
Market Roundup

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HP Announces Dynamic Smart Cooling

By Clay Ryder

HP has announced a new energy management system and initiatives to help organizations dramatically reduce data center operating costs. The new energy management system, called HP Dynamic Smart Cooling, is designed to deliver 20% to 45% savings in cooling energy costs, and deploys an intelligent control node to continuously adjust air conditioning settings based on realtime air-temperature measurements from a network of sensors deployed on IT racks. Dynamic Smart Cooling actively manages the environment to deliver cooling where it is needed most, enabling operational cost savings to organizations. Dynamic Smart Cooling integrates with HP Thermal Logic, a key component of the HP BladeSystem c-Class architecture, but can also be used with any standard IT equipment rack and incorporates standard interfaces to most air conditioning and building management systems, thus supporting new construction and retrofit projects. HP also announced a 3-Phase Power portfolio which includes a modular three-phase Uninterruptible Power System and 100KVA Power Distribution Rack. When used with HP standard racks, organizations can deploy redundant power grids to support cost-effective, site-level power distribution and remote site monitoring, resulting in significant data center space savings. As further proof of concept, HP indicated that Dynamic Smart Cooling would be adopted by HP's own IT organization for its six new consolidated data centers in the U.S. The company has also formed an internal Smart Data Center design team backed by a \$10+ million annual investment that is focused on lowering TCO through flexible power and cooling management products and services. In addition, the company announced Data Center Solution Builder, a new partner program focused on leading architecture, engineering, equipment, technology, utility, real estate, and service companies to accelerate adoption of energy efficiency solutions for next-generation data centers. HP Dynamic Smart Cooling and the HP 3-Phase Power portfolio are expected to be available worldwide in Q3 2007 with pricing to be released upon availability.

In a word, this is cool, all puns intended. Energy efficiency has been a hot topic for some time and there are many vendors who are actively pitching the greenness or the energy-saving capability of their wares. However, few vendors have taken a holistic approach to addressing the needs of energy consumption and its impact on Data Center operations. In this announcement, we see not just a focus on reducing the energy consumption of discrete pieces of the IT puzzle but rather a quest in making the data center as a whole more energy-efficient. From our perspective, HP has wisely focused on matching the actual power consumed by cooling to that needed by the servers; no more, no less. This is in sharp contrast to the worst-case scenario approach to cooling historically taken by most data centers that has focused on supplying sufficient cooling to overcome the maximum-rated power consumption of IT hardware. As we know that servers do not operate at 100% capacity, it is silly (and wasteful) to have cooling assume a 100% utilization scenario. Hence, there is a need to take a cue from the consolidation and virtualization lessons we have learned about servers and apply this to power being spent generating underutilized cool air that could be reclaimed along with reduced power costs without affecting the operations of the data center.

Although there have been laboratory prototypes for managing that energy within Data Centers, their productionization has largely been stymied by the high expense of the sensors and related wiring needed. In addition, the lack of an integrated and standardized solution for interconnection with HVAC and other facilities resources have limited past initiatives. In this announcement, we see a holistic approach that proffers an integrated

approach to the heat-sensing network and the HVAC equipment within the data center. While this is not yet the reality, it is clearly movement in the right direction. In the future, we would expect to see server and storage racks with integrated sensor systems and standardized wireless, or wired, connections into the HVAC being managed by simple to use, but highly complex management and control software.

Given that this is a leading-edge, if not ivory tower mindset toward an issue that is of growing importance, but not the leading issue in the minds of many data centers managers, we expect HP will initially target very large data centers that would be able to illustrate very tangible savings in the power consumption in the short term. Once such an approach is successfully piloted, we would then expect to see much of this monitoring capability begin to make its way into products geared toward the smaller data centers. As part of the move towards the broader market, sensors and the related infrastructure would become just an expected component of a rack or blade system. Although this would represent initially a higher cost, volume would help drive it down over time, but more importantly the cost to customer could be assuaged through proper financing on HP's part. Rather than selling the improved rack for an incremental cost, it could instead share the risk and reward with the customer by instead receiving payment as a percentage of the power savings accrued to the customer. This would effectively remove the incremental cost of the rack from the equation and provide a financing mechanism for the purchase of the equipment in the first place.

While it will be some months before these products will achieve general availability, the demonstrations given by the firm and the fact it's putting its own future IT needs squarely behind Dynamic Smart Cooling, we do not doubt the long-term focus of this offering. Just as efficiency gurus have noted that virtualization and consolidation can increase the efficiency of servers and storage networks within the Data Center, so too can savings be had by closely aligning power consumption, heat generation, cooling, and physical space inside the data center. We are pleased to see that HP values this as a strategic differentiator and is clearly doing its best to lead the marketplace in discussions of power efficiency. We will watch with much interest to see how the market accepts these latest solutions from HP and how the competition will respond in what appears to be a growing opportunity in the IT marketplace.

Cisco's Pay-as-You-Grow SAN Switch

By *Tony Lock*

Cisco has released details of the MDS 9124 Multilayer Fabric Switch. In addition to sophisticated capabilities such as VSANs (virtual storage area networks), advanced security features, and high availability as delivered by the Cisco SAN operating system software, the new switch will offer on-demand ports that can be switched on using a "pay as you grow" model. Initial SAN setup and its ongoing management have been simplified with the inclusion of a straightforward wizard to reduce the burden of routine administrative tasks. The MDS 9124 supplies high performance and excellent resilience with its inter-switch link capabilities, has a small footprint, and provides an entry price making it potentially attractive not only to enterprises but also to SMB organizations, departmental SANs, and core-edge enterprise SAN solutions. The switch will provide up to twenty-four 4GBps Fibre Channel ports in a single rack unit form factor. The system will be sold in eight-, sixteen-, or twenty-four-port configurations and customers will be able to switch on ports as required using a port-activation license. Cisco has stated that the MDS 9124 will be feature compatible with all Cisco MDS Multilayer directors and switches to ensure a high degree of investment protection. The new switch is scheduled to be made generally available from December 2006 via Cisco's original storage manufacturer (OSM) partners, including Dell, EMC, HDS, HP, IBM, Network Appliance, Sun Microsystems, and Xitech.

