

Marketplace Update

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EMC's Tiered Storage with Symmetrix DMX: Gaining Uncommon Advantages From Common Solutions

By Charles King

Many consider the high end of the enterprise storage market a rarified environment whose esoteric lessons are lost on the vast majority of businesses. But is this the case? We think not. The fact is that despite their reliance on high performance IT solutions, large enterprises follow the same rules and bow before the same market pressures as smaller companies. As a result, the ability of IT solutions to flexibly support key business processes and market fluctuations is a critical measure to which all enterprises pay particular attention.

For that reason, we believe that many enterprise storage customers will welcome EMC's new Low Cost FibreChannel (LC-FC) drive options for its Symmetrix DMX systems. Not only do LC-FC drives allow Symmetrix DMX-3 to scale to more than 1 petabyte of raw storage in a single array, a jaw-dropping amount by any measure, but they also support flexibly tiered storage solutions within massively consolidated storage environments. In addition, LC-FC options offer companies the means to streamline business processes and enhance infrastructure operational efficiencies, and to simplify implementation of integrated Information Lifecycle Management (ILM) strategies. Overall, we believe EMC's expanded DMX tiered storage offerings qualify as unique solutions to many essential enterprise business problems.

Challenges, Challenges

Large enterprises face particularly stringent demands related to data storage. First, since such companies typically employ high performance server hardware, storage systems must be robust and scalable enough to support demanding processing requirements. In addition, most enterprises depend on IT solutions to help them keep pace with or gain advantage over their competitors. As a result, they need to deploy robust, flexible applications that can support ever shifting business and global market demands.

To that end, the proper blending of online and near-line business information is an increasingly important issue, especially for applications that support critical customer- or partner-related data. Keep such data online for too long and you waste valuable high-end storage resources. Shift it to near-line or even to archive storage too quickly and you risk wasting valuable time and resources on excessive retrievals. Clearly, enterprises that depend on their information resources are best served by highly flexible storage solutions that support integrated methods for blending online, near-line, and archiving processes.

At the same time, storage requirements are continuing to grow at a breakneck pace for most businesses so enterprises must invest in highly scalable solutions unless they can afford to risk financial overextension or IT under-provision. Other financial pressures also affect storage. With economic growth remaining stagnant or unpredictable, many companies struggle to maintain flat or minimal growth in IT staff head counts. One realistic way to approach this is by keeping storage management processes as simple and efficient as possible. By deploying such solutions and leveraging existing investments wherever possible, enterprises can cost-effectively support necessary information resources to the betterment of their businesses.

EMC's Tiered Storage with Symmetrix DMX

EMC intends its new tiered storage with Symmetrix DMX to ease the storage challenges enterprises face in a number of ways. Most essentially, the new LC-FC drives support high-end storage functionality in tiered applications – at mid-tier price points. The ramifications of such an apparently simple offering are considerable. First, tiered storage with DMX provides customers notably flexible options for configuring enterprise storage resources. Applications with similar availability and performance requirements can cost-effectively share storage resources. For example, combining LC-FC and traditional Fibre-Channel drives in a single array allows businesses to support online and near-line storage resources in an integrated environment. This allows companies to more easily consolidate business information, and also provides them the means to implement tiered storage strategies on a single platform.

The primary result of this tiered single platform approach is the availability of storage management options and frameworks that are notably simpler than those that attempt to consolidate information stored across multiple, diverse platforms. By satisfying storage requirements with a single, highly robust enterprise-class architecture, businesses can also simplify the management of critical business applications. Also, customers can cost-effectively extend the rich, robust high-end functionality of EMC's Symmetrix systems to more of their enterprise at a reduced total cost of ownership. Additionally, the new drives provide current EMC customers the means to better leverage existing Symmetrix investments by allowing them to efficiently and strategically repurpose older DMX arrays.

A Unique Approach

How are EMC DMX tiered storage offerings different from other vendors' offerings? First, EMC's solution is quite literally unique; the company is currently the only major storage vendor that offers LC-FC drives for high end arrays. Other products lack the ability to consolidate multiple tiers while avoiding the cost and complexity of managing different arrays. Second, EMC's solution is easier to manage. Multi-platform storage environments typically require staffers to be conversant and stay current in multiple applications and maintenance procedures. Working with a single platform obviates these issues. Third, EMC's approach is cheaper to administer, since consolidating storage on a single integrated and scalable platform allows businesses to keep staff headcount flat and also support future storage growth. As a result, EMC's solution is more cost-effective than traditional FibreChannel solutions, both because LC-FC drives cost significantly less and due to secondary financial benefits gleaned from management simplicity and architectural unity.

