Market Roundup

September 7, 2007

EMC Avamar Becomes Physical and Virtual

JDSU's Covert Product New Approach to Authentication

HP Releases New Quad-Core Intel Servers

AT&T Lets Parents Control Kids' Phones

:sageza:

EMC Avamar Becomes Physical and Virtual

By Clay Ryder

EMC Corporation has announced the EMC Avamar Virtual Edition for VMware Infrastructure and the EMC Avamar Data Store (ADS). EMC Avamar Virtual Edition for VMware Infrastructure combines de-duplication gains with the server and storage efficiencies of VMware's Virtual Infrastructure and allows organizations to deploy Avamar within the virtual infrastructure and eliminate the need for dedicated backup server infrastructure. Complementing the recent integration of Avamar software with VMware Consolidated Backup (VCB), Avamar Virtual Edition enables customers to deploy Avamar's de-duplication technology easily on VMware ESX Server hosts. The solution's target markets of small/remote offices or small datacenters can achieve combined backup and recovery with replication to deliver both recovery methods within a shared virtual infrastructure and allow organizations to eliminating shipping backup tapes from site to site. This is accomplished by replicating data between Avamar virtual machines, or from Avamar virtual machines to the new ADS, or to standard Avamar servers. Avamar Virtual Edition supports all VMware backup modes—Guest, ESX Service Console, and VCB—and supports up to 1TB of de-duplicated backup capacity, which is roughly equivalent to 37TB of traditional backup storage given common backup procedures, while leveraging the VMware shared server and storage infrastructure. EMC Avamar Virtual Edition for VMware Infrastructure will be available in November 2007 from EMC and its authorized resellers.

EMC Avamar Data Store is a complete, packaged solution comprised of Avamar data de-duplication backup and recovery software running on pre-configured EMC-certified hardware. There are two models, scalable multi-node and single-node. The multi-node ADS is designed for datacenter deployment where backup data is being consolidated from multiple remote locations or to protect VMware environments and LAN-attached servers. The single-node model targets deployments in distributed or remote offices that require faster, local recovery performance. In addition, both models support replication, either from the remote office to the datacenter for consolidation, or between datacenters for disaster recovery purposes. EMC Avamar Data Store is immediately available from EMC and its authorized resellers.

We are intrigued by the holistic approach EMC has taken with the ADS. By combining software and hardware elements to create a standalone solution EMC has taken a unique approach to simplify the task of providing backups for remote locations while ensuring this functionality can easily become part of any network storage environment with the additional benefit of significantly reducing the impact on network traffic. With ADS, organizations are not required to develop in-house or purchase from outside the integration alacrity typically needed to deploy a comprehensive data protection solution effectively. Through its integrated approach, the ADS system can be installed on the existing network and organizations can benefit from Avamar's ability to de-duplicate file backups at the source, and extend the organization's current investment in backup resources to meet the growing demand for storage and associated maintenance within the enterprise. For organizations with multiple remote sites, we believe the ADS is well positioned to help consolidate, streamline, and raise the overall efficiency of backup while significantly reducing the ongoing cost to support such backups.

Avamar Virtual Edition for VMware to our way of thinking is especially well positioned to meet the often stealth challenge of efficiency of providing backup servers and data stores in virtualized environments. As organizations

hone their skills in consolidating larger numbers of virtual servers onto a physical server, being able to affect a backup regimen that accurately backs up only a single physical instance of multiple virtual files with the same content is a facet of IT operations that will only continue to increase in importance and value. This bodes well for higher consolidation ratios overall. In addition, since the Avamar software resides within the same virtual environment, there is minimal disruption to the existing infrastructure and the backup contents can be easily replicated an external ADS. Providing client side backup capability also helps to ensure further efficiency gains as the multiple client backup streams that are inevitable are enhanced by data de-duplication, which can significantly reduce the number of client-side files backed up in virtualized environments. Further, organizations with remote sites may find the ability to replicate as well as backup a welcome ability, especially within the virtualized context.

Overall, this is another example of how 1 + 1 = 3. EMC's acquisition of Avamar has proven fortuitous as it provided a valuable mechanism to help reduce the amount of network traffic organizations face as ever-increasing amounts of data are being stored on network volumes by an ever-increasing number of users. This achievement is noteworthy in and of itself; however, this latest announcement illustrates how EMC is not simply adding incremental value to its solutions, but rather is taking the opportunity to create new value through clever leverage of its growing cache of technological gems.

JDSU's Covert Product New Approach to Authentication

By Lawrence D. Dietz

JDSU has announced the release of a new weapon in the fight against counterfeiters with the introduction of its latest security solution for document authentication and brand protection. The new product is called Charms, which refers to printable microstructured taggants—miniscule particles two to three times the size of a red blood cell—that can be customized with a customer's logo or graphics and then added to printing ink for documents, labels, or packaging. It is the first covert product of this nature that is useable in standard printing ink, and the first solution able to offer very high-resolution graphics on micro-flakes in this particle size range. The easily verified presence of marked micro-flakes on non-counterfeit material provides an additional and unique factor for authentication. Because they are invisible to the naked eye, Charms can easily be added to documents, packaging, or product without affecting any of the visual aspects of the graphic design.

