

# Lenovo Solution for SAP HANA

Lenovo™

## Innovative solutions for the digital enterprise

### Scalable systems, software, and services for SAP HANA

#### Enabling the Digital Enterprise

Enabling the digital enterprise and developing business analytic solutions are the key to understanding challenges and responding to them proactively. To develop successful strategies in today's challenging environment, you need more access to critical enterprise insights than ever before. That fact is validated by a 2017 Gartner CIO Agenda survey which revealed analytics and enterprise resource planning (ERP) are top CIO priorities .<sup>1</sup> In addition, Forrester estimate that 70% of data in the enterprise goes unused.<sup>2</sup>

And because data volumes are growing exponentially, your technology solutions must easily scale performance, manage huge volumes efficiently and operate reliably. At the same time, your solutions must enable greater application performance. These are complex demands. But breakthrough technologies can help you meet all these difficult demands now, while still accommodating for future growth. Powered by mission critical servers and next generation Intel® Xeon® processors, the Lenovo Solution for SAP HANA provides outstanding capability for SAP® HANA® to drive enterprise-critical insights in real time.

Integrating hardware, software and memory advancements, the Lenovo ThinkSystem SR950 mission critical server is designed to be agile, scalable, and more resilient helping your SAP HANA based applications operate more efficiently to improve your data foundation and help lower total cost of ownership.

#### Highlights

- Enable your digital enterprise
- Scale with mission critical infrastructure
- Lower TCO with a scalable server platform for your SAP HANA landscape
- Speed deployment and simplify on-going management with Lenovo Services





Lenovo ThinkSystem SR950 Mission Critical Server

## SIMPLE, SEAMLESS AND SCALABLE ARCHITECTURE

To compete in today's dynamic markets, you require a deep understanding of your operational processes, personnel resources, company financials, corporate services and more. As the volume of information expands dramatically, so does the opportunity to gain valuable business insights and to predict challenges before they arrive. Yet meeting continually growing needs requires greater SAP HANA application performance than ever.

The Lenovo Solution for SAP HANA helps you make faster more informed decisions, even with escalating data loads. The reason is that the solution is designed to maximize your system performance to provide a smarter, more efficient approach to resource management. This results in excellent SAP HANA application value.

Running on fast and powerful new ThinkSystem SR950 mission critical servers, SAP HANA software can play a critical role in providing the business insights you need from your SAP Business Warehouse (BW), SAP ERP, SAP S/4HANA® and other SAP application data.

The new mission critical servers are designed to provide faster performance and support for more memory. Using next generation Intel® Xeon® processors, the Lenovo Solution for SAP HANA is purpose-built to support large-scale SAP HANA deployments.

The ThinkSystem SR950 is a 4U rack server capable of supporting up to 8 processors. It features a modular system with all

components accessible via the front or rear of the server helping to simplify server management and service. The SR950 supports up to 12 NVMe drive bays for increase storage at lower latency and up to 24 hard disk or solid state disk drive bays for increased storage capacity. Support for 128GB 3DS RDIMMs enables up to 6TB of memory in a four socket configuration and 12TB of memory in an eight socket configuration.

Used by SAP for next generation SAP HANA development, the powerful ThinkSystem SR950 mission critical servers are ideal for your most demanding SAP HANA deployments, providing superior capability and greater business value.



## Seamless Scalability

Agile design, speed, and more memory are certainly crucial to maintaining your competitiveness. But the business reality is that you will definitely require more capability next year than you do now. The Lenovo Solution for SAP HANA incorporates a pay-as-you-grow design for larger workloads in the future. This combination allows you to reduce your TCO by:

- Achieving higher utilization and lower acquisition costs with improved capacity and performance.
- Speeding server deployment and serviceability.
- Swapping components quickly, including compute, storage and I/O as well as fans and power supplies.

With IBM Spectrum Scale™ software, you can move beyond simply adding storage to optimizing SAP HANA data management. This allows seamless capacity expansion in order to handle the explosive growth of SAP HANA data.

When Spectrum Scale is coupled with the workload-optimized ThinkSystem SR950 server, you can combine multiple server models to create multi-node, scale-out configurations. Multi-node, scale-out configurations enable you to achieve larger SAP HANA memory sizes by simply adding server compute nodes.

These multi-node, scale-out configurations support up to 94 nodes for SAP Business Warehouse and data mart workloads as well as up to four nodes for SAP S/4HANA workloads.

The validated multi-node scale-out configurations do not require a storage area network (SAN), because Spectrum Scale has the unique capability to use the storage contained within each server node.

Lenovo also offers the Distributed Storage Solution for CEPH (DSS-C) for those seeking an open source solution. The Lenovo DSS-C offering uses SUSE Enterprise Storage™ and provides:

- Block, file, and object data access capabilities in a single cluster, simplifying administration and reducing operational costs.
- Multisite object replication and asynchronous block mirroring providing uninterrupted serviceability.
- New open source management framework for simplified management and improved cost efficiency

DSS-C serves up to 64 nodes with four redundant DSS-C engines. Lenovo offers three DSS-C configuration options:

- HDD—An all hard disk drive configuration
- Flash—Performance optimized using enterprise capacity SSDs
- Capacity—Maximizes node capacity with Lenovo storage expansion units.

The result is choice and simplified infrastructure for your SAP HANA applications that helps constrain operational costs as your data grows.



