Licensing SQL Server 2019 on-premises

Available SQL Server 2019 editions

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

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

Enterprise
Mission-critical performance and intelligence for tier 1 databases.

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

SQL Server 2019 licensing models

Core licensing

Rules for calculating required licenses:

- Count the number of cores in the server
- Buy that number of Core licenses, as long as a minimum of 4 licenses are acquired per processor
- No CALs are required for internal or external users
- Core licenses are acquired in 2-packs

Licensing SQL Server editions
- Standard edition may be licensed with either of the licensing models
- Enterprise edition is licensed with Core licenses

Server/CAL licensing

Purchase a SQL Server license for each server, and then purchase Client Access Licenses (CALs) for either users or devices:

*A **Device CAL** is assigned to the device and allows multiple users to use that device*

*A **User CAL** is assigned to the user and allows that user to use multiple devices*

For both types of CAL, the users or devices are licensed to access ANY SQL Server on the network. The SQL CALs can also be used against any SQL Server regardless of platform or edition.

Note that even if a user accesses SQL indirectly through another server (for example when using a Line of Business application), a CAL is still required. This is often known as multiplexing.

External users may be licensed with User or Device CALs or via Core licenses.

Downgrade and down-edition rights

Customers can choose to deploy an earlier version and, sometimes, an alternative edition:

Customers licensed for:	Can choose to deploy:	
	Software edition	Software version
SQL Server 2019 Standard	Standard	2019 or earlier
SQL Server 2019 Enterprise	Standard	2019 or earlier
	Enterprise	2019 or earlier
	Business Intelligence	2014 or earlier

Note that additional down-edition rights are available for some further editions of SQL Server 2008 R2 which are now out of support.

On-premises failover licensing scenarios

For each on-premises server licensed with SQL Server 2019 and covered by active SA, organizations can use the following passive replicas in anticipation of a failover event:

High Availability (automated failover)

Disaster Recovery (manual failover)

Note that the passive servers must have the same or fewer cores than the active server.

Licensing SQL 2019 for virtualization and containers

Server/CAL editions	Core editions	SQL 2019 Enterprise Core virtualization rights	Unlimited virtualization
SQL Standard Server licenses	SQL Standard or Enterprise Core licenses	SQL Enterprise Core licenses	SQL Enterprise Core licenses with SA
Assign a SQL Server 2019 Server license to each virtual machine or container running SQL Server 2019	License the virtual cores used by the virtual machines, with a minimum of 4 Core licenses per virtual machine or container	Licensing all the physical cores gives rights to run SQL Server in one virtual machine or container per Core license	License all the physical cores with Enterprise Edition Core licenses with Software Assurance

License Mobility

All SQL Server 2019 licenses purchased with Software Assurance have License Mobility across Server Farms rights.

In the diagram above, two Server licenses with Software Assurance have been purchased and the virtual machines may move freely around the server farm and the licenses can be considered to be dynamically reassigned to the relevant physical server.

License Mobility across Server Farms allows licenses to be moved between servers within a server farm as often as required, supporting a virtualized environment where virtual machines frequently move between physical servers.

Additional SQL 2019 SA benefits

Step-up licenses

• Step-up licenses may be purchased for Standard Core licenses with SA to move to Enterprise Core licenses

Power BI Report Server

• Enterprise Core licenses with SA include the rights to run Power BI Report Server on a licensed server to generate data visualizations

Machine Learning Server for Hadoop

• Each Enterprise Core license with SA allows the running of Machine Learning Server for Hadoop on up to five servers for advanced analytics

Licensing SQL components

SQL Server includes services such as Microsoft® SQL Server® Reporting Services and Microsoft® SQL Server® Analysis Services which are key to the Microsoft Business Intelligence solution.

When SQL Server runs with all of its components in one server, only one license is required.

However, if the database is running in one server, Analysis Services on a second, and Reporting Services on a third, then three licenses are required.

Microsoft®
SQL Server

Microsoft®
SQL Server
Reporting Services

Microsoft®
SQL Server
Analysis Services