IBM posts world-record 4-processor result on the two-tier SAP Sales and Distribution (SD) standard application benchmark

IBM System x3850 X6 delivers nearly twice the performance of IBM System x3850 X5

February 18, 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 x3850 X6, configured with four Intel® Xeon® Processor E7-4890 v2 processors, and running IBM DB2® 10 and SAP enhancement package 5 for the SAP ERP application Release 6.0.

The IBM System x3850 X6 achieved 25,000 SAP SD benchmark users with 0.98 seconds average dialog response time, 136,670 SAPS, measured throughput of 8,200,000 dialog steps per hour (or 2,733,330 fully business processed line items per hour), and an average CPU utilization of 99% for the central server. (1)

The x3850 X6 was configured with four Intel® Xeon® Processor E7-4890 v2 processors running at 2.8 GHz with 37 MB L3 cache per processor (4 processors/60 cores/120 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 x3850 X6 is a flagship, 4-socket, 4U rack server, designed for maximum performance and uptime for business-critical applications and cloud deployments. The X6 solution provides a powerful platform for mission-critical SAP Business Suite applications, 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.(2)

The unique, adaptive modular rack design of the new x3850 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;
- 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 x3850 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.

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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 2014004). 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 February 18, 2014. For the latest SAP benchmark results, visit: http://www.sap.com/benchmark.

(2) The claim of achieving 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 (4 processors / 40 cores / 80 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 2012006). The server achieved 12,560 SAP SD benchmark users; average dialog response time: 0.99 seconds; 1,371,670 fully processed order line items per hour; 4,115,000 dialog steps per hour; 68,580 SAPS; average database request time (dialog/update): 0.016 sec / 0.031 sec; CPU utilization of central server: 98 percent. The server was running Windows Server 2008 R2 Enterprise Edition; DB2 9.7; and SAP enhancement package 4 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.)