

Symantec NetBackup™ 7.5

The Symantec NetBackup Platform: Transform and Modernize Backup and Recovery

Data Sheet: Data Protection

Overview

The Symantec NetBackup™ Platform with V-Ray technology simplifies and unifies the protection of your information-driven enterprise by automating advanced technologies and standardizing operations across applications, platforms, and virtual and physical environments. NetBackup with V-Ray provides patented visibility into virtual machines and applications across physical and virtual servers, and optimizes deduplication data streams for fast and efficient backup and recovery. That means enterprises have the ability to protect completely, store efficiently, recover anywhere, and manage centrally across heterogeneous operating systems and storage hardware, including disk and tape. Integrated “Dedupe Everywhere,” snapshot replication management and recovery, and patent-pending virtual machine protection help customers better manage and protect accelerating data growth, lower infrastructure use and cost, and reduce recovery times to meet the most demanding service level agreements. A single, unified management console offers multisite monitoring, analytics, and reporting, which allows customers to standardize operations and risk management and deploy best practice Tiered Recovery solutions. Used by companies around the world, Symantec NetBackup easily scales to protect the largest UNIX®, Microsoft® Windows®, and Linux® environments.

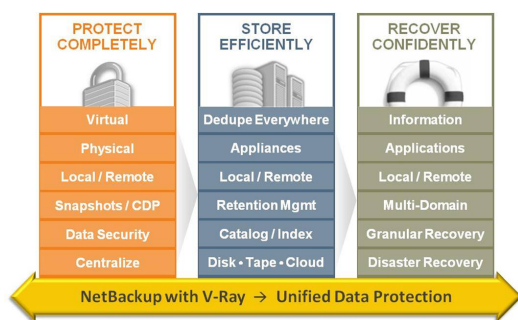


Figure 1: NetBackup with V-Ray unifies data protection across the enterprise to protect completely, store efficiently, recover anywhere, and manage centrally from one product, one console—physical and virtual.

The NetBackup Platform consists of the following Symantec products: NetBackup, NetBackup Appliances, NetBackup RealTime, OpsCenter Analytics, and Enterprise Vault™.

Product Highlights

New in Symantec NetBackup 7.5

- **NetBackup Replication Director** simplifies and accelerates snapshot replication management and granular file-level recovery from any NetBackup-managed replicated snapshot image.
- **NetBackup Accelerator** reduces traditional full backup times to the speed of incremental backups, reducing the stress of achieving the RTO/RPO of the most demanding service level agreements.
- **NetBackup Search** simplifies and accelerates the ability to conduct searches across the entire NetBackup environment and places those results on legal hold for eDiscovery and better retention management control.
- **Operational Restore using OpsCenter** enables you to easily find files or directories across multiple locations from an easy-to-use Web-based interface, enabling first-line help desk employees to handle end-user restore requests.
- **Cloud-Based Data Protection** is easily enabled with the seamless extension for the movement and storage of data from the premise to a growing list of cloud storage providers.

Popular Features From NetBackup 7.1

- **NetBackup VM Intelligent Policy** automates and accelerates policy-based protection of new or moved virtual machines, along with superior load balancing for the fastest possible backup performance of virtual environments.
- **NetBackup Auto Image Replication (AIR)** automates and accelerates disaster recovery through WAN-optimized replication of deduplicated backup images and their

associated catalog data from one domain and recovery from another domain.