***“Running SAP HANA on Lenovo Systems gives us a strong competitive edge in both domestic and foreign markets.”***

*— David Bevc,  
Head of Cloud Services,  
Unistar PRO<sup>3</sup>*

### **Resilient enterprise platform.**

Speed and scalability are vital to your system’s success. Yet unplanned or excessive system downtime can neutralize performance and agility advantages, so system availability and dependability are equally important. That is why you need a highly available solution designed to keep your system up and running and your business thriving.

The Lenovo Solution for SAP HANA offers superior reliability, availability and serviceability features. Consistently ranked #1 in reliability by ITIC<sup>6</sup>, Lenovo servers offer capabilities to protect the system against consumed errors that could reach critical applications. Self-monitoring, error detection, and self-healing along with predictive failure analysis. Lightpath diagnostics, corrupt data containment and Fault Resilient Boot help predict and quickly identify issues which helps decrease system downtime. The result of built-in system protections is outstanding system resilience.

When combined with Spectrum Scale or DSS-C, the Lenovo Solution for SAP HANA helps:

- Ensure business resiliency through integrated high availability
- Perform maintenance and serviceability faster
- Eliminate restarts by minimizing the number of system “touches.”
- Reduce downtime with self-healing architectures
- Maintain high availability by eliminating production outages

Deploying the Lenovo Solution for SAP HANA in a modular, multi-node scale-out configuration allows a high availability (HA) approach that is exclusive to Lenovo.

Including an additional HA node in your configuration, enables Spectrum Scale replication and automatic failover capabilities using the additional stand-by node to protect against unplanned outages.

The Lenovo Solution for SAP HANA, also offers a choice of operating system support allowing you to choose the operating system that best fits your datacenter requirements. You can choose SUSE Linux Enterprise Server for SAP Applications or Red Hat Enterprise Linux for SAP HANA, and the appropriate subscription and support. In addition, you can choose the Spectrum Scale or SUSE Enterprise Storage software license that matches your configuration requirements along with the appropriate software maintenance and support needed to enhance the availability and resiliency required for large production environments.

Single node configurations use the Spectrum Scale Single Server license or the XFS file system included with the Linux operating system. Scale-out cluster configurations use the Spectrum Scale Server and File Placement Optimizer licenses or SUSE Enterprise Storage licenses.

### Comprehensive solution services and support

To speed deployment and simplify management of your SAP HANA system, Lenovo offers comprehensive solution services and support which include:

- Pre-planning, on-site installation and configuration
- On-going maintenance and system updates
- Hands-on skills transfer and detailed post-installation training and documentation

In addition, Lenovo can provide remote Managed Services.<sup>5</sup> This offering includes:

- Integrated solution support
- On-going maintenance and updates to hardware, operating system software and Spectrum Scale or DSS-C
- Continuous monitoring of key SAP HANA solution components
- Simplified support processes, with expert consultants assisting with troubleshooting and problem-determination
- Assistance to help improve availability and reduce problem resolution time
- Proactive IT planning and preventative support advice and services

### Agile. Scalable. Reliable.

It is no secret your business depends on technology. Therefore, your success depends on how well your mission-critical technology performs. The Lenovo Solution for SAP HANA provides the seamless, scalable and dependable performance needed to extract strategic insights from exploding information volumes helping deliver the bottom line business results you demand.

**“Lenovo offered deep expertise in designing and supporting systems based on SAP HANA, which helped us to complete a successful migration from Oracle database to SAP HANA.”**

— Hamza Al Bakri, IT Manager, Gulf Ocean Trading Co.<sup>4</sup>



Lenovo ThinkSystem SR950  
Mission Critical Server



## Lenovo solution for SAP HANA



## Why Lenovo

Lenovo is a leading provider of x86 servers for the data center. Featuring rack, tower, blade, dense and converged systems, the Lenovo server portfolio provides excellent performance, reliability and security. Lenovo also offers a full range of networking, storage, software, solutions, and comprehensive services supporting business needs throughout the IT lifecycle. With options for planning, deployment, and support, Lenovo offers expertise and services needed to deliver better service-level agreements and generate greater end-user satisfaction.

## For More Information

To learn more about the Lenovo Solution for SAP HANA, contact your Lenovo Business Partner or visit:

[www.lenovo.com/sap/hana](http://www.lenovo.com/sap/hana)

1 Gartner. Gartner Survey of More Than 2,500 CIOs Charts the Rise of the Digital Ecosystem. October 17, 2016

<http://www.gartner.com/newsroom/id/3481117>

2 Forrester Consulting, Ultra-Fast Data Access Is The Key To Unleashing Full Big Data Potential, January 2016

<http://a248.g.akamai.net/n/248/420835/2bbc8f05759a4596bfa5e05402901629c5ee0569e34c6715058800decbe84d61/sapasset.download.akamai.com/420835/sapcom/docs/2016/03/9ea84ab0-647c-0010-82c7-eda71af511fa.pdf>

3 Unistar PRO sharpens its competitive edge with SAP and Lenovo

<https://lenovosuccess.com/casestudy/unistar-pro>

4 Gulf Ocean Trading gets an SAP HANA advantage with an integrated solution from Lenovo

<https://lenovosuccess.com/casestudy/gulf-ocean-trading>

5 Contact your Lenovo or Lenovo Business Partner sales representative for availability in your region

6 ITIC, ITIC 2016 - 2017 Global Server Hardware, Server OS Reliability Report

[http://www.lenovo.com/images/products/system-x/pdfs/white-papers/itic\\_reliability\\_2H\\_2016\\_wp.pdf](http://www.lenovo.com/images/products/system-x/pdfs/white-papers/itic_reliability_2H_2016_wp.pdf)



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