

# Frequently Asked Questions about Microsoft Licensing

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## General Topics

### DOWNGRADE RIGHTS

#### Question A1: Which licenses have downgrade rights?

A: Downgrade rights (rights to use a prior version of a product) are generally granted as part of all the Volume Licensing agreements.

Note that Microsoft makes a distinction between the terms "version" and "edition" when referring to product licenses. The term "edition" means different functional offerings within a product family that are usually released at the same time (for example, Office Professional Plus 2013 and Office Standard 2013). The term "version" refers to different generations of a product family. Downgrade rights between the current generation (N), the prior generation (N-1), and the generation prior to that (N-2) are limited to the same functional editions within each version (for example, Windows 10 Pro downgrades to Windows 8.1 Pro).

Downgrade rights will always apply to volume licenses, but it will depend on the product for the OEM licenses and Full Packaged Product (FPP) licenses. See table below.

	Application Software	System Software	Server Software
Volume Licensing Programs	●	●	●
Licenses Enrolled in Microsoft Software Assurance	●	●	●
OEM Microsoft Software License Terms	○	◐ OEM license for Windows allows to downgrade to N-1 and N-2 releases	◐ Most OEM versions released with or after the Windows Server 2003 R2 operating system allow for the user to downgrade to an earlier version
FPP Microsoft Software License Terms	○	○	◐ Some server products offer downgrade rights

● - Full downgrade rights; ◐ - Limited downgrade rights; ○ - No downgrade rights  
 For downgrade rights for each specific product release please refer to either the Microsoft Product Terms for volume licensing products (Available online at: [Licensing Terms](#)) or Microsoft Software License Terms for FPP or OEM licenses (Available online at: [Microsoft License Terms](#)).

#### Question A2: I have licensed Office Professional Plus through a Volume Licensing agreement. Can I downgrade it to Office Standard?

A: No. Downgrade rights refer only to previous version rights, therefore the end user is only granted the right to use prior versions of the licensed Microsoft software, not other editions of the software, unless explicitly stated in the Product Terms (or successor documents).

Microsoft makes a distinction between the terms "version" and "edition" when referring to product licenses. The term "edition" means different functional offerings within a product family that are usually released at the same time (for example, Office Professional Plus 2013 and Office Standard 2013). The term "version" refers to different generations of a product family.

**Question A3: I need to downgrade to a prior version of a product that my organization licenses through Volume Licensing. How do I get prior versions of products?**

A: Although you have the right to downgrade products, the Microsoft Volume Licensing Service Center (VLSC) generally provides download access only to the current (N) and the prior version (N-1) of products.

If you previously received physical media (CD/DVD) of prior Microsoft products that your organization is currently licensed to use through downgrade rights, you may use these prior software versions at your discretion.

## SOFTWARE ASSURANCE

**Question B1: Why should I add Software Assurance (SA) to my licenses?**

A: Software Assurance benefits help you take full advantage of your investments in IT. A comprehensive program that includes a unique set of technologies, services, and rights to help deploy, manage, and use Microsoft products efficiently, Software Assurance helps keep your business up to date and ready to respond quickly to change and opportunity. Software Assurance helps you with the following:

- Reduce software and services costs with rights to new software releases and cost-efficient upgrades.
- Use consulting services to plan new, on-premises and cloud-based deployments.
- Improve operational efficiency through access to unique technologies and licensing rights.
- Increase overall user productivity with instructor-led technical training and online end-user training.
- Maintain an available and responsive IT infrastructure with around-the-clock support.

**Question B2: What kind of benefits do I get, if I add SA to my licenses?**

A: According to the product specific terms, SA coverage gives additional benefits and product use rights, which are specified in Product Terms.

Active SA coverage grants specific supplemental product use rights which allow for significant flexibility and savings in product deployment. This includes rights such as:

- Update channels for Windows, Windows Server, System Center;
- Azure Hybrid Benefit for Windows Server and SQL Server;
- Nano Server deployment option for Windows Server;
- Use of additional products such as Power BI Report Server and Machine Learning Server for Hadoop deployment;
- Unlimited virtualization for SQL Server and BizTalk Server;
- and more.



Active SA coverage also provides added benefits that apply to all products within a certain product pool and provide additional value with the software investment. Benefits granted with SA include:

	Applications Pool	Systems Pool	Server Pool
New Version Rights	•	•	•
Office Online, Office Online Server	•		
Planning Services	•		•
Enterprise Source Licensing Program		•	
Enterprise Sideloading		•	
Windows Thin PC		•	
Microsoft Desktop Optimization Pack (MDOP)		•	
Windows Virtual Desktop Access (VDA)		•	
Training Vouchers	•	•	
Home Use Program	•		
24x7 Problem Resolution Support	•	•	•
Microsoft Dynamics CustomerSource			•
Step-Up License	•		•
Servers – Disaster Recovery Rights			•
License Mobility			•
Servers – Self Hosted Applications			•
Windows SA per User Add-on Purchase Rights		•	
Windows to Go		•	
Virtualization Rights for Windows and Windows Embedded Desktops		•	

**Question B3: Is it possible to add SA to an OEM/Retail product license?**

A: Yes, you can attach standalone SA coverage to an OEM/Retail product license, but you must do so within 90 days of purchasing the OEM/Retail (FPP) product license. This option is available only for particular products through particular Volume Licensing programs as outlined below.

Pool	Full Packaged Products	OEM	Programs
Application Pool	N/A	SA available only as outlined below*	Applies to Open License, MPSA, Select, Select Plus and non-Organization wide under Open Value and Additional Products under Enterprise Agreements. It does not apply to Enterprise Products under Open Value and Enterprise Agreements.
Server Pool	SA available	SA available	

\* Customers who acquire Microsoft Office Professional from an OEM may acquire SA for Microsoft Office Standard in the Open License programs, Select and Select Plus programs, and non-Company-wide under Open Value within 90 days from the date of OEM purchase.

#### **Question B4: How do I manage my SA benefits?**

A: Your SA benefits are determined by your Volume Licensing agreement, such as the Enterprise Agreement (EA), Microsoft Products and Services Agreement (MPSA), or Open Value (OV) agreement, and the qualifying license purchases you have with SA. Depending on which agreement your organization has, you use one of two tools to manage your available Software Assurance benefit:

- The Volume Licensing Service Center (VLSC) to view and activate your SA benefits; or
- If you are an MPSA customer, the Microsoft Business Center (MBC) to access and manage your SA benefits. SA benefits are ready to view and use once you sign in to the Business Center, there is no additional activation needed.

#### **Question B5: How long after Software Assurance expiration date can it be renewed?**

A: Customers may renew SA without the need to simultaneously order a license as long as the SA coverage has not expired.

Additional terms apply to Open license program, where SA coverage ordered under an Open License authorization number ends upon expiration of that number. To renew, Customer must submit a renewal order for SA within 90 days after their authorization number expiration date.

#### **Question B6: Can I renew Software Assurance into a different licensing program than the one I originally bought the license from?**

A: Yes, customers may renew SA from one volume licensing program into a different volume licensing program. Note that for Enterprise Products purchased under a program with a company-wide commitment (such as, Office Professional Plus, Windows Enterprise, Core CAL Suite), customer may only renew into the MPSA or a program with a company-wide coverage requirement for Enterprise Products.

#### **Question B7: How can I access the E-learning benefit to allow my end users to learn about Microsoft products?**

A: On November 1, 2018, the previously known E-learning platform, which was available as a SA benefit for qualifying volume licensing agreements, was replaced with Microsoft Learn – a free, interactive, quick and fun way to learn Microsoft products and services. The content and portals available to SA E-Learning customers has been retired, and access to courses, transcripts, completion certificates and administrative tools residing on previous sites is unavailable. In place of these resources, customers can access the Microsoft Learn or product-specific destinations for richer, more engaging, and more up-to-date materials.

The new locations for the training materials are:

- Microsoft Learn is available at [New approach to learning](#)
- Office resources available at [Office support and training](#)
- Windows resources available from [Download Center](#)
- Dynamics resources available on [CustomerSource](#)
- Windows Server and Azure resources available on [Microsoft Learn](#)

## Product Licensing

### CLIENT ACCESS LICENSES

#### **Question C1: When are Client Access Licenses needed?**

A: CAL requirements differ among server products. The general rule is that you must acquire and assign a CAL to each device or user that accesses your server software. Depending on the server product, there are Base licenses and Additive CAL licenses available and for some server products External Connector licenses apply for the external users. Base CALs license access to server functionality, while Additive CALs license access to advanced server functionality and must be licensed in addition to the corresponding base CAL. External Connector licenses are assigned to the server and allow access by external users.

#### **Question C2: Are there any exceptions to when CALs are needed?**

A: All server software access requires CALs or CAL Equivalent Licenses unless the server access complies with the exceptions listed below:

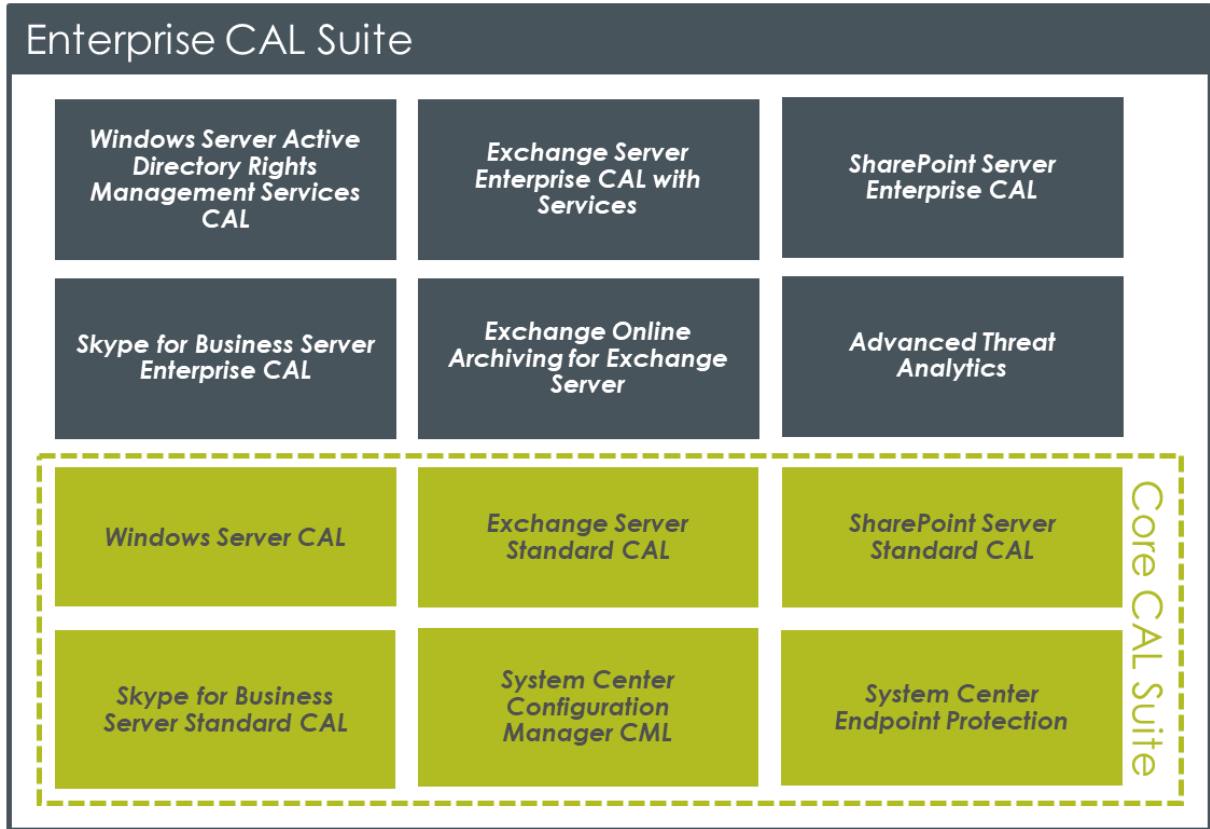
- CALs are not required for access by another Licensed Server;
- CALs are not required to access server software running a Web Workload or HPC Workload;
- CALs are not required for access in a Physical OSE used solely for hosting and managing Virtual OSEs.

Multiplexing or pooling to reduce direct connections with the software does not reduce the number of required CAL licenses. Users are required to have the appropriate licenses, regardless of their direct or indirect connection to the product. Any user or device that accesses the server, files, data or content provided by the server that is made available through an automated process requires a CAL.

#### **Question C3: What is Core and Enterprise CAL Suite and what is included?**

A: A CAL Suite is a single license that provides use rights equivalent to multiple licenses. The Core CAL Suite and the Enterprise CAL Suite are Microsoft offerings that provide access rights to a number of server products and online services. Core CAL Suite provides access to the Base licenses for server products while Enterprise CAL Suite includes everything that Core CAL Suite includes as well as gives additional functionality.

Below is a breakdown of what is included in each CAL suite license.



**Question C4: What are CAL Equivalent Licenses?**

A: CAL Equivalent license rights are product use rights granted when purchasing certain products, such as CAL suites and Online Services SLs. These CAL Equivalent licenses give rights to access server software running on your licensed servers or to manage OSEs. For example, Office 365 Enterprise E1 license gives equivalent rights to Exchange Server Standard CAL, SharePoint Server Standard CAL and Skype for Business Server Standard and Enterprise CAL licenses, allowing to also access on-premises server software.

The CAL Equivalent License rights as they apply for each qualifying product are specified in the Product Terms, Appendix A – CAL/ML Equivalent Licenses. Here are the applicable CAL/ML Equivalent Licenses as of March 2019:

Servers	Office 365 Enterprise/Education			Core CAL				Enterprise CAL				Enterprise Mobility + Security		Microsoft 365 Education			Microsoft 365			Dynamics 365 Enterprise				
	E1	E/A3	E/A5	Suite	Bridge O365	Bridge Intune	Bridge O365 + Intune	Bridge EMS	Suite	Bridge O365	Bridge Intune	Bridge O365 + Intune	Bridge EMS	E3	E5	A3 with Core CAL	A3	A5	F1	E3	E5	Cust Eng	Uni Ops	Plan
<b>Exchange Server 2019 Standard</b>																								
Base																								
Additive																								
<b>Exchange Server 2019 Enterprise</b>																								
Base																								
Additive																								
<b>SharePoint Server 2019</b>																								
Base																								
Additive																								
<b>Microsoft Audit and Control Management Server 2013</b>																								
Base																								
<b>Skype for Business Server 2019</b>																								
Base																								
Additive(Ent)																								
Additive(Pls)																								
<b>Windows MultiPoint Server 2016 Premium (Academic only)</b>																								
Base																								
Additive																								
<b>Windows Server 2019 Standard</b>																								
Base																								
Additive(RMS)																								
Additive(MIM)																								
<b>Windows Server 2019 Data Center</b>																								
Base																								
Additive(RMS)																								
Additive(MIM)																								
<b>Advanced Threat Analytics 2016</b>																								
Management																								
<b>System Center Configuration Manager 1606</b>																								
Management																								
<b>System Center Endpoint Protection 1606</b>																								
Management																								
<b>Microsoft Dynamics 365 On-premises Server</b>																								
Sales																								
Cust Service																								
<b>Microsoft Dynamics 365 On-premises Operations Server</b>																								
Operations																								

**Note:** Office 365 A1, Microsoft 365 A1, and Office 365 Nonprofit E1 do not satisfy the License requirement for access to (or management of) the Products in this table. With the exception of Advanced Threat Analytics 2016 and System Center Configuration Manager 1606, users licensed through Student Use Benefits do not satisfy the License requirement for access to (or management of) the Products in this table. A license for the Enterprise CAL Suite with active SA coverage provides rights equivalent to Data Loss Prevention and Exchange Online Protection.

**Question C5: Do I need more than one CAL per user or device to access server functionality running on more than one server?**

A: No. Only one user or device CAL is needed to use the services on any number of your licensed servers. For example, a Remote Desktop Services User CAL permits one user to access Remote Desktop Services functionality on any of your licensed Windows Server operating systems. It is important to note that user CAL will allow the same user to access any server in the server farm from any device, while device CAL only allows access from the licensed device.

**Question C6: Can I use any CAL version to access servers in my infrastructure?**

A: Client Access Licenses permit access to the same version, or earlier versions, of the server software. Older versions of CALs cannot be used with the newer version of the server software, but newer version CALs can be used with an older version of the server software. For example, if you purchase and use Windows Server 2016, you also need Windows Server 2016 CAL licenses, except if you downgrade the Windows Server 2016 license and use one of the previous editions that you have previously purchased CAL licenses for, e. g. if you already have Windows Server 2012 CAL and plan to downgrade to Windows Server 2012, you may use the existing CAL licenses and do not need to purchase newer Windows Server 2016 CALs.

**Question C7: A customer licenses all its users for the Core User CAL Suite or Enterprise User CAL Suite. Must they then also obtain Windows Server Device CALs for their network printers, multifunctional and other devices that access Windows Server?**

A: No, as articulated in the Product Terms, customers need either User CALs or Device CALs for any user who accesses the server software. If the network printers, multifunctional and other devices are used by licensed users, they are covered under the User CAL license rights.

**“CAL” means client access license, which may be assigned by user or device, as appropriate. A user CAL allows access to corresponding version of the server software or earlier versions of the server software from any device by one user. A device CAL allows access to corresponding versions of the server software or earlier versions of the server software from one device by any user. CALs allow access to server software running on Customer’s Licensed Servers only.**

**Question C8: Does my Multifunction Printer need a CAL?**

A: Yes, if the multifunction printer is connected to a Windows Server network, i. e. if a multifunction printer accesses server software to receive an IP address, receive a job or communicate that the job is finished, etc. In short, any situation when it communicates with the server software, requires a CAL, so if the multifunction printer is accessing any server software licensed via the Server / CAL licensing model it requires a CAL for that software. However, if your users who use the printer have User CALs then the printer is covered by their use via their CALs, but if users are licensed with a Device CAL, then also the printer itself requires a device CAL. The same CAL requirement applies to any other type of networked device –

such as networked scanners, networked fax machines, etc., but devices that do not connect to the network or the server software (generally referred to as peripherals) do not require CALs.

### **Question C9: Can I use my CALs to access someone else's server?**

A: You may use CALs purchased by your company to access your organization's servers, or servers owned by your Affiliates only. You may not use your CALs to access servers owned by an un-affiliated third party. This is confirmed in the January 2019 Product Terms, page 72, which states that:

**"CALs allow access to server software running on Customer's Licensed Servers only."  
"Licensed Server means a single Server, dedicated to Customer's use, to which a License is assigned. For purposes of this definition, a hardware partition or blade is considered to be a separate Server."**

For example, and Company A wants to provide employees from Company B with access to their SharePoint Servers.

- If Company A and Company B are affiliates and Company B already owns Windows Server and SharePoint Server CALs (that match the version of Windows and SharePoint Server that Company A uses), Company A will not need to purchase additional Windows Server or SharePoint Server CALs since employees from their affiliate are already covered with the appropriate CALs.
- If Company A and B are not affiliated, then CALs owned by Company B cannot be used to access Company A's servers. Company A would need to appropriately license their SharePoint farm for external users.

In any scenario, an affiliate is any legal entity that the licensed party owns, or is owned by, or that is under common ownership with that party. Ownership is understood as control of more than 50% interest in an entity.

### **Question C10: Do I need to purchase CALs for Active Directory service accounts?**

A: No, if there is no physical person accessing the server with these accounts, then no CAL is required. A CAL is required for any user or any device used by a user to access the server functionality. Active Directory and Mailbox in and of themselves do not require CALs. This is stated in the January 2019 Product Terms, page 72, which reads:

**"CAL" means client access license, which may be assigned by user or device, as appropriate. A user CAL allows access to corresponding version of the server software or earlier versions of the server software from any device by one user. A device CAL allows access to corresponding versions of the server software or earlier versions of the server software from one device by any user. CALs allow access to server software running on Customer's Licensed Servers only.**

## DYNAMICS 365

### Question D1: What is Dynamics 365?

A: Microsoft Dynamics 365 is the next generation of intelligent business applications in the cloud. Microsoft Dynamics 365 unifies customer relationship management (CRM) and enterprise resource planning (ERP) capabilities by delivering new purpose-built applications to help manage specific business functions, including Dynamics 365 for Sales, Dynamics 365 for Marketing, Dynamics 365 for Customer Service, Dynamics 365 for Field Service, Dynamics 365 for Project Service Automation, Dynamics 365 for Finance and Operations, Dynamics 365 for Retail, and Dynamics 365 for Talent. Designed to be personalized, enable greater productivity, deliver deeper insights and adapt to business needs, Microsoft Dynamics 365 applications help businesses accelerate digital transformation to meet the changing needs of customers and capture the new business opportunities of tomorrow.

The full range of products are available as online services, while a part of the offerings is also available as on-premises solution. Dynamics 365 is licensed per user and/or per device and customers must purchase licenses for their organization or their affiliates' employees and on-site agents, vendors or contractors who directly or indirectly access the Microsoft Dynamics 365 services.

### Question D2: How is Dynamics 365 online CRM solution licensed?

A: Dynamics 365 online CRM solution includes the option to license applications based on the functionality needed by the customer's employees. The applicable license is determined by the type of access and functionality needed for the particular employee.

There is a choice between standalone applications, Plan or Team Members license. The standalone application license includes access to the full functionality of that application (such as Sales or Customer Service) as well as light access to all other applications under the Dynamics 365 offering. If the employee needs more than the full access of one standalone application, it is more cost-efficient to purchase the Customer Engagement Plan license which includes access to all applications under the CRM solution. However, if any employee needs limited access to all applications, but does not need full functionality of any of the applications, they can be licensed with the Team Members license option. While most Dynamics 365 online licenses are available to be licensed per user or per device, there is also the unique Dynamics 365 for Marketing application which is licensed per organization depending on the number of marketing contacts used for the campaigns.

### Here is the overview of the functionality offered by each license option for the CRM solution:

- **Dynamics 365 for Sales Professional** includes core sales force automation (SFA) capabilities and is intended for customers who have simpler needs for their sales force automation solution, such as opportunity management, sales planning, and performance management. Per device and/or per user licenses available.
- **Dynamics 365 for Sales Enterprise** includes industry-leading SFA with embedded intelligence and advanced customization capabilities. Dynamics 365 for Sales Enterprise goes beyond core sales force automation and meets the needs of more



complex sales processes. In addition to all the functionality available in the Dynamics 365 for Sales Professional, Sales Enterprise includes rights to advanced customization and extensibility, embedded intelligence features, advanced sales force automation, Unified Service Desk for Microsoft Dynamics 365, and Voice of the Customer for Microsoft Dynamics 365. Per device and/or per user licenses available.

- **Dynamics 365 for Customer Service** is the recommended choice for customer support teams and provides licensed users with access to core customer service capabilities including Case Management, Interactive Service Hub, Unified Service Desk for Microsoft Dynamics 365, SLAs and Entitlements, and other service group management functionality. Per device and/or per user licenses available.
- **Dynamics 365 for Field Service** is the recommended choice for field-based service teams, leveraging tight integration between Dynamics 365 for Customer Service case management capabilities and field service work orders to deliver business process driven, best in class field service management. It provides licensed users with access to field service capabilities including work order management, schedule, dispatch, routing capabilities, repairs and returns management, and inventory management. Per device and/or per user licenses available.
- **Dynamics 365 for Project Service Automation** is designed for professionals who manage projects and the associated customer engagement process end-to-end and provides licensed users with capabilities required for setting up a project organization, engaging with customers, project scheduling and costing, managing and approving time and expense, and closing projects. Available to be licensed per user only.
- **Dynamics 365 Customer Engagement Plan** includes the functionality of all the standalone applications at a fraction of the price (Dynamics 365 for Sales Enterprise, Customer Service, Field Service, Project Service Automation, PowerApps Plan 2, plus Marketing, if 10+ seats of Customer Engagement Plans or Dynamics 365 Plans are purchased). Available to be licensed per user only.
- **Dynamics 365 for Team Members** subscription is designed for users who are not tied to a particular function, but who require basic Dynamics 365 functionality across all applications. This license includes read access as well as some write access for select light tasks across all Dynamics 365 applications for a given tenant and, in addition, some limited use write access across Dynamics 365 for Unified Operations Plan and Dynamics 365 Customer Engagement Plan Business Applications. (Note, at least one full user (meaning at least one of the full applications or Customer Engagement Plan) must be assigned to the tenant to administer and configure the service). Available to be licensed per user only.
- **Microsoft Relationship Sales** solution helps sales professionals build the relationships they need to win, from a single, trusted vendor. This solution will help connect more businesses with the power of relationship selling. Microsoft Relationships Sales solution includes Dynamics 365 for Sales and LinkedIn Sales Navigator. Available to be licensed per user only.
- **Microsoft Dynamics 365 for Marketing** allows to find and nurture more sales-ready leads by moving beyond basic email marketing by connecting sales and marketing, automating processes, and making smarter decisions to maximize the marketing ROI. Unlike other Dynamics 365 online CRM solution licenses, Marketing application is available to be licensed per organization and the license options are based on the number of marketing contacts used for marketing campaigns.

