

## ThinkSystem SR645 V3 Sets World Record with New SPECpower on Linux Benchmark Result Performance Benchmark Result

Lenovo has published a new SPECpower\_ssj 2008 benchmark result that has set one new world record. The result has been achieved on the powerful Lenovo ThinkSystem SR645 V3 server using the new AMD EPYC 9845 processor.

The world-record benchmark result is:

- Best score on a 2-processor, 1U rack system running Linux Server

The SPECpower\_ssj 2008 benchmark is an industry-standard benchmark that evaluates the power and performance characteristics of single servers and multi-node servers.



The ThinkSystem SR645 V3 server achieved the following score :

- **SPECpower\_ssj2008 = 41,427 overall ssj\_ops/watt**

The SR645 V3 was configured as follows:

- 2x AMD EPYC 9845 ("Turin") processors (160 cores, 2.10 GHz, 320 MB L3 cache)
- 384 GB of DDR5 memory
- 1x 240GB M.2 SSD
- SUSE Linux Enterprise Server 15 SP6
- Oracle Java HotSpot (TM) 64-Bit Server VM (build 17.0.10+11-LTS-240, mixed mode)

Results referenced are current as of December 17, 2024.

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

[https://spec.org/power\\_ssj2008/results/res2024q4/power\\_ssj2008-20241118-01470.html](https://spec.org/power_ssj2008/results/res2024q4/power_ssj2008-20241118-01470.html)

To view all SPECpower\_ssj 2008 results, see the following page:

[https://www.spec.org/power\\_ssj2008/results/](https://www.spec.org/power_ssj2008/results/)

## About the ThinkSystem SR645 V3

The ThinkSystem SR645 V3 with AMD processors, is the most powerful 2S 1U server in the industry. Ideal for Cloud Service Providers and high-performance computing workloads with its ultra-dense design and option for liquid cooling. The 320 cores of the dual 5th Gen AMD EPYC™ "Turin" family processors with up to 160 PCIe lanes and up to 6TB of the latest DDR5 memory, maximize the performance of this 2U server.

The SR645 V3 is designed to support today's infrastructure and easily scale to prepare for next gen workloads. Multiple drive options using SAS/SATA and NVMe with hot-swap capabilities and XClarity system management software enable changes to be made quickly with ease.

## 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 V3 server, visit the SR645 V3 product web page: <https://www.lenovo.com/us/en/p/servers-storage/servers/racks/thinksystem-sr645-v3/len21ts0008>

## Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)
- [SPECpower Benchmark Results](#)
- [ThinkSystem SR645 V3 Server](#)

## Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service. Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

Lenovo (United States), Inc.  
8001 Development Drive  
Morrisville, NC 27560  
U.S.A.  
Attention: Lenovo Director of Licensing

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Lenovo may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary. Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk. Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

© Copyright Lenovo 2025. All rights reserved.

This document, LP2123, was created or updated on December 30, 2024.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at:  
<https://lenovopress.lenovo.com/LP2123>
- Send your comments in an e-mail to:  
[comments@lenovopress.com](mailto:comments@lenovopress.com)

This document is available online at <https://lenovopress.lenovo.com/LP2123>.

## Trademarks

Lenovo and the Lenovo logo are trademarks or registered trademarks of Lenovo in the United States, other countries, or both. A current list of Lenovo trademarks is available on the Web at <https://www.lenovo.com/us/en/legal/copytrade/>.

The following terms are trademarks of Lenovo in the United States, other countries, or both:

Lenovo®

ThinkSystem®

XClarity®

The following terms are trademarks of other companies:

AMD and AMD EPYC™ are trademarks of Advanced Micro Devices, Inc.

Linux® is the trademark of Linus Torvalds in the U.S. and other countries.

SPEC®, SPECpower\_ssj®, and SPECpower® are trademarks of the Standard Performance Evaluation Corporation (SPEC).

Other company, product, or service names may be trademarks or service marks of others.