TECHNOLOGY

LTFS Customer Success Stories

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SNIA™

Advancing storage &
information technology

LTFS Customer Success Stories

SNIA's LTFS Technical Work Group collaborates with other industry associations, such as the LTO Consortium (www.lto.org/resources/case-studies), to help educate and promote the value of Linear Tape File Systems (LTFS). Following are a number of LTFS customer case studies where these customers use LTFS in the media and entertainment industry. Learn how innovative tape storage technologies with Linear Tape File System (LTFS) can save costs and make tape usable in a fashion like disk or other removable media. With LTFS you can view tape video content with directory tree structures and have the ease of drag and drop capability.

SNIA focuses its technical efforts on the development of an architecture that is related to the non-platform specific, on-media format for LTFS. It also produces a comprehensive set of specifications ensuring a consistency of interface standards across LTFS related efforts. LTFS provides an industry standard format for recording data on modern magnetic tape.

This standard allows for:

- File system implementations using tape
- User-friendly access to tape data using familiar tools and interfaces
- Cross-platform and cross-vendor interoperability for tape - Non Proprietary
- A standard for data interchange
- Open markets
- Ensures multivendor products
- Data sharing

SNIA's LTFS Format Specification defines a file system format separate from any implementation on data storage media. Using this format, data is stored in LTFS Volumes. An LTFS Volume holds data files and corresponding metadata to completely describe the directory and file structures stored on the volume.

SNIA's LTFS Bulk Transfer standard defines a method by which a set of files, directories and objects from a source system can be transferred to a destination system. The bulk transfer of large quantities of data is well suited for LTFS due to the economic and environmental characteristics of tape.

For more information about SNIA's work on LTFS, visit www.snia.org/ltfs.

Post Production Case Study

Since 1998, this company has played a definitive role in designing post and IT workflows for the media and entertainment industry. Clients include television, motion picture, independent, and the technology industry. It fosters an academic approach to post-production and IT design. Known for its numerous books, whitepapers and engineering reports, its advice is sought after by clients of all scale and scope.

The Challenge:
A workflow solution that would work well on the front and back-end of the production process.

In the media and entertainment industry, post-production work is one of the most critical, yet complicated stages of production. Production crews are frequently in remote locations, which means, getting footage back to editing can be a challenge. Projects may need to be accessed from different locations and in a form that allows all to work collaboratively.

This company was looking for a cost-effective file-based workflow solution that would work well on the front and back-end of the production process. Having a form of data storage that would also act as an archive for completed projects was also important, as production studios often would need to access original copies in order to recover certain projects.

The **Solution:**
Upon evaluating different options, Linear Tape Technology was elected to use as their storage medium. They started using data tapes primarily for their own purposes in backing up the finished, color-corrected master projects, so that they would have an archive on-site. As tape data storage is a non-linear form of storage, it also worked well if the television show or movie needed to be reconstructed. The categorization would let editors know which files were which (AVID file, color file, etc.), making it easy to reassemble the film or television show.

The introduction of Linear Tape File System (LTFS) opened a new range of options. With files even easier to locate and more interoperable, they quickly realized that project collaboration would now be even easier. Using OpenStack (the free and open-source software cloud computing platform), they were able to share their tape data storage with LTFS archived versions of projects directly in the cloud. Having this option allowed an additional location to store data while maintaining the archived version on-site.

They found major benefits by migrating certain assets from tape to cloud storage and from cloud storage to tape. Utilizing meta-data, they established workflows for clients to access their proxy files from cloud storage, as well as the associated high-resolution files living on tape. While shipping large amounts of data via tape is the most common, cheapest and (often times) the quickest way to transport data, saving content to the cloud provides an additional option to download directly from the source. Today they provide tape-to-cloud-to-tape services and software for their TV, Film and corporate clients.

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Production Case Study

This is a San Francisco based company that produces and distributes video for independent musicians. They have an in-house production and post-production team that consists of 12 video/audio editors

Business Need:

- Large storage need
- SAN storage is expensive
- Removable HDs are fragile (~8% failure rate), expensive, have limited shelf life and take up excessive space
- On site and off-site copies

Solution Results:

- With LTFS effectively backed up 80TB of uncompressed video resulting in finished projects
- Slashed storage costs from - $0.20/GB to ~$0.05/GB
- Built an archive and restore workflow with fast recovery
- Scalable archive solution with a 30-50 year shelf life
- LTFS standard format for easy sharing
- Assured data is protected with reliable off-line and off-site protection

TV Broadcaster Case Study

This is a leading Japan TV broadcaster that is based in Tokyo, and operates through 28 regional affiliates.

Business Need:

To improve efficiency of video content archiving and ease of use and reliability.

Solution Results:

- Computer graphic designers can archive files directly to tape through drag and drop functionality with LTFS
  Key result: More efficient work flow

- Tape appears as a disk directory providing faster access to data
  Key result: - Significantly reduced time taken to archive

- Designers can also directly access archived work
  Key result: - Improvements on business productivity

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