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Legacy File System User Guide

Version 7.20.3830.0

1. Introduction

The LTO Server Edition of XenData Archive Series software has read-write compatibility with the following LTO tape formats:

- LTFS
- TAR written by XenData software

If an LTO cartridge is imported into an LTO library or inserted into an LTO drive that is managed by the XenData software without a Legacy File System Extension and the tape has been written using a format other than LTFS or XenData TAR, the XenData software will identify it as quarantined. Then the only options available are to reformat the cartridge or to export it from the library or, in the case of a stand-alone LTO drive, to eject it.

The Legacy File System Extension is an optional upgrade to the LTO Server Edition of XenData Archive Series software. It adds read-only support for LTO cartridges written using the following proprietary formats:

- Active Circle
- Generic TAR (for example from Cache-A)
- Raw Tape (files on tape, separated by file marks)

Please refer to the XenData Legacy File System Extension Installation Guide for instructions on installing this upgrade.

2. Managing Legacy Formatted Tapes

After importing a first LTO cartridge written with a supported legacy format into an LTO library or external drive managed by the XenData software, a new Volume Set will be displayed within the XenData Tiered Storage Management Console with an identity beginning FFFFFFFF. The Volume Set may be renamed if required.

Each legacy cartridge subsequently imported into the system will be displayed in the Tiered Storage Management Console within the new Volume Set with a Volume ID beginning with FFFFFFFF, as illustrated below.
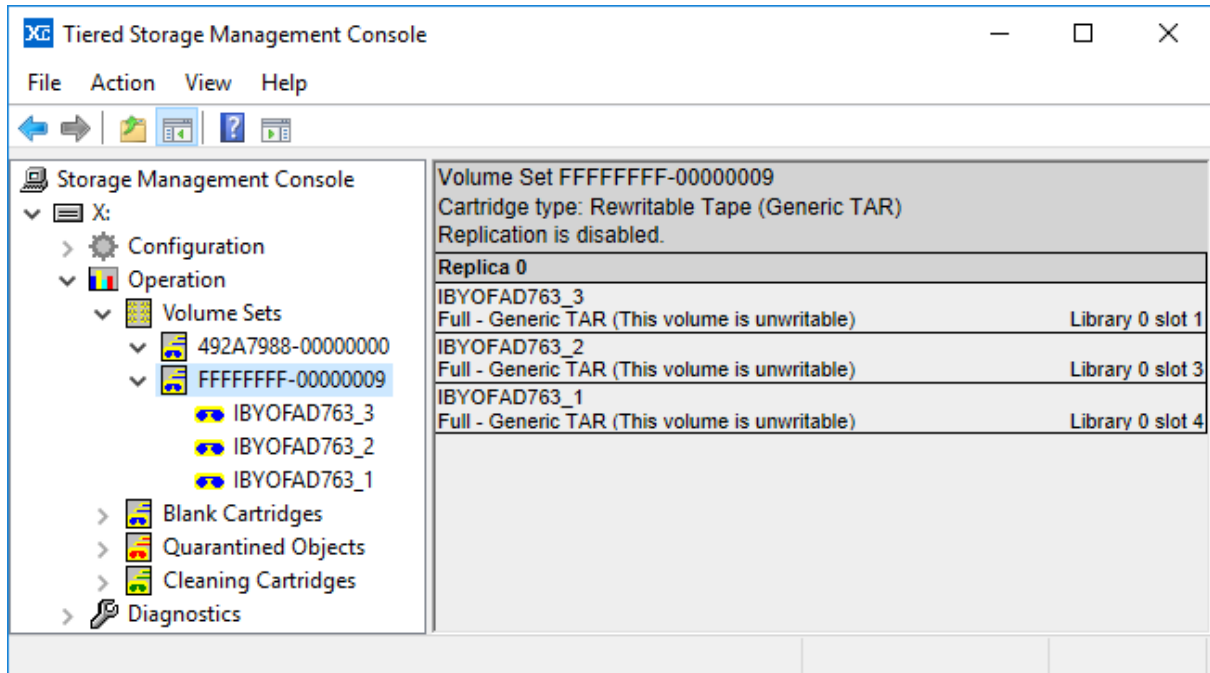
To access files stored on the legacy cartridges, a XenData catalog must be built first for each cartridge. This typically takes several hours for a full cartridge, as the entire tape must be scanned. After the catalog has been successfully created for a tape, the file and folder structure on that tape can then be made immediately available within the Windows logical drive letter managed by the XenData software. These operations are performed as follows for a single tape cartridge.

1. In the Operation section in the left pane of the Tiered Storage Management Console, right click on the tape Volume and select 'Build Catalog'. The tape will be mounted, scanned and a catalog generated.

2. After the catalog has been built, right click again on the tape Volume, and select 'Import Folder Structure'. The file and folder structure on the tape will then be merged into the existing file-folder structure within the managed Windows logical drive letter. The files will be available read-only.

These operations may be performed as follows for the complete legacy Volume Set.

1. In the Operation section in the left pane of the Tiered Storage Management Console, right click on the legacy Volume Set and select 'Build Missing Catalogs'. Then, one after another, each tape within the Volume Set will be mounted, scanned and a catalog generated. As it could take several hours to build a catalog for a single tape cartridge, this operation may take a very long time.

2. After the catalogs have been built, right click again on the legacy Volume Set, and select 'Import Folder Structure'. The file and folder structure on each of the tapes will then be merged into the existing file-folder structure within the managed Windows logical drive letter. The files will be available read-only.

3. Creating a Catalog Backup Copy

We recommend that users create a backup copy of the XenData catalogs. Each tape cartridge catalog is stored in a catalog file with an extension .XDB in a hidden folder named $XenDataData on the Windows logical volume managed by the XenData software. The procedure to copy the catalog files is as follows.

1. Check that no files are being written to the archive or read from it. Also, ensure that no files are being written to LTO.
2. Stop the XenData Archive Series service.
3. Using Windows File Explorer, navigate to the $XenDataData folder on the logical drive managed by the XenData software. You can access the folder by Configuring Window File Explorer to show hidden/protected operating system files, or by typing X:\$XenDataData into the File Explorer address bar, where X is the XenData Cache drive letter.
4. Copy the .XDB catalog files to a suitable backup location.
5. Start the XenData Archive Series service.

4. Special Considerations for Spanned Files

Cache-A LTO Appliances often span files across tapes. Unfortunately, the Cache-A TAR implementation is very limited: neither of the tape cartridges that store a spanned file contain metadata identifying the cartridge which stores the other portion of the file.
The default behavior of the XenData Legacy File System Extension software with spanned files is as below.

- The partial file at the end of a tape, i.e. the beginning of the spanned file, will be displayed in the archive file-folder structure with the correct file size, corresponding to the full file. However, an attempt to read this partial file, will result in an error.
- The partial file at the beginning of a tape, i.e. the end of the spanned file, will not be displayed in the archive file-folder structure.

XenData Professional Services may be purchased to restore spanned files from Cache-A tapes.