## Dynamics 365 Plan

Includes Unified Operations Plan, 20 seat minimum



## Customer Engagement Plan

(CRM solution)



### Sales

Two options available:



#### Professional

for core sales force automation (SFA) functionality

#### Enterprise

for SFA with embedded intelligence and advanced customization capabilities

### PowerApps

A service for creating and using custom business apps across platforms without writing code



### Customer Service

For customer support teams with capabilities for case management



### Marketing

For marketing automation



### Field Service

For field service management with capabilities for work order management



### Project Service Automation

For project managers to manage the customer engagement process end-to-end



### LinkedIn Sales Navigator<sup>1</sup>

For advanced lead and company search

### Relationship Sales Solution

Helps sales professionals build the relationships they need to win, from a single, trusted vendor

Available only through EA/EAS



## Team Members



Designed for users who are not tied to a particular function, but who require basic Dynamics 365 functionality across all applications. Includes read access and some write access to all applications for a given tenant.<sup>2</sup>

<sup>1</sup> Not from Microsoft license portfolio

<sup>2</sup> At least one full user must be assigned to the tenant to administer and configure the service

\* External user access is included and does not need to be licensed separately. External Users are users that are not an employee, contractor, or agent of the customer or its affiliates, providing business processes on the customer's behalf.

### Question D3: How are external users licensed for Dynamics 365 online?

A: External users are end customers and third-party users of the organization or its affiliates and do not require licenses to access Microsoft Dynamics 365, because external user access is included with the organization's internal user licenses. In addition, external users include off-site vendors not on an employee-like relationship with the organization or its affiliates (e.g. IT help desk support vendors serving multiple customer organizations). However, external user access does not extend to the customer or the customer's affiliate's contractors, vendors, or agents providing business processes on the customer's behalf or using Microsoft Dynamics 365 to manage any portions of their business. In this sense, the customer may not use Microsoft Dynamics 365 to provide business process outsourcing services to its clients.

### Question D4: Does the Dynamics 365 online license include any on-premises rights?

A: Yes, Microsoft Dynamics 365 includes dual use rights, which allows customers the option to deploy the server software either in Microsoft's cloud or in a private on-premises or partner-hosted cloud. Note that dual use rights included with Microsoft Dynamics 365 SLs are non-perpetual and will expire when the cloud subscription expires. You can find the full list of applicable dual use rights in the table below.

#### Dynamics 365 online dual use rights

##### Dynamics 365 Customer Engagement Plan and its components

**Server Rights included:** Customers may **install any number of copies of Dynamics 365 Server** software on a network server or shared servers. Downgrade rights are included.

**Dual Use Rights included:** Users are granted **CAL equivalent licenses** to access on-premises server software according to the licenses purchased:

- **Team Member SL = Team Member CAL**
- **Sales SL = Sales CAL**
- **Customer Service SL = Customer Service CAL**
- **Customer Engagement Plan SL = Sales CAL + Customer Service CAL**
- **Dynamics 365 Plan SL = Sales CAL + Customer Service CAL**

##### Dynamics 365 Unified Operations Plan and its components

**Server Rights included:** Customers may **install any number of copies of Dynamics 365 for Operations Server** software on a network server or shared servers. Downgrade rights are included.

**Dual Use Rights included:** Users are granted **CAL equivalent licenses** to access on-premises server software according to the licenses purchased:

- **Team Member SL = Team Member CAL**
- **Operations Device SL = Operations Device CAL**
- **Operations Activity SL = Operations Activity CAL**
- **Unified Operations Plan SL = Operations CAL**
- **Dynamics 365 Plan SL = Operations CAL**

### Question D5: How is Dynamics 365 online ERP solution licensed?

A: Dynamics 365 online ERP solution includes the option to license applications based on the functionality needed by the customer's employees. The applicable license is determined by the type of access and functionality needed for the particular employee. There is a choice between standalone applications, Plan or Team Members license. The standalone applications license includes access to the full functionality of that application as well as light access to all other applications under the Dynamics 365 offering. If the employee needs more than the full access of one standalone application, it is more cost-efficient to purchase the Unified Operations Plan license which includes access to all applications under the ERP solution. However, if any employee needs limited access to all applications, but does not need full functionality of any of the applications, they can be licensed with the Team Members license option. There are also some limited functionality licensing options that are intended for the users who need more advanced functionality than offered by the Team Members license, but less than included in the Unified Operations Plan.

#### Here is the overview of the functionality offered by each license option for the ERP solution:


- **Dynamics 365 for Finance and Operations** provides the operations features and capabilities including but not limited to financial, manufacturing and supply chain capabilities. The Dynamics 365 for Finance and Operations application cannot be licensed as a standalone application and is licensed exclusively with the Dynamics 365 Unified Operation Plan or Dynamics 365 Plan SLs, which are available to be licensed per user only.
- **Dynamics 365 for Operations Activity** is a named user subscription intended for users who may be heavy users of the application, but do not require the use rights of a full user. Dynamics 365 for Operations Activity use rights include all Dynamics 365 for Team Member user rights as well as the right to approve all Activity related transactions, create or edit the items related to warehousing, receiving, shipping, orders, vendor maintenance, and all budgets, operate a Point-of-Sale (POS) device, store manager device, shop floor device, or warehouse device. Available to be licensed per user only.
- **Dynamics 365 for Retail** application is designed to help retailers manage their operations, deliver a connected employee experience, and offer exceptional shopping experiences. By leveraging intelligent forecasting and product recommendations, retailers may improve in-store and e-commerce profitability, drive intelligent business insights to optimize strategy and cost, accelerate buying behavior through ubiquitous customer experiences. The Retail application is optimized for full users, including headquarter and central operation employees of retail organizations. There is a 20-seat minimum of Dynamics 365 for Retail (or Dynamics 365 Plan or Unified Operations Plan) SLs required to license the application. Available to be licensed per user only.
- **Dynamics 365 for Talent** application helps organizations strategically attain, empower and optimize human resources to achieve high-impact, sustainable results for the organization. There are two sets talent experiences: (i) HR Experience: strategic HR experience to drive operational excellence through intuitive experiences, visibility and collaboration and impactful programs, (ii) Talent Experiences: hire the best talent faster, build high performing agile teams and maximize the potential of your team. Both

experiences are licensed together in the Dynamics 365 for Talent application. There is a 5-seat minimum of full Dynamics 365 for Talent (or Dynamics 365 Plan or Unified Operations Plan) SLs required to license the Talent application. Available to be licensed per user only.

- **Dynamics 365 Unified Operations Plan** includes full read, edit and approval access across the entire ERP solution (formerly known as Microsoft Dynamics AX) plus Microsoft PowerApps capabilities. Includes Dynamics 365 for Finance and Operations Plan, Dynamics 365 for Talent, Dynamics 365 for Retail, and PowerApps Plan 2. Available to be licensed per user only. There is a minimum quantity of SLs required: 20 Microsoft Dynamics 365 Unified Operations Plan or Dynamics 365 Plan User SLs, 20 Dynamics 365 for Retail SLs and 5 Dynamics 365 for Talent SLs
- **Dynamics 365 for Team Members** subscription is designed for users who are not tied to a particular function, but who require basic Dynamics 365 functionality across all applications. This license includes read access as well as some write access for select light tasks across all Dynamics 365 applications for a given tenant and, in addition, some limited use write access across Dynamics 365 for Unified Operations Plan and Dynamics 365 Customer Engagement Plan Business Applications. (Note, at least one full user (meaning at least one of the full applications or Customer Engagement Plan) must be assigned to the tenant to administer and configure the service). Available to be licensed per user only.


**Question D6: How is Dynamics 365 online solution licensed if the users need both CRM and ERP functionality?**


A: If there are users who need to use functionality offered by both parts of the Dynamics 365 offering, then the Dynamics 365 Plan is the right option as it includes access to all Customer Engagement Plan plus Unified Operations Plan functionality.

**Dynamics 365 Plan**  
Includes Customer Engagement Plan, 20 seat minimum 


**Unified Operations Plan**  
(ERP solution) 20 seat minimum 

**PowerApps**  
A service for creating and using custom business apps across platforms without writing code 


**Retail**  
For HQ and central operation employees to manage their operations, deliver a connected employee experience, and offer exceptional shopping experiences   
**20 seat minimum**

**Talent**  
For HR professionals and recruiters to help organizations strategically attain, empower and optimize HR   
**5 seat minimum**

**Finance And Operations**  
Provides operations features and capabilities including but not limited to financial, manufacturing and supply chain capabilities  
**Cannot be licensed standalone**

**Operations Device**  
Used to license a point of sale device, shop floor device, warehouse device or store manager device 

**Operations Activity**  
Used to license heavy users of application who do not need the same rights as full users 

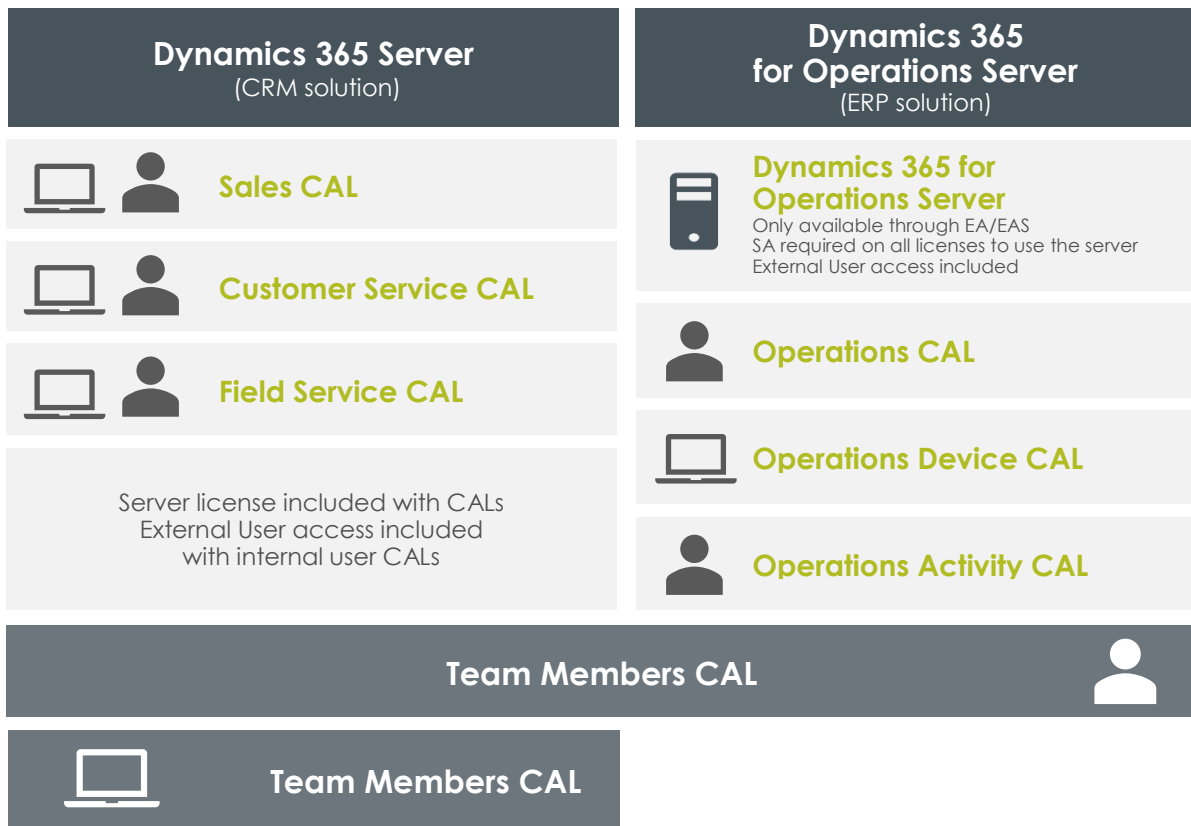
**Team Members**  
Designed for users who are not tied to a particular function, but who require basic Dynamics 365 functionality across all applications. Includes read access and some write access to all applications for a given tenant <sup>1</sup> 

<sup>1</sup> At least one full user must be assigned to the tenant to administer and configure the service  
\* External user access is included and does not need to be licensed separately. External Users are users that are not an employee, contractor, or agent of the customer or its affiliates, providing business processes on the customer's behalf.

### Question D7: How is Dynamics 365 on-premises licensed?

A: For software deployments, Microsoft Dynamics 365 on-premises licensing depends on the solution that is required.

- **The CRM solution is licensed under the Server/CAL model**, which means that the customer needs to license the server running the Dynamics 365 Server software as well as the users and/or devices that connect to the solution. The benefit when purchasing Dynamics 365 on-premises CAL licenses for CRM solution is that the server license is included and does not need to be purchased separately.
- **The ERP solution is licensed under the Server/CAL model**, which requires that the customer license the server running the software as well as the users and/or devices that connect to the product. Unlike the CRM solution, Dynamics 365 for Operations on-premises server license is not included with the purchase of CAL licenses and for each server instance, running in either physical or virtual operating system environment on the licensed server, customer must purchase a server license. Additionally, Dynamics 365 for Operations Server may only be used by customers that have active SA for their Dynamics 365 for Operations on-premises server and, if customers allow SA to lapse, they must uninstall the server software. Dynamics 365 for Operations on-premises server is only available for purchase through the Enterprise Agreement.



\* External Users are users that are not an employee, contractor, or agent of the customer or its affiliates, providing business processes on the customer's behalf.

**Question D8: How are external users licensed for Dynamics 365 on-premises?**

A: External users are end customers and third-party users of the organization or its affiliates and do not require licenses to access Microsoft Dynamics 365, because external user access is included with the organization's internal user licenses. In addition, external users include off-site vendors not on an employee-like relationship with the organization or its affiliates (e.g. IT help desk support vendors serving multiple customer organizations). However, external user access does not extend to the customer or the customer's affiliate's contractors, vendors, or agents providing business processes on the customer's behalf or using Microsoft Dynamics 365 to manage any portions of their business. In this sense, the customer may not use Microsoft Dynamics 365 to provide business process outsourcing services to its clients.

**Question D9: Are there any additional use rights granted with the Dynamics 365 on-premises licenses?**

A: Yes, Microsoft Dynamics 365 on-premises includes specific server and CAL use rights, which allows customers to deploy the server software on-premises more cost-efficiently. You can find the full list of applicable dual use rights in the table below.

Dynamics 365 on-premise rights	
Dynamics 365 Server	<p><b>Server Rights included:</b> Customers may <b>install and use any number of copies of the Dynamics 365 Server</b> software on a network server or shared server. Downgrade rights are included.</p> <p><b>CAL Use Rights included:</b></p> <ul style="list-style-type: none"> <li>• Sales and Customer Service CALs include Team Member CAL rights</li> <li>• Team Member Device CALs do not include access to Operations Server functionality</li> </ul>
Dynamics 365 for Operations Server	<p><b>Server Rights included:</b></p> <ul style="list-style-type: none"> <li>• CAL licenses do not grant the rights to install and use any number of the Dynamics 365 for Operations Server software and licenses for each server instance must be purchased separately.</li> <li>• Server license includes downgrade rights to Dynamics AX 2012 R3 or any previous version.</li> <li>• Server license includes License Mobility, Disaster Recovery, Fail-over Rights</li> </ul> <p><b>CAL Use Rights included:</b></p> <ul style="list-style-type: none"> <li>• Operations and Operations Activity CALs include Team Member CAL rights</li> <li>• Operations Activity CAL includes the rights of Operations Device CAL</li> </ul>



## MICROSOFT 365

### Question E1: What is Microsoft 365 and how is it licensed?

A: Microsoft 365 is a trusted, secure, and productive way to work that brings together Office 365, Windows 10 Enterprise, and Enterprise Mobility + Security. Microsoft 365 delivers the latest and most current advanced innovations in enterprise security, management, collaboration, and business analytics, delivered through enterprise cloud services. There are several plans which determine the products received when purchasing Microsoft 365:

**Microsoft 365 Business** is a single-platform solution specifically designed for the small and medium sized businesses (SMB) without formal IT and dedicated IT infrastructure such as Group Policy and on-premises Active Directory to allow them to take advantage of the best-in-class productivity and collaboration capabilities of Office 365 with device management and security solutions to safeguard business data. The subscription offer includes:

- A holistic set of business productivity and collaboration tools made available through as part of the **Office 365 Business Premium** plan;
- **Windows 10 Business** as a set of cloud-services and device management capabilities that is based on Windows 10 Pro. In Windows 10 Business, Windows Pro is enhanced with Windows Defender Security Controls, Windows Autopilot and automatic Office apps deployment;
- **A version of EMS** featuring a set of functionalities explicitly selected for the SMB customers such as app protection for Office mobile apps, device management for Windows 10 PCs and selective wipe of company data.

### LICENSING

Microsoft 365 Business is **licensed per user** and has a technical **limitation of 300 users** per customer tenant. Microsoft 365 Business is only **available for purchase through the CSP program**.

Offering **includes upgrade benefits** from Windows 7 Pro or Windows 8/8.1 Pro to Windows 10 Pro at no additional cost. **Windows 10 Business operates as an online service** and is not a successor to any prior version of the Windows desktop operating system therefore not granting any prior version, different language or platform version or lower editions rights or rights to access and use virtualized instances of Windows.

**Microsoft 365 Enterprise** delivers a complete, intelligent solution to empower employees to be creative and work together, on a secure, always-on platform by bringing together **Office 365 Enterprise, Windows 10 Enterprise and Enterprise Mobility + Security**. This offering is designed for large Enterprise customers with more complex IT environments and compliance needs. Microsoft 365 Enterprise family offers include three options for subscription plans:

- **Microsoft 365 Enterprise E3** includes **Office 365 Enterprise E3, Windows 10 Enterprise E3 and Enterprise Mobility + Security E3** and provides access to core products and features through one cloud offering to enhance workplace productivity and drive innovation securely. It unlocks creativity by enabling people to work naturally with ink, voice and touch, all backed by tools that utilize AI and machine learning, provides the broadest and deepest set of apps and services with a universal toolkit for teamwork, giving people flexibility and choice in how they connect, share and communicate, simplifies IT by unifying management across users, devices, apps and services and helps safeguard customer data, company data and intellectual property with built-in, intelligent security.
- **Microsoft 365 Enterprise E5** is the better version of Microsoft 365 Enterprise E3, adding more value with the latest advanced threat protection, security, and collaboration tools. With **Office 365 Enterprise E5, Windows 10 Enterprise E5 and Enterprise Mobility + Security E5**, this is the hero offering that delivers the best

value to large customers, through advanced security, identity and information protection, as well as voice services and analytics capabilities.

- **Microsoft 365 Firstline F1** plan is designed specifically for the needs of the Firstline Workforce and combines **Office 365 F1, Windows 10 Enterprise, and Enterprise Mobility + Security** to extend Microsoft 365 Enterprise across a customer's entire organization. Under this offer, firstline workers get access not only to Office 365 F1, but also to the full Windows 10 Enterprise E3 and a special edition of Enterprise Mobility + Security (EMS) which includes a certain set of capabilities from EMS carefully selected to address common firstline worker mobility and security scenarios.

## LICENSING

Microsoft 365 Enterprise offerings are **licensed per user** and available for purchase **through the MPSA, EA/EAS and CSP licensing programs**.

**CAL Rights:** Microsoft 365 Enterprise E3/E5 license options include equal rights to Enterprise CAL Suite allowing each licensed user in a hybrid environment to access on-premises servers. Additionally, Microsoft 365 Enterprise E5 also includes the Skype for Business Plus CAL use rights. You can find the breakdown of included components in each suite in [Microsoft 365 Enterprise E3 and E5 plans](#).

**On-premises server installation rights:** Each license of Microsoft 365 Enterprise E3/E5 plan allows to install any number of copies of Exchange Server, SharePoint Server, and Skype for Business Server on any on-premises server dedicated to Customer's use. This right does not apply to licenses purchased through CSP program. This right is further explained at [On-premises capable rights](#).

**The Windows 10 Enterprise component of Microsoft 365 E3/E5,** when licensed through volume licensing programs, includes the rights to all servicing channels, full SA benefits and deployment rights, including local install, VDI scenario, Windows To Go and re-imaging, and also full downgrade rights. These rights are not included when licenses are purchased through CSP program.

**The Windows component of Microsoft 365 F1** operates as an Online Service and is not a successor to any prior version of the Windows desktop operating system, therefore does not include rights to use prior, different language, different platform versions, or lower editions of Windows. Rights to access and use virtualized instances of Windows do not apply and MDOP benefit is not included.

**Microsoft 365 Education** empowers educators to unlock creativity, promote teamwork, and provide a simple and safe experience in a single, affordable solution built for education. Microsoft 365 Education entails three different offers addressing the specific needs of academic customers:

- **Microsoft 365 Education A1** is a comprehensive education solution for small and mid-size schools using affordable Windows devices. The Microsoft 365 A1 plan includes **Windows 10 Pro Education Upgrade, Intune for Education, and Office 365 Education A1**.
- **Microsoft 365 Education A3** is a 'Hero' offer for medium and large-sized schools/districts running hybrid environments. With **Office 365 Enterprise A3, Windows 10 Enterprise A3 and Enterprise Mobility + Security A3**, the A3 is a cloud-first modern licensing solution for education that empowers educators with a single, affordable and safe solution for better learning outcomes. Microsoft 365 Education A3 also includes Minecraft: Education Edition with Code Builder, to help promote student engagement through a collaborative platform that enhances creativity, collaboration, and problem-solving.
- **Microsoft 365 Education A5** delivers a premium stack for medium and large-sized schools/districts with advanced security features. The offer includes **Office 365 Enterprise A5, Windows 10 Enterprise A5 and Enterprise Mobility + Security A5**, adding more value with advanced security and information protection, as well as analytics and voice solutions. As with A3, this plan includes Minecraft: Education Edition with Code Builder, to help promote student engagement through a collaborative platform that enhances creativity, collaboration, and problem-solving.

## LICENSING

Microsoft 365 Education offerings are **licensed per user** and available for purchase **through the EES and CSP licensing programs**.

**The Microsoft 365 A1 plan is licensed per device** and includes Windows 10 Pro Education Upgrade, Intune for Education, and Office 365 Education A1. The license lasts for the life of the device, defined as 6 years from the date of the order, and may only be reassigned to a new device of the same model (or equivalent) upon permanent hardware failure. Microsoft 365 Education A1 includes an upgrade to Windows 10 Pro Education for devices licensed with Windows 7 Professional, Windows 8/8.1 Pro, and Windows 10 Pro. Microsoft 365 A1 is licensed for multiple users on a single device so it is a great solution for carts, labs, and classrooms that share devices across students.

