Spectra T120 Library

Release Notes and Documentation Updates

Part Number

90950001 Revision BD

Revision History

BlueScale Version	Revision	Date	Description
12.1.2-20120731F	ar	August 2012	BlueScale12.1.0 and BlueScale12.1.2 updates.
12.1.5-20120921F	as	October 2012	BlueScale12.1.5 updates.
12.4.1-20130114F	at	January 2013	BlueScale12.3.1, 12.4.0, and 12.4.1 updates.
12.4.1-20130114F	au	February 2013	Document corrections, updated 12.4.0 and 12.4.1 Known and Resolved Issues.
12.5.3-20130618F	av	July 2013	BlueScale12.5.0 and 12.5.3 updates.
12.6.3-20131030F	aw	December 2013	BlueScale12.6.3 updates.
12.6.26-20140703F	ax	July 2014	BlueScale12.6.26 updates.
12.6.27-20140804F	ay	August 2014	BlueScale12.6.27 updates.
12.6.44-20150319F	az	April 2015	BlueScale 12.6.44 updates.
12.6.44.5-20150707F	BA	July 2015	BlueScale 12.6.44.5 updates.
12.6.45-20150910F	BB	September 2015	BlueScale 12.6.45 updates.
12.6.45.2-20151027F	BC	October 2015	BlueScale12.6.45.2 updates.
12.6.45.3-20151121F	BD	December 2015	BlueScale12.6.45.3 updates.

Note: To make sure you have the release notes for the most current version of the BlueScale software, log on to the Spectra Logic Technical Support portal at support.spectralogic.com. The release notes also include updates to the product documentation.

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Introduction

These release notes give you the latest information available about the Spectra® T120 library, the BlueScale® software, and the library firmware. They also serve as an addendum to the published documentation for the library.

> **Note:** To make sure you have the release notes for the most current version of the BlueScale software, log on to the Spectra Logic® Technical Support portal at support.spectralogic.com. The release notes also include updates to the product documentation.

RELATED INFORMATION

This section contains information about this document and other documents related to the T120 library.

BlueScale User Interface Screens

The BlueScale interface changes as new features are added or other modifications are made between software revisions. Therefore, the screens on your library may differ from those shown in the library documentation.

Additional Publications

For additional information about the Spectra T120 library and its drives, refer to the publications listed in this section.

Spectra T120 Library

The following documents related to the T120 library are available on the Spectra Logic website at support.spectralogic.com/documentation/.

- The *Spectra T120 Library User Guide* provides detailed information about configuring, using, and maintaining your library.

- The *Spectra T120 Library Quick Reference Guide* provides a quick reference for the user interface and instructions for performing day-to-day library operations such as powering on and off, and preparing, importing, and exporting media.

- The *Spectra T120 Library BlueScale Toolbar Option Map* provides a quick reference for locating the options and commands available through the BlueScale user interface.

- The *Spectra Encryption User Guide* provides detailed information about using BlueScale Encryption Standard and Professional Edition. It also provides useful information about encryption best practices and recycling encrypted media.

- The *Spectra Tape Libraries SCSI Developer Guide* provides detailed information about the SCSI and Fibre Channel commands used in the library.

- The *Spectra Tape Libraries XML Command Reference* provides detailed information about using the XML interface with the T120 library.

- The *Spectra Tape Libraries Warnings* document provides all of the warnings found in Spectra Tape Libraries documentation, in English and 27 other languages.

LTO Ultrium Tape Drives

The following documents provide information that is applicable to all IBM LTO tape drives.

- *IBM Tape Device Drivers Installation and User's Guide*

    Note: This guide also provides information about using the IBM Tape Diagnostic Tool (ITDT) to troubleshoot drive problems.

- *IBM TotalStorage LTO Ultrium Tape Drive: SCSI Reference* (LTO-1 through LTO-4)

- *IBM TotalStorage LTO Ultrium Tape Drive: SCSI Reference* (LTO-5 through LTO-7)

For drive-specific information, search for the product name (for example, LTO 5) on the documentation page on the IBM website. You can also search the IBM Support Portal at http://www-947.ibm.com/support/entry/portal/Documentation.

Spectra SKLM Server

For additional information that can assist you during the installation and configuration of your server, see the following websites:

- IBM Security Key Lifecycle Manager welcome page

Discontinued Components

Check the Spectra Logic Support portal for information about which products are currently supported and which are considered discontinued. For information about discontinued products, log on to the Support portal (at support.spectralogic.com), open the Knowledge Base, and search using the term "discontinuance".

Typographical Conventions

These release notes use the following conventions to highlight important information:

Note: Provides additional information or suggestions about the current topic.

⚠ **Important**	Read text marked by the "Important" icon for information that will help you complete a procedure or avoid extra steps.
⚠ **Caution**	Read text marked by the "Caution" icon for information you must know to avoid damaging the library, the tape drives, or losing data.
⚠ **WARNING**	Read text marked by the "Warning" icon for information you must know to avoid personal injury.

These release notes use an arrow (⋯⋮) to describe a series of menu selections. For example:

Select **Configuration** ⋯⋮ **Partitions** ⋯⋮ **New**.

— means —

Select **Configuration**, then select **Partitions**, then select **New**.

Library BlueScale Updates

PACKAGE INFORMATION

⚠ **Important** Updating the library's BlueScale software and library firmware requires a current service contract with Spectra Logic Technical Support. The BlueScale Software Support key associated with your service contract must be stored in the library by entering it into the System Configuration screen. See the *Spectra T120 Library User Guide* for instructions.

If you have questions about your service agreement, contact Spectra Logic Technical Support (see Contacting Spectra Logic on page 4).

Package Support

Spectra Logic recommends that you keep the BlueScale software and library component firmware up-to-date. Customers using a previously released version of software are urged to update to the current release. If the BlueScale software version you are running is more than two releases behind, you may be required to update to the current release to resolve an issue or to verify that a problem still exists in the current release.

The currently released BlueScale package can be downloaded from the Spectra Logic Technical Support portal. Refer to the *Spectra T120 Library User Guide* for information about accessing the Technical Support portal. The *User Guide* provides detailed information about downloading a BlueScale package and updating your library, as well as information about downloading and installing tape drive device drivers. Contact Spectra Logic Technical Support at support.spectralogic.com if you have any questions.

To determine whether you have the most currently released version of the BlueScale software for your library, as well as the most current firmware for the installed tape drives, do the following:

1. Check the library BlueScale software version on the BlueScale status bar.

2. Check the drive firmware version on the Drive Details screen for each drive.

3. Compare your software and firmware versions with the most current versions available on the Spectra Logic Technical Support portal at support.spectralogic.com.

   The Spectra Logic Technical Support portal lists the currently recommended library software and drive firmware versions, as well as important notifications.

