Lenovo ThinkSystem SR950 Achieves World Record Non-Clustered TPC-H@10,000GB Benchmark Result

Performance Benchmark Result

July 11, 2017 ... Lenovo has published the best performance result ever on the non-clustered TPC-H benchmark @10,000GB scale. This new result showcases the capability of the Lenovo ThinkSystem SR950 with the latest Intel Xeon processor technology running Microsoft SQL Server 2017.

The ThinkSystem SR950 server achieved the following score:

- **1,336,109.6 QphH @10,000GB (queries per hour H) at $0.92 USD / QphH @10,000GB** (1)

This score is the best performance score at the TPC-H @10,000GB scale among the non-clustered results, and is 19% faster than the previous #1 result in the non-clustered TPC-H @10,000GB category. (2)

The ThinkSystem SR950 server achieved this record level of data warehouse performance using Microsoft SQL Server 2017 Enterprise Edition and Microsoft Windows Server 2016 Standard Edition.

The ThinkSystem SR950 server was configured as follows:

- Intel Xeon Platinum 8180M 28C 205W 2.5GHz Processors (4 processors, 112 cores, 224 threads)
- 6TB of Lenovo TruDDR4 memory
- 8x ThinkSystem HHHL 3.2TB Performance NVMe PCIe 3.0 Flash Adapters

This result highlights a tightly-integrated optimized Microsoft SQL solution on the ThinkSystem SR950 server. The benchmark showcases the ability to process large amounts of data using this solution.

Results referenced are current as of July 11, 2017. To view all TPC results, visit http://www.tpc.org.

(1) The total solution availability for this TPC-H benchmark result is October 19, 2017. See the details for this result are available from http://www.tpc.org/3328.

 (2) Details about this result are at http://www.tpc.org/3326.

About the ThinkSystem SR950

Lenovo ThinkSystem SR950 is designed for your most demanding, mission-critical workloads, such as in-memory databases, large transactional databases, batch and real-time analytics, ERP, CRM, and virtualized server workloads.

The powerful 4U ThinkSystem SR950 can grow from two to eight Intel Xeon Scalable Family processors, and with 96 DIMM sockets, supports up to 12 TB of high-speed memory without having to replace the server enclosure or upgrade to a physically larger design. The modular design of SR950 speeds upgrades and servicing with easy front or rear access to all major subsystems to maximize server availability.

The SR950 packs numerous fault-tolerant and high-availability features into a high-density design. The SR950 offers enterprise scalability and advanced RAS features to support the most demanding mission-critical applications that require 24x7 operations. The new 4U rack optimized design reduces the space needed to support massive network computing operations and simplifies servicing.

Lenovo XClarity Controller is an all-new hardware embedded management engine common in every ThinkSystem server. XClarity Controller features an uncluttered graphical user interface, industry standard Redfish-compliant REST APIs, and enables booting in half the time of prior generation servers, with up to 6x faster firmware updates.

Lenovo XClarity Administrator is a virtualized application that centrally manages ThinkSystem servers, storage, and networking. Via reusable patterns and policies, it ramps up and scales infrastructure provisioning and maintenance. It serves as a central integration point to extend your data center management processes to physical IT. Running XClarity Integrators in external IT applications, or integrating through REST APIs, helps you further speed services provisioning, streamline IT management, and contain costs.

About TPC-H

The TPC Benchmark H (TPC-H) 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.

Learn more

To learn more about solutions for decision support and data warehouse applications, please contact your Lenovo Sales Representative.

To find out more about TPC, visit https://www.tpc.org

To learn more about the Lenovo ThinkSystem SR950 server, visit the SR950 product web page .

Related product families

Product families related to this document are the following:

- 4-Socket Rack Servers
- Large Memory Capacity Servers
- TPC-H Benchmark Results
- ThinkSystem SR950 Server

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