Visual Studio licensing guidance

Introduction

This paper provides an overview of the Microsoft Visual Studio and Azure DevOps product line and the licensing requirements for those products in common deployment scenarios. The definitive guide to licensing terms and conditions for **volume license customers** is the Microsoft Licensing Product Terms and the customer's licensing program agreement. For **retail customers**, including those under the Community license agreement, the license terms are specified in the Retail Software License Terms included with the customer's product. (See Visual Studio Licenses & EULA Directory for many of these licenses.)

Visual Studio Licensing Overview

Visual Studio and Azure DevOps are available both as individual products and services and as part of a subscription. Visual Studio Community is available only as an individual product, and only to users meeting the terms of the license. Visual Studio Professional is available both as an individual product and as part of the Visual Studio Subscription. Visual Studio Enterprise is available only as part of the Visual Studio Subscription. Azure DevOps is available both as separate product and services and as part of the Visual Studio Subscription.

This paper focuses on the Visual Studio Subscription, which provides user licenses to various software, including Azure DevOps Server. Additionally, Azure DevOps can also be purchased without a Visual Studio Subscription, and that is billed along with other Microsoft Azure services.

Visual Studio Subscription

The software, services, and support included with Visual Studio Subscriptions varies by level, so subscribers should consult the Visual Studio Subscription comparison to determine the right level for the needs of each team member. The Visual Studio software and other Microsoft software that the individual subscriber can install, and run is defined by what is available for that Visual Studio Subscription level in Subscriber Downloads while the user's subscription is active.

Visual Studio Subscription options:

1. Standard subscriptions (sold via the Microsoft Store and Volume Licensing resellers):
    - Visual Studio Enterprise Subscription (formerly MSDN)
    - Visual Studio Test Professional Subscription (formerly MSDN)
    - Visual Studio Professional Subscription (formerly MSDN)
    - MSDN Platforms
2. Monthly subscriptions (sold via the Visual Studio Marketplace):
    - Visual Studio Enterprise
    - Visual Studio Professional

Activating a Visual Studio Subscription

Activating a Visual Studio Subscription is required to access subscription benefits including Subscriber Downloads, monthly Azure credits, and more. To activate a subscription, the licensed user must associate their Microsoft account or Work or Student account login with the Visual Studio Subscription.

User Licenses

Visual Studio and Visual Studio Subscriptions are licensed on a per-user basis rather than per installation. The primary method of licensing is by purchasing the appropriate level of Visual Studio Subscription for each user participating in software development projects. Users may also purchase standalone perpetual licenses for Visual Studio Professional or may qualify for Visual Studio Community if they meet the applicable license requirements. 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 additionally permit the licensed user to evaluate the software and simulate customer environments to diagnose issues related to their programs. Every individual who uses the software in these ways must have a valid license. Additionally, the Visual Studio Build Tools is licensed as a supplement to Visual Studio for every licensed Visual Studio developer. It is also available to non-licensed users within an organization, such as build engineers, to compile, build, and verify applications developed by using Visual Studio.

The Azure DevOps Server Environment

The Azure DevOps Server is an on-premise environment for managing source code, builds, and work items. The Visual Studio Subscription includes a license for Azure DevOps Server and an Azure DevOps Server Client Access Licenses (CALs) to connect to the servers. If purchasing Azure DevOps Server standalone, the purchaser must also purchase a Windows Server for each Azure DevOps Server, plus Windows Server and Azure DevOps Server Client Access Licenses (CALs) for each user connecting to these servers. Microsoft SQL Server 2025 Standard is included with the Azure DevOps Server license for use with Azure DevOps Server.

Azure DevOps

Azure DevOps offers cloud-based Application Lifecycle Management and DevOps capabilities for use by the team. Creating an Azure DevOps account is free.

It's also free to add as many stakeholders and active Visual Studio subscribers to the Azure DevOps account as needed. All Visual Studio subscribers get Basic access to the Azure DevOps account. Visual Studio Enterprise Subscriptions include additional features, such as the Azure Test Plans and Package Management extension. Additional services can also purchase for use by the account overall, such as Build and Release Hosted Pipelines and Private Pipelines, and Cloud-based Load Testing. The Visual Studio Marketplace provides a number of additional features through extensions, many of which are free.

In addition to the free stakeholders and Visual Studio subscribers, the account includes five free users with access to Basic features like version control, agile planning, and more.

For users who only need to interact with source control and manage work items, builds, and pipelines when using Microsoft Team Foundation Server, Azure DevOps, and Azure DevOps Server, the Visual Studio Team Explorer edition is available without charge.

How to Buy

Visual Studio products are offered through a variety of sales channels as outlined below.

Product Offerings and Purchasing Channels

		Visual Studio Enterprise Subscription	Visual Studio Professional Subscription	MSDN Platforms	Visual Studio Test Professional Subscription	Azure DevOps Server	Visual Studio 2026 Professional (license- only)	Visual Studio Monthly Subscription
Microsoft Volume Licensing	**Enterprise, Enterprise Subscription**	✓	✓	✓	✓	✓		
	Select, Select Plus, MPSA	✓	✓	✓	✓	✓	✓	
	Open Value, Open Value Subscription	✓	✓	✓	✓	✓		
	Cloud Solution Provider						✓	✓
	Campus, Enrollment for Education	✓	✓	✓	✓	✓		
Retail Channel	**Solutions Microsoft Store (online only)**	✓	✓		✓		✓	
Microsoft Azure	**Visual Studio Marketplace**							✓

Blank space indicates the offering is not available on the purchasing channel.

Each Microsoft Volume Licensing program has specific rules and benefits which the customer's software reseller can help the customer understand so the customer can make the right choice. More information on Volume Licensing and the above programs can be found at: www.microsoft.com/licensing.

Visual Studio Community

Visual Studio Community is a free, full-featured IDE for individual developers and small organizations with 5 or less developers, and for education, SQL development, and open source software. It includes all the capabilities needed to create compelling non-enterprise applications, including powerful productivity features, mobile development tools for Windows, iOS and Android, and access to thousands of extensions. It includes all the capabilities needed to create compelling non-enterprise applications, including powerful productivity features, mobile development tools for Windows, iOS and Android, and access to thousands of extensions.

Who can use the Software

See the Visual Studio Community license for information on use rights.

Example 1: A University wants to use Visual Studio Community for training students enrolled in computer science courses and for an academic research project that requires building a cross- platform mobile application. The University also plans to customize its ERP software and other internal LOB applications. Visual Studio Community use is allowed by academic institutions for coursework and the research project. However Visual Studio Community cannot be used for developing and testing its ERP software or internal LOB applications.

Example 2: A Fortune 500 firm has outsourced the development of its store-locator mobile application to a small agency. The application is not an open source project. The agency has 5 employees working on the project and would like to use Visual Studio Community. Since the agency is a contractor developing this application for the Fortune 500 firm, and since the application is not an open source project, the agency cannot use Visual Studio Community for developing and testing the application.

Example 3: A Fortune 500 ISV is working on a mobile application which is released under the Open Source Institute (OSI)-approved open source software licenses. It also works on a separate closed-source mobile application. Employees and contractors may use Visual Studio Community when working on the open source application. They may not use it when working on the closed source application.

Example 4: A company manufactures printers and needs to develop Windows drivers for their printers. They are allowed to use Visual Studio Community to develop and test the drivers.

Visual Studio Build Tools

Visual Studio Build Tools are licensed as a supplement to the user's Visual Studio license.

