

ROADMAP>

# Directions

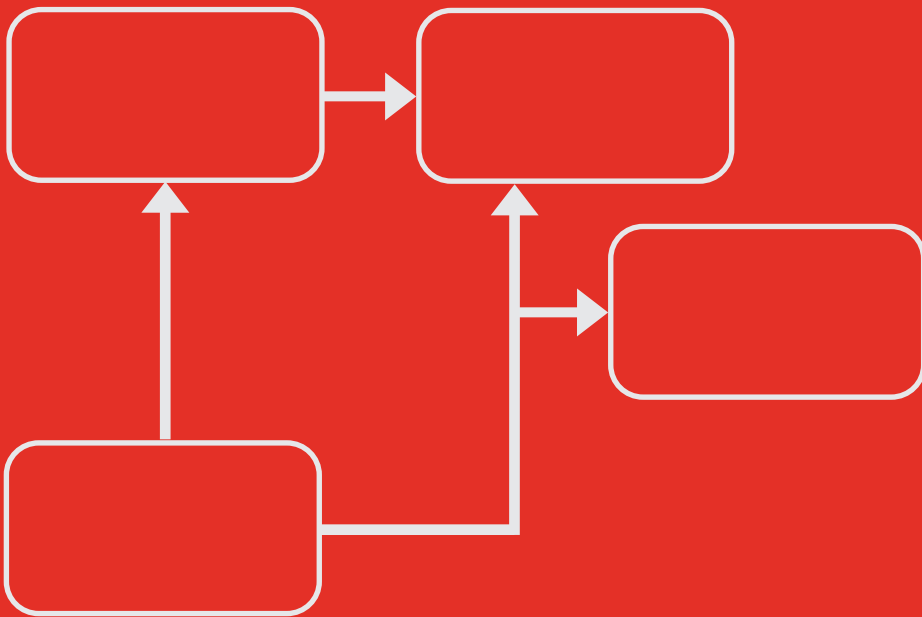
on Microsoft



issue

Licensing  
Microsoft Software  
for VMware Cloud  
on AWS  
July 2020

R O A D M A P



INDEPENDENT IT PLANNING INFORMATION & ADVISORY SERVICE

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# Directions

on Microsoft

## ROADMAP

# Licensing Microsoft Software for VMware Cloud on AWS

July 2020

By Wes Miller

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## Directions

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# Directions

on Microsoft

## ROADMAP

# Licensing Microsoft Software for VMware Cloud on AWS

- Many customers want to run Microsoft software in a deployment of VMware Cloud on AWS, which runs on dedicated hardware.
- To understand the costs of running Microsoft software in VMware Cloud on AWS, customers need to understand the licensing.
- Dedicated hosting licensing rules changed significantly in 2019 and vary across Microsoft's range of products.
- Customers who understand the rules and what they own can minimize license cost and risk.

# Introduction

VMware Cloud on Amazon Web Services (AWS) offers a hosted platform for new or existing VMware VMs, including those running Microsoft software. Understanding your own Microsoft licensing estate can minimize cost and risk, given recent Microsoft licensing rule changes.

## **What's in This Report**

This report has six key sections:

- A high-level summary of Microsoft licensing rules that affect VMware Cloud on AWS
- Four independent sections covering rules for licensing the most important Microsoft software for VMware Cloud on AWS:
  - Windows Server
  - SQL Server
  - Windows desktop OS
  - Office desktop applications
- An abbreviated glossary of Microsoft licensing terminology.

## **Why Microsoft Licensing Matters for VMware Cloud on AWS**

Customers putting VMware workloads on the AWS public cloud are migrating existing VMs from on-premises or organizational data centers or building out new or reengineered applications on VMware in the cloud. VMware Cloud on AWS offers a mature platform where customers can continue running applications with familiar systems management tools and practices and take advantage of the scale and reach of Amazon's data centers, without the capital costs of hardware acquisition that would be necessary for a large-scale deployment of VMware on-premises.

