

PERFORMANCE BENCHMARK RESULT

Lenovo posts world record non-clustered TPC-H@3,000GB benchmark performance result

Lenovo System x3850 X6 achieves highest performance score among TPC-H @3,000GB non-clustered results

May 5, 2015 ... Lenovo® has published the best performance result and the best price/performance ever on the non-clustered TPC-H™ benchmark @3,000GB scale. This new result showcases the capability of the Lenovo System x3850 X6 with the latest Intel® Xeon® E7 processor technology running Microsoft® SQL Server® 2014.



The TPC Benchmark™ H (TPC-H) (from tpc.org) is a decision support benchmark that can project performance in a data warehouse environment. It consists of a suite of business oriented ad-hoc queries and concurrent data modifications chosen to have broad industry-wide relevance. This benchmark illustrates decision support systems that examine large volumes of data, execute queries with a high degree of complexity, and give answers to critical business questions.

The System x3850 X6 server achieved the following score:

- **700,392.4 QphH™ @3,000GB** (queries per hour H) at **\$0.99 USD / QphH @3,000GB**. (1)

This score is the best performance score at the TPC-H @3,000GB scale among the non-clustered results, and is 51% faster than the previous #1 result in the non-clustered TPC-H @3,000GB category at less than half of the price/performance. (2)

The x3850 X6 achieved this record level of data warehouse performance using Microsoft SQL Server 2014 Enterprise Edition and Microsoft Windows Server® 2012 R2 Standard Edition. The x3850 X6 was configured with four Intel Xeon E7-8890 v3 processors at 2.50 GHz (4 processors/72 cores/144 threads) and 3TB of memory. This result highlights a tightly- integrated optimized Microsoft SQL solution on the Lenovo X6 server. The benchmark showcases the ability to process large amounts of data using this solution.

The System x3850 X6 is a 4-socket rack server that delivers maximum performance and availability for business-critical applications and databases.

With system support for up to 72 processor cores, 6TB of system memory, and over >100TB of flash storage, the 3850 X6 not only is known for its leadership performance, but also for its ability to scale in order to power traditional databases as well as new in-memory database and analytics solutions. Now customers can achieve leadership solution performance by virtualizing high performance databases and applications on the same server.

Clients also can realize infrastructure cost savings by hosting multiple generations of technology in an X6 single platform—without compromising performance or capacity. X6 servers help data center leaders avoid “rip and replace.”(3)

X6 platforms are the sixth generation of enterprise X Architecture™ (EXA) technology and represent more than 15 years of investment and innovation to exceed industry standards.

Results referenced are current as of May 5, 2015. To view all TPC results, visit www.tpc.org.

(1) The total solution availability for this TPC-H benchmark result is May 26, 2015. See the details for this result here: <http://www.tpc.org/3313>

(2) The HP® DL580 G8 server achieved a performance of 461,837 QphH @3,000GB and price/performance of \$2.04 USD/QphH @3,000GB using four Intel Xeon E7-4870 v2 processors at 2.80 GHz (4 processors/60 cores/120 threads), Microsoft SQL Server 2014 Enterprise Edition, and Microsoft Windows Server 2012 R2 Standard Edition. Total solution availability of April 16, 2014. Result details are at: <http://www.tpc.org/3298>

(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.

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