

# 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.



### 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



### 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



### Enterprise

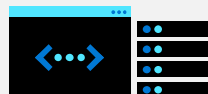
Mission-critical performance and intelligence for tier 1 databases

#### 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



### 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 →

# 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		×	×
Secure and reliable	Accelerated Database recovery		×	×
	Always Encrypted with secure enclaves	×	×	×
	Transparent database encryption		×	×
	Data classification and auditing	×	×	×
Quick business insights	Vulnerability assessment	×	×	×
	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

## 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

## 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

## 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