If the user has a Visual Studio license, the user, and others in the organization (even coworkers unlicensed) may use the Build Tools on the user's build devices to build projects created by using Visual Studio and Visual Studio code. For more information, see Section 2.b. of the Visual Studio Build Tools license.

If the user does not have a Visual Studio license, the user can nonetheless install and use the Build Tools to compile and build C++ components the user's software depends upon, provided that the component has been released under an open-source software license approved by the Open Source Initiative. The user cannot develop and test the Open Source Dependencies themselves.

Example 1: A Manage oversees a team of 10 software engineers. These 10 are developing a .NET component for an Azure Service by using Visual Studio. The manager also oversees a Build Engineer, who does not have a Visual Studio Subscription. The Build Engineer **may install and use** the Visual Studio Build Tools to build the .NET component because it is developed by using Visual Studio.

Example 2: A Manager oversees a team of 20 software engineers, 10 of whom have a Visual Studio Enterprise subscription. 10 other engineers do not have a Visual Studio Subscription and use another development tool to create C++ library used by several of the organization services. The Manage also oversees a Build Engineer, who does not have a Visual Studio Subscription. The Build Engineer **may not use** the Build Tools to build the C++ library because it was not developed by using Visual Studio.

Example 3: An individual is using Visual Studio Code to develop a Node.js app. The app depends upon an open source C++ add-on that is developed with Microsoft C++ and must be compiled as part of the project. The individual does not have a Visual Studio license. However, because the individual is merely compiling (and not developing) this C++ dependency, the Build Tools **may be used** for this component. The Build Tools **may not be used** for other parts of the app.

Example 4: An individual has a Visual Studio Subscription and also has a subscription with Contoso Hosting Services for shared servers on which the individual wants to create a build system. The Build Tools **may not be installed** and used on shared servers.

Example 5: An individual has a Visual Studio Subscription and also has a subscription with Contoso Hosting Services for servers dedicated to the individual's use on which the individual wants to create a build system. The Build Tools **may be installed** and used on dedicated servers provided that Contoso Hosting Services is not a Listed Provider (http://aka.ms/listedproviders).

Azure DevOps Purchasing

In many cases for Visual Studio Subscribers, no additional purchase is necessary for Azure DevOps. There is no extra charge for active Visual Studio subscribers who join the account, there are five free users included with each Azure DevOps account and unlimited stakeholder users per account. Additionally, there are free amounts of certain additional services (e.g., Build and Release Hosted Pipelines, Build and Release Private Pipelines) available per account depending on subscription level.

Billing of paid Azure DevOps is done through Azure. Accounts are not billed for the underlying consumption infrastructure (VMs, storage, bandwidth, etc.) that is used to run your Azure DevOps account.

As part of purchasing Azure DevOps, you will need to create an Azure subscription if you do not have one already. The Azure subscription establishes the payment terms such as payment via credit card or invoice.

Visual Studio Subscription Renewals and Upgrades

Standard Subscriptions

Visual Studio Subscriptions (Standard) can be renewed at a considerably lower price than purchasing a new Visual Studio Subscription. Maintaining a Standard Subscription provides ongoing rights to receive new versions of Visual Studio and access other subscriber benefits.

Retail Visual Studio Subscriptions (Standard) must be renewed annually. The Subscription expiration date is 1 year from the purchase date. There is a 30-day renewal grace period—that is, the period from when the Visual Studio Subscription expires to the point where the customer loses the option to renew at the renewal price. Renewal extends the Subscription 1 year from the current/previous expiration date. Customers should not delay activation, as doing so does not extend the Subscription term, expiration date, or renewal eligibility.

Visual Studio Subscriptions (Standard) purchased under most **Volume Licensing** programs are valid until the Volume License Agreement or Enrollment terminates. However, subscriptions under the **Select Plus** Agreement (which does not expire) last for 3 years from the date of purchase and there are also options for aligning the subscription term end date with an Agreement anniversary date.

For all Volume Licensing Programs, Visual Studio Subscriptions must be renewed by purchasing the Software Assurance (SA) or Subscription version of the product by the deadline specified under the Volume Licensing agreement. These deadlines vary by program and may also vary depending on the terms in place when the agreement was signed.

Standard Subscription Upgrade Options

Customers can upgrade an active Visual Studio Subscription either at renewal (in which case customers must purchase both the subscription renewal at the former level and a "step-up" license which upgrades the subscription) or at another point during the term of the subscription.

Microsoft Volume Licensing Upgrade Paths		
Upgrade from:	**Visual Studio Professional Subscription**	**Visual Studio Test Professional Subscription**
Upgrade to:	**Visual Studio Enterprise Subscription**	**Visual Studio Enterprise Subscription**
Enterprise, Enterprise Subscription	✓	✓
Select, Select Plus	✓	✓
Open Value, Open Value Subscription	✓	✓

Upgrades are not available in other programs. However, Retail and Open License customers can still take advantage of Step-up Licenses by renewing into the Open Value program and immediately buying a Step-up.

Renewing Down

Customers purchasing through Volume Licensing channels may "renew down" from a higher-level Visual Studio standard subscription to a lower-level subscription – effectively trading one license for another. In doing so, the customer forfeits all rights associated with the old Visual Studio Subscription and must immediately discontinue using any products that were available as part of that subscription but that are not available under the new subscription.

Example: An organization has been using Visual Studio Enterprise Subscription subscriptions across their development team. The organization decides to renew all their subscriptions down to Visual Studio Professional Subscription due to budget constraints. When the organization renews down, subscribers must immediately discontinue using and uninstall Visual Studio Enterprise—and thus can no longer benefit from the features in Visual Studio Enterprise. Subscribers also lose rights to use Microsoft Office, Microsoft 365, Microsoft Dynamics, SharePoint Server, and many other products included in Visual Studio Enterprise Subscription but not in Visual Studio Professional Subscription.

Monthly Subscriptions

Visual Studio Monthly Subscriptions renew automatically each month and include a software license only for as long as the subscription is maintained. There is no price difference for renewals. To upgrade or downgrade, simply purchase the subscription type that meets current needs—there is no separate upgrade or downgrade process. Subscription charges are prorated based on the date of purchase within the billing cycle. For example, purchasing mid-month results in a partial charge for that month.

Other Channels

Certain Visual Studio products are available for purchase through other Microsoft programs, including:

- Service Provider Licensing Agreement (SPLA): Azure DevOps Server, Visual Studio Enterprise, Visual Studio Professional, and Visual Studio Test Professional are available on a subscription basis through participating hosted solution partners. The partner offers the software running on its own hardware that you connect to remotely. These are not Visual Studio Subscription offerings. Use terms for the SPLA are covered in the Licensing Options: Service Providers | Microsoft Volume Licensing document.

