

Symantec NetBackup™ 5000 Appliance Series

A turnkey, end-to-end, global deduplication solution for the enterprise.

Data Sheet: Data Protection



Overview

Symantec NetBackup™ 5000 series offers your organization a content aware, end-to-end, and global data deduplication solution that integrates with NetBackup. It provides the critical features required to protect all your data. It reduces the size of backups by up to 50 times with a deduplication engine that can be deployed for storage and bandwidth reduction and connected to a NetBackup domain, in a matter of minutes. An open and flexible architecture allows you to easily scale the size of the solution to meet the changing needs of your environment.

Key benefits

- **Operational simplicity**—Set up backups in a matter of minutes.
- **Flexible and scalable architecture**—Maximum capacity of 192 TB usable deduplicate storage. Protect petabytes of data in one deployment.
- **End-to-end global deduplication**—Leverage deduplication across physical hosts, virtual machines (VM), Network-Attached Storage (NAS) devices, and application hosts.
- **NetBackup integration**—Integration with NetBackup and NetBackup 5200 series appliances for scalable, load-balanced, disk-backup for the data center.
- **Space reduction**—Up to 10-50 times in storage and 99 percent in bandwidth consumption.

Integrated source and target deduplication

The NetBackup 5000 series offers both source and target side deduplication in a single, end-to-end integrated solution. Source deduplication is built-in into the NetBackup 7.0 clients and eliminates duplicate backup data before transmission, thus allowing for better utilization of bandwidth and storage. The NetBackup 5000 appliances can also be used as a deduplicated storage target for NetBackup backups, if source deduplication is not preferred on specific clients. Once set up, the appliance simply appears as a disk pool within NetBackup and can be controlled via NetBackup policies.

Storage and bandwidth efficient backups

With built-in global deduplication technology, NetBackup 5000 series appliances globally eliminates the backup of duplicate data offering storage savings of up to 50 times. This allows for cost-efficient, long-term retention of data on disk, resulting in faster and more reliable backup and recovery of data. The source deduplication option eliminates duplicate backup data at the source, making the backups more bandwidth efficient.

Ease of operation

NetBackup 5000 appliances come pre-installed with all necessary hardware and software components, and can be set up within minutes for production use. Day-to-day monitoring of backup operations also requires minimal administrative intervention, allowing for lower setup and operational costs.

Scalable capacity and performance

NetBackup 5000 series appliances can scale up in increments of 16 TB to a maximum usable deduplicate capacity of 192 TB which can easily allow protection of petabytes of source data. Performance in the data center can be scaled by adding additional nodes and/or media servers.

Number of NetBackup 5000 Appliance Nodes	Logical Capacity	Maximum Raw Capacity	Maximum Usable Capacity
1	320 – 800 TB	24 TB	16 TB
2	640 – 1600 TB	48 TB	32 TB
3	960 – 2400 TB	72 TB	48 TB
4	1.28 – 3.2 PB	96 TB	64 TB
5	1.6 – 4 PB	120 TB	80 TB
6	1.96 – 4.8 PB	144 TB	96 TB

Figure 1. NetBackup 5000 Scalability

Number of NetBackup 5020 Appliance Nodes	Logical Capacity	Maximum Raw Capacity	Maximum Usable Capacity
1	640 – 1600 TB	48 TB	32 TB
2	1.28 – 3.2 PB	96 TB	64 TB
3	1.92 – 4.8 PB	144 TB	96 TB
4	2.56 – 6.4 PB	192 TB	128 TB
5	3.2 – 8 PB	240 TB	160 TB
6	3.84 – 9.6 PB	288 TB	192 TB

Figure 2. NetBackup 5020 Scalability

Built-In replicaton

The backups in NetBackup 5000 series deduplication storage pool can be replicated to other compatible targets. Replication is bandwidth optimized; the source will not send data segments that are already present in target deduplication pool, thereby minimizing the bandwidth usage between sites. Encryption may also be used for replication at no additional cost. NetBackup 5020 appliances can send/receive replicated data through Ethernet, as well as Fibre Channel.

Support for NetBackup 5200 Series Backup Appliances

NetBackup 5000 series global deduplication pool can be driven by supported NetBackup media servers including NetBackup 5200 series backup appliances. The NetBackup 5220 backup appliance is ideal for use with series appliances. Backups can be streamed via Ethernet or Fibre Channel from NetBackup 5220 to NetBackup 5020 appliances.

Multiple use cases—single solution

The NetBackup 5000 series is ideal for many cases including remote office backups, VM backups, and data

center backups. The built-in, source side, deduplication allows bandwidth efficient centralized backups of remote offices while reducing dependence on tape and unskilled IT personnel at the remote offices. Alternately, NetBackup 5220 appliances may be deployed as media servers at remote offices and backups may be replicated to NetBackup 5000 series global deduplication pools. In virtual environments, NetBackup 5000 series appliances offer flexible backup options including guest or image level backup for both VMware® and Microsoft Hyper-V™ environments with the option of recovering single files or entire VMware Virtual Machine Disk Format (VMDK) or Virtual Hard Disks (VHD) images. NetBackup 5000 series appliances can be used both as a source side and target side deduplication tool for data center backups allowing for bandwidth and storage efficient backup for core data center servers.

