

ECHOLEAF SYSTEMS: TIME-TRAVEL DATA RETRIEVAL



INTRODUCTION

Cybercrime continues to grow, with backups targeted over 94% of the time, and compromised 50-80% of the time, putting your critical data at risk.

With traditional disk and cloud backup, this level of compromise, along with even simple user errors, can result in your files being corrupted.

ROLLING BACK IN TIME

Imagine you are backing up your data regularly but just became aware that your last backup data had been compromised or

damaged. What if you could simply go back in time and recover an earlier 'clean' version of your files? With the EchoLeaf SafeRoom™, you can.

THE ECHOLEAF SAFEROOM™

The patented EchoLeaf SafeRoom™ solution leverages drive virtualization, compartmentalization, and orchestration that secures and isolates data and adds value and ease of use to Linear Tape-Open (LTO) technology, which has been a mainstay in data storage for decades and is renowned for its reliability, longevity, and cost-effectiveness.

Intelligently managed and immutable LTO storage adds a powerful and scalable layer of security by ensuring that data, once written, cannot be altered or deleted. This ability makes EchoLeaf-managed LTO an ideal choice for compliance, and protection against ransomware and other cyber threats, both known and unknown, as well as archival storage.

linear fashion so each new version of a "data_file" is written to the next available space on the tape.

Figure 1 shows a conceptual representation of an LTO-9 tape. As a file is written or "saved over," a new instance of that file is appended to the tape. Colored blocks represent a different version of the same data file.

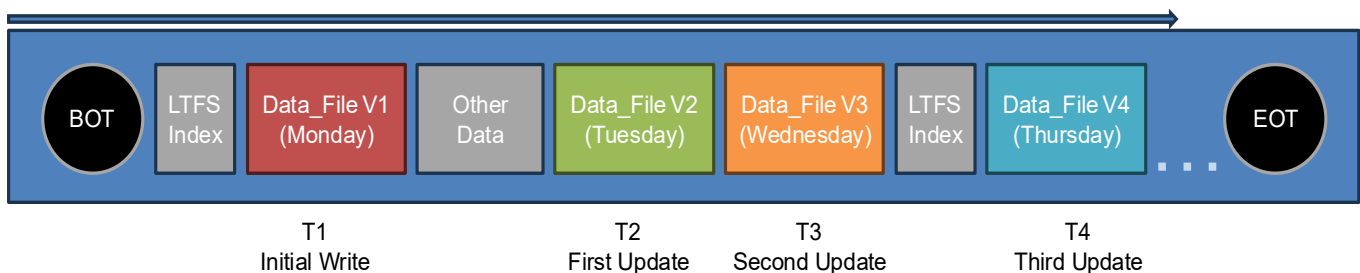


Figure 1

THE ECHOLEAF SAFEROOM™ TIME MACHINE

Think of the EchoLeaf StepBack/RollBack utility as a time machine for your data tapes.

One of the key advantages of the EchoLeaf SafeRoom™ is that your data is physically air-gapped and immutable. The EchoLeaf Sentry orchestration engine virtualizes your data and delivers it to LTO/LTFS tape, which writes sequentially from beginning to end of the media, never overwriting existing data.

When you update a file, the old version remains physically on the tape. Each time files are archived, the system creates a "generation," which is like a historical snapshot of the tape's contents at that moment.

Unlike hard drives, LTO tapes do not overwrite existing data. Instead, data is nondestructively written in a continuous,

An index that tracks the location of each file version is maintained and written periodically. This means all previous versions remain physically present on the tape but are logically marked as unavailable.

VERSION RECOVERY

Because old versions are not erased, the EchoLeaf SafeRoom™ provides an easy interface that allows you to:

- **View a Tape's History:** List all of the different historical generations (snapshots) available on a selected tape.
- **Travel Back in Time:** Temporarily and safely "roll back" the tape to show the exact file system as it existed in an older generation.
- **Browse Historical Files:** Navigate the folders and files from that past point in time, just like a normal file explorer.



EchoLeaf “Extreme Resilience”

- **Select and Restore:** Choose specific files or entire folders from the historical view and copy them to the EchoLeaf Quarantine area or a safe, separate location on your network.
- **Return to the Present:** Safely & Simply bring the tape back to its most current state, ready for new backups.

This process does not alter or delete any of the newer data and permits precise recovery of older versions of files without having to restore an entire tape.

SUMMARY

The unique EchoLeaf SafeRoom™ solution delivers unparalleled security and the strongest defense against malware and

ransomware through complete data isolation, dramatically fast disaster recovery, and rapid non-disruptive deployment while providing a cost-effective and scalable solution for anyone concerned with cyber threats and disaster recovery.

The EchoLeaf Rollback utility is a powerful capability for disaster recovery and version control. It provides a safe, non-destructive way to access historical data and perform precise, granular restores of exactly the files or folders you need without requiring a full tape restore.

EchoLeaf delivers critical protection, even with limited IT resources and budgets, providing the last mile of defense when other security measures fail.

Echo Your Data Today™!

To learn more, please visit www.echoleafsystems.com.

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