HP storage

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HP StorageWorks Enterprise Backup Solution

Business blueprint

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Executive summary

The HP StorageWorks Enterprise Backup Solution (EBS) is an enterprise wide backup and restore solution based on open standards that lay the foundation for advanced data protection. EBS provides fully tested, certified, and supported configurations with leading tape technologies for direct attached and Storage Area Network (SAN) environments. EBS scales from direct attached configurations to heterogeneous Fibre Channel SAN environments and provides best practices and tools for designing, deploying, and managing complex Fibre Channel SAN backup solutions.

EBS offers completely integrated data protection solutions that work right from the start. These pre-tested configurations of hardware and software are designed to solve specific storage challenges, such as the need for continuous access to data, simplified backup operations, and high data integrity. The solutions take care of protecting your data, freeing you to focus on your core business.

Business needs

Today's customers want robust data protection solutions for their most critical information. These backup and recovery solutions must meet the demands of virtually any storage environment—from the needs of fast-growing companies with expanding bandwidth to established companies looking to update and grow their current infrastructures into a SAN. To do this, customers must maximize their use of existing storage investments through storage consolidation and improved management tools, and incorporate new storage, all at existing staffing levels.

Organizations need an end-to-end data protection solution for networked storage environments that focus on both backup and restore. Backup is the problem to administrators because they deal with it every day and restore is more of a concern for the CIO. EBS provides the foundation to meet the ever-decreasing backup windows required by today's applications. HP testing ensures that your backup solution will be seamlessly integrated with HP OpenView Storage Data Protector so that you can always restore your data.

Customers are also looking to protect existing investments and build upon their current infrastructure without having to retrain IT staff. EBS is certified with leading ISV backup and recovery applications to provide continuity for customers who have already standardized on a third-party backup application. These applications include Computer Associates BrightStor ARCserve, Legato NetWorker, Tivoli Storage Manager, VERITAS Backup Exec, and VERITAS NetBackup. Additional supported applications can be found at www.hp.com/go/ebs.

Solution summary

Whether for a direct attached storage (DAS) or SAN-based environment, EBS provides a certified solution, ranging from autoloaders for individual workstations and small, remote offices to enterprise tape libraries for protecting terabytes of information in your datacenter. At the core of EBS, are cutting-edge, proven technologies, such as LTO Ultrium and SuperDLT. With these technologies, HP raises the bar for performance, capacity, and reliability.

EBS scales from autoloaders for workgroup environments to highly available libraries for heterogeneous SAN configurations found in datacenters. Protecting your investment, HP StorageWorks tape libraries can be redeployed from DAS configurations to SAN environments shared by multiple servers.

This solution is accompanied with a full set of services, including detailed diagnostics of existing implementation, capacity planning, architecture design, and onsite installation. Additional Backup & Recovery Solution Services are available for HP Data Protector, VERITAS NetBackup and Backup Exec and Legato NetWorker, see

http://www.hp.com/hps/storage/ns_backup.html

Solution description

Built on award-winning HP StorageWorks autoloaders and tape libraries, EBS helps shrink backup windows and reduce management costs.

Sample Enterprise Backup Solutions for SAN environments are made up of the following components:

Servers — EBS supports a heterogeneous server environment including HP-UX, Windows, Tru64, Linux, NetWare, Solaris, and AIX servers all connected to the same fabric sharing the same tape device (consult the EBS Compatibility Matrix for specific support by backup application).

SAN infrastructure — EBS supports several Fibre Channel SAN network topologies, including point-to-point and switched fabric.

