LTO NewsBytes

Seeding Your Cloud With LTO and LTFS

When it comes to broad availability of your files, cloud proponents evangelize about the convenience and assurance of accessibility from virtually anywhere you're connected. Many of you already know that the cloud isn't the panacea for all of your storage needs, but there are times when you need to tap into the convenience that it provides.

Of course, transferring vast amounts of data to or from your cloud can be a challenge. Typically, setting up a new cloud can be a manual process and even with a fast Internet connection can be costly and time-consuming for big data sets. And what do you do if your current cloud provider raises their costs and you want to move to another provider? Each cloud provider might be using a different proprietary system which might be incompatible with each other. How do you assure transparent and cost-effective data transfer? How do you specify your data structure or file replacement policies? How should errors be handled? How do you determine the outcome of the transfer?

Interoperability helps to address these issues. With open standards, there's a uniform way that data transfers are handled. The cloud host receiving your data needs to be able to understand how the medium is written. For those using tape as the transfer medium, there needs to be a well-defined set of instructions for issues such as where files are stored and whether a newer file replaces an older one.

That's why we're excited about the recent collaboration between two SNIA technical working groups (LTFS and Cloud) who are looking to use the LTO Technology with LTFS to address cloud data transfer issues. These groups are developing a standard for LTFS Bulk Data Transfer. This work will provide a set of instructions to describe the files to be transferred, policies for insertion or replacements, error handling and a transfer report. Cloud providers can make use of this standard to develop interoperable services for the transfer of large amounts of data using LTFS.

With LTO tape, a lot of the challenges of being able to find and manage the desired file were addressed with the introduction of the Linear Tape File System (LTFS). With LTFS, the tape is "self describing," meaning that it creates a file system much like you enjoy with disk or USB drive – you're able to locate a specific file on the tape. The technology, which is based on open software and has been adopted by SNIA, makes viewing and accessing tape files easier than ever before.

With LTFS, LTO tape is increasingly being used in new industries such as media and entertainment, oil and exploration, big data analysis and other industries that manage large files. We're seeing the same potential for cloud applications, where cloud data transfer is handled via tape. Not only does tape provide a reliable, portable and secure medium for transfer, tape can serve as a backup or archive solution at the same time. LTFS makes tape efficient for storing persistent data on a self -describing platform.

We'll keep you posted on developments as the SNIA working groups progress. In the meantime, if you'd like to learn more about LTFS and its various uses, check out our website

Want to Know More About LTFS?

LTFS (Linear Tape File System) is changing the way that storage managers and content providers are looking at tape – and opening the door for applications in a broad range of industries. To learn more, check out the new two-minute LTFS animation introduction video at the LTO program website.

The LTO Program is on the Road in 2014!

This 2014 trade show season is shaping up to be a good one and the LTO Program will be providing more insight on the latest uses of LTO technology and LTFS around the world. Stop by and visit if you're attending one of the following events:

- IBC – Amsterdam
- ASIS – Atlanta
- Supercomputing – New Orleans

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