## IBM posts new results for two-tier SAP SD Standard Application Benchmark

IBM System x<sup>™</sup> 3850 M2 and DB2® 9.5 deliver two-tier SAP® SD Standard Application Benchmark results on Red Hat Enterprise Linux® using Xen 3.1.0

December 19, 2008 ... IBM® today announced new results for the two-tier SAP Sales and Distribution (SD) Standard Application Benchmark. The result, 4,400 SAP SD Benchmark users, was achieved on the IBM System x3850 M2, configured with four Intel® Xeon® X7460 processors, and using the IBM System Storage<sup>™</sup> DS4700 and running IBM DB2 9.5 and Red Hat Enterprise Linux 5.2 and the SAP ERP application Release 6.0.

The x3850 M2 achieved 4,400 SAP SD Benchmark users with 1.99 seconds average dialog response time, 22,030 SAPS, measured throughput of 1,322,000 dialog steps per hour (or 440,670 fully processed line items per hour), and an average CPU utilization of 84% for the central server and 83% inside the virtual machine. (1)

The x3850 M2 was configured with four Intel Xeon X7460 processors, 2.66GHz with 9MB L2 cache (3MB per 2 cores) and 16MB L3 cache (4 processors/24 cores/24 threads), 64GB of main memory, 64-bit DB2 9.5, Red Hat Enterprise Linux Server 5.2, Xen 3.1.0, and SAP ERP 6.0. The server accessed the DB2 9.5 database on the storage managed by an IBM System Storage DS4700 disk system.

The x3850 M2 ran Xen, a virtual machine monitor that enables several guest operating systems to run concurrently on the same computer hardware. In this case, 24 virtual CPUs were configured; one was used to run the Xen hypervisor and 23 were used to run the SAP ERP application. This is the first SAP SD Benchmark to be run with the Xen hypervisor. (2)

The x3850 M2's result, achieved with 24 cores, demonstrates the ability to run the SAP ERP application and DB2 9.5 over Xen in a high-end virtualization environment; existing virtualization results were typically achieved with only 2 cores.

Results referenced are current as of December 19, 2008. For the latest SAP benchmark results, visit www.sap.com/benchmark.

(1) This benchmark fully complies with the SAP Benchmark Council regulations and has been audited and certified by SAP AG (certification number 2008077). Details can be obtained from IBM and SAP AG. The benchmark was performed at IBM in Markham, Ontario, Canada, by IBM engineers.

(2) Xen, a virtual machine monitor for IA-32, x86, x86-64, IA-64 and PowerPC 970 architectures, enables several guest operating systems to run concurrently on the same computer hardware. Initially developed by the University of Cambridge Computer Laboratory, Xen is maintained by the Xen community as free software, licensed under the GNU General Public License (GPL2).

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