Additionally, Visual Studio Subscriptions or Visual Studio are provided as program benefits under certain Microsoft programs:

- Microsoft AI Cloud Partner Program: Partners with one or more offers earn Visual Studio Enterprise Subscriptions which must be assigned to their end users. Software offered through the Microsoft Cloud Partner Program cannot be used for direct revenue-generating activities, such as providing consulting services, customizing a packaged application for a specific customer, or building a custom application for a customer, for a fee. Partners can use Visual Studio Subscriptions for indirect revenue-generating activities, such as building a packaged application on the Microsoft platform, which they can then market and sell to customers.
- Microsoft for Startups: Microsoft for Startups is a global program that helps software startups succeed by giving them access to Microsoft software development tools, connecting them with key industry players, and providing marketing visibility to help entrepreneurs start a business. The Visual Studio Enterprise Subscription offered through Microsoft for Startups are subject to the MSDN subscriptions not for resale (NFR) retail license terms.
- Azure Dev Tools for Teaching: Azure Dev Tools for Teaching is no longer available to new customers as of August 2025. All current customers will continue to receive access and benefits for the next 3 years. For existing customers, a Visual Studio Subscription is included for the administrator of the Dev Tools for Teaching subscription. Visual Studio (the IDE) is also included for all users of Dev Tools for Teaching subscription as a download
- Microsoft Learn for Educators: Microsoft Learn for Educators enables educators to bring Microsoft Official Curriculum and the instructor-led training materials into your classroom to build students' technical skills for the future. Eligible educators and faculty members at higher education institutions that offer accredited degree, diploma, certificate, or continuing or further education programs, such as colleges, universities, community colleges, polytechnics, and secondary schools with STEM focused curriculum, can access Microsoft ready-to-teach curriculum and teaching materials aligned to industry-recognized Microsoft Certifications. These certifications augment a student's existing degree path and validate the skills needed to be successful across a variety of technical careers.

This is not an exhaustive list of programs that offer Visual Studio products or subscription benefits as part of their programs. Please consult the terms for each program for specific Visual Studio Subscription use right additions or exclusions.

What Software is Included and Downgrade Rights

For Visual Studio Subscriptions, the included software is defined as any software that is available to the subscriber via the Subscriber Portal while the user's subscription is active. Downgrade rights to prior versions of that software are included for legacy software versions.

The software downloads available at each subscription level is available for review without a subscription from the download page of the Subscriber Portal. For a more general view of what software is included with each Visual Studio Subscription, subscribers can compare subscriptions.

For Visual Studio Professional standalone licenses, the software included in the license is the current version of the software plus downgrade rights to simultaneously run prior versions of Visual Studio Professional to which the user may otherwise have access.

For purposes of this User Licensing section, the software included with the license will be referred to as "the software."

Different Licensed Users Can Run the Same Software

Each member of the development team that will use (install, configure, or access) the software must have their own Visual Studio Subscription or standalone license. Two or more individuals may use the same software if each has a Visual Studio Subscription or standalone license.

Example 1: A development team consists of 6 software developers, 1 architect/developer, and 3 testers. The team is building an LOB app and wants to use the software to set up a test environment running Windows Server and Microsoft SQL Server. If all 10 team members will access the development or test environment, then each will require a Visual Studio Subscription. The minimum subscription levels including these products are Visual Studio Professional Subscription, and—for the testers who do not use Visual Studio—Visual Studio Test Professional Subscription.

Example 2: An organization has two development teams—one based in Seattle and the other in Singapore.
Because of the time difference, the two teams are never working at the same time. However, because Visual Studio Subscription licenses are per user and cannot be shared, each team member in each location must have his or her own Visual Studio Subscription.

Example 3: A systems engineer from the organization's IT department is installing the software needed for a development team—**each member of which is licensed with a Visual Studio Subscription**—on centrally managed hardware. This systems engineer is not doing any software development or testing. Installing the software in this context does not constitute licensed use for development or testing purposes. Therefore, the systems engineer does not require a Visual Studio Subscription for the systems engineer that includes the software he or she is installing.

Where the Software can be Installed and Run

The licensed user can install and use the software on any number of devices. The software can be installed and used on your devices at work, at home, at school, and even on devices at a customer's office or on dedicated hardware hosted by a third party that is an "Authorized Outsourcer" **and not** a "Listed Provider" (see http://aka.ms/listedproviders). Most subscriber software can also be run in Azure VMs. However, the software is otherwise not licensed for use in the subscriber's 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 (that is, a database used for routine business operations such as reporting, running applications used by customers or employees, or storing customer or business data).
- 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.

Example: A developer with a Visual Studio Subscription uses subscriber software at work during the day, but occasionally needs to develop at home as well, using a different computer. This is allowed.
However, the restrictions for the subscriber software running on the developer's home PC remain the same as in the work environment: the subscriber software installed on the home PC must only be used for design, development and testing purposes; and only other users with an appropriate Visual Studio Subscription can use the software.

Additional Use Rights and Benefits for Visual Studio Subscribers

For a complete list of additional benefits available to Visual Studio Subscribers, see Understand benefits in Visual Studio subscriptions.

Microsoft 365 E5

Microsoft 365 E5 can be used by licensed users of Visual Studio Enterprise Subscription on one device for production use. For more information, see Activate Microsoft 365 developer subscriptions.

Microsoft 365 Apps for Enterprise

Microsoft 365 apps for enterprise is available in selected Visual Studio subscriptions. The apps can be installed on multiple devices, including PCs, Macs, iPads, iPhones, Android tablets, and Android phones. For more information, see Microsoft 365 apps for enterprise in subscriptions.

Production Use of Azure DevOps Server

Visual Studio Enterprise Subscription, Visual Studio Professional Subscription, Visual Studio Test Professional Subscription, and MSDN Platforms, and all Visual Studio Monthly Subscriptions include a server license and one Client Access License for Azure DevOps Server. More information is provided later in this guide under the section on Azure DevOps Server Licensing.

Monthly Azure Credits for Visual Studio Subscribers

Visual Studio Enterprise Subscription, Visual Studio Professional Subscription, Visual Studio Test Professional Subscription, and MSDN Platforms include a monthly credit to use on Azure services. Availability varies and the amount of service included is subject to change. See the subscription benefits table, for your specific license type.

To use these services, the Visual Studio subscriber must sign up and accept the Microsoft Azure Agreement. The Visual Studio subscriber may not run production applications on these subscriptions; all use of this benefit is limited to development and testing. Also, monthly Azure credits from multiple Visual Studio Subscriptions cannot be combined onto a single account or pooled within an organization.

Azure DevOps Benefits for Visual Studio Subscribers

All Visual Studio subscribers (Standard and Monthly) who have activated their subscription can create or join any Azure DevOps tenant at no additional charge. Additional Azure DevOps extensions are also available to Visual Studio subscribers as follows, at no extra charge:

Team Services extension	Included with these Visual Studio Subscriptions:
Azure Test Plans	- Visual Studio Enterprise Subscription - Visual Studio Enterprise Monthly Subscription - Visual Studio Test Professional Subscription - MSDN Platforms
Package Management	- Visual Studio Enterprise Subscription - Visual Studio Enterprise Monthly Subscription

Cloud Use Rights: Running the Subscriber Software on Azure VMs

Visual Studio subscribers who have activated their subscription can run most of the software included in their subscription on virtual machines (VMs) in Azure. These rights are limited to design, development, testing, and demonstration purposes only—not production use.

The specific software and services licensed for use depend on the subscriber's subscription level. For example, Visual Studio Professional Subscription subscribers in an organization are not licensed to use software available only to their coworkers who have a Visual Studio Enterprise Subscription.

Cloud use rights apply to Visual Studio and all other software included in a subscription. Additionally, subscribers do not need a Remote Desktop Services (RDS) Client Access License to connect to Azure VMs for development and testing.

If a subscription includes benefits for Windows Server and Windows client, the subscriber can run VMs with these operating systems where they are available. It is important to note that standard Azure pricing for compute and OS applies - any associated VM costs incurred from deploying Windows Server and Windows client are applicable, as these are not included in Visual Studio cloud use rights.

