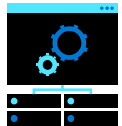**Microsoft**

SQL Server 2019 editions

Intelligence over all your data

SQL Server 2019 provides industry leading security, performance and intelligence over all your data, structured and unstructured.

Enterprise
Mission-critical performance and intelligence for tier 1 databases

Feature highlights

- Unlimited cores of CPU
- Unlimited memory
- Industry-leading performance with unmatched scalability
- Unlimited virtualization benefits
- Petabyte scale data warehousing
- Business critical HA on Windows and Linux
- Low TCO with free DR replicas
- Access to Power BI Report Server

+ **Standard features**
+ **Express/web features**

Standard
Full featured database with Big Data Clusters for mid-tier applications and data marts

Feature highlights

- Up to 24 cores of CPU
- Up to 128 GBs of memory
- SQL Server 2019 Big Data Clusters
- Data virtualization through PolyBase
- Enhanced in-memory performance
- Automatic intelligent database tuning
- Azure Data Studio with notebook support

+ **Express/web features**

Express/web
Free, entry-level database for small web and mobile apps

Feature highlights

- Up to 16 cores of CPU
- Up to 64 GBs of memory
- In-memory OLTP and Columnstore
- End-to-end encryption with secure enclaves
- Full T-SQL surface area
- Support for Linux and Windows containers
- UTF-8 character encoding
- Data classification and auditing

Developer
Free to use with all the features of Enterprise Edition specifically for dev/test in non-production environments

Build once and deploy across any SQL Server edition without changing your app

Microsoft

What's new in SQL Server 2019

SQL Server 2019 new features		Express/web	Standard	Enterprise
Compute and storage	Maximum number of cores	4/16	24	OS Max
	Maximum memory utilized per instance	1/64 GB	128 GB	OS Max
	Maximum size	10 GB/524 PB	524 PB	524 PB
Intelligence over all your data	SQL Server 2019 Big Data Clusters with Apache Spark and HDFS built into SQL Server engine		✕	✕
	Data virtualization using PolyBase (including additional data sources like Oracle, Teradata, MongoDB, and other SQL Server databases)		✕	✕
	Unified AI platform to train and operationalize models with SQL Server ML Services	✕	✕	✕
Choice of language and platform	Compatibility certification	✕	✕	✕
	UTF-8 support	✕	✕	✕
	Support for SQL Server Java extension	✕	✕	✕
Industry-leading performance and availability	Free DR replicas in Azure and on-premises		✕	✕
	Intelligent Query processing : Scalar UDF inlining, table variable deferred compilation, approximate count distinct		✕	✕
	Intelligent Query processing features: row mode memory grant feedback , batch mode for row store and automatic tuning			✕
	Automatic read-write connection re-routing			✕
	In-Memory Database: memory-optimized tempdb			✕
	In-Memory Database: Persistent Memory support		✕	✕
	Accelerated Database recovery		✕	✕
Secure and reliable	Always Encrypted with secure enclaves	✕	✕	✕
	Transparent database encryption		✕	✕
	Data classification and auditing	✕	✕	✕
	Vulnerability assessment	✕	✕	✕
Quick business insights	Azure Data Studio to manage SQL Server including support for T-SQL using Notebooks	✕	✕	✕
	SQL Server Analysis Services Direct Query		✕	✕

SQL Server 2019 continues to deliver unparalleled value

Key investment themes

Intelligence over all your data	Choice of language and platform	Industry-leading performance and availability	Highly secure and reliable	Quick business insights

2019 additions

- Big Data clusters with Apache Spark and HDFS
- Data virtualization to integrate external data sources
- Azure Machine Learning and Spark ML
- Support for Kubernetes deployment
- Free supported Java
- Native UTF-8 support
- Intelligent Query processing
- In-Memory Database: Persistent Memory support
- Accelerated database recovery
- Free DR to Azure
- Always Encrypted with secure enclaves
- Data classification & auditing
- Vulnerability assessment
- Notebook support for T-SQL, Python, R, and Scala in Azure Data Studio
- SQL Server Analysis Services Direct Query

2017 additions

- Support for Linux including Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), and Ubuntu
- Support for Docker containers on Linux and Windows
- Python language support
- Support for graph data
- Automatic plan correction and adaptive query processing
- Cross platform availability groups
- Power BI reporting both on-premises and in the cloud
- Access to Power BI Report Server

2016 additions

- Real-time operational analytics
- PolyBase
- R language support
- SQL Server Machine Learning Services
- Dynamic data masking, Row level security and Always encrypted
- End to end mobile BI

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