identification and categorization	Easily diagnose problems without having to parse transaction logs
Browse historical reports	Perform in-depth analysis of prior backup and restore activity
Enhanced Disaster Recovery	
Enhanced! Integration with VERITAS Bare Metal Restore™	Optional, complementary solution streamlines the recovery process, accelerating restores of Windows and UNIX servers
Inline Tape Copy	Optional feature that enables the creation of multiple concurrent backup images, each with unique retention attributes, run either simultaneously with primary backup or after completion of primary backup
Nonproprietary tape format	Ability to create TAR-compatible tapes, which may be restored (outside of NetBackup) utilizing native UNIX utilities
Enhanced! VERITAS NetBackup™ Vault	Optional, integrated module for complete, automated offsite tape management, from the creation of duplicates to be brought offsite to the tracking of offsite media retention periods for determining tape reuse and more
Alternate restoration methods	Systematic, menu-driven procedures for restoring data to alternate locations or systems to simplify disaster recovery and recovery simulation

FEATURES	BENEFITS
Mainframe Strength Media Management	
Automatic robotic/tape drive configuration	Helps to greatly reduce the time required to configure tape devices
Multihost library sharing	The first product of its kind to offer the ability to share an automated tape library between heterogeneous systems — UNIX, Windows, Linux or network attached storage (NAS) — for greater leverage of expensive tape resources
Enhanced! Broad tape device support	Support for all leading tape device providers, including ADIC, Compaq, Dell, Exabyte, HP, IBM, Overland Data, Qualstar, Quantum, Sony, Spectra Logic, StorageTek and Sun, enables enterprises to select best-of-breed technologies
Advanced media and library capabilities	Ability to leverage advanced functionality, including support for bar-code readers and configuration of "spillover" media volumes (scratch pools)
Enhanced! Dynamic tape drive sharing	With Shared Storage Option, NetBackup DataCenter virtualizes tape drive resources between heterogeneous systems, fostering greater efficiency in tape drive utilization for both backup and recovery
Flexible Implementation	
Enhanced! NetBackup administration and configuration wizards	Quickly and easily configure tape devices, media, storage units, backup policies and catalog backup, and, for Oracle, automatically generate backup and recovery scripts
Advanced scheduling	Ability to configure automated backups for specific days within a month may be combined with standard frequency-based scheduling techniques for greater control over backup job initiation
Remote administration	Full backup and restore capabilities from any location, including over dial-up networks
Network bandwidth throttling	Ability to control NetBackup network utilization helps adjust loads accordingly on corporate networks should backups continue into production time
Job prioritization	Ability to set priorities for backup jobs based on importance
Heterogeneous Support	
NetWare Media Server Option	Optional support for backing up large NetWare servers directly to tape devices
Enhanced! Broad platform support	Support for all major UNIX platforms, Microsoft Windows, including 32-bit and 64-bit client support for Microsoft Windows XP, Microsoft Windows Server 2003, Novell NetWare, Linux and others allows enterprises to leverage current infrastructure or choose best-of-breed technologies
Enhanced! Database- and application-aware backup and recovery	Support for all leading databases and applications, including Oracle, Microsoft SQL Server, Informix, Sybase, DB2, Microsoft Exchange Server, Microsoft SharePoint Portal Server, Lotus Notes and Domino Server and SAP R/3, with more in development
Support for leading networking topologies	Leverage Storage Area Networks (SANs), network attached storage (NAS), Gigabit Ethernet (GbE), and more for backup and recovery
Advanced frozen-image support	With the Array Integration Option, NetBackup DataCenter leverages HP Business Copy, Hitachi Shadow Image and EMC TimeFinder (with more in development) for zero-downtime backup periods

Disaster Recovery

In addition to performing full or partial recovery from a primary backup, NetBackup DataCenter may be used to help recover applications or complete servers that are located offsite.

VERITAS NetBackup DataCenter may automatically create a copy of primary backups. These secondary tapes may be brought offsite for storage. In addition, NetBackup can "de-multiplex" tapes to place the data for a given system within contiguous, recoverable images, a process that helps to significantly enhance the performance of selective data restoration. Very rarely do organizations choose to restore a complete server at a hot-site location. Rather, most installations have business-critical applications that must be restored first, followed by secondary and tertiary applications. A selective restore is much faster if the data is co-located.

NetBackup may create backup copies that are TAR-compatible. With TAR-compatible backup copies, in the event of a catastrophic disaster, administrators may utilize basic UNIX utilities to restore data from these copies without NetBackup even installed.

To help enable fully automated disaster recovery, NetBackup includes an option for complete vault management — VERITAS NetBackup Vault, which simplifies the management and creation of tape duplicates for offsite vaulting. Vault manages the ejection of tape duplicates to the robotic Cartridge Access Port (CAP), and the creation of pick/pull reports, to the monitoring of the retention periods for offsite media and more. NetBackup Vault facilitates duplicate management of media created either concurrently with the primary backup or at a scheduled time, such as during non-production hours.

SUPPORTED PLATFORMS

VERITAS NetBackup DataCenter 4.5 Supported Server Platforms

- Compaq Tru64 UNIX
- HP-UX
- IBM AIX
- IBM (Sequent) DYNIX/ptx
- Linux
- Microsoft Windows NT 4.0
- Microsoft Windows 2000
- Microsoft Windows 2000 Server Appliance Kit (SAK)
- Microsoft Windows Server 2003
- NCR MP-RAS
- Novell NetWare*
- SGI IRIX
- Sun Solaris

VERITAS NetBackup DataCenter 4.5 Supported Client Platforms

- Apple Macintosh OS, OS X
- Caldera OpenUnix
- Compaq OpenVMS
- Compaq Tru64 UNIX
- Data General (EMC) DG/UX
- FreeBSD
- HP-UX
- HP MPE/iX
- IBM AIX
- IBM (Sequent) DYNIX/ptx
- Linux
- Microsoft Windows 95/98/LE/ME/XP
- Microsoft Windows NT 4.0
- Microsoft Windows 2000
- Microsoft Windows 2000 Server Appliance Kit (SAK)
- Microsoft Windows Server 2003
- NCR MP-RAS
- Novell NetWare
- SGI IRIX
- Sun Solaris

VERITAS NetBackup DataCenter 4.5 Supported Network Attached Storage (NAS) Platforms (via NDMP)

- Auspex
- BlueArc Corporation
- EMC
- Hewlett-Packard
- Mirapoint
- Network Appliance
- Procom Technology
- Quantum
- Spectra Logic
- Spinnaker Networks
- VERITAS ServPoint™ Appliance Software *for NAS*

For the latest software and hardware compatibility information, please see the Compatibility Lists at www.support.veritas.com/ or contact your VERITAS sales representative or authorized VERITAS reseller.

**Support of Novell NetWare as a server requires the NetBackup NetWare Media Server Option. This option will enable backup and recovery of a NetWare server directly to locally-attached storage.*

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