PERFORMANCE BENCHMARK RESULT

Lenovo posts world-record 8-processor result on the two-tier SAP Sales and Distribution (SD) standard application benchmark on Windows

Lenovo System x3950 X6 delivers 22% improvement over the same server with previous-generation Intel® Xeon® processors and continues history of achieving leadership performance results on SAP standard application benchmarks

October 6, 2015 ... Today Lenovo announced a new result on the two-tier SAP® Sales and Distribution (SD) standard application benchmark. The result was achieved on the Lenovo System x3950 X6, configured with eight Intel® Xeon® Processors E7-8890 v3, and running IBM DB2® 10 and SAP enhancement package 5 for the SAP ERP 6.0 application.

The Lenovo System x3950 X6 achieved 60,000 SAP SD benchmark users with 0.88 seconds average dialog response time, 330,930 SAP Application Performance Standard (SAPS) values, measured throughput of 19,856,000 dialog steps per hour (or 6,618,670 fully business processed line items per hour), and an average CPU utilization of 98% for the central server[1].

The Lenovo System x3950 X6 was configured with eight Intel® Xeon® Processors E7-8890 v3 running at 2.5 GHz with 45 MB L3 cache per processor (8 processors/144 cores/288 threads), 2048 GB memory, 64-bit DB2 10, Microsoft® Windows® Server 2012, and SAP enhancement package 5 for SAP ERP 6.0.

The Lenovo 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 22% better than with previous-generation Intel® Xeon® Processors[2], and nearly two times faster than the Lenovo System x3850 X6[3] and more than twice the published result by a competitor for 4 processors on Windows[4].

The adaptive modular rack design of x3950 X6 is AGILE. It enables 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;
- Capitalize on agile system design that provides the ability to host multiple generations of technology in a single server[5]

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. Unique Lenovo 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 help ensure the 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 investment in Enterprise X-Architecture (EXA) and innovation beyond industry standards.

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About Lenovo

Lenovo (HKSE: 992) (ADR: LNVGY) is a Fortune 500 company and a leader in providing innovative consumer, commercial, and enterprise technology. Its portfolio of high-quality, secure products and services covers PCs (including the well-known Think and multimode YOGA brands), workstations, servers, storage, smart TVs and a family of mobile products like smartphones (including the Motorola brand), tablets and apps. Join us on LinkedIn, follow us on Facebook or Twitter (@Lenovo) or visit us at www.lenovo.com.

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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 2015041). More details can be found at

www.sap.com/benchmark. Details can be obtained from Lenovo and SAP. The benchmark was performed at Lenovo in Research Triangle Park, NC, USA, by Lenovo engineers. Benchmark results referenced are current as of September 29, 2015. For the latest SAP benchmark results, visit: http://www.sap.com/benchmark. All results valid as of September 29, 2015.

[2] The claim of achieving 22% improvement in performance is based on results on the two-tier SAP SD standard application benchmark achieved by the IBM System x3950 X6 (4 processors / 60 cores / 120 threads) on the Intel Xeon Processor E7-8890 v2, 2.8 Ghz, 37.5 MB L3 cache per processor (certification number 2014024). The server achieved 49,000 SAP SD benchmark users; average dialog response time: 0.85 seconds; 5,421,670 fully processed order line items per hour; 16,265,000 dialog steps per hour; 271,080 SAPS; CPU utilization of central server: 98%. The server was running Windows Server 2012 Standard Edition; IBM DB2 10; and SAP enhancement package 5 for SAP ERP 6.0.

[3] The claim of nearly twice the performance is based on results on the two-tier SAP SD standard application benchmark achieved by the Lenovo System x3850 X6 (4 processors / 72 cores / 144 threads) on the Intel Xeon Processor E7-8890 v3, 2.5 Ghz, 45 MB L3 cache per processor (certification number 2015010). The server achieved 30,501 SAP SD benchmark users; average dialog response time: 0.97 seconds; 3,336,670 fully processed order line items per hour; 10,010,000 dialog steps per hour; 166,830 SAPS; CPU utilization of central server: 98%. The server was running Windows Server 2012 Standard Edition; IBM DB2 10; and SAP enhancement package 5 for SAP ERP 6.0.

[4] The claim of more than twice the performance is based on results on the two-tier SAP SD standard application benchmark achieved by Fujitsu PRIMERGY RX4770 M2 (4 processors / 72 cores / 144 threads) on the Intel Xeon Processor E7-8890 v3, 2.5 Ghz, 45 MB L3 cache per processor (certification number 2015031). The server achieved 29,750 SAP SD benchmark users; average dialog response time: 0.98 seconds; 3,250,000 fully processed order line items per hour; 9,750,000 dialog steps per hour; 162,500 SAPS; CPU utilization of central server: 99%. The server was running Windows Server 2012 R2 Standard Edition; SQL server 2012; and SAP enhancement package 5 for SAP ERP 6.0.

[5] 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.)