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HP StorageWorks LTO-5 Ultrium tape portfolio

Business white paper

BRIDGE

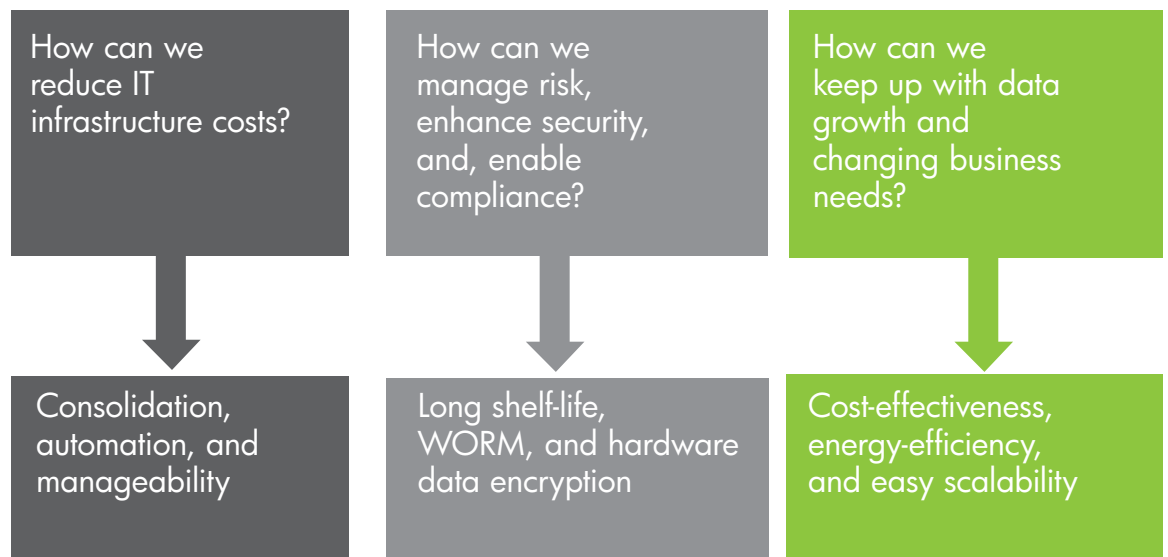
**the gap between your current tape
infrastructure capability and today's
business demands.**





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Executive summary

- Can your existing tape data protection infrastructure accommodate the needs of your primary data storage growth?
- Can you back up growing volumes of data within your existing backup windows?
- Are you aware of how efficiently your tape data protection infrastructure is performing and how effectively it is being used?
- Are you able to control the operational costs associated with tape data protection?
- Are you confident about the security of your confidential customer data that is stored on tape?


If your answer to any or all of these questions is an emphatic “no,” then it’s time to refresh your current tape data protection infrastructure. You can address all of these concerns with the HP StorageWorks LTO-5 Ultrium tape portfolio that comprises LTO-5 tape drives, tape automation, and tape media.

This paper discusses how the next-generation family of LTO-5 tape backup, archive, and disaster-recovery solutions from HP can help you do more with less—by directly addressing the combined challenges of exponential data growth, data retention compliance, and the need to optimize IT infrastructure spend.

Reassess the ability of your tape data protection infrastructure to meet your complex needs

By 2011, the digital universe will be 10 times the size it was in 2006. The compound annual growth rate of digital data between 2008 and 2011 is expected to be almost 60%¹.

¹ Report published in 2008 on “The Diverse and Exploding Digital Universe” by IDC



As the amount of digital data continues to grow at an exponential rate, organizations like yours face tough challenges. You are forced to:

- Keep ever-increasing volumes of business-critical information and data for longer periods
- Use multiple tapes to back up the increasing data within your existing backup windows
- Tolerate prolonged system downtime and reduced performance that are associated with older generations of tape technology
- Choose between compromising on security for data stored on tape and using software encryption that lowers backup performance
- Comply with increasing legislations that aim to protect personal and organizational data

In addition, you also have the increasingly challenging task of managing your tape infrastructure. From talking to backup administrators around the world, we know that many wait until there has been a failure with their tape infrastructure to take corrective measures. Often, this is because they are unaware of:

- How efficiently tape drives are performing
- How effectively they are being utilized
- What the quality of the data on tape is

At HP, we've been studying these issues closely. And it has helped us develop the deeper understanding needed to create the solution—the HP StorageWorks LTO-5 Ultrium tape portfolio.

Contain the time, costs, and risks involved in protecting your data

Using improved tape drive technology, the HP StorageWorks LTO-5 Ultrium tape family helps you save time, cut costs, and lower risk.

Save time: You can spend less time doing routine data backup, using the new LTO-5 Ultrium technology, which offers:

- A high transfer rate—1 TB/hr (compressed 2:1)
- Great performance—combining the high tape drive speed with the unique HP Dynamic Data Rate Matching feature, which adjusts the speed of the tape to variable host and network speeds to keep the tape drive streaming

Estimates by the University of California suggest that 95% of data may never be accessed again beyond 90 days after creation.² So why fly all your data “first class” when “coach” will do?

