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IBM Power Systems Announcement Overview

Unification Power = i + p

IBM announced two high-end Power Systems models -- the world's fastest UNIX® server and a unique water-cooled supercomputer. The new systems offer sophisticated IBM virtualization technology and energy-saving capabilities to help dramatically reduce bottom-line operating costs, such as those for energy, floor space and systems management, while improving system performance, helping clients transition to a new enterprise data center.

Beginning today, clients will be able to leverage the world's most powerful microprocessor, POWER6™ -- with new world-record speeds of up to 5 GHz -- in these new systems, leading to significant performance improvements across a wide array of applications.

The new UNIX enterprise server, the Power™ 595, designed to extend IBM's leadership in the UNIX market, will be attractive to existing IBM clients as well as Sun Solaris and HP UNIX users.

IBM's new POWER6 "hydro-cluster" supercomputer, the Power 575, is built to help users tackle some of the world's most challenging problems in fields such as energy, aerospace and weather modeling. The new super-dense system uses a unique, in-rack, water-cooling system and with 448 processor cores offers users nearly five times the performance and more than three times the energy efficiency of its predecessor, IBM's POWER5+™ processor-based p5-575 supercomputer.

The new IBM Power 570 is a unified version of the popular mid-range POWER6 processor-based System p™ 570 and the System i™ 570. Existing customers can update to the new system at no-charge. The Power 570 runs any permutation and combination of i, AIX® or Linux® partitions offering the ultimate in flexibility and increased asset utilization and reuse. And with PowerVM™, Power servers also run many Linux x86 applications.

New Generation of Power Systems

The two new computers are part of a comprehensive launch of a new generation of IBM Power™ Systems that began last week. This announcement includes a new aggressive IBM Power Rewards migration program allowing customers to earn rewards points by trading in selected HP or Sun UNIX systems. Also included in this announcement is PowerCare™ – a new services option included with every Power 595 that allows customers to more easily get no-charge, quick-start help from IBM when exploiting differentiating features of Power Systems, such as advanced virtualization, energy efficiency, increased security, or high availability.

Filling out the Power Systems lineup, IBM recently introduced the Power 520 Express and Power 550 Express – i Editions for the SMB market. Also last week, IBM announced the new BladeCenter JS12 Express, another model that extends the capability of POWER6 processor-based blade servers and provides more choice for the AIX, i or Linux client.

IBM Power 595 Server



The Power 595, IBM's new flagship enterprise server designed as the ideal server consolidation platform, is targeted for data centers supporting large-scale transaction processing and database applications, for large-scale server consolidation to increase flexibility and lower operational and energy cost, and for enterprises requiring the highest levels of RAS for their mission-critical applications.

As the most powerful member of the IBM Power Systems family, the 595 provides exceptional performance, massive scalability and energy-efficient processing for a full range of complex, mission-critical applications with the most demanding computing requirements. Equipped with ultra-high frequency 5.0 GHz POWER6 processors in up to 64-core, multiprocessing (SMP) configurations, the Power 595 server can scale rapidly and seamlessly to address the changing needs of today's data center. With advanced PowerVM virtualization, EnergyScale™ technology and Capacity on Demand (CoD) options, it helps businesses take control of their IT infrastructure and confidently consolidate multiple AIX, i and Linux application workloads onto a single system.

Extensive mainframe-inspired reliability, availability and serviceability (RAS) features in the Power 595 help ensure that mission-critical applications run reliably around the clock. Clients have the ability to upgrade their POWER5™ System p5™ 590 or 595 or System i 595 servers and know that their investment in IBM technology has again been rewarded.

The Power 595 provides a solid foundation on which to consolidate server infrastructure, reduce the complexity of systems administration and optimize computing resources. With extraordinary power, proven IBM technology and expansive growth potential, the Power 595 server is ready to take your business to the next level.

The Power 595 server will be available on May 6, 2008. Some operating system support will be available at a later date.

IBM Power 575 Cluster Node



The Power 575, IBM's new performance supercomputer building block, is available for organizations that require a system that is highly scalable with extreme parallel processing performance and dense, modular packaging. It features innovative water cooling technology. It can be used in clustered configurations of as few as 32 or in world-class supercomputer configurations of thousands of processors. Combined with specialized software

IBM Power Systems servers: Committed to virtualization, openness and innovative collaboration

from IBM, this system is designed for processing speed and represents the latest Power technology available.

Densely packing up to 448 POWER6 processor cores per frame each one running at 4.7 GHz and with innovative cooling features, the 32-core Power 575 cluster node is available as a 2U building block. Hundreds of these nodes can be clustered together to tackle the world's greatest problems. Supported by up to 3.5 TB of memory per frame and super fast interconnects, the Power 575 is estimated to achieve almost five times the GFLOPS per node as its predecessor with POWER5+™ technology, the System p5 575. The radical new approach to HPC represented by this system marks another step in the evolution of modular clusters designed to solve the world's greatest problems.

Ideal workloads for this system include high performance computing (HPC) applications such as weather and climate modeling, computational chemistry, physics, computer-aided engineering, computational fluid dynamics and petroleum exploration that require highly intense computations where the workload is aligned with parallel processing methodologies.

The Power 575 cluster node will be available on May 6, 2008.

IBM Power 570 Server



The Power 570 mid-range server offers a modular and scalable system for business flexibility and IT efficiency. It is designed as a complete business system combining all aspects of a company's IT infrastructure. It is especially useful for mid to large transaction processing, for mid to large database serving, and for server consolidation.

Two new functions have been announced for the Power 570:

1. Concurrent support of the AIX, i and Linux operating systems
2. Availability of two unique functions, Hot-node Add and Cold-node Repair, which help make the 570 more available for productive work. Hot-node Add allows the system to be upgraded with additional building blocks without taking it down. Cold-node Repair allows building blocks that have been deactivated due to component failure to be repaired and reintegrated without disruption to the system or applications.