- Windows Server VMs are available on Azure and other cloud providers.
- Windows client VMs are available only on Azure, and only to active Visual Studio subscribers (Standard). These can be paid for using monthly Azure credits or through team Azure subscriptions set up with the Dev/Test Pay-As-You-Go or Enterprise Dev/Test offers.

Example 1: A team of five developers are licensed for different Visual Studio Subscription levels: three have Visual Studio Enterprise Subscription and the other two have Visual Studio Professional Subscription. One team member with Visual Studio Enterprise Subscription sets up an Azure subscription using the Dev/Test Pay-AsYou-Go offer to act as the team's development environment. This team member deploys a VM with Microsoft SharePoint Server to be used for development and testing by the team members with Visual Studio Enterprise Subscription. The other two team members with Visual Studio Professional Subscription cannot use this VM because their subscription level does not provide rights to use SharePoint Server.

Example 2: A developer who is licensed for Visual Studio Professional Subscription has deployed SQL Server in a VM running on Azure to develop new stored procedures for a database application. While the work is proceeding, the Visual Studio Subscription expires. Because the subscription has expired, the cloud use rights also expire and the developer must cease use of SQL Server within this VM.

Cloud Use Rights: Running the Subscriber Software on Dedicated Hosted Cloud Services

As of October 1, 2019, Visual Studio subscriber software may no longer be run on dedicated hosted cloud services identified by Microsoft at http://aka.ms/listedproviders.

This change doesn't impact the use of existing software versions under licenses purchased before October 1, 2019, but will impact licenses purchased on or after October 1, 2019. Use on Azure (multi-tenant or dedicated hosts) continues to be permitted during the term of a Visual Studio Subscription.

For more information, refer to the following licensing information: https://www.microsoft.com/licensing/news/updated-licensing-rights-for-dedicated-cloud

Load Testing

Visual Studio Enterprise Subscription, Visual Studio Enterprise Monthly Subscription subscribers can use the software to execute load tests with any number of virtual users, including load tests that run in a production environment.

SQL Server Parallel Data Warehouse Developer

Visual Studio Enterprise Subscription, Visual Studio Enterprise Monthly Subscription, Visual Studio Professional Subscription, and Visual Studio Test Professional Subscription subscriptions include a license for SQL Server Parallel Warehouse Developer. The Parallel Data Warehouse appliances required to run this software are sold through OEMs.

IntelliTrace

IntelliTrace enables the recording and playback of application execution to help facilitate debugging. This is accomplished by deploying the IntelliTrace diagnostic data adapter (DDA) to the target system as part of the Visual Studio Test Agent, by deploying the IntelliTrace.exe command-line utility, or by running a test using Azure Test Plan. Azure Test Plan is included as a part of the Visual Studio Test Professional and Visual Studio Enterprise software installations.

IntelliTrace files—the output from running the IntelliTrace DDA or IntelliTrace.exe—can only be opened and debugged using Visual Studio Enterprise. IntelliTrace files may be shared among two or more companies. For example, a company can share IntelliTrace files with an external development consultant. Similarly, a company can use an external company for testing purposes and debug IntelliTrace files provided by that vendor.

Example 1: Finding a defect in a test environment:

Company A is building a Web application. All the developers are licensed for Visual Studio Enterprise
Subscription, and the testers are licensed with Visual Studio Test Professional Subscription. During a test run a defect is discovered in the test environment that is difficult to reproduce in a development environment. The test machines have previously been configured with the Visual Studio Test Agent, which includes the IntelliTrace DDA. The tester uses Azure Test Plan (a feature of Visual Studio Test Professional and Visual Studio Enterprise) to execute the test case with the IntelliTrace diagnostic data adapter (DDA) enabled. When the defect is encountered, the tester files a new bug, with the IntelliTrace files from each of the test machines is automatically attached to the bug. When a developer opens the bug using Visual Studio Enterprise, the developer can open the IntelliTrace files and use this to debug the problem.

Example 2: Working with an external consultant:

In Example 1, Company A uses an external consultant to help with development. If the external consultant is licensed for Visual Studio Enterprise, the developer can open and debug the IntelliTrace files provided by Company A.

When the Software Included is Subject to its Own Terms

Prerelease and Trial Software

Visual Studio Subscriptions include access to prerelease and trial versions of Microsoft software products. If the software is made available as part of the user's Visual Studio Subscription, then it can be installed and used on any number of devices. However, prerelease and trial versions of software provided via Subscriber Downloads are subject to their in-product licensing terms.

SDKs, DDKs, Feature Packs, and Other Software

Visual Studio Subscriptions may include access to Software Development Kits (SDKs), Driver Development Kits (DDKs), Visual Studio Feature Packs, and other Microsoft or third-party software, all of which are subject to their own product licensing terms.

C# Dev Kit

C# Dev Kit is available to customers who currently have an active Visual Studio Enterprise Subscription, Visual Studio Professional Subscription, or Visual Studio Enterprise Monthly Subscription or Visual Studio Professional Monthly Subscription. It is also available to those who are currently using GitHub Codespaces. See the license terms for more information. License Agreement | Visual Studio Marketplace

Windows Embedded

Windows Embedded products have additional software license terms that are governed by the specific product end user licensing agreement (EULA). Windows Embedded software cannot be used to run business operations or to distribute the Windows Embedded software for commercial purposes (e.g., licensing, leasing, or selling the Windows Embedded software, distributing it in a product to customers for evaluation purposes or distributing it for use with commercial products). Microsoft Embedded Authorized Distributors can guide the subscriber through the licensing, certifying, and shipping requirements.

IntelliTrace Collector and Microsoft Management Agent

The IntelliTrace Collector (offered in the Visual Studio product line) and Microsoft Management Agent (offered starting with the Visual Studio product line) are free downloads available to all licensed Visual Studio users. The IntelliTrace Collector and Microsoft Management Agent can be installed on any number of machines, including those in a production environment, to collect historical logs that can be used to debug application issues. Use of the IntelliTrace Collector and Microsoft Management Agent is subject to the in-product licensing terms, though the IntelliTrace output can only be read by Visual Studio Enterprise.

Remote Tools

Visual Studio Remote Tools, formerly known as the Remote Debugger, is subject to the in-product licensing terms provided. The Remote Tools can be used in a production environment to debug an application in real time.

Scenarios in which Unlicensed Users can use the Software

Demonstration Using Terminal Services

All Visual Studio Subscriptions (except Monthly 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. Nonetheless, a Visual Studio subscriber can use Remote Desktop Services for development and testing as they can for any other software included in their subscription.

Acceptance Testing

The software may be accessed by end users (or their proxies such as a business sponsor or product manager) who do not have a Visual Studio Subscription for purposes of user acceptance testing of your software, provided that the use of the software otherwise complies with all Visual Studio Subscription licensing terms. It is rare that someone whose primary role is designing, developing, or testing the software would also qualify as an "end user."

Acceptance testing must not use live production data. 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.

How Certain Software Can Be Distributed to Others within Your Applications

Components of software products included in Visual Studio Subscriptions that can be distributed (either within an application or as separate files) without royalty are identified in the REDIST.TXT file (or similarly named file or web page) associated with the product.

Components that can be distributed to non-Microsoft platforms are identified in the OTHER-DIST.TXT file (or similarly named file or web page) associated with the product. Code identified as distributable that has the extension .lib cannot be directly distributed; it must be linked into the application. However, the resulting output can be distributed.