² Study published in 2008, by University of California, looking into disk access patterns for the network of large local businesses with over 22 TB of disk-based data

Cut costs: It does not make sense to spend on expensive disks to quickly get to data you are unlikely to ever access. You can lower the overall cost of protecting your data, both from a CAPEX and OPEX perspective, using the LTO-5 Ultrium tape drive, which offers:

- An economical option for low-priority data—with LTO-5 tape cartridges typically costing less than five cents per compressed gigabyte
- Better storage consolidation—with 3 TB of compressed data per tape cartridge
- Improved energy efficiency—as tape cartridges can be stored offline without any power or cooling requirements
- Protection for existing investments—as LTO-5 is compatible with LTO media two generations backward as well as with leading operating systems and backup software and servers

Lower risks: You can enjoy peace of mind knowing that your business backup data is safe when being transported and stored offsite. The LTO-5 Ultrium tape drive enables:

- Additional level of security for data at rest—with the Write Once Read Many (WORM) tool that prevents tapes from being accidentally overwritten and hardware-based data encryption that prevents unauthorized access of tape media without affecting price, backup performance, or capacity

- Proactive management and monitoring—with TapeAssure, which is a quick, easy-to-read dashboard that provides health, utilization, and operational performance data; and with other tape tools (L&TT) that offer an extensive suite of diagnostic and performance tools
- Faster and automated disaster recovery—with HP StorageWorks Data Protector Express software featuring Bare Metal Disaster Recovery (BMDR) and One-Button Disaster Recovery (OBDR)
- Compliance to regulatory long-term archival requirements—with dependable media shelf-life of over 30 years
- Dependable backup performance—as the LTO-5 tape portfolio is built on a legacy of LTO enterprise-class reliability and years of R&D investment
- Easy offsite storage—as tape is a robust and portable medium



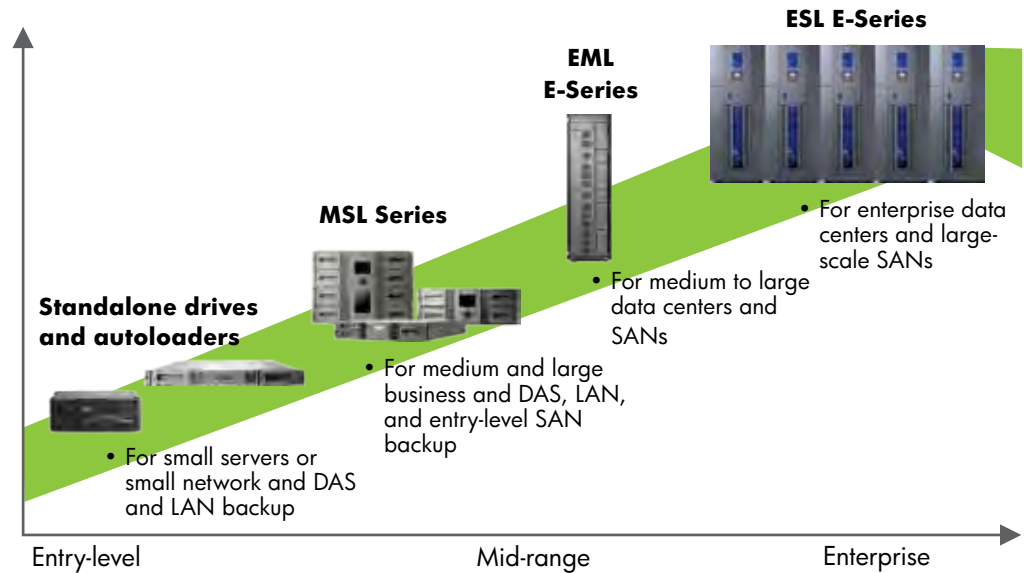
Compare your LTO-3 tape infrastructure with that of LTO-5

There are distinct benefits in using the two-generation backward compatibility feature to upgrade your LTO-3 drives. You can multiply your current capacity and

performance. And you can benefit from new manageability and security features such as TapeAssure and hardware-based data encryption capabilities.

Business issues	Benefits of upgrading to LTO-5
Growing data volumes	Get nearly four times the capacity (3 TB as opposed to 800 GB compressed) as a single LTO-5 drive can do the work of three LTO-3 drives, especially in a Tape Library
Escalating complexity of managing multiple devices and media	Reduce the number of drives and media needed for backup, while still meeting service levels
Expanding number of media cartridges	Decrease the number of LTO-3 media cartridges you need by up to 75%
Shrinking backup windows	Gain more than double the performance of LTO-3 half-high drives with LTO-5 and 75% more performance than your LTO-3 full-high drives
Increasing data security risks	Enhance security for data at rest without any additional costs with hardware-based data encryption
Constricting budgets	Save 50% in terms of cost/GB over LTO-3 ³
Rising energy consumption	Lower power and cooling costs by consolidating to fewer, more energy-efficient LTO-5 drives

³ Based on the current street price of an HP StorageWorks LTO-3 HH SAS tape drive compared to the launch price of the HP StorageWorks LTO-5 HH SAS tape drive



Give your tape storage infrastructure the HP advantage

Fulfill your business need for secure data protection, efficient storage consolidation, and easy management with the HP StorageWorks LTO-5 Ultrium tape family.

The market-leading HP LTO-5 product portfolio addresses your need for a cost-effective and energy-efficient data protection solution, by featuring:

- Scalable tape products and library solutions with long shelf-life—with capacity ranging from 3 terabytes up to tens of thousands of terabytes
- Autoloaders and libraries that consolidate and automate data protection processes
- Enterprise-class management functionality that helps reduce management overhead costs
- WORM media that helps prevent tapes from being accidentally overwritten

- Hardware-based data encryption that provides added security
- HP TapeAssure tools that help optimize your investment in tape drives and media

In addition, you can rely on HP support throughout the entire product lifecycle. To begin with, our services experts work collaboratively with you to integrate the required hardware seamlessly into your technology environment through the HP Hardware Installation service. When you have the solution in place, you can choose to upgrade your tape drive support to our 3-Year Support Plus 24 Service, which can help you get higher return on your storage technology investment. And you can also benefit from innovative financing and financial asset management programs, from HP Financial Services—which help you acquire, manage, and ultimately retire your HP solutions cost-effectively.

Make the first move to fulfill the data protection needs of your growing business, by visiting: www.hp.com/go/tape

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