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# Market Roundup

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## Sun Announces UltraSPARC T2

By *Clay Ryder*

Sun has announced the UltraSPARC T2, which it has dubbed the world's fastest commodity microprocessor. Formerly known as the "Niagara 2" project, the UltraSPARC T2 processor features eight cores and eight threads per core; dual, virtualizable, multithreaded 10 Gbps Ethernet ports with built-in packet classification; eight cryptographic acceleration units; eight floating point units; eight lanes of PCI Express I/O; quad memory controllers that deliver > 50 Gbps memory access; and up to sixty-four logical domains. With each thread capable of running its own operating system, the chip delivers a 64-way system on a single chip. The UltraSPARC T2 is the first processor to integrate multiple systems—virtualization, processing, networking, security, floating point units, and accelerated memory access—onto a single piece of silicon. As a general-purpose processor, the UltraSPARC T2 also provides support for the massively threaded, open source Solaris operating system and other realtime operating systems, as well as future versions of Ubuntu Linux. In addition, the new processor features Sun's CoolThreads chip multithreading while drawing fewer than two watts per thread. Sun plans to release source code for the UltraSPARC T2 processor to the OpenSPARC community and the UltraSPARC T2 processor design to the open source community through the GPL license. The UltraSPARC T2 processor will be available in production quantities this quarter, with prices starting below \$1,000, and licensing options for derivative works.

This announcement is important for a few reasons, perhaps the least of which is that this is Sun's latest and greatest processor. From a purely technical perspective, the T2 offers many substantial advances that will likely only grow in importance over time. The multicore, multithreaded reality of this processor is a harbinger of the future of software, especially in high-performance environments. As the industry has learned, simply ramping up the clock rate of processors does not lead to efficiency, especially with respect to power consumption and heat dissipation. Although we are beginning to see tacit recognition of this fact at the hardware level as dual-core and quad-core processors are becoming increasingly common, most software is still of the single-threaded mold, and fails to take advantage of this new architectural approach. But as the reality of physics, power, and thermal dynamics settles in, we expect that industry will have no choice but to move in the same direction as the T2.

We are also intrigued by the number of formerly discreet external components/capabilities that are offered on the die with the T2. The native support for PCI Express as well as onboard cryptographic capabilities and other enhancements are well positioned to not only reduce the cost of systems built around the processor, but also to offer attractive performance for encryption-oriented workloads. Given all the fuss about compliance, and inadvertent disclosure of information and whatnot, having onboard cryptography that operates without massively slowing down performance lends credence to the concept of encrypting everything all the time. While an extreme approach to securing information, for some organizations, the ability to do so without the expenditure on additional off-board hardware or bearing intolerable delays with software-based solutions is an ability that we believe will be well received.

While Sun undoubtedly wants to position the T2 as a commodity chip, in the sense of the Athlon or Xeon, this notion at present requires the reader to take it with a grain of salt. However, in the future view, the direction presented by Sun in the T2 may become more mainstream than we might expect. Sun states that it believes that the UltraSPARC T2 processor makes possible a new breed of compact, power-efficient, highly integrated devices such as routers, switches, network devices, medical imaging, industrial printing, etc. From a technical perspective, this would seem quite true; from a market penetration perspective, the Copernican Company has its work cut out. Nevertheless, as the future-thinker that it is, Sun may well be able to pull off some of this. The T2 is another example of Sun's out-of-the-box, perhaps a bit off-the-beaten-path, approach to the marketplace. As history has shown, this approach is often the one that delivers the best ROI for Sun, and in the process its customers.

## IBM Princeton Acquisition Serves Notice to Symantec and EMC

By *Lawrence D. Dietz*

IBM announced this week it has entered into an agreement to acquire Princeton Softech Inc., a privately held company based in Princeton, New Jersey, that provides data archiving, test data management, data privacy, and data classification and discovery software. Financial details were not disclosed. This acquisition furthers IBM's cross-company Information on Demand business initiative, enabling customers to address their escalating information management challenges and improve database performance by segregating historical data from current data and storing it securely and cost-effectively. Princeton Softech's test data management solutions also help customers protect data privacy and contain costs by creating test databases where sensitive data can be masked and protected. Princeton Softech has approximately 240 employees and more than 2,200 client companies. IBM plans to integrate Princeton Softech's product offerings into IBM's Software Group as part of its Information Management Software division. The addition of Princeton Softech's technology will expand IBM's capabilities in the area of Enterprise Data Governance, in particular boosting IBM's ability to offer clients integrated data classification, archiving, and test data management and data privacy solutions across heterogeneous application and database environments. IBM's strategy is focused on providing customers with the data they need when they need it in order to quickly respond to market needs, rapidly identify new business opportunities, efficiently ensure data governance, and improve business results. The acquisition is subject to regulatory approvals and is anticipated to close later in 2007.

