# ThinkSystem SR650 breaks two world records with new TPC-E result

## Performance Benchmark Result

July 11, 2017 ... Lenovo has published a new TPC-E benchmark result that has set two world records. Achieved on the powerful Lenovo ThinkSystem SR650 2U rack server, the benchmark result is the world's best result for two-processor (2P) performance. The benchmark result is also the overall best price/performance result for *any* server configuration.

The TPC-E benchmark is designed to enable customers to objectively measure and compare the performance and price of various On Line Transaction Processing (OLTP) and database systems.

The ThinkSystem SR650 server achieved the following score:

- **6,598.36 tpsE (transactions per second E) @ $93.48 USD/tpsE** (1)

This result sets two new records:

- The best two-processor performance in the industry: 39% faster and with 16% better price/performance than the Fujitsu PRIMERGY RX2540 M2. (2)
- The best price/performance of all TPC-E benchmark results, the first result ever to be under $100/tpsE.

The SR650 achieved this record level of OLTP performance using Microsoft SQL Server 2017 Enterprise Edition and Microsoft Windows Server 2016 Standard Edition. The SR650 was configured with two Intel Xeon Platinum 8180 processors at 2.50 GHz (2 processors, 56 cores, 112 threads) and 1536 GB of Lenovo TruDDR4 memory.

This result also relied on the new Lenovo Storage D1224 DAS enclosures. Four D1224 storage enclosures and over 60 SAS SSDs were used in the benchmark configuration, attached directly to the server using ThinkSystem RAID 930-8e controllers configured with RAID-5.

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-E benchmark result is October 19, 2017. See the details for this result at http://www.tpc.org/4080.

(2) Fujitsu PRIMERGY RX2540 M2 result details are from http://www.tpc.org/4077.

## About the ThinkSystem SR650

For medium to large enterprises, and managed and cloud service providers, Lenovo ThinkSystem SR650 is the optimum 2U, two-socket server—the most widely used server type worldwide. It's engineered to deliver high performance with 205W CPUs, low-latency NVMe drives, and high-power GPUs.

With Lenovo's history of reliability, the highly flexible and configurable SR650 is the ideal platform for hyper-converged infrastructure (HCI) or software-defined storage (SDS). It provides a solid foundation for:

- Transforming physical resources into services, using validated designs for hybrid cloud
- Performing analytics on streaming data, using validated designs for Big Data
- Increasing productivity of virtualized transactional systems, using validated designs for OLTP databases.

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 the Lenovo Storage D1212 and D1224 Enclosures

The Lenovo Storage D1212 and D1224 Disk Expansion Enclosures offer 12 Gbps SAS direct-attached storage expansion capabilities that are designed to provide simplicity, speed, scalability, security, and high availability for small to large businesses.

The D1212 (with 3.5-inch drives) and D1224 (with 2.5-inch drives), deliver enterprise-class storage technology in a cost-effective solution with flexible drive configurations and RAID or JBOD (non-RAID) host connectivity.

## Learn more

To learn more about solutions for database and OLTP applications, please contact your Lenovo Sales Representative.

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

To learn more about the Lenovo ThinkSystem SR650 server, visit the SR650 product web page: https://www.lenovo.com/us/en/data-center/servers/racks/ThinkSystem-SR650/p/77XX7SRSR65

## Related product families

Product families related to this document are the following:

- 2-Socket Rack Servers
- Direct-Attached Storage
- Microsoft SQL Server
- TPC-E Benchmark Results
- ThinkSystem SR650 Server

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