Charms are already on track for adoption by several large brand owners in 2007. In addition, JDSU's Charms solution has had a successful pre-release deployment on more than 100 million electronic products. JDSU security pigments are currently used on more than ninety different currencies, as well as on many pharmaceutical and other products. With Charms, non-experts now have a quick and reliable way to distinguish counterfeit from genuine product. Product authentication with Charms is a simple visual confirmation of graphics, size, shape, color, and texture that requires only minimal training. Charms also include specific attributes that allow forensic use when required. The Charms feature can be applied with a standard printing press, and a single low-cost, portable microscope works for authentication across different documents, products, and/or brands, which is crucial for investigators, customs, and law enforcement. Configuration of specific marks may be made at various levels, providing distinction by brand, product, region, manufacturer, or converter. Other benefits include that it is usable in combination with an overt solution, mixed in JDSU's color-shifting ink, or as a stand-alone covert solution. It can be added "just in case," and verified only when and where required. Protection does not require a minimum for sampling volume, as is the case with serialization, and the low per-unit cost enables effective protection of extremely high-volume, fast-moving consumer goods.

It would seem that JDSU's product is intended where users want to brand or authenticate large quantities of valuable products or documents. The genesis behind the product may be the growth of the global market and the tendency for criminals of various types seeking to reap the benefits of more successful brands. Dispersed manufacturing and the intrinsic worth of some small yet valuable components can also provide demand drivers for this type of product.

JDSU may also find itself the unwanted beneficiary of privacy advocates who have scrutinized other technologies such as RFID for their applicability in tracing goods, documents, or people. Notwithstanding the concerns of privacy advocates, there will undoubtedly be an even greater call for authentication products in the future, and security issues, along with the need for positive identification of goods or documents, will mature over time.

Physical authentication measures such as Charms may be employed for inventory and security applications for myriad products where authenticity is critical. A solution such as Charms can also address the emerging need to differentiate among different sets of products. For example, pharmaceutical companies may be induced to provide medications at low cost to economically deprived nations, yet they would not want these same medications to be available in other parts of the world. While the market for microstructured taggants may be nascent at the moment, we believe there are global forces at play which are likely to stimulate the use of this technology in unforeseen ways.

HP Releases New Quad-Core Intel Servers

By Clay Ryder

HP has released new servers based on the new Quad-Core Intel Xeon 7300 processor series, targeted at customers running data-intensive business applications such as databases, business intelligence, ERP, and large mail and messaging platforms in virtualized environments. The rack-based HP ProLiant DL580 G5 is a four-processor server designed for virtualization and mission-critical datacenter deployments. The processor performance and large memory capacity of the DL580 G5 seeks to help improve staff productivity through fewer, yet more powerful, servers to manage with better-performing applications. The DL580 G5 also has double the memory capacity of its predecessor. The HP ProLiant BL680c G5 is HP's first four-processor quad-core server blade, is designed for performance with up to four Intel 7300 series processors, and has a large memory capacity for data-intensive applications. To assist organizations in meeting their virtualization and power-efficiency goals, both servers include a pair of management software tools. HP Insight Power Manager enables customers to cap power at specific wattages to increase the number of servers in racks or blade chassis while keeping power consumption in check, and HP ProLiant Essentials Virtual Machine Management Pack provides central management and control of both physical server resources and virtual machines, eliminating the need for separate management consoles.

HP also announced a joint commitment with Microsoft to define a data warehouse reference platform with the upcoming Microsoft SQL Server 2008 based on the ProLiant DL580 G5 with HP StorageWorks 50 Modular Smart Arrays. The platform is designed to help businesses mitigate risk and deploy their SQL Server 2008 data warehousing solutions with confidence and predictable results. The quad-core HP servers are currently available. Pricing for the DL580 G5 starts at $9,219 and the BL680c G5 at $9,669.

With all the focus on multi core processors and Intel's announced product path for its Xeon processors, it was only a matter of time before we saw the first quad-core chips hit the streets.

Multiple CPUs with multiple cores offer a fundamentally different building block for server design, and we are happy to see that HP continues to recognize this. These CPUs are well suited for tasks that are very computationally demanding such as databases, business analytics, etc., especially when the underlying applications have been optimized for multithreaded architectures. But these CPUs are also very adept at supporting consolidated workloads in virtualized environments. When matched with the correct software development architecture, multicore CPUs can deliver throughputs in sub $10,000 solutions unimaginable even just a couple of years ago. When delivered as part of rack-based, or even better, blade-based solutions, such CPUs can significantly reduce the floor space, power consumption, and complexity inherent in the datacenter. However, ensuring that these savings are achieved requires more than just delivering the CPU on any motherboard; it requires a holistic, systematic approach to efficiency not only in supporting hardware, but in software as well. This is another example of HP's broader systems focus.