Examples of redistributable files may include sample or code snippet files that you can modify, Microsoft Merge Modules, object version of C++ libraries, and other files. For the list of distributable files and components included with Visual Studio, see https://aka.ms/VisualStudioRedistTxt.

Other Guidance

When Windows on the "Developer Desktop" Requires a Separate License

Visual Studio Subscriptions allow use of Windows for design, development, testing, and demonstration of the user's applications. Other uses, such as for doing email, playing games, or editing a document is another use, requires purchasing a separate license to Windows. When there is mixed use, the underlying operating system must be licensed normally by purchasing a regular copy of Windows such as the one that came with a new OEM PC.

Example 1: A developer with a Visual Studio Enterprise Subscription builds a PC using spare hardware and intends to use this for development and testing of applications. The developer installs a copy of Project Professional (licensed separately) on the machine to use for managing project timelines, which is its normal production use. Because Project is being used for production, the PC is under mixed use and the Windows operating system on which Project runs must also have a normal production license. The developer is not licensed through the Visual Studio Subscription to use Windows for this PC.

Example 2: A developer with a Visual Studio Enterprise Subscription builds a PC using spare hardware, installs a copy of Windows downloaded from the Visual Studio Subscription portal, and uses it exclusively for remote testing of applications. This use is allowed by the Visual Studio Subscription.

When Virtual Environments Require a Separate License

If a physical machine running one or more virtual machines is used entirely for development and test, then the operating system used on the physical host system can be subscriber software. However, if the physical machine or any of the VMs hosted on that physical system are used for other purposes, then both the operating system within the production environment VMs and the operating system for the physical host must be licensed separately. The same holds true for other software used on the system— for example, Microsoft SQL Server obtained as subscriber software can only be used to design, develop, test, and demonstrate your programs.

Example: A developer with a Visual Studio Enterprise Subscription configures a Windows Server machine to host Windows VMs. These VMs will be used exclusively for testing applications. This use is allowed by the Visual Studio Subscription.

Monitoring and Managing Development and Testing Environments Requires Management Licenses

Often Microsoft System Center is used to monitor or manage machines running in a development or testing environment. This is the normal use of System Center and requires normal System Center management licenses, which are acquired separately. This use—monitoring and managing machines—is not allowed under any Visual Studio Subscription. The installation of the System Center agents on these development and testing machines must be performed by a licensed Visual Studio subscriber (because any use of the software, including the operating system, requires a license), but System Center operators can remotely monitor these machines without a Visual Studio Subscription.

Additionally, for Visual Studio Subscriptions that include System Center, subscribers can use the System Center software to design, develop, test, and demonstrate their programs.

Example 1: A company uses System Center – Operations Manager to manage both the servers running in its production datacenter and those running in its development and testing labs. The development and testing team members who each have Visual Studio Subscriptions must perform all software installations in the development and testing labs, including installation of the System Center agents software, because the software running in this environment is licensed per user and only these individuals have Visual Studio Subscriptions permitting this use. Once installed, the normal System Center operators who do not have Visual Studio Subscriptions can monitor and manage these servers remotely using the System Center software.

Example 2: An ISV is writing an application that queries Microsoft System Center – Operations Manager via the APIs exposed in System Center and then generates a customized report. This is development and is allowed for Visual Studio Enterprise Subscription or Visual Studio Enterprise – annual subscribers, whose subscriptions include the System Center software.

Perpetual Use Rights

Some Visual Studio Subscriptions provide perpetual use rights to certain software products which allows the subscriber to continue to use the software after the subscription has expired. However, former subscribers do not continue to have access to software or product keys through Subscriber Downloads or to other subscription services that are a benefit of having an active subscription. Product keys that were acquired while the subscription was active can continue being used until all activations for those keys have been exhausted. If a Visual Studio Subscription is transferred or sold, any perpetual use rights are transferred to the new party, and the seller can no longer use the software.

Visual Studio Subscriptions that do **not** provide perpetual use rights include:

- Visual Studio Monthly Subscriptions
- Visual Studio Subscriptions purchased through Enterprise Agreement Subscription, Open Value Subscription, Campus Agreement, or other "subscription" Volume Licensing programs
- Visual Studio Subscriptions offered through the Microsoft Partner Network to competency partners and to Microsoft Action Pack partners.

In the above cases, subscribers can no longer use any software provided through the Visual Studio Subscription after it expires even if they have a product key for that software unless they have purchased a "Buyout License."

Subscribers under Enterprise Agreement Subscription, Open Value Subscription, Campus Agreement, and other "subscription" Volume Licensing programs may purchase a "Buyout License" to obtain perpetual use rights to the software included in the subscription when their subscription expires.

Reassignment of the License

The Visual Studio Subscription or Visual Studio Professional standalone license can be reassigned to another user—such as when a person leaves the team—but not within 90 days of the last assignment for purchases through retail and Volume Licensing channels.

Distribution of Software as Part of an Installation Image

Physical or virtual machine images provide a quick and convenient way to set up client or server machines. However, software included with Visual Studio Subscriptions purchased through a retail channel cannot be used to create images that are distributed to others. This restriction holds true even if the target users that will install and/or use the image also have appropriate Visual Studio Subscriptions for the software contained within the installation image. These users can, of course, download the software from Subscriber Downloads directly and create their own installation image.

If the Visual Studio Subscription was obtained by an organization through a Volume Licensing program, then the installation image may be distributed among users licensed for the appropriate Visual Studio Subscription level within the same organization only, including to external contractors working for the organization who have been temporarily assigned a Visual Studio Subscription from the organization's available licenses. Redistribution of the software to third parties is not allowed in any form, including physical and virtual machine images, DVDs and ISO files.

Example: Company A subcontracts with Company B. Part of the work involves creating an image for installing machines in a test server environment. Because individuals from Company B cannot distribute Microsoft software to individuals in Company A, the only options for Company B to "distribute" the resulting image back to Company A are:

- Company A assigns spare (unallocated) Visual Studio Subscriptions to the individuals in Company B that will be creating the image. This enables the software to be transferred within the same organization (and thus is not a distribution of Microsoft software to a 3rd party), OR
- Company B provides instructions for building the image to Company A, which then builds the image internally.

Assigning Visual Studio Subscriptions to External Entities (e.g., solution providers, independent contractors, offshore development centers)

If an organization hires external contractors to work within their development team, then the contractors must have appropriate Visual Studio Subscriptions for any software that they will be using. Customers must also ensure their development and test environments are completely and accurately licensed in situations when customers have outsourced all or part of their development and test environment to another entity in different geographies. Customers must track assignments for all external entities (e.g., solution providers, independent contractors, offshore development centers) and could be asked to report usage of all subscriptions assigned to external entities.

Example: An external contractor is to work temporarily within a client organization's development team. Each development team member at the client has a Visual Studio Enterprise Subscription. If the contractor has a Visual Studio Enterprise Subscription too, then, like the existing team members, the contractor can use the software in the development environment. If the contractor does not have a Visual Studio Subscription, or has a Visual Studio Subscription at a lower level that

- does not include all of the software they will be using, then either:
- The contractor must obtain an appropriate (higher-level) Visual Studio Subscription.

The organization must assign one of their spare (unallocated) Visual Studio Subscriptions— again, of a sufficient level to include the software they need to use—to the contractor for the duration of the contract.

