

Media and Entertainment Digital Archiving

Oracle's StorageTek Hardware with XenData Software

Digital archives are growing faster than ever, and media and entertainment organizations are looking for cost-effective, reliable, and scalable solutions to store digital files for future use. The XenData SXL product line combines digital archive software with Oracle's StorageTek modular tape library to create a highly scalable LTO digital video archive that is optimized for broadcasters, video production, post-production, and media organizations.

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Solution Overview

The XenData SXL series of archive servers, together with Oracle's StorageTek modular tape library systems, create highly scalable digital video archives that can easily keep up with the rapid growth of digital assets.

Key Features

- » File/folder interface for both archiving and restoring.
- » Built-in RAID cache delivers high performance in a network, and the NAS architecture eases deployment.
- » Linear tape file system (LTFS) support prevents vendor lock-in.
- » Seamless scaling to multiple petabytes of near-line capacity.
- » Tailored specifically to serve the media and entertainment industry.
- » Native compatibility with most applications, including media asset managers (MAMs). Supports multiple simultaneous applications.
- » Covers all archive needs, from customer installable and upgradable entry-level solutions to modular library systems that have been proven in demanding enterprise environments.

Cost-Effective, Reliable and Scalable Digital Archives

Native Compatibility with Most Applications

The digital archive has a file/folder interface for both archiving and restoring. It accepts all file types and presents them in a single Windows file/folder structure. Files are written to and retrieved from the archive just as though the files were stored on a standard disk drive.

Furthermore, there is no need to load any special software on client computers. The digital archive works with most applications, from MAMs to Windows Explorer or Finder. Windows, Apple OS X, and FTP clients are natively supported.



XENDATA SXL-SERIES

Oracle's StorageTek SL150 modular tape library combined with XenData's software in a scalable configuration.

- SXL-1000: Starts at 30 slots and scales to 90 slots (225 TB)
- SXL-3000: Starts at 60 slots and scales to 300 slots (750 TB)

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Support for Multiple Simultaneous Applications

The software allows groups of files to be allocated to specified pools of cartridges. Administrator-defined policies can be used to group related files together on the same set of cartridges.

Multiple cartridge groups can be created and used for different applications. For example, a MAM archive and a simple file-folder archive can be combined, all within one system. The system will dynamically expand cartridge pools to meet capacity demands, minimizing system administration.

Designed for Networks

The built-in RAID cache delivers high performance in a network, and the NAS architecture makes it easy to deploy using 1 GigE or 10 GigE interfaces.

LTFS Prevents Vendor Lock-In

LTO cartridges are written in either the LTFS interchange format or the open standard tape archive (TAR) format. The use of a standard format prevents vendor lock-in. Proprietary formats mean that it is very costly to ever convert to another vendor.

Built-In Data Protection

The system automatically creates extra backup copies of LTO cartridges for offsite retention. Furthermore, the tapes may be rapidly imported into a replica DR system.

Strong File Version Control

The software provides comprehensive file version control. Deleted files and old file versions may be restored from LTO (unless the files have been purged using the XenData repack operation).

Industry-Standard File Security

The archive server integrates fully with the Microsoft Windows security model based on Active Directory. There is no need to configure proprietary user access.

Management of Unlimited Externalized Cartridges

The system manages any number of externalized cartridges, providing an unlimited total capacity. There are no license fees for externalized capacity.

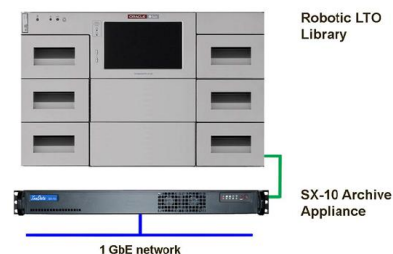
When offline files are accessed, the system prompts with email alerts and onscreen notifications, identifying the cartridge that should be imported back into the system.

High-Availability Options

The SX-525 is a server cluster that provides a high-availability (HA), fully redundant RAID cache. When configured with two of Oracle's StorageTek SL3000 modular tape library systems, it provides 24/7 operations with nondestructive, on-the-fly replacement of robotics, library electronics, and power supplies. In addition, the server cluster drives a fully redundant archive system: Any single component can fail, and it will continue to archive and restore.

