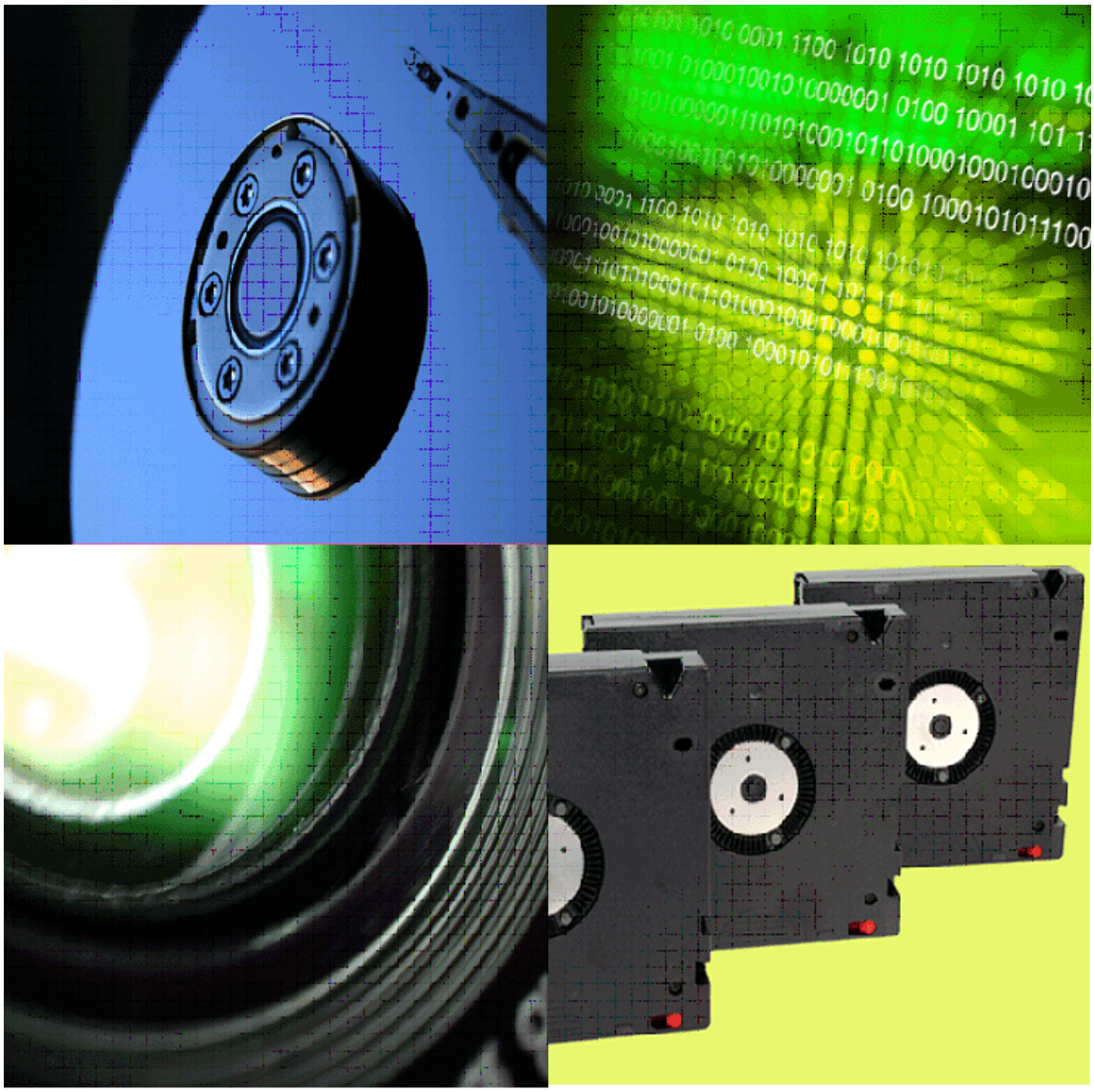


XenData Archive Series Software

MX Edition Overview

The MX Edition of XenData Archive Series manages a data tape library and magnetic disk cache on multiple Windows file servers to create a highly scalable digital video archive.

August 2007

Last updated: 30 August 2007

MX Edition for High Transfer Rates

The MX Edition of XenData Archive Series software is optimized for large digital video archives, meeting the most demanding needs of the broadcast industry. It manages a data tape library and magnetic disk cache on multiple Windows file servers to create a highly scalable digital archive.

