
Market Roundup

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Making It Mainstream: Dell Adopts Opteron

By Clay Ryder

Dell has announced two new PowerEdge servers that feature AMD Opteron processors: the PowerEdge 6950 and PowerEdge SC1435. The Dell PowerEdge 6950 is a four-socket server designed for demanding enterprise applications such as database, server consolidation, and virtualization, as well as migration efforts from legacy RISC-based systems. The PowerEdge SC1435 is a two-socket, rack-dense server optimized for high-performance compute clusters, distributed Web serving, and SMBs. Both servers feature PowerEdge enhancements including: SAS (Serial Attached SCSI) hard drives for fast, reliable data transmission with less thermal output; a TCP/IP Offload Engine to help reduce traffic on host processors; enhanced virtualization technology for improved performance, management and utilization in virtualized workloads; and PCI-Express I/O for high-performance Ethernet, RAID, InfiniBand, and Fibre Channel interconnects. In addition, Dell and Oracle have integrated Dell OpenManage and Oracle Enterprise Manager to provide for simplified management of the Oracle application infrastructure through the ability to manage Dell PowerEdge servers within a single management console that is familiar to Oracle database administrators. This integration includes support for lifecycle management of Dell PowerEdge servers through features such as system discovery, reporting, and configuration; managing server hardware health; cross-platform system event notification; and event-driven policy execution. The PowerEdge 6950 and PowerEdge SC1435 with dual-core, next-generation AMD Opteron processors are priced from \$6,499 and \$1,299 respectively and are now available worldwide.

During the past couple of years, AMD has managed to challenge the perception of being the little guy in the world of x86-based processors. The release of the Opteron brought x86-compatible 64-bit computing to the marketplace long before industry leader Intel deigned to do so. Despite the notable reluctance of many ISVs and systems vendors to give the burgeoning Opteron its due, The Not So Little Processor That Could has managed to force Intel to scurry to market with 64-bit Xeon EMT, IBM to truly embrace the processor within its System x family, and others to take the Opteron seriously. The announcement that Dell has jumped on the Opteron bandwagon illustrates that AMD has done what others thought unlikely and has broken out of the artificial Opteron pigeonhole so many tried to force this chip into. From a technological innovation viewpoint, Dell is one of the most trailing companies in the marketplace. Dell's margin-driven direct sales approach leaves little room for the risk inherent in unproven leading edge technologies; thus the company almost never embraces the latest and greatest, but rather waits until others have worked the kinks out of new technology and then enters the marketplace en masse. This is what we are seeing happen with this announcement.

Dell's decision to embrace Opteron gives customers with an aversion to risk clear guidance that AMD-based servers are safe to deploy. While it is said that no one is ever fired for buying IBM, it is rare that anyone is chastised for spending too much acquiring a Dell solution. With its legions of customers and an important place in the pocketbooks of SMBs, Dell is in a good position to sell AMD-based solutions into these organizations where others may have not been able. Given Opteron's penchant for energy efficiency, Dell can also ride the green bandwagon by promoting its up to 20% reduction in energy consumption while delivering more than double the performance per watt of its past servers. Nevertheless, most SMBs are not in the business of buying technology; rather they are buying solutions to business problems. Any further significant inroads that Opteron will make in this market will be dependent of the availability of business solutions, i.e., ISV software targeted to various

organizations' needs. Although some more pioneering ISVs have been creating 64-bit versions of their applications, the blessing from Dell on Opteron should help more application providers make the choice to take advantage of AMD's 64-bit solution.

Overall, we believe that AMD has successfully overcome the initial marketplace resistance to its 64-bit processor and has made it to the mainstream of server computing. Although this does not spell imminent doom for Intel's position, we believe it does show that the marketplace has spoken loud enough for those who eschew the leading edge for the comfort of tried, tested, and true to step up and embrace Opteron as a viable server solution for masses.

