ThinkSystem SR860 V2 Sets 2 World Records with New 2-node SPECmpiM Benchmark Result
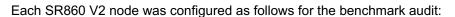## Performance Benchmark Result

The Lenovo ThinkSystem SR860 V2 has set two new 2-node 4-socket performance world records with the SPECmpiM_base2007 and SPECmpiM_peak2007 metrics from the MPI M2007 suite of the SPEC MPI 2007 Benchmark. The SPECmpiM Benchmark suite is an industry standard method to evaluate MPI-parallel, floating point, compute intensive performance across a wide range of cluster and SMP hardware.

This new benchmark result, published in a new SPEC Report on November 4, 2020, demonstrates that the ThinkSystem SR860 V2 continues Lenovo's leadership with outstanding performance for the server industry.

The ThinkSystem SR860 V2 has achieved the following scores:

- **SPECmpiM_base2007 = 66.6**
- **SPECmpiM_peak2007 = 66.6**

Each SR860 V2 node was configured as follows for the benchmark audit:

- 4x Intel Xeon Platinum 8380H Processors (28 cores, 2.90GHz)
- 1536 GB memory (48x 32GB RDIMMs at 3200MHz)
- 1TB SATA 2.5-inch SSD
- SUSE Linux Enterprise Server 15 SP2 5.3.18-22-default
- ThinkSystem Mellanox ConnectX-6 HDR InfiniBand Adapter

Results referenced are current as of November 4, 2020.

The new Lenovo benchmark result can be found at:
https://www.spec.org/mpi2007/results/res2020q4/mpi2007-20201020-00670.html

About the ThinkSystem SR860 V2

The Lenovo ThinkSystem SR860 V2 server provides the speed and reliability you require today, with the scalability and workload versatility to you'll need to manage the explosive growth of data; its design offers considerable adaptability in order to match system configurations to projected workloads.

The ThinkSystem SR860 V2 is purpose-built to deliver affordable scalability in an industry-standard x86 platform, ideal for mission critical workloads such as SAP HANA in-memory computing, transactional databases, analytics, big data, and enterprise resource planning tasks.

Up to four 250W third-generation Intel® Xeon® Scalable CPUs configured with a mesh topology pair with up to four enterprise-class GPUs position the SR860 V2 to tackle compute-intensive applications, leveraging thousands of GPU processor cores and parallel architecture in combination with additional storage and networking that's both high-performing and flexible.

Key features:

- Up to four 250W 3rd Generation Intel Xeon Scalable CPUs configured with a mesh topology combines with up to 48 2.5" HDD or SSDs, of which 24 can be NVMe SSDs to speed database response times, reducing latency and eliminating storage as the throughput bottleneck in I/O-intensive applications such as transactional processing, HPC, and Big data applications.
- Supports two or four processors, allowing you to start with two processors and then upgrade to four when you need it.
- Capability to handle four double-width GPUs or eight single-width GPUs to accelerate AI inference and deep learning proficiencies.
- Support for up to 12TB of DDR4 memory with DIMMs operating at up to 3200 MHz at 2DPC, and Intel Optane™ Persistent Memory 200 Series accelerates performance for in-memory databases and applications, reducing downtime and increasing application availability.
- High I/O bandwidth coupled with a generous number of PCIe expansion slots provides the additional connectivity scalability as your business and workload demands increase.
- Full Lenovo XClarity and ThinkShield system support for seamless infrastructure management and improved data security.

About SPEC MPI

The SPEC MPI 2007 benchmark suite evaluates Message-Passing Interface (MPI)-parallel, floating point, compute-intensive performance across a wide range of cluster and symmetric multiprocessing (SMP) server hardware. The suite includes the initial MPIM2007 suite, which contains medium-sized working sets and run times, and the newer MPIL2007 suite, which contains larger working sets and longer run times. This MPI 2007 continues the SPEC tradition of giving users the most objective and representative benchmark suite for measuring and comparing high-performance computer systems.

SPEC MPI 2007 focuses on performance of compute intensive applications using the MPI, which means this benchmark emphasizes the performance of all of the following:

- Type of processor
- Number of computer processors
- MPI Library
- Communication interconnect
- Memory architecture
- Compiler used
- Type of shared file system

The benchmark is not intended to stress other computer components such as the operating system, graphics, or the I/O system.

For more information about SPEC MPI 2007, see https://www.spec.org/mpi2007/.

Learn more

To learn more about 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 SR860 V2 server, visit the SR860 V2 product web page: https://www.lenovo.com/us/en/data-center/servers/mission-critical/ThinkSystem-SR860-V2-Server/p/77XX7HS86V2

Related product families

Product families related to this document are the following:

- 4-Socket Rack Servers
- SPECmpi Benchmark Results
- ThinkSystem SR860 V2 Server

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