NetBackup with V-Ray Technology

- **Complete and simple virtual machine protection**—Award-winning backup and recovery for VMware and Microsoft Hyper-V® environments.
- **Fast, granular recovery of data from applications in both virtual and physical environments**—Quickly restore files, email, and other granular items from Microsoft® Exchange, SharePoint®, Active Directory®, and applications running on hypervisors including VMware and Hyper-V.
- **NetBackup Intelligent Deduplication**—Dedupe everywhere: at the source across physical and virtual machines, media servers, turnkey NetBackup appliances, data centers, and remote offices with secure, WAN-optimized deduplication technology that is easy to deploy and manage.
- **Single vendor, turnkey solutions**—NetBackup appliances accelerate deployment and time to value for NetBackup data protection and deduplication.
- **Centralized management**—Increase efficiencies by globally managing all data protection technologies and multiple NetBackup servers and domains from one location, one management console, one product.
- **Heterogeneous data protection**—Protection across heterogeneous operating systems, applications, both disk and tape architectures, and physical and virtual environments.
- **High scalability**—Benefit from a flexible, three-tiered architecture that scales with the needs of today's growing data center.
- **Effective disaster recovery**—Fully automated and integrated system recovery with NetBackup Bare Metal Restore™; built-in replication; fast P2P, P2V, V2P, and V2V restores; and offsite tape management.
- **Comprehensive data security**—Flexible encryption technologies for maximum data security while in transit or in media.

Tiered Protection and Central Management

Client protection

NetBackup provides a simple yet comprehensive selection of innovative clients and agents to optimize the performance and efficiency of your backup and recovery environment. These clients provide high-performance, online backup and recovery of business-critical databases and applications; enable backup and recovery operations over storage networks; and deliver high levels of data security and complete system-level recovery. Organizations can centrally manage all aspects of backup and recovery operations from an intuitive graphical user interface (GUI), allowing consistent data protection policies to be established across the enterprise, regardless of the type and number of clients deployed.

Application protection

To ensure business-critical applications are not over- or underprotected, organizations must create a tiered protection strategy. The NetBackup Platform provides a variety of technologies to aid in the creation of a tiered protection strategy that is both reliable and cost-effective.

Highlights include:

- **Full backups completed in the time it takes to do an incremental backup**—Tackle the challenge of backing up hundreds of millions of files, or performing thousands of backups simultaneously, all of which are starting to run up against or exceed backup windows. In some environments, the backup windows have disappeared and no longer exist. With a single click from the NetBackup unified management console, NetBackup Accelerator can perform a full backup at the speed and cost of an incremental backup without sacrificing the fast recovery time associated with full backups. It can help meet ever more demanding backup and recovery SLAs.
- **Snapshot and Replication integration**—For more sophisticated protection, NetBackup integrates with a variety of different disk array- and software-based snapshot methods, including off-host backup and instant recovery. NetBackup Replication Director integrates full

control for the management and recovery of snapshot replication simplifying the recovery of individual files from a snapshot image without having to mount that entire image. Snapshots and replicas are now managed in the same NetBackup policy, catalog, and schedule interface as tape or any other type of streaming backup.

- **Application and database agents¹**—For the protection of business-critical applications and databases, NetBackup provides application-aware agents that enable hot/online backup, wizard-based configuration, and support for application-specific tools such as Oracle® Recovery Manager (RMAN).
- **Fast remote replication and disaster recovery**—To optimize disaster recovery efficiency, NetBackup AIR can automatically manage the replication of a deduplicated backup image across the WAN from one NetBackup master server domain to another. Backup images are available for immediate recovery from any domain or global location, with minimal impact on storage footprint or bandwidth.
- **Continuous data protection**—For more advanced protection, NetBackup integrates with NetBackup RealTime² to perform continuous data protection and live IP-based replication to dramatically lower recovery-point objectives (RPOs) and recovery-time objectives (RTOs) for both local protection and longer-distance disaster recovery across physical and virtual environments.

Data security

NetBackup provides flexible technologies to secure data, including access and authorization control and disk and tape encryption methods.

Highlights include:

- Source/Client encryption for the highest security, as data is protected while in transit and in media.
- Media Server Encryption Option provides more flexibility for backup to tape and leverages the NetBackup media server, thereby avoiding impact on client performance.

- Centralized and integrated key management service for encrypted tape drives.