Whether migrating or building anew, organizations must comply with the rules for licensing the software required for each workload. Microsoft software is widely used, and products like Windows Server and SQL Server are frequently chosen as platforms for both new and reengineered applications. The most important Microsoft software products used with VMware Cloud on AWS systems are the following:

**Windows Server**, an OS used as a platform for server applications or for desktop applications through the Remote Desktop Services (RDS) host role

**SQL Server**, which is typically used as a relational database manager for server applications

**Windows desktop OS** (Windows 10 or earlier versions), which is typically accessed by end users connecting to a virtual desktop infrastructure (VDI) farm running on multiple servers

**Office desktop applications**, which are typically accessed by end users connecting to an RDS server or within a VDI farm.

These products also account for a large portion of license spending in many organizations. Frequent use plus high spending means that customers face high financial risk if they do not comply with Microsoft licensing rules for these products.

## **Dedicated Hosting Rules**

With VMware Cloud on AWS, Microsoft software is subject to licensing rules for dedicated hosting scenarios. In dedicated hosting, a physical host server is exclusively dedicated to the use of one customer at a time. Microsoft's rules for licensing dedicated hosts in all major public cloud hosts changed on Oct. 1, 2019. These public clouds, sometimes called hyperscalers, are called out as "Listed Providers" in Microsoft licensing terms. They currently include Alibaba, Amazon (including VMware Cloud on AWS), and Google.

Most large customers license their use of Microsoft software through an Enterprise Agreement (EA). An EA is a complex license agreement usually lasting 36 months before requiring renewal. An EA is composed of multiple documents that outline the purchasing requirements and product pricing of Microsoft's enterprise software. While Microsoft's complex licensing rules change often, most changes are documented in Microsoft's publicly available (but byzantine) Product Terms document. EA customers are typically buffered from major changes to product licensing rules until their next EA renewal occurs, but then must abide by the new rules and often pay higher prices.

Customers should be mindful of their options when negotiating renewals of their EAs because Microsoft can, and is sometimes willing to, document exceptions to its standing product licensing rules with amendments to an EA when it is signed or renewed.

### **OLD RULES PRIOR TO OCT. 2019**

Licensing rules prior to Oct. 1, 2019 treated dedicated host servers the same as an organization's own host servers, whether they were running on-premises or in a data center where the organization had co-located a dedicated server.

#### **Bring Your Own License, Pay As You Go, and More**

These earlier more lenient rules permitted customers to use on-premises licenses for most Microsoft products, including Windows Server and Windows desktop OSs, SQL Server database software, and Microsoft's Office desktop application suite using a bring-your-own-license (BYOL) approach. When organizations cannot bring their own Microsoft licenses to a hosting provider, they typically must rent the software at a premium, on a pay-as-you-go (PAYG) basis, using the Services Provider License Agreement (SPLA) program offered by Microsoft, which permits hosting providers to rent most Microsoft software to customers.

Under these original rules, these Microsoft OSs and applications could be used in deployments of VMware Cloud on AWS often without ongoing licensing fees for Software Assurance (SA) or any subscription licensing options, because the dedicated host servers used by services like VMware Cloud on AWS were always treated the same as on-premises hardware.

#### **Software Assurance**

SA is an annual fee in addition to product licensing costs that entitles the organization to upgrades to future product versions and offers a variety of other benefits of value, along with a collection of miscellaneous benefits of a small but discernable market value compared to the overall SA spend. While SA is not mandatory when purchasing new licenses, it is often required for license compliance in highly virtualized deployments of Microsoft software.

### **NEW RULES SINCE OCT. 2019**

In Oct. 2019, Microsoft significantly modified most of the rules for dedicated hosting of its OSs and applications, making them far more restrictive in most cases and impossible to use in some cases. The overall impact: the new rules require subscription licenses or SA for many more workloads, raising licensing costs over the long run in almost all cases.

However, the exact effects depend on the product being used. Details for Windows Server, SQL Server, Windows, and Office are explained in this report.

## **Recommendations**

Customers already using the software or licensed to do so prior to Oct. 2019 can continue following the prior rules for the foreseeable future, as long as they continue to run versions of software released prior to that date.

Moving forward, customers will need to be careful about what software they use in these scenarios and what type of license agreement that existing use is granted under.

