

# EXTEND POSSIBLE.

Get servers that scale up and scale out and get more per server—more memory, more sockets, more workloads in less space. Plus, get faster insights.



Up to 38.5% more query executions per hour<sup>1</sup>



50% more memory support for OLAP and OLTP workloads on SAP HANA<sup>®</sup> 2<sup>2</sup>

in a single platform designed for scalability, reliability, performance, and the future of business.



Powerful performance for mission-critical workloads



2, 4, and 8 socket scalability



Real-time insights at the speed of digital business

## Lenovo™ ThinkSystem® SR950<sup>3</sup>

## Intel® Xeon® Platinum processors<sup>6</sup>



Record-breaking performance<sup>4</sup>



2x better density with massive onboard scalable storage<sup>5</sup>



Always-on reliability



50% more capacity for OLTP workloads: 12 TB compared to 8 TB<sup>7</sup>



6x greater system memory in SAP HANA<sup>®</sup> 2<sup>2</sup>



Never-before-seen scale for enterprise data centers

## Lenovo + Intel + SAP

SAP runs its SAP HANA<sup>®</sup> platform on Lenovo<sup>™</sup> servers powered by Intel<sup>®</sup> Xeon<sup>®</sup> processors.



Lenovo uses the SAP HANA platform to enable supply-chain transformation.



The SAP HANA platform is optimized and co-engineered for Intel Xeon processors.



SAP and Lenovo work together to help ensure compatibility of Lenovo servers with SAP<sup>®</sup> applications.



Lenovo servers are certified to seamlessly scale from small to large SAP HANA configurations.<sup>8</sup>

## Say Goodbye to Complexity. Say Hello to Scalable Possibilities.

- Learn more about the **Lenovo™ family of servers**
- Learn more about **Intel and SAP** and **Lenovo and SAP**
- Learn more about the **SAP HANA<sup>®</sup> platform**

<sup>1</sup> Comparing the Intel® Xeon® Platinum 8180 processor results for the SAP® BW Edition for SAP HANA® (SAP® BW/4HANA) Standard Application Benchmark (see endnote 4) from June 2017 to the Intel Xeon processor E7-8894 results for the SAP® BW Edition for SAP HANA Standard Application Benchmark from February 2017 (See [sap.com/documents/2017/02/f2732a32-a77c-0010-82c7-eda71af511fa.html](http://sap.com/documents/2017/02/f2732a32-a77c-0010-82c7-eda71af511fa.html) or <https://lenovopress.com/lp0616-x3850-x6-sapbw4hana-benchmark-result-2017-02-07>).

Configurations: Baseline: Lenovo™ System x3850 X6, four processors, 96 cores, 192 threads, Intel Xeon processor E7-8894 v4, 2.40 GHz, 64 KB L1 cache and 256 KB L2 cache per core, 60 MB L3 cache per processor, 2,048 GB main memory for the SAP® BW benchmark in February 2017; query throughput (higher is better): 4,273; query runtime (lower is better): 114; data load (lower is better): 14,939. Compared to: Lenovo™ ThinkSystem® SR950, four processors, 112 cores, 224 threads, Intel Xeon Platinum 8180 processors, 2.50 GHz, 1,792 KB L1 for the SAP BW/4HANA Standard Application Benchmark in June 2017; query throughput: 5,921 (38.50 percent improvement); query runtime: 143 (7 percent improvement); data load: 14,302 (4 percent improvement).

<sup>2</sup> Up to 6x greater system memory supported vs. available solutions from four years ago (representing the currently installed data-center base)

<sup>3</sup> SAP has certified its SAP HANA® 2 platform for online analytical processing (OLAP) workloads to support up to 3 TB of memory per system for the upcoming Intel® Xeon® processor Scalable family for a 4-socket configuration (or 6 TB for an 8-socket configuration). Systems available four years ago (representing the typical data center installed base infrastructure) could only support 0.5 TB (or 1 TB in an 8-socket configuration), respectively. For comparative purposes, SAP certifies support for up to 2 TB of memory for the current Intel® Xeon® processor E7 v4 family in a 4-socket configuration, so upcoming Intel Xeon processor Scalable family-based systems are certified to support up to 50 percent greater system memory than the generation they replace.

<sup>4</sup> Applicable to 4- and 8-socket Lenovo™ ThinkSystem™ SR950 servers.

<sup>5</sup> This benchmark fully complies with the SAP® Benchmark Council regulations and has been audited and certified by SAP SE. The SAP certification number was not available at press time and can be found at the following web page: [sap.com/benchmark](http://sap.com/benchmark). Details can also be obtained from Lenovo and SAP. The benchmark was performed at the Lenovo Data Center Performance Lab in Research Triangle Park, NC, USA, by Lenovo engineers. Configuration: Lenovo™ ThinkSystem™ SR950, 4 processors, 112 cores, 224 threads, Intel® Xeon® Platinum 8180 Processors, 2.50 GHz, 1,792 KB L1 cache, 28,672 KB L2 cache, and 39,424 MB L3 cache per processor, with 1,536 GB main memory.

The SAP® BW Edition for SAP HANA® standard application benchmark is the latest addition to the list of benchmarks for SAP BW. It fully utilizes the capabilities of SAP HANA to process the benchmark workload. Allowed data volumes are a multiple of 1.3 billion initial records and can be run in single-node and multimode setups. This benchmark was released in July 2016.

<sup>6</sup> Eight-socket Lenovo™ ThinkSystem™ SR950 servers. Systems now fit in a 4U package to deliver two times better density or half the rack space compared to the previous-generation eight-socket Lenovo™ system.

<sup>7</sup> Based on an Intel® Xeon® Platinum 8180 processor and an Intel Xeon Platinum 8176 processor.

<sup>8</sup> When running SAP HANA® SPS 12 on the Intel® Xeon® Platinum processor compared to an Intel Xeon processor E7 v4.

<sup>9</sup> Lenovo. "SAP Solutions on Lenovo Servers."

<http://www3.lenovo.com/us/en/data-center/solutions/alliances/sap/#tab-sap-main-tab-5>.

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