Acopia Promotes Tier Zero Storage

By *Tony Lock*

This week Acopia Networks announced a file virtualization solution that automatically places specified file sets on a pool of high-performance storage devices using its Acopia Adaptive Resource Switches (ARX) intelligent file virtualization system. The storage devices utilized serve file sets at memory speeds to deliver very high performance. Acopia is, among others, tentatively identifying such high-performance storage pools as Tier Zero storage. ARX are typically deployed to front-end file server platforms, more often than not NAS devices, to build a virtualization layer between applications and storage platforms. Acopia's switches employ a patented architecture with dedicated memory and processing resources handling three independent functions: packet processing, virtualization policy, and system management. Each processing plane (data path, control path, and management path) can then support high workloads with little if any impact on other functions and without introducing significant latency. In this way it becomes possible to separate the physical storage infrastructure from a more flexible logical mapping of information resources with ARX switches adding sophisticated data management, data migration, replication, and load-balancing capabilities. Organizations using ARX switches can then administer their file server infrastructure flexibly and cost effectively in line with business driven service level objectives.

In laboratory tests Acopia has used very simple storage to provide the Tier Zero platform. Rather than purchase one of the very high-capacity, very high-speed and high-cost storage platforms now available from specialist suppliers the company created a Tier Zero storage pool using a standard server running dual Intel processors configured with 32GB of memory. Tests using this solution indicate that some applications can have performance increased by up to thirty times versus using an NAS platform to host the files.

Clearly Tier Zero storage will not be appropriate, nor affordable, for every file set but may well suit certain business requirements where very fast access to specific data sets provides real business advantage. Indeed, recent months have witnessed a renaissance of very high-performance storage solutions. This is indicative of both a maturing in storage platforms and, more importantly, organizations beginning to identify areas of business that can utilize storage solutions that supply tiered performance characteristics.

When considering tiered storage it is essential that clearly defined objectives and data sets are identified. Attempting to implement a tiered solution covering the entire storage infrastructure in one step is not a good way to move. "Boil the ocean" projects usually just succeed in creating large, stormy rain clouds from which few benefits are delivered but from which everyone gets very wet. Creating and operating tiered storage systems is now achievable at a technological level with the requisite management tools being available. All that is required is to identify which data sets will benefit from such an approach. This will consume time and resources but it can be very beneficial.

Intel Endorses the Latest Energy Star Spec

By *Clay Ryder*

Intel has announced its support for the U.S. Environmental Protection Agency's (EPA) newly announced ENERGY STAR computer specifications. The company plans to deliver processors, including its new Core2 Duo, and other system components that will help enable PC and laptop suppliers to deliver ENERGY STAR qualified systems when these new specifications go into effect in mid-2007. Intel will work jointly with the EPA to provide energy

efficiency design expertise to smaller system vendors and channel partners to help enable their offerings to meet the specifications. This effort will culminate with publishing a white paper detailing a “recipe” system vendors can follow to ensure their products will qualify under the new specification. The newly published Version 4.0 Tier 1 specification for computers will go into effect on July 20, 2007 and will replace the Version 3.0, Tier 2 specification that has been in effect since July 2000. The new version is intended to continue to differentiate the market for energy-efficient computers and accelerate the market penetration of energy-efficient technologies.

After spending the last few years boggling the minds of the marketplace with ever-increasing price/performance figures, Intel must have grown tired of all that advertising from AMD about energy efficiency. While Intel has been actively involved with ENERGY STAR related matters for more than a decade, recently it has not been a mainstay of the company’s advertising and other messages to the market. Clearly, Intel’s reading of the marketplace tea leaves suggest that now is a good time to talk the green story once again. While AMD has been busy making noise about energy savings, Intel did release the Xeon 5100 series chip a few months back with energy efficiency as one of its main selling points. Although energy prices have backed down somewhat from their recent highs, there are few market-priced economies where energy is inexpensive. Combined with the physical limitations that many data centers are facing with respect to energy and cooling supplies, the market remains ripe for energy efficiency focused discussions.