Complete and simple virtual machine protection

Virtualization has created new opportunities and challenges in the data center, including slower backup and recovery, increased storage consumption, and yet another technology to learn and manage.

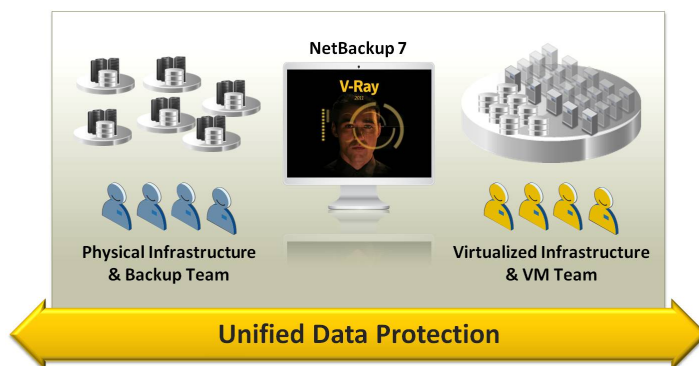


Figure 2: NetBackup with V-Ray provides unified backup and recovery across physical and virtual machine environments.

Symantec NetBackup with V-Ray technology breaks down virtual and physical silos and delivers simple yet comprehensive backup and recovery. This unified view allows for more standardization; reduces duplication of effort; eliminates redundant storage pools; and lowers licensing, training, and operational costs.

Feature	Benefit
Instant application and single file granular recovery from any storage type—disk or tape	Enables two types of restores from a single backup pass: the single file and the full virtual machine image for disaster recovery. This saves valuable time and backup storage as data is only written to storage once. The virtual machine image does not need to be restaged to disk, so single files can be restored instantly.
Off-host backup and deep VMware and Microsoft Hyper-V integration	Virtually eliminates the overhead of backup processing on virtual machines by leveraging the award-winning NetBackup integration with VMware vStorage API for Data Protection and Microsoft Hyper-V. By taking backup operations off-host, applications can run unabated and the need to maintain and upgrade agents on every virtual machine is removed.
Automated virtual machine protection	Automatically discover, identify, and protect virtual machines as they come online, whether they are new, cloned, or migrated from another location. Virtual

1. For more information, please refer to the NetBackup 7 Clients and Agents data sheet.

2. For more information, please refer to the NetBackup RealTime 7.1 data sheet.

Feature	Benefit
	machines can now be automatically protected wherever they reside, without having to edit the backup policy.
Virtual machine–optimized deduplication	Symantec offers flexibility and choice with deduplication built in. At the source, media server, or target appliance—from a single interface and with V-Ray visibility—NetBackup provides extremely efficient deduplication across physical and virtual environments. By unifying into one protection layer, redundant data can be eliminated, duplicate processes discontinued, and wasted storage prevented.

Dedupe Everywhere

NetBackup delivers deduplication everywhere, from data centers of all sizes to remote, globally dispersed sites, and provides an enterprise-class foundation for reducing the cost and complexity of data growth attributed to virtualization. No other provider has the ability to deploy such a flexible and cost-effective solution built right into the backup software and to support the wide range of compatible, highly scalable NetBackup appliance solutions.

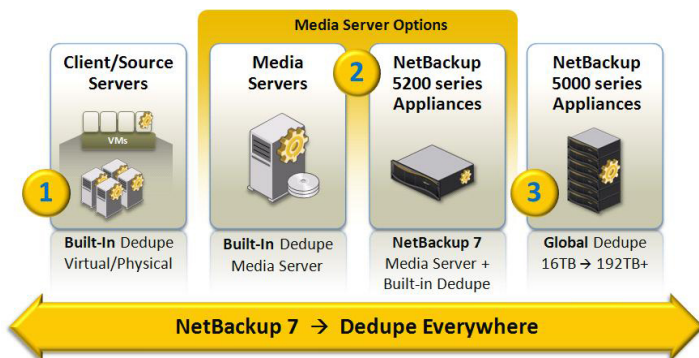


Figure 3: NetBackup 7 with its seamless “end-to-end” global deduplication offers a single vendor solution that is flexible yet cost effective, highly scalable, simple to manage, and as easy to deploy as 1-2-3.

