



PUND-IT, INC.

Marketplace Update

MARCH 20, 2006

EMC DMX-3 and Oracle Grid – The Benefits of Complementary Consolidation

By Charles King

IT consolidation is a relevant, even critical issue for a growing number of enterprises for both practical and strategic reasons. With business computing solutions becoming ever more powerful and complex, companies recognize that consolidating applications and hardware resources can help to bring unwieldy IT infrastructures under better control through centralized, simplified management solutions. In addition, consolidation can generally help enhance IT resource utilization and efficiency, and also provide enterprise customers a workable strategy for achieving lower IT total cost of ownership (TCO).

However, some vendors and technologies have notable affinities for supporting consolidation strategies. High among these is EMC's Symmetrix DMX-3, which provides a robust and flexible network storage architecture for supporting a wide range of consolidation efforts and tiered Information Lifecycle Management (ILM) implementations. In addition, DMX-3 is particularly complementary to other IT consolidation solutions such as Oracle Grid, which is designed to consolidate applications and databases whose success depends to a large degree on effective storage solutions. DMX-3's robust scalability and its support of a range of other grid enablers make it a perfect fit for Oracle Grid.

EMC's DMX-3 – The Benefits of Consolidated Storage

In an industry that emphasizes the value of bigger/better technical performance, EMC's DMX-3 still tends to make jaws drop. The DMX-3 is built to be massively scalable, both in capacity and in connectivity, allowing a single array to contain up to 2,400 drives supporting over one full petabyte (PB) of raw storage. This enables large enterprises to satisfy all their storage needs and simplify both critical business applications and crucial information management processes with a single integrated storage architecture.

In addition, EMC's new 500MB Low Cost Fibre Channel (LC-FC) drive options deliver ATA-style price and performance for DMX-3, a first for EMC's Symmetrix and for every other large storage vendor's enterprise-class solutions. In concert with other EMC Fibre Channel drives, including ultra high-performance options, customers can implement tiered storage strategies on a single highly robust and highly flexible stor-

age platform. As a result, DMX-3 customers can make certain that they can cost-efficiently allocate the most appropriate storage resources for their critical business applications.

What does this mean practically and strategically? First, DMX-3 supports information management options and frameworks that are notably less complex than those required by multi-platform storage environments. In such circumstances, IT administrators must make an effort to learn and stay current on multiple applications and maintenance procedures, a drain of time and energy from their day-to-day duties. By comparison, consolidated storage solutions such as DMX-3 allow administrators to focus their time and energies more effectively.

Since they can be managed more efficiently, consolidated IT environments also tend to be cheaper to administer. As a result, a consolidated storage environment can help companies keep IT staff headcount flat but still support continuing storage growth. Finally, the new DMX-3 offers enterprise customers entirely new ways to effectively deploy and enjoy the benefits of EMC's Information Lifecycle Management (ILM) strategy. These are all critical issues for businesses struggling to maintain business costs and also manage ever-expanding storage assets.

EMC DMX-3 and Oracle Grid – Working Together

While EMC's DMX-3 qualifies as an ideal platform for consolidating enterprise information assets, Oracle's Grid solutions offer businesses consolidated alternatives to all-too-typical "scattered islands" datacenter methodologies. On the hardware side, Oracle Grid relies on clusters of x86-based blade servers, along with enterprise-level Ethernet and Fibre Channel network technologies, and related SAN and NAS storage solutions.

In turn, these clusters are supported by Oracle 10g, which can enable a wide range of business solutions including customer relationship management (CRM), enterprise resource planning (ERP), transaction processing (OLTP), decision support (DSS), and enterprise content management. Overall, by consolidating server, storage, and network processes, Oracle Grid offers enterprises highly flexible and scalable solutions for ensuring that both low- and high-demand business applications have the IT support they require.

How can EMC's DMX-3 fit into this scenario? Tactically, EMC's DMX-3 tiered network storage "in a box" solutions intersect closely with Oracle Grid's highly consolidated and standardized approach to enterprise computing. Grid computing as Oracle defines it encompasses the datacenter as a whole and is designed to grow into an ever larger cluster. To be effective, storage must be able to flexibly and efficiently scale to support an entire Oracle Grid environment however it evolves. DMX-3's massive, consolidated information environments offer just such an enterprise-class solution.

In addition, the strategic combination of EMC and Oracle is nothing new. Since 1995, the companies have built a long and fruitful relationship that has resulted in over 40,000 shared customers. The pair also pursues concerted joint engineering, service, and support efforts that mirror a similarity of market approach and intent.

