

# Licensing Guide – SQL Server Licensing



# General SQL Server Licensing

With a basic understanding of the licensing and implications of specific actions, organizations will be better equipped to manage SQL Server licensing compliance.

SQL Server is often considered the most convoluted of the Microsoft products. This is mainly due to its high price tag and the constantly changing licensing rules. Each version and edition of SQL has differing licensing terms, rights and functionality.

The below is a quick reference guide to help identify how each version and edition is licensed.

# SQL Server Enterprise Core

Sold in packs of two cores, SQL Server Enterprise has a minimum requirement of 4 cores per processor or total number of cores on the server whichever is higher. If licensed without SA virtual SQL instances can be ran up to the total number of licensed Cores. When licensing a virtual instance a minimum of 4 core per virtual SQL server is required or the total number of virtual cores allocated, whichever is higher.

Licensing a virtual instance requires Software Assurance if the virtual server can move between hosts more than once every 90 days. This benefit is called License mobility across server farms. Licensing a virtual host's physical cores with SA grants an unlimited number of virtual machines with SQL deployed up to the maximum number of VMs the hosts can operate.

# SQL Server Standard Core

Sold in packs of two cores, SQL Server Standard has the same minimum requirements as Enterprise, 4 cores per processor or total number of cores on the server, whichever is higher. Virtual instances are also licensed the same as Enterprise, minimum of 4 core per virtual SQL server is required or the total number of virtual cores allocated, whichever is higher.

Licensing the virtual instance with Software Assurance is required if the virtual server can move between hosts more than once every 90 days. This benefit is called License mobility across server farms.

# SQL Server Standard + CAL

Licensing SQL under the CAL model requires each instance of SQL (virtual or physical) to be licensed with a single SQL Server license. Then a choice of User or Device CALs (Client Access Licenses) are required for every user or device which can access the server. Access to the server does not have to be direct to require a CAL. Indirect access such access to a SharePoint server supported by SQL will also require the user or device to have a SQL CAL despite not directly accessing the SQL Server. If the number of users or devices cannot be quantified then Core licensing is required.

Licensing the virtual instance with Software Assurance is required if the virtual server can move between hosts more than once every 90 days. This benefit is called License mobility across server farms.

# SQL Server Datacenter Processor

SQL Server Datacenter was discontinued after version 2008 R2. Each license gave rights to license a single Processor. Once every Processor on a physical server was licensed an unlimited number of virtual servers can run on the host.

# SQL Server Enterprise Processor

The Processor metric for SQL Server was discontinued after version 2008 R2. Under the Processor metric all Processors on the physical server must be licensed. Licenses are sold as single processors. Enterprise grants the rights to one Physical or four virtual SQL Server instances. License mobility is inherent in the license.

# SQL Server Standard Processor

The Processor metric for SQL Server was discontinued after version 2008 R2. Under the Processor metric all Processors on the physical server must be licensed. To license virtual instances the processors on the physical host must be licensed. Once all physical Processors are licencing a single SQL Server Standard instance can reside on the host. Additional virtual SQL instances requires licensing the host again. In a DRA environment the total number of SQL instances which have the potential to reside on a host requires licensing for each host. E.G. a 3 host cluster with DRA running 4 SQL VMs requires each host to be licensed for 4 vms.

# SQL Server Business Intelligence

SQL Server Business intelligence was release in the 2012 version of SQL then retired after the 2014 version. It has Enterprise functionality, but can is licensed in a Server + CAL model.

# Licensable SQL Components

Various functions of SQL can be separated across multiple servers. Some of these functions do not require licensing but others do. Splitting the functions of SQL across multiple servers does not reduce the license requirement each server with a licensable function of SQL requires its own SQL license even if they are all working on the same database.

The following are the licensable components of SQL;

- SQL Server Analysis Services
- SQL Server Reporting Services
- SQL Server Integrations Services

If a database is running in one server, Analysis services on a second and reporting services on a third then all three servers require licensing separately.

## SQL Server Enterprise vs Standard

When considering the two main SQL editions, Standard and Enterprise, organisations must account for a list of features before choosing between them. It is important to understand the intentions behind the two different editions. The Enterprise edition provides high end data-center availability, high performance with an array of business intelligence.

The Standard edition of SQL Server 2016 offers many of the same features with limitations. This edition is intended to provide smaller projects with all the necessary tools and features at a lower cost and less need for IT staff. The Standard edition is a highly effective version for limited scope databases.

Although both editions have the same Database size limit of 524PB the difference in scale is the editions ability to utilise the available memory on a server as well as a limit to the maximum number of cores which the Standard edition can use (this is from a technical perspective all cores would still require licensing).

Regarding high availability the differences are more apparent. There are a number of features that are not available in the Standard edition, some of the most important being the lack of always-on availability groups, online page and file restore, online indexing, online schema change, fast recovery, mirrored backups, and hot add memory and CPU.

# Additional Licensing Considerations

If you are interested in SQL Server or would like to know more about its licensing, you should also research the following topics;

- License Mobility
- Processor to Core transitions
- Extended Support
- Multiplexing
- Remote Access
- Development Licensing (Visual Studio MSDN)

# About License Dashboard

Our mission is to enable SAM, IT, Finance and Procurement teams to make informed decisions and take proactive action. Along with our partners we offer the most valuable and powerful license management services on the market.

We use a blend of home grown Software Asset Management technologies and licensing expertise to take on the time-consuming and laborious license management tasks and produce the business critical license intelligence required to move forward. From point-in-time Effective Licensing Position (ELP) programs, through to on-going license compliance and Software Asset Management initiatives, License Dashboard and its partners will help you establish, understand, optimize and manage your software assets. All of which can lead to savings of up to 30% in your overall IT expenditure.

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