

Embedded Server & SQL Decision Tree

Windows Embedded Server Decision Tree

Introduction to OEM Licensable Products

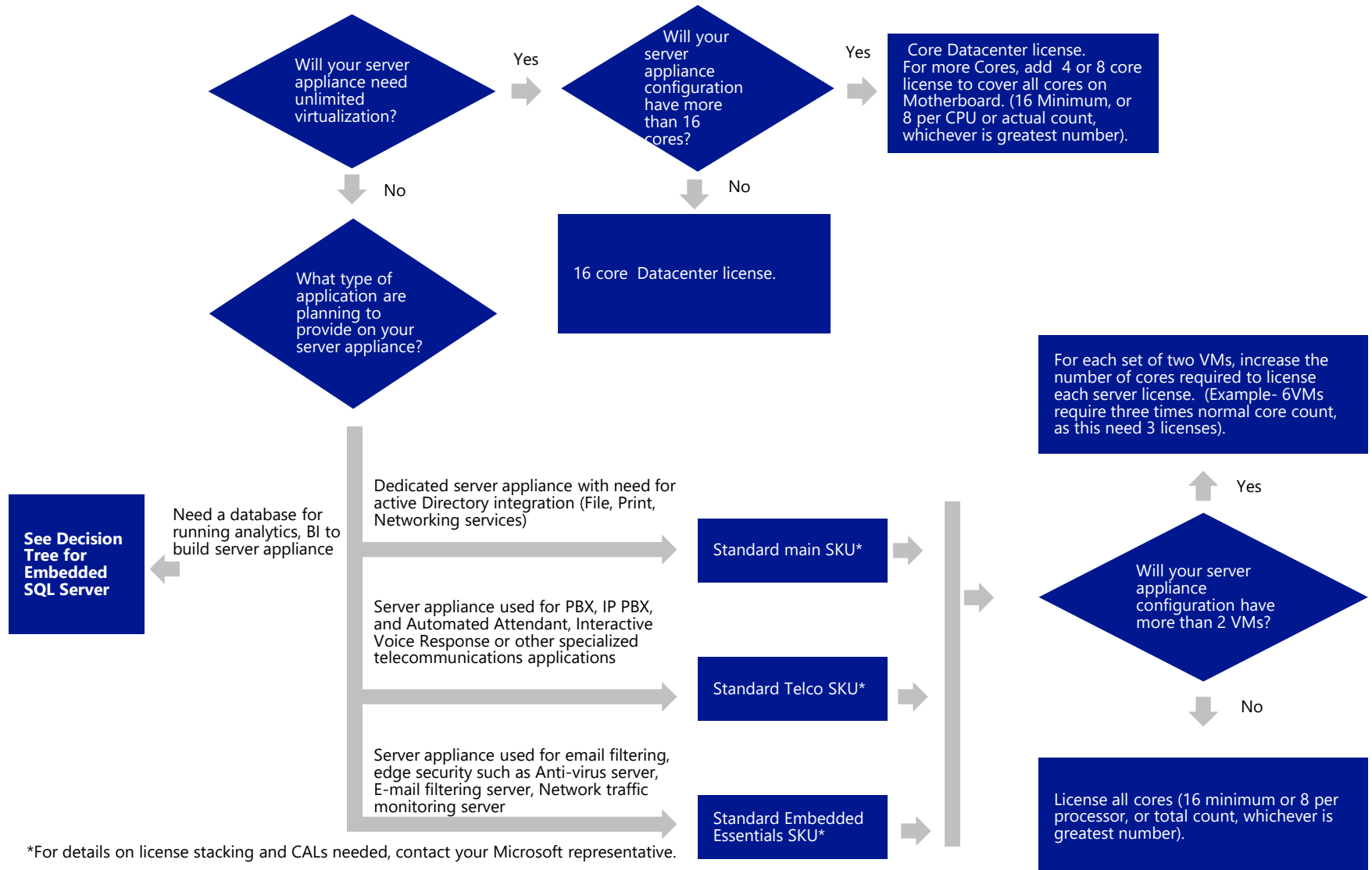
The Windows® Embedded Server Product Guide is designed to help you understand the variety of dedicated server and server appliance solutions that can be built using Windows Embedded Server operating systems and applications with unique licensing terms for OEMs building server solutions. These Windows Embedded Server software products provide the basis for deploying solutions with primary functionality determined by the OEM's embedded application. Such solutions are ideal for a multitude of scenarios such as: Retail, Medical, Security & Surveillance, Industrial Automation and others.

Dedicated server appliance solutions that run Windows® Embedded Server products can help OEMs develop preconfigured hardware and software solutions, systems designed to quickly connect to existing IT infrastructures, licensing and engineering to reduce TCO while ensuring reliable performance and manageability.

