ThinkSystem SR860 V3 Sets World Record with New SAP SD2T Benchmark Result

Performance Benchmark Result

The Lenovo ThinkSystem SR860 V3, using Intel Xeon Platinum 8490H processors, demonstrates best performance in the industry in the SAP SD 2-tier standard application benchmark on Windows, as compared to other systems with four Intel processors.

The SAP Standard Application SD (Sales and Distribution) Benchmark is an ERP business test that represents the critical tasks performed in real-world ERP business environments, is indicative of full business workloads of complete order processing and invoice processing, and demonstrates the ability to run both the application and database software on a single system.

The benchmark result was published on July 31, 2023. The result was achieved on the ThinkSystem SR860 V3, configured with four Intel Xeon Platinum 8490H processors, and running IBM Db2 11.5 and SAP enhancement package 5 for the SAP ERP application release 6.0.

Lenovo delivered the following certified result (1):

- **Number of SAP SD benchmark users: 128,001**

Throughput:

- Fully processed order line items per hour: 14,261,000
- Dialog steps per hour: 42,783,000
- SAPS: 713,050
- Average database request time (dialog/update): 5 ms / 9 ms

The benchmark result was a 97% performance gain over a similar two-tier SAP Sales and Distribution Standard Application Benchmark (2) completed on a Lenovo ThinkSystem SR860 V2 server with previous-generation Intel Xeon Platinum processors.

Configuration of the central server:

- ThinkSystem SR860 V3
- Four Intel Xeon Platinum 8490H processors (1.90 GHz core frequency, 240 total cores, 480 total threads)
- Cache: 80 KB L1 cache and 2048 KB L2 cache per core, 112.5 MB L3 cache per processor
- 2048 GB main memory

Software platform:

- Operating system, central server: Microsoft Windows Server 2019

- RDBMS: IBM Db2 11.5
- SAP Business Suite software: SAP enhancement package 5 for SAP ERP 6.0

Results referenced are current as of July 31, 2023. For the latest SAP benchmark results, visit: https://www.sap.com/dmc/exp/2018-benchmark-directory/#/sd.

(1) This benchmark fully complies with the SAP Benchmark Council regulations and has been audited and certified by SAP SE. Details are available at https://www.sap.com/dmc/benchmark/2023/Cert23032.pdf. The benchmark was performed at Lenovo Infrastructure Solutions Group Performance Lab in Research Triangle Park, NC, USA, by Lenovo engineers.

(2) This benchmark fully complies with the SAP Benchmark Council regulations and has been audited and certified by SAP SE. Details are available at https://www.sap.com/dmc/benchmark/2020/Cert20050.pdf. The benchmark was performed at Infrastructure Systems Performance Lab, Lenovo in Research Triangle Park, NC, USA, by Lenovo engineers.

About the ThinkSystem SR860 V3

The Lenovo ThinkSystem SR860 V3 mission-critical server provides the speed and reliability you require today with the scalability and workload versatility you'll need to manage the explosive growth of data for tomorrow. Purpose-built to deliver affordable scalability in an industry-standard x86 platform, the SR860 V3 is ideal for mission critical workloads such as SAP HANA in-memory computing, transactional databases, analytics, big data, and enterprise resource planning tasks.

The Lenovo ThinkSystem SR860 V3 is a 4-socket server that features a 4U rack design, providing technology advances, including 4th Gen Intel® Xeon® Scalable processors, 4800 MHz DDR5 memory, large internal storage, and PCIe Gen 5 slots with support for up to eight high-performance GPUs, offering considerable adaptability to match system configurations to projected workloads. The system has the capability to scale from two to four 4th Gen Intel® Xeon® Scalable processor family CPUs that offers a simple "pay as you grow" upgrade for both processors and memory, resulting in greater system performance to handle growing next-generation workloads.

Server reliability, availability, and serviceability (RAS) are crucial issues for modern enterprise IT shops that deliver mission-critical applications and services, and application delivery failures can be extremely costly per hour of system downtime. Intel Xeon Scalable processors running on ThinkSystem servers continue to be at the top of the industry in regards to RAS features. For further information on the importance of RAS and a comprehensive list of the key RAS features of the Lenovo ThinkSystem servers with Intel Xeon Scalable processors, read RAS Features of the Lenovo ThinkSystem Intel Servers .

About SAP SD

SAP SD benchmark is a test for standard sale and distribution business components on SAP ERP, which is indicative of the performance of the application and database on a specific hardware environment. For more information about the benchmark, go to https://www.sap.com/about/benchmark/appbm/erp.html.

Learn more

To learn more about SAP solutions on Lenovo servers visit the following page:
https://www.lenovo.com/us/en/data-center/solutions/sap/

To learn more about the Lenovo ThinkSystem SR860 V3 server, visit the SR860 V3 product web page:
https://www.lenovo.com/us/en/p/servers-storage/servers/mission-critical/thinksystem-sr860-v3/7d931000na

Related product families

Product families related to this document are the following:

- IBM Alliance
- IBM Db2
- SAP Alliance
- SAP SD Benchmark Results
- ThinkSystem SR860 V3 Server

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