



FACT SHEET

January 29, 2008

## **IBM Brings Power of World's Fastest Chip, Efficiencies of New Virtualization Technology to SMB Customers**

### *New IBM System p™ Hardware with POWER6™ Technology*

Both the new System p 520 Express and the new System p 550 Express feature the groundbreaking POWER6 processor -- the world's fastest chip -- and are available in entry rack or desktide configurations. The new servers feature dynamic LPAR and advanced virtualization capabilities with the new PowerVM™ and are ideal solutions for customers planning to migrate from competitive UNIX® systems or Linux® x86 servers to IBM.

The p520 Express features one, two or four cores of a 4.2 GHz POWER6 processor and up to 64 GB of memory. It is built to manage business critical workloads running ERP, CRM and logistics applications in remote locations or small robust database servers.

The p550 Express has a maximum of eight cores with either a 3.5 or 4.2 GHz POWER6 processor and up to 256 GB of memory. It is built to be a mid-sized database server for DB2®, Oracle and Sybase applications, or as an application server for ERP and CRM applications or for both when a single physical server is configured as multiple virtual servers. The 256 GB of memory in a 4U form factor is designed for large databases or for UNIX or x86 server consolidations supporting dozens or hundreds of server images.

The entry-level p520 servers are targeted to compete aggressively with Sun and its Niagara 2 portfolio on the low end. The p550 trounces Sun's M4000 and handily beats HP's rx6600 in price/performance but IBM and its partners will also include a rebate offer of up-to \$4,800 per server for 3.5 GHz models (\$600 per core) and up to \$9,600 per server for 4.2 GHz models (\$1,200 per core) good throughout 2008 for competitive HP and Sun UNIX server replacements in the US, available now. IBM will extend the offer to select countries worldwide throughout the first quarter.

Both new servers are attractive offerings for small and mid-sized customers. The System p 520 can be used in roll-outs, such as in-store processing for retail chains. The System p 550 is ideally suited for departments and for use as a database server or to reduce server footprints via consolidations.

POWER6 processors continue to display their versatility in performance benchmark results. The System p 550<sup>1</sup> Express topped all non-IBM, eight-core systems, including UNIX systems from Sun and HP, in three of the most widely used benchmarks for UNIX servers -- SPECint\_rate2006 (measuring integer-calculating throughput common in business applications), SPECfp\_rate2006 (measuring floating point-calculating



throughput required for scientific applications) and SPECjbb2005 (measuring Java™ performance in business operations per second required for web applications). The System p 520<sup>2</sup> beat all non-IBM, four-core systems, including those from Sun and HP, in both SPECint\_rate2006 and SPECfp\_rate2006.

In addition, the p550 Express<sup>3</sup> server running the Linux for POWER™ operating system offers more than 44-percent higher performance than an eight-core HP Integrity rx6600 server with HP/UX, based on the popular SAP SD 2-tier benchmark. Organizations can now choose the open source Linux operating system as they migrate from older business applications onto the integrated SAP ERP suite, helping them to make smarter decisions and quickly respond to changing business dynamics.

### **New IBM BladeCenter® Servers with POWER6**

Beginning February 29, the BladeCenter JS22 Express blade server with two dual-core POWER6 processors and the BladeCenter JS21 Express blade are now supported in the IBM BladeCenter S chassis, allowing users to run AIX and Linux on POWER or Linux x86 applications<sup>4</sup> in an office-friendly environment. Designed to integrate applications most commonly used for business functions -- such as antivirus/firewall, voice over IP, email, collaboration, back-up and recovery and file and print applications -- BladeCenter S is intended to run outside the datacenter as the perfect officemate.

In addition, IBM and its Business Partners can now offer customers for the first time a fully customized, pre-configured BladeCenter solution, including BladeCenter JS21 or JS22 blade servers installed in a BladeCenter H chassis, combined with System p servers and selected I/O and storage options, all pre-installed in the same enterprise rack. The rack is shipped to the customer location with servers and storage fully installed, and the AIX operating system can be pre-loaded.

Beginning in March, customers will be able to run a BladeCenter JS22 blade with the i5/OS® operating environment in a BladeCenter H chassis. This summer, support is planned for the JS22 with i5/OS in a BladeCenter S chassis.

### **New IBM Power™ Systems Software**

The new PowerVM Express Edition is designed for users looking for an introduction to more advanced virtualization features at a highly affordable price. With PowerVM Express, users can create up to three partitions on the server, leverage virtualized disk and optical devices with the built in Virtual I/O Server (VIOS), and utilize “shared dedicated capacity” to help optimize use of processor cycles.

PowerVM Standard Edition provides the most complete virtualization functionality for UNIX and Linux in the industry. PowerVM Standard Edition includes all capabilities of PowerVM Express Edition plus IBM MicroPartitioning™ allowing up to 10 operating system partitions per processor core and adds support for multiple shared processor pools.



PowerVM Enterprise Edition includes all the features of PowerVM Standard Edition plus an exciting capability called Live Partition Mobility -- a unique virtualization technique that enables POWER6 processor-based servers to move the entire operating system and its workloads from one server to another while the systems are running. With Live Partition Mobility, planned application downtime due to regular server maintenance can be a thing of the past since applications can be moved during business hours to alternate servers while still available to end users.