4. If a more current version of the BlueScale package is available, download the update package and install it.

5. If a more current tape drive firmware version is available, download the update and install it.

Update Procedure

The BlueScale package update procedure is described in the following documents:

- *Spectra T120 Library User Guide*

- *BlueScale Package Update Instructions: Updating from BlueScale12.4.x and Earlier Versions*

- *BlueScale Package Update Instructions: Updating from BlueScale12.5.x and Later Versions*

If you have any questions or concerns about updating, contact Spectra Logic Technical Support (see Contacting Spectra Logic on page 4).

Package Management

If you receive an error message stating that your disk is full when the library attempts to unzip an update package, you need to delete downlevel packages to make room for the new packages. Refer to the *Spectra T120 Library User Guide* for information about managing update packages.

FIRMWARE VERSION REQUIREMENTS

⚠️ **Caution**   Spectra Logic recommends updating the drive firmware to the most current version available. Log into your Support portal account at support.spectralogic.com and check the Drive Firmware page for the currently recommended firmware version. IBM LTO tape drives must be using the following minimum firmware versions:

- **LTO-7**: For use with BlueScale 12.6.45.3 or later, use firmware version FA11 (HH), or later.

- **LTO-6**: For use with BlueScale 12.4.0 or later, use firmware version C9T5 (HH), or later.

- **LTO-5**: For LTFS support with BlueScale12.0.3 or later, firmware version B6W1(HH), or later, is required.

- **LTO-4:** To prevent a potential hardware failure, firmware version 97F9 (FH or HH), or later, is required.

⚠️ **Important**   **SKLM**   To use Spectra SKLM encryption key management with your library, all LTO-5 drives in the encrypted partition must use firmware version C7RC or later. LTO-6 and LTO-7 drives can use any firmware supported by the library.

PACKAGE HISTORY

The following sections list the BlueScale update packages that have been released for the library and provide information about new features and updates that affect the library and its components. The packages are listed in reverse chronological order, with the most recent release listed first.

⚠️ **Important** Unless otherwise stated, the known issues for a package remain active until moved to the resolved issues section. Always read the known issues section for each firmware release to make sure you are aware of any potential problems.

BlueScale 12.6.45.3

This release improves the support of LTO-7 drives.

BlueScale 12.6.45.2

This release increases reliability.

BlueScale 12.6.45

Enhancements

This release provides support for LTO-7 drives and improves reliability. It also improves the content of error messages and logs , and adds new XML commands.

Feature	Description
New XML Commands	New XML commands and options are available that allow you to view and configure certain library settings, get information about commands currently running, and assist in troubleshooting. See the *Spectra Tape Libraries XML Command Reference* for more information.

Resolved Issues

Issue	Resolution
The library infrequently hangs during a cartridge import operation while host/ISV operations are occurring.	This issue no longer occurs.
The touchscreen occasionally does not respond to inputs during initial calibration.	The touchscreen driver was updated so that it correctly responds during touchscreen calibration.
Drive test occasionally returns the error message saying, "Lost Communication to Drive (04,89,01) Check cables within drive sled", when there is no problem with the drive sled cables.	This issue no longer occurs.
Drive test fails if you attempt to test a drive using a tape cartridge that is not in the MLM database.	This issue no longer occurs.
mediaExchange.xml?progress returns a syntax error.	This issue no longer occurs.
Invalid characters in system messages cause a blank screen.	This issue no longer occurs.
The library occasionally issues an unload command to a tape drive when the tape is not at the mouth of the drive.	Communication between the library and the tape drives was improved to better understand the exact location and position of the tape in the drive.
Running BlueScale12.6.44.5, the library cannot configure LTO-3 and LTO-4 SCSI drives using an FQIP.	This issue no longer occurs.

Known Issues

Problem	Workaround
Updating DCM firmware after installing a drive with DCM firmware earlier than what is included in BlueScale12.6.44 may cause an incorrect Read Element Status response.	If you install a drive using DCM firmware earlier than what is included in BlueScale12.6.44, you must reboot the RCM after upgrading the DCM.
If DLM drive test fails on the first pass and then succeeds every other time, the library does not exit drive test.	Reboot the library.

Problem	Workaround
Drive staging only stages four drives at a time. If there are additional drives needing a firmware update, the library displays the message, "Drive firmware did not copy properly for drive(s) [*Drive Identifier(s)*]. Drive staging will automatically retry sending the firmware. If the operation continues to fail, please contact technical support."	After the first four drives complete firmware staging, the library retries sending the firmware to the remaining drives. The staging should complete, four drives at a time.
When attempting to remove an LTO-6 HH drive using the library front panel, the operation returns an error message: "Invalid formatted ID".	Ignore the message.

BlueScale 12.6.44.5

Resolved Issues

Issue	Resolution
The library infrequently hangs during a cartridge import operation while host/ISV operations are occurring.	This issue no longer occurs.
The touchscreen occasionally does not respond to inputs during initial calibration.	The touchscreen driver was updated so that it correctly responds during touchscreen calibration.
DLM Drive test occasionally returns the error message saying, "Lost Communication to Drive (04,89,01) Check cables within drive sled", when there is no problem with the drive sled cables.	This issue no longer occurs.
DLM Drive test fails if you attempt to test a drive using a tape cartridge that is not in the MLM database.	This issue no longer occurs.

BlueScale 12.6.44

Enhancements

This BlueScale release improves error handling. It also improves the content of on screen instructions and error messages, and adds the new features listed in the table below. Refer to the most current version of the *Spectra T120 Library User Guide* for detailed information about using these features.

Feature	Description
Auto Download for Library Packages	If configured, the library checks the package server once a week for a library update package or drive firmware package newer than what the library is currently running. If a new package is available, the library downloads it, generates a system message, and displays an icon on the status bar to indicate the update is available.
Drive Clean Tracking Notification	If you ignore a cleaning request for too long, the library generates a warning system message. Using drives with dirty heads can reduce drive performance, decrease usable tape capacity, and result in read/write failures which can eventually interrupt data storage.
New XML Commands	New XML commands and options are available that provide more library status information, allow you to reset the LCM, and allow webserver access to functions usually only available on the front panel. See the *Spectra Tape Libraries XML Command Reference* for more information.
DLM Test Improvements	To correct the most common tape drive problems, the DLM Drive Test now cleans the drive twice.
New SCSI Read Buffer Command	The SCSI Read Buffer command can provides the IP address of the LCM, the library name, and the partition name. This is especially useful when using the library with a BlackPearl Deep Storage Gateway.

Resolved Issues

Issue	Resolution
A McAfee® Vulnerability Manager (MVM) scan may cause the library to hang.	This issue no longer occurs.
A failed move may leave both source and destination locations in incorrect state.	This issue no longer occurs.
Using the SCSI Read Buffer command to retrieve the library's serial number does not work with libraries using a tape drive to provide the control path for the library's robotics.	The SCSI Read Buffer command now works to retrieve the serial number for libraries using a tape drive to provide the control path for the library's robotics.

