

# THE NEW POWER EQUATION

By Vaughn Dragland

**A**t COMMON's Annual Meeting in Nashville, Tennessee (April 2, 2008) IBM unveiled their new line of Power Systems™, the most significant mid-range announcement since the birth of the AS/400 in 1988.



Vaughn Dragland

IBM Power 520 Express

The new Power Systems servers from IBM will incorporate POWER6™ processors, and support IBM i, Linux®, and UNIX® applications simultaneously on a single server system. The new Power Systems also feature PowerVM™ virtualization technology that supports up to 254 virtual partitions in a single system. Additionally, IBM's secure and integrated operating system, i5/OS®, will now be called "i" — signifying a simplified, streamlined experience for all "i" customers. These Power servers are available as preconfigured AIX editions, i editions, or Linux editions; or they can be ordered a la carte and mix and match with AIX, IBM i, and Linux on a single Power server.

### IBM BladeCenter JS12

For a complete integrated business system, the BladeCenter JS12 Express blade server, combined with a BladeCenter S chassis, allows the small or mid-sized company to avoid increased spending and staffing requirements, but still enjoy outstanding price/performance in a com-



Léo Lefebvre

Ross Mauri unveils the IBM Power Systems in Nashville

mercial IT environment—with superior reliability, availability, and serviceability (RAS) characteristics; and high energy efficiency.

### IBM BladeCenter JS22

The exceptional price/performance in a virtualized environment; breadth of available applications; superior RAS characteristics; energy efficiency; and leadership virtualization of the BladeCenter JS22 Express makes it a highly desirable blade server for organizations of any size. The JS22 Express will bring significant rewards to clients who want a durable server solution for consoli-

IBM Power Systems Summary	IBM BladeCenter JS12 Express	IBM BladeCenter JS22 Express	IBM Power 520 Express	IBM Power 550 Express	IBM Power 570	IBM Power 575	IBM Power 595
<b>Max Processor Cores</b>	4	4	2/4	4/8	16	32	64
<b>Max Clock Rate</b>	3.8 GHz	4.0 GHz	4.2 GHz	4.2 GHz	4.7 GHz	4.7 GHz	5.0 GHz
<b>Max Random Access Memory</b>	64 GB	32 GB	64 GB	256 GB	768 GB	256 GB	4 TB
<b>Max Logical Partitions</b>	20	40	40	80	160	254	254
<b>Max I/O Drawers</b>	-	-	8	8	32	1	30
<b>Max I/O Slots</b>	-	-	60	59	212	24	600
<b>Max Internal Disk Bays</b>	2	1	102	102	264	18	480
<b>Max Internal DASD (not including SAS disks)</b>	292 GB	146 GB	30.6 TB	30.6 TB	79.2 TB	(5.0 TB )	620.9 TB
<b>Sample Benchmarks:</b>							
<b>LINPAK HPC (AIX 5.3)</b>	-	-	53,600	104,000	239,400	466,900	1,028,000
<b>rPerf (AIX 5.3)</b>	14.71	30.26	31.48	68.2	134.35	*	553.01
<b>SPECfp_rate2006 (Linux)</b>	45.9	84.7	79.7	176	430	*	2110
<b>CPW (IBM i 6.1)</b>	7,100	13,800	8,300	18,000	76,900	*	*

\* Benchmarks not available at press-time

Statistics are provided for informational purposes only, and are not verified or sanctioned by the author, IBM, or other companies. No warranties of any kind are expressed or implied. All performance information was determined in a controlled environment. Actual results may vary. IBM, the IBM logo, AIX, BladeCenter, POWER, PowerVM, and Power Systems, are trademarks or registered trademarks of IBM Corporation. UNIX is a registered trademark of the Open Group. Linux is a registered trademark of Linus Torvalds. SPECfp is a trademark of the Standard Performance Evaluation Processing Council (TPPC). Other company, product, and service names may be trademarks or service marks of others.

dating multiple applications and servers into a single BladeCenter; transitioning from traditional rack servers to highly efficient blades.