NetBackup client deduplication

Removing redundant data as close to the source as possible maximizes the benefits of deduplication. NetBackup 7.5 has client deduplication built right into the product for fast, secure, and efficient backup and recovery. Client deduplication removes redundant data at the source, which leads to lower CPU, I/O, and memory utilization compared to a traditional backup, freeing up more client resources for

production services. Client deduplication can deliver up to 10 times faster backups.

Highlights include:

- **Native deduplication embedded in NetBackup**—Client deduplication is built right into NetBackup, so no separate appliance is required.
- **Application support**—Client deduplication is ideal for any backup source like standard file data, applications, and databases that are supported by NetBackup.
- **Virtual machine protection**—Using a NetBackup client inside a virtual guest reduces the backup impact on the overall virtual infrastructure by deduplicating the data at the source, thereby sending only unique data and changes over the network. For VMware and Hyper-V environments, it is also possible to offload deduplication to an alternate backup host, thereby eliminating the need to run backups from the production virtual machines.

NetBackup media server deduplication

NetBackup has target deduplication built right into the media server, which allows it to be used with existing disks. Setup is as easy as clicking a box. The NetBackup media server offers inline deduplication by processing the data streams in flight, requiring no extra staging disks for processing, leading to optimal use of storage. Through the NetBackup storage lifecycle policies, you have the option to implement post-process deduplication.

Highlights include:

- **Faster backups**—NetBackup target deduplication removes redundant data inline, before storing to disk; therefore, much less data is moved and eventually stored to the final destination.
- **Reduced storage costs**—NetBackup enables organizations to leverage commodity disk and servers, which can enable a more cost-effective and flexible solution.
- **Reduced storage consumption**—Organizations can reduce overall storage by up to 20 times versus traditional tape-based approaches.

- **Faster restores**—With deduplication, you can keep more versions of data locally, online, eliminating the need to perform individual restores from tape.
- **Any off-host backup types (VMware, NDMP, SAN client)**—The NetBackup “stream handler” technology delivers an intelligent deduplication approach to fully optimize backup processing.

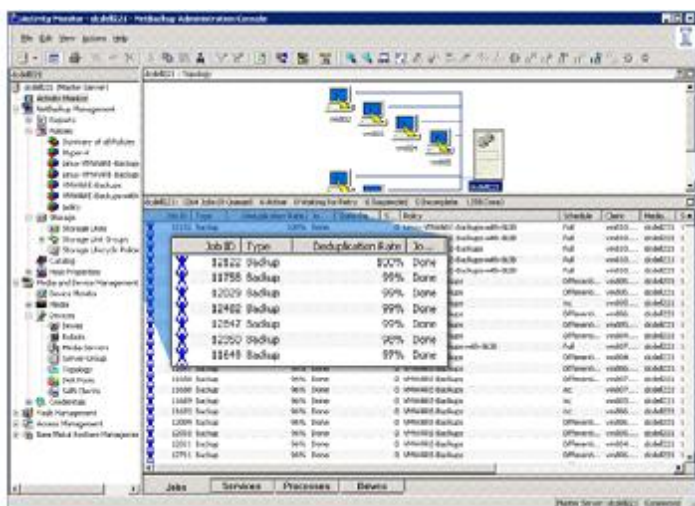


Figure 4: NetBackup allows for easy monitoring of backup job deduplication ratios and status.

Operational simplicity and easy integration NetBackup Appliances



Symantec understands the shifting needs of the data center and offers the NetBackup appliances as an additional option for customers to use with their backup and deduplication

strategy. To help data centers maximize their investment of time and budget, Symantec has seamlessly integrated the hardware, software, and support, so there is no longer any need to source and manage multiple vendors. NetBackup simplifies and accelerates the deployment and management of enterprisewide global deduplication into one integrated solution.