Issue	Resolution
The partition creation screens allows you to select a Global Spare drive that does not match the generation of drives it would replace. For example, it allows you to select an LTO-4 drive to replace an LTO-5 drive.	The partition creation screens will only allow you to select a Global Spare that matches the generation of the drives it would replace.
Cancelling drive removal results in an 'error' level system message.	This issue no longer occurs.
It is possible to perform an XML package upload with a non-SSL connection when the library has SSL enabled.	It is no longer possible to perform an XML package upload with a non-SSL connection when the library has SSL enabled.
If you attempt to change the netmask and/or gateway for a library that is already configured to use static IP addressing, without also changing the IP address, the save fails and the error message, "Failed to update IP Information", displays.	The change succeeds and you no longer receive an error message if you change the netmask and/or gateway for a library without also changing the IP address.
When enabling or updating the NTP server, the LCM reboots automatically without confirmation from the user and even if the NTP server entered is invalid.	Then an NTP server is enabled or updated, the library validates the NTP server and requires confirmation from the user before rebooting.
Trying to create a partition with a space character at the end of the partition name causes the partition creation to fail.	This issue no longer occurs.
If you change the encryption type from BlueScale drive based encryption to Spectra SKLM encryption, in a library with multiple encryption keys installed, it is not possible to deselect the encryption key to use, which causes an error.	This issue no longer occurs.
If the library is busy it displays a generic, "Waiting for another action to complete" message.	The library now reports the specific action for which it is waiting.
It is sometimes not obvious that the library is in Maintenance Mode.	The first screen after an LCM reboot reports Maintenance Mode status.
If there is a tape present in the EE port when the initial partition is created, the inventory is not updated correctly when the EE port is opened and closed.	The inventory is now correctly updated when there is a tape in the EE port when a partition is created and then the EE port is opened and closed.
It is possible to set the "Scan after time" setting for QuickScan to 0 during partition creation.	The value for "Scan after time" for QuickScan must be 1 or larger during partition creation.
During a bulk import/export operation, XML commands may timeout.	This issue no longer occurs.

Issue	Resolution
The library may experience problems updating and switching to the redundant library control module (LCM) partition.	The LCM redundant partition is no longer required and is disabled.
Drives disappear from a partition without reason.	This issue no longer occurs.
When a drive provides the control path for the robotic motion commands sent from the host to the robotics, the library may fail with the error "Getting inventory failed with Sense Data: b,8,0: No Description."	This issue no longer occurs.
Package update through XML does not complete correctly.	Package update through XML completes successfully.

Known Issues

Problem	Workaround
If a tape is replaced with another tape with the same barcode, but different serial number, there will be two entries for the same barcode number in the MLM database. This may cause repeated scans.	Delete the MLM record for the original tape prior to importing a new tape with a previously used barcode.
The library can no longer connect to the Spectra Logic package server.	The IP address for the Spectra Logic package server has changed to 192.30.190.34. See "Configure a Package Server" in the *Spectra T120 Library User Guide* for instruction on edition the configured IP address.
After a library power cycle, the BlueScale version will, on rare occasions, report as "NONE".	Navigate to the Package Update screen, and perform the update to the latest BlueScale package again.
Using PostScan with a Global Spare drive may cause an inventory mismatch if a move is requested for a tape in the process of being scanned.	None.
The front panel may reboot unexpectedly when Drive Performance Monitoring is enabled.	Disable Drive Performance Monitoring if the library is experiencing front panel reboots.
The MLM Report screen only shows the remaining capacity of the first partition on an LTFS formatted tape.	Use the host software that created the LTFS partitions (such as the BlackPearl Deep Storage Gateway) to determine the remaining capacity on all partitions on the LTFS formatted tape.

BlueScale 12.6.27

This release corrects an issue that may cause an inventory mismatch when cartridges are imported or exported from a partition using a QIP to provide the robotic control path.

Resolved Issues

Issue	Resolution
In rare circumstances the library will report a move failure, 5,3b,e or 5,3b,d, when the move was actually successful. This causes an inventory mismatch.	This issue no longer occurs.

BlueScale12.6.26

This BlueScale release improves front panel and web interface stability and reliability, and solves several memory leaks. It also changes when and how data is written to the SD card to increase reliability.

Resolved Issues

Issue	Resolution
The SCSI command Read Element Status with VolTag=0 and DVCID=1 does not report drive serial numbers.	Drive serial numbers are now reported for Read Element Status with VolTag=0 and DVCID=1.
If the front panel is reset, the library does not remember the source slot for any tapes currently loaded in drives, which can result in move failures.	The library remembers the source slot of tapes currently in drives through a front panel reset.
Library reports 'Auto Drive Clean successful' even though the cleaning failed because the cleaning cartridge was expired.	The library now correctly reports a failed Auto Drive Clean in the system messages.
If a tape drive is removed from the library without using the **Remove** feature on the DLM (Drives) screen, an incomplete error message displays.	The full error message displays when a drive is removed from the library.
If a user selects **Delete Selected** on the Delete Exported MLM Records screen when no records are selected, the BlueScale navigation pane stops displaying.	This issue no longer occurs.

Issue	Resolution
The Read Element Status bytes for Media Domain and Media Type are not updated between moves to/from a drive.	The Read Element Status bytes for Media Domain and Media Type are now updated correctly.
The exporting drive for a partition may lock-up after an import or export operation when the host has issued a PreventMediaRemoval or a ModeSense SCSI command with a very short timeout value.	This issue no longer occurs.
When updating drives using Package Update, the library occasionally reports that drive firmware is ready to be committed when the firmware has not staged correctly.	Drives no longer display on the Commit screen if the firmware did not stage correctly.
After replacing an SD/CF card or updating BlueScale software, the library may respond to SNMP queries when **Enable SNMP Agent** is set to disabled.	SNMP will work as configured after a software update or SD/CF card replacement.
Upgrading from BlueScale12.0.1 or earlier, to a later revision can cause MLM database issues.	This issue no longer occurs.
The Read Element Status response for a single storage element with the VolTag bit set to 0, contains four erroneous bytes.	This no longer occurs.
A move initiated from the front panel attempts to unload a tape during tape drive power-on recovery, even if the drive is in mid-tape recovery. The move fails.	The library now displays a message informing you to try the move again after mid-tape recovery is complete.
QuickScan and PostScan stop at the end of the first filemark.	QuickScan and PostScan now continue to the end of the first track or the end of the data if it does not span a full track, as expected.
In some library messages, incorrect information is displayed in place of a drive ID.	Drive IDs are now correctly displayed in library messages.
The **Display Full Trace** check box on the System Traces screen only applies to selections made in the **LCM Trace** list, not selections made in the **Component Trace** list. If you select **Display Full Trace** when you generate a component trace, the trace might be corrupted.	The **Display Full Trace** check box has been renamed to **Display Full LCM Trace** and only works if an LCM trace is selected.
The timestamp in SMTP headers uses UTC (GMT) rather than local time.	If NTP is used for the library time, the header will report the correct local time. If the library time is set manually, the header will continue to report UTC (GMT).
DLM drive test fails if the drive is in Data Safe mode.	The DLM test temporarily takes the drive out of Data Safe mode. It restores Data Safe mode when the test completes.