An archive running the MX Edition software delivers high data transfer rates by load balancing over multiple servers. Performance may be increased by adding additional datamover servers to the system.

In addition to high transfer rates, the system provides the following key features:

- **Standard Windows File System Interface** The managed tapes and disk cache appear as a single standard Windows logical drive which means one or more software applications can write to and read from the archive as though it were a standard shared disk-based logical drive.
- **Strong Data Protection** The system provides the option for automatic tape cartridge replication, creating additional copies of each tape cartridge. When full, the replica tapes may be exported from the tape library and held in a secure offsite location. If required, the replica tapes can be quickly imported into a duplicate archive system.

Data Tape Formats

The MX Edition supports a range of data tape formats including the market leading LTO format.

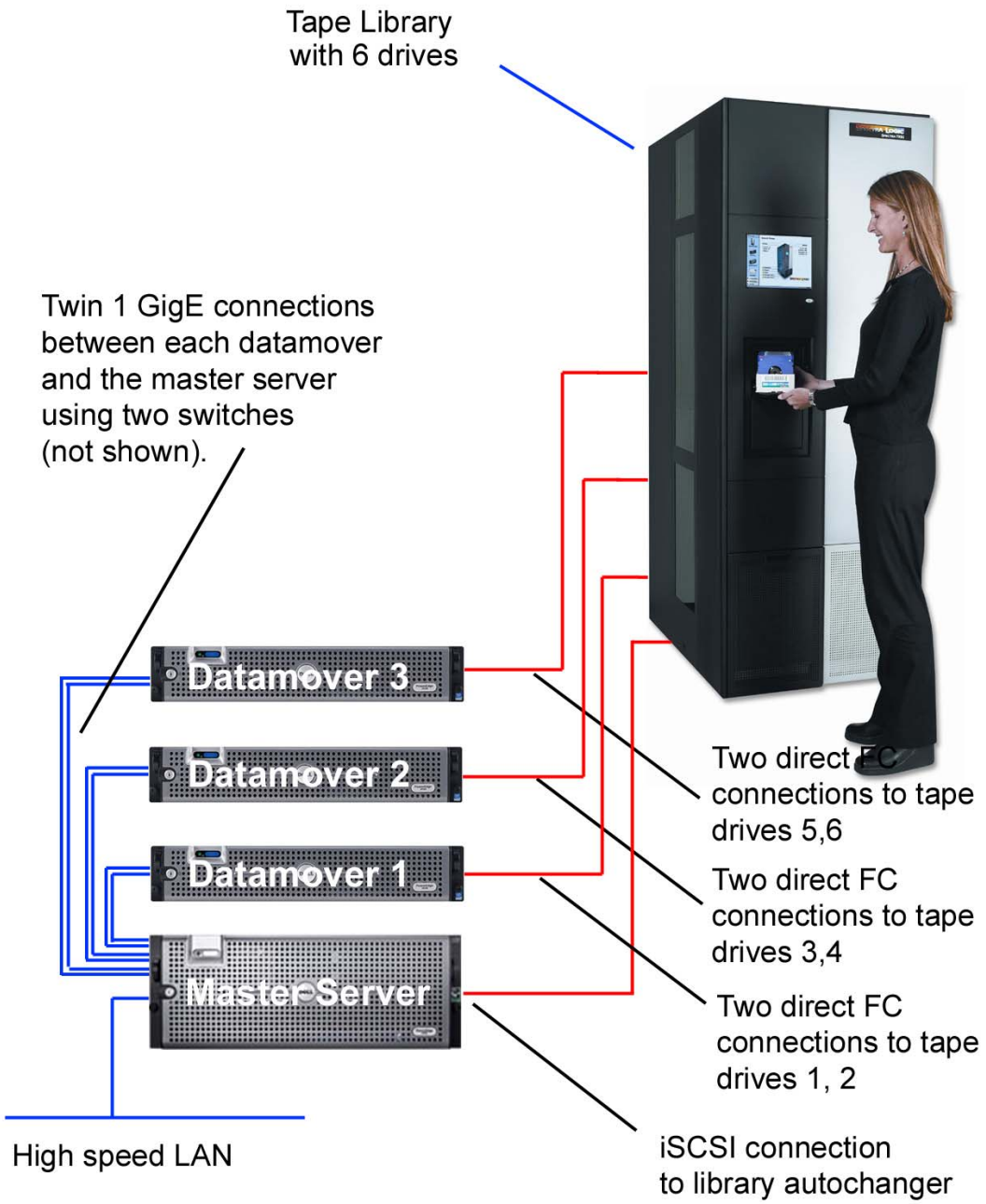
	LTO-3	LTO-4
Capacity per cartridge (Native capacity i.e. without compression)	400 GB	800 GB
Equivalent hours recording per cartridge at 25 Mbps	35.5 hours	71 hours
Equivalent hours recording per cartridge at 50 Mbps	17.7 hours	35.5 hours
Maximum Data Transfer Rate in Megabytes per second (without compression)	80 MB/s	120 MB/s
Media Archival Lifetime[1]	30 years	30 years

