

## Lenovo Posts Three World Record SPECvirt\_sc2013 Benchmark Results with ThinkSystem SR650 Performance Benchmark Result

November 8, 2017 ... Lenovo has published three world-record two-processor (2P) performance results for the SPECvirt\_sc2013 benchmark, including performance/watt results. The SPEC VIRT benchmark suites are used to measure performance and energy efficiency of virtualized platforms.

These benchmark suites are targeted for use by hardware vendors, virtualization software vendors, application software vendors, datacenter managers, and academic researchers.

The ThinkSystem SR650 server delivered the following overall SPECvirt\_sc2013 world-record performance scores for 2-socket platforms:



- **SPECvirt\_sc2013 3376 @ 189 VMs**
- **SPECvirt\_sc2013\_ServerPPW 4.792 @ 179 VMs**
- **SPECvirt\_sc2013\_PPW 4.792 @ 179 VMs**

The SR650 was configured as follows:

- Performance score (3376 @ 189 VMs) used the Intel® Xeon® Platinum 8180 processor (2.5 GHz with 38.5 MB L3 cache per processor: 2 chips/56 cores/28 cores per chip)
- Performance/Watt configuration (4.792 @ 179 VMs) used the Intel® Xeon® Platinum 8176 processor (2.1 GHz with 38.5 MB L3 cache per processor: 2 chips/56 cores/28 cores per chip)
- 768 GB of DDR4 memory
- Two ThinkSystem RAID 930-8i-2GB 12Gb SAS/SATA Adapters
- Two Intel X710-DA2 10Gb 2 Port SFP+ Ethernet Adapters
- SUSE Linux Enterprise Server 12 SP2 using the Kernel-based Virtual Machine (KVM) hypervisor

This benchmark result can be found at:

- [SPECvirt\\_sc2013 result](#)
- [SPECvirt\\_sc2013\\_ServerPPW result](#)
- [SPECvirt\\_sc2013\\_PPW result](#)

Results referenced are current as of November 8, 2017. To view all SPECvirt\_sc2013 results, visit [https://www.spec.org/virt\\_sc2013/results/specvirt\\_sc2013\\_perf.html](https://www.spec.org/virt_sc2013/results/specvirt_sc2013_perf.html)

## About the ThinkSystem SR650

For medium to large enterprises, and managed and cloud service providers, Lenovo ThinkSystem SR650 is the optimum 2U, two-socket server—the most widely used server type worldwide. It's engineered to deliver high performance with 205W CPUs, low-latency NVMe drives, and high-power GPUs.

With Lenovo's history of reliability, the highly flexible and configurable SR650 is the ideal platform for hyper-converged infrastructure (HCI) or software-defined storage (SDS). It provides a solid foundation for:

- Transforming physical resources into services, using validated designs for hybrid cloud
- Performing analytics on streaming data, using validated designs for Big Data
- Increasing productivity of virtualized transactional systems, using validated designs for OLTP databases.

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 SPECvirt

SPECvirt\_sc2013 is the second-generation SPEC benchmark for evaluating the virtualization performance of datacenter server consolidation (SPEC VIRT), including enterprise class workloads such as virtualized SMP application server VMs and SMP database VMs, as well as dynamic workload levels across many workload types and VM instances.

## Learn more

To learn more about power-efficient solutions for virtualization 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 SR650 server, visit the [SR650 product web page](#).

## Related product families

Product families related to this document are the following:

- [2-Socket Rack Servers](#)
- [SPECvirt Benchmark Results](#)
- [ThinkSystem SR650 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 2024. All rights reserved.

This document, LP0800, 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/LP0800>
- 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/LP0800>.

## 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® 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® and SPEC VIRT® are trademarks of the Standard Performance Evaluation Corporation (SPEC).

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