Issue	Resolution
If a drive is selected as the robotic control path and subsequently unselected, the drives assigned to the partition may be incorrect.	The partition configuration wizard correctly keeps track of drives selected and unselected as the robotic control path and includes the selected drives in the partition.
If a QIP/RIM fails to retrieve an updated inventory from the BlueScale software, the QIP/RIM fails to respond to any host commands while waiting for the inventory, causing host commands to timeout and be aborted.	This issue no longer occurs.

Known Issues

Problem	Workaround
Drives incorrectly display good health status after an Auto Drive Clean fails because the cleaning tape is expired.	If you receive a system message that a drive was not cleaned because the cleaning cartridge was expired, ignore the good health status shown, the drive has not been cleaned. Import a new cleaning tape and the drive will be cleaned the next time it requests cleaning.

BlueScale12.6.3

This BlueScale release improves overall reliability and adds the new features listed in the table below. Refer to the most current version of the *Spectra T120 Library User Guide* for detailed information about using these features.

Enhancements

Feature	Description
Multiple exporting drives in a partition	You can select multiple LTO-5 and later generation drives as controllers, and export the same changer interface over the drives to provide redundancy, as long as your backup software can support this. These multiple paths cannot be used at the same time.
Initialization screen	An Initialization screen is now available to provide the system's progress during library initialization.

Resolved Issues

Issue	Resolution
Occasionally, the library allows a tape to be moved from a drive, even though the prevent bit is set.	The backup software now needs to clear the prevent bit before the library can move a tape from a drive. If for some reason the prevent bit is set but the software is down, you can reset the drive using the **Reset** button on the DLM screen to clear this bit.
The Drive Firmware Staging Committed process may fail due to a memory management issue. After the LCM restarts, drive firmware staging restarts from the beginning.	The Drive Firmware Staging Committed process now completes as intended.
The `Prevent Media Removal` command doesn't prevent media removal from the library. Using the Inventory screen, media can be removed by selecting **Storage** as a source and **To TAP** as a destination.	The `Prevent Media Removal` command now prevents media removal from the library.
When issuing the `login.xml` command to a library that has SSL enabled without using `https://` in the command URL, the command response indicates that the command was successful when it was not.	The `login.xml` command now reports a failure to log in error when the **`https://`** prefix is not used to log in to a library with SSL enabled. Make sure that you use **`https://`** in the command URL when logging into a library that has SSL enabled.
Staged drive firmware updates cannot be cancelled.	Delete the associated drive firmware package to cancel the staging process. **1.** Select **Maintenance ···⠿ Package Update**. **2.** Click **Manage Packages**. **3.** Click the check box next to the drive firmware that is currently staging. **4.** Click **Delete Selected**.
If the host and front panel both start moves from different drives to the same slot, the one that completes first finishes correctly. The other move fails with the tape left in the drive, but the library reports a sense code of 2,3a,0 (drive empty).	The library now sends the correct sense code if a move fails.
If MLM is disabled, the **Drive Reset** button on the Drives screen will be greyed out and inaccessible.	The **Drive Reset** button on the Drives screen is now available when MLM is disabled.
When the library is unable to read the robotics serial number, the library enters maintenance mode and is not able to capture an ASL.	The library is now able to capture an ASL when the robotics serial number is not available to the library.
The `driveList.xml` command reports information for a Global Spare after it released.	Information for drives not assigned to a partition is not reported by the `driveList.xml` command.

Issue	Resolution
The library does not report incompatible media.	The library now reports incompatible media.
When importing or exporting tapes, the operation times out 10 minutes after the E/E port closes, and the inventory update fails. Although the E/E port is visibly scanned after the door closes, the library inventory reports that removed tapes are still in the E/E port, and reports that added tapes are not in the E/E port.	Import and export operations now complete and the inventory is updated correctly.
The Power Metrics screen only shows power usage for the last hour.	The power metrics screen correctly displays the power usage statics over a five day period.
The health of cleaning media is incorrectly calculated when unloaded from LTO-6 drives.	The health of LTO-6 cleaning media is now correctly calculated.
LTO-6 media is shown as Unknown in the MLM report.	LTO-6 media is now correctly identified in the MLM report.
The `packageUpload.xml` command fails when the library has SSL enabled.	The `packageUpload.xml command` no longer fails when SSL is enabled.
The `resetRobot.xml` command can be executed by an operator.	The `resetRobot.xml` command can no longer be executed by an operator.
If the MLM server stops working and needs to be restarted, the MLM database no longer updates.	The MLM database continues to update after the MLM server stops working and is restarted.

Known Issues

Problem	Workaround
If you select the **Mail Results To** check box, a message indicating the success or failure of the utility is not sent to the selected mail user.	Use the BlueScale interface to see the results of the utility.
When adding a controller by selecting **Configuration ⋯⫶ Controllers** and clicking **ADD**, the library may generate a system message saying "QIP F-QIP1 appeared unexpectedly. To avoid this message in the future, use the Controllers screen when adding a QIP to the library."	Ignore the message. The controller was added correctly.
The library allows you to use invalid characters in the NTP hostname. Once an invalid NTP hostname is set, you are not able to set a new hostname.	Do not include !@#$^&*()< or > in the NTP hostname. If the NTP hostname has been set to an invalid name, you must set the library to factory defaults to be able to reset it.
The partition creation screens allows you to select a Global Spare drive that does not match the generation of drives it would replace. For example, it allows you to select an LTO-4 drive to replace an LTO-5 drive.	Select a Global Spare drive that matches the generation of the drives it would replace. For example, only use an LTO-5 drive as a spare for an LTO-5 drive.

Problem	Workaround
The Staged Drive Firmware Update Results screen displays "Package Update Completed Successfully" when staging starts.	Ignore the message and follow the rest of the instructions on the screen.
When using NTP, the read/write time in the MLM database might not be correct.	None.
Adding more than seven decryption keys to a partition with drive based encryption fails with a "Partition Configuration Error".	Do not attempt to assign more than seven decryption keys to a single partition using drive based encryption.
If several partitions are receiving move commands from the host when an ASL is requested, the ASL generation may take a long time or not complete.	Pause host moves before generating an ASL.

BlueScale12.5.3

This BlueScale release corrects issues seen on other tape libraries. None of the changes impact the T120 library.

BlueScale12.5.0

This BlueScale release improves the robustness of the library, particularly robotic recovery when a move fails. It also improves the content of on-screen instructions and error messages. Refer to the most current version of the *Spectra T120 Library User Guide* for detailed information about using these features.

Enhancements

Feature	Description
Improved package update	BlueScale package updates and drive firmware updates are easier and more reliable.
Configurable package server port	You can now specify a port when configuring a package server. If no port is specified, the default is 80.
Improved robotic reliability	The release provides more than 15 different fixes and enhancements for robotic control and recovery.
Improved on-screen instructions and error messages	The release provides more than 25 different fixes and enhancements for on-screen instructions and error messages.