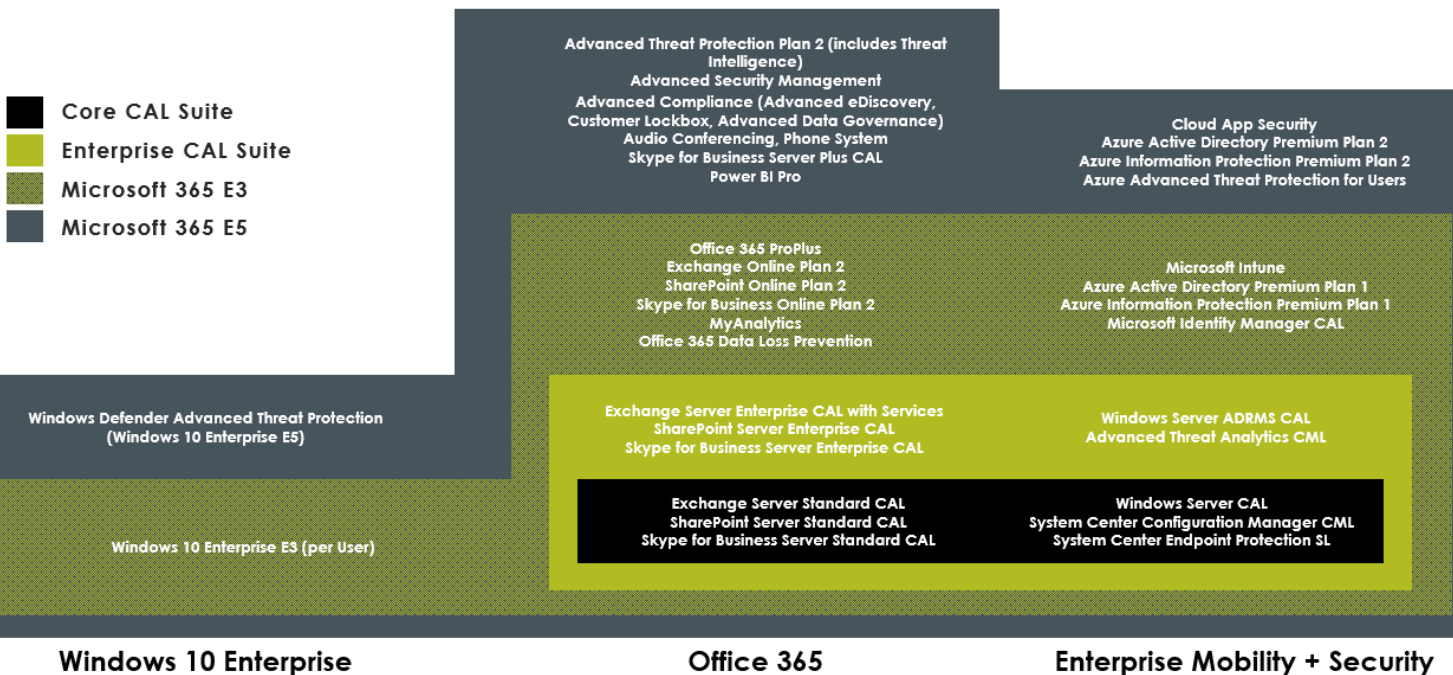
**CAL Rights:** Microsoft 365 Education A3/A5 license options include equal rights to Enterprise CAL Suite allowing each licensed user in a hybrid environment to access on-premises servers. Additionally, Microsoft 365 Education A5 also includes the Skype for Business Plus CAL use rights. You can find the breakdown of included components in each suite in [Microsoft 365 Education A3 and A5 plans](#).

**On-premises server installation rights:** Each license of Microsoft 365 Education A3/A5 plan allows to install any number of copies of Exchange Server, SharePoint Server, and Skype for Business Server on any on-premises server dedicated to Customer's use. This right does not apply to licenses purchased through CSP program or acquired through Student Use Benefit. This right is further explained at [On-premises capable rights](#).

<sup>1</sup> Excludes reimaging rights, downgrade rights, Enterprise LTSB rights or virtualization rights

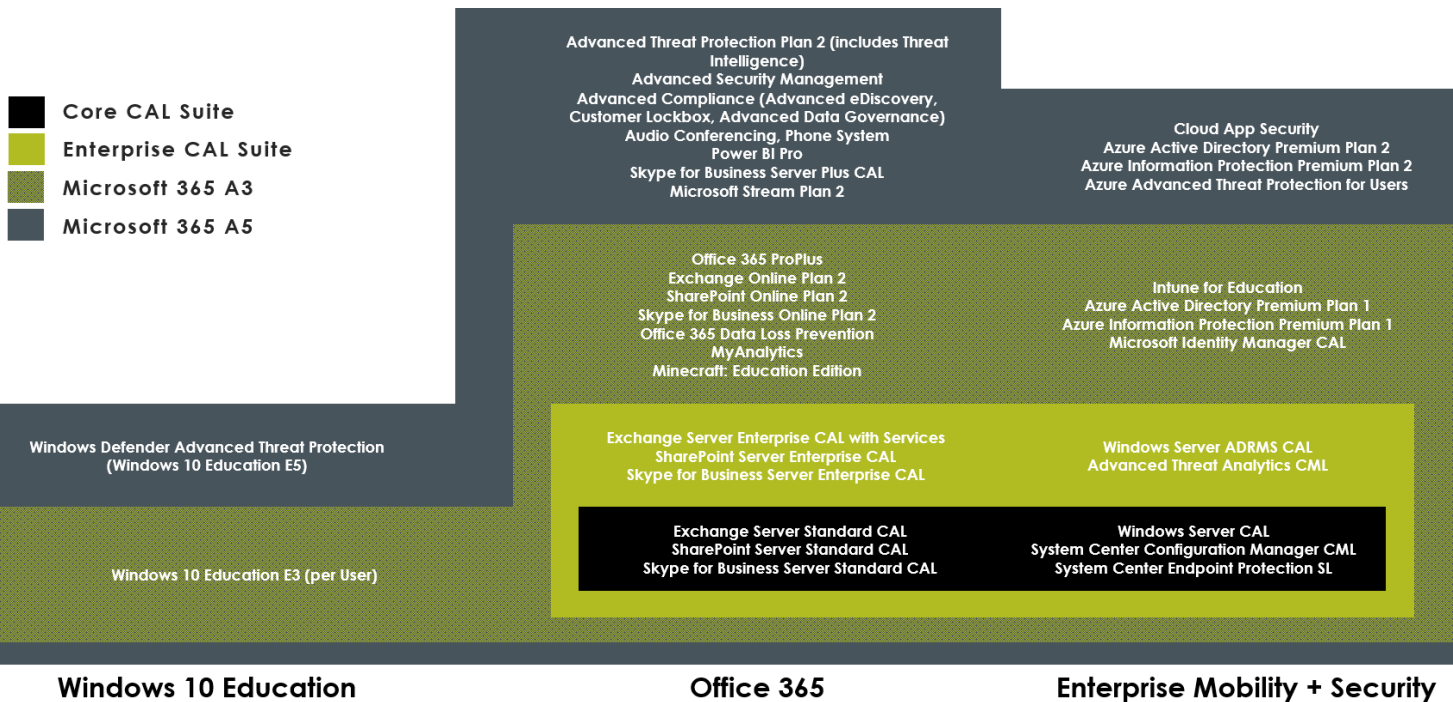
## Question E2: What is included in Microsoft 365 Enterprise E3 and E5 plans?

A: Below you can find a visualization of all the services and use rights included in the Microsoft 365 Enterprise plans.



## Question E3: What is included in Microsoft 365 Education A3 and A5 plans?

A: Below you can find a visualization of all the services and use rights included in the Microsoft 365 Education plans.



## Question E4: What are the on-premises capable rights granted with Microsoft 365 Enterprise E3/E5 or Microsoft 365 Education A3/A5?

A: Microsoft 365 users during their subscription term receive on-premises rights to productivity servers at no additional cost. Each license of Microsoft 365 Enterprise E3/E5 plan or Microsoft 365 Education A3/A5 plan allows to install any number of copies of Exchange Server, SharePoint Server, and Skype for Business Server on any on-premises server dedicated to Customer's use. However, this right does not apply to licenses purchased through CSP program and for Education offers to licenses received through Student Use Benefit.

An important distinction when looking at the on-premises server installation rights is that access to the servers installed via this benefit is exclusive to the users licensed with Microsoft 365 only, which means that if the customer has users licensed with the on-premises products such as Enterprise or Core CAL Suite, these users are not licensed to access servers installed through the Microsoft 365 productivity server benefit, while Microsoft 365 E3/E5 or A3/A5 users have access to all server options – services located on Microsoft Cloud, productivity servers installed via the on-premises capable rights and servers additionally purchased as paid licenses. This distinction is explained by the illustration below.

**MICROSOFT CLOUD**  
Microsoft Online Services

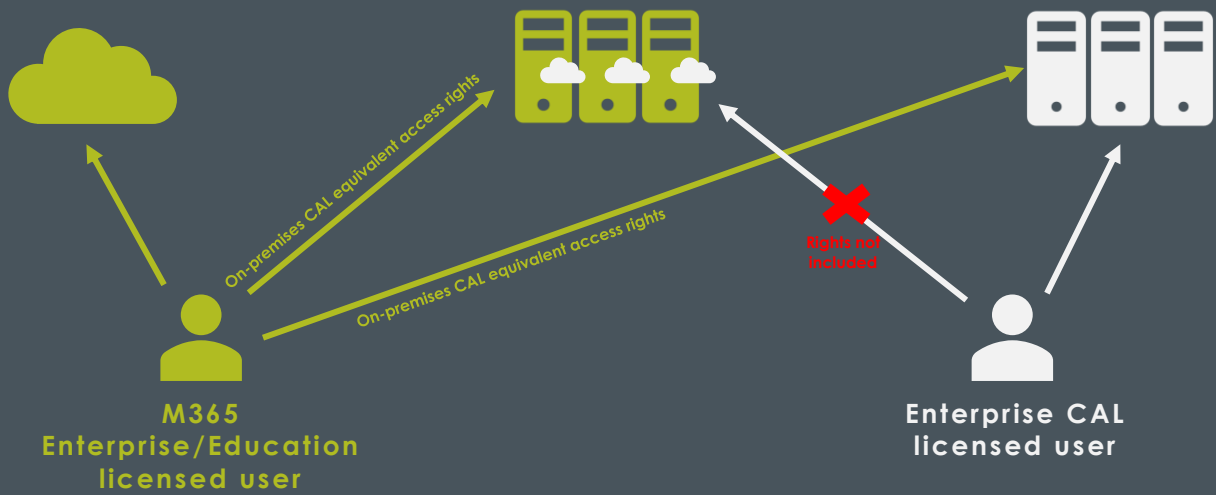
**ON-PREMISES**  
Granted via M365  
on-premises server rights

**ON-PREMISES**  
Granted via license and  
SA purchase

SharePoint Online  
Skype for Business Online  
Exchange Online

SharePoint Server  
Skype for Business Server  
Exchange Server

SharePoint Server SA  
Skype for Business Server SA  
Exchange Server SA



**Question E5: Through which licensing programs is Microsoft 365 available?**

A: All Microsoft 365 offers (except A1) are licensed per user via a single named-user subscription license and are available through the EA/EAS, EES, MPSA licensing programs and CSP licensing option. Below is a table summarizing the availability of each of the offers.

	Business	Enterprise F1	Enterprise E3	Enterprise E5	Education A1	Education A3	Education A5
Web Direct	•						
EA/EAS		•	•	•			
EES						•	•
MPSA		•	•	•			
CSP	•	•	•	•	•	•	•

## OFFICE

### **Question F1: How can I get the installation files for my Office 2019 license?**

A: The volume licensed versions of Office 2019 are no longer available to be installed using the old Windows Installer (MSI) installation technology. With the release of Office 2019, all volume licensed versions of the product are installed using Click-to-Run installation technology. With that comes a change in how the installation files are made available for the customers.

With the release of the new version, instead of downloading the installation files from the Volume Licensing Service Center (VLSC), customers have to use the Office Deployment Tool (ODT) to download the installation files directly from the Office Content Delivery Network (CDN) on the internet. The ODT is available as a free download from the [Microsoft Download Center](#) or from the VLSC portal.

After the ODT is downloaded, the customer must create a configuration file to start downloading the appropriate installation files for Office 2019. Detailed information about this process can be found here: [Deploy Office 2019 \(for IT Pros\)](#).

## POWER BI

### **Question G1: What are the licensing options for licensing Power BI?**

A: There are three licensing options:

- 1) free desktop application that lets you build advanced queries, models, and reports that visualize data, allowing to build data models, create reports, and share your work by publishing to the Power BI service;
- 2) Power BI Pro user license with all the features from free version, enhanced by collaboration and sharing capabilities with other Pro users;
- 3) Capacity-based Power BI Premium for large scale deployments within large enterprises.

The idea is that desktop application can be used to create Power BI content, but when you need to publish to and consume content from app workspaces, share dashboards, and subscribe to dashboards and reports, you need the capabilities of Power BI Pro licenses. In large quantities, licensing each user with a Power BI Pro license can be expensive, which is why for large enterprises there is the Power BI Premium offering which is intended to allow to build and distribute BI solutions broadly to all users, without the need to purchase licenses for each and every user. Power BI Premium still requires Power BI Pro licenses for users who need to collaborate, create, and publish BI content to a large number of "readers" (aka "viewers"), but these users who are consumers only and simply need to view and explore dashboards and reports, do not need any additional licensing.

### Question G2: What is the difference with between the Free and Pro users?

A: All users in the Power BI service are either Free or Pro, but the main difference between a Free or Pro user is centered around sharing and collaboration.

Only Pro users are able to publish content to app workspaces, consume apps without Premium capacity, share dashboards and subscribe to dashboards and reports. Free users can connect to all data sources through all connectivity options such as DirectQuery, live connection and use of the data gateway, and if an app is published and the app workspace it is for is assigned to Premium capacity, Free users can consume those apps.

Here is a full list of features supported by each user type:

Feature		Free user	Pro user
Connect to 70+ data sources		•	•
Publish to Web		•	•
Export to PowerPoint, Excel, CSV		•	•
Enterprise distribution	Apps		•
	Email subscriptions		•
	Embed APIs and controls		•
Collaboration	Peer-to-peer sharing		•
	App workspaces		•
	Analyze in Excel, analyze in Power BI Desktop		•

### Question G3: Are there any options to share reports without licensing all users with a Power BI Pro license?

A: If there are few users who are creating reports and many users who consume them, then there are two options to license consumers, without buying individual Pro license for each user:

- 1) Purchase **Power BI Premium dedicated capacity** for the company and Power BI Pro licenses for users who create the reports. In this scenario the read-only users will be able to see these reports without needing an additional license.
- 2) If you have SQL Enterprise core licenses covered with active SA, you can run **Power BI Report Server on-premises** to distribute interactive Power BI reports and traditional paginated reports to a large number of viewers. In addition, a Power BI Pro user license is required for users who need to publish shared Power BI reports using the Power BI Report Server. Note that there are functional differences for this option when compared to the cloud offering, see table below for details.

Features	Power BI Report Server	Power BI Service	Notes
Deployment	On-premises or hosted cloud	Cloud	Power BI Report Server can be deployed in Azure VMs (hosted cloud) if licensed through Power BI Premium
Source data	Cloud and/or on-premises	Cloud and/or on-premises	
License	Power BI Premium or SQL Server EE with SA	Power BI Pro and/or Power BI Premium	

Lifecycle	Modern lifecycle policy	Fully managed service	
Release cycle	Once every 4 months	Once a month	Latest features and fixes come to Power BI Service first. Most core functionality comes to Power BI Report Server in the next few releases; some features only meant for the Power BI service.
Create Power BI reports in Power BI Desktop	Yes	Yes	
Create Power BI reports in the browser	No	Yes	
Gateway required	No	Yes for on-premises data sources	
Real-time streaming Dashboards	No	Yes	<a href="#">Real-time streaming in Power BI Dashboards in the Power BI service</a>
Distribute group of reports using apps	No	Yes	<a href="#">Create and publish apps with dashboards and reports</a>
Content packs	No	Yes	<a href="#">Organizational content packs: Introduction</a>
Connect to services like Salesforce	Yes	Yes	<a href="#">Connect to the services you use with content packs in the Power BI service.</a> In Power BI Report Server, use certified connectors to connect to services. See <a href="#">Power BI report data sources in Power BI Report Server</a> for details.
Q&A	No	Yes	<a href="#">Q&amp;A in the Power BI service and Power BI Desktop</a>
Quick insights	No	Yes	<a href="#">Automatically generate data insights with Power BI</a>
Analyze in Excel	No	Yes	<a href="#">Analyze in Excel</a>
Paginated reports	Yes	Yes	<a href="#">Paginated reports are available in the Power BI service</a> in preview in a Premium capacity
Power BI mobile apps	Yes	Yes	<a href="#">Power BI mobile apps overview</a>
ARC GIS maps	No	Yes	<a href="#">ArcGIS maps in Power BI service and Power BI Desktop by Esri</a>
Email subscriptions for Power BI reports	No	Yes	<a href="#">Subscribe yourself or others</a> to a report or dashboard in the Power BI service
Email subscriptions for paginated reports	Yes	No	<a href="#">E-Mail delivery in Reporting Services</a>
Data alerts	No	Yes	<a href="#">Data alerts in the Power BI service</a>
Row-level security (RLS)	Yes	Yes	Available in both DirectQuery (data source) & Import mode Row-level security in the <a href="#">Power BI service</a> Row-level security in <a href="#">Power BI Report Server</a>
Full-screen mode	No	Yes	<a href="#">Full-screen mode</a> in the Power BI service
Advanced Office 365 collaboration	No	Yes	<a href="#">Collaborate in an app workspace</a> with Office 365
R visuals	No	Yes	<a href="#">Create R visuals</a> in Power BI Desktop and publish them to the Power BI service. You can't save Power BI reports with R visuals to Power BI Report Server.



<b>Preview features</b>	<b>No</b>	<b>Yes</b>	<a href="#">Opt in for Power BI service preview features</a>
<b>Custom visuals</b>	<b>Yes</b>	<b>Yes</b>	<a href="#">Custom visuals in Power BI</a>
<b>Power BI Desktop</b>	<b>Version optimized for Report Server, available for download with Report Server</b>	<b>Version optimized for Power BI Service, available from the Windows Store</b>	<a href="#">Power BI Desktop for the report server</a> <a href="#">Power BI Desktop for the Power BI service</a>

#### Question G4: How is the Power BI Premium licensed?

A: The Power BI Premium offering enables the distribution of reports broadly across an enterprise and externally, without requiring recipients to be individually licensed. A Power BI Pro license is required for users publishing reports, but consumers no longer need to be individually licensed if their organization is covered by Power BI Premium. Power BI Premium consists of capacity in the Power BI service exclusively dedicated to an organization and the offering provides the flexibility to customize performance based on the needs of a team, department, or the organization itself.

Power BI Premium is licensed by **dedicated capacity** which is calculated by capacity nodes – a certain number of virtual cores, memory and bandwidth, dedicated to a customer, that will be sufficient to power the required BI system. There are three sizes – P1, P2 and P3 which, for example, give access to 8, 16 and 32 virtual cores.

There are also separate offerings for embedded analytics for app developers/ISVs who leverage a multi-tenant system, and these are licensed with **embedded capacity** – in this model two elements are required to take embedded analytics to production: Power BI Pro licenses are required for administration, content publishing, and development, and Power BI Premium is required for testing and deployment, available at three embedded capacity options – EM1, EM2, and EM3.

Power BI Premium capacity technical details can be found here: [What is Microsoft Power BI Premium?](#)

Power BI Premium offering also includes the option for a hybrid solution to allow on-premises deployment and distribution of interactive Power BI reports and traditional paginated reports with Power BI Report Server. When you purchase Power BI Premium you can use the same number of cores that you've purchased in the cloud with Power BI Report Server on-premises.

#### Question G5: What licensing programs is the Power BI Premium available from?

A: Power BI Premium plans are available through MPSA, EA/EAS, CSP and EES licensing programs.

#### Question G6: Is the Power BI Report Server available as a standalone purchase?

A: No, Power BI Report server is only available either included with the Power BI Premium offer or as a SA benefit for customers with active SA on SQL Server Enterprise Core licenses, giving them rights to run Power BI Report Server.

**Question G7: If I have SA on my SQL Enterprise core licenses, how can I run the Power BI Report server?**

A: You are licensed to run Power BI Report Server on the licensed server on a maximum number of cores equal to the number of SQL Server Enterprise Edition Core Licenses with active SA assigned to that server, subject to a minimum of four cores per OSE. In addition, a Power BI Pro user license is required for users who need to publish shared Power BI reports using the Power BI Report Server. The right to run Power BI Report Server expires upon expiration of SA coverage.

**Question G8: How can I find out the price for my Power BI Premium deployment?**

A: You can use the Power BI Premium calculator to estimate the price for your large-scale deployment. It is available here: [Power BI Premium calculator](#).

## PRODUCT ACTIVATION

**Question H1: Do I need to activate my Microsoft product licenses?**

A: Yes, some Microsoft products require activation, before they can be used for their intended purpose. When products are licensed through volume licensing programs, they include volume activation technology, which means that unlike retail products that have to be activated via unique product activation codes on each computer the product is installed on, volume licenses can be activated with either volume license product keys that are granted for all licenses of the same product and are not unique to each license itself, or through Active Directory-Based activation.

**Question H2: How do I know whether the product I have purchased needs to be activated?**

A: All products that require activation can be found through the Search option here: [Product activation and key information](#)

**Question H3: How does volume license product activation work?**

A: Volume Activation is a product activation technology which enables Volume Licensing customers to automate the activation process in a way that is transparent to end users.

Volume Activation provides two different models for completing volume activations: Key Management Service (KMS) and Multiple Activation Key (MAK). KMS allows organizations to activate systems within their own network, while MAK activates systems on a one-time basis, using Microsoft's hosted activation services. Customers can use either or both activation methods in their environment and the type of key entered in the product determines the activation method.

There is also a third model for completing volume activation called Active Directory-Based activation (ADBA) which enables enterprises to activate computers through a connection to their domain. Unlike other activation methods, ADBA provides a way to activate the products when the computers join the company's domain by automatically activating the product installed on the computer, as long as the computer has a Generic Volume License Key (GVLK) installed.

#### **Question H4: How do I know which volume license activation method to choose?**

A: Customers can use any applicable activation method in their environment based on their needs.

- A helpful resource to understanding KMS and MAK activation methods and deciding on the most appropriate option is the Volume Activation Planning Guide at [Volume Activation for Windows 10](#)
- Active Directory Based Activation is explained in an overview available at [Active Directory-Based Activation overview](#)

#### **Question H5: How does the Key Management Service (KMS) activation work?**

A: The KMS is an activation service that allows organizations to activate systems within their own network, eliminating the need for individual computers to connect to Microsoft for product activation. It does not require a dedicated system and can be easily co-hosted on a system that provides other services. KMS requires a minimum number of either physical or virtual computers in a network environment. These minimums, called activation thresholds, must be met in order to activate the products.

**Activation Thresholds for Windows** – organization must have at least 5 computers to activate servers running Windows Server and at least 25 computers to activate client systems running Windows.

**Activation Thresholds for Office** – organization must have at least 5 computers running an edition of Office to activate installed Office products using KMS.

Note that when using the KMS activation method, a license key is not entered in each individual computer, but instead a KMS host key is used to activate the activation host computer against a Microsoft activation server. Once activated, the KMS host computer then has the ability to activate an unlimited number of computers. A single KMS host key can activate up to six KMS hosts with 10 activations per host, but customers can contact the Microsoft Activation Center if additional KMS activations are needed.

#### **Question H6: How does the Multiple Activation Key (MAK) activation work?**

A: A Multiple Activation Key (MAK) activates systems on a one-time basis, using Microsoft's hosted activation services, requiring a connection with a Microsoft activation server. Once computers are activated, no further communication with Microsoft is required.

MAK method uses one of two ways to activate the licenses:

**MAK Independent Activation** - Each computer individually connects to Microsoft via the web or telephone to complete activation.

**MAK Proxy Activation** - One centralized activation request is made on behalf of multiple computers with a single connection to Microsoft online or by telephone. This method uses

the Volume Activation Management Tool (VAMT), which is a part of the Windows Automated Installation Kit (WAIK). VAMT enables IT Professionals to automate and centrally manage the Volume Activation process using MAK and includes a check on the number of activations on the MAK.

It is important to note that each MAK has a predetermined number of allowed activations, based on the Volume Licensing agreement, but it does not always match the number of licenses purchased. Generally, customers receive a higher number of activations in case they need to reinstall and activate some of the products, however, the customers may increase the number of MAK activations available to them by contacting the Microsoft Activation Center.

**Question H7: Where can I find the volume license product keys for the products I have purchased?**

A: The volume license product keys can be retrieved from the Volume Licensing Service Center (VLSC). A product key enables use of a software product you have licensed under a specific Volume Licensing program, therefore the product keys listed in the VLSC should be used with only volume license products and are intended for use by the organization only. There are two locations where you can obtain product keys within the VLSC. If the key is not in the **Downloads and Keys** section, it may be on the **Product Keys** tab of the **Enrollment Details** page.