While servers suck considerable juice, desktops are big consumers as well, especially with the typical utilization rates achieved on this platform. By continuing to invest in reducing power consumption at the desktop and the data centers, organizations win on several fronts. Not only is power consumed by the computer reduced, so are environmental factors such as HVAC, air quality, and ambient noise levels. Additionally, many of the newer and more energy-efficient display technologies are less burdensome on the eyes. Organizations should reap these benefits as they refresh their technology over its lifecycle, and in some cases, the savings might encourage earlier refresh of equipment that may still be functional, but less efficient. If power utilities would embrace power savings programs for computer technologies, like many do with older household appliances, lighting, heating, and cooling equipment, the economic value of ENERGY STAR V 4.0 would be bolstered even further.

Of course, one unintended consequence we must be aware of is that decommissioning of older technology, especially monitors, but motherboards and power supplies as well, must be undertaken in an ecologically friendly fashion. If not, then the energy savings from upgrading will be offset or worse by toxic environmental hazards. While some markets such as California and certain EU countries already mandate responsible disposal of used gear, such is not yet the norm everywhere. Nevertheless, we are pleased to see that Intel has again raised the issue of energy efficiency to the forefront and is poised to work with its partners to help spread the word, but more importantly to assist in making compliance with the new specifications the norm, not the exception.

Itheon Networks Opens U.S. Office

By Tony Lock

Itheon Networks, a networked applications performance monitoring and testing company based in Welwyn Garden City just north of London, has announced that it has opened a new office in Reno, NV to meet strong demand for its performance monitoring and testing tools. The new office will focus on supporting corporate customers and users throughout the Americas. New sales in Itheon Network solutions in 2005–2006 were up by more than 80% over 2004–2005, including wins with several prestigious U.S. organizations in the financial, defense, and hi-tech sectors. The company indicated that the growth in its North American user community, together with the increased demand for affordable Network and Applications Performance Management systems across industry sectors, led the firm to start up direct operations in the U.S.

It is very common for software companies based in the U.S. to expand into Europe, often taking the UK as their EMEA launch point. It is not so often that one hears of a software house reversing the trend, especially one focused in the areas of network applications performance monitoring, testing, and management. Itheon supplies a range of software solutions providing Storage Utility Billing Management and Automated Availability Management, but the company is best known for its Application and Network Performance tools.

At the heart of these offerings are the Itheon Portable Network Consultant (PNC) and Itheon QoS (Quality of Service). PNC is a non-intrusive technology based on a Laptop PC that captures analyses and displays data to provide network profiling information. PNC is connected to any network segment (10/100/1000) and utilizes Itheon's flow-based monitoring software to rapidly deliver key network activity data in organized, easy-to-understand views. Itheon QoS measures, in a non-intrusive fashion, the time taken to be completed by Business Service transactions. The company also supplies Itheon Network Emulator that allows organizations to model conditions likely to be encountered in an application rollout thereby reducing the potential for failure through network service problems when applications are released in production networks.

There is a growing recognition of the need to establish the true level of service that is being experienced by users of live production systems. There is a demand from business users to establish that appropriate levels of service are being delivered to users by their IT service providers, be they Internal IS departments or external suppliers. With more IT systems now being centralized the need has never been greater to ensure that services being delivered over increasingly complex networks are meeting ever tighter quality of service demands.

In addition, it should be recognized that accurate information on application service quality could also play a key role in establishing good systems management. Accurate, timely, and granular service quality information can also help speed the resolution of service problems as they arise and, potentially, before they cause service levels to degrade below acceptable levels. There is no doubt that the use of application availability information and the deployment of good application availability management tools will grow. It will be fascinating to see how quickly Itheon can establish its North American office and to note the reaction of the company's competition, both real and perceived, to the establishment of a European systems management vendor on the continent.