SQL Server 2025 Key Features

SQL Server 2025 is an AI-ready enterprise database from ground-to-cloud, designed to help organizations build modern AI-enabled applications securely using their own data while maintaining the performance, availability, and security customers expect from SQL Server.

The release brings built-in, extensible AI capabilities directly into the SQL Server engine, allowing customers to work with AI scenarios using familiar tools and T-SQL while minimizing the need to move data to external systems.

Why SQL Server 2025

Organizations are modernizing their data platforms to adopt AI and gain faster insights while avoiding unnecessary architectural sprawl. SQL Server 2025 addresses this by integrating AI, analytics, and performance enhancements directly into the database engine.

Key customer outcomes

- Accelerate AI adoption using built-in vector capabilities for semantic and similarity search
- Reduce data movement by storing and querying vector and relational data together
- Improve performance with less manual tuning through Intelligent Query Processing (IQP) enhancements
- Unlock more value in core editions with expanded capacity limits

Customer Objective	SQL Server 2025 Enables
Adopt AI faster	Native vector data type
Reduce complexity	Vectors + relational data together
Improve performance	IQP enhancements
Get more value	Expanded edition limits

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Top SQL Server 2025 Capabilities

1. Built-in AI with Native Vector Data Type and Vector Search

SQL Server 2025 introduces a native vector data type designed for AI and machine learning scenarios, allowing vectors to be stored efficiently and queried using familiar SQL tools. The SQL Database Engine supports vector search and vector indexes, enabling similarity and semantic search without requiring a separate vector database.

Customer value: Enable modern AI use cases such as semantic search, retrieval-augmented generation (RAG), and intelligent applications directly on operational data.

2. Change Event Streaming for Near Real-Time Integration (Preview)

SQL Server 2025 introduces Change Event Streaming (CES), which captures inserts, updates, and deletes and streams them in near real time to Azure Event Hubs. This supports event-driven architectures and near real-time analytics with decoupled consumers.

Customer value: Support modern integration and analytics patterns using near real-time data pipelines.

3. Intelligent Query Processing Enhancements

Intelligent Query Processing improves query performance for existing workloads with minimal application changes, helping workloads adapt automatically based on runtime conditions.

Customer value: More consistent performance and scalability with fewer manual tuning efforts.

4. Built-in Data Protection with Always Encrypted and Secure Enclaves

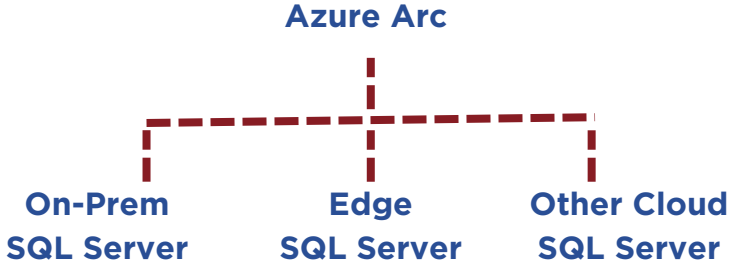
Always Encrypted helps protect sensitive data by ensuring encryption keys remain outside the database engine. Secure enclaves enable richer operations on encrypted data.

Customer value: Stronger data confidentiality with expanded support for secure queries and analytics.

5. Hybrid Management with SQL Server Enabled by Azure Arc

SQL Server enabled by Azure Arc allows SQL Server instances running in datacenters, at the edge, or in other clouds to be managed from a centralized Azure control plane.

Customer value: Centralized visibility and management for SQL Server wherever it runs.



6. More Value Across Editions

- Express edition: Maximum relational database size increased to 50 GB
- Standard edition: Maximum buffer pool memory per instance increased to 256 GB

Why Lenovo and SQL Server are Better Together.

Lenovo positions its database solutions as optimized for Microsoft SQL Server, emphasizing performance, reliability, and flexibility for enterprise database workloads. Lenovo also highlights its long-standing partnership with Microsoft and alignment with Azure Arc-enabled SQL Server deployments.

Customer value: A validated, enterprise-ready infrastructure foundation for SQL Server across on-premises and hybrid environments.

SQL Server 2025 advances Microsoft's AI-ready vision by introducing native vector support, near real-time change streaming, continued performance improvements, built-in data protection, and hybrid management capabilities. When paired with Lenovo infrastructure, customers gain a documented and optimized path to run SQL Server reliably across environments.

Lenovo

Microsoft SQL Server 2025

The AI-ready enterprise database from ground to cloud

Microsoft

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