Three World Record SPEC CPU2017 Benchmark Results for 8-Processor ThinkSystem SR950

Performance Benchmark Result (withdrawn product)

November 8, 2017… Lenovo has published three top SPEC CPU2017 benchmark scores for the Lenovo ThinkSystem SR950 rack server with eight Intel Xeon Platinum 8180 processors. The top scores were for metrics SPECspeed2017_int_base, SPECspeed2017_fp_base, and SPECrate2017_fp_base.

The SPECspeed scores are ideal for measuring single-threaded compute-intensive applications, such as High Frequency Trading (HFT) and other financial industry workloads. The SPECrate score is ideal for measuring multi-threaded compute-intensive applications, such as High Performance Computing (HPC) workloads.

The ThinkSystem SR950 with eight processors achieved the following scores:

- **SPECspeed2017_int_base = 9.37**
- **SPECspeed2017_fp_base = 153**
- **SPECrate2017_fp_base = 982**

The ThinkSystem SR950 was configured as follows:

- Eight Intel Xeon Platinum 8180 processors (2.5 GHz, 38.5 MB L3 cache per processor, 8 processors with a total of 224 cores, 28 cores per processor)
- 3TB of Lenovo TruDDR4 memory
- SUSE Linux Enterprise Server 12 SP2

The result is current as of November 8, 2017. To view details of these results, go to:

- SPECspeed2017_int_base result
- SPECspeed2017_fp_base result
- SPECrate2017_fp_base result

To view all SPEC CPU2017 results, go to http://www.spec.org/cpu2017/results/

About the ThinkSystem SR950

Lenovo ThinkSystem SR950 is designed for your most demanding, mission-critical workloads, such as in-memory databases, large transactional databases, batch and real-time analytics, ERP, CRM, and virtualized server workloads.

The powerful 4U ThinkSystem SR950 can grow from two to eight Intel Xeon Scalable Family processors, and with 96 DIMM sockets, supports up to 12 TB of high-speed memory without having to replace the server enclosure or upgrade to a physically larger design. The modular design of SR950 speeds upgrades and servicing with easy front or rear access to all major subsystems to maximize server availability.

The SR950 packs numerous fault-tolerant and high-availability features into a high-density design. The SR950 offers enterprise scalability and advanced RAS features to support the most demanding mission-critical applications that require 24x7 operations. The new 4U rack optimized design reduces the space needed to support massive network computing operations and simplifies servicing.

Lenovo XClarity Controller is an all-new hardware embedded management engine common in every ThinkSystem server. XClarity Controller features an uncluttered graphical user interface, industry standard Redfish-compliant REST APIs, and enables booting in half the time of prior generation servers, with up to 6x faster firmware updates.

Lenovo XClarity Administrator is a virtualized application that centrally manages ThinkSystem servers, storage, and networking. Via reusable patterns and policies, it ramps up and scales infrastructure provisioning and maintenance. It serves as a central integration point to extend your data center management processes to physical IT. Running XClarity Integrators in external IT applications, or integrating through REST APIs, helps you further speed services provisioning, streamline IT management, and contain costs.

About SPEC CPU2017

SPEC CPU 2017 is SPEC's next-generation, industry-standardized, CPU intensive suite of benchmarks for measuring and comparing compute intensive performance, stressing a system's processor, memory subsystem and compiler. This benchmarks provides a comparative measure of compute-intensive performance using workloads developed from real user applications.

The SPEC CPU 2017 benchmark suite measures server performance in the following ways:

- SPECspeed 2017 is to compare time for a computer to complete single tasks
- SPECrate 2017 is to measure the throughput or work per unit of time.

This benchmark is targeted for use by hardware vendors, IT industry, computer manufacturers, and government.

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 SR950 server, visit the SR950 product web page.

Related product families

Product families related to this document are the following:

- 8-Socket Rack Servers
- Large Memory Capacity Servers
- SPECcpu Benchmark Results
- ThinkSystem SR950 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 2026. All rights reserved.

This document, LP0809, was created or updated on November 8, 2017.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at:
  https://lenovopress.lenovo.com/LP0809
- Send your comments in an e-mail to:
  comments@lenovopress.com

This document is available online at https://lenovopress.lenovo.com/LP0809.

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:

Intel®, the Intel logo and Xeon® are trademarks of Intel Corporation or its subsidiaries.

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

SPEC®, SPEC CPU®, SPECrate®, and SPECspeed® are trademarks of the Standard Performance Evaluation Corporation (SPEC).

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