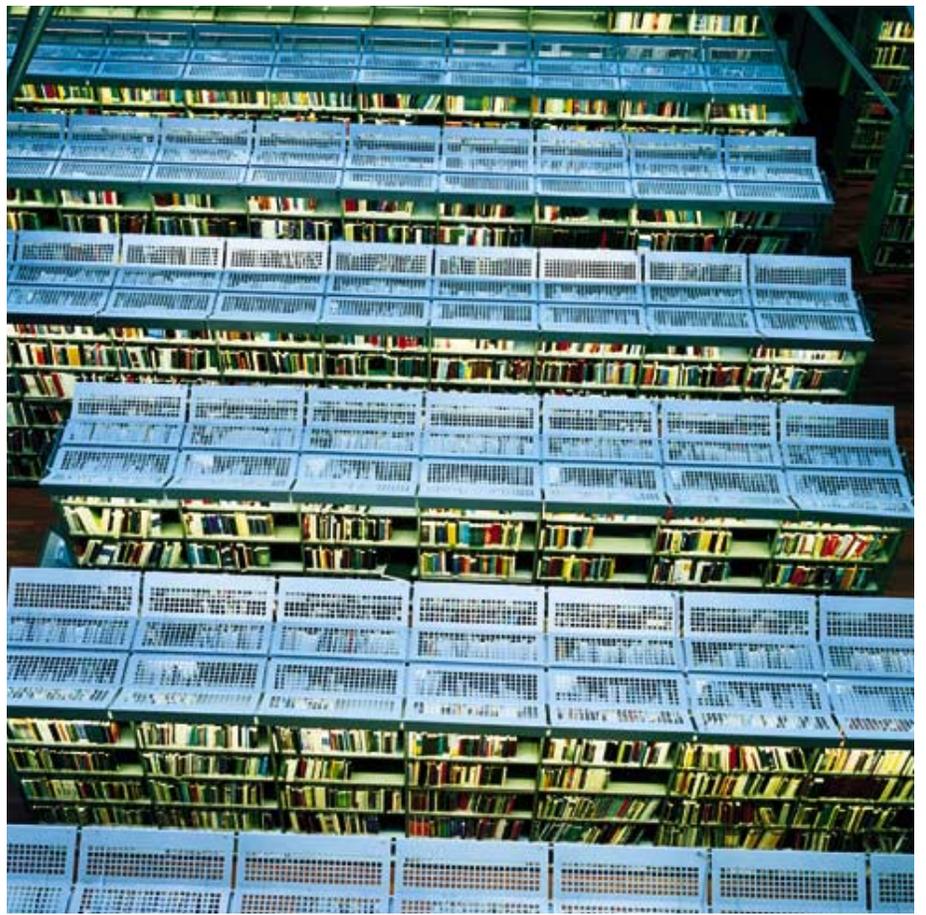




HP StorageWorks tape libraries
Reliable, high-performance foundation
for enterprise data protection and recovery



change
+
hp

Solutions for the adaptive enterprise.





HP offers comprehensive solutions for data protection at every level— from instant recovery to near-term data retention to long-term archiving.

Sophisticated tape-based solutions made easy

Data protection is one of the most important challenges businesses face today. With the high cost associated with data loss—both monetary and from a customer trust standpoint—as well as increased requirements for regulatory compliance, it is critical for businesses of all sizes to invest in the right strategy to protect their valuable information assets.

HP offers comprehensive solutions for data protection at every level—from instant recovery to near-term data retention to long-term archiving. Regardless of the scale or complexity of your enterprise, tape and tape libraries establish a solid foundation for data protection on which all other strategies—including disk backup, remote replication and RAID mirroring—are built.

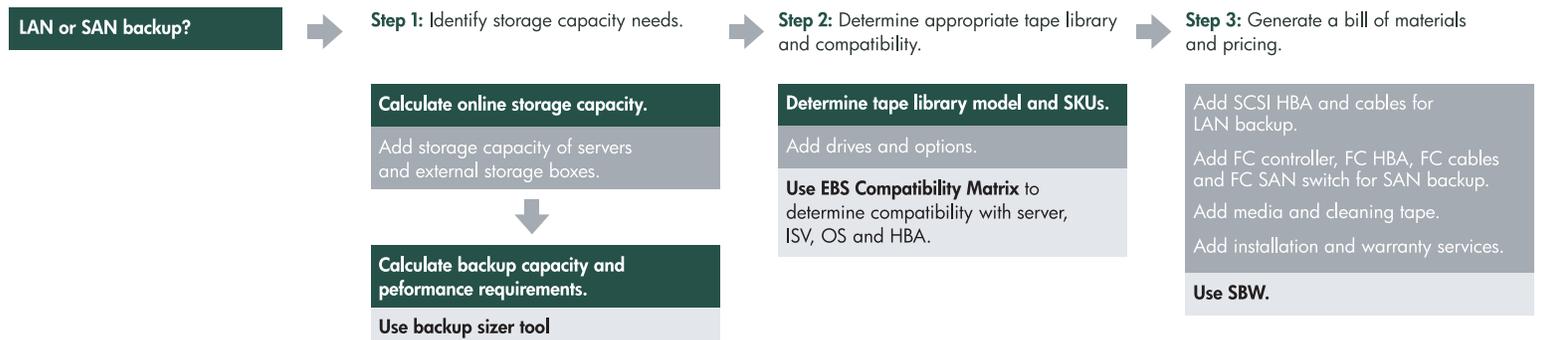
Tape-based storage is the most cost-effective form of data protection based on cost per megabyte, and it's the only medium other than optical that is removable for off-site storage. This makes tape the ideal solution for protecting against data corruption and equipment failures, and a key component of your overall data protection strategy.

