

Improve security, performance, and flexibility with SQL Server 2016 + Windows Server 2016

Unlock the full potential of SQL Server 2016

Organizations want a data platform that enables them to drive faster, more secure data transactions and more effective business insights. SQL Server 2016 provides breakthrough performance, security, and analytic capabilities on its own. But when deployed on Windows Server 2016, it offers the highest performing,¹ most secure,² and most cost effective³ data platform available today.

Together, Windows Server 2016 and SQL Server 2016 create a world-class solution that:

- Improves database performance and availability with support for 24 terabytes of memory and 640 cores on a single server.
- Aggregates the fastest storage on the planet using commodity hardware – with read speeds of more than 25 GB per second.
- Simplifies high availability and disaster recovery by supporting failover to different domains and even non-domain-joined resources.
- Sets the bar for security, with the fewest vulnerabilities of any major database for 7 years running and the fewest number of server OS vulnerabilities for 5 years running.⁴

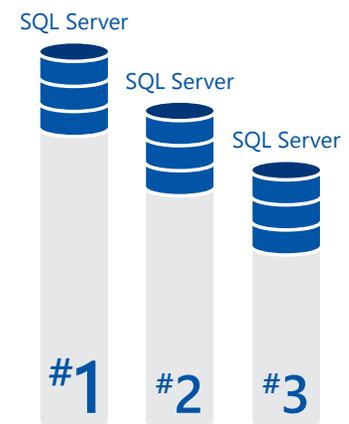
Windows Server 2016 and SQL Server 2016: Better together

Customers running mission critical workloads need an enterprise-class data platform that can easily scale up and down, and provide on-demand storage resources to scale out across datacenters and between on-premises and cloud environments. SQL Server 2016 running on Windows Server 2016 provides industry-leading technologies that provide superior performance, availability, and scale, while also giving organizations the flexibility to meet business goals, limit risk of data loss, and reduce total cost of ownership.

“After combining the new all-flash infrastructure and the features from SQL Server 2016 on Windows Server 2016, one of our BI queries ran 9,521 times faster than on the prior infrastructure. That is much more than we expected.”

– Morten Vinther
Lead Software Developer
Danske Fragmaend

Best-in-class performance



TPC-H benchmarks, which offer a common way to compare data platforms, show SQL Server 2016 on Windows Server 2016 as the highest performing data warehouse platform across data sets, including the top three results for the 10 TB data set.⁵

¹ http://www.tpc.org/tpch/results/tpch_perf_results.asp?resulttype=noncluster

² NIST Vulnerability Database, 2016

³ For comparison, Oracle is 11.7x the cost of SQL Server 2016.

⁴ NIST Vulnerability Database, 2016

⁵ http://www.tpc.org/tpch/results/tpch_perf_results.asp?resulttype=noncluster

Enterprises need to:	How Windows Server 2016 + SQL Server 2016 help:
<p>Protect against data exposure caused by stolen admin credentials, unauthorized access, or exploits such as Pass-the-Hash attacks.</p>	<ul style="list-style-type: none"> • Dynamic Data Masking, Row Level Security, and Always Encrypted keep SQL Server data from being accessed by unauthorized users. • Just Enough and Just-in-Time privilege administration prevent misuse of SQL Server administrator credentials. • Credential Guard protects SQL Server admin credentials against being stolen by Pass-the-Hash and Pass-the-Ticket attacks. • Windows Defender and Control Flow Guard protect against known and unknown vulnerabilities that malware can otherwise exploit.
<p>Cut costs and improve performance of storage, business intelligence, and analytics across workloads.</p>	<ul style="list-style-type: none"> • In-memory database can access 24 terabytes of memory and 640 cores, enabling customers to run queries faster than ever before. • Persistent Memory (aka Storage Class Memory) support provides 3x latency improvement. • Storage Spaces Direct allows use of industry-standard servers with local storage as a highly available, scalable alternative to expensive storage area networks (SANs) – with read speeds that can exceed 25 GB/second.
<p>Improve database uptime and reliability, including effective disaster recovery across sites and domains.</p>	<ul style="list-style-type: none"> • Always On availability groups include up to 8 readable secondaries and can span multi-domain clusters; Active Directory authentication is no longer required. • Hybrid Backup and Stretch Database provide online cold data availability. • Storage Replica enables asynchronous or synchronous replication of data between servers or clusters to ensure zero data loss at the file-system level during a failure. • Rolling, in-place upgrades make it easy to upgrade to SQL Server 2016 and Windows Server 2016 from previous versions while dramatically minimizing downtime.
<p>Reach data science insights faster by running analytics at the point of creation.</p>	<ul style="list-style-type: none"> • SQL Server R Services built directly into T-SQL bring advanced predictive analytics to the data. • Real-time operational analytics enable running of analytics directly on operational data without the delay of moving data. • Multi-threading and Massive Parallel Processing allow for high performance data analysis. • New R-models are published by data scientists and can be accessed through Azure data services.
<p>Maintain a consistent data environment across on-premises, hybrid, and cloud environments.</p>	<ul style="list-style-type: none"> • Common code for on-premises, IaaS and PaaS implementation creates a “write once, deploy anywhere” SQL Server and Windows Server experience. • SQL Azure Migration Wizard and other free migration tools provide easy migration to Windows Server 2016 servers or virtual machines in the cloud. • Azure Hybrid Use Benefit and SQL Server License Mobility ensure customers can easily move databases to the cloud without impacting licensing agreements; no license required for SQL Server passive HA nodes.

Learn more and download your free trial of [Windows Server 2016](#) and [SQL Server 2016](#) today.