Resolved Issues

Issue	Resolution
An error occurs when a write-protected and encrypted cartridge is loaded into a drive.	The library now handles write-protected and encrypted cartridges correctly.
DLM information retrieved using XML returns erroneous single character display (SCD) data.	The single character display (SCD) information listed in DLM results obtained through XML is now correct.
Web session cookie needs increased security.	The sessionID string length has been increased to increase security.
Need XML logout.	An XML logout command is now available.
Library initialization does not handle immediate host commands.	The library now holds host commands until it is ready to process them.
A drive configured as a Global Spare for one partition can be configured as a standard data drive in another partition.	A drive configured as a Global Spare for one partition is no longer listed as available as a standard data drive in another partition.
When a cartridge has met a PostScan trigger, but before the PostScan has occurred, the last PostScan date may display as 1970/01/01.	This no longer occurs.
Able to delete encryption moniker associated with a partition.	An encryption moniker cannot be deleted when it is still configured to be used by a partition.
When multiple MLM tapes are exported from the library, only one shows an '*' (asterisk) next to the barcode number in MLM records and reports.	The MLM database now updates the records for multiple tape exports correctly.
Auto Drive Clean continuously tries to use a broken cleaning tape.	The library no longer attempts to use a cleaning tape that was previously unusable. The unusable classification is cleared when the LCM is power cycled.
Partition data in the MLM database is not always accurate/up-to-date.	The partition data in MLM now reflects the current inventory of the library.
Viewing traces on an F-QIP not associated with a partition or drives causes the LC server to crash.	Viewing traces on an F-QIP not associated with a partition or drives no longer causes the LC server to crash.
Trying to delete more than one MLM record at a time causes an error.	The library can now delete the MLM records for more than one cartridge at a time.
Cartridge serial numbers do not appear in the MLM data in an ASL if the media is not certified.	The serial numbers for both certified and non-certified media appear correctly in the MLM data in an ASL.
Displaying the full trace of the MLM log fails to get the trace if any of the files in the log set are empty.	The Display Full Trace option works correctly even when there are empty files in the log.

Issue	Resolution
A cleaning tape will incorrectly display as expired when there are fewer than 10 cleans remaining on the tape.	A cleaning tape will not display that it is expired until the number of cleans remaining reaches zero.
Cannot set a DNS server on Spectra tape libraries.	DNS can now be set.
Adding more than one tape to the manual PostScan queue fails and results in an error message.	You can now add more than one cartridge at a time to the manual PostScan queue.
SKLM server configuration fails if the IP address entered is the same as a previously configured and deleted SKLM server.	The SKLM server information is updated as configuration changes are made.
A Spectra PC control module can get in a mode where it regularly reboots at 1:00 a.m. or 2:00 a.m.	The Spectra PC no longer reboots without a reason at a specific time.
The MLM database is not displayed after a code upgrade and power cycle.	Cycling power right after a package update no longer causes problems with the MLM database.
ASLs do not contain any information on why the drive health on the DLM screen is red.	The ASL now contains an MLM log line explaining why a drive health indicator is red.
For the XML command: partition.xml: action=new, the acceptable values for the parameter "type" do not match the choices in the partition creation screens.	The acceptable values for the "type" parameter for the XML command partition.xml: action=new have been changed to be consistent with the partition creation screens. ▪ LTOClean changed to LTO Cleaning ▪ 3592 changed to TS11x0 ▪ 3592Clean changed to TS11x0 Cleaning ▪ SDLT changed to Super DLT ▪ SAIT changed to Super AIT **Note:** If you have created scripts using this command, they need to be updated to use the new values for "type".
Drive firmware updates using drive firmware staging do not complete successfully.	Drive Firmware updates using drive firmware staging complete successfully.
MLM data shows tapes as exported when they are not.	The MLM data updates correctly when tapes are exported and imported.
The MLM report in an ASL shows C3 media as just certified media.	The MLM report in an ASL correctly identifies C3 media.

Known Issues

Problem	Workaround
When using NTP, the read/write time in the MLM database might not be correct.	None.
The Staged Drive Firmware Update Results screen displays "Package Update Completed Successfully" when staging starts.	Ignore the message and follow the rest of the instructions on the screen.
The partition creation screens allow you to select a Global Spare drive that does not match the generation of drives it would replace. For example, it allows you select an LTO-4 drive to replace an LTO-5 drive.	Select a Global Spare drive that matches the generation of the drives it would replace. For example, you cannot use an LTO-4 drive as a spare for an LTO-5 drive.
If you change the name of an existing partition, any tapes in the partition continue to report the old partition name in the first/last read/write MLM data.	None.

BlueScale12.4.1

This BlueScale release improves overall reliability.

⚠️ **Important** Depending on its LC controller, when a library is upgraded from either BlueScale12.1.x or BlueScale12.3.x to BlueScale12.4.x, the library may generate a CE O/S downgrade warning message on the Package Details screen. The message is expected; confirm the changes and proceed with the library upgrade.

Resolved Issues

Issue	Resolution
CAN overrun issues are not handled well by the CE CAN driver.	This issue no longer occurs.
Generation 1 and 2 LCMs lose their static IP addresses on reboot, and then request IP addresses through DHCP. This occurs when the library is power cycled using the front panel power button or when NTP is enabled.	The LCMs now maintain their static IP addresses after power cycling.
RCM periodically stops receiving CAN commands.	Fixed low level CAN protocol issue so LogLib reliably receives CAN commands.

Known Issues

Problem	Workaround
The LCM occasionally fails to reboot if a USB device is inserted.	Remove all USB devices before rebooting the LCM or the library.
You cannot set a static IP and enter DNS settings at the same time.	Configure either the static IP or DNS settings and click **Save**. Click **Previous** to return to the Network screen. Configure the other setting and click **Save**.

BlueScale12.4.0

Enhancements

The library now supports IBM LTO-6 half-height tape drives. Refer to the *Spectra T120 Library User Guide* for further information.

Resolved Issues

Issue	Resolution
The library occasionally generates invalid warning messages when a checksum calculation does not match the checksum stored in the MAM.	These messages are usually unnecessary and can be ignored. They are now recorded in the MLM log, and do not produce warnings.
The **Recycle Encryption Media** button is available on the Import/Export screen when logged in as an operator.	The **Recycle Encryption Media** button is now only available on the Import/Export screen when logged in as an administrator or superuser.
A move can fail if you are using C3 media, MLM, BlueScale Encryption, and NetBackup due to the MAM being full.	Unnecessary manufacturing information is erased from the MAM to prevent exceeding the MAM capacity.
When using the **Email Motion Traces** utility, some zipped files may become corrupted.	This issue no longer occurs.
After exporting multiple tapes from the library, the MLM database does not always show all of the tapes as exported.	The library now consistently updates the MLM Database after a cartridge is exported.
After running Recycle Encryption Media on a group of cartridges, you may encounter backup errors caused by some tapes not being properly recycled.	The Recycle Encryption Media process now works correctly with groups of cartridges.
The library may fail to restore an MLM database when using the **Restore MLM Database from USB** utility.	This issue no longer occurs.
During normal operations, a bus reset may occur unnecessarily.	This issue no longer occurs.