Many organizations are finding that storage management is now or will soon represent greater than 50% of their annual IT budget. Companies grappling with government mandates and business demands are striving to capture and integrate information in a more seamless, realtime fashion across their enterprises. IBM's Information on Demand approach combines industry-specific expertise with advanced software, open standards and storage technology—integrated via a services oriented architecture—to manage, secure and deliver information as a service to solve business challenges.

Large organizations are constantly wrestling with the critical issues associated with increased amounts of Electronically Stored Information. On one hand organizations rightly want to minimize their expenses associated with this storage, and on the other they recognize that scrimping on technology in this area may come back to bite them with governance, compliance, and litigation exposure and expense. The notion of integrating data classification, archiving and data privacy is particularly sound because the concept recognizes that all of these key elements belong together.

However, the elephant in the living room behind this announcement is Professional Services. Organizations are loathe to attack the issues of data classification on their own, and some fail to realize that this mighty chore is the heart of any data privacy, data protection, and governance effort. While we do not track figures on the split of product versus services revenue in large deals, and some pundits have stated that the services piece is often as much as 90% of the total project, we know that the services piece serves as the glue to put the whole thing together. Through this announcement IBM has recognized not only the pieces of the puzzle, but can help their clients put those pieces together by offering the services needed to effectively meld them together along with creating or adjusting the policies and procedures required to keep the organization operating smoothly. The combination of data classification, archiving and data privacy products and services should help IBM's clients to employ effective governance to include protecting personally private data and valuable intellectual property.

## IBM Information Server Blade Unveiled

By *Clay Ryder*

IBM has announced an integrated, blade server-based data virtualization offering designed for companies that are seeking to gain more intelligence from massive volumes of complex information spread across businesses of all sizes. The new IBM Information Server Blade is an integrated offering comprised of IBM blade hardware, the IBM Information Server data integration software platform, and implementation services including financing. The solution targets data integration projects including consolidations, mergers and acquisitions, business intelligence or data warehousing. IBM Information Server Blade leverages grid computing with the flexibility of blade computing and virtualization technologies to access and translate large quantities of information stored across an enterprise. The system deploys the Red Hat Linux OS and is housed on IBM BladeCenter HS21 servers with Dual-Core Intel Xeon processors. To ease management and enhance grid and virtualization capabilities, the Information Server Blade features IBM Systems Director to a centralized dashboard to discover and manage all workloads as well as physical and virtual machines within the pooled environment. It also offers integrated grid management with Tivoli Workload Scheduler LoadLeveler, which provides high workload throughput and efficient utilization of resources within grid clusters, so workloads can be easily managed across blades. As more processing power is needed, additional blades can be snapped into a grid and Tivoli Workload Scheduler LoadLeveler can coordinate workload dispatching accordingly. IBM's Information Server Blade will be available worldwide from IBM and IBM Business Partners in October 2007. IBM Global Financing also announced the IBM BladeCenter Flexible Choice offering through which a BladeCenter chassis can be leased for up to 60 months, and individual blades that are regularly updated or replaced with new technology can be leased for a shorter period: 24 to 36 months.

Blades continue to be a fascinating study in market development and user deployment. Today the notion that the blade server is a one-trick pony is as quaint as carbon paper. Some vendors have even gone so far as to state that their entire future product roadmap is based upon blades. IBM has continued to redefine the notion of the blade server throughout its relatively brief lifespan and this offering is a further honing of direction that focuses on purpose-built blade solutions. General purpose, or roll-your-own blade solutions have considerable value, just like their rack and tower counterparts, but in an era where organizations are more interested in solutions than technology, this focused approach is well positioned to meet a growing need. Considering that ongoing management tends to represent the most significant overall cost of any solution, the inclusion of the Tivoli technology should be well received by IT professionals who want to take advantage of grid-like environments, but do not wish to manually define and operate them. At the same time, the Linux basis of this solution should permit additional workloads to be migrated to the platform as organizations seek to further integrate their IT environment onto this bladed solution. Overall, we see this offering from IBM as not an end point, but rather a harbinger of what we expect to be an increasingly common product direction of purpose specific bladed solutions.

## SekChek Encryption Offering Elevates Value and Security

By *Lawrence D. Dietz*

SekChek Information Protection Services, providers of automated computer security assessments, has announced that it is now offering Transport Layer Security encryption to all its clients. TLS ensures privacy of email content by encrypting emails on a server-to-server (domain to domain) basis. SekChek supplies system security assessment services for IT departments, auditors, and compliance and corporate-governance practices. SekChek extracts security control settings from an enterprise's host operating system, providing a complete review of security effectiveness compared with international "leading practices." It also benchmarks the results against a database of statistical averages, compiled from ten years' worth of sanitized computer reviews in ninety-five countries, across twenty-two industries. SekChek helps companies quickly determine how their security controls stack up against similar industry deployments, helping to ensure an organization's computer security is in line with policy and regulation.