IBM Power 520 and 550 Express Servers



Combining IBM's industry-leading POWER6 processor technology with enhanced virtualization, energy efficiency and near-continuous availability features, the Power 520 and Power 550 Express servers offer outstanding price/performance and value for entry-level, SMB (Small and Medium Business), and mid-range clients wishing to run UNIX, i, or Linux operating environments. The 520 is perfect for branch office applications, small databases or a complete business system while the 550 is an Ideal solution as an application, mid-sized database or Linux consolidation server

These systems have been enhanced to support the i operating system. Special M15, M25 and M50 models optimally configured to run the i operating system are available as i Editions -- easy to order, pre-configured packages provide financial incentives on the hardware.

Selected models of the Power 520 Express and Power 550 Express servers are available now while others will be available either April 18, 2008 or May 23, 2008.

BladeCenter JS12 Express Blade



The BladeCenter JS12 Express blade server is the ideal blade solution to replace traditional UNIX, i and Linux rack servers, as a system for small database and application serving, or as a complete business system with an integrated database and application server.

Combined with a BladeCenter S chassis, the JS12 blade provides exceptional value and expandability in an attractively packaged and highly efficient design. And specifically for an office environment, this combination quietly resides, secure and looking like it belongs in the office with a set of security doors to protect vital data optional dust filtering to extend blade computing into virtually any environment.

Built on the promise of the IBM BladeCenter family of products—easy-to-use, integrated platforms with a high degree of deployment flexibility, scalability and manageability—the BladeCenter JS12 Express is an extremely affordable blade server with the capability to run AIX, i or Linux applications—concurrently if desired. Powered by the latest IBM processor technology, POWER6™, the JS12 provides outstanding price/performance in a commercial IT environment; superior reliability, availability, serviceability (RAS) characteristics; high energy efficiency; and outstanding built-in PowerVM™ virtualization to help achieve increased system utilization. The feature-rich, JS12 Express will bring significant benefits to clients who want a durable server solution for consolidating multiple applications and servers into a single BladeCenter chassis transitioning from traditional rack-mount or desktside servers to highly efficient blades and implementing commercial applications.

The BladeCenter JS12 Express blade server will be available on May 30, 2008.

Power Rewards Program

Similar to a frequent flyer incentive, this new program offers reward points to competitively installed customers based on the number of HP or Sun cores retired or traded-in when migrating to IBM Power Systems. Customers can redeem points toward no-charge migration services to move from HP-UX or Sun Solaris to AIX or Linux operating environments. IBM is offering a very aggressive 1,000 points per core for Sun UltraSPARC and SPARC-based systems, HP Alpha and Itanium technology-based systems, and SGI MIPS trade ins.

IBM is giving HP customers a highly attractive alternative to HP's multi-year plea to migrate to Itanium technology-based HP Superdome. IBM is offering quadruple the Power Rewards points for PA-RISC-based system trade-ins -- or 4,000 per core redeemable for up to \$4,000 worth of no-charge IBM migration services --- to help clients more easily justify the migration to IBM.

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A wide range of additional discounts on hardware, software or services are available and a reward points table is published for accumulating and redeeming Power Rewards. IBM will also re-use or recycle competitive HP or Sun servers in an eco-responsible manner.

PowerCare Services

PowerCare Services is a set of service offerings -- such as virtualization implementation, and availability, energy efficiency and security assessments -- to help companies maximize their investment in IBM Power servers and software. For instance, with the purchase of a Power 595 server, clients are eligible to select one of five PowerCare services options, free of charge.

Power Systems Software

IBM also introduced a new family of high availability solutions, called PowerHA, designed to help customers maximize system availability and performance for AIX, i and Linux operating systems through disk clustering, logical replication and other capabilities. For better alignment within the Power Systems Software portfolio, IBM High Availability Cluster Management Program for AIX and Linux will become PowerHA for AIX and PowerHA for Linux and the IBM High Availability Solutions Manager for i5/OS will become Power HA for i.

As announced last week at the COMMON User Group Conference, the new Power Systems platform continues the decades long value of application compatibility for System i clients. Now, i clients can run their traditional applications unchanged alongside their new Web-based applications, on everything from blades to scalable servers based on the industry's fastest POWER6 processors.

IBM PowerVM Lx86 V1.2

IBM is introducing a new release level of PowerVM Lx86 version 1 release 2 offering more options for clients wanting to consolidate 32-bit x86 Linux applications on Power Systems servers. Enhancements include performance, additional POWER6 server support and additional Linux operating system support. PowerVM Lx86 is offered as a standard feature of all PowerVM Editions.

PowerVM Lx86 version 1.2 offers the potential to improve the performance of certain 32-bit x86 Linux applications enabled compared to version 1.1, particularly on POWER6 processor-based systems.

IBM Rational

Today, IBM Rational is announcing its Enterprise Modernization solutions for IBM i on Power Systems. The new offerings and resources help clients accelerate software innovation and more easily transition to service-oriented architectures (SOA). The new and updated capabilities enable clients to:

- Reduce time to market and project risk by reusing existing software assets to deliver new solutions
- Leverage IBM's newest business language "EGL" to achieve new levels of business value and innovation
- Increase productivity and eliminate technology silos by simplifying the development environment for virtualized applications

To learn more about these new solution offerings please visit:
<http://www.ibm.com/software/rational/announce/systems/i/>



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The IBM BladeCenter home page on the Internet can be found at <http://www.ibm.com/systems/bladecenter/power-based.html>.

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The IBM Linux on POWER home page on the Internet can be found at <http://www.ibm.com/systems/linux/power/>.

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