



Getting Beyond the Pain – EMC’s *Symmetrix* Offers More Value

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Management Summary

The pain is everywhere. No doubt these are lean days for IT spending, and storage is no exception. After the spending boom of the last few years, management is now scrutinizing every purchase. Acquisitions are cut back or deferred. **Buyers are looking to do more with less: focusing on total cost of ownership, price-performance, and value. Value assessment – figuring out how to justify what you want in business terms – can no longer be ignored for the sake of having the newest technology.**

All vendors, including EMC, the leader of high-end enterprise storage, have had to lower prices to stay competitive. But price is only part of the equation and EMC has not forgotten that it can also increase capabilities to deliver more value, even at the high-end. **EMC recently raised the bar by announcing a significant increase in performance, functionality, and breadth of the *Symmetrix* family of enterprise storage platforms.** These *Symmetrix* improvements are intended to continue EMC’s lead and to accomplish several important goals:

- **Offer significantly increased storage capacities and performance.**
- **Bundle storage network switches into products** targeted at enterprises that have not yet adopted SANs widely and are looking for simpler SAN solutions.
- **Do more for mainframe customers,** whose mission-critical data growth cannot be turned off just because the economy is in a funk.
- **Offer a smaller version of its premium product,** for those larger enterprises that need less capacity at remote locations and for those mid-size enterprises that want the premium product, but not in “giant size”.

EMC’s announcement is not a new architecture or a new product family. **Recognizing that something new, at this time, would further disrupt the procurement process, EMC has made significant enhancements to its premier *Symmetrix* product.** While you have to assess, carefully, the value that these enhancements and extensions to the product family will deliver to your enterprise, this will be much easier than evaluating and justifying a radically new product line. Read on for the details.

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Increased Performance and Capacity

To help customers keep up with the ever-rising flood of information, EMC increased the performance and scalability of the three-bay 8830 and single-bay 8530. Raw capacity more than tripled to 69.5 TB and 17.4 TB, respectively. The capacity of the 8830 is now two-and-a-half times larger than the book collection of the Library of Congress. To speed access to these larger repositories, EMC doubled processing power in terms of aggregate MIPS (millions of instructions per second). This mega processing power is key to the high performance expected from this *Symmetrix* generation. The global cache director, which provides a performance-enhancing memory buffer between host servers and disks, is also bigger (up to 64 GB) and faster. EMC's *CacheStorm* cache-partitioning technology enables the intermediary cache to perform parallel processing, smart optimization, and tuning. This could be the most innovative feature of the new offerings.

Bundled Networking

By supporting *six times* more Fibre Channel connections on *Symmetrix* platforms, EMC has effectively announced a "SAN in a box" capability for enterprises that have been reluctant to adopt SANs. The number of Fibre Channel host connections on the 8830 and 8530 has increased to 96 and 72, respectively. With the potential to connect so many servers directly to a single frame, customers who are hesitant to take on the costs and complexities of Fibre Channel SANs have a second option.

More for Mainframers

Not forgetting its longtime mainframe customer base (and to edge out IBM's *Shark*), EMC pre-announced support for *FICON* (*ESCON* over Fibre Channel) and IBM's *GDPS* (*Geographically Dispersed Parallel Sysplex*) for general availability in the first quarter of 2002. *FICON* allows mainframes to connect directly to Fibre Channel SANs and take advantage of Fibre Channel's more than

New Models At A Glance

Symmetrix 8830

Raw Capacity.....69.5 TB
 # DisksUp to 384
 Disk Capacities.....36 / 73 / 181 GB
 Global CacheUp to 64 GB
 Aggregate MIPS61,760
 Fibre Channel PortsUp to 96
 SCSI / ESCON Ports.....Up to 32
 FICON Ports.....Up to 16

Symmetrix 8530

Raw Capacity.....17.3 TB
 # DisksUp to 96
 Disk Capacities.....36 / 73 / 181 GB
 Global CacheUp to 64 GB
 Aggregate MIPS43,232
 Fibre Channel PortsUp to 72
 SCSI / ESCON Ports.....Up to 24
 FICON Ports.....Up to 12

Symmetrix 8230

Raw Capacity.....3.5 TB
 # DisksUp to 48
 Disk Capacities.....36 / 73 GB
 Global CacheUp to 32 GB
 Aggregate MIPS15,440
 Fibre Channel PortsUp to 24
 SCSI / ESCON Ports.....Up to 8
 FICON Ports.....Up to 4

six-fold bandwidth edge over *ESCON*. More importantly, *FICON* optimizes the capacity dedicated to each logical *ESCON* session between the mainframe and the *Symmetrix*.

GDPS is IBM's mainframe technology for remote failover and workload balancing, principally over long distances. A *Symmetrix*

array will be able to support this high availability architecture. Additionally, *Symmetrix* will offer improved addressing and RAID 10 (mirroring and striping for high performance and fault tolerance) support for greater flexibility in *zOS*.

Smaller Model

The new *Symmetrix 8230* was announced for customers who want enterprise-class functionality at a smaller scale and correspondingly lower price. It offers a raw capacity of 3.5 TB, 32 GB of cache, and support for up to 24 Fibre Channel host connections. Slim is in, and the *8230*'s tall, slender profile fits efficiently in a space-constrained data center. For small- to medium-sized enterprises that want advanced storage software features, but lack a Fortune 500 IT budget, the *8230* is an attractive proposition. It will also function well as a remote platform for SRDF mirrors, allowing customers to duplicate only business-critical volumes and avoid investing in a full-size frame at a remote location.

Conclusion

Bigger, faster, better. EMC's latest round of *Symmetrix* enhancements continues to push forward the performance and scalability of enterprise storage, and, more importantly, **it gives customers more value in these tight times.**



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