### **LIVING BY THE OLD RULES**

Customers currently using or considering the use of Microsoft software with VMware Cloud on AWS should take an inventory of their Microsoft software and analyze how long

each workload can continue to operate under the old rules, as operating under the old rules is likely to become more complex over time.

In general, customers who licensed the applicable software prior to Oct. 2019 can continue to use it for the foreseeable future. Licenses in place prior to that date are not affected by the change, but other events can change the type of license a customer owns (such as the renewal of an underlying EA) or the licenses required for their deployment (such as upgrading the software that is already deployed to a newer version of that product).

The following factors can trigger the new rules:

- The newest product version and edition that is currently deployed within VMware Cloud on AWS
- When that deployed version of the product was first released
- The product version and edition that was originally licensed, and what license model applies
- The type of license (perpetual or subscription)
- The volume licensing program under which the license was acquired and the contract termination date for that agreement.

Organizations looking to run these products under the old rules for an extended period of time will need to be vigilant about three things:

- Inventory and document the software versions, editions, licenses, and deployed architecture that apply to their VMware Cloud on AWS workloads
- Do not deploy any newer versions of the affected products (do not upgrade to any new versions shipped after Sept. 2019)
- Consider amendments to an EA that may need to be negotiated at renewal to run the software for an extended period of time under the old rules.

## **NEGOTIATING LICENSE AGREEMENTS**

Living with the previous rules will become more complex after an EA that began or was renewed prior to Oct. 2019 is renewed again. For most organizations, this is any contract renewed after Sept. 2022.

The impact will be particularly significant for customers with an Enterprise Agreement Subscription (EAS) or an EA that includes a Server and Cloud Enrollment (SCE), as all of their licenses will be subject to the new rules at the conclusion of contracts in effect prior to Sept. 2019. (The majority of enterprise customers do not have an EAS, and many do not utilize an SCE.)

Large organizations negotiating EA renewals could try to negotiate special terms that delay or avoid the new rules and try to sign a five-year (rather than a traditional three-year) contract to lock in the old rules for the longer duration. For Windows Server and SQL Server workloads, a threat to drop SA, if credible, could be a useful negotiation lever to extract concessions.

Obtaining any concessions is far from certain and, if granted, likely requires compromise on some other contractual provision in return.

All affected customers need to be prepared to defend all rights they have to continue to operate under the old rules by keeping good records of their entitlements and understanding the applicable rules and knowing where they are documented so they can push back against confusion and misinformation.

# Windows Server

Current Version	Release Date	Old Rules Still Applicable?	Last Version Under Old Rules	Release Date
Windows Server 2019	Nov. 2018	Yes	Windows Server 2019	Nov. 2018

Microsoft's changes in dedicated hosting rules for the Windows Server OS will eventually require organizations running VMware Cloud on AWS to license the OS at an increased cost.

In general, customers who licensed Windows Server prior to Oct. 2019 and continue to run Windows Server 2019 or earlier can continue to use it for the foreseeable future.

## OLD DEDICATED HOSTING RULES

Under the old dedicated hosting rules, licensing dedicated hosts for Windows Server 2019 and earlier was no different from licensing a host server on-premises.

For example, by licensing all of the cores on a dedicated host for Windows Server Datacenter edition, a theoretically unlimited number of Windows Server VMs can run on that host, whether it is on-premises or on a dedicated host like VMware Cloud on AWS.

Because the rules were no different from on-premises, customers could use on-premises licenses in a hosted, dedicated cloud using a BYOL approach, rather than needing to pay any additional fees to license it for use with VMware Cloud on AWS. (These rules still apply to any licenses for the software that were acquired prior to Oct. 2019, or that were licensed through an EA that began or renewed prior to Oct. 2019.)

**Required core licenses:** All cores in all processors in the host hardware require core licenses for a specific version and edition of Windows Server. A minimum of 16 core licenses per host and 8 cores per processor are required per host. SA is not required.

**Virtualization rights:** Install and run Windows Server 2019 or earlier in any number of VMs on a dedicated host server (any edition, any Long-Term Servicing Channel [LTSC] release) provided that Windows Server Datacenter is licensed for all cores.