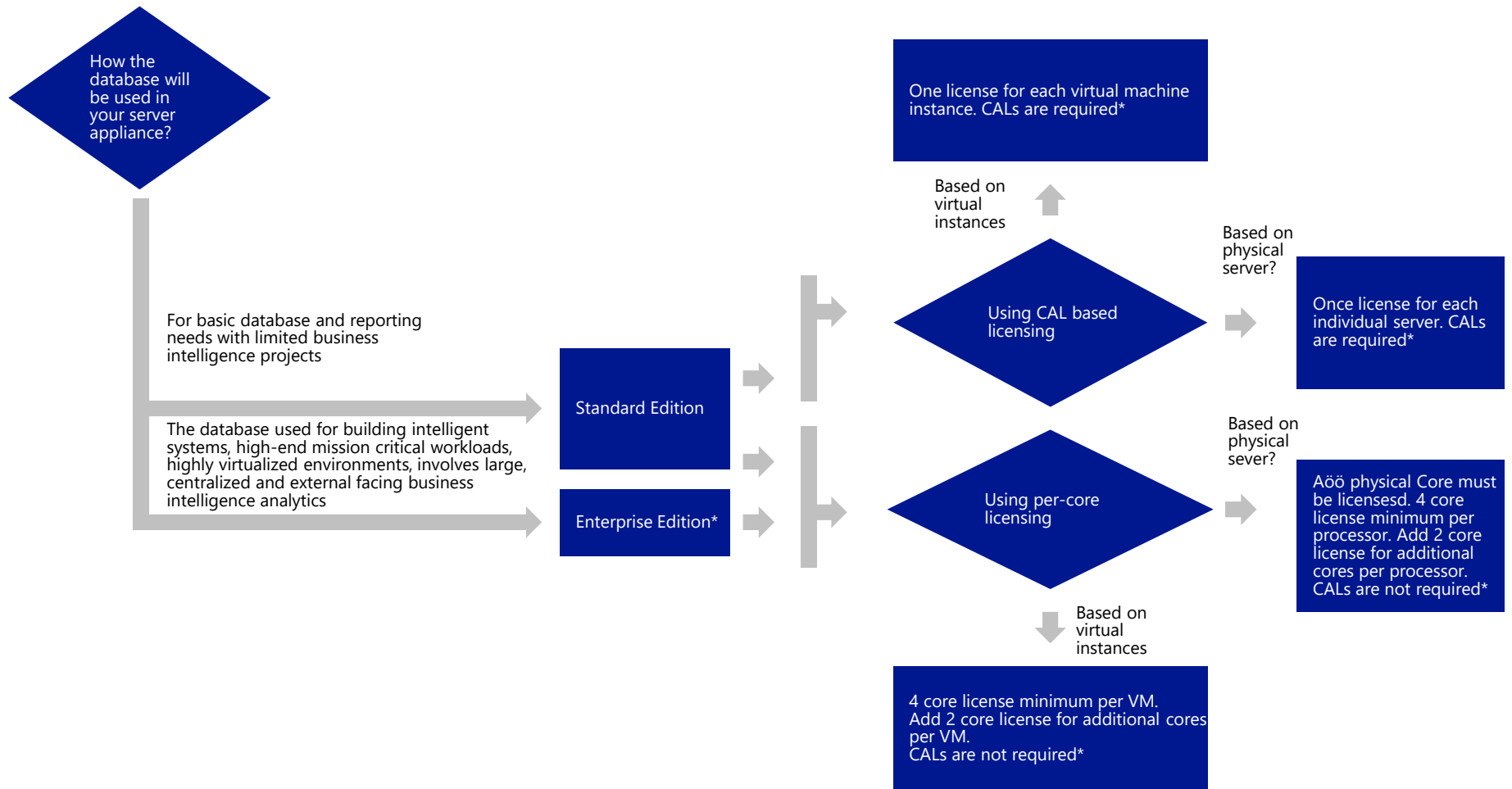
The Decision tree below can help you identify which Windows Embedded Server products can help you deliver dedicated server or server appliance solutions to your customers.

If you know which product you are interested in, or would like to learn more all the current Windows Embedded Server product offerings, visit the related product page on our website <http://www.microsoft.com/windowseMBEDded/en-us/windows-embedded.aspx>. Once you have identified the products that fit your needs, contact a Microsoft Authorized Embedded Distributor to discuss bringing your dedicated server or server appliance to market.

