

Media Lifecycle Management Best Practices



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To effectively use BlueScale Media Lifecycle Management (MLM) and ensure data protection, plan a strategy and employ it with processes and best practices. Once you've implemented Media Lifecycle Management, build custom strategies based on your data center needs. Sound management policies and procedures and appropriate staff are essential for consistent effective implementation.

People

Identify the people on your site who are responsible for backing up data. They will be responsible for implementing lifecycle management procedures.

Next, identify the users who will have responsibilities that involve MLM. It may be wise to have more than a single user familiar with policies, depending on the size of your organization, so that if one person is not available, another can take over.

Processes

On an organizational level, you need to identify the level of management your media requires. For example, you may choose to use Spectra's guidelines for retirement for all media, or you may choose to retire tapes that hold financial or legal data sooner than recommended.

Consider the following when establishing your Media Lifecycle Management procedure:

- Choose a retirement guideline to use at startup. Spectra suggests assessing the Media Lifecycle Management health icon, visible on the MLM Reports screen (Fig. 1) and the single tape detail screen. At the 50% healthy mark, when the icon goes from green to yellow, stop writing new data to the tape and use it only for retrieval. When the icon goes from yellow to red, indicating the tape as passed the 10% healthy mark, transfer any data that is still needed to a new tape and take the old tape out of circulation.



Figure 1

- For higher levels of notification, use the options under Configuration -> Media Lifecycle Management (Fig. 2). Choose a maximum load count for the data tapes and put that value in the “Maximum Tape Loads Before Warning.” This will generate a system message listing the barcodes of the tapes that have exceeded that threshold.

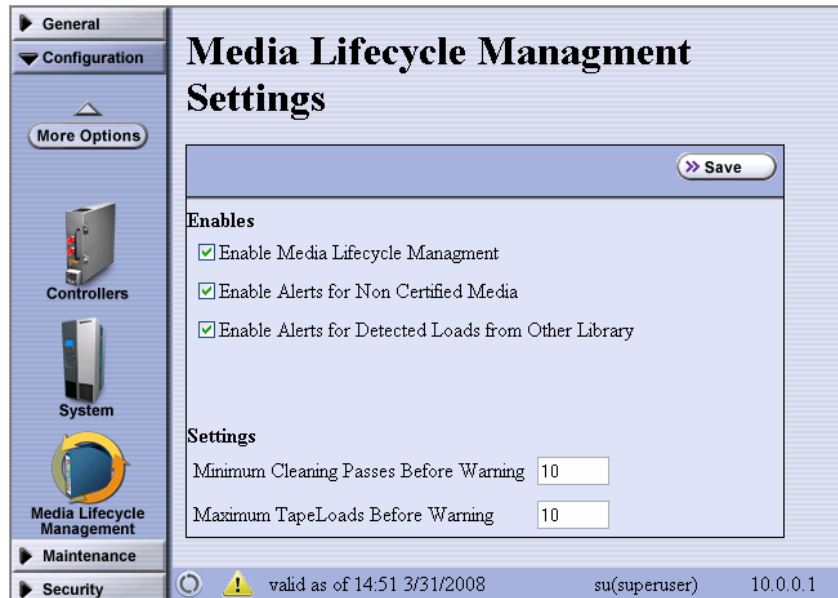


Figure 2

- Be consistent with partition names. Spectra’s suggested naming practice is to list the location, followed by the library name, followed by the backup software. For example, Dallas/T950/Veritas.
- When a tape leaves the library, it is marked as ‘out of library’ with an asterisk (*) but all its data is still available. Define the frequency with which you will export the complete MLM report and note the ‘out of library’ tapes.
- Under Configuration -> Media Lifecycle Management (Fig. 2), there is an option to enable alerts for media that is loaded in a non-MLM compatible library or drive. If your Spectra Logic library with LTO-4 drives is the only place your media will be loaded (which Spectra recommends), use this alert as a security feature to let you know if a tape was removed and loaded elsewhere.
- For most accurate tracking, do not load the tapes into non-Spectra Logic libraries or drive generations lower than LTO-4, as what happens in those locations will not be recorded by MLM.
- Choose which information is most relevant when saving reports. During the export process, you must choose between saving all MLM data (Fig. 3) or just the data that’s included in the most recently viewed report. The data will save as comma delimited format for export into any spreadsheet software.
- For the most accurate information about remaining capacity, use only Certified Media in a partition. If the partition contains non-Certified Media, the usable capacity shown will only represent that available on the Certified Media.
- Do not perform any actions with Media Lifecycle Management disabled and then re-enable it. Loads, reads, writes, errors, and any other tape related event that occurs while MLM is disabled will not be recorded in the MLM database.
- Determine how frequently to export the MLM database to a USB key for storage. The database can be loaded back into the library from the USB key in the event of an error. For more details see your library users guide.