The NetBackup appliances simplify and accelerate the deployment of Symantec's award-winning backup and recovery solution, as well as its fully integrated data deduplication solution. Ideal for customers looking for turnkey solutions for their fast-growing IT environments, the appliances enable efficient, storage-optimized data protection for virtual and physical data centers of all sizes and globally dispersed offices.

- **NetBackup™ 5200** backup appliance series, based on NetBackup 7, enables easy expansion and upgrade of existing NetBackup environments while reducing the overall backup storage footprint with a built-in deduplication option.³
- **NetBackup™ 5000** deduplication appliance series offers scalable deduplication appliance solutions for the enterprise that provide operational simplicity, effective utilization of bandwidth and storage, and high performance. Easily fits into existing NetBackup environments.⁴

Integration with third-party deduplication appliances via NetBackup OpenStorage

Many deduplication appliances are essentially virtual tape libraries that are based on disk technology, but emulate tape. The NetBackup OpenStorage⁵ API allows NetBackup to see disk as disk. The whole concept of tape emulation goes away, allowing users of storage appliances with OpenStorage better utilization and the ability to leverage the advanced feature

3. For more information, please refer to the NetBackup 5220 Backup Appliance Appliance data sheet.
4. For more information, please refer to the NetBackup 5020 Deduplication Appliance data sheet.
5. For more information, please refer to the NetBackup 7 Options data sheet.

set, including deduplication, optimized duplication, virtual synthetics, and direct to tape.

Improve eDiscovery and recovery speed with backup and archiving

Managing the search and legal hold for eDiscovery requests across thousands of tapes is costly and time-consuming. NetBackup Search now gives users the ability to conduct detailed searches across their NetBackup environment based on user, date range, domain, or keywords. Now it's possible to easily manage legal holds on backup images, ensure that files don't expire according to data retention policies, and give back the flexibility to delete tapes that no longer contain relevant information.

Data reduction for primary storage is equally important and follows Symantec's strategy to deduplicate as close to the source as possible. The solution for reducing primary data growth at the source is Enterprise Vault, a recognized leader in archiving and eDiscovery.

The combination of data protection with archiving enhances traditional backup and recovery. NetBackup and Enterprise Vault provide integration for automatic, policy-based migration of archived data from disk managed by Enterprise Vault to tape or other media managed by NetBackup. For protection of an Enterprise Vault environment, NetBackup provides an agent that automatically discovers the various servers and components within an Enterprise Vault environment.

Recover Anywhere

The NetBackup Platform provides a variety of ways to move data off site to a disaster recovery location in the event a data center is no longer available, whether due to environmental or other factors. The array of technologies in NetBackup ensures data can be recovered quickly, even instantly, from anywhere and with minimal data loss.

- **Cloud-based data protection**—For customers trying to expand or replace their current premise-based storage with a cloud-based solution, NetBackup provides seamless extension into the cloud by adding new features to address the key barriers to adoption: security and bandwidth constraints. With media server encryption, NetBackup Accelerator, bandwidth throttling, and WAN acceleration, NetBackup enhances the movement and storage of your data from the premise to the cloud.
- **Remote disaster recovery and replication of deduplicated data**—NetBackup Auto Image Replication can automatically manage the replication of a deduplicated backup image across the WAN from one NetBackup master server domain to another, managed centrally from the NetBackup GUI. While backup data is now globally available for immediate recovery from any location, bandwidth and back-end storage are optimized as only unique data is replicated. For long-term storage, data can be migrated to a tape device at the disaster recovery site.
- **Offsite tape media management**⁶ —The NetBackup Vault Option automates and tracks the movement of tape media off site to a disaster recovery location.
- **Live block-level replication**—NetBackup RealTime⁷ provides live block-level asynchronous or synchronous replication with NetBackup. If used for the protection of the NetBackup catalog, it is free of charge.
- **Bare Metal Restore**—Integrated and included at no extra charge, Bare Metal Restore provides automated server recovery of physical or virtual machines (P2P, P2V, V2P, V2V), including the ability to perform a restore to a dissimilar server and/or a dissimilar disk configuration. This feature boasts a complete system recovery time of approximately 15 minutes on Windows, Linux, and UNIX platforms.

