

# Windows Server 2016 and System Center 2016

## Pricing and Licensing FAQs (January 2017)

### 1. What are the top reasons to upgrade to Windows Server 2016 and System Center 2016?

IT professionals and developers have a lot to be excited about in the 2016 release of Windows Server and System Center. Microsoft is optimizing Windows Server 2016 for innovation in the cloud, and optimizing System Center 2016 for management across private and public cloud environments.

Windows Server 2016 is the cloud-ready operating system that supports customers' current workloads and introduces new technologies that make it easy for customers to transition to cloud computing when they are ready. Windows Server 2016 delivers powerful new layers of security along with Azure-inspired innovation for the applications and infrastructure that power business. Advances in computing, networking, storage, and security give customers added flexibility to meet changing business requirements. Modern application platform features, including Windows Server containers and the Nano Server installation option, increase speed and agility.

System Center 2016 delivers a simplified datacenter management experience to keep customers in control of IT—whether on-premises, in the cloud, or across platforms. The solution builds on the experience and depth of previous versions and extends capabilities with Microsoft Operations Management Suite to give customers visibility and control of data and applications that live across multiple systems--from a single solution.

More information about the exciting product innovations in Windows Server 2016 and System Center 2016 can be found at these links:

[Microsoft.com-Cloud Platform-Windows Server 2016](#)

[Microsoft.com-Cloud Platform-System Center 2016](#)

### 2. What editions are available in Windows Server 2016?

Customers can choose from three primary editions of Windows Server, based on the size of the organization as well as virtualization and datacenter requirements:

- **Datacenter Edition** is ideal for highly virtualized and software-defined datacenter environments.
- **Standard Edition** is ideal for customers with low density or non-virtualized environments.
- **Essentials Edition** is a cloud-connected first server, ideal for small businesses with up to 25 users and 50 devices. Essentials is a good option for customers currently using the Foundation Edition, which is not available with Windows Server 2016.

### 3. What are the new features in Windows Server 2016?

Windows Server 2016 customers benefit from a variety of new features. New features in Standard Edition include Nano Server and unlimited Windows Server containers; customers also receive rights to two Operating System Environments (OSEs) or Hyper-V containers. New features exclusive to Datacenter Edition include Shielded Virtual Machines, software-defined networking, Storage Spaces Direct, and Storage Replica; customers receive rights to unlimited OSEs or Hyper-V containers and unlimited Windows Server containers.

Feature	Datacenter Edition	Standard Edition
Core Windows Server functionality	•	•
OSEs/Hyper-V containers	Unlimited	2
Windows Server containers	Unlimited	Unlimited
Nano Server*	•	•
Host Guardian Service	•	•
Storage features including Storage Spaces Direct and Storage Replica	•	
Shielded Virtual Machines	•	
Networking stack	•	

\*Software Assurance is required to install and use Nano Server.

### 4. How is licensing changing with Windows Server 2016 and System Center 2016?

Windows Server 2016 and System Center 2016 Standard and Datacenter editions have transitioned from processors-based to core-based licensing, providing a consistent licensing metric between on-premises and cloud environments.

With Windows Server 2016 and System Center 2016:

- All physical cores in the server are required to be licensed.
- Each physical processor is required to be licensed with a minimum of 8 physical cores.
- Each physical server is required to be licensed with a minimum of 16 physical cores.
- Core licenses are sold in packs of two (i.e. 2-pack core licenses).

The price of a set of 16 core licenses (in a 2-processor server) for Windows Server 2016 Datacenter and Standard editions is the approximately the same price as the 2-processor license of the corresponding edition of Windows Server 2012 R2.

