HP LTO-5 Ultrium Tape Drive Portfolio

Bridging the gap between current data protection infrastructure capabilities and today's business demands

Table Contents

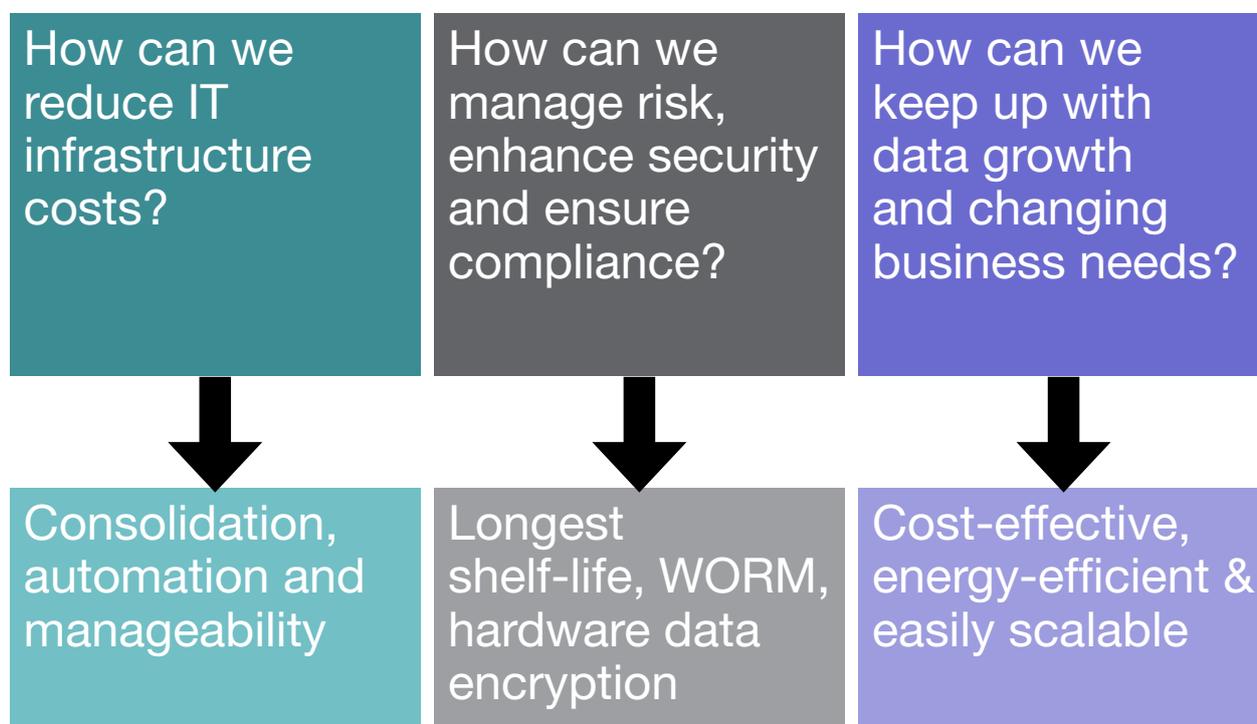Powered by

- Can your existing tape data protection infrastructure accommodate the needs of your primary data storage growth?

- Can you backup 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 LTO-5 Ultrium tape portfolio that comprises LTO-5 tape drives, tape autoloaders, tape libraries 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.

Addressing business issues with HP Tape...

How can we reduce IT infrastructure costs?	How can we manage risk, enhance security and ensure compliance?	How can we keep up with data growth and changing business needs?
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Consolidation, automation and manageability	Longest shelf-life, WORM, hardware data encryption	Cost-effective, energy-efficient & easily scalable

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

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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].

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 backup 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 lowering backup performance with the use of software encryption for data stored on tape or compromising on security

• 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 been 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 LTO-5 Ultrium tape portfolio.

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?

[1]Report published in 2008 on "The Diverse and Exploding Digital Universe," by IDC
[2]Study published in 2008, by University of California San Diego, looking into disk access patterns for the network of large local businesses with over 22 TB of disk-based data

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

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

Save time: You can spend less time in 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

- File management - HP LTFS makes LTO-5 tape self-describing, file-based, and easy-to-use and provides users with the ability to use standard file operations on tape media for accessing, managing and sharing files with an interface that behaves just like a hard disk. In addition, LTFS provides the ability to share data across platforms, as you would with a USB drive or memory stick. Simply insert a tape into the drive, and it becomes visible and usable on your desktop.

