

New World Records Set with the STAC-M3 Benchmark Result on the ThinkSystem SR650 Performance Benchmark Result

The Lenovo ThinkSystem SR650 has set 15 new performance world records with the Antuco suite of the STAC-M3 benchmark. The STAC-M3 Benchmark suite is the industry standard for testing solutions that enable high-speed analytics on time series data, such as tick-by-tick market data, also known as tick database stacks.

These new benchmark results are published on July 11, 2017 in a new STAC Report, [SUT ID KDB170703](#). The results demonstrate that the SR650 continues Lenovo's leadership with world record breaking performance for the financial services industry.



Compared to previous publicly reported results for single-node 2-socket servers running the kdb+ database, the SR650 set records in 15 of 17 mean response-time benchmark categories.

Mean response-time benchmark category world records are as follows:

- STAC-M3.β1.1T.NBBO.TIME
- STAC-M3.β1.1T.WKHIBID.TIME
- STAC-M3.β1.1T.MOHIBID.TIME
- STAC-M3.β1.1T.QTRHIBID.TIME
- STAC-M3.β1.1T.YRHIBID.TIME
- STAC-M3.β1.1T.YRHIBID-2.TIME
- STAC-M3.β1.10T.MKTSNAP.TIME
- STAC-M3.β1.10T.STATS-AGG.TIME
- STAC-M3.β1.10T.THEOPL.TIME
- STAC-M3.β1.10T.VOLCURV.TIME
- STAC-M3.β1.10T.STATS-UI.TIME
- STAC-M3.β1.50T.STATS-UI.TIME
- STAC-M3.β1.100T.STATS-UI.TIME
- STAC-M3.β1.100T.VWAB-12D-NO.TIME
- STAC-M3.β1.1T.WRITE.TIME

The SR650 was configured as follows for the benchmark audit:

- Lenovo ThinkSystem SR650
- 2x Intel Xeon Platinum 8180 processors (28 cores, 2.5 GHz, 38.5 MB last level cache)
- 1.5TB memory (24x 64 GB LRDIMMs @ 2666 MHz)
- 4x Intel P4600 1.6TB NVMe drives
- 2x Intel P4500 4TB NVMe adapters
- Red Hat Enterprise Linux 7.3 Maipo kernel 3.10.0-514.el7.x86_64
- Kx Systems kdb+ 3.5

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 is 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 STAC

The Securities Analysis Technology Center (STAC) is a company that coordinates a community called the STAC Benchmark Council.

The STAC Benchmark Council consists of over 300 financial institutions and more than 50 vendor organizations whose purpose is to explore technical challenges and solutions in financial services and to develop technology benchmark standards that are useful to financial organizations.

User firms include the largest global banks, brokerage houses, exchanges, hedge funds, proprietary trading shops, and other market participants. Vendor firms include innovative manufacturers of processor, server, storage, and network hardware, as well as horizontal-market software providers and vertical specialists.

STAC-M3 benchmarks are governed by user firms in the STAC Benchmark Council. The STAC-M3 benchmark report for the SR650 is publicly available.

Learn more

To learn more about solutions for the financial services industry, please contact your Lenovo Sales Representative.

To find out more about STAC, visit the [STAC Research web site](#).

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](#)
- [ThinkSystem SR650 Server](#)
- [STAC-M3 Benchmark Results](#)

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