To find **Downloads and Keys** page in the VLSC:

1. Go to the **Licenses** section, and then select **Relationship Summary**.
2. Select the **Licensing ID** you want and then select the **Product Keys tab**, where you should find the Product Key.

To find **Enrollment Details** page in the VLSC:

1. Select **Downloads and Keys**.
2. Find your product and expand the Key section.

## REMOTE DESKTOP SERVICES AND VIRTUALIZATION SCENARIOS

**Question I1: What are Remote Desktop Services?**

A: Remote Desktop Services (formerly known as Terminal Services) accelerates and extends desktop and application deployments to any device, improving remote worker efficiency, while helping to keep critical intellectual property secure and simplify regulatory compliance. Remote Desktop Services enables virtual desktop infrastructure (VDI), session-based desktops, and applications, allowing users to work anywhere. Microsoft RDS provides three deployment choices so that customers can have the flexibility to deploy the right type of VDI desktop for their users, all from a single platform. Customers can host either sessions-based desktop, pooled virtual machines, or personal virtual machines.

### **Question 12: How do I license RDS scenario?**

A: In addition to the Windows Server licenses for the server, which include the Remote Desktop Services role, RDS licensing requires that, in addition to a Windows Server CAL (acquired either standalone or through Microsoft Core CAL Suite or Microsoft Enterprise CAL Suite), you must acquire a Windows Server RDS CAL for each user or device that:

- (i) directly or indirectly accesses any of the RDS functionality and/or
- (ii) directly or indirectly accesses the server software to interact with a graphical user interface (GUI) using RDS functionality or any other third-party technology.

### **Question 13: Do I need a Remote Desktop Services (RDS) CAL if I am using a third-party technology (such as Citrix XenApp, Citrix XenDesktop, Ericom PowerTerm WebConnect, Quest Virtual Access Suite, GraphOn Go-Global) to do VDI on Windows Server?**

A: Yes. An RDS CAL is required for any technology that is used to directly or indirectly interact with a graphical user interface of the server software. This includes (but is not limited to) using Microsoft Remote Desktop Services or other third-party software that enables multiuser scenarios on Windows Server. An RDS CAL license is also required whenever the user or device directly or indirectly accesses the Remote Desktop Services functionality. This is defined as the features or services that are running when enabling the Remote Desktop Services role and/or role service(s) in Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, or Windows Server 2016. This includes, but is not limited to, Remote Desktop Gateway, Remote Desktop Web Access, Remote Desktop Connection Broker, Remote Desktop Session Host, and Remote Desktop Virtualization Host.

### **Question 14: If I am using VMware to enable a VDI solution, do I need an RDS CAL?**

A: If the solution uses any RDS roles (Remote Desktop (RD) Gateway, RD Web Access, RD Connection Broker, RD Session Host, or RD Virtualization Host), then an RDS CAL is required.

### **Question 15: Do I have to acquire RDS CALs if I am only remotely administering Windows Server operating systems by using Remote Desktop for Administration?**

A: No. Up to two users may connect to the Windows Server operating system simultaneously to perform administrative functions without needing any RDS CALs. Additional administrative users need the appropriate RDS CALs.

### **Question 16: How do I license desktop applications for use with Windows Server RDS?**

A: When desktop applications are licensed per device, you must obtain a license for each desktop on or from which the product is used or accessed. For example, when a desktop application is accessed remotely across an organization using Windows Server RDS, a separate desktop application license is required for each desktop from which the application is accessed.

Use of Microsoft desktop applications in an RDS environment requires that the suite/edition, components, language, and version of the license acquired for the desktops from which the

desktop application is remotely accessed matches that of the copy of the application being accessed. For example, Microsoft Office Standard 2016 and Microsoft Office Professional Plus 2016 are different products (or suites), therefore a desktop licensed for Office Standard 2016 may not remotely access and use Office Professional Plus 2016.

**Question 17: When licensing Office for use in RDS, do I need to purchase an Office license for the server that is hosting the application for other desktops to access?**

A: No. A license is not required for the copy installed on the server.

**Question 18: Which Office licenses can I use in my RDS scenario?**

A: Microsoft Office retail (full packaged product) and original equipment manufacturer (OEM) products released in 2007 or later do not permit network use. All volume licenses can be used to access desktop applications in RDS. For Office 365, network use is allowed for the subscription plans that include the Office 365 Pro Plus and allow to use shared computer activation. Below is a table illustrating which Office licenses allow desktop virtualization.

Enterprise Value	Office Professional Plus 2013	Office Professional Plus 2016	Office 365 ProPlus	Office 365 Business	Office 365 Business Essentials	Office 365 Business Premium	Office 365 Enterprise E1	Office 365 Enterprise E3	Office 365 Enterprise E5	Office 365 Enterprise F1
Desktop virtualization	Yes	Yes	Yes <sup>8</sup>	No	No	No	No	Yes	Yes	No
Shared computer activation	No	No	Yes	No	No	No	No	Yes	Yes	No

<sup>8</sup> Office 365 ProPlus is supported on user-dedicated virtual desktop infrastructure (VDI). Office 365 ProPlus only supports Remote Desktop Services (RDS) when purchased through a Volume Licensing Program. Full Office applications service description available here: [Office Applications Service Description](#)

**Question 19: Which Windows licenses can be used in a network environment?**

A: Windows desktop operating system software licenses acquired through the OEM channel provide use rights to run Windows locally on the licensed device in a virtual operating system environment (OSE), however, they do not provide use rights for accessing Windows running remotely in a virtual OSE. The same limitation applies to Retail licenses of Windows software. Full virtualization use rights are provided with Software Assurance for Windows and Windows VDA subscription licenses acquired through Microsoft Volume Licensing.

**Question I10: What licenses are needed to access Windows in a virtualized environment?**

A: Windows VDA rights are needed to allow for a licensed device or user to access virtual Windows desktops either remotely and/or locally, depending on how the device or user is licensed. You can license devices or users for Windows VDA rights in the following ways:

- License devices with Windows Software Assurance or Windows VDA subscription on a per device basis.
- License users with Windows Software Assurance or Windows VDA subscription on a per user basis.

**Question I11: When should I purchase Windows Software Assurance and when Windows VDA licenses?**

A: Customers who want to use devices that do not qualify for Windows Enterprise SA, such as thin clients, will need to license those devices with Windows Virtual Desktop Access (VDA) in order to access a Windows VDI desktop. Windows VDA is also applicable to third party devices, such as contractor or employee-owned PCs.

**Question I12: How do I know what licenses are needed for my Windows virtualization scenario?**

A: Below is a list of common scenarios and licensing solution for these scenarios.

Scenario	Description	Licensing Solution
<p><b>Virtual Desktop Infrastructure Desktops</b></p>	<p>The Windows desktop operating system runs within virtual machines in the datacenter on a hypervisor platform (such as Hyper-V technology). These virtual desktops are accessed from either PCs, thin clients, or other devices.</p>	<ul style="list-style-type: none"> <li>▪ Devices or users need active <b>Windows Software Assurance or Windows VDA subscription</b>.</li> <li>▪ If the VDI solution uses any RDS roles (Remote Desktop (RD) Gateway, RD Web Access, RD Connection Broker, RD Session Host, or RD Virtualization Host), then <b>additionally an RDS CAL</b> is required.</li> </ul>
<p><b>Remote Desktop Session Host/Terminal Services Session Virtualization "Desktops"</b></p>	<p>A Windows Server operating system (such as Windows Server 2016) is shared across multiple users via Remote Desktop Session Host running applications like Microsoft Office Professional Plus 2016. Either PCs, thin clients, or other devices access these sessions.</p>	<ul style="list-style-type: none"> <li>▪ Because the devices access a Windows Server operating system only, they do not need any additional licensing for the Windows desktop operating system.</li> <li>▪ The devices/users need to be <b>licensed for the session technology (i. e. Windows Server CALs and RDS CALs)</b></li> <li>▪ The devices accessing the sessions also need licenses for <b>Office Professional Plus</b>.</li> </ul>

<p><b>Mixed VDI and Session Desktops</b></p>	<p>Some users access VDI desktops and some access session-based desktops or applications. In some cases, a particular device may need to access both simultaneously (for example, a user logs into a VDI desktop and then accesses a remote application or desktop through a session).</p>	<ul style="list-style-type: none"> <li>▪ For users who access VDI, the <b>Windows Software Assurance or Windows VDA subscription</b> is needed.</li> <li>▪ Depending on whether the solution uses RDS roles, and <b>RDS CAL might be needed.</b></li> <li>▪ Users/devices accessing a session/VDI desktop or application on Windows Server, need to be licensed with the <b>corresponding access licenses (such as Windows Server CALs and RDS CALs)</b>, as well as <b>applications used through the session.</b></li> </ul>
<p><b>Bring Your Own Device (BYOD)</b></p>	<p>The company decides to let users bring their own devices to work and sets up VDI desktops for all users. Devices do not have a qualifying operating system (for example, they may be licensed for Windows 7 Home Premium). These users do not have access to any other devices.</p>	<ul style="list-style-type: none"> <li>▪ The <b>Windows VDA per User</b> license would allow the user to access the VDI desktops from any device.</li> </ul>
<p><b>Contractor PCs</b></p>	<p>Organization A contracts some work to organization B and allows organization B's employees to access organization A's VDI desktops through organization B's PCs. Devices have a qualifying operating system (such as Windows 10 Pro).</p>	<ul style="list-style-type: none"> <li>▪ Organization A will need to license devices that organization B's employees use to access organization A's VDI desktops with either <b>Windows Software Assurance or Windows VDA subscription license</b>; or license the users with Windows Software Assurance or Windows VDA subscription on a per user basis.</li> </ul>
<p><b>Local Windows Virtual Machines</b></p>	<p>An organization has a group of developers who need to test an application across multiple Windows images running in local virtual machine on PCs running Windows 10 Pro.</p>	<ul style="list-style-type: none"> <li>▪ The PC or the primary user of the PC needs active <b>Windows Software Assurance</b>, which permits running up to four virtual machines concurrently.</li> </ul>



## SQL SERVER

### Question J1: How is SQL Server 2017 licensed?

A: There are two licensing models that apply to SQL Server: Standard edition can be licensed by either Server/CAL model or per core model, while Enterprise edition can only be licensed with the per core model. See the specifics of licensing SQL Server in physical or virtual environment in the table below.

Edition	Licensing Model	Licensing Requirement	
		FOR PHYSICAL ENVIRONMENT	FOR VIRTUAL ENVIRONMENT
SQL SERVER STANDARD	Server/CAL	Each physical server running SQL Server software requires a <b>server license</b> and each user and/or device accessing a licensed SQL Server requires a <b>SQL Server CAL<sup>2</sup></b> . <b>External users</b> also require to be licensed with individual user/device CALs.	For a single virtual machine to be licensed according to Server/CAL model, a <b>server license</b> is required for the VM and <b>matching SQL Server CALs<sup>2</sup></b> for each user or device accessing the server software.
	Per Core <sup>1</sup>	For each physical server running SQL Server software <b>all physical cores</b> on the server must be licensed with <b>a minimum of 4 core licenses for each physical processor</b> on the server. No additional access licenses required for internal or external users.	To license a single VM with core licenses, a <b>core license must be assigned for each virtual core</b> (virtual thread) allocated to the VM, with a <b>minimum of 4 core licenses per VM</b> . No additional access licenses required for internal or external users.
SQL SERVER ENTERPRISE	Per Core	For each physical server running SQL Server software <b>all physical cores</b> on the server must be licensed with <b>a minimum of 4 core licenses for each physical processor</b> on the server. No additional access licenses required for internal or external users.	<p>To license a single VM with core licenses, a <b>core license must be assigned for each virtual core</b> (virtual thread) allocated to the VM, with a <b>minimum of 4 core licenses per VM</b>. No additional access licenses required for internal or external users.</p> <p>ADDITIONAL OPTIONS FOR HIGHLY VIRTUALIZED ENVIRONMENTS:</p> <ol style="list-style-type: none"> <li><b>Licensing all the physical cores with SQL Server Enterprise Core licenses gives rights to a VM per Core license.</b> For example, if you license 2 processor server with 4 cores per processor with 8 SQL Enterprise Core licenses, you receive the right to deploy 8 VMs on this server.</li> <li><b>Licensing all the physical cores with SQL Server Enterprise Edition Core licenses with SA gives unlimited virtualization rights.</b> For example, if you license 2 processor server with 4 cores per processor with 8 SQL Enterprise Core licenses with SA, you receive the right to deploy unlimited number of VMs on this server.</li> </ol>

<sup>1</sup> Per Core license model with the minimum required licenses becomes more cost-efficient when the SQL Server is accessed by more than 30 users.

<sup>2</sup> CAL licenses must be the same version or newer than the version of server software being run on the server and accessed by the users or devices, for example, to access a SQL Server 2012 Standard Edition server, a user would need either SQL Server 2012 or 2017 CAL.

**Question J2: How often can I reassign my SQL Server licenses between servers within a server farm?**

A: SQL Server licenses that are not covered with active SA can only be reassigned to a different server within a server farm once every 90 days. (In the event of permanent hardware failure, the 90-day reassignment limit is waived.) However, all SQL Server licenses with active SA can be reassigned to another server within the server farm as often as needed.

**Question J3: Can I assign my SQL Server licenses to a third-party web hoster or non-private cloud?**

A: SQL Server licenses that are not covered with active SA cannot be reassigned to a third-party web hoster or non-private cloud at any time, however, if you cover your SQL Server licenses with active SA, they can be reassigned to another server in another server farm, or to a non-private cloud, once every 90 days.

**Question J4: Do I need SQL Server CALs if my users will not access the database directly?**

A: Yes, when licensing SQL Server software under the Server/CAL licensing model, users and devices that indirectly access SQL Server data through another application or hardware device still require SQL Server CALs, because multiplexing does not reduce the number of licenses required and users are required to have the appropriate licenses, regardless of their direct or indirect connection to SQL Server.

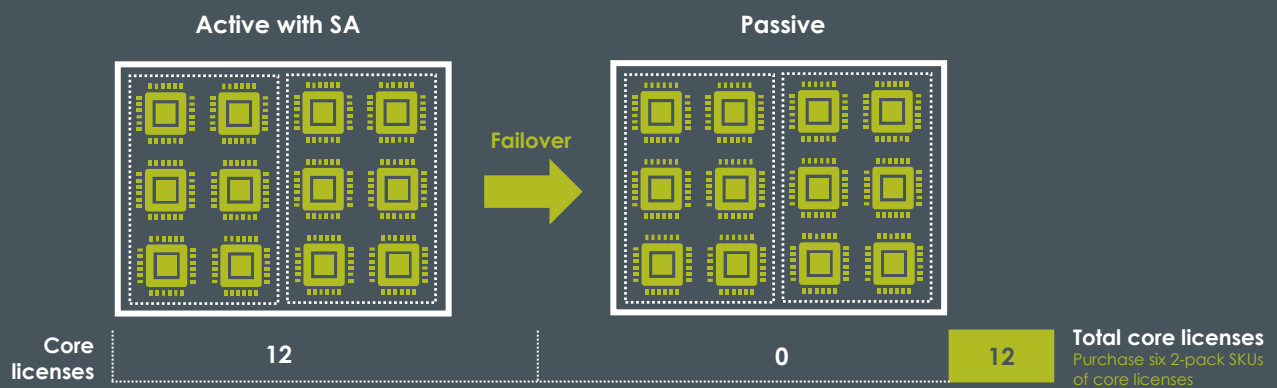
**“Multiplexing” refers to the use of hardware or software to pool connections, reroute information, or reduce the number of devices or users that directly access or use SQL Server. Multiplexing can also include reducing the number of devices or users SQL Server directly manages.**

Per the licensing rules, any user or device that accesses the server, files, data or content provided by the server that is made available through an automated process requires a SQL Server CAL and the number of tiers of hardware or software between the SQL Server and the user or devices that ultimately use its data, services, or functionality does not affect the number of CALs required. Exception would be a manual transfer of data from employee to employee, which would not necessitate the requirement of a CAL for the receiving employee, for example, if an employee sends a Microsoft Office Excel version of a report to another employee, the receiving employee does not require a CAL (as long as the report does not access a server running SQL Server in some way). Likewise, the paper distribution of data does not require SQL Server CALs for the recipients of the paper report. Users who receive data directly or indirectly from SQL Server require CALs, but if these users print the data, recipient users do not require a SQL Server CAL.

### Question J5: How do I license SQL Server for high availability?

A: SQL Server failover rights are granted as a SA benefit, which means that for each server licensed with SQL Server 2017, customer needs active SA to run the same number of passive failover instances in a separate OSE to support failover events. The passive SQL Server instance does not need to be separately licensed for SQL Server as long as it is truly passive, and the primary SQL Server is covered with active SA.

A passive instance is defined as one that is not serving SQL Server data to clients or running active SQL Server workloads. These may only be used to synchronize with the primary server and otherwise maintain the passive database instance in a warm standby state in order to minimize downtime due to hardware or software failure.



### Question J6: How do I license a non-production SQL Server environment?

A: To license a non-production use of SQL Server, customers can use the free SQL Server 2017 Developer Edition which provides a fully featured version of SQL Server software – including all the features and capabilities of Enterprise Edition – licensed for development, test and demonstration purposes only.

Customers may install and run the SQL Server Developer Edition software on any number of devices, as long as the instances are not run in a production environment or with production data. A production environment is defined as an environment that is accessed by end-users of an application (such as an Internet website) and that is used for more than gathering feedback or acceptance testing of that application. Any test data that was used for design, development or test purposes must be removed prior to deploying the software for production use. Other scenarios that constitute production environments include:

- Environments that connect to a production database.
- Environments that support disaster-recovery or backup for a production environment.
- Environments that are used for production at least some of the time, such as a server that is rotated into production during peak periods of activity.

SQL Server 2017 Developer Edition is available for download at [Microsoft Data Platform Downloads](#). Developers can also gain access to SQL Server Developer through the Visual

Studio Dev Essentials program, which also provides access to many other valuable developer resources. For more information visit: [Visual Studio Dev Essentials](#).

### Question J7: What benefits will I receive if I add SA to SQL Server licenses?

A: The SA benefits specifically applicable to SQL Server product are listed in the table below.

Benefit	Description	SQL Server Edition	
		STANDARD	ENTERPRISE
<b>New Version Rights</b>	Upgrade each Microsoft product license that is covered by active SA to the most recent version for no additional cost. Customers are eligible to deploy the latest version released during the active SA coverage, even after the SA has expired.	●	●
<b>Unlimited Virtualization</b>	Rights to deploy an unlimited number of server software instances on the licensed server in any number of OSEs (physical or virtual) when fully licensing all the physical cores on the server.		●
<b>Parallel Data Warehouse Feature Updates</b>	Rights to receive Parallel Data Warehouse feature releases (e.g., appliance updates) available between major product releases.		●
<b>License Mobility within a Server Farm</b>	Allows reassignment of SQL Server licenses within a server farm more than once every 90 days. Does not apply to SQL Server PDW.	●	●
<b>License Mobility through SA</b>	Allows license reassignment of SQL Server to third party shared servers. Does not apply to SQL Server PDW.	●	●
<b>Back-up for disaster recovery</b>	Allows to use additional instances for servers used as offline ("cold") backups, to help customers recover in case of a catastrophic event, without having to license each server individually.	●	●
<b>Failover Servers</b>	Rights to run the server software on a passive server in anticipation of a fail-over event. Passive fail-over instances may be run in either a separate OSE on the licensed server or on a different server dedicated to disaster recovery.	●	●
<b>Machine Learning Server</b>	Allows to use updates to Machine Learning Server for Windows and Machine Learning Server for Linux made available after October 2017, and for each SQL Server Enterprise core license with active SA, customer may also run Machine Learning Server for Hadoop on up to five servers solely in conjunction with its licensed use of SQL Server Enterprise Core.		●
<b>Power BI Report Server</b>	Rights to run Power BI Report Server on the licensed server on a maximum number of cores equal to the number of SQL Server core licenses with active SA assigned to the server, subject to a minimum of 4 cores per OSE. A Power BI Pro User SL is required to publish shared Power BI reports using the Power BI Report Server.		●
<b>Azure Hybrid Benefit</b>	Rights to use SQL Server licenses to consume the Microsoft Azure Data Services, while paying only for the cost of compute (i.e., the base rate), storage, and back-up, as well as I/O associated with their use of the services (as applicable).	Core licenses only	Core licenses only
<b>Step-up licenses</b>	Customers with active SA are eligible to purchase additional licenses to migrate from a lower- to higher-level edition of SQL Server.		●
<b>24x7 Problem Resolution Support</b>	Provides around-the-clock phone support for business-critical issues or business hours phone support for non-critical. Unlimited email support can be used for non-critical problems.	●	●

### Question J8: What is Azure Hybrid Benefit for SQL Server and how does it work?

A: The Azure Hybrid Benefit for SQL Server are extended use rights for SQL Server which are granted through active SA. This benefit gives the customer rights to use SQL Server licenses to consume the Microsoft Azure Data Services, while paying only for the cost of compute (i.e.,

the “Base Instance”), storage, and back-up, as well as I/O associated with their use of the services (as applicable), allowing for significant savings when running SQL Server Data Services in Azure.

Under AHB for SQL Server, for each SQL Server license covered with SA, customer is allowed to use the indicated Data Services according to predefined ratios determining the number of vCores covered by each core license (see more details in table below).

It is not allowed to allocate the licenses to Azure Hybrid Benefit for SQL Server and on-premise servers at the same time, except on a one-time basis, for a period not to exceed 180 days, to allow Customer to migrate those workloads to Azure. Reassignment of licenses can be done a minimum of 90 days after a workload is migrated.

QUALIFIED LICENSE	MICROSOFT AZURE DATA SERVICE	RATIO OF QUALIFIED LICENSES TO AZURE VCORES
SQL Server Enterprise (Core)	Azure SQL Database (Managed Instance, Elastic Pool and Single Database) – General Purpose	1 Core License : 4 vCores
	Azure SQL Database (Managed Instance, Elastic Pool and Single Database) – Business Critical	1 Core License : 1 vCore
	Azure Data Factory SQL Server Integration Services (Enterprise)	
	Azure SQL Database (Managed Instance and Single Database) - Hyperscale	1 Core License : 4 vCore
	SQL Server Enterprise Virtual Machines	1 Core License* : 1 vCore
SQL Server Standard (Core)	Azure SQL Database (Managed Instance, Elastic Pool and Single Database) – General Purpose	
	Azure Data Factory SQL Server Integration Services (Standard)	1 Core License : 1 vCore
	Azure SQL Database (Managed Instance and Single Database) – Hyperscale	
	SQL Server Standard Virtual Machines	1 Core License* : 1 vCore

\* Subject to a minimum of 4 Core Licenses per Virtual Machine

## VISUAL STUDIO

### Question K1: What is Visual Studio and how is it licensed?

A: Visual Studio offerings provide access to developer tools, cloud services, software, support, and training to help developers build apps for any platform. There are a number of licensing options designed for each organization’s specific needs:

- **Visual Studio integrated development environment (IDE)** is a rich software solution for creating stunning applications for Windows, Android, and iOS, as well as modern web applications and cloud services, and includes a comprehensive, highly flexible set of application lifecycle management (ALM) tools. Visual Studio IDE is where the developer

creates their applications and has access to the programming languages, is able to test and debug programs and see how they will look like running on an end-user device. Visual Studio IDE is the software included in all Visual Studio subscriptions along with other subscriber benefits or a standalone license may be purchased without the additional benefits.

- **Visual Studio subscription** offerings are designed to not only provide developers access to the IDE, but also give rights to additional high-value benefits, such as development/test use rights for Microsoft platform software like SQL Server/Windows/Windows Server, monthly Microsoft Azure credits, a developer account for publishing apps to the Windows Store and an Office 365 Developer subscription. Visual Studio subscription offerings are available in four editions – Professional, Enterprise, Test Professional or MSDN Platforms – but there is also a distinction between cloud and standard subscriptions.
- **Azure DevOps Server environment** (previously Visual Studio Team Foundation Server) is an on-premises solution where the software developers, testers, project managers, stakeholders, and other participants in the software development team collaborate, manage source code, manage and prioritize work, generate builds of the application, and much more.
- **Azure DevOps Services** (previously Visual Studio Team Services) offers a broad and growing set of cloud-based Application Lifecycle Management and DevOps capabilities for use by development teams.