Does this mean that EMC's tiered storage with Symmetrix DMX is an ideal fit for every business? Well, no. Tiered storage solutions with Symmetrix DMX offer measurable financial and economic benefits, but they are most appropriate for customers who have some

level of tier 1 requirements. In addition, while tiered storage and ILM are valuable strategies, the benefits of single platform consolidation will be most apparent to enterprises that take an aggressive approach to strategically managing their storage resources. Overall, we believe that EMC's new DMX solutions will be particularly compelling for the company's existing Symmetrix customers and for enterprises that are searching for maximally effective storage solutions.

Real World Applications of Tiered Storage with DMX

Businesses are likely to derive the greatest benefits from EMC's new solutions by deploying them for specific storage and business applications. Here are a few of the areas where tiered storage with Symmetrix DMX should provide notable value:

- **Back-Up to Disk** – One of the most important issues all enterprises face is successfully protecting company information via robust, reliable back-up and recovery processes. During the past half decade, disk-based back-up has become the methodology of choice, especially for critical online and near-line information. The reliability, repeatability, and fast recovery times offered by cost-efficient disk-based back-up is increasingly relegating traditional tape-based storage to permanent archive and data silo processes.

EMC's tiered storage solutions provide companies that depend on back-up to disk more seamless consolidated options than multi-platform products offer. They allow businesses to consolidate the back-up of both online and near-line data on a single platform, or even in a single array, easing back-up management and simplifying archiving processes. This is a relevant matter for companies actively pursuing ILM strategies. In addition, utilizing tiered storage with DMX allows enterprises to ensure that their essential business information enjoys the proven security and performance of EMC's high-end Symmetrix.

- **Large Media Databases** – Huge database environments offer inherent challenges to any organization, but those comprised of particularly large files that do not need authentication, such as digital medical images, have very different access patterns than more familiar online transactional processing (OLTP) applications. Providing economical and efficient access to large media files offers a number of technical and real world benefits. For example, using DMX tiered storage with LC-FC drives instead of traditional tape libraries would allow doctors to more quickly and easily download archived CT and MRI images, helping them to gain a better understanding of a patient's history, or to aid in critical emergency treatments.

EMC DMX tiered storage delivers quicker access to critical data than traditional tape archive solutions, and does so with a cost-effectiveness that most organizations will find attractive. In addition, it is difficult to think of a more dependable and secure storage environment than EMC's DMX for entrusting sensitive and important information such as medical files. Finally, tiered storage with DMX provides organizations such as hospitals and clinics the means for creating dynamic tiered environments that can respond and adapt to shifting online, near-line, and archiving requirements.

- **Short Term Archival For Predictive Business Applications** – Enterprises that rely on predictive business applications rank among the most demanding and dependant IT users on the planet. Credit card companies, airlines, banks and financial service providers, and phone and utility companies all rely on EMC's Symmetrix DMX to provide quick access to time-sensitive documents such as transaction and billing records. Suf-

fer a storage glitch or failure, and customer service and satisfaction plummet. Employ an ineffectual tiered storage solution, and watch efficiency falter and costs accelerate.

EMC's tiered storage with DMX enables data to be moved to more economical LC-FC drives when access patterns decline. For instance, most billing inquiries for credit cards, phones or utility services occur within weeks of statement issue. After this time, accesses drop off precipitously and the urgency for quick response times subsides. Moving infrequently accessed data to LC-FC drives can be notably beneficial to enterprises that rely on such applications. For these customers, EMC's DMX-3 can deliver the highest levels of performance for critical processes on high performance enterprise drives, and also offer the means to create economical tiered environments leveraging LC-FC drives.

Mission Accomplished?

While many believe that large enterprises occupy a rarified realm, such organizations are subject to the same essential rules and market pressures that affect any business. Like every company, enterprises measure IT solutions by their practical ability to support business processes that are critical to creating or maintaining competitive advantages. EMC's tiered storage options for Symmetrix DMX are just such a solution. Not only do the company's LC-FC drives offer attractive pricing and unique performance options for high end arrays, but they also enable enterprise customers to support business critical applications with highly consolidated and efficient storage architectures.

In addition, tiered storage with DMX solutions should help customers cost-effectively simplify storage management, a critical issue for most every business, and enable easier implementation of tiered storage processes and ILM strategies. At a time when virtually every organization is attempting to maximize the bang/buck ratio of their IT solutions, we find these LC-FC features particularly compelling. Finally, EMC's tiered storage with DMX supports unique methods for addressing challenges inherent in complex back-up to disk processes, large databases, and predictive business applications, areas that define the high end limits of enterprise IT infrastructures. Overall, we believe that enterprises that wish to gain maximum strategic value from their storage resources and those considering consolidated tiered storage solutions would do well to investigate EMC's new Low Cost FibreChannel drive options for Symmetrix DMX.

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