ThinkSystem SR645 Sets World Record with New SPECjbb Benchmark Result

Performance Benchmark Result

The Lenovo ThinkSystem SR645 server has set a new 2-socket performance world record for the SPECjbb2015 benchmark.

SPECjbb2015 is a Java Business Benchmark and is the SPEC benchmark used for evaluating the performance of servers running typical Enterprise Java applications.

The ThinkSystem SR645 with two processors achieved the following top SPECjbb2015 score:

- **SPECjbb2015-MultiJVM Critical-jOPS (Windows Server 2019): 190,493**

SPECjbb2015 measures multi-threaded compute-intensive applications, with mixed industry workloads such as online purchase, inventory management, and supply. Critical-jOPS scores are ideal for measuring latency-critical applications.

The Lenovo ThinkSystem SR645 was configured as follows:

- 2x AMD EPYC 7742 processor - 64 cores, 2.25 GHz, 256 MB L3 cache per processor
- 1 TB system memory
- Windows Server 2019 Datacenter
- Oracle Java HotSpot 64-Bit Server VM, version 13.0.2

The result referenced is current as of May 5, 2020.

To view details of this result, go to the following SPEC web page:

- SPECjbb2015-MultiJVM Critical-jOPS (Windows Server 2019)
  https://www.spec.org/jbb2015/results/res2020q2/jbb2015-20200408-00537.html

To view all SPECjbb2015 results, go to
https://www.spec.org/jbb2015/results/jbb2015.html

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 SPECjbb2015

The SPECjbb 2015 benchmark has been developed from the ground up to measure performance based on the latest Java application features. It is relevant to all audiences who are interested in Java server performance, including JVM vendors, hardware developers, Java application developers, researchers and members of the academic community.

SPECjbb2015 scores are ideal for measuring throughput and latency of multi-threaded compute-intensive applications such as online purchasing, inventory management, and supply.

Learn more

To learn more about solutions for Java 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
- SPECjbb Benchmark Results
- ThinkSystem SR645 Server

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