ThinkSystem SR655 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 a new world record. The result has been achieved on the powerful Lenovo ThinkSystem SR655 V3 server using the new AMD EPYC 9845 processor.

The world-record benchmark result is:

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

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 SR655 V3 server achieved the following score :

- **SPECpower_ssj2008 = 40,013 overall ssj_ops/watt**

The SR655 V3 was configured as follows:

- 1x AMD EPYC 9845 ("Turin") processor (160 cores, 2.10 GHz, 320 MB L3 cache)
- 192 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_ssj2008-20241118-01475.html

To view all SPECpower_ssj 2008 results, see the following page:
https://www.spec.org/power_ssj2008/results/

About the ThinkSystem SR655 V3

The Lenovo ThinkSystem SR655 V3 is a 1-socket 2U server that features the 5th Gen AMD EPYC "Turin" family processors. With up to 160 cores per processor and support for the new PCIe 5.0 standard for I/O, the SR655 V3 offers the ultimate 1-socket server performance in a 2U form factor. The server is ideal for dense workloads that can take advantage of GPU processing and high-performance NVMe drives.

The SR655 V3 server is a highly agile offering, supporting 31 different drive bay configurations utilizing the front, middle and rear locations of the server. It also includes 6 different slot configurations at the rear of the server. This adds flexibility to ensure that you can configure the server exactly the way your workload requires.

Combining performance and flexibility, the SR655 V3 server is a great choice for enterprises of all sizes. The server offers a broad selection of drive and slot configurations and offers high performance features that industries such as finance, healthcare and telco need. Outstanding reliability, availability, and serviceability (RAS) and high-efficiency design can improve your business environment and can help save operational costs.

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 SR655 V3 server, visit the SR655 V3 product web page: https://www.lenovo.com/us/en/p/servers-storage/servers/racks/thinksystem-sr655-v3/len21ts0021

Related product families

Product families related to this document are the following:

- 1-Socket Rack Servers
- SPECpower Benchmark Results
- ThinkSystem SR655 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.

This document, LP2119, was created or updated on January 6, 2025.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at:
  https://lenovopress.lenovo.com/LP2119
- Send your comments in an e-mail to:
  comments@lenovopress.com

This document is available online at https://lenovopress.lenovo.com/LP2119.

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®

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.