Decision Tree | Windows Server 2016 for Embedded Systems



Decision Tree | Microsoft SQL Server 2016 for Embedded Systems



*for details on license stacking and CALs needed, talk to your Microsoft representative

Licensing | Windows Embedded Server

Licensing Provisions	WS 2016 Datacenter (General Purpose)	WS 2016 Datacenter for Embedded Systems	WS 2016 Standard (General Purpose)	WS 2016 Standard for Embedded Systems	WS 2016 Standard for Embedded Systems Essentials	WS 2016 Standard for Embedded Systems Telecommunications
Number of Virtual Instances	Unlimited	Unlimited	2	2	2	2
Preinstalled OS	Optional	Mandatory	Optional	Mandatory	Mandatory	Mandatory
Embedded Application	Optional	Mandatory	Optional	Mandatory	Mandatory	Mandatory
Line of Business Applications	Optional	No	Optional	No	No	No
Network Infrastructure Services	Yes	Yes	Yes	Yes	Restricted	Restricted
Remote Management	Yes	Yes	Yes	Yes	Terminal Services (TS) Session ¹	Terminal Services (TS) Session ¹
Keyboard, Video & Mouse	Yes	Yes	Yes	Yes	No	No
File service over Network	Yes	Yes	Yes	Yes	No	No
Authentication Services	Yes	Yes	Yes	Yes	No	No
Client Access License (CAL) Required	Yes	Yes	Yes	Yes	No	No
Messaging or Enterprise Mail	Yes	Yes	Yes	Yes	POP3	No
Firewall, Anti Spam, VPN	Yes	Yes	Yes	Yes	Yes	No

Note(1) Maximum of two connections in remote administration mode solely to manage the licensed product

Windows Server 2016 for Embedded Systems

SKU	Key Windows services	Appliance Examples	Support File, Print & User Services	Embedded Application Required
Windows Server 2016 Datacenter for Embedded Systems	Virtualization features, Networking	Highly virtualized turnkey solutions that consolidate several complex functions into a single server appliance	Yes	Yes
Windows Server 2016 Standard for Embedded Systems	File, Print, Networking	Any dedicated server appliance Especially if need broad driver support & Active Directory integration	Yes	Yes
Windows Server 2016 Standard for Embedded Systems – Essentials	E-mail filtering, Security	Anti-virus server E-mail filtering server Network traffic monitoring server	No	Yes
Windows Server 2016 Standard for Embedded Systems - Telecommunications	Telco	PBX server Call center server Teleconferencing server	No	Yes (Telco)

Windows Server 2016 for Embedded Systems | Datacenter

Windows Server® 2016 for Embedded Systems Datacenter Edition is ideal for dedicated server solutions that provide benefits from the unlimited virtualization available with this edition. Windows Server® 2016 for Embedded Systems Datacenter is identical to the Windows Server® 2016 for Embedded Systems Standard edition with all the same features. The only difference between these two edition is the number of virtualization rights. While the Standard edition provides a limited virtualization rights (2 virtual instances depending on coverage for all cores) while the Datacenter edition (cover all cores) provide unlimited virtualization rights.

Examples of Datacenter server appliance would be a high density turnkey solution that consolidates all the server workloads that serve a large PACS system for storing, retrieving, monitoring and analyzing image data, a large server appliance that runs several historian servers for plant automation that provides consolidation, space and energy efficient and high performance utilizing the new Hyper-V technology for better load-balancing and higher availability.

Windows Server 2016 for Embedded Systems Standard

Windows Server 2016 for Embedded Systems builds on Windows Server 2012 R2 for Embedded Systems, expanding existing technology and adding new features to help original equipment manufacturers (OEMs) deliver solutions with increased reliability and flexibility.

OEMs can save time and reduce costs with new virtualization tools, management enhancements, Server Core, and features that are designed specifically to work with embedded devices or client computers running Windows 10 IOT Embedded.

Windows Server 2016 for Embedded Systems Standard requires CAL(client access license) purchase in order to require access the server data through client devices. Like all Windows Server 2016 for Embedded Systems offerings, Windows Server Standard is based on the same core software as the general purpose versions of Windows Server 2016. OEMs can use Windows Server 2016 for Embedded System to build dedicated server appliances that leverage the powerful features included in the Windows Server 2016.

But note: ***With 2016, Datacenter Edition and Standard Edition DIFFER. They were the same binaries with 2012, but not now.***

Windows Server 2016 for Embedded Systems Standard | Essentials

Windows Server® 2016 for Embedded Systems Standard Essentials (Windows Server Essentials) is a SKU ideal for dedicated server solutions that provide networking or security services. Windows Server Essentials is a lower cost offering than Windows Server 2016 for Embedded Systems Standard because the licensing restricts server functionality to specific scenarios that typically do not involve providing services to end-users (e.g., file services, print services, writeable domain controllers, etc.).

