
Market Roundup

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EMC Information Infrastructure for Oracle

By *Clay Ryder*

EMC Corporation and Oracle have announced a broadened investment in joint engineering testing and integration and solutions development to support customers who are deploying EMC Information Infrastructure in Oracle environments. EMC's Information Infrastructure offerings provide a range of hardware, software, and services for enterprise applications, database, and middleware solutions. Jointly integrated services, solutions, and support seek to help customers avoid multi-vendor complexity when deploying end-to-end information infrastructure solutions based on EMC and Oracle technologies. The EMC Information Infrastructure for Oracle includes four solution areas: Data Warehousing, whereby EMC partners with the Oracle Information Appliance Program to offer customers packaged, low-cost data warehouse solutions that are high performance, quick to deploy, and can easily scale through validated building blocks known as Foundations; Oracle Unbreakable Linux, jointly engineered grid computing solutions backed by the Oracle Unbreakable Linux support program which have generated Oracle Validated Configurations and pre-defined best practices, allowing customers to reduce deployment time while minimizing risk with tested and qualified Oracle Enterprise Linux on core EMC platforms and software; Enterprise Security, integrating RSA security technologies and Oracle's identity management and data protection solutions along with user authentication, database encryption, and compliance reporting tools for database applications across the enterprise; and Grid Computing, using joint reference architectures and best practices for midrange environments to help customers rapidly deploy Oracle Grid Computing environments across EMC NAS or SAN platforms with low-cost tiered storage for simplified consolidated management and unique business continuance software for transaction consistency. All EMC Information Infrastructure for Oracle Solutions are backed by the EMC-Oracle Joint Escalation Center that provides customers a dedicated single path for support.

A file is a file, the saying goes, but not all files are the same. Logically they are just bits on a disk; however, from a usage perspective this is where the commonality ends. Databases are very different from plain text files and have differing usage scenarios and storage performance needs. Likewise, not all databases are the same. Oracle database solutions have specific performance and data storage requirements that are part of Oracle's articulated strategy for storage, which involves clustering, disk management, and replication, as well as promoting the Linux OS. The choice of storage architecture affects database performance, storage utilization, suitability as a high-availability solution, and the ability to tune and optimize the solution to meet organizational goals. Organizations deploying storage solutions that are not in alignment with Oracle's strategy as instantiated by Oracle 10g, ASM, and RAC may find themselves at a disadvantage from an operational and competitive standpoint. As such, the availability of tried, tested, and true storage infrastructure for Oracle databases is well positioned to assist organizations get the most from their extensive Oracle investments, which for many represent the operational lifeblood of their enterprise.

To appreciate the significance of this announcement, one must consider the depth of the technical and commercial relationship that the two companies share, and the dependency upon one another that they have developed over time. The Oracle Global Single Instance, which has been promoted by Oracle as the driving force behind a multi-billion dollar IT cost savings, runs on a variety of EMC hardware. Similarly, EMC is one of the five largest Oracle

customers in the world, based on the number of Oracle Application modules, users, and database instances deployed. The two companies' first-hand experience with each other, which should mirror the many operational experiences of customer organizations, feeds each other's product requirements and assessments. This does allow many of the deployment and usage "gotchas" that are inevitable in the customer environment to be experienced firsthand by the vendors, which should help alleviate issues sooner rather than later and reduce the likelihood of the issues impacting end-customer's production environments.

Overall, this announcement will likely be welcomed by the many organizations, large and small, that depend on Oracle databases to run their businesses. Although vendor partnerships are common and sometimes short-lived, it is a rarity in the industry for such a deep vendor relationship to develop for a substantial period of time. The obvious joint investments made by EMC and Oracle bode well for users of their certified technologies and serve as an example of the value of long-term strategic relationships not only for the vendors in question, but for their customers and partners as well.