**Other requirements:** In this scenario, Windows Server base Client Access Licenses (CALs) are required, and RDS CALs are required when RDS technology is used—generally when Windows Server is used as an RDS server or a VDI host, but also when RDS technologies are used by third-party desktop hosting solutions. (Although the use of CALs and External Connector licenses are required in this case, SA is not required, because these servers are treated as if they were on-premises.)

## NEW DEDICATED HOSTING RULES

Under the new terms that applied beginning in Oct. 2019, customers cannot bring new licenses of Windows Server to a dedicated environment like VMware Cloud on AWS as if it were on-premises hardware.

Instead, customers must license Windows Server for all hosts in a cluster from VMware on a PAYG basis, using the SPLA program offered by Microsoft, which permits hosting providers to rent most Microsoft software to customers. Note that Microsoft's rules require the entire cluster to be licensed.

Typically, licensing Windows Server through SPLA will be more expensive than bringing existing licenses from on-premises, but this may not be true in all cases.

**Required core licenses:** To license Windows Server for VMware Cloud on AWS, all cores in all processors in the host hardware must be licensed for Windows Server, and all hosts in the entire cluster must be licensed. As with on-premises, a minimum of 16 core licenses per host and 8 cores per processor are required per host. SA does not apply, since the OS is being licensed through SPLA.

**Virtualization rights:** Install and run any number of VMs running Windows Server (any version, any edition, LTSC or SAC) provided Windows Server Datacenter is licensed.

**Other requirements:** In this scenario, Windows Server base CALs are *not* required, but RDS CALs *are* required when RDS technology is used—generally when Windows Server is used as an RDS server or a VDI host.

## TRIGGER AND IMPACT

**Trigger:** The primary trigger that will cause organizations to follow the new dedicated host licensing rules is the use of any newer version of Windows Server released after Oct. 2019 (for example, all future LTSC or SAC versions of Windows Server that follow Windows Server 2019 are affected).

**Type of impact:** The impact that these new rules will have is primarily financial, as licensing options for dedicated hosts used for VMware Cloud on AWS will cost significantly more than the on-premises licenses without SA that worked earlier.

**Financial impact of this licensing change on customers:** High.

# SQL Server

Current Version	Release Date	Old Rules Still Applicable?	Last Version Under Old Rules	Release Date
SQL Server 2019	Nov. 2019	No	SQL Server 2017	Oct. 2017

Microsoft's changes in dedicated hosting rules for SQL Server will eventually require organizations running VMware Cloud on AWS to license the database application at a significantly increased cost. Care should be taken with planning a cloud migration.

In general, customers who licensed SQL Server prior to Oct. 2019 and continue to run SQL Server 2017 or earlier can continue to use it for the foreseeable future.

## OLD DEDICATED HOSTING RULES

Under the old dedicated hosting rules, licensing dedicated hosts for SQL Server 2017 and earlier was no different from licensing a host server on-premises.

For example, by licensing all of the cores on a dedicated host for SQL Server Enterprise edition and adding SA, a theoretically unlimited number of SQL Server VMs can run on that host, whether it is on-premises or on a dedicated host like VMware Cloud on AWS.

Because the rules were no different from on-premises, customers could use on-premises licenses in a hosted dedicated cloud using a BYOL approach, rather than needing to pay any additional fees to license it for use with VMware Cloud on AWS. (These rules still apply to any licenses for the software that were acquired prior to Oct. 2019, or that were licensed through an EA that began or renewed prior to Oct. 2019.)

**Required core licenses:** All cores in all processors in the host hardware require core licenses for a specific version and edition of SQL Server. A minimum of four core licenses is required per host. SA is required for unlimited virtualization; without SA, the host is limited to one VM for each core licensed in the host. (Note that this is a significant difference in rules between SQL Server and Windows Server.)

**Virtualization rights:** Install and run SQL Server 2017 or earlier in any number of VMs on a dedicated host server (any edition) provided that all cores in the host have been licensed for SQL Server Enterprise with SA as described here.

**Other requirements:** None. Unlike Windows Server, SQL Server does not require CALs of any kind when licensed on a Per-Core basis.