6. For more information, please refer to the NetBackup 7 Options data sheet.

7. For more information, please refer to the NetBackup RealTime 7.1 data sheet.

Symantec NetBackup with V-Ray Granular Recovery Technology

Symantec NetBackup with V-Ray gives patent-pending Granular Recovery Technology the visibility into virtual and physical environments to enable fast recovery of files, email, and other granular objects from environments such as Microsoft Exchange, Active Directory, SharePoint, VMware, Hyper-V, Red Hat®, and SUSE Linux. This means the image can be backed up once and stored once, yet enable two types of restores—the full image for disaster recovery or a granular file.

Unified Data Protection Management

The Symantec OpsCenter provides a centralized console for operational monitoring and reporting for visibility and control across a heterogeneous data protection environment.

Highlights include:

- **Operational restore**—A Web browser user interface available to operators enables users to search across multiple client and multiple NetBackup domains. Files or directories can now be found in seconds, even with limited information, and service the restore request as quickly as possible. Search results appear within seconds and users can refine or cancel them as needed to find and restore files fast.
- **Customized alerting and real-time monitoring**—Manage by exception with easy-to-use sort and filter capabilities for better troubleshooting, work prioritization, and control of the backup environment.
- **Cross-domain monitoring and management**—Bridge together multiple NetBackup domains and multiple product versions for easier management and control.
- **Point-and-click operational reporting**—Quickly identify tape drive utilization, success rates, and unprotected areas across NetBackup, Symantec Backup Exec™, and Enterprise Vault environments.

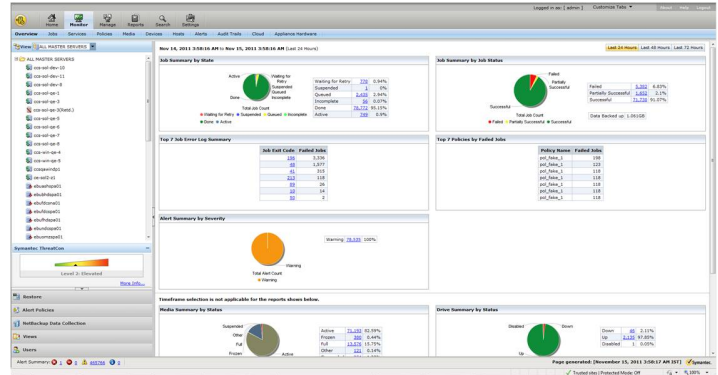


Figure 5: OpsCenter provides an intuitive Web interface for centralized operational management, reporting, enterprise search, and restore.

Advanced business-context reporting with OpsCenter Analytics

Easily upgrade OpsCenter to OpsCenter Analytics⁸ via a license key for advanced and integrated business-context reporting. Content can be customized for the intended audience, such as by line of business, by geography, or by application across a heterogeneous environment. Highlights include:

- **Reporting across third-party applications**—Centralize and normalize reporting across both Symantec and third-party backup applications such as EMC® NetWorker and IBM® Tivoli® Storage Manager.
- **Long-term data retention for trending and analysis**—Better predict backup and email archive storage consumption by tracking growth rates over time, including pre- and post-deduplication, for easier ROI tracking.
- **Service level compliance, cost analysis, and chargeback**—Threshold-based reporting helps ensure service level compliance and the ability to consolidate and allocate costs across backup and archive services using pricing models that are defined to help meet the business need.