The 800 GB capacity of an LTO-4 tape cartridge is equivalent to over 71 hours recorded at 25 Mbps or 35.5 hours at 50 Mbps.

[1] 30 years is typical for LTO media. However, for specific brands, please check with your vendor.

MX Edition Archive Configuration

A typical archive configuration is shown below:



The archive consists of the following components:

- a robotic data tape library
- a master server running Windows 2003 X64
- two or more datamover servers, each running Windows 2003 X64
- a private network connecting the master server to the datamovers

XenData Archive Series software runs on the master server and on each datamover. The master server is connected to a high speed LAN (at least 1 GigE) which provides the interface for the overall archive.

The master server provides the following functionality:

- Overall control of the archive, including direct control of the tape library robotics
- High speed interface to the external LAN, presenting the archive with a single IP address
- High bandwidth conduit between the datamovers and the external LAN using RAM
- Secure storage of file system metadata for the complete archive

The master server is configured with at least 8 GB of RAM and has RAID which is partitioned into at least two logical drives: one for the operating system which is usually drive letter c: and a second logical drive dedicated for the archive file system metadata.

Each datamover has fixed connections to one or more of the library's data tape drives. The main functions provided by a datamover are:

- Writing files to tape that have been sent to the datamover from the master server
- Reading files from tape and transfer to the external LAN via the master server
- Caching of files for both write and read operations

Each datamover is configured with at least 4 GB of RAM and has RAID which is partitioned into at least two logical drives: one for the operating system which is usually drive letter c: and a second logical drive used for file caching.

MX Edition Features and Benefits

Standard File System The entire archive appears as a standard Windows file system within a single logical drive letter. The solution uses the standard Windows offline file attribute to identify when a file is no longer online. **Benefit:** seamlessly integrates with standard applications and existing network infrastructure without modification.

Automated Tape Cartridge Replication Replication of tape cartridges is automatic and follows the policies defined by the Administrator. **Benefit:** it is easy to generate tape cartridge replicas for off-site retention for data protection purposes.

Offline Tape Cartridge Management The system retains meta-data for offline tape cartridges. **Benefit**: the system supports an unlimited number of tapes 'on the shelf'.

Partial Read of Large Files With very large files there is often a need to read only a portion of the file. For example, this frequently occurs with multi-gigabyte video files when a short clip is requested. XenData software supports partial reading of large files. **Benefit:** enhanced performance when dealing with large files

Multiple Tape Set Support The software allows file groups to be allocated to specified groups of tapes. **Benefit:** the Administrator can group related files together on the same set of tapes.

Open Standard Tape Format Open standard TAR file format is used on the tape, allowing the tape cartridges to be read using third party utilities. **Benefit:** the use of open standards on industry standard hardware ensures the long term availability of data.

Dynamic Expansion of Tape Sets The system will dynamically expand tape sets to meet capacity demands. **Benefit:** this minimizes system administration.

Familiar Administration File policy and tape cartridge management is performed by the Administrator using the XenData Management Console which is a Microsoft Management Console Snap-In. **Benefit:** the Administrator uses a familiar tool for system management.

Microsoft Security XenData Archive Series software is fully integrated with the Microsoft Windows security model, based on Active Directory. **Benefit:** effortlessly integrates with existing security, minimizing system administration.

Highly Scalable Archive Series software supports tape libraries with multiple Petabyte capacities.

Email Alerts Notification of hardware errors or archive system problems is provided by e-mail alerts and / or on-screen messages.

API Available An API is available. **Benefit:** this can be used by developers to obtain tight integration with their applications.

For further information, please visit www.xendata.com or contact XenData:

USA: +1 925 472 6522

UK: +44 1223 370114

Germany: +49 89 99216 422