Oracle Identity Management Ecosystem May Fertilize the Market

By *Lawrence D. Dietz*

Oracle announced this week that it has added eight new members and more than doubled the size of its Identity Management ecosystem. Joining existing partners such as Authenex, F5 Networks, Giesecke & Devrient, Identity Engines, and Lenel Systems International are strong authentication providers Arcot, Imageware, and TriCipher; converged physical access control provider Quantum Secure; network access control providers Juniper Networks and ForeScout; privileged accounts management partner Cyber-Ark; and a secure, federated identity partner Pay By Touch. These new participating ISVs are working with Oracle to provide value-added integrations to Oracle Identity Management thereby delivering solutions that extend beyond traditional access and identity management infrastructures. Launched last year, the Oracle Extended Identity Management Ecosystem and Reference Architecture delivers integrations that make it easier for organizations to unify siloed security technologies into a comprehensive, standards-based identity management framework. Unifying these technologies with Oracle Identity Management enables customers to create a common security policy framework that spans heterogeneous systems and applications, lowers costs, and improves overall enterprise security. The expansion of the ecosystem is indicative of a commitment by Oracle to the identity management market and is likely predicated on its view of the continued demand for comprehensive identity and access management systems.

The information security market plays like a team sport. Players in the market tend to group into three classes: large powerful vendors; small new-technology vendors, and a group we call the "Goldilocks" vendors. This last group is the smallest of the three and consists of security vendors that have grown to a critical mass with revenues in excess of \$100 million. We believe that the Oracle IDM is designed to attract a bevy of smaller companies who want to "draft" on Oracle much like racing car drivers increase their advantage in a race by drafting vehicles in front of them. With respect to the group named above, we believe that Juniper is the "one thing that doesn't belong" (to quote Sesame Street).

Technologically it makes great sense for Oracle to open its ecosystem to any and all comers. In that way customers can choose between Oracle and something, or Oracle and something else. This arrangement also allows the smaller vendors to leverage off Oracle's penetration and to focus some of their precious developmental activity on building the interfaces needed to optimize performance with Oracle software. Where the rubber meets the road, however, is in lead generation and deal control. While we applaud the kumbaya nature of the ecosystem, we're adopting a wait-and-see attitude as to how this relationship affects the top line of players besides Oracle.

Looking to the Top500 Supercomputers

By *Clay Ryder*

With much anticipated fanfare, the Top500 Supercomputer list was announced this week at the International Supercomputing Conference in Dresden, Germany. For the fourth time, the BlueGene/L System development by IBM and DOE's National Nuclear Security Administration that is installed at DOE's Lawrence Livermore National Laboratory claimed the No. 1 spot with a Linpack benchmark performance of 280.6 TFlop/sec. The second- and

third-placed systems also exceeded 100 TFlop/sec: the upgraded Cray XT4/XT3 at DOE's Oak Ridge National Laboratory, with a benchmark performance of 101.7 TFlop/sec, and Sandia National Laboratory's Cray Red Storm system, rated 101.4 TFlop/sec. Dell's Abe system at NCSA, built on 1,200 PowerEdge blades, ranked number 8 overall; the highest performing blade solution. IBM's MareNostrum supercomputer, built on IBM BladeCenter JS21 blade servers, ranked number 9 on the overall list to retain its position as the most powerful supercomputer in Europe. The performance value required to make it onto the list increased to 4.005 TFlop/sec on the Linpack benchmark, compared with 2.737 TFlop/s six months ago. The system ranked #500 on the current list would have held position #216 just six months earlier. This is the largest turnover between lists in the TOP500 project's fifteen-year history.

A total of 289 systems (~58%) use Intel processors, 105 systems (21%) feature AMD's Opteron family, and 85 systems (17%) are based on IBM Power processors. Dual-core processors are the dominant chip architecture. Intel's Woodcrest dual-core chip showed the most growth, with 205 systems using this chip compared to 31 six months ago. Another 90 systems use Opteron dual core processors, up from 75 six months ago.

Clusters remain the most common architecture in the TOP500 list. The list has 373 clusters, representing just under three-quarters of all systems. HP Cluster Platform 3000BL and 4000BL systems based on HP BladeSystem c-Class servers accounted for 152 entries on the list. HP has the highest number of systems on the list with 40.6%, IBM now has 38.4%, and Dell holds 4.8%, with no other manufacturer having more than 5% of the systems listed. For overall total performance represented, IBM has 41.9% of installed performance; HP follows with 24.5%; next is Dell at 9%; Cray with 7.3%; and SGI at 5.7%. The average age of a system in the Top500 list is one year and two months with 60% having been installed or upgraded this year and 23% having been installed or upgraded last year.

