Introduction

DNAevolution has allowed you to build an active archive as well as maximize your performance through many generations of LTO Technology. Now V4.5 with LTO-7 technology is here to take your archives and workflows to the next level. DNAevolution V4.5 has numerous enhancements, features and customer requests.

KEY HIGHLIGHTS INCLUDE

AUTOMATED DATA MANAGEMENT

With growing amounts of data, protecting and ensuring data integrity has become a major challenge. V4.5 is designed to make the process of managing large quantities of data simple, requiring less administration thus making the process less error prone. **LEARN MORE**

LTO MEDIA MIGRATION

The only LTFS smart migration tool allows LTO-5/6 tapes to be automatically migrated to LTO-7 tapes. **LEARN MORE**

SMART DASHBOARD

A new alerts dashboard is designed to keep the administrator updated on ongoing issues with tasks and hardware. This provides a single view to the entire system. **LEARN MORE**

OTHER ENHANCEMENTS

Based on end user requests and feedback, V4.5 contains numerous enhancements. **LEARN MORE**

AUTOMATED DATA MANAGEMENT

AUTO-VERIFICATION

- With V4.5, one or more drives can be dedicated to scheduling verification on tapes. Automated verification makes the process of ensuring data integrity on LTO simpler and less error prone. Additionally, tape filters can be added.

- Once scheduled, the verification task wakes up periodically and auto-verifies tapes using the dedicated drive. Tapes are picked based on a filter that can be set by the administrator (e.g. AYX*, AYX407-AYX410). This allows admins to setup verification jobs that match currently running archive jobs and tapes. Additionally, it allows multiple drives to be dedicated to perform verification in parallel across different sets of tapes.

TAPE POOLING

- With V4.5, tape pooling allows an admin to setup tape pools from where jobs can automatically pull tapes. Additionally, tape pools can be setup with filters.

- Tape pools address a common inconvenience where jobs do not complete as they run out of tapes. With tape pooling, as long as there are free tapes in the pool, tapes will be pulled as needed.

- Tape pools is designed to enable a more "set-and-forget" approach to data archiving.

VERIFICATION W/AUTO-CORRECTION,RE-COPY

- Verification ensures data integrity by re-reading files from LTO and then comparing the calculated checksum against the source checksum. Often times, the verification process uncovers errors. These errors include:

  – Files in catalog but not on tape
  – File checksum mismatch between catalog and tape
  – File size incorrect in catalog versus tape

- Normally, these errors have to be manually corrected by deleting catalog entries and recopying files. Often times, these errors require StorageDNA support intervention.

- With V4.5, the process of detecting and fixing verification errors is automated. DNAevolution can detect any of the above errors and then performs a re-copy of the source media to LTO while making the appropriate changes to the catalog.

- All errors and corrections are reported to the dashboard.

SMART DASHBOARD

DATA PROCESSING ALERTS

- A key element of smooth data management is up-to-date information. The dashboard now includes key alerts related to events such as system startup, bulk formatting, tape full, verification, duplication and more. This allows the admin to stay informed about key events without have to dig through job events, alerts and logs.

SYSTEM WARNINGS/FAILURE ALERTS

- The archive middleware is the place where admins discover failed data management tasks. Often these are not on account of software but are caused by hardware issues including LTO drive/library related errors, source/target NAS/SAN issues and more.

- The purpose of the System Warnings (also displayed in the dashboard) is designed to provide the administrator detailed information about not just the high-level cause of an issue but also the hardware/system fault related to the issue.

- This allows the administrator to more effectively diagnose and fix problems

LTO MEDIA MIGRATION

A number of customers have built an archive on LTO-5 and LTO-6 tapes. With the release of LTO-7 and the forthcoming release of LTO-8 customers are looking for a way to migrate from LTO-5/6 to LTO-7 tapes. V4.5 makes the process of migrating tapes automated and simple.

- Multiple migration processes can be setup. Each migration process needs 2 x LTO drives. The source drive must support the source media generation (LTO-5/6) and the target drive must be LTO-7. Once setup, DNAevolution automates the process of copying the content.

- Tapes can be migrated at an archive or at a tape level. This allows admins to specify a current archive (and all its related tapes) for migration or request a migration by specifying the tapes. In either case, DNAevolution creates a target archive where the catalog entries for the migrated data lives. The data itself is copied to the target LTO-7 tapes.

- The new archive along with the new LTO-7 tapes represents a new useable archive. The older catalog and tapes can be stored for offsite disaster recovery.

- During migration, data is automatically compacted between LTO-5/6 to LTO-7 tapes. This results in an efficient compacting of an archive to denser LTO-7 tapes.

- All migration activities are in turn reported to the dashboard.

OTHER ENHANCEMENTS

WEB LTFSCK

- LTFSCK or filesystem checking a tape is a common task required when the tape does not mount due to a corruption (e.g. due to a power loss). In this case, admins can use the web LTFSCK feature to auto-correct the tape without requiring a StorageDNA support call.

WEB IMPORT

- Ability to import LTFS format tapes from 3rd party software. While this feature was available as a command line option, it is not available via the web interface.

- Import performs a basic catalog create or additionally creates a checksum as well. This provides an easy workflow for importing tapes into the central DNAevolution catalog.

NON-SDNA FILE STRUCTURE

- DNAevolution creates a special folder structure on LTO/LTFS tapes that allows more efficient tracking of files. However, often times, end users demand a folder structure that does not have the added DNAevolution format.

- Now, as part of verification (and if a flag is set), DNAevolution creates a non-SDNA format directory structure on the tape as well. This enables both SDNA and non-SDNA to co-exist on the same tape.

FORMAT W/ CATALOG REMOVAL

- Format now allows you to re-format tapes and automatically delete catalog entires during the format process. This allows users to re-use tapes while also deleting the related catalogs so files can be recopied.

TAPE DISPLAY FILTER

- Admins have the ability to filter the tape view in the My Tapes tab by additional filters. This includes the following:

  – Verified Tapes
  – Client/Archive Manager
  – Tape Generation
  – Serial Name Filter

- This allows admins to quickly get a list of tapes without trying to browse every tape in the tape listing