For transmitting client-scanned data, SekChek already employs industry-standard encryption techniques and offers the Secure/Multipurpose Internet Mail Extensions methodology, which is based on a Public Key

Infrastructure. SekChek's implementation of PKI effectively secures data with three layers of encryption, including an outer layer that uses a 4096-bit public key combined with the industry standard RSA and 3DES encryption algorithms. The addition of TLS provides SekChek clients with added security on a mail server-to-mail server level, reinforcing the privacy of transferred data as well as email correspondence. A TLS-configured email server means the entire email is encrypted during transmission, providing a fourth layer of data encryption. TLS is supported by most operating systems and Web servers, including Windows, UNIX (all variants), Novell/Netware, IBM Systems, Apache (version 1.3 and later), and Netscape Enterprise Server.

This announcement is notable first of all because it has encryption as a lead and it seems that SekChek has recognized what we have long believed, which is that a part of the market will be delighted to pay a premium price if they believe they are getting a premium service. Security can be positioned as an add-on, one that provides considerable value-add. Another interesting aspect of this announcement is the distinct international flavor. The ability to measure one's efforts against peers in the same industry can be an important yardstick and sanity check. It can offer objective evidence as to whether or not your program is at least as robust as your competition and it can provide indirect guidance on what may be construed as due diligence. In the era of globalization this kind of international data is likely to become the standard rather than the exception.

We believe that following SekChek's lead by offering security services on a menu-based approach whereby customers can pick and chose their level of security will allow vendors to benefit by increased revenue. It is also interesting to note that SekChek's home country appears to be South Africa and they have established their U.S. foothold in North Carolina, one of the more cost-effective high locations. Like Thawte, a highly innovative South African company ultimately sold to VeriSign, it would seem that SekChek has applied a common sense approach to addressing customer problems.

## New HP Linux Offerings

*By Clay Ryder*

HP made several announcements this week at LinuxWorld 2007. The company announced the release of the HP-developed Parallel Compositing Library visualization software into the open source community. HP stated its Parallel Compositing Library addresses the demand for Linux and open source in high-performance computing for organizations with complex computational needs but also require solid performance with balanced cost considerations. Customer references included The University of Texas MD Anderson Cancer Center and Partners HealthCare who are using these technologies to help accelerate drug discovery as well as MD Anderson who has invested in creating the largest dedicated oncology research system in the United States that investigates new techniques in bioinformatics, epidemiology, and radiation treatment modeling. HP also announced the addition of Xen and guest operating system support for Debian to the HP Partner Virtualization Program that enables ISVs to build and verify applications in a secure, virtualized environment. Through the program, partners will have access to HP's entire server portfolio using HP Integrity, ProLiant and BladeSystem platforms running a broad range of operating systems and virtual machines. In addition, HP also announced the expansion of its Pay-Per-Use flexible pricing structure for Linux running on HP Integrity servers, whereby computing capacity is readily available to customers, who are then billed for only what they use. The addition of Linux completes the PPU offering across all operating systems on the HP Integrity platform, including HP-UX, Windows, and OpenVMS.

It's not surprising to hear the major vendors touting their Linux wares this week; after all, LinuxWorld is taking place. For many this might be a time to simply wear the Linux badge as loudly as possible, and while HP (and everyone else) is doing this, there is some new and interesting meat in these announcements. We have long argued that certain technologies must be priceless in order to succeed. This implies that they must be ubiquitous and accessible at very low or zero price points. Visualization libraries are an example of what until very recently have remained a high value-added technology, and their value remains considerable. However, as with other key technologies, their value is approaching a priceless level in many cases. Considering the number of applications that could now deploy advanced visualization to render information, at some point the ability easily do so in a consistent fashion becomes paramount. We believe this announcement is HP's implicit recognition that these technologies are ripe to become a given in any HPC environment.

The addition of XEN and Debian to the Partner Virtualization Program is also important is that it reflects the traction these technologies are finding in the marketplace, even if they may seem out of the mainstream to some. Given the value organizations are deriving from virtualization in general, it is not unexpected that alternative platforms would be in the demand especially for specific workloads. Organizations with such workloads will likely appreciate the broadened engagement from HP with corresponding ISVs, and we expect just as with all matters related to platforms, support from ISVs is a critical factor in the long-term success of any platform. Overall, we find these announcements to be another example of the continued support for Linux emanating from HP, and look forward to see these and other Linux and Open Source related initiatives continue to help drive the value proposition of the Linux platform overall.