### 5. Why is Microsoft making these licensing changes?

The transition to core-based licensing helps Microsoft align to a common and consistent currency across environments on-premises and in the cloud and removes friction from different licensing models, enabling multi-cloud scenarios. The change to core-based licensing is one of several steps Microsoft has taken to evolve the server licensing to support hybrid cloud. For example, the Azure Hybrid Use Benefit (AHUB) allows customers with Software Assurance to use on-premises Windows Server licenses to run Windows Server virtual machines in Azure at the base compute rate. With AHUB, customers can save up to 50 percent on Azure instances, depending on usage, instance type, and location. For complete details, visit [www.azure.com/ahub](http://www.azure.com/ahub).

### 6. How are Windows Server 2016 and System Center 2016 core licenses sold?

Windows Server Standard and Datacenter editions are available in 2-core packs. The number of core licenses required equals the number of physical cores on the licensed server, subject to a minimum of 8 core licenses per physical processor (i.e. four 2-pack core licenses) and a minimum of 16 core licenses per server (i.e. eight 2-pack core licenses). Additional cores can be licensed in increments of two cores (i.e. one 2-pack core licenses) for gradual increases in core density growth.

**Required number of Core Licenses**

		Physical Cores per Processor				
		2	4	6	8	10
Procs per Server	1	16	16	16	16	16
	2	16	16	16	16	20
	4*	32	32	32	32	40

*\*Standard edition may need additional core licenses*

**Minimum cores to license:** 8 per processor, 16 per server

**Core licenses:** Sold as a 2-pack Core License

### 7. What are the virtualization rights for the Windows Server 2016 editions?

When all physical cores on a server are licensed, with a minimum of 8 core per physical processor and a minimum of 16 core licenses per server:

- **Datacenter:** Provides rights to use unlimited Operating System Environments (OSEs) or Hyper-V containers and Windows Server containers on the licensed server.
- **Standard:** Provides rights to use up to two Operating System Environments (OSEs) or Hyper-V containers and unlimited Windows Server containers on the licensed server. For each additional 1 or 2 VMs, all the physical cores in the server must be licensed again.

### 8. When are the Windows Server 2016 and System Center 2016 licensing and packaging changes effective?

The transition to core-based licensing took effect October 1, 2016. Customers with Software Assurance will transition to core-based licensing for Windows Server 2016 and System Center 2016 at their first license renewal after the general availability of Windows Server 2016 and System Center 2016. When purchasing net new licenses (e.g. via MPSA, or when buying net new server licenses directly from an OEM), customers will pay core-based licensing.

### 9. Are CALs still required for Windows Server 2016?

Yes, Windows Server Standard and Datacenter editions will continue to require Windows Server CALs for every user or device accessing a server (see the [Product Terms](#) for exceptions). Some additional or advanced functionality will continue to require the purchase of additive CALs. These are CALs that are needed in addition to the Windows Server CAL to access functionality such as Remote Desktop Services or Active Directory Rights Management Services.

### 10. Can existing customers with Software Assurance deploy Windows Server 2016 or System Center 2016?

Yes, customers with an active Software Assurance can deploy Windows Server 2016 and System Center 2016 at any time.

### 11. When will customers transition to core-based licensing?

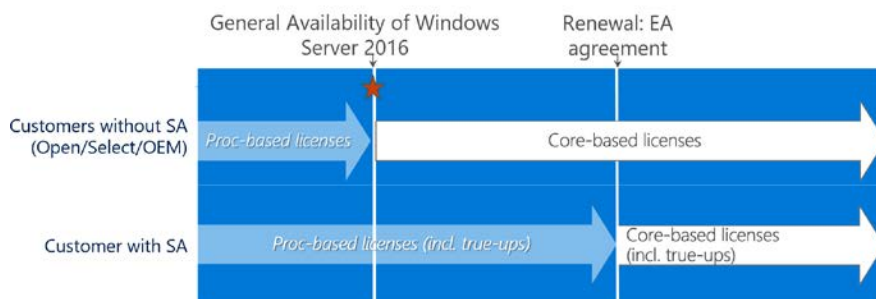
Customers will transition to core-based licensing based on their type of agreement and the time of renewal.

