

ThinkSystem SR645 Sets World Record with New SPECpower on Linux Benchmark Result Performance Benchmark Result

The Lenovo ThinkSystem SR645 has set a new two-processor 1U rack server performance world record on Linux 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 servers and multi-node servers.



The ThinkSystem SR645 server delivered the following SPECpower_ssj 2008 2-socket 1U world record performance result on Linux:

- **SPECpower_ssj2008 = 22,467 overall ssj_ops/watt**

The SR645 was configured as follows:

- 2x AMD EPYC 7742 Processors (64 cores, 2.25 GHz, 256 MB L3 Cache)
- 256 GB of DDR4 memory.
- 1x 128GB M.2 SSD
- SUSE Linux Enterprise Server 12 SP5
- Oracle Java HotSpot 64-bit Server VM, build 11.0.3+12-LTS mixed mode (JVM)

Results referenced are current as of May 5, 2020.

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

https://www.spec.org/power_ssj2008/results/res2020q2/power_ssj2008-20200407-01024.html

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

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

About the ThinkSystem SR645

The Lenovo ThinkSystem SR645 server, now with AMD EPYC 7003 Series processors, delivers outstanding TCO for transactional database, ERP, virtualization and software-defined deployments. The combination of two AMD EPYC 7003 CPUs with class-leading memory speed and core density in a 1U chassis is a step forward compared to prior generation two-socket servers. Lenovo's lauded system reliability, management capabilities, and security infrastructure layer on to the exceptional value that the ThinkSystem SR645 brings to the data center. The ThinkSystem SR645 features two processors with up to an unprecedented 128 total cores with 128 PCIe Gen4 lanes to bring better efficiency to customers looking for the ultimate in core density and high speed direct attached storage in their data centers.

Compared to previous processor generations, the ThinkSystem SR645 delivers up to 2X performance and 4X floating point capability, providing faster data transfer and transaction capabilities without sacrificing memory capacity or I/O with PCIe Gen4 support and faster memory speeds up to 3200 MHz.

Key features:

- 128 cores across two processors to handle heavy-lift ERP, CRM, and virtualization workloads; provides cutting edge application efficiency in database applications, or electronic trading platforms for financial services applications.
- Compact 1U server with dense NVMe storage is an ideal platform for software defined storage or a hyperconverged solution
- Class-leading core density in the 1U form factor coupled with high speed 3200 MHz memory and PCIe Gen4 IO makes an ideal platform for advanced analytics

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 SR645 server, visit the SR645 product web page: <https://www.lenovo.com/us/en/data-center/servers/racks/ThinkSystem-SR645-Server/p/77XX7SR352S>

Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)
- [SPECpower Benchmark Results](#)
- [ThinkSystem SR645 Server](#)

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