

Advanced Tape Storage Integration: HPE Data Management Framework & Spectra Tape Libraries

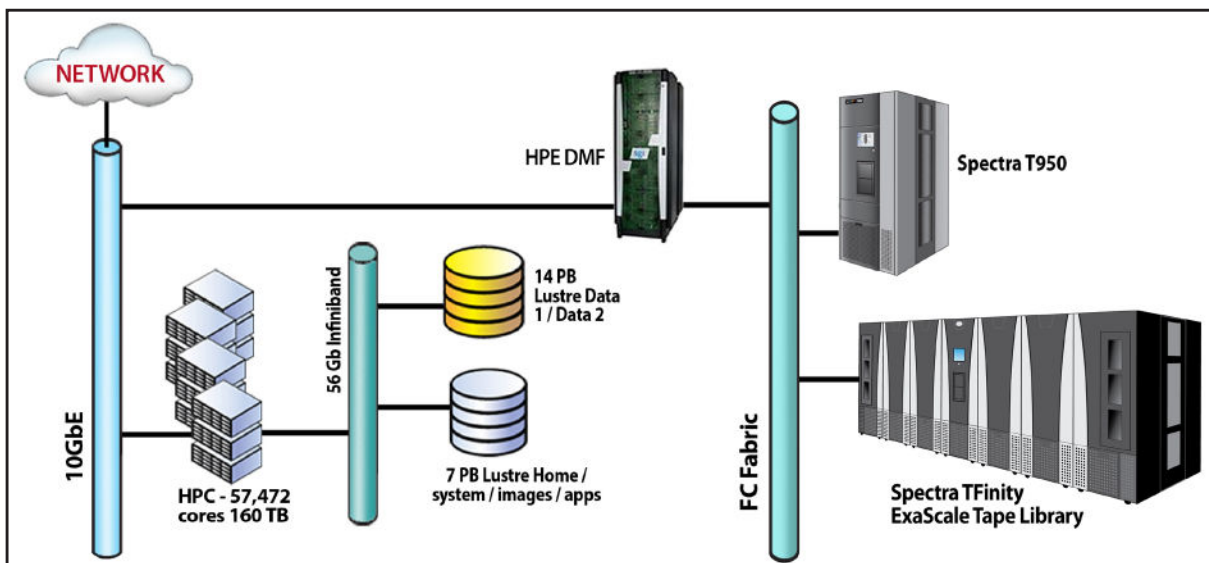
Tiered Data Management and Storage with HPE Data Management Framework and Spectra TFinity® ExaScale and T950 Tape Libraries

The relentless growth of data generated by high performance computing (HPC) and artificial intelligence (AI) platforms increasingly demands automated systems to reduce the cost of storing and managing data. HPE Data Management Framework 7 (DMF7) is a highly scalable data management system for unstructured data in HPC and AI environments. DMF7 is a multi-purpose tool that helps customers customize their data management strategies for backup, HSM and archive. At the heart of most data management strategies is tape; it's still the world's most cost-effective storage medium. And in the midst of an ever-expanding data universe of storage systems, file systems and data lakes, DMF7 is the only tool that knows where the data is.

Customers are using high-performance file systems for home directories and community stores where availability and access to data is a priority. DMF7 simplifies protection of complex, scalable storage systems. DMF7 eliminates backup windows and improves RTO/RPO via file versioning and file system image snapshots. When combined with Spectra's TFinity Exascale and T950 Tape Libraries, DMF7 reduces the cost of ensuring that critical data can be recovered.

Implementation of a hierarchical storage management (HSM) strategy has never been more important to customers. DMF7 is a powerful policy-based HSM platform that migrates data between premium priced high-performance flash, expensive high-capacity disk and cost-effective tape. DMF7 and Spectra's TFinity ExaScale and T950 Tape Libraries can be configured to ensure that inactive data doesn't sit on expensive storage any longer than it needs to.

Ultimately, data and files that are infrequently used and/or fall into disuse should be tiered to the most cost-effective storage for long-term archiving. DMF7 is a data curator for files destined for the archive. Through policies that can be customized to meet each customers' business needs, DMF7 automates the archiving process from end-to-end; determines which files should be archived, moves those files and their metadata into the archive, protects files in the archive, and even expires copies of files in the archive. Spectra tape storage and DMF7 are at the heart of this archive solution, working together to support 3-2-1 archive strategies (3 copies, 2 media types, 1 offsite copy).



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“ DMF7 is the only tool that knows where the data is. ”

 HPE Data Systems



Solution Benefits:

- **Certified** – Engineering tested to ensure reliable, consistent operation
- **State of the art** – Support for the latest enterprise-class LTO technologies
- **Management at scale** – Manage backup, HSM and archive via administrator-defined policies
- **Accelerated retrieval** – Recover data: 1) automatically via file system access; 2) from tertiary tape copies when the first copy is unreadable; and 3) from multiple tape drives for higher bandwidth
- **Automated library management** – consolidate sparsely written tapes, recycle expired tape, migrate data to newer tape technology generations
- **Optimize data storage cost** – Reduce data storage cost vs. flash/disk; use tape as the foundation of a 3-2-1 archive strategy

Operational enhancements through tight integration of hardware and software

With Spectra and DMF – storage can be up to 10 times less expensive than archival cloud storage. DMF delivers data center tiering technology that enables the deployment of the lowest cost data storage – tape. Spectra tape storage utilizes industry leading density and efficient power consumption, making tape the most economical storage on the market today.

Spectra Zoning

Spectra Logic has collaborated with the engineers at HPE (DMF) to optimize the zoning functionality with the TFinity ExaScale tape library. This optimization means that users can take advantage of using both robots in parallel to achieve industry leading robotic mount performance. Changes were also made to each software package so that the tape barcode can be associated with the corresponding TeraPack® barcode in which the tape resides. This allows DMF to sort the move queue for each zone so that tapes from the same TeraPack can be loaded in order into drives, which further increases robotic mount performance.

Spectra TAOS

TAOS is a unique Spectra advancement that provides up to a four times improvement in overall access speed on reads and up to a 13 times reduction in tape movement across the drive head when reading multiple files from individual tapes. The latter also results in reduced tape and drive wear providing the secondary benefit of improving overall system reliability and reducing cost. TAOS speeds up recall times for the Spectra TFinity ExaScale by intelligently reordering recalls from LTO tapes to optimize the time required to perform a recall. Until now, no such functionality has existed for LTO-7 and LTO-8 tape drive-based systems.

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