Compatibility

Target side deduplication

This feature requires a minimum of NetBackup 6.5 media server with a deduplication plug-in running on one of the following operating systems: Microsoft Windows®, Red Hat® Enterprise Linux®, SUSE® Linux, or Oracle® Solaris.

- Any NetBackup client
- Any NetBackup application or database agent

Note: NetBackup 5200 and NetBackup 5220 backup appliances are supported for use with NetBackup 5000 series appliances.

Source side deduplication

Client side deduplication is supported for NetBackup domains with software version 7.0 or higher. The clients must be at NetBackup 7.0 or higher to support this feature.

Fibre Channel support

NetBackup 5020 deduplication pools have Fibre Channel support. Backups via Fibre Channel require a NetBackup 5220 appliance to act as the media server. Replications

from a deduplication pool hosted in NetBackup 5220 or another 5020 based deduplication pool are also supported.

Platform and application support¹

All core NetBackup software agents can be utilized with the NetBackup 5000 series global deduplication pools if driven by a supported NetBackup media server. 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®, Oracle®, SAP®, Sybase®, and Symantec Enterprise Vault™.

Advanced backup and deduplication reporting

Available with NetBackup OpsCenter Analytics.

Hardware specifications

Each NetBackup 5000 appliance node is a 4U device, Dual Intel Central Processing Units (CPU), 24 GB DDR2 memory, 24x 1 TB disks, systems disks configured in RAID 1, data disks in RAID 6, LSI disk management, 4 GB Ethernet ports, redundant power modules, redundant fan modules, hot-pluggable disk modules, and power entry modules.

Each NetBackup 5020 appliance node is a 4U device, dual Intel E5620 CPUs, 32 GB DDR2 memory, 24x 2 TB disks, systems disks configured in RAID 1, data disks in RAID 6, LSI disk management, redundant power modules, redundant fan modules, hot-pluggable disk modules, and power entry modules. In addition to standard 2 X Gb Ethernet ports, NetBackup 5020 appliance node will have one of the following set of ports:

- 2 X 10 Gb Ethernet ports, LC Optical connection
- 4 X 1 Gb Ethernet ports, Copper connection
- 2 X 10 Gb Ethernet ports and 4 X 8 Gb Fibre Channel ports

NetBackup 5000 Series Comparison		
	NetBackup 5000	NetBackup 5020
Usable capacity per node (TB)	16	32
Maximum usable capacity with 6 nodes (TB)	96	192
Raw capacity per node (TB)	24	48
Maximum raw capacity with 6 nodes (TB)	144	288
1 Gb Ethernet ports	4	Up to 6
10 Gb Ethernet ports	0	Up to 2
8 Gb Fibre Channel ports	0	Up to 4

Technical Specifications		
	NetBackup 5000	NetBackup 5020
Dimensions H x W x D (inches)	6.9 x 17.3 x 27	6.9 x 17.6 x 27
Maximum Weight (lb)	95	104
Floor Space (sq. ft)	3.2	3.5
Floor Loading (lb/sq.ft)	29.7	31.5
Typical Power Consumption (Watts)	< 550	< 550

1. For more information, please refer to the NetBackup Clients and Agents Data Sheet

Technical Specifications		
Maximum Power Consumption (Watts)	700	700
AC Voltage Range (Volts)	100 to 127, 200 to 240	100 to 127, 200 to 240
AC Frequency Range (Hz)	47 to 63	47 to 63
Ampere Rating (A)	7 (100V to 127V), 3.5 (200V to 240V)	7 (100V to 127V), 3.5 (200V to 240V)
Inherent Availability	≥ 99.95	≥ 99.95
Mean Time to Repair (hours)	< 1	< 1

Environmental Specifications		
	NetBackup 5000	NetBackup 5020
Operating temperature (°F)	41 to 95	41 to 95
Storage temperature (°F)	-22 to 140	-40 to 158
Transportation temperature (°F)	-22 to 140	-40 to 158
Operating humidity (RH)	5 to 85 percent	10 to 85 percent
Operating altitude (ft)	-100 to 9843	-100 to 9843

Environmental Specifications		
Maximum Noise (dBA)	65.8	72
Typical Cooling (BTU/hr)	1878	1878
Maximum Cooling (BTU/hr)	2390	2390
Air Flow (cu. ft/min)	105 at 10000 RPM, 70 at 5000 RPM	150 at 10000 RPM, 100 at 5000 RPM

Management

Web-based user interface and NetBackup Console.

Expansion capabilities

Up to 192 TB usable in increments of 16 or 32 TB.

Safety and EMC standard compliance

UL 1950, UL 60950, LVD Directive 2006/95/EC, EN 60950, FCC, 47 CFR Part 15, Subpart B, EMC Directive 2004/108/EC, EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3

More Information

Visit our website

<http://enterprise.symantec.com>

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