## NEW DEDICATED HOSTING RULES—BYOL

Under the new terms, SQL Server may not be licensed in a dedicated environment like VMware Cloud on AWS using the same rules as on-premises hardware. Customers can still use a BYOL approach to bring any SQL Server licenses with SA, although they will do so under less favorable terms than before.

Specifically, customers can take advantage of License Mobility through SA to move SQL Server core licenses to VMware Cloud on AWS, if the licenses have SA. (License Mobility through SA is a benefit of SA offered with most Microsoft products other than Windows Server and the Windows client OS. This right per-

mits licenses with SA to be transferred to a Microsoft-qualified hosting provider, if customers sign a waiver noting this transfer.)

However, the use of License Mobility through SA to apply on-premises licenses to dedicated hosts like VMware Cloud on AWS no longer entitles the organization to unlimited virtualization on the host. Instead, each core license with SA entitles the organization to the rights to run SQL Server on one virtual core within a VM on that host, subject to product use rights including a requirement of a minimum four core licenses per VM.

**Required core licenses:** As with on-premises, a minimum of four core licenses per VM are required per host. SA must be maintained to continue running SQL Server in this manner.

## NEW DEDICATED HOSTING RULES—SPLA

Instead of bringing their own core licenses with SA to license VMs, customers can license SQL Server for all hosts in a cluster from VMware on a PAYG basis, using SPLA. Note that Microsoft's rules require the entire cluster to be licensed. Typically, licensing SQL Server through SPLA will be more expensive than bringing existing licenses from on-premises, but this may not be true in all cases.

**Required core licenses:** To license SQL Server for VMware Cloud on AWS, all cores in all processors in the host hardware must be licensed for SQL Server, and all hosts in the entire cluster must be licensed. As with on-premises, a minimum of four core licenses is required per host. SA does not apply, since the OS is being licensed through SPLA.

**Virtualization rights:** Install and run any number of VMs running SQL Server (any version, any edition) provided SQL Server Enterprise edition is licensed.

## TRIGGER AND IMPACT

**Trigger:** The primary trigger that will cause organizations to follow the new dedicated host licensing rules is the use of any newer version of SQL Server released after Oct. 2019 (for example, SQL Server 2019 and all future releases of SQL Server are affected).

**Type of impact:** The impact that these new rules will have is financial, as organizations can no longer use on-premises licenses to acquire unlimited virtualization rights to SQL Server running in VMware Cloud on AWS. Instead, customers will be forced to license vCores in each VM using on-premises core licenses with SA, licenses acquired through SPLA, or some combination of both. (Mixing license types on a host is not recommended, as it can make auditing extremely difficult and could dramatically increase the financial risk of audit noncompliance.)

**Financial impact of this licensing change on customers:** Extremely high.



# Windows 10

Current Version	Release Date	Old Rules Still Applicable?	Last Version Under Old Rules	Release Date
Windows 10 version 2004	May 2020	No	Windows 10 version 1903	May 2019

The changes in dedicated hosting rules for the Windows client OS will eventually require organizations running VMware Cloud on AWS to license the OS at an increased cost.

In general, customers who licensed Windows 10 prior to Oct. 2019 and continue to run Windows 10 version 1903 or earlier can continue to use it for the foreseeable future. Due to abbreviated support life cycles, however, customers will not be able to avoid this licensing change for long. (Version 1903 leaves support in Dec. 2020, and version 1809, which preceded 1903 but offered a longer life cycle, leaves support in May 2021.)

## OLD DEDICATED HOSTING RULES

Customers could license Windows for VDI use with VMware Cloud on AWS using the same rules as VDI on-premises licenses. This scenario required licensing each client device or client user that could access the VDI farm. (On an RDS host, multiple users access their own Windows session running on a Windows Server. With VDI, each user accesses their own instance of the OS, usually of Windows 10.)

**Required licenses:** Every client user or device accessing the VDI required a Windows 10 Enterprise or Virtual Desktop Access (VDA) license. Windows 10 E3 User Subscription Licenses (User SLs) or VDA User SLs are generally required because they provide so-called roaming rights for unmanaged devices, such as personal laptops. (Windows 10 Enterprise Per-Device with SA is generally no longer an option as all customers lost roaming rights for this option by Feb. 2019.) The Microsoft 365 E3 subscription suite includes the equivalent of a Windows 10 E3 User SL.