### IBM Power 520 Express

The IBM Power 520 Express is a 1- or 2- core (for i edition), or up to 4-core (for AIX or Linux editions), 4.2 GHz POWER6 processor-based entry server designed to deliver outstanding business value to smaller and mid-sized businesses while meeting the needs of mission-critical applications. It offers outstanding price/performance in a commercial IT environment; a breadth of available applications; superior RAS characteristics architected to avoid, detect, and recover from errors to achieve near-continuous availability.

### IBM Power 550 Express

The Power 550 Express is a 2-, 4-, 6-, or 8-core entry server utilizing 3.5 or 4.2 GHz processors and includes tremendous configuration flexibility to meet most capacity and growth requirements. (Currently the IBM i edition only supports up to 4-cores.) The Power 550 Express offers a choice of operating environments in either a desktop or 4U rack-mount form factor. It is designed to deliver outstanding business value to medium-sized businesses with a choice of operating systems, proven virtualization capabilities, and support for innovative energy management technologies.

### IBM Power 570

For mid to large transaction processing workloads, the IBM Power 570 server delivers outstanding performance, mainframe-inspired reliability, modular non-disruptive growth, and innovative virtualization technologies. These fea-



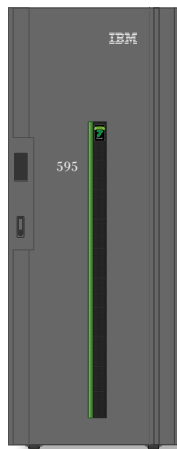
tures are integrated to enable the simplified management of growth, complexity and risk, in a complete business system combining all aspects of a company's IT infrastructure.

### IBM Power 575

The IBM Power 575 cluster node is designed for organizations that require a highly scalable system with extreme parallel processing performance and dense, modular packaging. Use it in clustered configurations of as few as 32 processor cores or in world-class supercomputer configurations of thousands of processors. Densely packing up to 448 POWER6 processor cores per frame, each one running at 4.7 GHz with innovative cooling features, the 32-core Power 575 cluster node is designed for speed and tuned for performance.

### IBM Power 595

Equipped with ultra-high frequency IBM 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 enterprise data center. With advanced PowerVM virtualization, EnergyScale™ technology, and Capacity on Demand (CoD) options, the Power 595 helps businesses take control of their IT infrastructure and confidently consolidate multiple UNIX, IBM i and Linux application workloads onto a single system.




IBM Power 595

### About the Author

**Vaughn Dragland** is an independent graphic artist, editor, photographer, Web designer, IBM i developer, project manager, and business consultant. He has been a volunteer at COMMON conferences since 1983, and was the Editor-in-Chief of COMMON.CONNECT for its first 27 issues. Vaughn Dragland can be reached at [vaughn@e-clipse.ca](mailto:vaughn@e-clipse.ca) or by phone at 416-622-8789.



### IBM Power VM

PowerVM is the family of technologies, capabilities, and offerings that deliver industry-leading virtualization on all of the IBM POWER processor-based systems, to achieve server consolidation, mixed workloads, isolated environments, and dynamic resource requirements. 




For more information about IBM Power Systems, visit [www-03.ibm.com/systems/power/news/announcement/20080402\\_announcement.html](http://www-03.ibm.com/systems/power/news/announcement/20080402_announcement.html).

*Much of this information was obtained from the April 2008 issue of IBM Canada's iSay newsletter. Special thanks to **Kathy Gregson and Barry Pow.***

## Editor's Desk (continued from page 4)

to the effort that they put in to any endeavor like this; so as a COMMON volunteer, I really appreciate the support I get from my employer.

COMMON has enjoyed great support from member companies in this area for many years. For example: BassPro – **Paul Fenstermacher** has volunteered for over 10 years; Arbor Solutions – **Larry Bolhuis** has volunteered for over 10 years; Bank of Nova Scotia – **Jack Karvat** has volunteered for over 6 years; Countrywide Home Loans – **Michael Lance** has volunteered for at least 6 years and others from this company have volunteered as well; Perishable Distributors of Iowa (PDI) – **Scott Hamilton** has volunteered for at least 5 years and others from the company have also volunteered (e.g., **Dan Swinehart**); Vision Solutions – **David Brown** has volunteered as a speaker for over 15 years. But that's just a partial list. If you feel that your company deserves to be mentioned, drop us a line and tell us your story. We would love to hear about it. 

— Vaughn