With continuous pressure on IT organizations to do more with less, you need data protection solution that delivers reliable, high-performance, easy-to-manage operations to provide consistent, accurate backup and rapid restore—without the need for specialized resources or time-consuming processes.

HP has the solution with our family of StorageWorks tape libraries. From small and mid-sized data centers to large enterprise SAN environments, HP StorageWorks tape libraries deliver the performance, reliability and ease-of-use to ensure data protection and provide smooth recovery. HP offers a range of tape libraries to meet your specific business needs, all designed to fit easily into a multi-vendor environment, complete with intelligent tools to streamline backups and simplify management. All HP tape libraries are backed by a full portfolio of services to maximize effectiveness and business value over the long term.

If you're looking for maximum data protection in a reliable, high-performance, cost-effective tape-based solution, look no further than HP StorageWorks tape libraries.

Figure 1. How to recommend a suitable tape library





HP StorageWorks Tape Libraries

HP StorageWorks MSL-Series

Low-cost consolidation

For low-cost consolidation in workgroups, remote locations and small data centers, the HP StorageWorks MSL-Series tape libraries are the ideal choice. These versatile tape libraries provide a range of high-performance, automated mid-range backup and restore solutions, with high-density configurations that support capacities from 2.86 TB to 24 TB in a single unit. Compact form factors minimize footprint, while a broad choice of drive options and interfaces mean the MSL-Series will fit seamlessly into either a SCSI or SAN environment. They are a cost-effective way to extend the reach of your tape backup solution, while gaining the high availability features normally found in enterprise libraries.

With HP StorageWorks MSL-Series tape libraries, you get:

- **Simplified management** – With web-based tools and removable magazines, administration is fast and easy.
- **Increased flexibility** – Your choice of Ultrium and SDLT drives, Fibre Channel or SCSI interfaces lets you match the right model to meet your specific business needs.
- **Extensive scalability** – With multi-unit stacking or easy upgrades to new drive technology, you can meet growing capacity requirements while protecting your library investments.
- **Assured compatibility** – Models are fully tested in a wide range of configurations with the HP StorageWorks Enterprise Backup Solution, enabling consolidated backup across multivendor platforms.

With high performance, reliability and availability, HP StorageWorks MSL-Series Tape Libraries provide maximum uptime and investment protection to streamline backup and ensure data protection.

HP StorageWorks Enterprise Modular Library E-Series

Outstanding TCO for SAN data protection

The HP StorageWorks Enterprise Modular Library (EML) E-Series tape libraries provide performance, reliability and investment protection for a wide range of solutions—from efficient data center backup to cost-effective data protection in 24x7 enterprise environments. Built on the HP Extended Tape Library Architecture (ETLA), these modular and scalable tape libraries support multiple SANs, providing the ideal companion to the HP StorageWorks Enterprise Virtual Array (EVA). In fact, through virtualization, the EML E-Series helps you simplify your data protection solution and consolidate storage for small data centers, resulting in outstanding total cost of ownership (TCO) value.

With up to 16 HP Ultrium tape drives, the EML E-Series delivers native throughput of over 4.6 TB/hr and total capacity of up to 72 TB. The controller-based architecture of the ETLA ensures consistent performance by regulating traffic between the SAN and the tape drives, preventing rogue I/O requests from interrupting the backup or recovery job in progress. In addition, library partitioning allows you to logically subdivide the library, simplifying support for multiple SANs or backup software packages.

The EML library is built in a standard HP rack and is fully integrated with the HP StorageWorks portfolio, so it fits easily in today's data centers. It is also extensively tested in the Enterprise Backup Solution (EBS) to ensure reliable operation in the most rigorous data center environments. And the hardware itself is designed for 24x7 environments, delivering the high availability you need for critical data. In addition, the EML E-Series is built for scalability, providing expansion modules that extend capacity to 16 drives and 500 slots, protecting investments as your tape storage needs grow.

