

Accentient / Azure DevOps Services

Class Setup Guide



July 2023



Accentient Classroom Training Requirements and Setup Guide

Class Setup Requirements

CDADS: Continuous Delivery Using Azure DevOps Services

This class has students working as a team with various DevOps practices and tools to scale their agility, share and integrate their work, and deliver working software continuously in order to enable faster delivery of value and feedback. This class uses Azure DevOps Services, Visual Studio 2019, and Azure.

Setup Requirements

- Windows 10/11 with local administrator permissions and no custom/group policies (e.g. can run PowerShell scripts)
- Latest version of Google Chrome browser with fast, reliable Internet access
- Students must have a Microsoft Account (see *Microsoft Accounts* in the appendix)
- Microsoft Azure subscription (see *Azure Accounts and Subscriptions* in the appendix)
- Visual Studio 2019 Enterprise Edition (see *Installing Visual Studio 2019* in the appendix)

Note: Students will form into teams during class and each team will use their own Azure DevOps Services organization. Trainer must perform these steps ahead of time and provide students with pre-configured organizations. See *Pre-provisioning Azure DevOps Services Organization* in the appendix for more information.

Appendices

Appendix: Microsoft Accounts

This course requires each student to have a *Microsoft Account* (formerly known as a Live ID) to create and access Azure DevOps Services. If the student doesn't have a Microsoft Account or wants to create a "throwaway" one for class, they can visit <https://signup.live.com> and provide the required information, which includes name, username, password, and other details. They will also need to provide a phone number or other method in order to reset a forgotten password. A downside to using a "throwaway" account for training, is that it won't be associated to a Visual Studio subscription. Should the student join a team that already has (5) members using a Microsoft Account like this, they will become a stakeholder with limited capability.

AAD-Backed Microsoft Accounts

A Microsoft Account that is backed by Azure Active Directory (AAD), cannot be used unless everyone on the student's classroom team also has AAD-backed accounts. In other words, an Azure DevOps Services account cannot contain a mix of AAD-backed MAs and regular/personal MAs. It is possible to create/associate a new Microsoft Account with your AAD-backed account, with similar passwords for the sake of using an existing Visual Studio subscription. The signup process is similar to the above steps for first-time Microsoft Account creation. If this is the plan, everyone on the classroom team should to use their personal Microsoft Accounts, rather than their work one, when doing the hands-on activities. For more information, view this [FAQ](#).

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Appendix: Azure Accounts and Subscriptions

This course requires an Azure account with an active subscription. As these accounts typically require extra validation and financial details, these services should be provisioned ahead of time by the trainer, the training company, or the group sponsoring the class.

If Azure *Free* Accounts will be used, keep in mind that the Microsoft Account must not have been used to create a trial account before. Also, free/promotional subscriptions can have time/credit limits. For more information, visit <http://bit.ly/2wnXSHa>.

Important: After class is over, remove any resources created during class so as not to incur ongoing expense.

Appendix: Installing Visual Studio 2019

You can install any edition of Visual Studio 2019, including trial edition.

1. Download and run the **Visual Studio 2019** installer.

Unless otherwise directed, you should download the *most recent* version/update of Visual Studio. This is done automatically when you download from here: <https://www.visualstudio.com/downloads>

2. Ensure the following **Workloads** are selected at a minimum:

- **ASP.NET and web development** (include **Architecture and analysis tools**)
- **Azure development**
- **.NET desktop development**
- **Data storage and processing**

3. Ensure the following **Individual components** are selected at a minimum:

Cloud, database, and server	Data sources for SQL Server support, IIS Express, SQL Server Data Tools, SQL Server Express 2016 LocalDB
Code tools	Azure DevOps Office Integration, Class Designer, Code Clone, Code Map, Developer Analytics tools, DGML editor, Git for Windows, Live Dependency Validation
Debugging and testing	.NET profiling tools
Development activities	ASP.NET MVC 4

Some of the above individual components may already be selected based on the workloads you picked. The above workloads and components will require > 10 gb of disk space and can take several minutes to install.

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Appendix: Pre-provisioning Azure DevOps Services Organization

This course will have students creating and using an Azure DevOps Services organization during class. Azure DevOps Services is free for teams of five or fewer users. Teams formed during class that have more than five students can use Azure DevOps Services effectively, so long as ...

- The extra student(s) have a Visual Studio subscription (and are using that Microsoft Account)
- The extra student(s) don't mind being a [stakeholder](#)
- The extra student(s) don't mind going without using Azure DevOps (and pairing with another instead)

As an option for speeding up class, the instructor could create generically-named Azure DevOps Services organizations ahead of time, and even add the student Microsoft Accounts (if they are known ahead of time) as team members of those accounts. Example: <https://dev.azure.com/awesometraining>, etc.

Requesting Free Microsoft-Hosted CI/CD Pipeline Agent

In the Spring of 2021 Microsoft changed their process of granting free, hosted pipeline minutes for building and testing software for newly-created Azure DevOps Services organizations. This means that when a new organization is created, it may not be automatically granted the free tier of 1800 pipeline minutes.

For classes that use Azure Pipelines, the workaround is for a student or training coordinator to create one or more Azure DevOps Services organizations *ahead of time* and then complete [this form](#) to request the parallelism grant. For more information, you can read this [blog post](#) and/or check with your instructor.

Important: Since it takes 2-3 business days to complete the process, don't do this on the first day of class.