Additionally, if the contractor is using the client's Azure DevOps Server then the client must supply a Azure DevOps Server CAL for the contractor's use. This could be a CAL purchased separately or a CAL that is included with the Visual Studio Subscription that the client assigns to the contractor temporarily. Azure DevOps Server CALs are only valid for accessing a Azure DevOps Server acquired by the same organization.

Visual Studio Subscriptions through Microsoft Partner Network (MPN)

Visual Studio Subscriptions offered through the Microsoft Partner Network cannot be used for direct revenue generating activities, such as providing consulting services, customizing a packaged application for a specific customer, or building a custom application for a customer, for a fee.

Example: An external contractor is to work temporarily within a client organization's development team. The contractor has a Visual Studio Enterprise Subscription as a benefit of his firm being in the Microsoft Partner Network (MPN). However, since the MPN benefits cannot be used for consulting services:

- The contractor must purchase a Visual Studio Subscription for this use.
- Or, the organization must assign one of their spare (unallocated) purchased Visual Studio Subscriptions— again, of a sufficient level to include the software they need to use—to the contractor for the duration of the contract.

Product Keys and Installation Software

Visual Studio subscribers can use any installation software as long as that software is from an authorized source (such as Subscriber Downloads, Volume License Service Center, the Microsoft Download Center, or VisualStudio.com) and the software product is covered under the user's Visual Studio Subscription. For example, a Visual Studio subscriber could choose to use his organization's Volume Licensing media for installing Windows in a test lab, which may be more convenient due to the Volume Licensing product key having higher activation limits than the key made available through Subscriber Downloads.

Using Software Sourced from Subscriber Downloads but Licensed Under a Production License

Often, it is more expedient to deploy a server running a fully-tested application directly into production. Normal licenses must be acquired for this use (such as a Windows Server license and Client Access Licenses) because the Visual Studio Subscription license is per user and is generally limited to development and testing. However, the installed software and the product key used to activate that software, where applicable, can be from Subscriber Downloads, even though the licenses to use that software in production must be acquired separately from the Visual Studio Subscription.

Software Activation

Many software products offered via Subscriber Downloads require activation, a process which validates that the software being installed is genuine Microsoft software (and not a corrupted copy) by connecting to Microsoft servers online. Activation happens after the product key has been entered and has been validated for the product being installed. Be careful not to confuse activation with licensing; activation has no way of determining whether you are licensed to use the product (such as Windows, offered through a Visual Studio Subscription) or whether you're using the software in a way that is allowed under your license (such as using Windows for developing an application). For more information, see Product Keys and Activation.

Azure DevOps Server Licensing

Microsoft licenses Azure DevOps Server under the Server/Client Access License (CAL) licensing model— that is, organizations must have a license for each running instance of Azure DevOps Server (i.e., the server) and, with certain exceptions, an Azure DevOps Server CAL for each user or device that accesses Azure DevOps Server.

Obtaining Azure DevOps Server

Azure DevOps Server can be obtained in two ways:

- **Visual Studio Subscriptions.** Visual Studio Enterprise Subscription, Visual Studio Professional Subscription, Visual Studio Test Professional Subscription, MSDN Platforms, and all Visual Studio Monthly Subscription users can download and deploy one instance of Azure DevOps Server. These same Visual Studio subscribers are granted an Azure DevOps Server User CAL to be used within their organization (it is not valid for use of Azure DevOps Server acquired by a different organization).
- **Volume Licensing.** Azure DevOps Server is offered separately from a Visual Studio Subscription through Microsoft Volume Licensing programs, as outlined in the How to Buy section above.

Example: An organization has purchased two retail server licenses for Azure DevOps Server. They have 10 people needing access to a single instance of Azure DevOps Server (the other server license is currently not in use) and none of them has a Visual Studio Subscription. Five people accessing this one instance of Azure DevOps Server don't need a CAL, so the organization only needs to purchase CALs for the other five people.

Alternately, if the organization installed both instances of Azure DevOps Server, they could have 5 people use one instance and the other five people use the other instance. In this case, the organization would not need to purchase CALs.

While this section of the document focuses on Azure DevOps Server licensing, these terms also relate to Azure DevOps Server Express, which is free, except as noted and except for features that are not included in Azure DevOps Server Express.

General Guidance for Licensing Azure DevOps Server

There are a number of points to understand when planning to license Azure DevOps Server:

- **For each server license of Azure DevOps Server that a user acquires, the user must assign that license to one of the user's servers.** The user may run one instance of the server software in one physical or virtual operating system environment (OSE) on the licensed server.

- The Azure DevOps Server license also includes certain additional software which can be run on any number of machines (physical or virtual). Additional software includes:
  - Visual Studio Team Explorer to connect to Azure DevOps Server
- **The user must acquire an operating system license for each machine running Azure DevOps Server,** any of the additional software, or the SQL Server database for Azure DevOps Server.
  - The user must acquire an operating system license even when the user's use of Azure DevOps Server is licensed as part of a Visual Studio Subscription.
  - For Windows Server-based deployments where Windows Server is licensed on a Server/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.
- One instance of the Microsoft SQL Server 2025 can be used as the Azure DevOps Server database, except for Azure DevOps Server Express which uses SQL Server 2025 Express. Azure DevOps Server uses Microsoft SQL Server as its data repository and provides the right to deploy one instance of SQL Server 2025 Standard software per Azure DevOps Server server license. This is not a separate SQL 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 the user uses the SQL Server software for purposes other than Azure DevOps Server, then the user must license that use separately for purposes other than Azure DevOps Server, then the user must license that use separately.
- **SQL Server Enterprise can be used for Azure DevOps Server, but the user must acquire that license separately.**
- **SQL Server Reporting Services for Azure DevOps Server can be accessed without a SQL Server CAL,** as long as the SQL Server software running is the version and edition supplied under the Azure DevOps Server license (i.e., SQL Server 2025 Standard) or is licensed separately per core. In all cases, Azure DevOps Server CALs are not required for users who are only accessing Azure DevOps Server reports.

Reassignment of the Server License

The Azure DevOps Server license can be reassigned to another server, but not within 90 days of the last assignment. However, in the event of a permanent hardware failure, it can be reassigned sooner.

Using Visual Studio on the Build Server

If the user has one or more licensed users of Visual Studio Enterprise Subscription, Visual Studio Professional Subscription, Visual Studio Monthly Subscription, or Visual Studio Professional (standalone license) then the user may also install Visual Studio or the Visual Studio Build Tools as part of Azure DevOps Server Build Services. This way, the user does not need to purchase a Visual Studio license to cover the running of Visual Studio on the build server for each person whose actions initiate a build. For more details, see the Build Tools terms in the Visual Studio product license (https://visualstudio.microsoft.com/license-terms/).

Client Licensing Requirements for Azure DevOps Server

With certain exceptions, each user or device directly or indirectly accessing Azure DevOps Server must have a User CAL or a Device CAL.

When a Client Access License is Not Required

An Azure DevOps Server 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 would be a report. Accessing reports also includes read-only data from custom reports that call into Azure DevOps Server APIs and join that data with other data sources.
- **Accessing Azure DevOps Server using Microsoft System Center Operations Manager.** This enables operations staff to take operational issues encountered in production and raise them as issues to the development team.
- **Accessing Azure DevOps Server using the Feedback Client for TFS**. This allows the user to provide Feedback about an application into 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 Azure DevOps Server Express. However, a CAL is required for the sixth user and any subsequent user.
- **Accessing Azure DevOps Server through a pooled connection from another integrated application or service.** This removes licensing friction from integrating Azure DevOps Server with LOB applications like customer ticketing solutions and other ALM solutions.
- **Accessing Team Foundation Service via an Azure DevOps Server Proxy.** This enables Team Foundation 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, and where Windows Server is licensed under Server/CAL), SharePoint Server (when the user accesses an 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 2025 Standard), where applicable.