**Additionally, there are free services available:**

Visual Studio Community is a free, full featured IDE for any developer building non-enterprise apps across any platform or device in the following scenarios:

- Any individual developer can use Visual Studio Community to create their own free or paid apps
- Teams of up to 5 users in a non-enterprise organization (less than 250 PCs, less than \$1M in annual revenue) may also develop apps
- Any number of users in any size organization may use Visual Studio Community in a classroom learning environment, for academic research, or for contributing to open source projects

**Question K2: How are Visual Studio subscriptions licensed?**

A: Visual Studio subscription offerings are available in four editions – Professional, Enterprise, Test Professional or MSDN Platforms – but there is also a distinction between cloud and standard subscriptions.

**Cloud subscriptions** allow to rent Visual Studio and Azure DevOps without a long-term contract. Cloud subscriptions are purchased through a Microsoft Azure subscription and available either direct from Microsoft via credit card payments, purchased through the Enterprise Agreement contract (requires the removal of spending limits, monetary commitments cannot be used to purchase VS Cloud subscriptions), or through Cloud Solution Provider partners.

**Standard subscriptions** (previously called MSDN subscriptions) are available through volume licensing and give the option to either rent or purchase Visual Studio IDE (depending on the type of volume licensing agreement chosen), while also providing access to subscriber benefits and Azure DevOps through a long-term contract.

	Cloud subscriptions		Standard subscriptions for developers		Standard subscriptions for testers and IT Professionals	
	PROFESSIONAL	ENTERPRISE	PROFESSIONAL	ENTERPRISE	MSDN PLATFORMS	TEST PROFESSIONAL
<b>Visual Studio IDE</b>						
Newest version for PC & Mac (2017) Earlier versions for PC	●	●	●	●		
			●	●		
<b>Azure DevOps</b>						
Basic features	●	●	●	●	●	●
Test Manager		●		●	●	●
Artifacts		●		●		
Self-Hosted Pipelines		●		●		
<b>Azure DevOps Server 2018</b>						
Server license	●	●	●	●	●	●
User client access license (CAL)	●	●	●	●	●	●
Test Manager		●		●	●	●
Artifacts		●		●		
Self-Hosted Pipelines		●		●		

No Visual Studio IDE included in subscription, but subscribers can use Visual Studio Code (free for anyone) and Visual Studio Community (free for open source projects, classroom learning, and academic research, plus for any use by up to 5 people in small organizations)

## SUBSCRIBER BENEFITS

### Cloud Services

Experiment and learn using Microsoft Azure

	\$50 credit per month	\$150 credit per month	\$100 credit per month	\$50 credit per month
Azure Dev/Test pricing	●	●	●	●
Visual Studio App Center	●	●		
Office 365 Developer subscription (up to 25 users)		●		
Power BI Pro		●	●	
Windows Store developer account (for publishing apps)	●	●		
Enterprise Mobility + Security		●		

### Software for dev/test

Microsoft Office Professional Plus, Project, Visio  
Windows, Windows Server, Windows Embedded, Microsoft SQL Server, R Server  
SharePoint, Exchange, Dynamics & other Microsoft server software

	\$50 credit per month	\$150 credit per month	\$100 credit per month	\$50 credit per month
Microsoft Office Professional Plus, Project, Visio		●		
Windows, Windows Server, Windows Embedded, Microsoft SQL Server, R Server	●	●	●	●
SharePoint, Exchange, Dynamics & other Microsoft server software		●	●	

### Software for production use

Office 365 Pro Plus  
Office Professional Plus 2019 (for use on one device)

	\$50 credit per month	\$150 credit per month	\$100 credit per month	\$50 credit per month
Office 365 Pro Plus		●		
Office Professional Plus 2019 (for use on one device)		●		

### Training & Education

LinkedIn Learning  
Pluralsight training  
DataCamp  
Opsgility – Microsoft Cloud-focused training  
MSDN Magazine (print or early digital access)

	\$50 credit per month	\$150 credit per month	\$100 credit per month	\$50 credit per month
LinkedIn Learning	● <sup>1</sup>	● <sup>2</sup>	● <sup>1</sup>	● <sup>1</sup>
Pluralsight training	● <sup>1</sup>	● <sup>2</sup>	● <sup>1</sup>	● <sup>1</sup>
DataCamp	● <sup>1</sup>	● <sup>1</sup>	● <sup>1</sup>	● <sup>1</sup>
Opsgility – Microsoft Cloud-focused training	● <sup>2</sup>	● <sup>3</sup>		
MSDN Magazine (print or early digital access)	●	●	●	●

## Support

Technical support

Developer Community

Priority support in select TechNet Forums

Online Chat

## Visual Studio partner offers

CAST Highlight

CloudPilot

MODERNRequirements

SmartOffice4IFS and inteGREAT4IFS

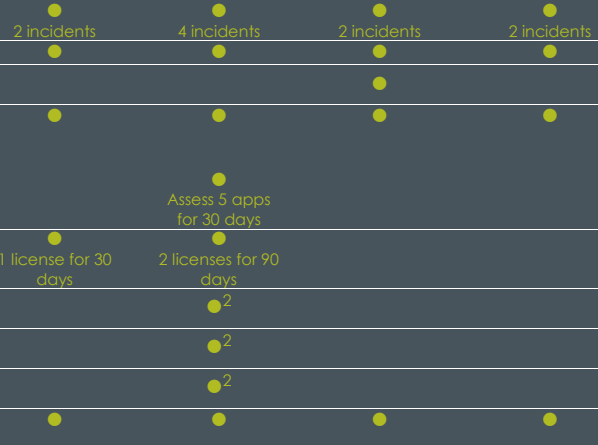
Parasoft – virtualize/SOAtest

Professional Desktop

WhiteSource – Azure DevOps

Server/Azure DevOps Bolt extension

Other partner offers



Full list of all software for dev/test purposes that is included as part of Visual Studio subscriptions: [Software for dev/test](#)

<sup>1</sup> Full subscription for 3 months

<sup>2</sup> Full subscription for 6 months

<sup>3</sup> Full subscription for 12 months

**All Visual Studio subscriptions are licensed on a per-user basis.** Each licensed user may install and use the software on any number of devices to design, develop, test, and demonstrate their programs. Visual Studio subscriptions also allow the licensed user to evaluate the software and to simulate customer environments in order to diagnose issues related to your programs. Each member of the development team that will use (install, configure, or access) the software must have his or her own Visual Studio subscription. Two or more individuals may use the same software if each has a Visual Studio subscription.

### Question K3: Are there any exceptions when Visual Studio license is not needed?

A: Yes, there are certain scenarios which allow unlicensed users to access and use the software provided via the Visual Studio subscriptions.

**Demonstration Using Terminal Services:** All Visual Studio standard subscriptions include the use of the Windows Server Remote Desktop Services for up to 200 simultaneous, anonymous users to access an online demonstration of your programs. These anonymous users do not need a Visual Studio subscription.

**Acceptance Testing:** At the end of a software development project, end users (or team members such as a business sponsor or product manager acting as proxies for end users) typically review an application and determine whether it meets the necessary criteria for release. The software may be accessed by end users who do not have a Visual Studio subscription for purposes of acceptance testing. Acceptance testing must not use live production data and if a copy of any live production data is used, then that copy of the data must be discarded after the testing is complete and cannot be incorporated back into the live production data.

**Feedback via Feedback Client for Azure DevOps Server:** End users can download the free Feedback Client for Azure DevOps Server and access the software to review



application and provide feedback. A Visual Studio subscription is not needed for end users accessing the software in order to provide feedback. The end user is not testing the application, which would require a Visual Studio subscription.

#### **Question K4: How should external users be licensed for use of Visual Studio environment?**

A: If an organization hires external contractors to work within their development team, the contractors must have appropriate Visual Studio subscriptions for any software that they will be using. The contractor can either bring his own Visual Studio subscription to do work for the organization, or the organization can assign one of their Visual Studio subscriptions to cover contractors use of the software.

However, if the contractor will be using the organization's Azure DevOps Server, the organization must supply an Azure DevOps Server CAL for the contractor's use. The CAL can be purchased standalone or provided as part of Visual Studio subscription purchased by the organization and assigned to the contractor temporarily. Azure DevOps Server CALs are only valid for accessing an Azure DevOps Server acquired by the same organization.

#### **Question K5: Where can the software used as part of Visual Studio subscription be installed and run?**

A: The licensed user can install and use the software on any number of devices. The software can be installed and used on devices at work, at home, at school, and even on devices at a customer's office or on dedicated hardware hosted by a 3rd party or in Microsoft Azure VMs. However, the software is otherwise not licensed for use in production environments.

A **production environment** is defined as an environment that is **accessed by end users of an application** (such as an Internet Web site) and that is used for more than Acceptance Testing of that application or Feedback. Some scenarios that constitute production environments include:

- Environments that connect to a production database.
- Environments that support disaster-recovery or backup for a production environment.
- Environments that are used for production at least some of the time, such a server that is rotated into production during peak periods of activity.

#### **Question K6: How is Azure DevOps Server environment licensed?**

A: Microsoft Azure DevOps Server is licensed under the Server/CAL licensing model, which requires that each server running Azure DevOps Server software must have a server license and an Azure DevOps Server CAL is required for each user or device accessing the Azure DevOps Server software. The rights to use and access Azure DevOps Server are included with Visual Studio subscriptions (each Visual Studio subscription grants one CAL for the licensed user) or can be purchased standalone through volume licensing.

### **Question K7: Can Azure DevOps Server run in a virtual machine?**

A: Azure DevOps Server can be run as one instance in either physical or virtual environment for each server license purchased. The license includes Team Foundation Build Services (for running a build server) and Team Explorer (for installing with Visual Studio to connect to Azure DevOps Server).

### **Question K8: Is an operating system license included with Azure DevOps Server license?**

A: No, in addition to Azure DevOps Server license, an operating system license must be acquired for each machine running Azure DevOps Server. The operating system license is not granted via a Visual Studio subscription license and must be purchased separately. For Windows Server-based deployments where Windows Server is licensed on a Per Core/CAL basis, each user or device that accesses Azure DevOps Server data (on a read or write basis) must also have a Windows Server CAL.

### **Question K9: Is SQL Server license included with Azure DevOps Server license?**

A: Yes, Microsoft SQL Server Standard is included with the Azure DevOps Server license for use as Azure DevOps Server database (except for Azure DevOps Server Express which uses SQL Server Express). Azure DevOps Server uses Microsoft SQL Server as its data repository and provides the right to deploy one instance of SQL Server Standard software per Azure DevOps Server license. This instance of SQL Server can run on a separate server but can only be used by Azure DevOps Server, not for any other purposes. If SQL Server software is used for any other purposes, a license must be purchased separately.

SQL Server Reporting Services for Azure DevOps Server can be accessed without a SQL Server CAL, using the SQL Server software supplied under the Azure DevOps Server license.

Azure DevOps Server license includes SQL Server Standard only and while SQL Server Enterprise can be used for Azure DevOps Server, this edition is not included with the Azure DevOps Server license and must be licensed separately.

### **Question K10: Are there any exceptions for when the Azure DevOps Server CALs are required?**

A: Yes, each user or device directly or indirectly accessing Azure DevOps Server must have a User CAL or a Device CAL, but there are scenarios which do not require an Azure DevOps Server CAL. CAL is not required in the following scenarios:

- **Entering work items through any interface and viewing and editing any work items.**
- **Accessing Azure DevOps Server reports.** Any read-only data that comes from the Azure DevOps Server SQL data warehouse or is surfaced through SQL Server Analysis Services is a report, but custom reports can also be written to call into Azure DevOps Server APIs and join data with other data sources.
- **Accessing Azure DevOps Server using Microsoft System Center Operations Manager** and enabling operations staff to take operational issues encountered in production

and raise them as issues to the development team, automatically creating a work item in Azure DevOps Server.

- **Accessing Azure DevOps Server using the Feedback Client for Azure DevOps Server.**
- **Viewing static data that has been manually distributed outside of Azure DevOps Server.**
- Up to two devices or users that only access Azure DevOps Server **to perform system administration**, such as creating Team Projects or Project Collections.
- Up to five users when Azure DevOps Server is purchased through the retail channel or for the free Team Foundation Server Express. However, a CAL is required for the 6th user and any subsequent user.
- **Accessing Azure DevOps Server through a pooled connection from another integrated application or service.**
- **Accessing Azure DevOps Service via an Azure DevOps Server Proxy** and enabling Azure DevOps Service subscribers with bandwidth latency issues to deploy Azure DevOps Server Proxy to access the service
- **Providing approvals to stages** as part of the Release Management pipeline

In all cases, however, the user must still have the necessary CALs for Windows Server (when Windows Server is used as the operating system for Azure DevOps Server), SharePoint Server (when the user accesses a Azure DevOps Server Project Portal running SharePoint Server), or SQL Server (when Azure DevOps Server uses a version or edition of SQL Server other than SQL Server Standard), where applicable.

**Question K11: Are there any cases when Azure DevOps Server licensing requires more than a CAL license?**

A: Yes, using the Test Management or Package Management features in Azure DevOps Server requires either a particular level of Visual Studio subscription or a purchase through the Visual Studio Marketplace. A CAL is not sufficient to use these features.

Feature	Available to:
<b>Test Management</b>	Visual Studio Enterprise subscribers (Visual Studio Enterprise standard subscription, Visual Studio Enterprise cloud subscription) Visual Studio Test Professional Subscription subscribers MSDN Platforms subscribers Paid Test Manager users
<b>Package Management</b>	Visual Studio Enterprise subscribers (Visual Studio Enterprise standard subscription, Visual Studio Enterprise cloud subscription) Paid Package Management users

External contractors with Visual Studio Enterprise standard subscription, Visual Studio Enterprise cloud subscription, MSDN Platforms, or Visual Studio Test Professional standard subscription supplied by their organization can also access these features in Azure DevOps Servers running at other organizations. However, an Azure Dev Ops Server CAL purchased by the organization that licensed the Azure DevOps Server must be assigned to each of these users.

**Question K12: How are external users licensed for access to Azure DevOps Server?**

A: If the contractor will be using the organization's Azure DevOps Server, the organization must supply an Azure DevOps Server CAL for the contractor's use. The CAL can be purchased standalone or provided as part of Visual Studio subscription purchased by the organization and assigned to the contractor temporarily. Azure DevOps Server CALs are only valid for accessing an Azure DevOps Server acquired by the same organization.

**Question K13: How are Azure DevOps Services licensed?**

A: Azure DevOps is a cloud service allowing access by members of a development team across the world, with functionality updated regularly with the latest innovations.

Azure DevOps is free with unlimited users and build time for open source projects. For small teams, **creating an Azure DevOps account and first 5 users are free, and it is also free to add as many stakeholders and active Visual Studio subscribers to Azure DevOps account as needed.** Azure DevOps users as well as Visual Studio subscribers have access to Basic features like version control, agile planning, and more. Additionally, certain Visual Studio subscriptions include additional features, such as the Test Manager and Package Management extensions.

**Additional users can be purchased through the Visual Studio Marketplace,** which also includes the option to purchase additional services for use by the account overall, such as Build and Release Hosted Pipelines and Private Pipelines, and Cloud-based Load Testing. Visual Studio Marketplace is accessible through the Azure Management portal and is linked to the Azure Subscription billing mechanism.

	Visual Studio Professional	Visual Studio Enterprise
<p><b>Azure DevOps is included with Visual Studio subscriptions</b></p> <p><b>Subscribers get access to any number of accounts and don't count against 5 free users.</b></p>	<p>Basic features</p>	<p>Basic features            Package management            Test Manager            1 concurrent job of self-hosted CI/CD</p>

Find out more about [Azure DevOps](#).

## VOLUME LICENSING VS RETAIL/OEM PRODUCT EDITIONS

### Question L1: Which Office 2019 Editions are available through OEM and Retail channel and which through Volume Licensing?

A: These are the Office Editions and their channel availability:

**OEM or Retail:** Home and Student; Home and Business; Professional

**Volume licensing:** Standard; Professional Plus

**Cloud subscription:** Office 365 Business; Office 365 ProPlus

### Question L2: Which Windows 10 Editions are available through OEM and Retail channel and which through Volume Licensing?

A: These are the Windows Editions and their channel availability:

**OEM or Retail:** Home; Pro

**Volume licensing:** Windows 10 Pro Upgrade; Windows 10 Enterprise LTSC 2019; Windows 10 Enterprise per device; Windows 10 Enterprise E3 / E5 per user; Windows Virtual Desktop Access (VDA) per device, Windows Virtual Desktop Access (VDA) E3 / E5; Windows 10 Education per device; Windows 10 Education E3 / E5 per user

## WINDOWS

### Question M1: Can I purchase the Windows Upgrade license for computers with no pre-installed operating system?

A: No, Microsoft Volume Licensing programs do not offer Windows desktop operating system licenses – through Volume Licensing it is only possible to purchase Upgrade licenses, for which the licensing rules require a qualifying operating system license that is considered a “Full” license. This means, that in order to be eligible to purchase the Windows Upgrade license, you need to have either OEM or Retail (FPP) version of Windows installed on the computer. In case you have none of those, it is possible to purchase the legalization (Get Genuine) license for the computer, to become eligible for the Upgrade License.

### Question M2: What are the Qualifying Operating Systems for Windows Upgrade licenses?

A: Qualifying Operating Systems vary according to the volume licensing program through which the Upgrade licenses are purchased and the type of license to be purchased.

**When customer wants to purchase Windows per user licenses**, user to be licensed must be the primary user (i. e. using the device more than 50% of the time) of at least one device licensed with a qualifying OS listed in the table below. This one device must also be the primary user's primary work device.

**Qualifying OS for Per User Licenses and Virtual Desktop Access Per Device/User Licenses**

Qualifying Operating Systems	Enterprise Agreement, Microsoft Products and Services Agreement, Select, Select Plus	Microsoft Cloud Agreement
<b>Windows 10</b> Enterprise, IoT Enterprise, Pro, Pro for Workstations, Pro in S mode	•	•
<b>Windows 7 / 8 / 8.1</b> Enterprise, Pro, Professional, Ultimate, Windows 7 Professional/Ultimate for Embedded Systems, Windows Embedded 8/8.1 Pro, Industry Pro	•	

**When customer wants to purchase Windows per device licenses**, the device to be licensed must have a qualifying OS installed as listed in the table below and unless customer acquires SA for the device, they must remove the qualifying OS from the device before installing Windows software acquired through a volume licensing agreement. Per device license assignment is permanent unless device has active SA.

**Qualifying OS for Per Device Licenses (Excluding Virtual Desktop Access Licenses)**

Qualifying Operating Systems	New Enterprise Agreement (EA)/Open Value Company Wide (OV-OW) <sup>1</sup>	Existing Enterprise Agreement (EA)/Open Value Company Wide (OV-OW)	Microsoft Products and Services Agreement (MPSA)/Select Plus/Open	Microsoft Cloud Agreement	Academic and Charity
<b>Windows 10</b> Enterprise, Pro, Pro for Workstations, Pro in S mode	•	•	•	•	•
Education, Home, Home in S mode					•
<b>Windows 8/8.1</b> Enterprise, Pro	•	•	•		•
Windows 8/8.1					•
<b>Windows 7</b> Enterprise, Professional, Ultimate	•	•	•		•
Home Premium, Home Basic, Starter Edition					•
<b>Windows Vista</b> Enterprise, Business, Ultimate	•		•		•
Home Premium, Home Basic, Starter Edition					•
<b>Windows XP</b> Professional, Tablet Edition, Pro Blade PC	•		•		•
Home, Starter Edition					•
<b>Apple</b> macOS <sup>2</sup>	•		•		•
<b>Windows Embedded Operating Systems</b> Windows 10 IoT Enterprise	•	•	•	•	•
Windows 2000 Professional for Embedded Systems	•		•		•
Windows XP Professional for Embedded Systems	•		•		•
Windows Vista Business/Ultimate for Embedded Systems	•		•		•
Windows 7 Professional/Ultimate for Embedded Systems	•	•	•		•
Windows Embedded 8/8.1 Pro, Industry Pro	•	•	•		•

<sup>1</sup>Also applicable to Qualified Devices acquired through merger or acquisition

<sup>2</sup>macOS must be preinstalled by the authorized manufacturer prior to the initial sale of the device.

### Question M3: Can I add Software Assurance to my Windows 10 Pro license?

A: No, Windows Enterprise is the only edition eligible for Software Assurance.

### Question M4: What benefits will I receive if I add SA to Windows licenses?

A: The SA benefits specifically applicable to Windows Enterprise product are listed in the table below.

Benefit	Description
<b>New Version Rights</b>	Upgrade each Microsoft product license that is covered by active SA to the most recent version for no additional cost. Customers are eligible to deploy the latest version released during the active SA coverage, even after the SA has expired.
<b>Virtualization Rights for Windows</b>	Rights to run Windows in either local or remote virtualization scenarios: <ul style="list-style-type: none"> <li>Allows to run Windows software in up to 4 VMs locally on a licensed device (Note: If all permitted virtual OSEs are used, physical OSE may only be used to host and manage the virtual OSEs).</li> <li>Any licensed device, or any device used by a licensed user, may remotely access up to 4 virtual OSEs or one physical OSE of Windows software on a device dedicated to customer's use (also referred as Windows Virtual Desktop Access (VDA) rights)</li> </ul>
<b>Microsoft Desktop Optimization Pack (MDOP)</b>	Offers tools to take advantage of desktop virtualization and better manage Windows devices to help personalize the user experience, simplify application deployment, improve application compatibility with Windows, and manage and secure customers' devices. Key components of MDOP: Application Virtualization (App-V), User Experience Virtualization (UE-V), BitLocker Administration and Monitoring (MBAM), Advanced Group Policy Management (AGPM), Diagnostics and Recovery Toolkit (DaRT)
<b>Windows Thin PC</b>	Enables repurposing of existing PCs as thin clients with a locked-down version of Windows with a smaller footprint. Windows Thin PC software may be used only to run these types of applications: security, management, terminal emulation, RDS and similar technologies, web browser, media player, instant messaging client, document viewers, NET Framework and Java VM.
<b>Windows SA per User Add-on</b>	Allows to purchase the optional Windows 10 Enterprise per User Add-on, providing either Windows SA per User rights for a primary user with a primary device that is licensed for Windows Enterprise or Windows VDA per User rights for a primary user with a primary device that is licensed with Windows VDA.
<b>Windows To Go</b>	Rights to create and store an instance of Windows software on up to two USB drives using Windows to Go and run the instance on licensed device or, if licensed per user, on any device.
<b>Windows Enterprise Channels Enterprise Sideloading</b>	Rights to deploy the Semi-Annual Channel or Long-Term Servicing Channel releases. A method for distributing line-of-business applications to internal organization, which means installing a Windows Store app directly to devices within the organization without publishing it in and downloading it from the store. Available with the purchase of Windows through EA/EAS, EES
<b>10.1" Screen Device Benefit</b>	Per User license allows to install Windows software on all Windows licensed devices with integrated screens 10.1" diagonally or less.
<b>Rights to run Clustered HPC Applications</b>	A licensed device or a device used by a licensed user may be used as a Cycle Harvesting Node to run Clustered HPC Applications, as long as the device is not used as a general purpose Server, database Server, web Server, e-mail Server, print Server or file Server, for other multi-user access purposes, or for any other similar resource sharing purpose.

### Question M5: When do I need the Windows VDA license?

A: Windows VDA is a subscription license designed to help organizations license devices or users that do not qualify for Software Assurance, such as "thin client" devices, and users who

are not the primary user of a device that qualifies for Software Assurance, in order to get the right to access a virtual desktop.

**Question M6: Do I need a Windows VDA subscription license to access my work PC in the office (licensed to run Windows Pro) remotely from my home PC (licensed to run Windows Home)?**

A: No, the primary user of the licensed device may access the licensed device from another device using remote access technologies while out of office. Other users, at different times, may access the licensed device from another device using remote access technologies, but only on devices that are separately licensed to run the same or higher edition of this software. Multiple users may not remotely access the same licensed device.

**Question M7: Can I use Windows Pro or Enterprise like a "server" to host applications?**

A: No. The Windows desktop OS is not allowed to be used as a "server." Device connection is allowed only for certain purposes (such as File Services, Print Services, Internet Information Services, Internet Connection Sharing, and Telephony Services). If you want to host applications and access them from multiple devices or for multiple users simultaneously, you need to license Server/CAL products.