Best of all the EML E-Series is easy to manage locally and remotely. An intuitive touch-screen GUI makes local operations easy. Loading and unloading media is also easy with configurable load ports containing removable magazines, allowing quick transfer of large numbers of cartridges in and out of the library. What's more, the HP StorageWorks Command View for Tape Libraries software simplifies library setup, configuration, and troubleshooting from anywhere at any time with centralized, web-based library management—saving time and money for library and SAN administrators.

To ensure rapid recovery and minimize downtime, you need a highly efficient backup and recovery management environment that is tightly integrated with your storage infrastructure.

HP StorageWorks Enterprise Systems Library

Always-on availability

When you need the highest level of redundancy and reliability in automated tape storage, the HP StorageWorks Enterprise Systems Library (ESL) E-Series is the solution. This powerful, enterprise-class tape library is designed for large-scale, heterogeneous data center consolidation and disaster recovery, featuring the highest drive and cartridge densities in its class, with up to 14.2 TB of native storage capacity per square foot and a capacity range of 64 TB to 284 TB.

Fully integrated into the HP StorageWorks ETLA, the ESL E-Series provides self-aware tape storage designed specifically for enterprise SAN environments. The library supports a mix of up to 24 HP Ultrium and SDLT drives in a single cabinet, and even enables instant capacity on-demand through a license key—no hardware upgrade required! And with removable, user-configurable load port magazines, tape transport in and out of the cabinet is fast and easy.

The combination of the ESL E-Series libraries and the HP StorageWorks Extended Tape Library Architecture delivers superior reliability, interoperability, and advanced functionality for your enterprise SAN. ETLA also offers a single interface for remote, unobtrusive management of the entire library system, including robotics, drives, interface controllers, and an interface manager card. It is the ideal way to reduce complexities and eliminate errors when configuring, installing and managing the ESL library.

For outstanding performance, reliability and scalability in an enterprise data protection solution—with integrated library manageability—the choice is the HP StorageWorks ESL E-Series.

Backup and recovery services

Maximize data protection; minimize downtime

To ensure rapid recovery and minimize downtime, you need a highly efficient backup and recovery management environment that is tightly integrated with your storage infrastructure. HP Network Storage Services offers a complete backup and recovery solution to meet your enterprise needs.

HP Network Storage Services can deliver fast, effective integration of your backup solution into an existing or new storage infrastructure. With our Backup and Recovery Solution Service (BRSS), you get end-to-end management of all the details, with a dedicated BRSS team to help you analyze your business and IT environment, develop a comprehensive integration plan and timetable, design an architecture that suits your critical requirements, install backup software, implement your solution, and validate and monitor your configuration.



This comprehensive service delivers results, including:

- Rapid implementation to cut the total cost of protecting data
- Reduced risk of data loss
- Shortened backup windows with restore time reduced from days to hours
- Lightened load on servers and your network
- Reduced backup staffing and lowered training costs

With HP Network Storage Services, you get the knowledge and experience you need to cost-effectively meet your backup integration needs—from straightforward to complex—to maximize data protection and minimize downtime.

The HP StorageWorks Extended Tape Library Architecture (ETLA) enables storage consolidation through increased reliability and robustness of enterprise tape libraries in a SAN, and reduces costs through easier integration into the SAN, faster problem isolation and resolution, and better, more automated management of the entire library. This intelligent architecture delivers tape libraries that are both self aware and self-managed, automatically maintained, continuously available, network-aware, resilient, secure, and adaptable. It is the essential framework for ensuring reliability, interoperability, and advanced functionality in enterprise SAN environments.

1. HP StorageWorks MSL5000
Tape Library, 10U, front



2. HP StorageWorks MSL6000
Tape Library, 10U, front



3. HP StorageWorks EML E-Series
Tape Library, front



4. HP StorageWorks ESL E-Series
Tape Library, front





Reliable, high-performance, cost-effective tape-based data protection solutions

When it comes to comprehensive data protection, HP offers a complete range of tape storage solutions that provide a solid foundation for your data protection strategy, offering the performance, reliability, and investment protection you need. With HP, you have a family of cost-effective tape libraries built on a common architecture and integrated with HP StorageWorks arrays to provide a seamless enterprise storage solution from end to end. HP also provides intelligent and automated tools to simplify management of your tape libraries and your entire storage infrastructure-including integration with enterprise management systems. And, with HP OpenView Storage Data Protector software you can simplify and centralize backup and recovery operations.

The entire HP solution suite is backed by a rich portfolio of services to ensure rapid, cost-effective, low-risk implementation to help you get the most out of your storage investments. With HP, you get the breadth of capabilities to meet your most demanding enterprise data protection requirements.

The smartest way to invest in IT

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage and ultimately retire your HP solutions.

For more information on these services, please contact your HP sales representative or find us on the web at: www.hp.com/go/hpfinancialservices.

For more information

For more information on HP StorageWorks tape libraries, contact your HP representative or local authorized HP reseller. Visit: www.hp.com/go/automation and www.hp.com/go/ebs



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