The development of this switch coupled with Cisco's adoption of the pay-per-port model marks an interesting development in the growing maturity of storage area networks. The MDS 9124 will offer customers looking for a small SAN entry switch a very strong candidate to consider. The switch comes with all the features and functionality that we have come to expect from enterprise class offerings yet is targeted at those with smaller SAN requirements in mind. Equally, supplying a simple wizard to assist the installation process should allow customers, and their storage suppliers, to spend more time considering the use and daily operation of the SAN

than in just getting it up and running. Simplicity of installation will be valued by large and small organizations alike, never mind anyone charged with delivering installation services.

It will be fascinating to note how Cisco's many OSM partners take the MDS 9124 to market and to note how, if at all, they attempt to customize its positioning to fit their own target markets. Of even greater interest will be just how the remaining SAN switch suppliers react. In particular the response of Brocade/McData will be closely analyzed as the strong entry of Cisco into this market sector has the potential to stir up a sector in which Brocade has enjoyed strong brand recognition.

IBM Acquires Vallent Corporation

By Joyce Tompsett Becknell

This week IBM announced that it planned to acquire Vallent Corporation, a privately-held U.S. company that provides network performance monitoring and service management software for wireless service providers. Vallent's software lets service providers manage their network infrastructure performance by monitoring and reporting problem areas such as dropped calls and traffic bottlenecks. It also helps operators improve the quality of wireless service and identify network problems before they affect the customer experience. IBM believes that the combination of Vallent's software with IBM's management capabilities will allow service providers to deliver and manage end-to-end high-quality services across wire line, wireless, IP, and converged fixed/mobile network infrastructures. The product will be added to IBM's Tivoli software Netcool portfolio to create a broad set of service assurance capabilities, including fault, network performance, and service quality management over various technologies and third-party equipment and applications. IBM acquired the Netcool assets in February of 2006 when it purchased Micromuse.

When IBM acquired Micromuse earlier this year, it inherited the Netcool capabilities to manage wireless infrastructure and IP-based services. While this added to IBM's capabilities, there was still some concern that IBM was not fully committed to the service provider network, particularly on the wireless side. Vallent provides the ability to manage wireless radio access networks, which should be a good fit with the Netcool products. Vallent can also address a broader set of service management issues, according to IBM, from handsets and base stations to IP application servers. IBM believes that these newly acquired capabilities should give service providers the confidence that IBM is fully committed to them and their markets.

We've noted before that IBM is one of the vendors keen to be a leader in the management space. Leadership in management clearly extends beyond the classic enterprise data center infrastructure to commercial data center infrastructure that service providers are building out for their clients. In this space wireless is one of the strategic plays that demands competence and robust services beyond those required of the traditional corporate data center. Integrating Vallent will provide IBM with those capabilities, and Vallent brings a range of international clients that will boost IBM's portfolio. Current Vallent customers stand to win as they inherit the IBM's deep capabilities across technologies and prospective clients will now be able to consider IBM and Tivoli in their list of prospective vendors.

Broadcom Acquires LVL7

By Susan Dietz

Broadcom has announced its decision to acquire LVL7, a company that develops networking software enabling original-equipment manufacturers and original-design manufacturers to network their systems to facilitate smoother communication in the quest to reduce development timelines and costs. The stated goal is that of enhancing Broadcom's current customer platforms to take advantage of LANs and VoIP so as to bolster their ability to reach new markets without having to switch platforms. Broadcom expects to buy outstanding shares of capital stock and vested stock options of LVL7 and liquidate outstanding LVL7 debt at a cost of approximately \$62 million in cash. The closing is expected to occur some time in Broadcom's fourth quarter. An undisclosed portion of the cash payable to the stockholders will be placed into escrow, per the agreement terms.

Complete solutions are generally attractive. The less a company, especially an SMB, has to piecemeal a system together, the less they can pay in IT costs, which implies more retained profits. Faster go-to-market time gives a company a competitive edge, too, and in the world of SMBs, even the smallest edge can mean the difference. Traditionally, most major vendors that catered to SMBs have looked to the channel to put together a workable package. With the Broadcom acquisition of LVL7, SMBs may find that they now have more options for the solutions that they are seeking. Cisco, for example, while not ignoring the many SMBs out there, has usually concentrated its total solutions packages at the larger enterprise. Due to the SMB focus, LVL7's FASTPATH software systems are especially attractive to Broadcom and as Broadcom and LVL7 have been partners for several years, this acquisition should offer a relatively smooth integration of systems. With the LVL7 acquisition, Broadcom may find ways to increase choices that are targeted at SMBs, which is consistent with the sea shift in the way IT vendors have come to approach the SMB opportunity.

With the enterprise market pretty much saturated by the enterprise IT companies, many of the smaller IT companies have been turning their sights to their fellow SMB customers as a potential market. Traditionally, most SMBs had to wait for the trickle-down effect. New products were marketed to the enterprise companies, then after a suitable trial length of time, the SMBs would have access to scaled-down, more affordable, but not always well tailored to the need, technology. However, the Broadcom and LVL7 merger seems to be based on the notion that SMBs are a market to be catered to in their own right by offering a complete out-of-the-box solutions developed for a smaller company from the start. We believe that the complete solution now on offer by Broadcom is the right approach for the company and we will wait to see how successful they are in growing their SMB focus through the LVL7 acquisition.