EMC's DMX-3 and Oracle Grid – Real World Use Cases

EMC's DMX-3 and Oracle Grid offer their customers a host of obvious technical affinities, but how does this translate in real world IT? Following are a trio of use cases where we believe a combined EMC/Oracle solution can provide organizations significant technological and business benefits:

- **Storage consolidation for multiple applications** – To Oracle, one of grid's prime value propositions is the ability to consolidate IT infrastructures to support numerous enterprise applications. The company's Oracle 10g offers full grid server cluster capabilities for business-critical applications including transaction processing (OLTP), decision support (DSS), and enterprise content management.

EMC's DMX-3 can support the massive storage requirements triggered by Oracle's Grid application consolidation methodologies. DMX-3's scalability means that companies will have seamless access to the consolidated storage resources they need to fit their specific business needs. The consolidated storage and data management solutions supported by DMX-3 can also help reduce overall TCO for many enterprises. In addition, EMC's myriad data migration and data management solutions provide further granular support for such consolidations.

- **Database infrastructure consolidation** – Oracle Grid can also be used to consolidate the IT infrastructure required to support the company's database offerings. According to Oracle, the combination of its Application Server clusters with the Oracle Real Application Clusters option for the Oracle Database can notably increase database reliability and reduce the server hardware and associated infrastructure management costs.

EMC's DMX-3 is uniquely positioned to support the wide range of storage requirements for both database information and related applications. Specifically, database infrastructure Grids typically consist of several instances, including those for production, development, test, and/or reporting. These different instances have differing I/O performance characterizations, as well as differing growth and availability requirements. To meet these myriad needs, many customers today deploy multi-tier, multi-vendor storage solutions.

Since EMC's DMX-3 can deliver a single, highly flexible platform for all varying classes of tiered storage in a single architecture, it provides a complementary solution for the various requirements of Oracle Grid deployments. More importantly, though, consolidating storage into a single platform simplifies provisioning, management, backup/recovery, disaster recovery and other information management tasks, further reducing TCO and improving business efficiency.

- **"Scale-out" grid and storage growth** –Both EMC's DMX-3 and Oracle Grid address the simple fact that IT growth is a constant, and both are designed to ease customers' growing pains. Oracle Grid enables customers to incrementally grow to hundreds or even thousands of consolidated blade servers, and offers Enterprise Manager and Grid Control software to centralize and automate necessary day-to-day maintenance processes

The unique scalability of EMC's DMX-3, along with its Symmetrix-class performance and reliability, make it an ideal match for demanding Oracle grid environments. According to EMC, DMX-3 has the ability to deliver incremental scalability across multiple storage tiers, enabling the non-disruptive scale-out of additional storage frames, drives, and controllers. When combined with EMC's notable data mobility software, the DMX-3 helps enable Oracle Grid customers "consolidation without compromise."

As a result, DMX-3 customers can be assured of having fast access to the storage assets they need for evolving strategic business efforts, while at the same time supporting a wide variety of current enterprise application tiers and service level requirements, even as those requirements change. The ability to enable both critical strategic efforts and practical business processes makes EMC's DMX-3 a singular enterprise storage solution, and emphasize its value as a complementary solution for Oracle Grid.

Mission Accomplished?

As business computing solutions become ever more powerful and complex, consolidating applications and hardware resources can help bring unwieldy IT infrastructures under better control. Along with centralizing and simplifying management processes, consolidation efforts can also help enhance IT resource utilization and efficiency, and support workable strategies for businesses to achieve lower TCO.

High among the IT vendors and technologies with affinities for supporting enterprise consolidation efforts are EMC's Symmetrix DMX-3 arrays and Oracle Grid solutions. Oracle Grid' standardized, scalable approach promises to be particularly valuable for consolidating a wide range of database infrastructures and enterprise applications including CRM, ERP, OLTP, and enterprise content management. In turn, DMX-3's massively scalable and flexible capabilities, and its ability to drive down storage TCO through consolidation of all tiered database instances intersect closely with Oracle Grid's approach to enterprise computing.

The obvious technical affinities of EMC's DMX-3 and Oracle Grid also translate clearly into real world IT benefits. In particular, we believe the combination of DMX-3 and Oracle Grid can provide notable support for a range of enterprise solutions including storage consolidation for multiple applications, database infrastructure consolidation, and scale-out grid and storage growth. Overall, we believe that enterprises contemplating IT or datacenter consolidation efforts that leverage their database resources should consider the combination of EMC's Symmetrix DMX-3 and Oracle Grid.

© 2006 Pund-IT, Inc . All rights reserved.

Contact:

Web: www.pund-it.com

Phone: 510-909-0750

E-mail: charles@pund-it.com