

# Fast-track data warehousing. Extract more data value.

**Gain the advantages of an optimized, validated Lenovo configuration based on Intel® Select Solutions for Microsoft SQL Server\* from SHI**



## Executive summary

Data warehousing is key to mining data value and delivering this value quickly enough to inform competitive strategy and operations. Modern databases that can handle ever-larger data lakes are essential when consolidating data warehousing and speeding integration of data from multiple sources. With the Lenovo Microsoft Data Warehouse Fast Track (DWFT) configuration based on the Intel® Select Solutions for Microsoft SQL Server\* reference design, SHI offers a high-performance, optimized solution designed to meet the needs of demanding, data-centric workloads.

## Challenges

The digital economy, AI, IoT, and HPC are generating massive amounts of data. Combine this with the rapid growth of technologies capable of collecting, transmitting, and storing this data—and you have a modern business paradox. Today's organizations must be data-smart to compete, but the sheer volume, velocity, and complexity of extracting meaningful insight prevent them from deriving true value from their data.

### Customer Innovation Center

Located at SHI's New Jersey world headquarters, the 8,000-square-foot Customer Innovation Center is designed to help organizations test new solutions, accelerate the adoption of emerging technologies, and build capabilities that facilitate strategic transformation. Take advantage of the state-of-the-art labs, workshops, training, and industry-leading technologies to test how a data warehousing solution will work in your environment. SHI can help you simulate current conditions, as well as the impact of new equipment or upgrades.

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### Ridge Integration Center

Located less than five miles from SHI's world headquarters, this 400,000-square-foot facility is SHI's largest integration and configuration center. Specifically designed to support and build custom data center solutions, Ridge Integration Center features state-of-the-art equipment and certified experts to help organizations address complex and unique data center needs.

## Solution

configuration for SQL Server 2017 improves time-to-value for data warehousing needs with a new scalable architecture. Based on the Intel Select Solutions for Microsoft SQL Server reference design, this offering features the high-performance 2U Lenovo ThinkSystem SR650 server configured with 2nd Generation Intel® Xeon® Scalable processors, Intel® Optane™ SSDs, and Intel® Optane™ DC persistent memory. The solution supports Microsoft SQL Server warehouse requirements up to 50 TB in capacity.

### *Fast time to value for the enterprise data warehouse*

Optimized for fast-track extraction of meaningful data, the pretested hardware configuration enables organizations to handle diverse, complex, and data-intensive workloads. You can run query workloads patterned for large sequential data sets rather than small random transactions. Bottlenecks are eliminated with optimized rapid data reads and query aggregations. And the solution allows you to select from different levels of performance, scalability, and price to meet your specific requirements.

### *Intel Select Solutions for Microsoft SQL Server from SHI*

Scale out multitenant database-as-a-service solutions for a wide variety of analytical and operational workloads with Intel Select Solutions for Microsoft SQL Server. When paired with Intel Optane SSDs and Intel Optane DC persistent memory, you can achieve outstanding VM density, enhanced data throughput, and significant cost efficiencies in SQL Server deployments to take your modernization efforts further and prepare your organization for future data growth. Gain a platform for building intelligent applications and scaling with in-database advanced analytics using SQL Server Machine Learning Services.

With these solutions you can modernize older SQL environments to help reduce total cost of ownership (TCO) and data center footprint. They are benchmarked to support multitenant databases running multiple workloads and scale-up workloads while offering industry-leading performance.

### *Sample data warehousing use cases*



*Data processing and mining*



*Operational and analytics workloads*



*Virtualization*



*Data protection*

## Proven Lenovo configurations for Intel® Select Solutions from SHI include:

- **Simplified evaluation.** New workload integration and the transition to software-defined infrastructure are areas where IT managers lose time and money sorting through endless options and searching for optimal solutions. Intel® Select Solutions are tightly specified in terms of hardware and software components to eliminate guesswork and speed decision-making.
- **Fast, easy deployment.** With predefined settings and rigorous systemwide tuning, Intel Select Solutions are designed to increase efficiency in IT testing processes, speed time to service delivery, and improve confidence in solution performance.
- **Workload-optimized performance.** Intel Select Solutions configurations are designed by Intel and our partners to deliver to a performance threshold for the workload. They are built on the Intel® architecture foundation, including the latest 2nd Generation Intel® Xeon® Scalable processors.

### Solution components

- Microsoft SQL Server
- Lenovo ThinkSystem SR650 server
- 2nd Generation Intel® Xeon® Scalable processors
- Intel® Optane™ DC persistent memory
- Intel® Optane™ and Intel® 3D NAND SSD Data Center family

## Learn more

Explore [SHI solutions](#)

Discover [Intel Select Solutions for Microsoft SQL Server](#)

Find out more about the [Lenovo Database Configuration](#) for Microsoft SQL Server DWFT – 50 TB



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For more information about Intel, please visit [intel.com](http://intel.com)

## SHI professional services

With long-standing experience and dedicated SQL Server experts, SHI offers a range of custom services to help you achieve your goals.

- **Data Center Readiness Assessment:** Comprehensive evaluation of your data center—from networking and storage to dark data and power consumption—to identify areas of improvement and opportunity.
- **Data center optimization:** SHI will track, analyze, and report on your data center utilization and provide recommendations to reduce costs and optimize your infrastructure.
- **Simplified billing:** SHI offers flexible billing options based on your requirements.
- **Volume licensing and product expertise:** SHI offers guidance on various Bring Your Own License models to reduce your total cost of ownership or purchasing redundancy.

## Conclusion

SHI's Lenovo solution offerings with Microsoft SQL Server based on Intel Select Solutions are methodically tested and tuned with Microsoft certification to save you months of configuration, setup, testing, and tuning.

It's time to stop running yesterday's database server on tomorrow's data lake and extract more value from your data.

## About SHI

*From software and hardware procurement to deployment planning, configuration, data center optimization, IT asset management, and cloud computing, SHI offers custom IT solutions for every aspect of your environment.*

*SHI's goal is to foster long-term and mutually beneficial relationships with our customers and partners, every single day. The expertise, dedication, and commitment to excellence of each member of your SHI account team (and the support organization that backs them) have made SHI into the industry-leading, complete IT solution provider we are today.*

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