



# Release Notes

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<b>Product</b>	Linear Tape File System (LTFS) V2.2.0 for Linux and Mac
<b>Date</b>	December 2015

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## Introduction

These release notes apply to the Quantum Linear Tape File System (LTFS) Linux and Mac software version 2.2.0.

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## Terms

Types of changes:

- **Enhancements** - A given feature or algorithm of the product has been enhanced, to allow wider usability and/or to provide greater robustness
- **New Functionality** - A new piece of functionality is added.
- **Bug Fix** - Fixes a bug in the software.

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## Compatibility

LTFS version 2.2.0 compatibility requirements:

- Unrecognized tags shall be ignored.
- Older major versions of LTFS are not allowed to update volumes written by later major versions of LTFS. The new XML tags could not be properly handled by older versions impacting forward compatibility.
- As per traditional LTO philosophy, use of the CM to enhance performance is optional and not required. This refers to the Volume Coherency Information (VCI) attribute, which is used to determine where the latest index was written on the volume - and whether any data was written after the latest index was written. It's implied, but not required, that the LTFS application should handle a *broken* CM.

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## New Features and Enhancements

This release contains the following enhancement:

- LTFS Manager 1.1.0 and LTFS 2.2.0 support Quantum LTO-7 drives.
- OSXFuse 2.6.2 is included for use with older OS versions and OSXFuse 2.8.2 is included for use with OSX 10.10/10.11.
- Added support for LTFS Spec Version 2.2.0
- Added support for MAM Barcode attribute
- Removed support for MacOSX 10.6
- Added support for RHEL 7.0 and SUSE 12
- Added 'interactive mode' for mklfts utility
- Implemented ability to list rollback points of a cartridge without EOD marker (--salvage-rollback-points)

## Resolved Issues

This release resolves the following issues:

Change Request Number	Service Request Number	Description	Solution
		The default 'mklfts' behavior modified to avoid user confirmation.	
		The '--quiet' option in 'mklfts' and 'unlfts' utilities now does not imply '--force'	
		Improved sparse file handling	Write sparse file data in order to improve read back performance
		Improved performance of writing index	
		Improved performance of writing small files	
		The new release_device option for lfts can only release legacy reservations. It also unloads the cartridge.	

## Known Issues

This release has the following known limitations:

Change Request Number	Service Request Number	Description	Workaround
		mklfts segmentation faults on an LTO-5 FH SAS drive that has an unsupported firmware (V3050)	Make sure to use latest drive firmware available
		lftsck deep and full recovery options are unable to recover a tape that was in a drive that was power cycled while writing	Avoid power interruption to the drive while writing data to an LTFS Volume
		If a power loss to a drive occurs during writes, the drive will appear twice in the GUI after the refresh list button is clicked.	N/A
		Quantum LTFS Manager or LTFS Mac installation package do not validate a version of LTFS SW installed on the system.	Quantum LTFS Manager is included with the LTFS install package for Mac. It is recommended to use LTFS version 2.1.2 with LTFS Manager 1.0.0 and LTFS version 2.2.0 with LTFS Manager 1.1.0. Attempts to use LTFS Manager 1.0.0 with LTFS versions prior to 2.1.2 or LTFS Manager 1.1.0 with LTFS version prior to 2.2.0 might result in a drive showing up in LTFS Manager but not being supported by actual LTFS SW.