#### a) Customers with Software Assurance:

- Continue to be on the processor-based licensing until the first renewal after the general availability of Windows Server 2016. While on the processor-based licensing, true-ups will also be processor-based.
- Transition to core-based licensing at the first renewal after the general availability of Windows Server 2016. Once the customer transitions to core-based licensing, true-ups will also be core-based.

#### b) Customers without Software Assurance (Open, Select, and OEM)

- All net new licenses will be core-based.



### 12. Can you explain how true-ups work after the general availability of Windows Server 2016?

- If the renewal of the agreement is prior to the general availability of Windows Server 2016, the customer will be on the processor-based model for the life of the agreement and the true-ups will also be processor-based. Net new purchases will be core-based.
- If the renewal of the agreement is after the general availability of Windows Server 2016, the customers will transition to core-based licensing and true-ups will be also be core-based.

### 13. How does the price of Windows Server 2016 and System Center 2016 compare to the price of Windows Server 2012 R2?

There is no price increase for servers with 8 or fewer cores per processor and 16 or fewer cores per server. The price of 16-core licenses, i.e. eight 2-pack core licenses for Windows Server 2016 and System Center 2016, is approximately the same as one 2-processor license for Windows Server 2012 R2. For servers with more than 8 cores per processor and 16 cores per server, the price will increase based on the core density of the servers. However, customers with Software Assurance are eligible to receive core license grants at the expiration of their Software Assurance coverage.

### 14. What are core license grants?

To help with the transition to core-based licensing, customers with Software Assurance are eligible to receive core license grants at the expiration of Software Assurance coverage. Depending on the core density of the servers, there are two categories of core license grants:

- Full core license grants: For servers with  $\leq 8$  cores per processor and  $\leq 16$  cores per server.
- Additional core license grants: For servers with  $> 8$  cores per processor and  $> 16$  cores per server.

### 15. Can you share details on full core license grants?

Software Assurance customers with a server density of fewer than 8 cores per processor and 16 cores per server, are eligible to receive full core license grants. Customers receive a minimum of 8 cores per processor and 16 cores per server at the expiration of the Software Assurance coverage. To receive full core license grants, customers are not required to maintain a documentation of their environment.

### 16. Can you share details on Additional Core License grants?

Software Assurance customers with a server density of more than 8 cores per processor and 16 cores per server are eligible to receive additional core license grants and only pay Software Assurance on the incremental cores. To receive additional core license grants, customers must maintain a record of the physical hardware and the configuration of the licensed server by using the Microsoft Software Inventory Logging tool (SIL) or any equivalent software. Inventory must be maintained at the first expiration of the Software Assurance coverage after the general availability of Windows Server 2016 or before September 30, 2019.

*Note: Customers are not required to share inventory with Microsoft, but may be asked to share inventory if required.*

### 17. What is Nano Server?

Nano Server is an extremely small, headless operating system ideal for reducing your datacenter footprint or running applications that use containers and microservices architectures. Nano Server can be managed remotely, via PowerShell or the web-based Server management tools, or customers can use existing remote management tools such as Microsoft Management Console (MMC) or System Center.

### 18. Can customers install Nano Server if they deploy Windows Server 2016?

Yes, customers with Software Assurance on Standard and Datacenter editions can install Nano Server with no additional licensing. Additionally, you need active Software Assurance on Windows Server base CALs or External Connectors.

### 19. How is the servicing model changing with Windows Server 2016?

The servicing model depends on the installation option the customer selects.

- Customers installing Windows Server 2016 with Desktop Experience or Server Core: There are no changes in the servicing model and customers will be on the Long Term Servicing Branch (LTSB) model, which comes with 5 years of mainstream support and 5 years of extended support.
- Customers choosing the Nano Server installation option: Customers will opt into a more active servicing model similar to the experience with Windows 10, with periodic releases known as Current Branch for Business (CBB) releases. This approach supports customers who are moving at a cloud cadence of rapid development lifecycles and wish to innovate more quickly. Since this type of servicing continues to provide new features and functionality, Software Assurance is required to install and use Nano Server.

