

ThinkSystem SR650 Achieves Single-Socket Leadership Performance per Watt with SPECpower_ssj2008 Benchmark Result

Performance Benchmark Result (withdrawn product)

The Lenovo ThinkSystem SR650 has set a new one-processor performance world record for the SPECpower_ssj 2008 benchmark.

The SPECpower_ssj 2008 benchmark is the first industry-standard benchmark that evaluates the power and performance characteristics of single server and multi-node servers.

The ThinkSystem SR650 server delivered the following SPECpower_ssj 2008 1-socket world record performance result:



- **SPECpower_ssj2008 = 11,631 overall ssj_ops/watt**

The SR650 was configured as follows:

- 1x Intel Xeon Platinum 8280 processor (28 cores, 2.7 GHz core frequency, 38.5 MB L3 cache)
- 96 GB of Lenovo TruDDR4 memory
- SUSE Linux Enterprise Server 12 SP4
- Oracle Java HotSpot 64-bit Server VM, version 1.7.0_80 (JVM)

Results referenced are current as of April 2, 2019.

This benchmark result can be found at the following web page:

https://www.spec.org/power_ssj2008/results/res2019q2/power_ssj2008-20190313-00934.html

To view all SPECpower_ssj 2008 results, see the following page:

https://www.spec.org/power_ssj2008/results/

About the ThinkSystem SR650

The Lenovo ThinkSystem SR650 server now supports Intel Optane DC Persistent Memory and up to two second-generation Intel Xeon Scalable processors. It features up to 36% total performance improvement compared to the previous generation and supports two 300W high-performance GPUs and ML2 NIC adapters with shared management. Unique Lenovo AnyBay technology provides the flexibility to mix-and-match SAS/SATA HDDs/SSDs and NVMe SSDs in the same drive bays. Support is now available for up to 24 NVMe drives.

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 SPECpower

The SPEC Power benchmark suite measures the power and performance characteristics of server-class computer equipment. It is used to compare power and performance among different servers and serves as a toolset for use in improving server efficiency. This benchmark is targeted for use by hardware vendors, IT industry, computer manufacturers, and governments.

Learn more

To learn more about power-efficient solutions for compute-intensive applications, please contact your Lenovo Sales Representative.

To find out more about SPEC, visit <https://www.spec.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/77XX7SR65>

Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)
- [SPECpower Benchmark Results](#)
- [ThinkSystem SR650 Server](#)

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