Not surprisingly, the sheer amount of computational horsepower listed on the Top500 has broken another record, and the table stakes required to play in this game have jumped up about 50% over six months ago. The industry's ability to continue to shatter past assumptions about performance limits has proven remarkably resilient and perhaps serves notice that we should simply stop trying to define what the limit of computing will ever be. Nevertheless, what we find most interesting in the latest list is how prevalent, and how far up the totem pole blade-based solutions have become. The Dell Abe system installed at NCSA ranked #8 overall, IBM's system in Barcelona followed in 9th place, and many of the entries from HP were based upon the BladeSystem c-Class.

These are remarkable achievements for an architecture that for many is becoming the de facto IT platform of the future. From an overall efficiency and cost perspective, this bodes well for the architecture and begs the question: in the world of HPC, does the blade server offer the best price per TFlop? Granted, HPC systems are often highly customized, but the inherent reduction in cabling, power supplies, external switches, etc., would seem to translate even in an HPC scale. It would be interesting to see just how the efficiency of the blade architecture scales in the highest-performance environments.

Overall, we are impressed with the continued growth in HPC capability, and in particular with the solutions from IBM, HP, and Dell that are based upon technologies commonly available to mere mortals albeit in much smaller footprints. The value of clustering, blades, and virtualization technologies is very evident in the Top500. To our way of thinking, this should help keep vendors very interested in pursuing these technologies in their general market offerings, which after all is where most vendors make the lion's share of their revenue. While HPC solutions of the highest scale typically do not deliver a profit margin that would keep most vendors afloat, the R&D investment has a substantial payback as the vendors bring the innovations that they develop in solving some of the computational most difficult tasks down to the general-purpose offerings upon which the industry and organizations thrive.

Savi Networks Employs RFID in Tracking of Colombian Cargo Shipments

By *Lawrence D. Dietz*

Savi Networks and Emprevi Ltd. have officially launched the first Radio Frequency Identification-based information network operating in South America that automatically tracks the location and security status of cargo shipments from in-country factories to sea ports. Emprevi, a Colombia-based provider of logistics and

security services for major importers and exporters, contracted with Savi Networks to build the information network, which extends between Emprevi's customers' manufacturing facilities, intermediate transportation checkpoints, and ports. Readers throughout the network capture data transmitted over radio waves from RFID-based e-Seals affixed to containers, and route the information to the transportation security software with ongoing location and security status, and delivers automated alerts on security breaches and other exceptions that users can receive via their emails, cell phones, or PDAs. The network is compatible with ISO standard 18000-7 for active RFID devices and ISO standard 18185 for electronic container security devices, both operating on the 433.92 MHz frequency. Real-time "actionable visibility" provided by Savi's Web-hosted transportation security software helps to cut administrative costs, improve inventory management, decrease safety stock, and reduce the potential for drug trafficking and smuggling, theft, loss, or terrorist intrusions. Emprevi has tested the system and will be offering it as a value-added service to Savi customers in the pharmaceutical and healthcare, consumer product goods, food and beverage, transportation, and logistics services industries. Savi Networks plans to expand the network footprint in Colombia, and to integrate it with SaviTrak, its worldwide information network, so that Emprevi's customers can have end-to-end visibility of their shipments throughout the global supply chain.

There is an extricable connection between physical and information security, and global security infrastructure is the rule rather than the exception. While RFID may raise the privacy hackles of many U.S. citizens and privacy advocacy organizations, there can be no doubt of the technology's value in securing commercial assets, especially those with high value. Maritime cargo in particular has generated significant concern, for two reasons at least. On the one hand, governments are concerned about terrorist exploitation of maritime cargo as a means to deliver a weapon of mass destruction; on the other hand, commercial entities are concerned about the safety of their personnel and their cargo especially in treacherous areas or areas of significant criminal activity such as narcotics.

The combination of an internationally based security systems provider such as Savi, especially with its Lockheed backing and a strong local presence such as that offered by Emprevi, has to be a winning one. We also note that there are specific industries that are to be addressed by the marketing of the services and that these industries are often marked by high value-added cargo. RFID technology appears to be non-intrusive as well as cost-effective. Furthermore, commercial organizations do not have the privacy concerns of consumer ones and are more inclined to dictate the use of a form of technology especially when it is perceived as a high added value by their customers. We expect to see RFID technology become more prevalent over time in commercial settings.