Known Issues

| Problem	Workaround
The **Display Full Trace** check box on the System Traces screen only applies to selections made in the **LCM Trace** list, not selections made in the **Component Trace** list. If you select **Display Full Trace** when you generate a component trace, the trace might be corrupted. **Note:** This issue is resolved in BlueScale12.6.26.	Do not select **Display Full Trace** when you are collecting a trace specified in the **Component Trace** list.
If you click **Test** under the name of a mail user on the Mail Users screen, the test fails and a confusing error message is generated. **Note:** This issue is resolved in BlueScale12.6.26.	Ignore the error message. Test emails cannot currently be sent using this button. To confirm an email recipient can receive emails from the library, generate an ASL file through AutoSupport and select the mail user you want to test as the recipient.

BlueScale12.3.1

Enhancements

This BlueScale release improves overall reliability and adds the following new features. Refer to the most current version of the *Spectra T120 Library User Guide* and *Spectra Encryption User Guide* for detailed information about using these features.

Feature	Description
Staged Drive Firmware	For LTO-5 and later generation tape drives, drive firmware rapidly updates after the firmware has been downloaded and staged. Staging is a background process which does not affect library operations. Once staging is complete, the drives are updated in parallel.
Tape Generation in Read Element Status	The Read Element Status command now returns the tape drive generation in its response.
Spectra SKLM Encryption Key Management	BlueScale software provides options to configure library access to Spectra SKLM servers and to configure partitions with LTO-5 and later generation drives to use Spectra SKLM for encryption key management.
Drive Traces	Drive traces for LTO-5 and later generation drives can be easily generated and retrieved using the Drive Traces button on the Drives screen.

Resolved Issues

Issue	Resolution
Using the MLM shortcut to go to the end of the database can take several minutes.	There is no longer a delay after clicking the button to move to the end of the MLM database.
While running the DLM Drive Health Verification wizard from the web interface, the library may log you out.	You are no longer logged out of the library when running the DLM Drive Health Verification wizard from the remote web interface.
The library sometimes reports the error message, "Error: SQL returned error: SQL logic error or missing database."	This issue no longer occurs.
When running PostScan, if the tape being scanned is requested for use by the host, the system may report a move failure stating that the cartridge move to slot failed.	The library no longer incorrectly reports a move failure when a tape in the process of PostScan is requested for use by the host.
AutoSupport Log creation defaults to "Create new Hardware Health Monitor ticket" when no HHM triggers have been met.	AutoSupport log creation now defaults to "Create new support ticket".
When viewing the Drives screen, clicking **Detail** next to one of the drives will occasionally redisplay the Drives screen instead of the Drive Details screen.	This issue no longer occurs.

Known Issues

Problem	Workaround
A cleaning tape will incorrectly display as expired when there are less than 10 cleans remaining on the tape. **Note:** This issue is resolved in BlueScale12.5.0.	Use the MLM report to determine the number of cleans remaining on the tape.
If MLM is disabled, the Drive Reset button on the Drives screen will be greyed out and inaccessible. **Note:** This issue is resolved in BlueScale12.6.3.	Enable MLM or use the advanced utility Reset Controller to reset the drive. 5. Click on **Maintenance ⋯⋮ Tools**. 6. Click **Utilities**. 7. Click **Advanced Utilities** and acknowledge the warning about advanced utilities use. 8. Click **Reset Controller**, the screen refreshes to show the details of the utility. 9. Select the drive you want to reset from the drop-down menu. 10. Click **Run Utility**.

Problem	Workaround
Adding more than one tape to the manual PostScan queue fails and results in an error message. **Note:** This issue is resolved in BlueScale12.5.0.	Add only one tape to the manual PostScan queue.
When selecting SKLM encryption, encryption monikers that apply only to drive based encryption can still be selected.	The encryption monikers for drive based encryption have no effect on SKLM encryption.

BlueScale12.1.5

Resolved Issues

Issue	Resolution
Generating the MLM Cleans Remaining report with a specific partition selected does not include all of the cleaning cartridges in the partition.	The MLM Cleans Remaining report now generates correctly for a specific partition.

BlueScale12.1.2

This BlueScale software release improves overall reliability.

Resolved Issues

Issue	Resolution
NTP is only updating the time at LCM bootup and not on an hourly basis.	NTP now updates the time hourly.

BlueScale12.1.0

Resolved Issues

Issue	Resolution
The library reports power consumption metrics incorrectly.	The library now more accurately measures and reports power consumption.
Following a BlueScale software update, system messages may indicate that one or more components did not upgrade.	BlueScale software updates complete correctly.
If an attempt to display the Drive Performance metrics for a partition fails, clicking **Previous** on the system message screen that describes the failure redisplays the system message. The system message continues to be displayed whenever the Metrics page is accessed.	Clicking **Previous** on the system message screen when displaying the Drive Performance metrics for a partition now works correctly.
When a drive is configured as a Global Spare but not actively in use, the library posts system messages indicating that the Global Spare appeared/disappeared during power-up.	The library no longer posts messages that a Global Spares appeared and disappeared during power-up.
After performing a BlueScale software update, the library occasionally fails to reboot after you click **Finish**.	The library reboots updated components, when necessary, after a BlueScale software update.
After removing a drive from a partition, it cannot be added back. The library may post a message that the "type is not the same as spare type" even if the partition is not configured to use Global Spares.	Drives can be added back after being removed from a partition.
The DLM Drive Test wizard fails when Drive Performance monitoring is enabled.	You can run the DLM Drive Test wizard when Drive Performance monitoring is enabled.
The Administrator user cannot delete partitions.	The Administrator user can now correctly delete partitions.
In partitions that use ADI (that is, the robotic control path is provided by a drive and not a QIP), recycling encrypted media while backup operations are in progress can cause the library to become unresponsive or cause other errors.	You can recycle encrypted media while backup operations are in progress.
If the library has the Feature option key installed, no drives are listed as possible robotic exporters when you try to create the first partition.	Having the Feature key installed no longer causes the drives to not be listed as possible robotic exporters.

