

IBM Posts World-Record Result on Microsoft Windows on Two-Tier SAP Sales and Distribution (SD) Standard Application Benchmark

IBM System x3950 X6 delivers highest performance on Windows on the two-tier SAP SD standard application benchmark as well as nearly twice the performance of previous-generation IBM System x3850 X5 and near-perfect scaling over the four-processor x3850 X6²

June 17, 2014 ... Today IBM® announced a new result on the two-tier SAP® Sales and Distribution (SD) standard application benchmark. The result was achieved on the IBM System x3950 X6, configured with eight Intel® Xeon® Processors E7-8890 v2, and running IBM DB2® 10 and SAP enhancement package 5 for the SAP ERP application Release 6.0.

The IBM System x3950 X6 achieved 49,000 SAP SD benchmark users with 0.85 seconds average dialog response time, 271,080 SAPS, measured throughput of 16,265,000 dialog steps per hour (or 5,421,670 fully business processed line items per hour), and an average CPU utilization of 98% for the central server. (1)

The x3950 X6 was configured with eight Intel® Xeon® Processors E7-8890 v2 running at 2.8 GHz with 37.5 MB L3 cache per processor (8 processors/120 cores/240 threads), 1024 GB memory, 64-bit DB2 10, Microsoft® Windows® Server 2012, and SAP enhancement package 5 for SAP ERP 6.0.

The IBM System x3950 X6 is a flagship 8-socket 8U rack server designed for maximum performance and uptime for business-critical applications and cloud deployments. The X6 solution provides a powerful infrastructure platform for running mission-critical SAP Business Suite software and the SAP HANA® platform, one that is ideal for customers who are looking for reliability, manageability, and scalability with the flexibility to run Windows or Linux. Integrating hardware, software and memory advancements, the X6 enterprise servers are designed to be FAST, AGILE AND RESILIENT.

X6 servers deliver FAST application performance – processing speed that is nearly two times faster than previous-generation systems with almost linear scaling over x3850 X6(2)

The unique, adaptive modular rack design of the new x3950 X6 is AGILE, enabling the design of fit-for-purpose solutions and the ability to realize infrastructure cost savings by hosting multiple generations of technology in a single platform—without compromising performance or capacity. X6 platforms enable customers to:

- Configure the server to fit the unique requirements of specific applications and workloads and add, modify or upgrade X6 platforms easily with selectable modular book components for each of the major subsystems in the server: compute, I/O and storage;
- Scale capacity and performance from 4-socket to 8-socket, to deliver twice the performance for growing applications without creating IT sprawl;
- Use IBM Fast Setup software for automated provisioning of a cluster of servers to realize time-to-value in minutes rather than days;

- Capitalize on agile system design that provides the ability to host multiple generations of technology in a single server. (3)

X6 enterprise platforms are RESILIENT. Through differentiated X6 self-healing technology, the x3950 X6 maximizes uptime by proactively identifying potential failures and transparently taking necessary corrective actions. Four unique IBM features proactively protect applications from corrupt pages in memory; allow the platform to maintain access to networking and storage and server management during a processor failure; enable concurrent updating of the system firmware with no impact on application performance or availability; and enable the creation and management of policies to maintain high availability of virtual machines. These built-in technologies drive the outstanding system availability and uninterrupted application performance needed to host business-critical applications.

X6 platforms help reduce costs and complexity and deliver the breakthrough performance and capacity that enterprise applications demand. X6 servers are the result of more than 15 years of EXA investment and innovation in industry-standard servers. X6 platforms are backed by a 100-year history of market-leading IBM technology designed to solve customers' most pressing business problems.

For over 40 years, IBM and SAP have consistently delivered superior ROI through thousands of successful implementations. Our global business and technology solutions can help you innovate, adapt and compete.

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(1) This benchmark fully complies with the SAP Benchmark Council regulations and has been audited and certified by SAP AG (**certification number 2014024**). Details can be obtained from IBM and SAP. The benchmark was performed at IBM in Research Triangle Park, NC, USA, by IBM engineers. Benchmark results referenced are current as of June 16, 2014. For the latest SAP benchmark results, visit: <http://www.sap.com/benchmark>.

(2) The claim of achieving nearly 100 percent improvement in performance is based on results on the two-tier SAP SD standard application benchmark achieved by the IBM System x3850 X5 (8 processors / 80 cores / 160 threads) on the Intel Xeon Processor E7-8870, 2.4 GHz, 64 KB L1 cache and 256 KB L2 cache per core, 30 MB L3 cache per processor (certification number 2012034). The server achieved 25,550 SAP SD benchmark users; average dialog response time: 0.87 seconds; 2,814,330 fully processed order line items per hour; 8,443,000 dialog steps per hour; 140,720 SAPS; average database request time (dialog/update): 0.013 sec / 0.012 sec; CPU utilization of central server: 91 percent. The server was running Windows Server 2008 R2 Enterprise Edition; DB2 9.7; and SAP enhancement package 4 for SAP ERP 6.0.

The claim of achieving nearly linear scaling is based on results on the two-tier SAP SD standard application benchmark achieved by the IBM System x3850 X6 (4 processors / 60 cores / 120 threads) on the Intel Xeon Processor E7-4890 v2, 2.8 GHz, 64 KB L1 cache and 256 KB L2 cache per core, 37.5 MB L3

cache per processor (certification number 2014004). The server achieved 25,000 SAP SD benchmark users; average dialog response time: 0.98 seconds; 2,733,330 fully processed order line items per hour; 8,200,000 dialog steps per hour; 136,670 SAPS; average database request time (dialog/update): 0.009 sec / 0.010 sec; CPU utilization of central server: 99 percent. The server was running Windows Server 2012 Standard Edition; DB2 10; and SAP enhancement package 5 for SAP ERP 6.0.

(3) When a newer generation of processor and memory technology becomes available, Compute Books can be replaced with newer ones. (All Compute Books must use matching technology.)

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