XEN DATASXL-1000

System is powered by a XenData SX-10 archive appliance and supports the StorageTek SL150 modular tape library



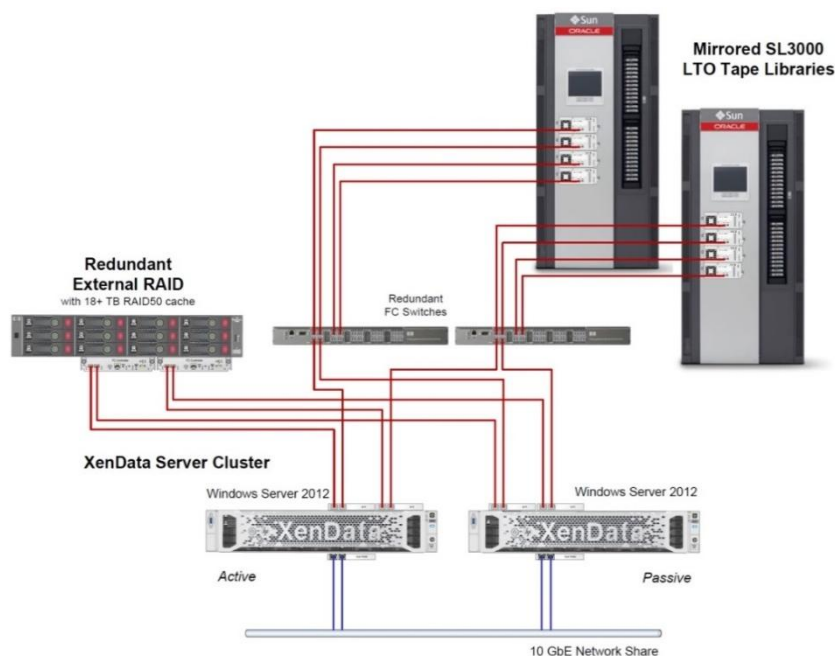
- HP LTO-6 half-height drives
- 6 Gb/sec SAS tape drive interface
- 1 or 2 tape drives
- 30, 60 or 90 slot library
- Touchscreen front panel
- Web interface
- Intel Xeon E3 quad-core, 3.2GHz
- 32 GB RAM
- 1 TB hybrid drive
- 4 TB SATA drive

XEN DATASXL-3000

System is powered by a XenData SX-520 archive appliance and supports the StorageTek SL150 modular tape library

- HP LTO-6 half-height drives
- 6 Gb/sec SAS tape drive interface
- 2 to 20 tape drives
- 60 to 300 slot library
- Touch screen front panel
- Web interface
- 32 GB RAM
- Mirrored drive for boot volume
- 4 to 20 TB archive RAID disk cache
- SX-521: single 6-core Xeon processor. 4 to 20 TB of RAID-50 cache (SAS).
- SX-522: dual 6-core Xeon processors. 6 to 20 TB of RAID-50 cache (SAS).

An example SX-525 HA configuration with mirrored StorageTek SL3000 modular tape library systems with LTO tape drives is shown below.



Selecting an Archive Format

Both digital tape and disk hardware systems are leveraged in media and entertainment archive environments, but the mix between digital tape and disk is evolving. Over the past several years, digital tape capacities have grown rapidly while increases in disk capacities have slowed. Today the highest capacity digital tape is 8.5TB while disk capacities are around half of that. Additionally, disk systems consume more power and are refreshed more frequently than digital tape, leading to a higher TCO. A detailed analysis of disk versus digital tape costs is available in a public report from a leading storage industry analyst company, The Clipper Group:

oracle.com/us/corporate/analystreports/industries/clipper-tco-storage-2013-1959019.pdf?ssSourceSiteId=opn

Flexibility and Scalability

Oracle's StorageTek portfolio is engineered for digital archiving. Oracle offers the world's highest capacity digital tape technology and the most scalable digital tape libraries in the world. XenData and Oracle work together to ensure seamless integration for the following products:

Digital Tape Libraries	Digital Tape Drives
StorageTek SL3000 Modular Library System	StorageTek T10000D, LTO-5, LTO-6 (HP and IBM) FC
StorageTek SL150 Modular Tape Library	LTO-5, LTO-6 (HP HH) FC and SAS

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