Known Issues

Problem	Workaround
After running Recycle Encryption Media on a group of cartridges, you may encounter backup errors caused by some tapes not being properly recycled. **Note:** This issue is resolved in BlueScale12.4.0.	Run Recycle Encryption Media on the affected tapes again.
After clicking **Stop Update** on the Drive Firmware Update screen, the left hand menu bar may disappear.	Use the front panel soft keyboard to reset the web browser.
Trying to create a partition with a space character at the end of the partition name causes the partition creation to fail.	Do not use a space at the end of the partition name.
The Drive Firmware Update screen does not automatically refresh and will continue to show that the upgrade is in progress.	To show the correct status of the upgrade, navigate away from the Drive Firmware Update screen and then return. The screen will display the current status.
Using the MLM shortcut to go to the end of the database can take several minutes. **Note:** This issue is resolved in BlueScale12.3.1.	Scroll through the list rather than jumping to the final page.
The displayed WWN for SAS drives is all zeros.	None.
For a partition using a drive as the exporting controller, the Media Lifecycle Management Report screen for the partition does not show the inventory. **Note:** This issue is resolved in BlueScale12.5.0.	View the total library to see the cartridges in the partition. It may be useful to generate a .csv file so that the cartridge information can be sorted by partition. See the *User Guide* for your library for instructions.
Clicking **Update** on the DLM Details screen for a drive returns a confusing error message. **Note:** This button was removed in BlueScale12.4.	This feature is currently unavailable. Ignore the message.
While running the DLM Drive Health Verification wizard from the web interface, the library may log you out. **Note:** This issue resolved in BlueScale12.3.1.	Log back in to the library and check the Drives screen for a green check mark indicating that the test passed or a red X indicating that the test failed.
After exporting multiple tapes from the library, the MLM database does not always show all of the tapes as exported. **Note:** This issue is resolved in BlueScale12.4.0.	None
When you enable or disable MLM, a Feedback Required screen warns you that drives may reset, and asks you to press **OK or Cancel**. After clicking **OK**, the Feedback Required screen continues to display.	Wait up to 2 minutes for the operation to complete. Do not click **OK** or **Cancel**.

Problem	Workaround
NTP is only updating the time at LCM bootup and not on an hourly basis. **Note:** Resolved in BlueScale12.1.3.	Is necessary, manually update the time on the System Setup screen as described in the *Spectra T120 Library User Guide*.
The General Status screen will sometimes revert to displaying capacity instead of broadcast hours when additional partitions are created.	Reset the Convert to Broadcast Hours option after all partitions are created.
If you attempt to delete a single MLM record without selecting a record from the MLM list, the left hand side menu disappears. **Note:** This issue is resolved in BlueScale12.6.26.	Select any record from the MLM list and then press the **Cancel** button. The left hand side menu will redisplay.
The library sometimes reports the error message, "Error: SQL returned error: SQL logic error or missing database." **Note:** This issue is resolved in BlueScale12.3.1.	Ignore the error message.

EARLIER BLUESCALE VERSIONS

Contact Spectra Logic Technical Support if you need information about earlier BlueScale versions.

Important Information

This section provides information that is essential for ensuring that your data is accessible at all times and ensuring optimal operation of your library.

> **Note:** To make sure you have the release notes for the most current version of the BlueScale software, log on to the Spectra Logic Technical Support portal at support.spectralogic.com.

PROTECTING THE LIBRARY METADATA

Library metadata includes the library configuration data, the Media Lifecycle Management (MLM) database, the Drive Lifecycle Management (DLM) database, and all BlueScale encryption-key related data. Having backups of your library metadata is *very* important in the case of disaster recovery and other situations where you need to restore the library.

⚠️ **Caution** Losing metadata can have catastrophic effects—as can losing keys in any encryption key management system, especially when related to encrypted data. If you lose all copies of all metadata:

- Your encrypted data is lost—you will be unable to decrypt encrypted data without the encryption keys.
- You will need to completely reconfigure your library.
- You will lose stored data about your media that will be time-consuming to recover.

To ensure the availability of your library and encrypted data, protect library metadata as described in this section.

Backup the Library Metadata

To ensure the availability of your library and encrypted data, protect library metadata as described in this section.

Back Up All BlueScale Encryption Keys

Use the BlueScale **Export Key** option to export BlueScale encryption keys to a USB device as soon as you create them. The exported keys are encrypted and password protected. See the *Spectra T120 Library User Guide* for instructions.

⚠️ **Caution**

As a matter of best practice, Spectra Logic recommends exporting BlueScale encryption keys to a USB device instead of using email.

Although emailing BlueScale encryption keys is supported by the library, doing so presents security issues, including the following:

- Copies of encryption keys may be left on the email servers used for sending and receiving email and are thus subject to compromise.
- The difficulty in verifying where all the copies of emailed encryption keys may be located can make security audits more challenging.

Automatically Email the Auto Configuration Save File

Configure the **Auto Configuration Save** feature to automatically email a backup of the library configuration, the MLM database, and the DLM database to a preconfigured mail recipient once a week and whenever you create or modify a library partition. See "Enabling Email for Automatic Configuration Save File" in the *Spectra T120 Library User Guide* for instructions.

Notes:
- The **Auto Configuration Save** feature creates a backup file once a week and every time you create or modify a partition. It does not automatically create a backup when you make other configuration changes to the library.
- If the MLM database contains a large number of MLM and DLM records, writing the Auto Configuration Save file can take several minutes.
- The backup configuration can only be restored to the library that saved the configuration. The configuration is tied to the Hardware ID of the library and cannot be transferred to another library.

Back Up the MLM and DLM Database Regularly

Use the **Save MLM Database** advanced utility to export the MLM database to a USB device and also email the exported database to a preconfigured mail recipient. See the *Spectra T120 Library User Guide* for instructions. The file created by the utility also includes the DLM database.

> **Note:** The Auto Configuration Save operation performed by the library also backs up the MLM and DLM databases. See "Auto-Save Library Configuration and MLM Database" in the *Spectra T120 Library User Guide* User Guide for information.

Back Up the Library Configuration Regularly

Use the **Save Library Configuration** utility to save the updated library configuration data to a USB device or to email the updated library configuration data to a preconfigured mail recipient. See the *Spectra T120 Library User Guide* for instructions.

The partition wizard gives you the option to save the library configuration whenever you create or modify a partition. You can choose to save the updated library configuration data to a USB device or email it to a preconfigured mail recipient. See "Confirm and Save Partition Settings" in the *Spectra T120 Library User Guide* for detailed information about saving the library configuration when you create or modify a partition.

Verify and Protect the Metadata Backup

To ensure that your metadata is protected and available when you need it:

1. As soon as you create and export the backup files, check the exported data to make sure the correct files are present and accessible. Refer to the table in Saved Configuration Files on page 37 for a list of the files to look for and to see examples of the file lists you might see.

   ▪ Plug the USB device into a computer or laptop and check the data.

   ▪ If you emailed the metadata (the data is sent as an attachment), save the data to a USB device, then check the data in the email attachment and the data on the USB device.

2. Store at least one USB device off-site. After you have several weeks of backups stored off-site, rotate back through them.