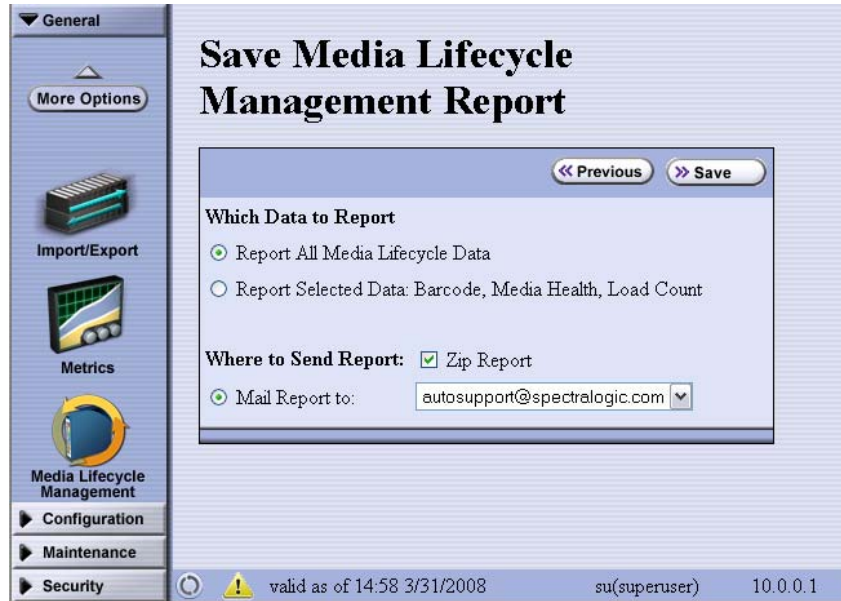


Figure 3

- The rate at which drives need cleaning depends on several factors and varies from data center to data center. Drives will notify you when they need to be cleaned, and you should always clean them immediately. Determine if your data center wants notification prior to the final clean and use the option listed under Configurations -> Media Lifecycle Management to notify you when a cleaning tape is nearing its maximum usage level.
- The Exported Media Report lists all media that has been removed from the library, along with the time of removal and the user name of the person logged in at the time of removal. The report can be used for security purposes if you institute a policy of changing the user to accurately represent the person responsible for removal of tapes at any given time.

Tape Handling

Temperature and Humidity Guidelines

Operating		Storage		Archival	
Temp	Humidity	Temp	Humidity	Temp	Humidity
50-113 F	10%-80%*	61-95 F	20%-80%*	61-77 F	10%-50%*

Keep tapes away from extreme heat, cold, or humidity. Do not store them anywhere near fire extinguishers, windows, doorways, sources of heat or magnetic fields. Do not store media near copiers or printers at any time, as toner and paper dust can contaminate tapes.

Do not smoke, eat, or drink where media is used or stored.

*All humidity percentages are in non-condensing environments.

Usage

Allow your media to spend at least 12 hours in your data center before the first use. If for any reason you must use it outside the optimum usage conditions (which puts your media at risk and is not recommended) allow the media to acclimate for at least 12 hours at those conditions.

Storage

Tapes should be stored on their edge in the TeraPacks provided by Spectra Logic. The included lids should remain on the TeraPacks when outside the library to reduce risk of contamination. The humidity and temperature of the tape storage area should be kept as constant as possible.

Transportation

When moving the tapes from location to location within the data center, the TeraPack will protect the tapes and up to three can be stacked on top of each other. If for any reason tapes need to be moved without being in a TeraPack, stack a maximum of six and do not drop them. If a tape is dropped, move the data to another tape and dispose of the dropped tape.

The Spectra Certified Media packaging is designed to hold a TeraPack with up to ten tapes and to withstand regular shipping without affecting those tapes. To ship media, please use the Certified Media box that was included with your TeraPack. If you no longer have that packaging, please follow these guidelines:

- Use an appropriately sized box
- Make sure there is at least 2 cm (.8") of filler between the tapes and the top and bottom of the box
- Verify that the tapes are in the box vertically and cannot move freely
- For maximum safety, ship in the TeraPack while following the above guidelines

Conclusion

Implementing a media tracking method such as Media Lifecycle Management is the first step in ensuring better backup practices. Tape failures most frequently occur when a tape has been overused, so tracking usage and failure statistics is an effective way to reduce data loss.