8. For more information, please refer to the OpsCenter Analytics data sheet.

Flexible Deployment Offerings for Environments of all Sizes and Levels of Sophistication

NetBackup is available in three editions to support organizations ranging from SMBs to large enterprises (see Table 2).⁹

Edition	Target market	Architecture	Number of supported clients	Available agents and options	Bundled
NetBackup Enterprise Server	Enterprise to large enterprise	3-tier (client, media server, master server)	Unlimited	All	No
NetBackup Server	Mid-market to enterprise	2-tier (client, media server)	Unlimited	All except for the Shared Storage Option and Enterprise Client	No
NetBackup Starter Pack	SMB	2-tier (client, media server)	5, 20, or 40	All except for the Shared Storage Option and Enterprise Client	Yes, includes server, clients, tape drive, and database agent(s)

Table 2. NetBackup editions comparison

Additional NetBackup Features and Benefits

Performance

- **Synthetic backups**—Enable quick client restore from a single backup image for decreased application host impact and less network bandwidth usage
- **Advanced disk staging**—Facilitates faster backups and restores since there is no tape device latency, and non-multiplexed backup images can be used for faster recovery
- **Checkpoint/Restart**—Allows a failed backup or recovery job to be resumed from the last checkpoint

- **Multiplexed backup**—Writes multiple data streams from one or more clients/servers to a single tape drive for optimum performance
- **Inline copy**—Enables the creation of multiple concurrent backup images, each with unique retention attributes, run either simultaneously with or after completion of the primary backup

Media management

- **Automatic robotic/tape drive configuration**—Reduces tape drive configuration time with the automatic generation of drive names and configuration of swapped tape drives
- **Media sharing**—Allows multiple NetBackup media servers to actively share a given tape media for write purposes
- **Broad tape device**—Supports all leading tape device providers, including Dell, Exabyte, HP, IBM, Overland Data, Qualstar, Quantum, Sony, Spectra Logic, and Sun StorageTek.

Agents and Options for Databases, Applications, Disk, Tape, and Disaster Recovery

NetBackup agents¹⁰

NetBackup agents optimize the performance of critical databases and applications, including IBM DB2®, Informix®, Lotus® Notes and Lotus Domino® Server, Microsoft Active Directory, Microsoft Exchange Server, Microsoft SharePoint Portal Server and Microsoft Office SharePoint Server, Microsoft SQL Server®, MySQL, Oracle®, SAP, Sybase, and Symantec Enterprise Vault.

NetBackup options¹¹

NetBackup options enhance data protection environments with features that include virtual tape library support, deduplication, offsite tape media management, and more.

⁹. NetBackup Server does not support NetBackup Enterprise Client or features enabled by the Enterprise Client such as array-based snapshots, and advanced protection of VMware (vStorage API), and Microsoft Hyper-V.

¹⁰. For more information, please refer to the NetBackup Clients and Agents data sheet.

¹¹. For more information, please refer to the NetBackup Options data sheet.

More Information

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[V-Ray for Virtualization and Deduplication](#) (video)

[NetBackup RealTime 7.1](#) (data sheet)

[OpsCenter Analytics](#) (data sheet)

[NetBackup 5220 Backup Appliance](#) (data sheet)

[NetBackup 5020 Deduplication Appliance](#) (data sheet)

To speak with a Product Specialist in the U.S.

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To speak with a Product Specialist outside the U.S.

For specific country offices and contact numbers, please visit our website.

About Symantec

Symantec is a global leader in providing security, storage, and systems management solutions to help consumers and organizations secure and manage their information-driven world. Our software and services protect against more risks at more points, more completely and efficiently, enabling confidence wherever information is used or stored.

Headquartered in Mountain View, Calif., Symantec has operations in 40 countries. More information is available at www.symantec.com.

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Symantec helps organizations secure and manage their information-driven world with [data backup and recovery software](#).

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