Server Features Requiring More than a CAL

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:
Test Management	- Visual Studio Enterprise Subscription - Visual Studio Enterprise Monthly Subscription - Visual Studio Test Professional Subscription - MSDN Platforms Subscription - Paid Azure Test Plan users
Package Management	- Visual Studio Enterprise Subscription - Visual Studio Enterprise Monthly Subscription - Paid Package Management users

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

Choosing between User CALs and Device CALs

Organizations may choose to purchase User CALs or Device CALs, or a combination of both. User CALs may be appropriate when one user accesses Azure DevOps Server from multiple devices or locations; device CALs are typically used when multiple individuals share a single device to access Azure DevOps Server. Although a Device CAL permits multiple users on a single device, it may only be used by a single user at a time.

Example: A training facility that teaches Azure DevOps Server to a group of classes needs to license Azure DevOps Server. The teaching facility can purchase a Device CAL for each computer in their classroom. In this case, any number of students can use these machines, as each Device CAL allows any number of users to access the server software from a single device, though one at a time on each device.

Multiplexing and Pooling Do Not Reduce the Need for CALs

Hardware and software that reduce the number of users or devices that directly access Azure DevOps Server (sometimes referred to as "multiplexing" or "pooling") **do not** reduce the number of Azure DevOps Server CALs that are required. End users or devices that access Azure DevOps Server in any way–other than the When a Client License is not Required scenarios noted above–are required to have the appropriate licenses, regardless of whether they are using a direct or indirect connection to the software.

Example 1: An organization implements an intranet Web site that connects to Azure DevOps Server in a way that enables users to add work items, resolve bugs, or trigger builds through the Web site. Even though only one device (the Web server) is directly connecting to Azure DevOps Server, each person who uses the Web site to access Azure DevOps Server for purposes other than entering defects and enhancement requests must have a CAL. (A device CAL may not be used for the Web server because the Device CAL only supports one user logged into the specified device at any given time.) A CAL is not required for accessing a second Web site that runs on the same physical Web server but does not access Azure DevOps Server.

Example 2: Multiple people simultaneously remote into a server running Terminal Services to access a development environment. Even though those multiple users are "sharing" one device, each user must have a CAL. (A device CAL may not be used because the Device CAL only supports one user logged into the specified device at any given time.)

Release Management

With the introduction of web-based Release Management capabilities in Azure DevOps Server, the ability to manage and configure releases is available to all users with an Azure DevOps Server CAL, including Visual Studio subscribers. There is no charge for users whose access level is configured as Stakeholder to approve releases.

Each Azure DevOps Server can deploy one release at a time using Release Management, included as part of the server license. Each of the following provides one additional concurrent deployment: Visual Studio Enterprise Subscription, Visual Studio Enterprise Monthly Subscription, and paid Azure DevOps Build and Release Private Pipelines.

Feature	Available to:
Concurrent deployments using Release Management	1 concurrent deployment is included with Azure DevOps Server. Additional concurrent deployments for each of the following: • Visual Studio Enterprise subscribers (Visual Studio Enterprise Subscription, Visual Studio Enterprise – annual, or Visual Studio Enterprise – monthly) • Paid Private Pipelines

Learn more about Release Management here.

Downgrade Rights for Azure DevOps Server

Microsoft provides downgrade rights for Azure DevOps Server. This enables users to use an earlier version of Azure DevOps Server (such as Team Foundation Server 2018) in place of the licensed version of Azure DevOps Server, and an earlier version of SQL Server Standard as the database supporting Azure DevOps Server. The downgrade rights also apply to Azure DevOps Server CALs, so an Azure DevOps Server CAL can be used for accessing earlier versions of Team Foundation Server.

Azure DevOps Server under Software Assurance

As is standard with Software Assurance, if users had a Visual Studio Team Foundation Server license and CAL that was under Software Assurance as of the availability of Azure DevOps Server in Volume Licensing, then their server and CAL become a Azure DevOps Server server and CAL; otherwise, users are required to purchase a Azure DevOps Server server and CAL to access Azure DevOps Server.

Connecting Azure DevOps to a Local Build Server

It is possible to set up the user's Azure DevOps account to run builds on a local server running Team Foundation Build Services. The licensing requirements for the server running the Build server are no different whether it is receiving commands from a local Azure DevOps Server or from Azure DevOps—at a minimum it requires an Azure DevOps Server license, an operating system license (plus potentially CALs), and all users whose actions cause builds to run require Azure DevOps Server CALs. Therefore, users who check in code to Azure DevOps which in turn kicks off a build to the local Build server need Azure DevOps Server CALs. An Azure DevOps Server CAL is provided for each paid Azure DevOps user.

Methods of Accessing Azure DevOps Server

The Azure DevOps Server data can be accessed in several ways, including:

- Visual Studio Team Explorer, which is free, or the Team Explorer functionality that is included with Visual Studio Enterprise, Visual Studio Professional, and Visual Studio Community.
- **Microsoft Office Excel,** which can access Azure DevOps Server using add-ins for those programs that are provided with Team Explorer.
- Programmatically, as enabled through the Azure DevOps Server application programming interfaces (APIs) or by other means.

No matter which method users use to access Azure DevOps Server they must acquire a license for the client, other than for scenarios noted in the When a Client Access License is Not Required section above.

Deployment Options

Companies can take advantage of the inherent flexibility and scalability of Azure DevOps Server to support development teams of all sizes. For example, Azure DevOps Server can be deployed on a desktop system, on a single server, or in a two-tier configuration. Regardless of which approach is used, Azure DevOps Server requires an operating system and a database, each of which have their own licensing implications.

Multi-Server (Two-Tier) Deployment

The user can deploy Azure DevOps Server in a two-tier configuration, where one tier hosts Azure DevOps Server and the other tier hosts the SQL Server back-end. As outlined above, the operating system for each tier must be licensed separately, and one instance of SQL Server 2016 Standard can be deployed for each license of Azure DevOps Server that you acquire.

Example: An organization deploys Azure DevOps Server to one server running Windows Server 2022 Enterprise, and the corresponding SQL Server 2019 Standard database on a separate instance of Windows Server 2022 Enterprise. In this case, only one Azure DevOps Server license is in use (comprising the Azure DevOps Server and the SQL Server data tier collectively), but licenses for both Windows Server 2022 Enterprise servers are required. Azure DevOps Server Client Access Licenses may be needed.

When deployed in a two-tier environment, the user can increase reliability by maintaining a second application tier server in a warm or cold standby mode. In warm standby mode, the failover machine is running but a system administrator manually activates the failover functionality. In a cold standby setup, the failover system is usually off until an administrator turns it on and activates its failover functionality. Organizations considering warm or cold standby scenarios may want to consider a load-balanced application tier instead, with both servers in an active role by default.

The user can increase the availability of Azure DevOps Server in a two-tier configuration by using SQL Server clustering on the data tier—in this case comprised of two servers. Clustering provides high availability by combining several physical SQL Server instances into one virtual instance. In a clustered, two server data tier configuration, Windows Server and SQL Server 2025 licenses are required for each server but no additional Azure DevOps Server CALs are required. Each server in the cluster running SQL Server 2025 Standard counts as a separate instance of SQL Server, so you need to have enough Azure DevOps Server licenses to cover the number of instances, or acquire licenses for SQL Server separately.