HP Insight Power Manager plays an important role in helping organizations achieve energy goals with these latest quad-core systems. In some cases, the issue is less about the absolute maximum system throughput than about ensuring that power consumption remains within a given envelope. For organizations that face power availability constraints in the datacenter, setting adjustable caps can aid in overall energy consumption, and indirectly benefit workload scheduling. When the resource cost and availability is factored into the service delivery equation, line-of-business personnel may find their expectations altered if they are to experience resource limitations first hand. This is not necessarily a monetary issue, but an overall resource prioritization issue. Accepting alternative service levels and workload flexibility in return for overall greater service may prove a sufficient balm to entice line of

business managers to accept consolidated and shared resources and the option to reconsider and reprioritize what constitutes their most critical workloads.

The combination of multi-process, multicore, and virtualization for many spells complexity, confusion, and headache. With the HP ProLiant Essentials Virtual Machine Management Pack organizations should be able to overcome much of this complexity and take greater advantage of what virtualization has to offer. As the scale of consolidation efforts continue to grow, in large part due to ever more powerful servers, it is essential that organizations have the management and resource planning tools to enable IT professionals to maximize the cost-effectiveness of both their physical server resources and virtual machines. Consolidating a few workloads onto a couple of virtual machines on a single processor system is relatively straightforward matter, However, the capabilities of DL580 and BL680c scale far beyond this simple scenario, hence the importance of the Virtual Machine Management Pack should not be underestimated.

Overall, we view these announcements as further evidence of HP's desire to remain a leading innovator in x86-based servers. From a sheer processing perspective, all of these systems offer considerable bang for the buck; however, the greater value we see in these solutions is not simply in their computational ability, but rather in the holistic approach to processor, hardware platform architecture, and software management of the resources. To the end customer, the value is in the total solution, not just in the processor. We believe HP has understood this reality for some time, and these quad-core offerings are just another example of the value that ongoing innovation helps unlock not only in its products, but in the operations of the customers who buy them.

AT&T Lets Parents Control Kids' Phones

By Lawrence D. Dietz

AT&T Inc. has announced a new Web-based feature, Smart Limits for Wireless, that allows parents to stay in touch with their children while controlling the children's mobile phone use. The service allows a parent to set usage limits on a child's talk time, text messages, instant messages, and downloads; manage how and when a child can communicate; restrict access to mobile Web sites; and allocate minutes among users of shared wireless plans. Smart Limits for Wireless also allows parents to block numbers they deem inappropriate and filter access to Web content inappropriate for children. Parents can change the limits at any time through an online interface. Calls and text messages to and from numbers designated as "allowed numbers" and calls to 911 are permitted regardless of restrictions.

When children near the established usage limit for any of their wireless capabilities (minutes, text/IM, or downloads), they receive a warning notice. Once a limit is reached, the service is restricted. Results of a recent AT&T survey revealed that 84% of adult consumers believe parental controls and safety tools are extremely or very important in keeping children safe while they use today's entertainment and communications technologies, but that nearly one-third (31%) of those adults do not feel that they have adequate knowledge of how to use those tools to protect children from today's threats. Smart Limits for Wireless is available for $4.99 per month for each line for customers who subscribe to a new or existing postpaid rate plan. No special handset is required.

As mobile phones proliferate faster than Barbie Dolls and Tonka trucks did back in the day, it's clear that parents do want to exert some level of control over their children's mobile communications. AT&T's thinking is that by collaborating with children to set sensible limits for using a wireless phone, parents can help their children learn how to manage calling and messaging habits and work within a budget. We agree, sensible limits can indeed help parents and children to benefit from omnipresent mobile communications. We suspect that many a parent has had a very unpleasant surprise when a larger-than-anticipated mobile phone bill appears in the mail. Consequently we believe this is overall a very positive and sensible set of capabilities. However, while we applaud the notion of parents being able to block communications from numbers or callers they feel are objectionable, we wonder how the parent would know the numbers to block in the first place or how parents will be able to keep track of the offending sources given the frantic pace of teenage communications and energy spent in trying to outwit parental units.

This type of service is one well suited for the consumer market, but we believe it foreshadows an even bigger possibility: the use of similar services by commercial enterprises and governments who provide their employees

with mobile phones. Employer behavior control may resurface via communications control. At one point organizations wanted to block access to computers by outside sales people between the hours of 9 to 5 under the assumption that sales people ought to be with customers and selling during these hours. It will be interesting to see whether other mobile service providers decide to offer the same or similar services, and whether or when the services begin to extend beyond the consumer market .