

Breaking News Review

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EMC Brings Flash Drives, Virtual Provisioning and 1TB SATA to Symmetrix

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EMC made a trio of important announcements with respect to its flagship Symmetrix enterprise storage platform. Most notably, EMC will deliver 73 GB and 146 GB flash drives or solid state drives (SSD) that represent a new solid-state storage tier, "Tier 0," for Symmetrix DMX-4 arrays. In addition, EMC will offer Virtual Provisioning for Symmetrix DMX-3 and 4, as well as one terabyte SATA II disk drives. The target date for general availability of these new capabilities is March 19, 2008

Why is this important? With this announcement, EMC is the first storage vendor to integrate flash technology into its enterprise-class arrays. Solid state flash drives are able to store and retrieve data significantly faster than the fastest 15k Fibre Channel (FC) drives and are far more energy efficient. According to EMC, flash drives can store a terabyte of data using 38 percent less energy than traditional FC disk drives. Since it would take thirty 15,000 RPM FC disk drives to deliver the same performance as a single flash drive, this translates into a dramatic 98 percent reduction in power consumption to achieve similar transaction-per-second performance.

With flash drive technology in a Symmetrix DMX-4 storage system, a credit card provider could clear up to six transactions in the time it once took to process a single transaction. Overall, EMC's efforts could significantly alter the dynamics of the flash SSD market, where standalone flash storage systems have been available only from smaller vendors — notably Solid Data and Texas Memory Systems.

In EMC's hands, flash is finding a home in enterprises where high performance is a must, such as for high-transaction-rate mission-critical database applications. That increase in performance comes at a price; EMC said that the new flash drives will cost about 30 times what an equivalent size high speed FC drive, and estimated that adding four drives would raise the cost of a Symmetrix disk storage system by about 10%. But in high-end business applications where every bit of IOPS performance counts, that premium becomes entirely acceptable. When an organization truly needs a major boost then flash drives are a very real and very reasonable solution.

EMC also announced Virtual Provisioning (what some other vendors call "thin provisioning") options for Symmetrix storage tiers, including new Tier 0 flash-based SSDs. EMC views Virtual Provisioning as a foundation feature that enables simplified array management and improved utilization of disk capacity. With Virtual Provisioning, IT administrators can provision storage and setup Symmetrix systems far faster than they can other storage systems. In fact, EMC claimed that Symmetrix can be provisioned in half the time as one of its leading competitor's boxes. Management enhancements aside, a key point in the announcement is that Virtual Provisioning will also allow organizations to maintain the use of existing remote and local replication operations, such as SRDF.

EMC also announced that Symmetrix DMX-4 will support 1 TB SATA II disk drives. So on one end of the spectrum EMC announced support for the highest speed flash-based drives available for fast performance and at the other end of the spectrum the highest capacity

drives that can help businesses successfully deal with continuing demands for storage growth. Taken together, the new Symmetrix options qualify as very good news for EMC's enterprise customers. So far as the competition is concerned, it certainly appears that EMC has a significant performance leg up on IBM and HDS. For the industry as a whole, this points the way to the future.

In fact, these latest announcements show EMC at its best. The company has a history of being first to market with technologies other vendors were too timid or unimaginative to embrace. In the early 90s, EMC was the first storage vendor to offer 5 ¼" disk drives in its enterprise storage systems, an option other vendors first derided, then embraced. The same scenario played out when EMC announced Centera, the first enterprise archiving platform to leverage SATA drives. If history is any judge, we expect the company's competitors to eventually move forward with their own SSD options. But even as they do, their acceptance of an essentially new approach to enterprise storage will serve as a tacit nod to EMC's innovative leadership.

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Pund-IT emphasizes understanding technology and product evolution and interpreting the effects these changes will have on business customers and the greater IT marketplace.

About the Mesabi Group

The Mesabi Group (www.mesabigroup.com) helps organizations make their complex storage, storage management, and interrelated IT infrastructure decisions easier by making the choices simpler and clearer to understand.