Azure DevOps Build Services

Build automation functionality in Azure DevOps Server enables the software to run automated builds on the same server or a separate system, along with the ability to run quality or performance tests as part of the build process. Implementing a "build server" is accomplished using the build agent which is included with Azure DevOps Server. The build server can be separate from the server running Azure DevOps Server, and no Azure DevOps Server CAL or server license is required for the build server.

Lab Management Licensing

Microsoft's Visual Studio Lab Management solution extends the existing Visual Studio Application Lifecycle Management platform with integrated Hyper-V based virtual machine management. Lab Management automates complex build-deploy-test workflows to optimize the build process, decrease risk and accelerate time to market. It helps reduce development and testing costs associated with setup, tear down and restoration of virtual environments to a known state. Lab Management streamlines the collaboration between development, QA and operations to help achieve a higher ROI and realize the benefits of Microsoft's entire ALM solution.

Lab Management Components

Different pieces of software are used to enable the Lab Management functionality. A typical configuration includes:

Virtual Machine Host:

- Operating system: Windows Server 2008 R2 or 2012
- Other software: System Center – Virtual Machine Manager 2008 R2 or 2012
- On the virtual machines: Visual Studio Agents 2019

Azure DevOps Server:

- Operating system: Windows Server 2025 (Server Core and Server with Desktop are supported)
- Other software: Azure DevOps Server, SQL Server 2025 Standard, and Visual Studio Test
- Controller 2019 (part of Visual Studio Agents 2019 which is available to Visual Studio Enterprise Subscription, Visual Studio Enterprise – annual, MSDN Platforms, and Visual Studio Test Professional Subscription subscribers for this use).

Client:

- Operating system: Windows 8 or other Microsoft operating system capable of running the
- Visual Studio software
- Other software: Visual Studio Enterprise 2019

While it is possible to consolidate the Virtual Machine Host and the Azure DevOps Server, this may not be ideal in terms of performance. It may also be preferable to deploy Azure DevOps Server in multiple tiers (see *Multi-Server (Two-Tier) Deployment*).

Lab Management Licensing

To utilize the Lab Management functionality in Azure DevOps Server, the user must acquire licenses for the following:

1. **Each person using Azure Test Plans** to configure and manage the lab environment must be licensed for either Visual Studio Enterprise Subscription, Visual Studio Enterprise – annual, MSDN Platforms or Visual Studio Test Professional Subscription, depending on the product they're using. Azure Test Plan is installed with Visual Studio Test Professional and Visual Studio Enterprise. Interacting with the Visual Studio Agents 2022 software running on the virtual machines (which is done through Azure Test Plans and uses Microsoft System Center Virtual Machine Manager) is also licensed under Visual Studio Enterprise Subscription, Visual Studio Enterprise – annual, MSDN Platforms, and Visual Studio Test Professional Subscription.
2. **The operating system(s) running Azure DevOps Server.** Use of Azure DevOps Server (which includes use of SQL Server Standard) is provided to Visual Studio subscribers. (See *Visual Studio Azure DevOps Server Licensing* for more details, including details on *Client Licensing Requirements for Azure DevOps Server*.) However, the operating system(s) used to run Azure DevOps Server, including the server, the build server, and the database—which can each be run on a separate operating system—must always be acquired separately.
3. **Each person accessing the Virtual Machine Host** (or accessing a virtual machine on that host) **must have a Visual Studio Subscription** that contains the software they are using to develop or test the application. When these people do not need to create the lab environments or interact with the Visual Studio Agents software running on the virtual machines, then a lower-level Visual Studio Subscription may be sufficient. The host operating system for the Virtual Machine Host, Windows Server 2022, does not need to be licensed separately as long as the software running on this host is only used by Visual Studio subscribers for development and testing.

Appendix

For More Information

- Visual Studio: http://visualstudio.microsoft.com
- Buy Visual Studio: https://visualstudio.microsoft.com/products/how-to-buy-vs
- Compare subscription options and benefits: https://visualstudio.microsoft.com/vs/compare/

Evaluating Visual Studio

Trial versions of Visual Studio Enterprise and Visual Studio Professional can be downloaded at http://visualstudio.microsoft.com. The trial may be used to evaluate Visual Studio for 30 days (extendable to 90 days) before requiring a purchase. Applications built using trial software cannot be deployed into production.

Licensing Training Environments

Organizations providing training services to third parties that include Visual Studio Professional or Enterprise or other Microsoft software must be active in the Learning competency in the Microsoft Partner Network. Earning this competency provides the partner with rights to classroom licenses for any software that they have legally acquired, such as separate purchases or licenses that are a benefit of their membership in the Microsoft Partner Network.

Organizations that have signed an Enterprise, Select or Select Plus agreement are allowed to use up to 20 licenses of any product offered through Microsoft Volume Licensing programs in a dedicated training facility on the organization's premises.

Outside these two options, customers need to purchase licenses for the software being used for training, or they can rely on Visual Studio Community if they meet its license requirements, as it can be used in training environments without additional cost.

Historical Visual Studio Subscription Transitions

From time to time, Microsoft changes the Visual Studio Subscription offerings and convert existing subscribers to new subscription levels, often providing significantly improved capabilities and benefits.

Year	Old Subscription	New Subscription
2019	Visual Studio Annual Cloud Subscription	Visual Studio Monthly Subscription. Annual Cloud Subscriptions were discontinued for new purchases. Existing customers retained the ability to renew, increase, decrease, or cancel their current subscriptions. Benefits as well as use rights and terms for existing Annual Cloud subscribers remain consistent with those applicable to Visual Studio Standard subscriptions but do not confer perpetual use rights.
2015	• Visual Studio Ultimate with MSDN • Visual Studio Premium with MSDN	Visual Studio Enterprise Subscription
2015	MSDN OS	Visual Studio Professional Subscription (if renewed)
2012	Visual Studio Professional with MSDN Embedded	Visual Studio Professional with MSDN
2010	• Visual Studio Team System 2008 Team Suite with MSDN Premium • Visual Studio Team System 2008 Architecture Edition with MSDN Premium • Visual Studio Team System 2008 Development Edition with MSDN Premium • Visual Studio Team System 2008 Test Edition with MSDN Premium • Visual Studio Team System 2008 Database Edition with MSDN Premium	Visual Studio 2010 Ultimate with MSDN
2010	Visual Studio Professional Edition with MSDN Premium	Visual Studio Premium with MSDN
2005	Visual Studio Professional Edition with MSDN Professional	Visual Studio Professional with MSDN
2005	MSDN Universal	Customers had the choice of Visual Studio Team Edition: • Visual Studio 2005 Team Edition for Software Architects with MSDN Premium • Visual Studio 2005 Team Edition for Software Developers with MSDN Premium • Visual Studio 2005 Team Edition for Testers with MSDN Premium • Visual Studio 2005 Team Edition for Database Professionals with MSDN Premium
2005	MSDN Enterprise	Visual Studio Team Edition for Software Developers with MSDN Premium
2005	MSDN Professional	Visual Studio Professional Edition with MSDN Professional

Licensing White Paper Change Log

Release Date	Scope of Changes
March 2017	First version covering Visual Studio 2017 licensing
August 2020	Updated for Visual Studio 2019
July 2023	Validated and Edited for Visual Studio 2022
November 2025	Updated for Visual Studio 2026