**Use rights:** Licensed users are entitled to access Windows 10 or earlier versions of the OS running in a VDI farm.

## NEW DEDICATED HOSTING RULES

The Windows desktop OS is not available through SPLA. Instead, customers running VDI in VMware Cloud on AWS must license each user with VDA User SLs, even if the user is already licensed for Windows Enterprise E3 or higher. Effectively, the customer must double-license VDI users who are already licensed for Windows Enterprise on-premises.

**Required licenses:** Windows VDA E3 or higher User SL or higher for every user accessing the VDI. VDA User SLs are not included in Microsoft 365 suites. (This may be a point of negotiation that larger organizations impacted by this change should consider during EA renewals.)

**Use rights:** Licensed users are entitled to access Windows 10 or earlier versions of the OS running in a VDI farm.

## TRIGGER AND IMPACT

**Trigger:** The primary trigger that will cause organizations to follow the new dedicated host licensing rules is the renewal of their license agreement in place as of Oct. 1, 2019. (One small exception—for customers who renewed Windows Enterprise SA coverage or Windows Enterprise User SLs between Oct. 1, 2019, and Oct. 1, 2020, the new rules do not begin taking effect until Oct. 1, 2020.)

**Type of impact:** The impact that these new rules will have is financial, as organizations can no longer license Windows client VDI running on VMware Cloud on AWS using any form of Windows 10 Enterprise license but must license VDA Per-User instead, at a much higher cost.

**Financial impact of this licensing change on customers:** Extremely high.

# Office

Current Version	Release Date	Old Rules Still Applicable?	Last Version Under Old Rules	Release Date
Office Professional Plus 2019	Sept. 2018	Yes	Office Professional Plus 2019	Sept. 2018

The changes in dedicated hosting rules for the Microsoft Office suite will eventually require organizations running VMware Cloud on AWS to license Office at a significantly increased cost in some cases, and change deployment architecture in other cases.

In general, customers who licensed Office Professional Plus prior to Oct. 2019 and continue to run Office Professional Plus 2019 or earlier can continue to use it for the foreseeable future. (Customers who license Office applications through Office 365 cannot avoid being impacted, but their impact is lower.)

## OLD DEDICATED HOSTING RULES

Customers could license Microsoft's Office suite with VDI or RDS on VMware Cloud on AWS through one of two avenues:

**Office Professional Plus** licensed for each client device accessing the VDI or RDS farm. This option generally requires SA to license unmanaged devices (such as personal laptops) with roaming rights as discussed earlier for Windows 10. (Office Standard can also be used and has the same terms, but the two licenses are not interchangeable. For simplicity, this report focuses exclusively on Office Professional Plus.)

### Use rights:

Licensed devices may access that version or earlier of Office Professional Plus running in a VDI or RDS farm.

**Office 365 ProPlus** licensed for each user accessing the VDI or RDS farm. This option requires the Office 365 ProPlus User SL for every user, which includes roaming rights. (Office 365 ProPlus, renamed "Microsoft 365 Apps for enterprise" in mid-2020, is available stand-alone and in several Microsoft 365 suites.)

### Use rights:

Licensed users may access Office 365 ProPlus running in a VDI or RDS farm.

## NEW DEDICATED HOSTING RULES

The impact of the changes depends on how Office is licensed:

**Office Professional Plus** licenses from on-premises can no longer be used on dedicated hosts like VMware Cloud on AWS. Office Professional Plus also never offered License Mobility through SA; however, it is available through SPLA, via VMware partners.

### Required licenses:

Per-User licensed through SPLA.

### Use rights:

SPLA-licensed users may access Office Professional Plus running on a VDI or RDS host.

**Office 365 ProPlus** can continue to be used on a dedicated host, but customers are no longer entitled to use Shared Computer Activation (SCA), a key technology required to license and activate the Office software on Windows Server RDS hosts. This change most likely prevents the use of Office 365 ProPlus in VMware scenarios, mandating the use of Office Professional Plus through SPLA.

### Required licenses:

Per-User licensed stand-alone or a suite that contains it.