3. When you perform disaster recovery exercises, use metadata from both your USB devices and email attachments in the rebuild.
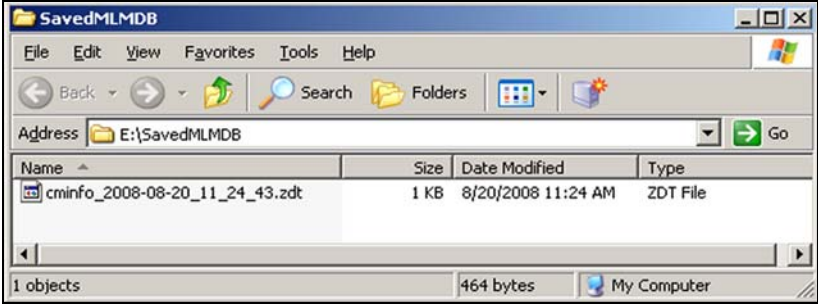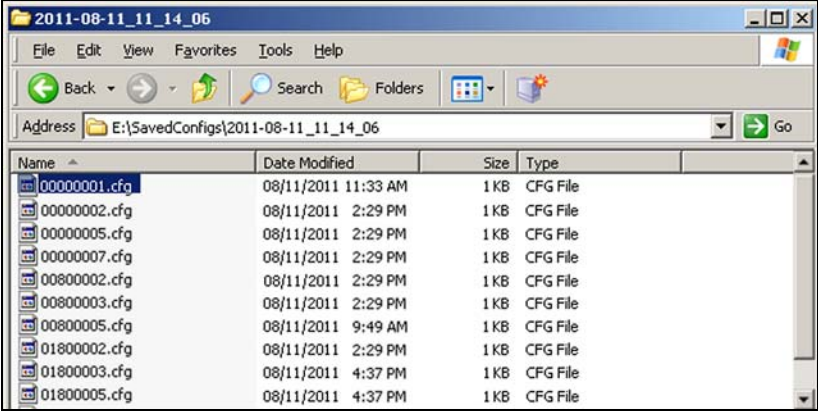
Saved Configuration Files

The following table summarizes the method for creating each type of backup and the file names and locations of the metadata saved during the backup operation. See the *Spectra T120 Library User Guide* for detailed instructions.

Saved data	Method	Files on USB device	Email
Exported BlueScale encryption keys	BlueScale interface: **Security ⋯⋗ Encryption ⋯⋗ Export Key**	A key file named `name`.bsk or `name`.bss, where `name` is the moniker you assigned to the key when you created it	An attachment containing a key file named `name`.bsk or `name`.bss
Auto-saved configuration	Automatic weekly backups saved to the LCM compact flash and emailed	A zip file named `<date-time>`cfg.zip in a folder called \autocfgsave, where `date-time` is the time stamp for the backup files	An attachment containing a zip file named `<date-time>`cfg.zip
Library configuration	BlueScale interface: **Maintenance ⋯⋗ Tools ⋯⋗ Utilities ⋯⋗ Save Library Configuration**	Multiple configuration (.cfg) files in the SavedConfigs\`<date-time>` folder	An attachment that is a zip file containing the entire set of configuration files
MLM and DLM databases	BlueScale interface: **Maintenance ⋯⋗ Tools ⋯⋗ Utilities ⋯⋗ Show Advanced ⋯⋗ Save MLM Database**	A time-stamped file containing the current MLM and DLM databases. The filename depends on whether the LCM is a Spectra PC or a Spectra LS and includes the time stamp `<date-time>` to indicate when the backup was created. If the backup file was saved to a USB device, it is located in a folder called \SavedMLMDB. ▪ **Spectra PC**— cminfo_`<date-time>`.dat —OR— ▪ **Spectra LS**— xmlinfo`<date-time>`.db —OR— ▪ **Zipped file**— cminfo_`<date-time>`.zdt (The zip filename is the same for both the Spectra PC and the Spectra LS.)	An attachment that is a zip file named cminfo_`<date-time>`.zdt, which contains the entire media lifecycle management database

Examples of Saved Configuration Files

The following figures show examples of the files that display when you check your USB memory device/email.

Saved Data	Details
BlueScale encryption key (T120_SF2.bsk)	 **Note:** The screen shown here also includes the SavedMLMDB and SavedConfigs folders.
MLM and DLM data	 **Notes:** ▪ In this example the file has a .zdt extension. The file will have either a .dat or a .db extension if you did not choose to zip the file when you created it. ▪ The file also contains the DLM database.
Configuration data	 **Note:** The files are located in the \SavedConfigs\<date-time> folder, where <date-time> in this example is 2011-08-11_11_14_06.

WORKING WITH HARDWARE COMPONENTS

This section provides information about hardware components associated with the T120 library.

LTO Tape Drives

Updating the Drive Firmware

⚠️ **Caution** Before updating drive firmware, make sure that your library is idle and that the tape drive does not contain a tape (loaded or ejected). Attempting to update the firmware while the library is busy or while a tape is in the drive will result in the update failing and may result in failed backup jobs. It may also result in equipment being permanently damaged.

If you previously attempted to update the drive's firmware with media loaded, unload the tapes, and retry the operation.

⚠️ **Important** The drive firmware files are only available on the Spectra Logic Technical Support Portal. You must first create an account on the portal by following the instructions at support.spectralogic.com.

After you update your library software and firmware, confirm that your LTO drives are using the correct firmware version and update the drive firmware if necessary (see the *Spectra T120 Library User Guide* for instructions).

Spectra Logic recommends that you:

- Use the IBM Tape Diagnostic Tool (ITDT) to update the LTO tape drive firmware. ITDT and its related documentation can be downloaded directly from IBM's website at http://www-933.ibm.com/support/fixcentral/. See the Knowledge Base article *Downloading and installing ITDT (IBM Tape Diagnostic Tool)* and "Download and Install ITDT" in the *Spectra T120 Library User Guide* for detailed instructions.

  Notes:
  - Make sure you install ITDT on a computer that has access to the library's tape drives.
  - If you cannot use ITDT, see "Updating Drive Firmware" in the *Spectra T120 Library User Guide* for more options.

- Use the correct firmware versions for your IBM LTO tape drives. See Firmware Version Requirements on page 11 for all drive firmware requirements.

  Check the Tape Drive Firmware page on the Spectra Logic Technical Support portal for the currently recommended firmware version. Refer to the *Spectra T120 Library User Guide* for detailed information about accessing the Technical Support Portal.

Drive Status Reporting for Fibre Channel LTO-4 and Later Generation Tape Drives

When LTO-4 Fibre Channel drives running firmware version 97F9 or later or LTO-5 and later generation Fibre Channel drives at any firmware level are installed in the library, the LED status information shown on the Drive Details screen always indicates that the LED is off.

If you need to determine the state of the LED, use the IBM Tape Diagnostic Tool (ITDT).

Purchasing Additional Accessories and Media

To purchase additional accessories for your library, or to purchase additional TeraPack® cases, media, and barcode labels, visit Spectra Logic's website at: spectralogic.com/shop.

For your convenience, MLM Media, like all Spectra Logic Certified Media, is available pre-labeled with sequential barcode labels. Optional custom barcode sequences can be ordered, if desired.

Recycling Your Library

For information on recycling your Spectra library, check the Spectra Logic website at spectralogic.com/environment.

INTEGRATION TIPS

Refer to the websites for the individual manufacturers for product updates and drivers.

For the most up-to-date compatibility matrices, visit the Spectra Logic Technical Support portal at:
support.spectralogic.com/documentation/compatibility-matrices/.

User Guide Updates

The *Spectra T120 Library User Guide* is current as of the release of BlueScale12.6.44. No updates are required for BlueScale12.6.45.3.

BlueScale Toolbar Option Map Updates

The *Spectra T120 BlueScale Toolbar Option Map* is current as of the release of BlueScale12.6.44. No updates are required for BlueScale12.6.45.3.