

ThinkSystem SR650 V4 Sets World Record with New VMmark4 Benchmark Result

Performance Benchmark Result

The Lenovo ThinkSystem SR650 V4 has set a new VMmark world record. The server has achieved the best VMmark 4 result for servers in a 2-socket matched pair configuration that use Intel's latest processors, formerly codenamed "Granite Rapids". Two of these powerful servers, each configured with a pair of 350-Watt Intel Xeon 6787P processors, achieved the following benchmark result:

- The highest VMmark 4 performance ever published for 2-socket servers using Intel processors in a 2-socket matched pair configuration.

The VMmark 4 benchmark is a free web-scale multi-server virtualization platform benchmark developed by VMware, part of Broadcom. The benchmark is designed to enable enterprise customers to objectively measure and compare the performance and scalability of various virtualization platforms.



The ThinkSystem SR650 V4 server achieved the following VMmark 4.0.2 score (1):

- **3.39 @ 3.8 Tiles**

This result is:

- The highest VMmark 4 result for servers with Intel processors in a 2-socket matched pair configuration
- 1.49% faster than the second-place result, with the identical processors (2)
- 35.6% better performance than a previous generation 2-socket server with 5th Generation Intel Xeon Platinum processors, formerly codenamed "Emerald Rapids" (3)
- The result achieves 95.7% performance of a 4-socket server with 4th Generation Intel Xeon Platinum processors, formerly codenamed "Sapphire Rapids" (4)

The two ThinkSystem SR650 V4 servers achieved this record level of virtualization performance using the following configuration:

- Two Lenovo ThinkSystem SR650 V4 servers configured as systems under test (SUTs). Each SUT included:
 - 2x Intel Xeon 6787P 86-core processors at 2.0GHz (total 2 processors, 172 cores, 344 threads)
 - 16x Lenovo TruDDR5 64GB 8800MHz memory
 - VMware ESXi 8.0 Update 3 with Patch 05, Build 24560471
- Two Lenovo ThinkSystem SR665 V3 servers configured as client hosts, each with:
 - 2x AMD EPYC 9654 96-core processors at 2.4 GHz (total 2 processors, 192 cores, 384 threads)
 - 24 x Lenovo TruDDR5 64GB 4800MHz memory

- VMware ESXi 8.0 Update 3 with Patch 05, Build 24560471
- One Lenovo ThinkSystem SR655 server configured as server management host:
 - VMware ESXi 8.0 Update 3b, Build 24280767
 - VMware vCenter Server 8.0 Update 3b, Build 24322831
- Four Lenovo ThinkSystem SR665 servers and one Lenovo ThinkSystem SR655 server were all configured as external Fibre Channel targets:
 - SUSE Linux Enterprise Server 15 SP5 Linux 5.14.21-150500.53-default kernel
 - Attach to the SUTs via a Fibre Channel switch

The total solution availability for this VMmark 4 benchmark result is on May 09, 2025.

Results referenced are current as of April 15, 2025.

To view all VMmark results, visit <https://www.vmware.com/products/vmmark/results4x>.

(1) 2x Lenovo ThinkSystem SR650 V4 each with 2x Intel Xeon 6787P processors (2 hosts, 4 total sockets, 344 total cores, 688 total threads) scored 3.39 @ 3.8 tiles. See the details for this result at: https://www.vmware.com/docs/2025-04-15-Lenovo-ThinkSystem-SR650-V4-3_39

(2) 2x Dell PowerEdge R770 each with 2x Intel Xeon 6787P processors (2 hosts, 4 total sockets, 344 total cores, 688 total threads) scored 3.34 @ 4.2 tiles. See the details for this result at: https://www.vmware.com/docs/2025-03-18-Dell-PowerEdge-R770-3_34

(3) 2x Dell PowerEdge R760 each with 2x Intel Xeon Platinum 8592+ processors (2 hosts, 4 total sockets, 256 total cores, 512 total threads) scored 2.50 @ 3 tiles. See the details for this result at: https://www.vmware.com/docs/2025-02-04-Dell-PowerEdge-R760-2_50

(4) 2x Lenovo SR860 V3 each with 4x Intel Xeon Platinum 8490H processors (2 hosts, 8 total sockets, 480 total cores, 960 total threads) scored 3.54 @ 4 tiles. See the details for this result at: <https://www.vmware.com/docs/2024-11-12-Lenovo-ThinkSystem-SR860V3>

About the ThinkSystem SR650 V4

The Lenovo ThinkSystem SR650 V4 is an ideal 2-socket 2U rack server for customers that need industry-leading reliability, management, and security, as well as maximizing performance and flexibility for future growth. The SR650 V4 is based on two Intel Xeon 6700-series or Xeon 6500-series processors, with Performance-cores (P-cores).

The SR650 V4 is designed to handle a wide range of workloads, such as databases, virtualization and cloud computing, virtual desktop infrastructure (VDI), infrastructure security, systems management, enterprise applications, collaboration/email, streaming media and web.

Combining performance and flexibility, the SR650 V4 server is a great choice for enterprises of all sizes. The server offers a broad selection of drive and slot configurations and offers numerous high-performance features. Outstanding reliability, availability, and serviceability (RAS) and high-efficiency design can improve your business environment and can help save operational costs, read [RAS Features of the Lenovo ThinkSystem Intel Servers](#).

About VMmark

The VMmark benchmark is designed to measure the performance and scalability of virtualization platforms using workloads representative of the highly scalable and complex applications commonly found in the data center. VMmark is used to compare the performance of different hardware platforms and configurations.

Customers implementing or evaluating virtualization platforms use VMmark for comparing performance and scalability of various server platforms and storage solutions, making appropriate hardware choices, and for measuring platform performance on an ongoing basis.

Learn more

To learn more about solutions for virtualization applications, please contact your Lenovo Sales Representative.

To find out more about VMmark4, visit <https://www.vmware.com/products/vmmark>

To learn more about the Lenovo ThinkSystem SR650 V4 server, visit the SR650 V4 product web page: <https://www.lenovo.com/us/en/p/servers-storage/servers/racks/lenovo-thinksystem-sr650-v4/len21ts0042>

Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)
- [ThinkSystem SR650 V4 Server](#)
- [VMmark Benchmark Results](#)

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