## WINDOWS SERVER AND SYSTEM CENTER

**Question N1: How is Windows Server and System Center licensed?**

A: With the release of 2016 product versions, the licensing of Windows Server and System Center Datacenter and Standard Editions has moved from processors to physical cores, which means that to license a server, all physical cores on the server must be licensed. The Standard Edition of Windows Server and System Center license up to 2 VMs or 2 Hyper-V containers when all of the physical cores on the server are licensed, while Datacenter edition allows for unlimited virtual machines or Hyper-V containers on the licensed server.

To license Windows Server or System Center, you must comply with ALL the rules listed below:

- 1) **All physical cores on the server must be licensed;**
- 2) **A minimum of 8 physical cores on each physical processor must be licensed, even if the processor has less than 8 physical cores;**
- 3) **A minimum of 16 physical cores per server must be licensed, even if the server has less than 16 cores.**

**Question N2: Do I have to license all cores on the server, even if they are disabled?**

A: Yes. All physical cores on all physical processors on a server must be sufficiently licensed, even if they have been disabled.



**Question N3: How are core licenses sold?**

A: Core licenses are sold in packs of 2 or 16 core licenses.

**Question N4: Can I mix Windows Server Datacenter and Standard licenses on the same server?**

A: No. All physical cores on a given server must be licensed with the same version and edition. The customer can run different editions or older versions of Windows Server software as guests within virtual OSEs, but they are not allowed to assign licenses of different versions or editions to the same physical server to license the physical cores on the server.

**Question N5: Are CALs required for Windows Server?**

A: Yes, Windows Server Standard and Datacenter editions require Windows Server CALs for every user or device accessing a server. External access to the licensed server requires a CAL for each user or device or, alternatively, a Windows Server External Connector license for the server. Additional or advanced functionality is enabled with the purchase of an additive CAL, such as Remote Desktop Services CAL or Active Directory Rights Management Services CAL.

**Question N6: How is the number of System Center Management Licenses determined?**

A: For System Center, server MLs are required for managed devices that run server OSEs and these are licensed per core. For devices that run non-server OSEs, client management licenses are required, licensed either per OSE or per user.

**Question N7: Can I assign a Windows Server and/or System Center license to a virtual machine?**

A: No. Windows Server and System Center are licensed by physical cores, not virtual cores, therefore, licenses are assigned only to the physical server. After assigning the required number of core licenses to a physical server, the customer has the rights to use the operating system environments (OSEs), such as virtual machines, Hyper-V containers, and Windows Server containers on that licensed server according to the allowance by the edition licensed.

**Question N8: How do I license Windows Server with virtualization technologies?**

A: When licensing Windows Server in virtual environment, regardless of whether the workloads are running in physical or virtual operating system environments (OSEs), each server must have the appropriate number of licenses assigned to it prior to the workload running on it. This holds true regardless of whether the customer plans the workload to:

- Always run on a single server;
- Run in parallel on the server as a backup when the primary server fails;
- Run the workload if the primary server is down;
- Load balance when the primary server has high use;
- Only run the workload during maintenance.

Since Windows Server licenses cannot be assigned to virtual machines, customer must always appropriately license the physical machine running your virtual environment. So, for instance, if Windows Server is deployed on a server and is running a hypervisor on bare metal (directly on top of the server hardware), such as VMware's ESX/ESXi, and Windows Server will not be deployed as a host OS in the physical OSE, the guest OS instances deployed and running in virtual OSEs on the server still must be appropriately licensed. This means licenses must be assigned to the physical server for all the physical cores on the server (subject to a minimum of eight per processor and 16 per server), which then grants virtualization rights according to the server edition licensed (i. e. the right to run either two virtual OSEs for Standard edition or unlimited OSEs for Datacenter edition). These same licensing rules apply when using any other virtualization technology.

Because a server running Windows Server Standard must have assigned licenses equal to the number of physical cores on the server (subject to a minimum of eight per processor and sixteen per server) for every two running instances, customer needs to consider what the peak capacity for the server will be, whereas Windows Server Datacenter permits an unlimited number of instances of the server software to run in virtual OSEs and offers the greatest flexibility to move OSEs between servers without having to track the number of instances running or worry about being under-licensed.

**Question N9: If I have a Windows Server Standard edition license, how can I increase my virtualization rights?**

A: With the Windows Server Standard edition licensing model, the customer can expand the virtualization capacity of their licensed server by purchasing additional licenses. Assigning additional licenses to the same physical server gives rights to run additional OSEs or Hyper-V containers on the licensed server.

For example, a 2-processor server with 8 cores per processor requires 16 core licenses of Standard edition and has rights to 2 OSEs or 2 Hyper-V containers. To increase the virtualization allowance by additional 2 OSEs or 2 Hyper-V containers the server must be fully licensed again, so if the server has 16 cores in total, an additional 16 core licenses must be assigned to the server. This is called "stacking" licenses to achieve the number of virtual machines needed. See below a table showing how the licenses should be counted when "Stacking" licenses.

<b>"STACKING" STANDARD</b>		<b>2-processor server with 8 cores per processor (16 cores total)</b>	
<b>Number of OSEs or Hyper-V containers allowed on licensed server</b>	<b>How many core licenses are required?</b>	<b>How many license packs (2-core-pack) should be purchased?</b>	
<b>2 per server</b>	<b>16</b>	<b>8</b>	
<b>4 per server</b>	<b>32</b>	<b>16</b>	
<b>6 per server</b>	<b>48</b>	<b>24</b>	
<b>8 per server</b>	<b>64</b>	<b>32</b>	

### Question N10: What benefits will I receive if I add SA to Windows Server licenses?

A: The SA benefits specifically applicable to Windows Server product are listed in the table below.

Benefit	Description	Windows Server Edition	
		STANDARD	DATACENTER
<b>New Version Rights</b>	Upgrade each Microsoft product license that is covered by active SA to the most recent version for no additional cost. Customers are eligible to deploy the latest version released during the active SA coverage, even after the SA has expired.	●	●
<b>Semi-Annual Channel Releases</b>	Allows to install and use Semi-Annual Channel releases (including both Pilot and Broad releases) on licensed servers. Active SA is also required on Base Access Licenses and Additive Access Licenses.	●	●
<b>Azure Hybrid Benefit</b>	Rights to use Windows Server licenses to license virtual machines on Azure while paying for the cost of compute only (the "Base Instance").	●	●
<b>Azure Hybrid Benefit for Disaster Recovery</b>	Allows to use Windows Server for backup Instances run and managed on Microsoft Azure Services using Azure Site Recovery.	●	●
<b>Nano Server</b>	Allows to install and use the Nano Server deployment option. Active SA is also required on Base Access Licenses and Additive Access Licenses.	●	●
<b>Back-up for disaster recovery</b>	Allows to use additional instances for servers used as offline ("cold") backups, to help customers recover in case of a catastrophic event, without having to license each server individually.	●	●
<b>Step-up licenses</b>	Customers with active SA are eligible to purchase additional licenses to migrate from a lower- to higher-level edition of Windows Server.	●	
<b>24x7 Problem Resolution Support</b>	Provides around-the-clock phone support for business-critical issues or business hours phone support for non-critical. Unlimited email support can be used for non-critical problems.	●	●
<b>Remote Desktop Services ("RDS") User CAL and User SL Extended Rights</b>	Allows to use RDS User CALs and User SLs with Windows Server software running in OSEs dedicated to its internal use on either Microsoft Azure or the shared servers of a License Mobility through Software Assurance Partner. Customer must complete and submit License Mobility Validation form to their License Mobility through Software Assurance Partner.	●	●

### Question N11: When should I think about Datacenter licenses instead of Standard licenses?

A: The number of core licenses required depends on the number of physical cores on the server, as well as the number of OSEs or Hyper-V containers that will be running. It is recommended to choose the Datacenter edition for highly virtualized environments, in general, for servers with 13 or more OSEs or Hyper-V containers.

The following table demonstrates the economic breakeven point between Windows Server Standard and Windows Server Datacenter, given the licensing requirements and virtualization rights for each edition for a server with the minimum number of core licenses required.

VERSION CHOICE (BREAK EVEN)		2-processor server with 8 cores per processor (16 cores total)								
OSEs or Hyper-V containers		2	4	6	8	10	12	13	14	16
DATACENTER EDITION	Cores to license	16	16	16	16	16	16	16	16	16
	2-pack core licenses	8	8	8	8	8	8	8	8	8
	TOTAL ANNUAL PRICE*	€4,948	€4,948	€4,948	€4,948	€4,948	€4,948	€4,948	€4,948	€4,948
STANDARD EDITION	Cores to license	16	32	48	64	80	96	112	112	128
	2-pack core licenses	8	16	24	32	40	48	56	56	64
	TOTAL ANNUAL PRICE*	€792	€1584	€2,376	€3,168	€3,960	€4,752	€5,544	€5,544	€6,336

\* Estimated Retail annual price for License + Software Assurance. Prices and pricing levels may vary.

### Question N12: What benefits will I receive if I add SA to System Center licenses?

A: The SA benefits specifically applicable to System Center product are listed in the table below.

Benefit	Description
<b>New Version Rights</b>	Upgrade each Microsoft product license that is covered by active SA to the most recent version for no additional cost. Customers are eligible to deploy the latest version released during the active SA coverage, even after the SA has expired.
<b>System Center Configuration Manager VDI Rights</b>	Customers with active SA coverage for System Center Configuration Manager CMLs, Core CALs, or Enterprise CALs (each, a "VDI qualifying license") may use the software to manage up to 4 Virtual OSEs in which software is used remotely from the VDI licensed device or by the VDI licensed user. Each Virtual OSE may be run on a different virtual desktop infrastructure hosts.
<b>System Center Current Branch Rights</b>	Allows to install and use the Current Branch option for all components.
<b>System Center Azure management rights through Server and Cloud Enrollment (SCE)</b>	Customers may use System Center software to manage qualifying Virtual OSEs running within Microsoft Azure. For every 16 CIS Suite core Licenses (or each CIS Suite processor License), the customer may manage up to 10 qualifying Virtual OSEs running within Microsoft Azure. Qualifying Virtual OSEs include: Windows Server Virtual Machine Instances (including Instances deployed under Azure HUB), Cloud Services instances (Web role and Worker role), Storage Accounts, SQL Databases, Websites instances.
<b>License Mobility through SA</b>	Allows to reassign licenses to another server in another server farm or to a non-private cloud once every 90 days.
<b>Back-up for disaster recovery</b>	Allows to use additional instances for servers used as offline ("cold") backups, to help customers recover in case of a catastrophic event, without having to license each server individually.
<b>Step-up licenses</b>	Customers with active SA are eligible to purchase additional licenses to migrate from a lower- to higher-level edition of System Server.
<b>24x7 Problem Resolution Support</b>	Provides around-the-clock phone support for business-critical issues or business hours phone support for non-critical. Unlimited email support can be used for non-critical problems.

**Question N13: If I have active Software Assurance on my Windows Server and/or System Center licenses, how do I move from processor to core licensing?**

A: When switching from the processor licensing model, customers with active Software Assurance are eligible for core grants. This means that if they previously had licensed their servers with processor licenses, they are now granted the core licenses and are therefore eligible to renew SA only.

The standard core grant is 16 core licenses per each 2-processor license, but servers with more than 8 cores per processor are eligible for additional core grants, to enable them to renew the number of licenses that they actually need, without purchasing additional Licenses with SA. So, if the customer's servers have more than 8 cores per processor, it means that the 2-processor license was used to cover more than the minimum 16 cores required by the new licensing model, so they would need to renew SA for more than 16 cores.

This is allowed when customer documents their existing server environment with a Software Inventory Logging tool (or third-party inventory tools) to substantiate the necessity for additional core grants. With software inventory documentation customer proves that the 2-processor license was used to run software on a server with more than 8 cores per processor and therefore they have grounds for renewing SA on the number of licenses required.

**Question N14: What do I need to do to document my servers to receive additional core grants?**

A: The inventoried environments should include date-stamped documentation of servers, processors, and cores for all production hardware on which Windows Server and/or System Center is currently installed. A record must be established as of September 30, 2019, or the expiration of the Software Assurance term for the eligible licenses—whichever is earlier, and this documentation must be kept for customer's records and provided to Microsoft in case of audit, but there is no requirement to send this documentation to Microsoft prior to renewing SA on the licenses.

**Question N15: How can I license my Windows Server for use in third party data centers?**

A: In the case of Windows Server, since Windows Server product licenses do not qualify for the License Mobility through Software Assurance benefit, which allows to run eligible software products on shared servers in qualified third-party data centers, the standard rules for outsourcing software management apply for all Windows Server licenses purchased through volume licensing. As stated in the March 2019 Product Terms:

Customer may install and use licensed copies of the software on Servers and other devices that are under the day-to-day management and control of third parties, **provided all such Servers and other devices are and remain fully dedicated to Customer's use.** Customer is responsible for all of the obligations under its volume licensing agreement regardless of the physical location of the hardware upon which the software is used. [...] Server means a physical hardware system capable of running server software.

This means that for Windows Server product, it is not allowed to run the software in a multitenant server environment outside the client's own datacenters unless the software is run on the customer's own dedicated server that is simply located at a third-party location. Scenarios with any shared server environment, such as renting a couple virtual machines on a physical server, are not allowed under the volume licensing rules, with the exception of using Azure services through the Azure Hybrid Benefit rights granted via SA.

**Question N16: What is Azure Hybrid Benefit for Windows Server and how does it work?**

A: The Azure Hybrid Benefit for Windows Server are extended use rights for Windows Server which are granted through active SA. This benefit gives the customer rights to use Windows Server licenses to license virtual machines on Azure while paying for the cost of compute only (the "Base Instance") and allowing for significant savings when running Windows Server virtual machines in Azure.

Under AHB for Windows Server, each set of 16 Windows Server core licenses with SA entitles to use Windows Server on Azure on up to 16 vCores allocated across two or fewer Azure Base Instances. Each additional set of 8 core licenses with SA entitles use on up to 8 vCores and one Base Instance. Windows Server Subscriptions also allow to use AHB. Windows Server Standard edition allows to license either on-premise servers or Azure instances, while Datacenter edition allows to license both on-premise servers and Azure instances.

## Extended Security Updates

### FOR SQL SERVER AND WINDOWS SERVER 2008 AND 2008 R2

#### **Question O1: What is the Extended Security Update (ESU) offer for Windows Server and SQL Server 2008 and 2008 R2?**

A: In line with the product Lifecycle Policy, Microsoft offers 10 years of support (5 years for Mainstream Support and 5 years for Extended Support) for Business and Developer products (such as SQL Server and Windows Server). Upon the end of the 10-year term, the customers can no longer receive patches or security updates if they remain on the unsupported product versions, which may cause security and compliance issues and expose customers' applications and business to serious security risks. SQL Server and Windows Server 2008 and 2008 R2 products are expected to soon reach the end of their support period and therefore pose an immediate risk to customers still using the older product versions:

- End of Support for SQL Server 2008 and 2008 R2 is July 9, 2019.
- End of Support for Windows Server 2008 and 2008 R2 is January 14, 2020.

To help with the potential security concerns for the customers who based on their business requirements are not able to upgrade their servers to the newest versions, Microsoft is offering the Extended Security Updates option.

#### **Question O2: What does the ESU offer for Windows Server and SQL Server 2008 and 2008 R2 include?**

A: For customers that are not able to transition before the End of Support date, Microsoft is offering two options to help protect data and applications during the End of Support transition:

**Option 1 – Extended Security Updates in Azure:** Customers who move 2008 and 2008 R2 workloads to Azure Virtual Machines (IaaS) “as-is” have access to ESU for both SQL Server and Windows Server 2008 and 2008 R2 for three years after the End of Support dates for free. Those that decide to move to Azure SQL Database Managed Instance (PaaS) will have access to continuous security updates, as this is a fully managed solution. On Azure, customers do not need Software Assurance to get free ESU.

**Option 2 – Extended Security Updates for on-premises environments:** ESU are available for workloads running on-premises or in a hosting environment for customers running SQL Server or Windows Server under licenses with active SA via an EA, EAS or SCE. ESU will be available as an additional purchase annually for three years after End of Support date. Customers can purchase ESU only for the servers they need to cover. SA is required for customers to purchase ESU on-premises.

For SQL Server 2008 and 2008 R2, ESU include provision of Security Updates and Bulletins rated "critical" for a maximum of three years after July 9, 2019. For Windows Server 2008 and 2008 R2, Extended Security Updates include provision of Security Updates and Bulletins rated "critical" and "important," for a maximum of three years after January 14, 2020. This offer does not include technical support, but customers may use other Microsoft support plans to get assistance on 2008 and 2008 R2 questions on workloads covered by ESU. The offer does not include new features, customer-requested non-security hotfixes, or design change requests, however, Microsoft may include non-security fixes as they deem necessary.

### Question O3: How much will ESU cost for Windows Server and SQL Server 2008 and 2008 R2?

A: The cost of ESU depends on the option chosen by the customer:

**In Azure:** Customers running Windows Server or SQL Server 2008 and 2008 R2 in an Azure Virtual Machine will get ESU for **no additional charges** above the cost of running the virtual machine. Customers moving to Azure SQL Database Managed Instance (PaaS) do not need ESU, as this is a fully managed solution, and is always updated and patched by Microsoft.

**On-premises:** Customers with active SA or subscription licenses can purchase ESU for **75% (annually) of the EA License cost** of the EA or SCE license prices of the latest version of SQL Server or Windows Server. Coverage will be available in three consecutive 12-month increments following End of Support. Customers cannot buy partial periods (e.g., only 6 months) and, if deciding to add the support after the end of support date, customers must buy-back on prior years to get coverage for subsequent years (e.g., a customer must purchase year 1 and year 2 if they need coverage for year 2 but skipped year 1). ESU are transacted per year only commencing with the End of Support date and are not prorated. For example, if customer purchases the offer in the 10th month of the cycle, they still must pay for the full year, but will only get updates for the remaining 2 months of the cycle. Customers pay for only the servers they need to cover, so they can reduce costs each year as they upgrade parts of their environment.

**Hosted environments:** Customers who purchased Windows Server or SQL Server 2008 or 2008 R2 from a hoster will need to purchase ESU directly from Microsoft or a Microsoft licensing partner for **75% of the full on-premises license cost annually** for use in the hosted environment.

### Question O4: How will Microsoft deliver ESU for Windows Server and SQL Server 2008 and 2008 R2?

A: The ESU will be delivered to customers based on the type of updates the customer has opted for. The ESU delivery technologies are planned as follows:



**For Windows Server 2008/R2 instance running on-premises:** Customers will receive an add-on Multiple Activation Key (MAK) through the volume licensing portal. Customers can then deploy both the new MAK key and any pre-requisite servicing stack updates, then continue with their current update/servicing strategy to deploy ESU through Windows Update, Windows Server Update Services (WSUS), or whatever patch management solution the customer prefers.

**For Windows Server 2008/R2 instance running on Azure Virtual Machines:** Windows Server will automatically detect the VM that it is running on Azure and enable ESU to be downloaded and installed using Windows Update or whatever patch management solution the customer is using. Pre-patched Windows Server 2008 R2 images will also be available from the Azure gallery.

**For SQL Server 2008/R2 running on Windows Server 2008/2008 R2 on Azure VMs:** Customers will receive updates automatically through existing SQL update channels.

**For SQL Server 2008/R2 running on Windows Server 2008/2008 R2 on-premises:** Customers will be able to download the update from a private website to deploy to their on-premises environments. This is available to customers only if they buy ESU.

#### **Question O5: Where can I find more information about this offer?**

A: Detailed information about the ESU offer for Windows Server and SQL Server 2008 and 2008 R2 can be found here: [Extended Security Updates FAQ](#)

## FOR WINDOWS 7 AND OFFICE 2010

#### **Question O6: What is the Extended Security Update (ESU) offer for Windows 7 and Office 2010?**

A: In line with the product Lifecycle Policy, Microsoft offers 10 years of support (5 years for Mainstream Support and 5 years for Extended Support) for Business and Developer products (such as versions of Windows prior to Windows 10 and Office perpetual). Upon the end of the 10-year term, the customers can no longer receive patches or security updates if they remain on the unsupported product versions, which may cause security and compliance issues and expose customers' applications and business to serious security risks. Windows 7 and Office 2010 products are expected to soon reach the end of their support period and therefore pose an immediate risk to customers still using the older product versions:

- End of Support for Windows 7 is January 14, 2020.
- End of Support for Office 2010 is October 13, 2020.

To help with the potential security concerns for the customers who based on their business requirements are not able to upgrade their desktops to the newest versions, Microsoft is offering the Extended Security Updates option.

#### **Question O7: What does the ESU offer for Windows 7 include?**

A: For customers that are not able to transition before the End of Support date, Microsoft is offering two options to help protect data and applications during the End of Support transition:

**Option 1 – Extended Security Updates in Azure:** For organizations where a virtualization solution might be appropriate, **Windows Virtual Desktop** is the only cloud-based service that delivers a multi-user Windows 10 experience, optimized for Office 365 ProPlus, and **includes free Windows 7 ESU**.

**Option 2 – Extended Security Updates for on-premises environments:** For organizations that require more time to upgrade and are not able to move the workloads to Azure, ESU can also be **purchased separately through EA, EAS or EES licensing programs** as a last-resort option for Windows 7. Organizations can purchase the ESU at any time before or after the end of support date for the three years they are available. If an organization waits and purchases ESU for the first time after January 2020, they will have to pay for preceding years as well since all security updates are cumulative.

#### **Question O8: What editions of Windows 7 are eligible for Extended Security Updates?**

A: Extended Security Updates are available for Windows 7 Professional, Windows 7 Enterprise, and Windows 7 Ultimate. Windows XP and Windows Vista support has already ended, and no further support is available for these versions.

#### **Question O9: Is SA required to purchase ESU for Windows 7?**

A: No, organizations only need to have a qualifying edition of Windows 7 to be eligible for ESU purchase, however, organizations with Windows Enterprise SA or a Windows Enterprise E3 subscription license will receive advantageous pricing.

#### **Question O10: How will Microsoft deliver ESU for Windows 7?**

A: Upon purchasing Windows 7 ESU, the organization will be provided with a multiple activation key (MAK), which can be used to deploy to the covered devices. This MAK key is independent of the Windows 7 activation and can work in parallel with a Key Management Service (KMS) activation deployment. Additional technical details will be provided in a TechNet article published at a later date.

#### **Question O11: What are the extended support options for customers with Office 2010?**

A: There is no ESU offer for Office 2010. For customers on Office 2010, the recommendation is to upgrade directly to Office 365 ProPlus. If organizations find any application compatibility

issues after an Office 365 ProPlus update, [Desktop App Assure](#) is designed to help address those issues (including Macros and add-ins).

Organizations with Office 365 ProPlus will be supported on devices with active Windows 7 ESU through January 2023. This means organizations that purchase the Windows 7 ESU will be able to continue to run Office 365 ProPlus.