Examples of dedicated server functionality that would be appropriate for Windows Server Essentials include an anti-virus server, e-mail filtering server, network traffic monitoring server, or custom embedded-server applications that do not provide end-user services such as monitor, keyboard, mouse to build headless hardware appliances that requires minimal support and resources. Because services are not provided to end-users, Windows Server Essentials does not require the purchase of client-access licenses for the server functionality. Like all Windows Server 2016 for Embedded Systems offerings, Windows Server Essentials is based on the same core software as the general purpose versions of Windows Server 2016 and comes only in Standard edition. OEMs that use Windows Server Essentials can build dedicated server appliances that leverage the smaller footprint of Windows Server 2016.

Windows Server 2016 for Embedded Systems Standard | Telecommunications

Microsoft Corporation offers a special Embedded OEM version of Windows Server® 2016 Standard to provide a server operating system platform that meets the application-specific needs of the telecommunications market. With Windows Server 2016 for Embedded Systems Standard– Telecommunications (Windows Server Telecommunications), OEMs can leverage the stability, reliability and new functionality of Windows Server 2016 for Embedded Systems Standard to build versatile, easily manageable, and dependable telecommunications solutions at significantly lower royalty rates than general purpose server.

Windows Server Telecommunications includes the same software or technologies included in Windows Server 2016 for Embedded Systems Standard, including a smaller footprint, virtualization and new management and security technologies. Windows Server Telecommunications continues to offer the core benefits of the Windows operating system including familiarity of the developer environment, interoperability with other Windows-based servers, and integration with a rich set of server applications such as Embedded SQL Server®.

Device Type Examples

- » PBX server
- » Call center server
- » IVR server
- » Teleconferencing server
- » Miscellaneous telecommunication server solutions with qualifying embedded application(s)

General Purpose SQL vs Embedded SQL

Licensing Provisions	Microsoft SQL Server 2016 (General Purpose)	Microsoft SQL Server 2016 for Embedded Systems
Use case	General Purpose	Industry devices
Features and Functionality	See SQL Server 2016 Editions for details	Same as the general purpose Microsoft SQL Server 2016
Preinstallation on hardware	Optional	Required under standard licensing terms
Embedded Application	N/A	Required (used only to run the Embedded Application)
Line of Business Applications	Optional	No
Enterprise Database Software	Yes	Only integrated as part of the Embedded Application

SQL Server 2016 Editions

Enterprise

MISSION CRITICAL IN-MEMORY PERFORMANCE,
SECURITY AND HIGH AVAILABILITY

- ✓ **Enhanced in-memory** performance for all workloads
- ✓ Most secure database with **Always Encrypted**
- ✓ PB scale data warehousing
- ✓ **End-to-end mobile BI** with rich visualizations on all major platforms
- ✓ **Advanced analytics** built-in at scale with R plus in-memory
- ✓ Enhanced hybrid scenarios including **Stretch Database**, HA, DR and backup

Standard

NON-BUSINESS CRITICAL DATABASES WITH
MODERATE PERFORMANCE

- ✓ Basic security and availability
- ✓ Basic reporting
- ✓ **Basic analytics**
- ✓ **Hybrid scenarios: Stretch Database, backup**
- ✓ **Basic two node failover**

1

2

Note: Text in blue indicates new feature for 2016

Top 10 reasons why customers should purchase SQL Server 2016



Microsoft is the **recognized industry leader**



Delivers the **most secure & least vulnerable** database



Provides ground-breaking **performance and scale**



Is the only **end-to-end mobile BI solution** in the market



Boasts the **fastest In-Memory technology** on the planet across workloads



Enables **mission critical** intelligent applications



Introduces accelerated **hybrid cloud scenarios** with Azure



Tackles **big data** workloads



Provides **platform choice**



Has **everything built-in**

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- ① Microsoft is the recognized **industry leader**
- ② Delivers the **most secure & least vulnerable** database
- ③ Provides ground-breaking **performance and scale**
- ④ Is the only **end-to-end mobile BI solution** in the market
- ⑤ Boasts the **fastest in-memory technology** on the planet across workloads
- ⑥ Enables **mission critical** intelligent applications
- ⑦ Introduces **accelerated hybrid cloud** scenarios with Azure
- ⑧ Tackles **big data workloads**
- ⑨ Provides **platform choice**
- ⑩ Has **everything built-in**

Other Resources

Learn more about Windows Server 2016

<https://www.microsoft.com/en-us/cloud-platform/windows-server-resources>

Explore Windows Server 2016 capabilities on TechNet

<https://technet.microsoft.com/en-us/windows-server-docs/get-started%2fwindows-server-2016>

Download and evaluate Windows Server 2016

<https://www.microsoft.com/en-us/evalcenter/evaluate-windows-server-2016>

Check out our blogs

<https://blogs.technet.microsoft.com/server-management/>



Other resources

[Windows Server 2016 for
Embedded Systems Datasheet](#)

[Microsoft SQL Server 2016 for
Embedded Systems Datasheet](#)