

**Spectra Logic's T-Finity Product Scales To Petabyte Storage Solutions For HPC**

November 10, 2009 - IDC Link

By: [Steve Conway](#)

Storage solutions vendor [Spectra Logic](#) has been scoring impressive wins this year at some of the world's most prestigious and demanding high performance computing (HPC) sites, including [NASA Ames](#), [Argonne National Laboratory](#), and Los Alamos National Laboratory. (Those are just the mega sites. Spectra Logic also has a growing installed base in small and medium-sized HPC organizations.) Now, the company's new T-Finity product is giving HPC sites and others the ability to scale their tape libraries to substantially larger sizes, on up to petascale, with lots of nifty management and RAS abilities thrown into the mix.

Let's get their terminology straight first. Spectra Logic calls a row of tape drive cabinets (frames), no matter how short or long, a "library." Multiple rows, or libraries, constitute a "complex." What turns a library into a complex is something Spectra Logic calls a "skyway." That's an overhead bridge that links rows together and allows tapes to be physically transported over the data center aisle between rows of libraries.

Now for some specs. A T-Finity complex can scale up to 8 robots, 100 frames, 480 tape drives, and 122,080 slots for a whopping 183PB of storage capacity. Spectra Logic claims that T-Finity solutions provide not only substantially greater scalability than their closest rivals, but also 44%-218% greater storage density, a 2x-3x footprint advantage, and 2x-6x better power use at a miserly 0.35w/TB.

NASA Ames installed two Spectra T950 tape libraries with up to 32PB of storage capacity (with data compression) and freed up an impressive 1,400 square feet of data center floor space. NASA Ames can now use the freed-up space to add more computing resources. The new T-Finity product is presumably capable of even greater feats.

A T-Finity library doesn't need to be taken offline when capacity is being added, and libraries can be virtualized in multiple useful ways. For example, a physical library can be separated into multiple logical libraries, and users can move tapes into and out of logical libraries. Spectra Logic's "global spare" implementation is designed to allow archive and backup applications to use a hot spare virtual drive with no configuration changes to their software environment to recognize the spare drive.

The new T-Finity solutions continue to feature the Spectra Library Lifecycle Management software, which actively monitors the status of every tape (green means its safe to write to and from, yellow means its safe to use but add no more data, and red means its time to retire this tape). This important software capability is designed to improve data integrity and uptime.

Spectra Logic sells its products directly, through channel partners, and via OEM partners.

The HPC market holds strong potential for capable storage products. Thanks to ballooning system sizes and core counts, the average HPC system is churning out rapidly increasing data volumes. Tape storage will continue to play an important role in hierarchical storage management systems at HPC sites, especially when daunting problems like climate studies or federal regulations (e.g., the aerospace industry) require sites to store multiple decades' worth of data. IDC expects the HPC storage market to continue growing faster than the HPC server market.

What do you think about tape libraries in HPC? IDC invites you to email your opinion to hpc@idc.com.

Subscriptions Covered:

[HPC User Forum: Vendor US Only](#), [Technical Computing](#), [HPC User Forum: Academic User Organization](#), [HPC User Forum: Vendor US and International](#), [HPC User Forum](#), [HPC User Forum: Government User Organization](#), [HPC User Forum: Industrial User Organization](#)

Please contact the IDC Hotline at 800.343.4952, ext.7988 (or +1.508.988.7988) or sales@idc.com for information on applying the price of this document toward the purchase of an IDC or Industry Insights service or for information on additional copies or Web rights. Visit us on the Web at www.idc.com. To view a list of IDC offices worldwide, visit www.idc.com/offices. Copyright 2009 IDC. Reproduction is forbidden unless authorized. All rights reserved.