### Use rights:

Licensed users may access Office 365 ProPlus running in a VDI or RDS farm. (The loss of SCA will require organizations to carefully consider how users activate the software on RDS servers and similar technologies from third parties, and may require an exception from Microsoft permitting the use of SCA. See earlier note.)

## TRIGGER AND IMPACT

**Trigger:** The primary trigger that will cause organizations to follow the new dedicated host licensing rules is the renewal of their license agreement in place as of Oct. 1, 2019. Customers utilizing Office Professional Plus will be impacted if they deploy any version of that software that follows Office Professional Plus 2019.

### Type of impact:

**Office Professional Plus** impact is financial and very significant.

**Office 365 ProPlus** has no financial impact, but losing SCA can affect deployment and management options and that impact could be significant. This change likely precludes the use of Office 365 ProPlus (and affiliated desktop software like Teams) in VMware scenarios.

### Financial impact of this licensing change on customers:

No financial impact for Office 365 ProPlus;

high for Office Professional Plus.

# Glossary of Licensing Terminology

Chart explains useful licensing-related terminology for Microsoft enterprise software.

Term	Definition
<b>Bring your own license (BYOL)</b>	Ability for customers to reassign (move) on-premises licenses of Microsoft software to hosting providers such as Amazon Web Services.
<b>Client Access Licenses (CALs)</b>	Provides the right for a client device or user to access all running instances of a particular server-based product within a customer's organization, generally deployed on-premises.
<b>Core + CAL</b>	Licensing model used by Microsoft Windows Server. Requires licensing all physical cores in a host server, plus CALs for all client devices or users accessing a Windows Server host.
<b>Customer Price Sheet</b>	A document that records the prices an Enterprise Agreement customer agrees to pay for various Microsoft products and services during the course of a multiyear enrollment.
<b>Edition</b>	Tiered variations of a product offered with different features, at different prices, and sometimes with different licensing models and use rights.
<b>Enrollment</b>	An Enterprise Agreement contract that commits the customer to specific purchase obligations across the entire organization, or a specified section of the organization, usually over a 36-month period.
<b>Enterprise Agreement (EA)</b>	A Microsoft volume licensing program applicable to large commercial customers that typically includes multiyear, organization-wide purchase commitments.
<b>Enterprise Agreement Subscription (EAS)</b>	An enrollment that gives an organization non-perpetual rights to the most recent versions of selected Microsoft enterprise software over a 36-month period.
<b>Enterprise Enrollment (EE)</b>	A contract that commits an Enterprise Agreement customer to various purchasing obligations, rules, and processes, typically on desktop software and CALs, most commonly over a 36-month period.
<b>License Mobility through Software Assurance</b>	A Software Assurance benefit offered for most Microsoft on-premises server applications that permits licenses to be reassigned to a hosting provider (bring your own license [BYOL]).
<b>License model</b>	A license model determines how a customer is charged for use of a Microsoft product by defining the types of licenses required for use, and under what circumstances.
<b>Long-Term Servicing Channel (LTSC)</b>	A Windows release cycle (predominantly for Windows 10 Enterprise) with new versions roughly every three years, with limited features and servicing requirements. It offers 10 years of support for each version.
<b>Microsoft Business and Services Agreement (MBSA)</b>	A nonexpiring contract that contains numerous terms and conditions applicable to Enterprise Agreement contracts.
<b>Online Services Terms (OST)</b>	Updated monthly, this downloadable document is the main repository for rules governing online services licensed through Microsoft volume licensing programs, along with the Product Terms.
<b>Pay as you go (PAYG)</b>	Ability for customers to rent Microsoft software on a short-term basis from hosting providers such as Amazon Web Services, often using SPLA-based licensing.
<b>Per-Core</b>	Licensing model used by Microsoft SQL Server and BizTalk Server. Requires licensing all physical cores in a host server. No CALs are required.
<b>Perpetual license</b>	Once paid for in full, a perpetual license allows a customer to use the associated software in perpetuity, including after the product has left Extended support.
<b>Product Terms (PT)</b>	Updated monthly, this downloadable document is the main repository for rules governing product licenses acquired through Microsoft volume licensing programs.
<b>Remote Desktop Services (RDS)</b>	Server-based desktop architecture that allows users to access session-based desktops running on Windows Server (or VDI). Requires specific Windows Server CALs. Previously named Terminal Services.
<b>Semi-Annual Channel (SAC)</b>	A Windows release cycle (predominantly for Windows 10) with new releases twice a year offering new features and mandated servicing requirements. It offers at most 30 months of support for each version.
<b>Server and Cloud Enrollment (SCE)</b>	An enrollment within an Enterprise Agreement used to license select Microsoft Server and Tools Products (such as Windows Server and SQL Server) organization-wide.

