IBM posts best overall performance ever published on TPC-E benchmark

IBM System x3850 X5 sets new record for TPC-E performance

August 26, 2011 ... IBM has published a benchmark result that sets a new record for performance on the TPC-E benchmark, which is designed to enable clients to more objectively measure and compare the performance and price of OLTP systems.

The IBM System x3850 X5 server achieved 4,593.17 tpsE (transactions per second E) at $140.56 USD / tpsE. (1) This result is faster than all the other currently published TPC-E results, and has the second-best TPC-E price/performance ever published. (2) The x3850 X5's result is more than 9% faster than the NEC Express5800/A1080a-E's result—at less than half the price/performance. (3)

With this new result, IBM now has the top three TPC-E price/performance results. The IBM System x3850 X5 server with four processors is #1 at $129.66 USD / tpsE, and the IBM System x3690 X5 is #3 at $143.32 USD / tpsE. (2, 4)

The x3850 X5 achieved this tpsE result using Microsoft® SQL Server 2008 R2 Enterprise Edition and Microsoft Windows® Server 2008 R2 Enterprise x64 Edition SP1. The x3850 X5 was configured with eight Intel Xeon E7-8870 processors at 2.40GHz with 30MB shared L3 cache per processor (8 processors/80 cores/160 threads), 2TB of memory, and solid state drive (SSD) storage, which can enable faster database access. (5)

With IBM's exclusive eX5, the fifth-generation of X-Architecture®, and the Intel® Xeon® E7 processor technology, the System x3850 X5 delivers innovation with enhanced reliability and availability features to enable optimal performance for databases, enterprise applications, and virtualized environments. The x3850 X5 is a versatile 4-socket, 4U rack-optimized, scalable enterprise server that supports up to 2TB of memory. In addition to higher levels of function than its predecessors, the x3850 X5 offers up to 8-socket (80-core) SMP operations with powerful 6-, 8- and 10-core Intel Xeon MP processors and up to 6TB of system memory in an 8-socket (80-core) complex with the optional IBM MAX5 for System x. The MAX5 is a scalable, 1U, memory expansion drawer that provides an additional 32 DIMM slots with a memory controller for added performance and a node controller for x3850 scalability.

Results referenced are current as of August 26, 2011. To view all TPC results, visit www.tpc.org. See the details for this result: http://www.tpc.org/tpce/results/tpce_perf_results.asp

(1) The total solution availability for this TPC-E benchmark result is August 26, 2011.

(2) IBM System x3850 X5 with four Intel Xeon E7-4870 processors at 2.40GHz (4 processors/40 cores/80 threads), Microsoft SQL Server 2008 R2 Enterprise Edition, Microsoft Windows Server 2008 R2 Enterprise Edition; 2,862.61 tpsE at $129.66 USD / tpsE, total solution availability of June 27, 2011.

(3) NEC Express5800/A1080a-E with eight Intel Xeon E7-8870 processors at 2.40GHz (8 processors/80 cores/160 threads), Microsoft SQL Server 2008 R2 Enterprise Edition, Microsoft Windows Server 2008 R2 Enterprise Edition SP1; 4,200.61 tpsE at $287.42 USD / tpsE, total solution availability of August 31, 2011

(4) IBM System x3690 X5 with two Intel Xeon E7-2870 processors at 2.40GHz (2 processors/20 cores/40 threads), Microsoft SQL Server 2008 R2 Enterprise Edition, Microsoft Windows Server 2008 R2 Enterprise Edition; 1,560.70 tpsE (transactions per second E) at $143.32 USD / tpsE, total solution availability of May 27, 2011.

(5) Solid state drive storage with SMART Modular SSDs.