New to all three PowerVM Editions is the PowerVM Lx86 feature at no additional charge. This feature will now allow System p servers to run many Linux x86 binary applications unmodified and without recompilation in addition to UNIX and Linux on POWER applications, greatly expanding the workloads available to be consolidated onto System p servers. PowerVM Lx86 (formerly System p Application Virtual Environment or p AVE) allows the creation of an x86 application virtual environment so users may easily install and run a wide range of x86 Linux applications on a System p server with a Linux on POWER operating system.<sup>5</sup> The Linux x86 application binaries are automatically detected at runtime and run seamlessly without additional configuration, allowing thousands of x86 Linux binaries to run easily on System p servers, helping clients consolidate, cut escalating power and cooling costs and improve performance.

More than 225 companies have used PowerVM Lx86 in an open beta program to consolidate x86 applications on their System p platform of choice, taking advantage of leadership performance and superb RAS features.

### **New IBM i5/OS V6R1**

IBM today introduced the newest version of i5/OS, an integrated operating environment with a highly scalable and virus resistant architecture for exceptional business resiliency. i5/OS V6R1 allows customers to consolidate their POWER, Intel and i5/OS systems, conserving space and energy and adding to their bottom line. Today's announcement further demonstrates IBM's investment in i5/OS, which is part of the Power Systems Software portfolio. i5/OS V6R1 will help customers maximize the return on their IT investments by:

- Reducing costs and simplifying creation of i5/OS test and development environments through virtualization of i5/OS storage.
- Delivering improved performance for i5/OS and IBM Systems Storage™ environments through improved SAN support.
- Enabling consolidation of i5/OS and x86 servers on an IBM BladeCenter solution.
- Improving energy efficiency with monitoring and control of power/thermal utilization through POWER6 EnergyScale™ technology enabled by IBM Systems Director Active Energy Manager™ software.
- Helping customers adopt modern, open source-based technology and more easily transition to Service Oriented Architectures (SOA) with new and updated IBM Rational® Software offerings and support for i5/OS, including: WebSphere Development Studio for System i, Rational Developer for System i, IBM Rational Business Developer, IBM Rational Developer for System i for SOA Construction,



and IBM Rational Host Access Transformation Services (HATS) for 5250 Applications.

### **New IBM x86 Server Consolidation Factory**

Building on the success of IBM's Migration Factory, Server Consolidation Factory and Availability Factory, IBM is extending the Factory offerings with a fourth x86 Server Consolidation Factory. This new initiative is geared to help companies reduce server sprawl by migrating their Linux x86 applications to System p servers with the new PowerVM editions and by engineering server makeovers that save space, energy, maintenance and software costs. IBM's successful Migration Factory offerings have helped more than 900 customers over the last two years move from competitive UNIX platforms – 80 percent of which have been from Solaris and HP/UX environments --- to IBM's AIX® or Linux on Power platforms with IBM's leadership virtualization solutions while optimizing their overall IT environments and investments.

IBM is a trademark of IBM Corporation in the United States and/or other countries. All other company/product names and service marks may be trademarks or registered trademarks of their respective companies. UNIX is a registered trademark in the United States and other countries licensed exclusively through The Open Group. Linux is a trademark of Linus Torvald.

IBM benchmark results submitted on 1/29/08. All competitive benchmark results current as of 1/24/08. Source of SPEC results is <http://www.spec.org>. Source of SAP results is <http://www.sap.com/solutions/benchmark/index.epx>

1 IBM System p 550 (4.2 GHz POWER6, 4 processor chips/8 cores/16 threads) SPECint\_rate2006 result of 212; IBM System p 550 (4.2 GHz POWER6, 4 processor chips/8 cores/16 threads) SPECfp\_rate2006 result of 178; IBM System p 550 (4.2 GHz POWER6, 4 processor chips/8 cores/16 threads) SPECjbb2005 result of 333,779 bops (83,445 bops/JVM).

2 IBM System p 520 (4.2 GHz POWER6, 2 processor chips/4 cores/8 threads) SPECint\_rate2006 result of 90.6; IBM System p 520 (4.2 GHz POWER6, 2 processor chips/4 cores/8 threads) SPECfp\_rate2006 result of 80.8.

3 The SAP certification number was not available at press time and can be found at the following Web page [www.sap.com/benchmark/](http://www.sap.com/benchmark/). Current as of 1/29/08. IBM SAP SD 2-tier benchmark (SAP ECC 6.0) result of 3104 benchmark users on an 8-core (4 processors, 16 threads) 4.2 GHz POWER6 IBM System p 550 running RHEL 5.1 and IBM DB2 9.5 with Fully Processed Order Line items/hour: 312,670, Dialog steps/hour: 938,000, SAPS: 15,630, Average DB request time: 0.019 sec / 0.049 sec, CPU utilization: 97% vs. HP SAP SD 2-tier benchmark result of 2150 benchmark users on a 8-core (2 processors, 16 threads) 1.6 GHz Intel Dual-Core Itanium 2 9050 HP Integrity rx6600 server running HP/UX 11iV3 and Oracle 10g; Certification # 2006083

<sup>4</sup> Using any optional PowerVM Edition with PowerVM Lx86.

<sup>5</sup> [ibm.com/systems/power/software/virtualization/editions/lx86/qual.html](http://ibm.com/systems/power/software/virtualization/editions/lx86/qual.html)

### **Contact(s) information**

#### **Cary Barbour**

IBM Media Relations

917-472-3564

[barbour@us.ibm.com](mailto:barbour@us.ibm.com)

#### **Rick Bause**

IBM Media Relations

845-892-5463

[rbause@us.ibm.com](mailto:rbause@us.ibm.com)