

Licensing Microsoft SQL Server 2012

Volume Licensing

OVERVIEW

Microsoft® SQL Server® 2012 delivers over 170 new features to help organizations take advantage of shifts in the database industry and the increase in database virtualization and cloud computing. SQL Server 2012 delivers innovations in high availability and performance, new Business Intelligence capabilities, support for hybrid IT environments with common management and development tools, as well as the ability to extend applications to the cloud through SQL Azure™.

The principal editions of SQL Server 2012 are:

- ▶ Enterprise Edition
- ▶ Business Intelligence (BI) Edition
- ▶ Standard Edition

SQL Server 2008 R2 Datacenter Edition is being retired, with all capabilities available in SQL Server 2012 Enterprise Edition. SQL Server 2008 R2 Workgroup and SQL Server 2008 R2 Small Business Editions are being retired and SQL Server 2008 R2 Web Edition will only be available through SPLA.

Principal	<p>SQL Server 2012 Standard</p> <ul style="list-style-type: none"> • Departmental • Limited BI 	<p>SQL Server 2012 Business Intelligence</p> <ul style="list-style-type: none"> • Enterprise BI • Self-service analytics 	<p>SQL Server 2012 Enterprise</p> <ul style="list-style-type: none"> • High-end datacenter • Premium BI 	
	<p>SQL Server 2012 Web</p> <ul style="list-style-type: none"> • Websites • Web applications 	<p>Available through SPLA only</p>		<p>SQL Server 2012 Appliances</p>
Specialized	<p>SQL Server 2012 Developer</p> <ul style="list-style-type: none"> • Developing and testing • *Free with MSDN subscription or \$50 <p>FREE*</p>	<p>SQL Server 2012 Compact</p> <ul style="list-style-type: none"> • Client embedded <p>FREE</p>	<p>SQL Server 2012 Express</p> <ul style="list-style-type: none"> • Entry level / learning <p>FREE</p>	

SQL SERVER 2012 LICENSING MODELS

- ▶ Enterprise Edition: *Core licensing only*
- ▶ Business Intelligence (BI) Edition: *Server/CAL licensing*
- ▶ Standard Edition: *Core or Server/CAL licensing*

Note that SQL Server Enterprise can no longer be purchased in a Server/CAL licensing model, and that licensing by Cores has replaced Processor licensing.

Core Licensing

Standard and Enterprise Editions are available through the Core licensing model. Rules for calculating required licenses:

1. Count the number of cores in the server
2. Multiply by the Core Factor:

Processor type	Core Factor
All processors not listed below	1
AMD 31XX, 32XX, 41XX, 42XX, 61XX, 62XX Series Processors with 6 or more cores	0.75
Single Core Processors	4
Dual Core Processors	2

Note: Core licenses are sold in multiples of 2. No CALs are required.

Core Licensing Examples

1. An Intel server with 4 x 8 core processors requires **32** Core licenses:
 $(8 \times 4) \times \text{Core Factor of } 1 = 32$
2. An Intel server with 2 x 2 core processors requires **8** Core licenses:
 $(2 \times 2) \times \text{Core Factor of } 2 = 8$
3. An AMD server with 2 x 6 core processors requires **9** Core licenses:
 $(2 \times 6) \times \text{Core Factor of } 0.75 = 9$
4. An AMD server with 1 x 6 core processor requires **5** Core licenses:
 $(1 \times 6) \times \text{Core Factor of } 0.75 = 4.5 \rightarrow 5$

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.

SERVER/CAL v PER CORE

Number of 4-core processors	Microsoft SQL Server 2012 Standard	Microsoft SQL Server 2012 Business Intelligence	Microsoft SQL Server 2012 Enterprise
1	30		100
2	65		225
4	130		490

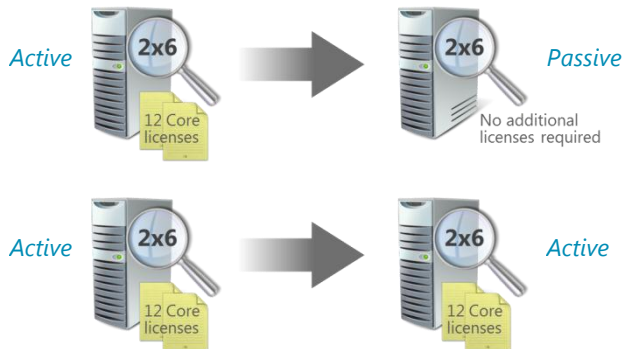
Approximate number of users when per Core licensing is cheaper

STEP-UPS

- ▶ SA benefit
 - Lower edition license must be covered with SA
- ▶ Available Step-ups
 - Standard Server to BI Server
 - Standard Cores to Enterprise Cores
- ▶ Cannot step-up between licensing models

FAILOVER LICENSING

In the event of failure of a licensed, active server, the licenses also cover a passive server for temporary support, as long as the passive server has the same or fewer cores than the active server.



Licensing active and passive secondary SQL Server 2012 databases with a Core Factor of 1

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 a 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.



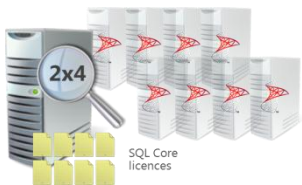
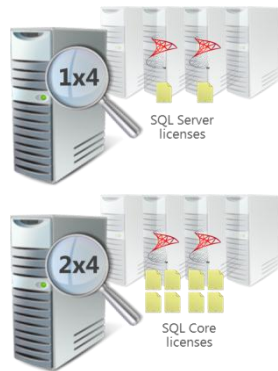
LICENSING SQL 2012 IN VIRTUAL ENVIRONMENTS

▶ Server/CAL Editions

Assign a SQL Server 2012 Server license to each virtual machine running SQL Server 2012

▶ Core Editions

License the virtual processors used by the virtual machines, with a minimum of 4 Core licenses per virtual machine



▶ SQL 2012 Enterprise Core Virtualization Rights

Licensing all the physical cores gives rights to a virtual machine per Core license

▶ Unlimited Virtualization

License all the physical cores with Enterprise Edition Core licenses with Software Assurance

MIGRATING TO SQL SERVER 2012

SQL Server 2008 R2 License with SA	Migrates to SQL Server 2012	Conditions
Standard Server	Standard Server	1 license for each existing license
Standard Processor	Standard Core	1 Core license for each core in use at the time of SA renewal, with a minimum of 4 allocated per Processor license
Enterprise Server	Enterprise Server	Limited to machines with 20 cores or less
Enterprise Processor	Enterprise Core	1 Core license for each core in use at the time of SA renewal, with a minimum of 4 allocated per Processor license
Datacenter Processor	Enterprise Core	1 Core license for each core in use at the time of SA renewal, with a minimum of 8 allocated per Processor license

Organizations with active Software Assurance on SQL Server 2008 R2 Workgroup, Web or Standard for Small Business editions receive upgrade rights to SQL Server 2012 Standard.

LICENSE MOBILITY

License Mobility (within Server Farms* and to Service Providers**) is offered for all editions of SQL Server 2012 provided the licenses are covered with **Software Assurance**.

* "License Mobility within Server Farms" rights mean that licenses may be moved between servers as often as required

** "License Mobility through Software Assurance" allows organizations to move licenses to third party shared servers

Further Microsoft Licensing handouts and exams: GetLicensingReady.com