Backup application — EBS offers complete integration with Storage Data Protector. For customers who have adopted a third-party backup application, HP partners with leading ISVs to certify their application in EBS configurations. These ISVs include Computer Associates, Legato, Tivoli, and VERITAS. Others can be found at www.hp.com/go/ebs.
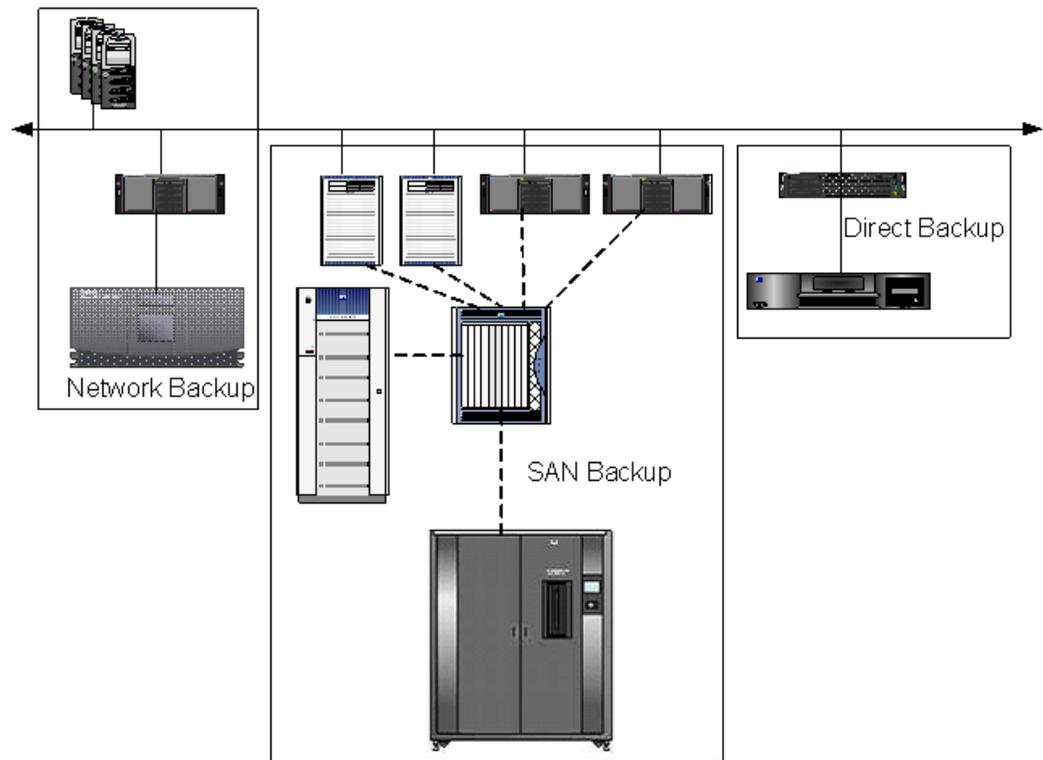
Storage arrays — EBS supports all HP StorageWorks arrays, ranging from the entry-level msa1000 and midrange virtual array, to the high end enterprise virtual array and XP arrays.

Tape libraries - HP StorageWorks tape libraries range from the rack-mountable MSL tape libraries to the enterprise class ESL libraries. The MSL libraries have an embedded or external router option for SAN connectivity. The ESL9000 tape libraries utilize the HP StorageWorks e2400-160 FC Interface Controller to attach to the SAN. These Interface Controllers are an integral component of HP's Extended Tape Library Architecture and are responsible for managing concurrent attempts to access the elements of the tape library, adding a layer of intelligence between the tape drives and the SAN. The Interface Controllers are an evolutionary step beyond previous FC routers and bridges, adding functionality, reliability, and flexibility to the SAN connectivity for the tape libraries.

Tape technologies — EBS provides the ultimate customer flexibility supporting a variety of leading tape technologies in the HP StorageWorks tape automation products, including Ultrium 460 and SuperDLT 220 and 320.

Solution overview

EBS is an enterprise wide backup solution

Three Usage Scenarios

Direct backup — EBS provides certified solutions for many departmental and workgroup situations with HP StorageWorks tape autoloaders and libraries connected directly to the server, providing the server with fast backup speeds, exclusive use of the devices, and an automated solution for reduced human intervention and error.

- Dedicated storage
- Simple configuration
- Low cost with high performance

Network backup — In midsize environments, a dedicated backup server with a direct attached tape device can serve multiple servers through the existing corporate network.

- Existing network architecture
- Simplified storage management

SAN backup — In enterprise situations where customers are consolidating servers and storage, EBS provides backup of multiple servers over a high speed, independent Fibre Channel storage network to centrally attached SCSI tape libraries.

- Consolidated storage
- Massive scalability and fault tolerance
- Centralized storage management

Return on investment (ROI)

EBS has a high return on investment because of its:
- Scalability and modularity offering a pay-as-you-grow approach
- Ability to expand capacity smoothly through a fully tested architecture
- Easier, centralized management over a multi-server and multi-database configuration

Value proposition

EBS:
- Is a foundation backup and recovery solution that can be built upon for a multi-tiered data protection strategy.
- Offers customer confidence based on the extensive testing conducted by HP and relieving IT administrators of having to guess when technology transitions should occur.
- Drives interoperability with solutions based on open standards.
- Makes it easy with design and implementation guides that detail how to design, deploy, and manage your backup and recovery solution.
- Uses award-winning components with high-availability features.
- Has multiple certified backup applications so there is no new application to learn.

Services

The Storage Services Packaging takes the existing storage product along with the existing services and creates a package of the storage hardware and appropriate services. The increased level of support provides for a higher level of storage system availability for the customer. The package includes 24 x 7 support with a 4-hour response for three years as well as installation and startup service.

Additional HP branded support is available for HP Data Protector, Legato NetWorker and VERITAS NetBackup and Backup Exec.

Why HP

- Provides investment protection through compatible, expandable, industry-leading products
- Is a leader in innovation, storage, computing, and networking expertise
- Offers unparalleled support and service
- Strives on bringing to market industry-standard solutions that work in heterogeneous environments

For more information

For more information about HP StorageWorks Enterprise Backup Solution, visit:
http://www.hp.com/go/ebs

Also available:
- Technical blueprints, which provide a high-level technical overview, configuration, and standard bill of materials (refer to the HP Web site)
- EBS Design Guide and Backup Application Implementation Guides, which provide installation instructions, sample configurations, and more