Blazing-Fast Performance

SQL Server 2012 helps customers gain more predictable and next-generation performance backed by industry-leading benchmarks and real-world applications.

**Highlights**

- Next-generation performance with xVelocity in-memory technologies
- Speed built into the engine
- Proactive management tools
- Verified by industry and real-world application benchmarks

**Next-Generation Performance**

Experience a generational leap in performance across SQL Server with xVelocity in-memory technologies for data warehousing and business intelligence

**Blazing-Fast Query Performance**

Reach a new level of performance with data warehouse queries

- Boost query performance by 10-100x for star join and similar queries with xVelocity in-memory column store index for data warehousing.
- Dramatically improve query processing speed with the new vector-based query execution that addresses modern day performance realities by reducing overhead, taking advantage of larger cache sizes, and limiting the number of CPU instructions.

**Business Insight at the Speed of Thought**

Help accelerate new insights with rapid data exploration within massive data volumes

- Interactively explore 10s of billions of rows of data using xVelocity in-memory analytics engine for business intelligence.
- Dramatically compress data up to 300x with xVelocity in-memory analytics engine, which uses aggressive compression and column-oriented storage.

Global antivirus company, Trend Micro, needed to accelerate searches for its massive malware database, which had grown past 50 terabytes. With SQL Server 2012 and xVelocity in-memory column store index functionality, Trend Micro was able to:

- Cut query wait time by 1/3
- Respond faster to virus threats
- Stay ahead of the competition

**Predictable Performance**

Benefit from a higher level of predictability, and perform more proactive troubleshooting and diagnostics.
Consistent Performance
Get improved consistency of performance, even for multi-tenancy environments, such as a private cloud

- Achieve more consistent performance for concurrent and mixed workloads by defining resource usage across different applications with Resource Governor.
- Affinitize your resource pools to schedulers, groups of schedulers, and NUMA nodes.

Proactive Management Tools
Manage more efficiently and proactively using familiar tools within a single console

- Use SQL Server Management Studio as your single environment for accessing, configuring, managing, administering, and developing all components of SQL Server.
- Collect data from T-SQL queries, such as DMVs, Windows Performance Counters, and the SQL Trace, and bundle it into a collection set using the Performance Data Collector.
- Use Policy-Based Management to create policies for managing entities on the server, such as a SQL Server instance, databases, or other SQL Server objects.
- Monitor only the events you are interested in and capture server events for near real-time diagnosis using SQL Server Profiler.
- Gain better insight into resource utilization with multi-server management to proactively make changes before trouble arises.
- Improve query processing by selecting and creating an optimal set of indexes with the Database Engine Tuning Advisor (DTA).

Speed, Built-in
Take advantage of significant new capabilities in SQL Server 2012 for enhanced scalability and performance

- More easily manage large data volumes for applications like SAP, with support for up to 15k partitions for large sliding windows scenarios.
- Support blazing-fast queries with dramatic improvements to Full-Text Search that offer serious performance and scale advances.
- Improve the relevance of your search results with statistical semantic search, which uses algorithms in SQL Server to quickly deliver statistically relevant results based on search inquiries.
- Accelerate the performance of I/O intensive workloads by cutting growing volumes of data ~50-60% with enterprise-grade compression capabilities.
- Get the scalability and high-performance you need for very large workloads or consolidation scenarios with support for up to 640 cores and 4TB of memory.

Leading TPC Benchmarks
Make a bet on a leading performer in industry-relevant TPC benchmarks¹.

- SQL Server is the uncontested leader in TPC-E performance, with 7 results published in 2011, and 49 results since the benchmark was ratified in 2007 and record-breaking results for SQL Server 2012¹.
- SQL Server also receives high ratings in many of the TPC-H categories, focused on measuring Decision Support¹.

Proven Real-World Performance
Count on performance that is proven in industry-tested applications

- SQL Server 2012 is delivering truly astonishing performance in real-world scenarios, with benchmarks that prove scalability to 250 million subscribers, 25 million capitalizations and account accruals processed in <42 minutes, and 10-100x gains for common data warehouse queries¹.
- Release over release, SQL Server is SAP-certified to run some of the industry’s most demanding workloads.

Industry-Verified
Rely on a trusted, leading platform backed by major industry benchmarks and proven in real-world applications

- SQL Server is consistently rated as the leader in TPC-H categories, with 49 results since the benchmark was ratified in 2007 and record-breaking results for SQL Server 2012¹.
- SQL Server also receives high ratings in many of the TPC-H categories, focused on measuring Decision Support¹.

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