<b>Term</b>	<b>Definition</b>
<b>Services Provider License Agreement (SPLA)</b>	A program permitting hosting providers to offer customers short-term rental of most Microsoft enterprise software, typically through a Per-User or Per-Core licensing model, depending on product.
<b>Shared Computer Activation (SCA)</b>	A method of license activation offered for use with Office 365 ProPlus that avoids technical challenges present when the software is used on a shared device, such as an RDS session host.
<b>Software Assurance (SA)</b>	An annual fee that entitles the organization to upgrades to future product versions while it is maintained and other rights, including bring-your-own-license hosting options and virtualization rights.
<b>Use rights</b>	Microsoft's limits on how a product can be used, generally defined in the monthly Product Terms document.
<b>User Subscription License (User SL)</b>	A non-perpetual license that entitles the user to access a particular online service, server-based product, or Windows client OS, typically from any device.
<b>Version</b>	Designates a significant release of a software product.
<b>Virtual Desktop Access (VDA)</b>	A subscription-based license enabling access to the Windows client OS running within a virtual desktop infrastructure. Licenses VDI access for clients that are not eligible for Windows Enterprise edition.
<b>Virtual desktop infrastructure (VDI)</b>	Server-based desktop architecture that allows users to access Windows client OSs within VMs.

Directions on Microsoft (DOM) is an independent IT planning information and advisory service focused exclusively on Microsoft enterprise technologies since 1992. DOM membership gives you access to an all-in-one-place source of objective and accurate facts about Microsoft roadmaps, products, and licensing policies that will help you make faster, better decisions about your Microsoft investments.

## Directions on Microsoft services include:



### Product & Services Roadmaps

DOM Roadmaps summarize essential facts about Microsoft enterprise products and cloud services, including code names, release dates, new features, key use scenarios, and support deadlines. Use them to build your Microsoft IT plans and budgets and proactively prepare for disruptive changes in Microsoft technologies and services.

### Technology Reports

DOM Reports drill down into key Microsoft technologies and initiatives to help you understand the technical and business significance that can affect your organization. Use them to cut through the marketing hype that surrounds Microsoft technologies and focus your attention on facts that matter to IT decision makers.

### Licensing Reference Set

The DOM Licensing Reference Set is an up-to-date wiki of licensing rules and programs for Microsoft enterprise products and cloud services. Use it to quickly find answers to your Microsoft licensing questions and verify what Microsoft or your reseller is telling you.

### Analyst Webinars

DOM Webinars are monthly conference calls consisting of a 20-minute presentation by DOM subject matter experts followed by a question-and-answer period. Use them to get clarity about new Microsoft technologies, roadmaps, and licensing policies in the most time-efficient way possible.

### Licensing Boot Camps & EA Negotiation Workshops

The two-day DOM Licensing Boot Camp and one-day EA Negotiation Workshop are intensive trainings that teach you how Microsoft licensing really works. Use them to get the information and knowledge you need to optimize your agreements.

### Advisory Services

DOM subject matter experts apply an institutional understanding of Microsoft technologies, roadmaps, and licensing to elevate your Microsoft IT strategy and help you negotiate the best terms possible on your Microsoft agreements.

You get thinking and advice you'd expect from a top consulting firm for a fraction of the cost.

DOM equips you with the essential knowledge you need to take full control of your Microsoft investments. To schedule a demonstration of the DOM portal, please call +1 425.739.4669 or e-mail [info@DirectionsOnMicrosoft.com](mailto:info@DirectionsOnMicrosoft.com).