**Question O12: Where can I find more information about this offer?**

A: Detailed information about the ESU offer for Windows 7 can be found here: [Extended Security Updates FAQ](#)

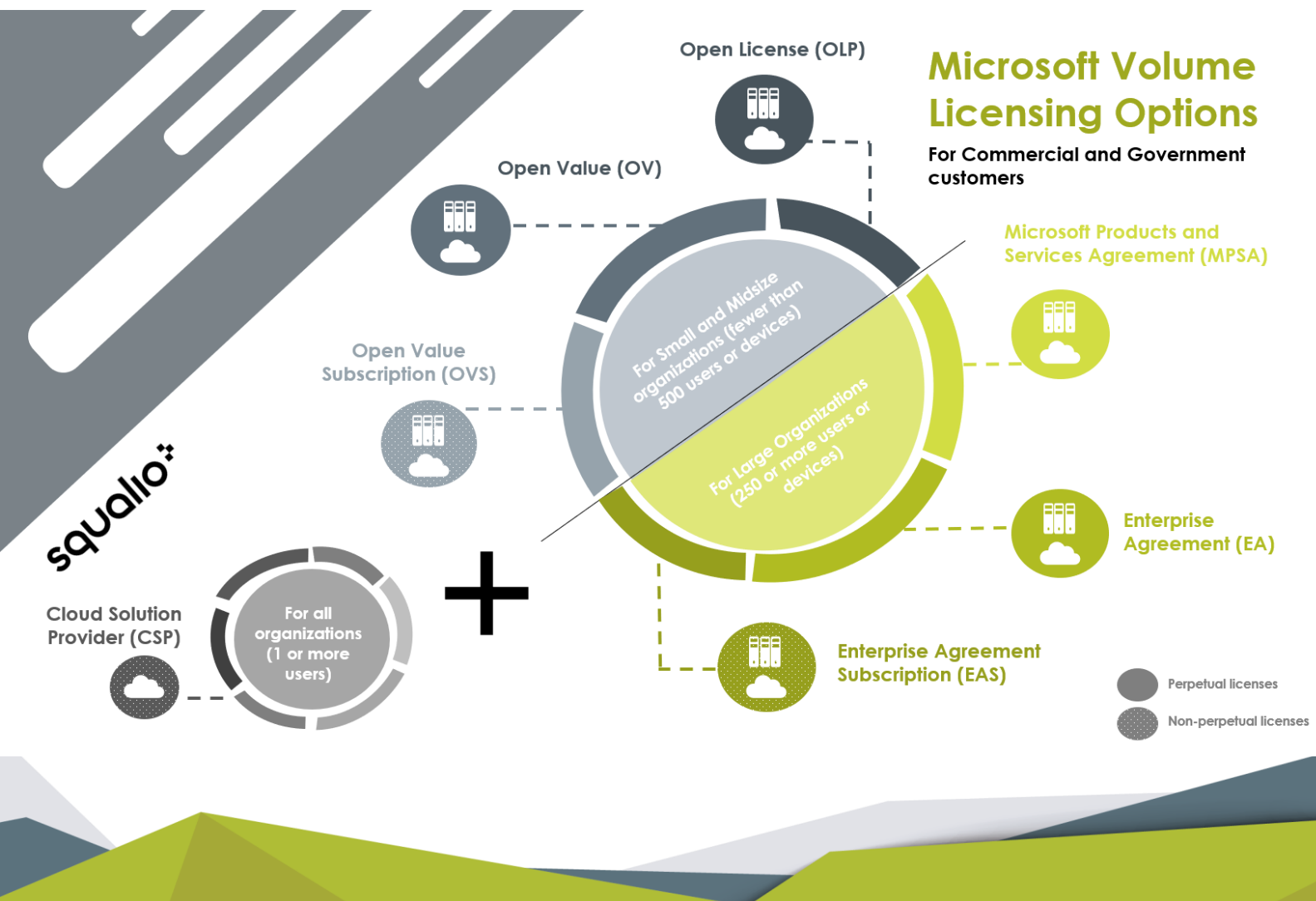
## Volume Licensing Programs

### COMMERCIAL AND GOVERNMENT

#### Question P1: What licensing programs are available for commercial and government customers?

A: Microsoft Volume Licensing is the best option for business customers to purchase software licenses not only because it gives the rights to run a Microsoft software product, but also offers the potential for substantial savings, ease of deployment, flexible acquisition, varied payment options, and other benefits such as Software Assurance. Depending on the organization's size, Microsoft Commercial Volume Licensing includes various options for purchasing software licenses.

All Microsoft volume licensing programs can be divided into two groups – licensing programs more suited for small and medium organizations and licensing programs targeted at large organizations. Below is a visualization of available licensing options based on this distinction.



## Question P2: What is the recommended licensing solution for an organization with up to 500 users/devices?

A: For organizations with fewer than 500 users or devices, the Microsoft Open agreements provide volume discounts for a minimal up-front cost and are widely available. This includes the choice between Open License, Open Value Subscription and Open Value licensing options.

- **Open License** is for commercial, government, and education customers who want a minimum initial purchase of only five software licenses. Open License is a two-year term agreement that allows transactional purchasing on an as-needed basis and is ideal if an organization prefers to pay on a transaction basis as they consume services or use licenses, and without any commitment to a certain number of products. Open License program also allows the customer to choose whether to add Software Assurance to their licenses or not. When qualifying for the minimum required, this program offers deeper discounts for a greater savings.
- **Open Value** is the recommended program for small to midsize organizations with five or more desktop PCs and allows to simplify license management, manage software costs, and get better control over software investment. It is a three-year agreement which includes Software Assurance, providing access to valuable benefits. Open Value Company Wide option provides additional benefits when organization chooses to standardize all their users/devices on one or more of Microsoft's enterprise products.
- **Open Value Subscription** is a non-perpetual licensing agreement which requires to standardize across the organization, while providing the lowest up-front costs of the Open program options with the flexibility to reduce the total licensing costs in years when the desktop PC or user count changes. This option gives organization the rights to run the software throughout organization only during the three-year term of the agreement with Microsoft, while paying annually for the subscription licenses based on the actual license count needed.

### Volume Licensing Options for Small and Midsize Organizations

	Open	Open Value	Open Value Subscription	Cloud Solution Provider
<b>Agreement type</b>	Software purchase Cloud subscription	Software purchase Cloud subscription	Cloud and software subscription	Cloud and software subscription
<b>Agreement term</b>	2 years	3 years	3 years	One-year (auto-renew)
<b>Target organization size</b>	5-499 users/devices	5-499 users/devices	5-499 users/devices	1 or more users
<b>Purchase coverage on desktop platform products</b>	As needed	As needed/Organization-wide	Organization-wide	As needed
<b>Purchase term</b>	2 years for the initial purchase	3 years for the initial purchase	3 years for the initial purchase	One year
<b>Ordering</b>	As needed	In the month of first use for the initial product order, annually for subsequent orders	In the month of first use for the initial product order, annually for subsequent orders	As needed
<b>Software Assurance</b>	Optional	Included	Included	None
<b>Price levels</b>	One price level for Commercial, one level for Government	One price level for Commercial, one level for Government	One price level for Commercial, one level for Government	One level
<b>Payments</b>	Upfront	Upfront/Annual	Annual	Monthly/Annual
<b>Price protection</b>	None	All products and services included in the organization-wide agreement	All products and services included in the agreement	Cloud services subscription length in one-year increments

### Question P3: What is the recommended licensing solution for an organization with more than 500 users/devices?

A: For organizations with 250 or more users or devices, Microsoft offers the following options:

- **Microsoft Products and Services Agreement (MPSA)** is a transactional licensing agreement for commercial, government, and academic organizations with 250 or more users/devices. MPSA works best for organizations that want to license Microsoft on-premises software, cloud services, or both as needed—with no organization-wide commitment under a single, non-expiring agreement. Software Assurance is optional through MPSA.

For organizations with 500 or more users or devices, Microsoft offers the following options:

- **Enterprise Agreement** is a licensing option for enterprises that offers the best value to organizations that want a manageable volume licensing program over a three-year term that gives them the flexibility to buy cloud services and software licenses under one agreement. Enterprise Agreement offers the best value when purchasing Microsoft technologies on a per user, per device or hybrid basis for either perpetual on-premise software or cloud services. EA is commitment based and intended to help customers standardize broadly on the latest versions of enterprise products.
- **Enterprise Subscription Agreement** is a licensing option for enterprise customers that want to subscribe to, rather than buy, Microsoft product licenses. Subscription Enrollment is commitment based three-year agreement and helps customers standardize broadly on the latest versions of enterprise products, while offering the lowest up-front costs for organizations that want a manageable volume licensing program that gives them the flexibility to buy cloud services and software licenses under one agreement.

### Volume Licensing Options for Large Organizations

	Enterprise Agreement	Enterprise Agreement Subscription	Microsoft Products & Services Agreement	Cloud Solution Provider
<b>Agreement type</b>	Software purchase Cloud subscription	Cloud and software subscription	Software purchase Cloud subscription	Cloud and software subscription
<b>Agreement term</b>	3 years	3 years	Non-expiring	One-year (auto-renew)
<b>Target organization size</b>	500+ users/devices	500+ users/devices	500 points per pool/year	1 or more users
<b>Purchase coverage on desktop platform products</b>	Organization-wide for on-premise, cloud services as needed	Organization-wide for on-premise, cloud services as needed	As needed	As needed
<b>Purchase term</b>	3 years for the initial purchase	3 years for the initial purchase	1 / 3 years	One year
<b>Ordering</b>	In the month of first use for the initial product order, annually for subsequent orders	In the month of first use for the initial product order, annually for subsequent orders	As needed (per purchasing account)	As needed
<b>Software Assurance</b>	Included	Included	Optional	None
<b>Price levels</b>	Based on user and device license quantity, one level for Government	Based on user and device license quantity, one level for Government	Based on points per pool, one level for Government	One level
<b>Payments</b>	Upfront/Annual	Annual	Upfront/Annual	Monthly/Annual
<b>Price protection</b>	All products and services included in the agreement	All products and services included in the agreement	One-year subscription for cloud services	Cloud services subscription length in one-year increments

**Question P4: What is the recommended licensing solution for an organization of any size that wants to license Microsoft cloud products?**

A: For organizations of any size who want a flexible solution to license Microsoft cloud products, Microsoft offers the following options:

- **Cloud Solution Provider** program is a licensing option for cloud services under which Microsoft Cloud Agreement document provides the terms and conditions and product use rights for Online Services usage. This is a transactional licensing agreement which offers an easy and flexible way to license the cloud services as needed with pay-as-you-go payment model and no minimum purchases.

**Question P5: Can customers mix EA with CSP to meet their Enterprise Commitments?**

A: No, as set forth in the February 2017 EA Enterprise Enrollment, the Enterprise Commitment must be met through the enrollment (emphasis added):

“Enterprise Product” means any Desktop Platform Product that Microsoft designates as an Enterprise Product in the Product Terms and chosen by Enrolled Affiliate under this Enrollment. Enterprise Products must be licensed for all Qualified Devices and Qualified Users on an Enterprise-wide basis **under this program.**

**Question P6: What price do I pay when adding additional products to Enterprise Agreements?**

A: In EAS, for any software products, customer must pay the full year price for the year when the product is added (for example, even if the product is added in the 2 months before the anniversary, it is required to pay the price for the full year) and at anniversary they continue paying annually for the remaining years of the agreement. However, for the Online Services products, the customer pays for the remaining months until anniversary and then for each remaining year annually.

In EA, for any software products customer must make an upfront payment for the full year price for the year of installation and each remaining year for the agreement term. For the Online Services products, the payment is for the remaining months until anniversary and then for each remaining year annually.

**Question P7: When will I have access to the additional products ordered through my Enterprise Agreement?**

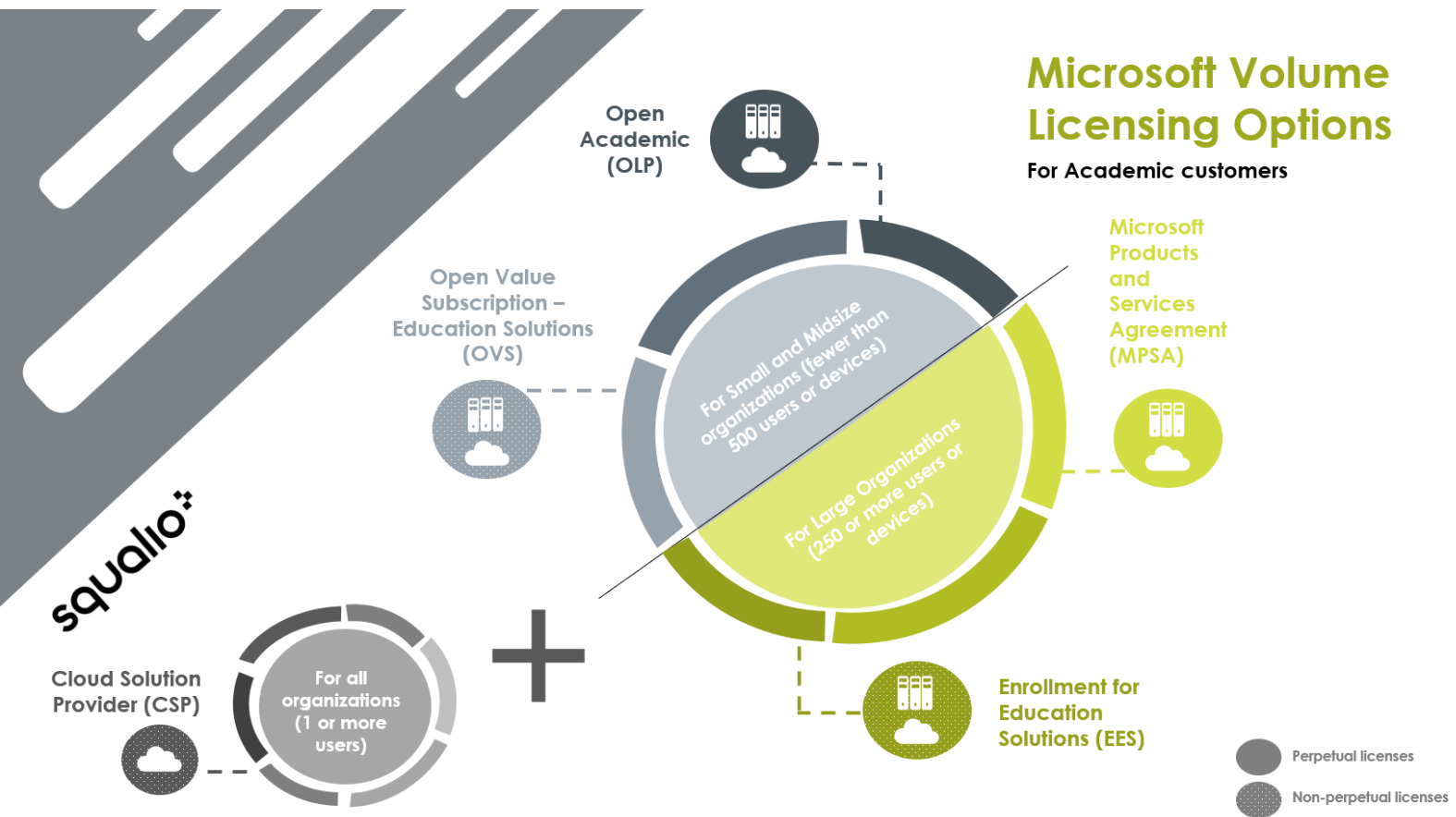
A: Under Enterprise Agreement, all products that are ordered on the 1<sup>st</sup> of the month, are available immediately on the same month. All products that are ordered on 2<sup>nd</sup> or later date during the month, are available from the 1<sup>st</sup> day on the next month.

## ACADEMIC

### Question R1: What licensing programs are available for academic customers?

A: Microsoft Volume Licensing is the best option for academic customers to purchase software licenses not only because it gives the rights to run a Microsoft software product, but also offers the potential for substantial savings, ease of deployment, flexible acquisition, varied payment options, and other benefits such as Software Assurance. The Volume Licensing agreement that best fits an academic organization depends on the size and type of the institution and how they want to acquire Microsoft licenses and cloud services.

Below is a visualization of available licensing options for academic customers.





## Volume Licensing Options for Academic Organizations

	Open Academic	Microsoft Products & Services Agreement	Open Value Subscription – Education Solutions	Enrollment for Education Solutions	Cloud Solution Provider
<b>Minimums</b>	5 licenses	500 points or 250 Online Services user licenses per pool	5 licenses	1000 Enterprise Online Services user licenses	No minimum number of USLs
<b>Commitment</b>	None	None	All Full Time Equivalent (FTE) employees must be covered	All Education Qualified Users must be covered	None
<b>Agreement Term</b>	2-year term	Non-expiring agreement	1 or 3-year term	1 or 3-year term	No minimum commitment term
<b>Payment</b>	Upfront payment	Upfront payment for licenses and/or annual payments for licenses with SA	Annual payment	Annual payment	Monthly payment for licenses
<b>Purchasing</b>	Purchasing on a transaction basis	Purchasing on a transaction basis	Allowed to decrease licenses at anniversary to program minimums	Allowed to decrease licenses at anniversary to program minimums	Change number of licenses on a monthly basis
<b>Price &amp; Price Protection</b>	2 price levels based on points and pools No price protection	1 price level 1-year price protection for OLS	1 price level 1 or 3 years price protection	4 price levels for OLS 1 or 3 years price protection	1 price level 12 months price protection
<b>Availability</b>	Perpetual software Limited Online Services SA optional	Perpetual software Limited Online Services SA optional	Non-perpetual software with SA included Limited Online Services	Online Services mandatory to start the agreement Non-perpetual software with SA included	Online Services only
<b>Benefits and Features</b>			Student Use Benefit* Azure DevTools for Teaching Imagine Academy	Student Use Benefit* Azure DevTools for Teaching Imagine Academy Support for consortia, amendments and concessions from Microsoft	Student Use Benefit*

\* Requires organization-wide commitment, granted according to pre-defined ratios

### Question R2: What is the Azure Dev Tools for Teaching offer for academic customers?

A: One of the offers for academic institutions is the Microsoft Azure Dev Tools for Teaching subscription (previously named “Microsoft Imagine” or “DreamSpark”). This is an offer that allows to put professional developer tools, software, and services in the hands of faculty and students with a low-cost subscription options from Microsoft for learning and research purposes.

This allows to provide the latest technologies and cloud services to students and faculty to further the learning process by giving students professional-level developer and designer tools from Microsoft and helping the educators teach the latest technologies and experiment in research, all while reducing the lab costs and teaching budget.

The program has two primary goals:

1. Give access to Microsoft software and platforms: Microsoft Azure Dev Tools for Teaching subscriptions give educators and students access to virtually every Microsoft product and technology, helping ensure they have the right technology choices for all current and future educational opportunities.
2. Deliver outstanding value: These subscriptions give outstanding value through inexpensive cost of membership, and convenient management of licenses on a per-user basis, removing the complexity of licenses across multiple environments.

Unlike the Microsoft Imagine subscription, which had two subscription levels available providing access to either the whole institution or qualifying STEM (science, technology, engineering, mathematics) departments or labs, Microsoft Azure Dev Tools for Teaching subscription includes one subscription offer for STEM departments<sup>1</sup> or technical schools only.

### **Question R3: How can an institution use the software obtained through Azure Dev Tools for Teaching offer?**

A: Software acquired through Microsoft Azure Dev Tools for Teaching subscription may be installed on any number of departmental lab machines (depending on the licensing and courses the school or department offer). The software must be used for instructional and research purposes; it may not be used to run the infrastructure of the department. The software is expressly intended to support education, teaching, non-commercial research, or efforts to design, develop, test, and demonstrate software applications for the above purposes.

In addition, the department's faculty and students may check out or download the software to install on their personal computers. When the subscription ends the institution will no longer have access to subscription benefits or new activations or product keys, however, they receive perpetual use rights to any software obtained during the subscription term and may continue to use the products.

### **Question R4: How is the Azure Dev Tools for Teaching subscription managed?**

A: Subscription administrators can manage the subscriptions through the [Visual Studio Subscription Portal](#). For the educators and students, the software is distributed through the [Education Hub Store](#), which is located within the Azure Portal, allowing for quick and easy access to the cloud services. The Education Hub Store is automatically set up once the Microsoft Azure Dev Tools for Teaching subscription is activated, and by default access to the benefit is granted to any students and educators who have the same e-mail domain as the subscription administrator. Students and educators need to simply log in on the Education Hub Store with their University credentials to get access to the software downloads available to them.

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<sup>1</sup> Each STEM department within an Educational Institution must have its own separate Microsoft Azure Dev Tools for Teaching Subscription. STEM departments may not share a Microsoft Azure Dev Tools for Teaching Subscription with any other departments, regardless of subject matter. For volume licensing customers each STEM department within the institution is eligible for their own free subscription when signing one of the eligible volume licensing agreements (EES, OVS-ES, Campus Agreement or School Agreement).

## Question R5: What products are available through Azure Dev Tools for Teaching offering?

A: Below is the full list of products available per each subscription.

Product Categories	Azure Dev Tools for Teaching
<b>Operating Systems</b>	
Windows Client	•
Windows Server	•
Windows 10	•
<b>Developer &amp; Design Tools</b>	
Visual Studio Community (for students and faculty)	•
Visual Studio Enterprise (for students, faculty, and labs)	•
Windows Embedded	•
Advanced Threat Analytics (ATA)	•
Visual Studio Code	•
Visual Studio for Mac	•
<b>Applications</b>	
Microsoft Visio	•
Microsoft Project	•
OneNote	•
<b>Servers</b>	
Host Integration Server	•
Machine Learning (ML) Server	•
Hyper-V Server	•
R Server	•
Skype for Business Server	•
SQL Server Developer	•
SQL Server Enterprise	•
SQL Server Standard	•
SQL Server Web	•
Team Foundation Server	•
<b>Additional Benefits</b>	
<b>ELMS (Electronic License Management Systems)</b>	•
<b>Technical Support Incidents</b>	•
Technical Support Incidents are the equivalent of paid Professional support and can be used to resolve or find solutions to non-production break-fix issues	
<b>Priority Support in Visual Studio Forums</b>	•
With this benefit a Microsoft engineer will respond to Visual Studio Forums posting within 2 business days if the community hasn't already gotten the answer	
<b>Licensing</b>	
<b>Perpetual Rights</b>	•
A perpetual license right means that you can continually use the software without being limited by a set time period.	
<b>Academic/Non-commercial usage</b>	•
<b>Usage</b>	
<b>STEM Department Only (one subscription per department)</b>	•
Lab Installation	•
Microsoft Access	•
Advanced Threat Analytics (ATA)	•
Agents for Visual Studio	•
Datazen Enterprise	•
System Center	•
<b>Pricing</b>	
Electronic Software Delivery (1 year)	\$499 USD <sup>1</sup>
Renewed Subscription Pricing (1 year)	\$320 USD <sup>1</sup>

<sup>1</sup> The pricing in USD is indicative and is subject to change based on geographic location. New or renewal subscriptions are granted for free for volume licensing customers when signing one of the eligible volume licensing agreements (EES, OVS-ES, Campus Agreement or School Agreement). Usage guidelines available at: [Microsoft Azure Dev Tools for Teaching Agreement](#)

### **Question R6: What happened to Imagine Standard and Imagine Premium?**

A: Both Microsoft Imagine offerings have been retired in favor of the new Azure Dev Tools for Teaching offer. For existing customers who had active Imagine subscriptions, both Standard and Premium subscriptions are automatically transitioned to the Azure Dev Tools for Teaching offer and the customers can access the new benefits through the [Education Hub Store](#). Upon renewal, only Azure Dev Tools for Teaching will be available for purchase.

### **Question R7: What is the Microsoft Imagine Academy offer for academic customers?**

A: Microsoft Imagine Academy Program membership offer for academic customers (previously called “Microsoft IT Academy”) provides comprehensive resources and exclusive discounts for its members to enable innovative education. The Imagine Academy Program offers institutions quality education training resources on Microsoft technologies to help educators, faculty and staff and its enrolled students to obtain the skills needed to reach their academic and career potential. The program enables Institutions to:

- offer quality technology curricula to help its students acquire skills on current Microsoft technologies
- provide rich online learning resources to its students and educators
- ensure its students graduate with the Microsoft technology expertise required to be successful in today’s job market
- prepare its students and educators to earn Microsoft Certification credentials
- provide professional development opportunities for its educators

### **Question R8: What is available through the Microsoft Imagine Academy offering?**

A: Each Imagine Academy subscription provides the following resources to help educators prepare to pass Microsoft certification exams and earn Microsoft certification credentials:

- Certification vouchers, each of which can be redeemed to take one Microsoft certification exam:
  - 10 vouchers for MOS certification options
  - 10 vouchers for MTA certification options
  - 10 vouchers for Microsoft Certified Educator (MCE) certification

Explore the certifications available through Imagine Academy on the [Imagine Academy Certification Roadmap](#).

- Professional development guides (available through the Imagine Academy member site)
- Microsoft Certified Educator certification study and exam preparation guides to help educators demonstrate the competency of integrating technology into teaching and learning
- Access to curriculum for professional development including the Microsoft Educator Network: Teaching with Technology online professional development course

**Question R9: How can I get access to the Imagine Academy benefit and what are the use rights for this offer?**

A: Institution has the option to add the Imagine Academy subscription once per the term of their volume licensing agreement paying the price for a yearly subscription and enjoying the benefits while this subscription is active. The offer is available for EES or OVS-ES customers.

Imagine Academy benefits, including any content obtained via Imagine Academy, are for use only by institution's educators or its students and only during the term of institution's Imagine Academy subscription. Institution may not distribute, sell, transfer, sublicense, or assign any Imagine Academy benefit.

