ThinkSystem SR655 Server and ThinkSystem DM7000F Storage Set World Record with New 1-Socket VMmark3 Result
Performance Benchmark Result

Lenovo has published a new VMmark3 benchmark result that has set record for one-processor 2-node performance for VMmark3. Notably, the *1-processor* 2-node Lenovo result achieved a score that surpassed the highest Intel-based *2-processor* 2-node result from Fujitsu's PRIMERGY RX2540 M5 (2).

The VMmark3 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.

The ThinkSystem SR655 server achieved the following score (1):

- **9.10 @ 10 Tiles**

The SR655 achieved this record level of virtualized data center performance using the following configuration:

- ThinkSystem SR655
- 1x AMD EPYC 7742 64-core processor at 2.25 GHz (1 processor, 64 cores, 128 threads)
- 1024 GB of Lenovo TruDDR4 memory
- VMware ESXi 6.7 U3
- VMware vCenter 6.7 U3

This result also relied on the Lenovo ThinkSystem DM7000F Storage and DB620S Fibre Channel switch, configured as follows:

- 2x ThinkSystem DM Series DM7000 Controllers
- 2x ThinkSystem DM240S 2U24 SFF Expansion Enclosures
- 36x 960GB SSDs
- 1x Lenovo ThinkSystem DB620S 32Gb FC SAN Switch

Results referenced are current as of September 16, 2019. The total solution availability for this VMmark3 benchmark result is December 15, 2019.

To view all VMmark 3.x results, visit https://www.vmware.com/products/vmmark/results3x.html.

(1) The new Lenovo result is available from
https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2019-09-17-Lenovo-ThinkSystem-SR655.pdf

(2) Fujitsu PRIMERGY RX2540 M5 result details are from
https://www.vmware.com/content/dam/digitalmarketing/vmware/en/pdf/vmmark/2019-04-02-Fujitsu-RX2540M5.pdf

About the ThinkSystem SR655

The Lenovo ThinkSystem SR655 is a 1-socket 2U server that features the AMD EPYC 7002 "Rome" and AMD EPYC 7003 "Milan" families of processors. With up to 64 cores per processor and support for the PCIe 4.0 standard for I/O, the SR655 offers the ultimate in single-socket server performance. With up to 128 PCIe lanes, the server is ideal for workloads that can take advantage of GPU processing and high-performance NVMe drives.

ThinkSystem SR655 is a multi-GPU optimized rack server, with support for up to 6 single-wide GPUs providing 200% more workload acceleration in AI, SDI and VDI instances. Capacity for up to 32x 2.5" low-latency NVMe drives that pairs well with the demands of low-latency, high-bandwidth storage such as clustered SAN solutions and software-defined storage. Eight PCIe Gen4 slots offer 2x faster I/O and support for 16 DIMMs with 2TB of DDR4 memory capacity ensure the SR655 is ideal for high performance database applications.

About the Lenovo ThinkSystem DM7000F Storage

The ThinkSystem DM7000F Unified Flash Storage Array is a perfect fit for a wide range of enterprise workloads, including big data and analytics, artificial intelligence, engineering and design, hybrid clouds, and other storage I/O-intensive applications. The DM7000F is a scalable, unified, all flash storage system that is designed to provide high performance, simplicity, capacity, security, and high availability for large enterprises. Powered by the ONTAP software, this system delivers enterprise-class storage management capabilities with a wide choice of host connectivity options, flexible drive configurations, and enhanced data management features, including support for NVMe over Fabrics.

The ThinkSystem DM7000F offers the following key features and benefits:

- All-flash array capabilities to meet the demand for higher speed storage and provide higher IOPS and bandwidth with lower power usage and total cost of ownership than hybrid or HDD-based solutions
- Scalable, all flash storage with dual active/active controller configurations for high availability and performance.
- NVMe over Fabrics helps achieve up to two times higher performance at a half of the latency.

Learn more

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

To find out more about VMmark, visit https://www.vmware.com/products/vmmark.html

To learn more about the Lenovo ThinkSystem SR655 server, visit the SR655 product web page:
https://www.lenovo.com/us/en/data-center/servers/racks/ThinkSystem-SR655-Server/p/77XX7SRSR75

Related product families

Product families related to this document are the following:

- 1-Socket Rack Servers
- DM Series Storage
- ThinkSystem SR655 Server
- VMmark Benchmark Results

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