# PERFORMANCE BENCHMARK RESULT

## Lenovo posts world-record TPC-E benchmark performance result

**System x3950 X6 achieves best overall performance on TPC-E**

December 18, 2015 ... Lenovo® has again published the best overall performance result on the TPC-E™ benchmark. This new result showcases the capability of the System x®3950 X6 from Lenovo, based on the latest Intel® Xeon® E7 processor technology and running Microsoft® SQL Server® 2014.

The TPC-E benchmark is designed to enable clients to more objectively measure and compare the performance and price of various OLTP systems.

The System x3950 X6 server achieved the following score:

- **11,058.99 tpsE**™ (transactions per second E) @ **$143.91 USD/tpsE**. (1)

This score is the best overall performance in the industry, 9.9% faster- and with 23% better price/performance- than the Fujitsu® Server PRIMEQUEST™ 2800E2 configured with the same processors and the same amount of memory. (2)

The x3950 X6 achieved this record level of OLTP performance using Microsoft SQL Server 2014 Enterprise Edition and Microsoft Windows Server® 2012 R2 Standard Edition. The x3950 X6 was configured with eight Intel Xeon E7-8890 v3 processors at 2.50 GHz (8 processors/144 cores/288 threads) and 4 TB of TruDDR4 memory.

This result also relied on the new Lenovo Storage E1024 DAS enclosures. Twelve E1024 storage enclosures and over 100 SAS SSDs were used in the benchmark configuration, attached directly to ServeRAID M5225-2GB SAS/SATA controllers running RAID-5.

The Lenovo Storage E1012 and E1024 Disk Expansion Enclosures offer universal storage expansion capabilities that are designed to provide simplicity, speed, scalability, security, and high availability for small to large businesses. The E1012 and E1024 deliver enterprise-class storage technology in a cost-effective solution with flexible drive configurations and RAID or JBOD (non-RAID) host connectivity or Lenovo storage area network (SAN) array expansion.

The System x3950 X6 is an 8-socket rack server designed for maximum performance and uptime for business-critical applications and databases.

With system support for up to 144 CPU cores, 12TB of system memory, and with over 100TB of flash storage, the 3950 X6 is designed to deliver leadership performance and scalability to power traditional databases as well as new in memory database and analytic solutions.  The scalable design enables customers to virtualize both high performance databases and applications on the same server to deliver leadership solution performance.

To enhance performance, the x3950 has a unique modular design to deliver price/performance optimized, solutions.  The modular design supports simple CPU upgrades for customers to maintain leadership performance over time as technology changes, and to maximize their solution investment without the disruption of replacing a server. (3)

X6 platforms, with a history of over 15 years of EXA investment and innovation, are designed to help reduce overall enterprise solution cost while delivering breakthrough performance and availability.

Results referenced are current as of December 18, 2015. To view all TPC results, visit www.tpc.org.

(1) The total solution availability for this TPC-E benchmark result is December 17, 2015.  See the details for this result here: http://www.tpc.org/4075

(2) Fujitsu Server PRIMEQUEST 2800E2 result details are at:  http://www.tpc.org/4074

(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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**About Lenovo**

Lenovo (HKSE: 992) (ADR: LNVGY) is a $39 billion global 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.