### 20. Can you tell me more about the Azure Hybrid Use Benefit?

The Azure Hybrid Use Benefit (AHUB) lets you bring your on-premises Windows Server license with Software Assurance to Azure. Rather than paying the full price for a new Windows Server virtual machine, you will pay only the base compute rate. For each Windows Server Standard and Datacenter edition license covered with Software Assurance, customers can move or add incremental workloads into Azure across two instances, up to 8 cores each, or one instance up to 16 cores, and pay non-Windows (Linux) pricing.

- With Datacenter Edition: Customers get lower-cost instances in Azure as well as rights to maintain existing on-premises deployments.
- With Standard Edition: Customers still get lower-cost instances in Azure, but must assign the license to Azure and decommission the corresponding on-premises workload.

### 21. How should I think about hyper-threading in the core based licensing?

Windows Server and System Center 2016 are licensed by physical cores, not virtual cores. Therefore, customers need only to inventory and license the physical cores on their processors.

### 22. I read that Windows Server 2016 will support nested virtualization -- a VM running inside a VM. How do you license that scenario?

Windows Server 2016 Datacenter licensing allows for unlimited virtualization and so would easily cover this scenario. Windows Server 2016 Standard Edition licensing is designed for no-to-low-virtualization scenarios

and supports up to two virtual machines. A virtual machine running inside a virtual machine counts as two virtual machines from a licensing perspective.

### **23. Will the Core Infrastructure Suite SKU also be core-based licensing?**

The Core Infrastructure Suite SKU is a very popular way for customers to license Windows Server and System Center together at a discount, and its licensing is core-based for Windows Server 2016 and System Center 2016.

### **24. Is the Windows Server External Connector available at the release of Windows Server 2016?**

Yes, the Windows Server External Connector license will still be available to license external users' access to Windows Server. An external connector is required for each Windows Server the external user is accessing.

### **25. I want to continue to use my System Center Software Assurance rights to manage instances in Azure or another service provider's cloud. How many core licenses do I need for that benefit if I am not using System Center to manage any OSEs on premises?**

Customers would need to maintain Software Assurance on 16 cores (equivalent price of the System Center 2012 R2 2-processor license) to continue to use the Software Assurance benefit of managing instances in Azure or other service provider's cloud.

### **26. Are there any changes to how the number of System Center Server Management Licenses are determined?**

There are no changes to the manner in which the number of System Center Server Management licenses are determined. Consistent with the licensing of System Center 2012 R2 Server Management Licenses (MLs), 2016 server MLs will be required for managed devices that run server OSEs. Licenses for System Center 2016 will be core based instead of processor based. The number of server MLs needed for each managed server is determined by the number of physical cores in the server being managed. For Standard Edition, licensing all the physical cores on the managed server provides rights to manage two OSEs on that server while Datacenter Edition enables management of unlimited number of OSEs. The rights to run the management server software continues to be included with the server and client MLs. Multiple core licenses can be assigned to the same physical core to increase the number of OSEs able to be managed.

### **27. Will MultiPoint Premium Server be available in all channels in Windows Server 2016?**

Academic customers can purchase MultiPoint Premium Server 2016 in the Volume Licensing channel. Corporate customers can use the Windows MultiPoint Premium Server role available in Standard and Datacenter editions. Windows Server and RDS CALs (Non-Academic CALs) are required for Multipoint Server.

### **28. Will I need CALs for Windows 2016 MultiPoint Premium Server?**

Yes, to license MultiPoint Premium Server customers would need CALs for Windows Server and Remote Desktop Services (RDS). For customers qualifying for Academic programs, Academic RDS CALs can be used.