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 5 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 off-line without any power or cooling requirements

- Protection for existing investments—as LTO-5 is compatible with LTO media two generations backwards 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 Ready 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

- 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

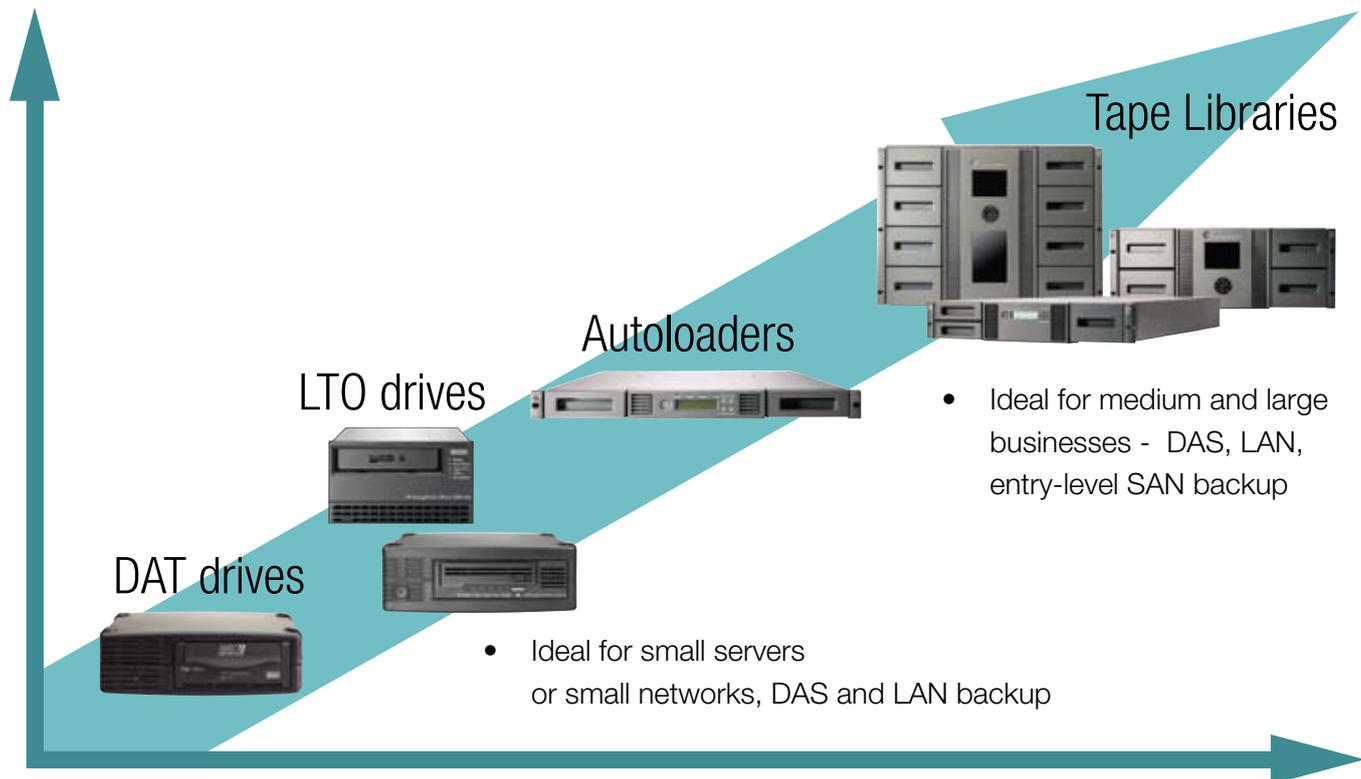- Easy offsite storage—as tape is a robust and portable medium

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. To begin with, you can multiple your current capacity and performance. In addition, you can benefit from new manageability and security features such as hardware-based data encryption capabilities and HP LTFS file management.

Business issues	Benefits of upgrading to LTO-5
Growing data volumes	Get nearly four times the capacity (3 TB as opposed to 800GB compressed) as a single LTO-5 drive can do the work of three LTO-3 drives, especially 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- by migrating from LTO-3 to LTO-5
Expanding number of media cartridges	Decrease your number of LTO-3 media cartridges 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 our LTO-3 full high drives
Increasing data security risks	Enhance security for data at rest without any additional costs
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 LTO-3 HH SAS tape drive compared to the launch price of the HP LTO-5 HH SAS tape drive

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Give your tape storage infrastructure the HP advantage

Tape Libraries

Autoloaders

LTO drives

DAT drives

- Ideal for medium and large businesses - DAS, LAN, entry-level SAN backup

- Ideal for small servers or small networks, DAS and LAN backup

Fulfil your business need for secure data protection, efficient storage consolidation, and easy management with the HP 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 portfolio of tape products and library solutions with long shelf-life—with capacity ranging from 3 terabytes up to tens 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 LTFS for enhanced file management on tape