**Question R10: How can I access my Microsoft Imagine Academy benefit?**

A: Microsoft Imagine Academy benefit can be accessed through the [Imagine Academy member site](#).

**Question R11: Do academic volume licensing customers have access to training vouchers?**

A: No, the Training Voucher benefit is not granted free to academic customers as part of Software Assurance benefits. The options for training for academic customers include:

**If organization is interested in providing resources to help educators prepare to pass Microsoft certification exams** and earn Microsoft certification credentials, there is the option to add Imagine Academy subscription to eligible volume licensing agreements. [Read more about Imagine Academy](#)

**If organization wants to allow end users to learn about Microsoft products**, as of November 1, 2018, all customers have access to Microsoft Learn – a free, interactive, quick and fun way to learn Microsoft products and services. Customers can access the Microsoft Learn or product-specific destinations for rich, engaging, and up-to-date materials in the following locations:

- Microsoft Learn is available at [New approach to learning](#)
- Office resources available at [Office support and training](#)
- Windows resources available from [Download Center](#)
- Dynamics resources available on [CustomerSource](#)
- Windows Server and Azure resources available on [Microsoft Learn](#)

# Support

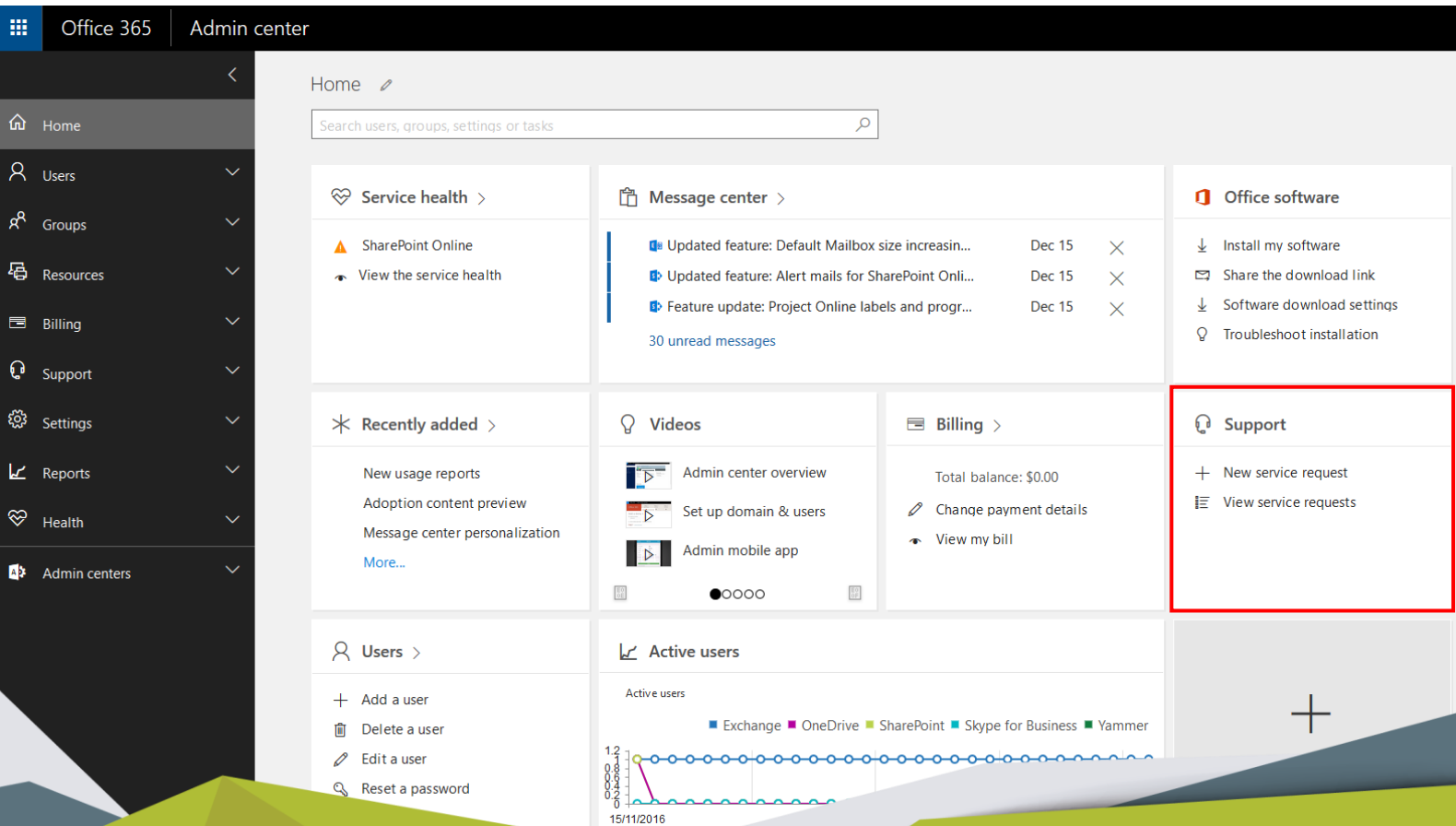
## Question S1: How can I submit a support ticket to Microsoft?

A: Here are the resources to help you submit any problems related to Microsoft products or licensing:

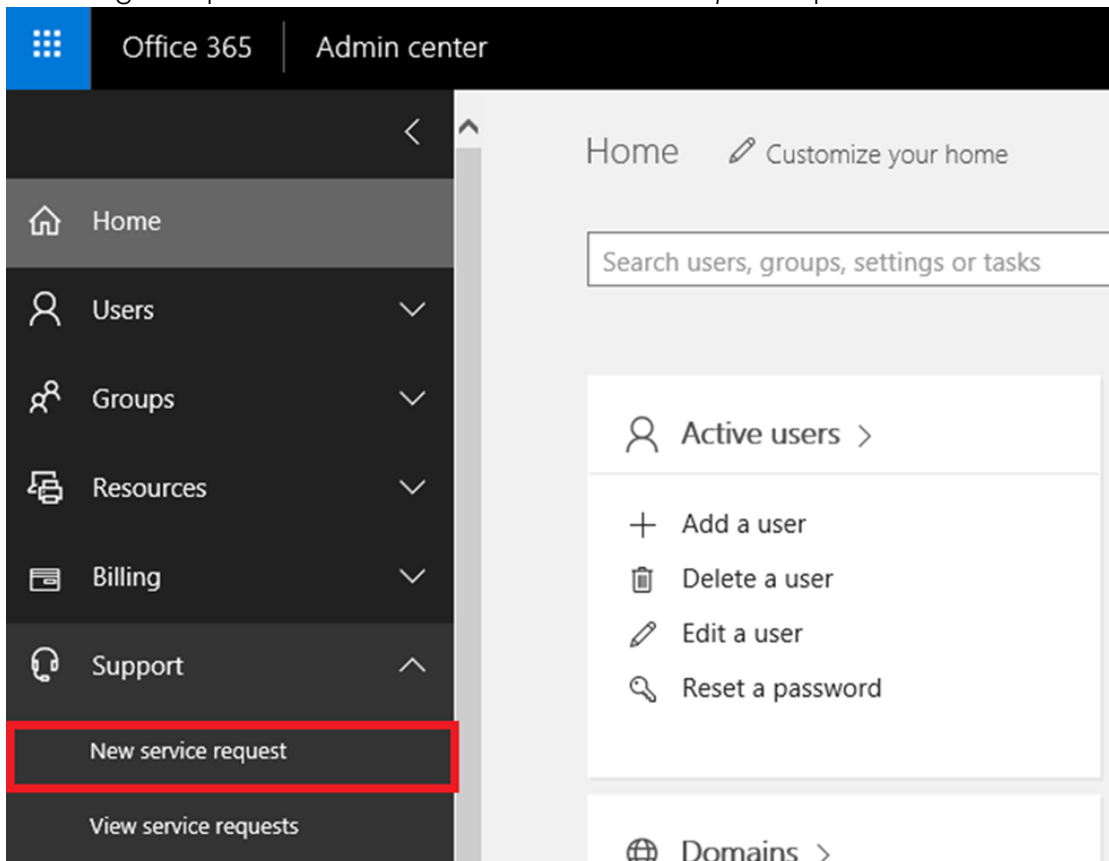
- **For issues with VLSC portal:** [Contact Volume Licensing Service Center Support](#). Click on the region where you are located and then choose your specific country to find the Web Form and phone numbers applicable to your region.
- **For issues with Microsoft products** such as Azure, Desktop Software, Servers or Windows: [Contact Support for Business](#)
- **For issues with Office 365 Admin Center or cloud product licenses:** submit a service request from [Office 365 Admin Center](#).
- **For issues with Azure services,** submit a support request through [Azure Portal](#).

## Question S2: How do I submit a service request in Office 365 Admin Center?

A: To submit a service request, log into [Office 365 Admin Center](#) with the global administrator account. Once you log in, you should see a “Support” section in the landing page. Choose “New service request” to submit your support ticket.



In Office 365 Admin Console, you can also choose to follow the “Support” tab in the Left navigation pane and click on the “New service request” option there.

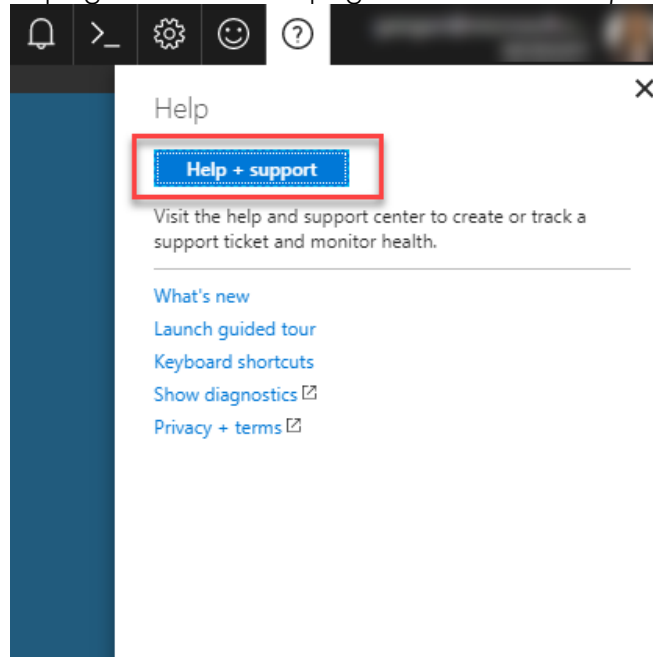


### Question S3: How do I submit a service request in Azure Portal?

A: To submit a service request, log into [Azure Portal](#). You can create a support request from the top navigation menu or directly from a resource blade.

## From the top navigation bar

On the main page, go to top right corner of the page and click on "Help + support".



Then on the Help and Support page, select "New support request".

The image shows the Azure 'Help + support' page. On the left sidebar, the 'New support request' button is highlighted with a red box. The main content area features a 'Have you tried one of these?' section with four cards: 'Get started', 'Documentation', 'Learn about billing', and 'Support plans'. Below this is a 'Community' section with links to MSDN Forums, Stackoverflow, @AzureSupport, and Serverfault. The 'Recent support requests' section is at the bottom, with a 'New support request' button highlighted in a red box. Below the button is a table of recent support requests.

TITLE	ID	CREATED (UTC)	SUBSCRIPTION	RESOURCE TYPE	UPDATED	STATUS
users having reader permissions to subscrip...	118041217987367	Thu, Apr 12, 2018, 7:39:05 ...		Subscription management	5 hrs ago	Open
Test ticket	118041217987285	Wed, Apr 11, 2018, 10:43:0...		File	9 hrs ago	Closed
This is test case. Please ignore.	118041217987135	Wed, Apr 11, 2018, 10:10:3...		Virtual Machine running ...	9 hrs ago	Closed
Quota request for Azure RemoteApp	118041117984951	Wed, Apr 11, 2018, 9:08:12 ...		Quota	20 hrs ago	Closed
Quota request for Batch	118041117984949	Wed, Apr 11, 2018, 9:07:51 ...		Quota	20 hrs ago	Closed



## From a resource blade

The screenshot displays the Azure portal interface for a virtual machine resource blade. The breadcrumb navigation at the top reads: Home > Virtual machines > CaseSubTestVM > New support request > Basics. The interface is divided into four main sections:

- Virtual machines (Microsoft):** A list of virtual machines on the left, with 'CaseSubTestVM' selected and highlighted in blue.
- CaseSubTestVM (Virtual machine):** A central menu of operations and monitoring options. The 'New support request' option at the bottom is highlighted with a red box.
- New support request (HELP + SUPPORT):** A multi-step wizard with three steps: 1. Basics, 2. Problem, and 3. Contact information. Step 1 is currently active.
- Basics (NEW SUPPORT REQUEST):** A form for entering basic information:
  - Issue type:** Technical
  - Subscription:** IBIZA - Test (76cb77fa-8b17-4eab-9493-b65dace99813)
  - Service:** My Services (selected), All Services
  - Resource:** CaseSubTestVM
  - Resource health:** Resource health did not detect any issues with your resource.
  - Support plan:** PremierA 'Next' button is located at the bottom right of this section.

## Glossary

**“Add-on”** means a license that is purchased in addition to (and associated with) a previously acquired qualifying product license (or set of qualifying licenses) at any time during agreement term in order to add additional functionality to the existing qualifying licenses.

**“Affiliate”** means any legal entity that a signatory party owns, or is owned by, or that is under common ownership with that party. Ownership is understood as control of more than 50% interest in an entity.

**“CAL Equivalent License”** means a User SL or External Connector License, or a CAL suite or SL, that gives equivalent rights to a CAL license, for instance, a Core CAL Suite is a CAL Equivalent License that gives rights to use the corresponding components includes as part of the suite.

**“CAL”** means *Client Access License*, which may be assigned by user or device, as appropriate. A user CAL allows access to corresponding version of the server software or earlier versions of the server software from any device by one user. A device CAL allows access to corresponding versions of the server software or earlier versions of the server software from one device by any user. CALs allow access to server software running on Customer’s Licensed Servers only.

**“CIS”** means *Core Infrastructure Suite* which is a suite of products that includes the latest versions of Windows Server and System Center server software (Standard and/or Datacenter editions) and is a way for customers to license them together at a discounted price.

**“CML”** or **“Server ML”** means *Client Management License* or *Server Management License* and is a license that permits management of one or more OSEs by the corresponding version of the server software or any earlier version of the server software. There are two categories of Management Licenses (Server Management License and Client Management License) and three types of Client Management Licenses (User, OSE and device). A User Management License permits management of any OSE accessed by one user; an OSE Management License permits management of one OSE accessed by any user; a device Management License (Core CAL or Enterprise CAL Suite) permits management of any OSE on one device.

**“CSP”** means *Cloud Solution Provider* which is a licensing option for cloud services under which Microsoft Cloud Agreement document provides the terms and conditions and product use rights for Online Services usage.

**“EA”** means *Enterprise Agreement* and refers to Microsoft licensing option for enterprises with 500 or more users or devices that offer the best value to organizations that want a manageable volume licensing program over a three-year term that gives them the flexibility to buy cloud services and software licenses under one agreement. Enterprise Agreement offers the best value when purchasing Microsoft technologies on a per user, per device or hybrid basis for either perpetual on-premise software or cloud services. EA is commitment based and intended to help customers standardize broadly on the latest versions of enterprise products.

**“EAS”** means *Enterprise Subscription Agreement* and refers to Microsoft licensing option for enterprise customers with 500 or more users or devices that want to subscribe to, rather than buy, Microsoft product licenses. Subscription Enrollment is commitment based three-year agreement and helps customers standardize broadly on the latest versions of enterprise products, while offering the lowest up-front costs for organizations that want a manageable volume licensing program that gives them the flexibility to buy cloud services and software licenses under one agreement.

**“EES”** means *Enrollment for Education Solutions*, which is an agreement that provides subscription licensing for primary/secondary and higher education institutions with over 1,000 users, offering simplicity of licensing Education Platform Products organization-wide through an annual count of users (also referred to as “Knowledge Workers”) instead of PCs/devices and the flexibility to order additional products in any quantity.

**“FPP”** means *Full Packaged Product* and refers to licenses that are purchased from retailers. Licenses sold through FPP channel are full licenses. A full license does not require any pre-existing versions of the software to be on the machine it is installed on, whereas an upgrade license allow you to cost effectively upgrade to a newer version of software that you are already licensed for.

**“From SA”** means a license that eligible customers are allowed to purchase when migrating from qualifying on-premises products to cloud products, which offers a discount based on their previous investment in either fully paid perpetual software with software assurance or, for non-perpetual software, continuous subscription coverage for no less than three years.

**“Licensed Device”** means a single physical hardware system to which a License is assigned. For purposes of this definition, a hardware partition or blade is considered to be a separate device.

**“Licensed User”** means the single person to whom a License is assigned.

**“Managed Device”** is any device on which customer directly or indirectly controls one or more operating system environments. For example, a managed device is any device that

- is allowed to join customer's domain,
- authenticates as a requirement to use applications while on customer's premises,
- has agents installed on it (e.g., anti-virus, antimalware or other agents mandated by the Customer's policy), or
- has directly or indirectly applied and enforced group policies,
- solicits or receives data about, and, configures, or gives instructions to hardware or software that is directly or indirectly associated with an operating system environment
- is allowed to access a virtual desktop infrastructure (VDI) outside of Windows SA, Microsoft Intune (Device) or Windows Virtual Desktop Access Roaming Rights. Note that, a device that accesses a VDI under Roaming Rights only or utilizes Windows To Go on a Qualifying Third Party Device off the customer's premises only, and is not managed for other purposes as described above, is not considered “managed”.

**“MDOP”** means *Microsoft Desktop Optimization Pack* and refers to a benefit of Windows Software Assurance for Volume Licensing customers. MDOP virtualization technologies help to personalize the user experience, simplify application deployment, improve application compatibility with Windows, and manage and secure your customers' devices.

**“MIM”** means *Microsoft Identity Manager* and refers to Windows Server additional functionality included as part of Microsoft Identity Manager, which allows to synchronize identities between directories, databases, and applications, implement self-service password, group, and certificate management, increase admin security with policies, privileged access, and roles, and thwart identity theft.

**“MPSA”** means *Microsoft Products and Services Agreement*, which is a transactional licensing agreement for commercial, government, and academic organizations with 250 or more users/devices. MPSA works best for organizations that want to license Microsoft on-premises software, cloud services, or both as needed—with no organization-wide commitment under a single, non-expiring agreement. Software Assurance is optional through MPSA.

**“OEM”** means *Original Equipment Manufacturer* and refers to software that comes pre-installed when purchasing a new computer. OEM software is considered a full license which does not require any pre-existing version of the software to be on the machine it is installed on. OEM licenses can only be sold to end users by authorized System Builders or Original Equipment Manufacturers, who are directly responsible for providing support for the software, which means that if there are any issues it is the responsibility of the computer manufacturer or installer to provide support rather than Microsoft.

**“OL”** or **“OLP”** means *Open License* and refers to the following perpetual licensing programs: Open License, Open License for Academic, Open License for Government, and Open License for Charity, where available. A good choice for organizations that want a minimum initial purchase of five software licenses. OL program is a two-year term agreement that allows transactional purchasing on an as-needed basis.

**“OLS”** or **“Online Services SLs”** means *Online Services Subscription Licenses* which grant subscription license that allows access to Microsoft Online Services software or hosted service for a defined period of time.

**“OS”** means *Operating System* and is a system software that manages computer hardware and software resources and provides common services for computer programs.

**“OSE”** means *Operating System Environment* which is all or part of an operating system instance, or all or part of a virtual (or otherwise emulated) operating system instance which enables separate machine identity (primary computer name or similar unique identifier) or separate administrative rights, and instances of applications, if any, configured to run on the operating system instance or parts identified above. A physical hardware system can have one Physical OSE and/or one or more Virtual OSEs.

**“OV”** means *Open Value* and refers to Open Value perpetual licensing program, including Open Value and Open Value for Government. Open Value is the recommended program for small to midsize organizations with five or more desktop PCs and allows to simplify license management, manage software costs, and get better control over software investment. It is

a three-year agreement which includes Software Assurance, providing access to valuable benefits.

**“OVS”** means *Open Value Subscription* and refers to the non-perpetual licensing agreement, including Open Value Subscription for Government. Similar to the OV Organization-wide option, the OVS option requires to standardize across the organization, while providing the lowest up-front costs of the Open program options with the flexibility to reduce the total licensing costs in years when the desktop PC or user count changes. This option gives organization the rights to run the software throughout organization only during the three-year term of the agreement with Microsoft, while paying annually for the subscription licenses based on the actual license count needed.

**“OVS-ES”** means *Open Value Subscription – Education Solutions* and refers to non-perpetual three-year agreement option for academic customers designed for smaller educational establishments with a full time equivalent (FTE) employees count of more than 5, but less than 1,000 to provide a simplified purchasing experience with annual payments and ability to adjust the number of employees according to the changes in the institution. OVS-ES is a commitment-based agreement and requires organization-wide coverage, providing all employees the latest versions of Microsoft software and online services specifically customized for academic customers.

**“OW”** means *Open Value Company Wide* which refers to Open Value Agreement with the Organization-wide option enabled, providing additional benefits when organization chooses to standardize all their users/devices on one or more of Microsoft's enterprise products.

**“Qualified Device”** means any device that is used by or for the benefit of organization and is either a personal desktop computer, portable computer, workstation, or similar device capable of running Windows Pro locally (in a physical or virtual operating system environment), or a device used to access a virtual desktop infrastructure (“VDI”). Qualified Devices do not include any device that is designated as a server and not used as a personal computer, an Industry Device, or not a Managed Device.

**“Qualified User”** means a person (e. g. employee, consultant, contingent staff) who is either a user of a Qualified Device or accesses any server software requiring an Enterprise Product Client Access License or any Enterprise Online Service.

**“RDS”** means *Remote Desktop Services* (formerly known as Terminal Services), which accelerates and extends desktop and application deployments to any device, improving remote worker efficiency, while helping to keep critical intellectual property secure and simplify regulatory compliance. Microsoft RDS provides three deployment choices so that customers can have the flexibility to deploy the right type of VDI desktop for their users, all from a single platform. Customers can host either sessions-based desktop, pooled virtual machines, or personal virtual machines, allowing users to work anywhere.

**“RMS”** means *Rights Management Services* and refers to Windows Server Active Directory Rights Management Services functionality that is used for information rights management by enforcing data access policies.

**“SA”** means *Software Assurance* and refers to a comprehensive set of benefits that help take full advantage of organization's investments in IT. SA includes a unique set of technologies, services, and rights to help deploy, manage, and use Microsoft products efficiently, while keeping the business up to date and ready to respond quickly to change and opportunity. Depending on Microsoft Volume License Agreement, SA can be either an obligatory or an optional purchase and available benefits are determined by the types and quantity of products that are purchased.

**“SCE”** means *Server and Cloud Enrollment* and refers to an option under Enterprise Agreement when making an installed-base commitment to one or more server and cloud technologies components to receive the best pricing and terms, cloud-optimized licensing options and simplified license management.

**“SL”** means *Subscription License* that allows access to software or a hosted service for a defined period of time.

**“Step-up”** means a license which can be purchased if customer has active software assurance in addition to (and associated with) a previously acquired base license and allows to migrate from a lower to a higher edition of certain products at a fraction of a new license cost.

**“True-up”** refers to the annual reconciliation process to account for the license quantities needed for customers with Enterprise Agreement, which allows to add additional software and online services that were licensed at the start of the agreement throughout the year, while accounting for these changes at Anniversary Date.

**“VDA”** means *Virtual Desktop Access* and refers to Windows Software Assurance benefit that grants rights to access a virtual desktop running in a datacenter.

**“VL”** means *Volume Licensing* and refers to licenses that are purchased through any of volume licensing agreements offered by Microsoft. Usage of software purchased through these agreements is controlled by a number of factors; the agreement itself may contain some usage rights specific to purchasing through that agreement, but the usage rights per product can be found in the Product Terms document.

**“VLSC”** means *Volume Licensing Service Center*, which is an online platform for customers to be used for managing their Microsoft Volume Licensing agreements (such as Open, Open Value, Open Value Subscription, Enterprise Agreement and Enterprise Agreement Subscription), by providing access to their licensing information, allowing to view agreements and purchases for the organization, and access licensing summaries of all entitlements by product and version, as well as view all assigned product keys and download products, manage their Software Assurance Benefits and activate Online Services.