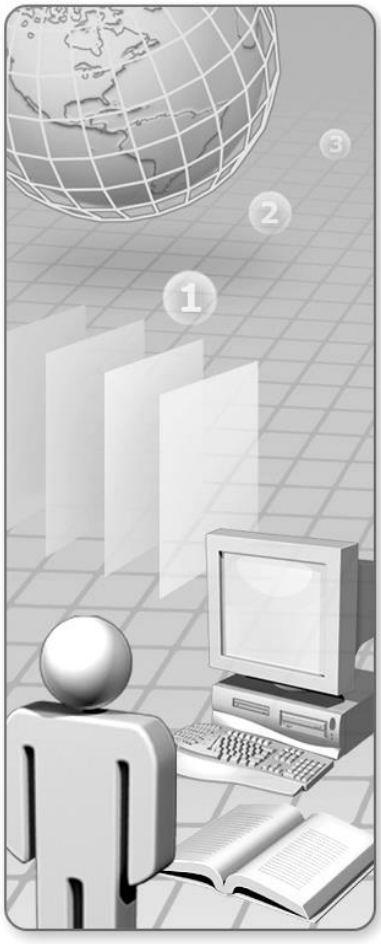
Microsoft

20486D: Developing ASP.NET Core MVC Web Applications

Classroom Setup Guide

Contents



Template v2.0

Product Number: 20486D

Introduction – No VM courseware

This course's lab experience was designed to run on the student's own PCs. The course is not shipped with a dedicated virtual machine. Students should install the required software specified below on their PCs. Training centers interested in providing the development environment for their enrolled students should follow the installation steps given here for each classroom PC.

Microsoft Labs Online

Microsoft Labs Online (online or hosted labs) are available for this and other Microsoft Official Courseware (MOC) courses. This provides an alternative to the lab setup and configuration that is outlined in this document, where the course virtual machines are accessed on Microsoft Learning's hosted lab platform, rather than on physical local machines.

Requirement for accessing hosted labs

Hosted labs still require that each student have a host computer to access the course lab environment, but the host computer does not need to meet the same specifications as when the virtual machines are running locally.

The general requirements for student machines are as follows:

- A valid operating system such as Windows 7 or newer
- Microsoft Edge or another supported web browser
- Internet access

You should refer to your individual hosting provider for more specific details.

In addition, there may be some variations in steps for labs that are run in a hosted environment as opposed to a local environment. Details of any variations in lab steps can be found in the Lab Notes on the hosted lab platform.

If you are using hosted labs instead of on-premises labs, become familiar with how to access and configure the labs. Ensure that you are ready to demonstrate their use to students when starting the class, and that everything is in place for students to have a smooth experience.

You can purchase Microsoft Labs Online for use during course delivery at the same time you order the course materials.

Digital Courseware

If you are using digital courseware via the Skillpipe reader from Arvato, if the course contains a "boot to vhd" or "native boot" scenario in some or all of the labs, students will not be able to view the online courseware content and lab steps in the Skillpipe reader while their host machine is offline. In this particular scenario, there are available options:

1. Have two network interface cards (NICs) in the host machines.
2. Print out Lab steps for the particular module.
3. Ask student who have their own devices to bring them to the class.
4. Configure two virtual machines prior to the class to allow access to the content offline.

Depending on your particular situation, consider implementing one of the above options. Further details and considerations for these workarounds and options are available on the Born To Learn website at https://borntolearn.mslearn.net/, and have also been sent out via partner and MCT newsletters.

Important: Additional virtual machine configuration may be required. Therefore, you should allow enough time to assess your situation and make appropriate decisions.

Microsoft Learning Azure Pass

Some demonstrations and labs in this course require access to Microsoft Azure. As such you need to request Microsoft Learning Azure passes for you and your students. Once students receive the Microsoft Learning Azure passcodes, they then need to register and activate their pass prior to the class starting.

Note: You should request the Microsoft Learning Azure passes at least two weeks prior to the class to allow sufficient time for their arrival.

Details of how to acquire Microsoft Learning Azure passes for your class, along with pass functionality are available at http://aka.ms/mocazurepass.

Students should activate their Microsoft Learning Azure Passes prior to the start of class by going to http://www.microsoftazurepass.com/learning and following the outlined steps.

While using publicly available trial subscriptions or other types of passes is possible with the course labs, the labs have not been tested with every available pass type, so variations in functionality, while unlikely, are possible due to

potential Azure subscription limitations. The scripts used in the labs will also delete any existing services or components present in Microsoft Azure under the subscription that you use. As such, using the Microsoft Learning Azure Pass will provide a level of standardization and help prevent any inadvertent removal or interference with existing Microsoft Azure infrastructure.

Setup Overview

The host computers must be set up with Windows 10 Professional or Windows 10 Enterprise and must be running on 64-bit hardware.

Classroom Requirements

This learning product requires a classroom with a minimum of one computer for the instructor and one for each student. Before class begins, use the following information and instructions to install and configure all computers.

Hardware

The classroom computers require the following hardware and software configuration.

Hardware Level 6

- Processor: Intel Virtualization Technology (Intel VT) or AMD Virtualization (AMD-V)
- Hard Disk: Dual 120 GB hard disks 7200 RM SATA or better (Striped)
- RAM: 4 GB expandable to 8GB or higher
- DVD/CD: DVD drive
- Network adapter
- Video Adapter/Monitor: 17-inch Super VGA (SVGA)
- Microsoft Mouse or compatible pointing device
- Sound card with amplified speakers

In addition, the instructor computer must be connected to a projection display device that supports SVGA 1024 x 768 pixels, 16-bit colors.

Note: To determine what features your processor supports, download Coreinfo from http://aka.ms/coreinfo

Software

Please note that, unless otherwise indicated, this software is not included in the Trainer Materials disc. This learning product was developed and tested on supported Microsoft software, which is required for the classroom computers.

Also required, but not included in the Training Materials: Microsoft Office PowerPoint® 2016 (instructor computer only) and Visio Professional 2016 (not mandatory).

Classroom Configuration

Estimated Time to Set up the Classroom: 60 Minutes

Instructor and Student Computer Checklist

- ☐ 1. Install Microsoft Visual Studio 2017 Community Edition
- ☐ 2. Install Microsoft SQL Server 2016 Express Edition
- ☐ 3. Get Allfiles and the associated lab and demos documentation and instructions
- ☐ 4. Get the Microsoft PowerPoint slide deck
- ☐ 5. Install Node.js

Instructor and Student Computer Setup

Use the instructions in the following section to set up the classroom manually.

1. Install Visual Studio 2017 Community Edition

In this task, you will install the Visual Studio 2017 Community Edition software on the machine.

1. Go to https://www.visualstudio.com/downloads/ and under Visual Studio Community 2017, click **Free download**.
2. Make sure that the downloaded Visual Studio Community version is **15.5.6** or later.
3. Double-click the downloaded .exe file and then on the **User Account Control** dialog box, click **Yes**.
4. On the Visual Studio dialog box, click **Continue**.
5. On the **Workloads** page, under **Web & Cloud (7)**, select **ASP.NET and web development**.
6. On the **Workloads** page, under **Windows (3)**, select **.NET desktop development**.
7. On the summary pane, select the following checkboxes:
    - .NET Framework 4 – 4.6 development tools
    - Blend for Visual Studio
    - Entity Framework 6 tools
    - .NET profiling tools
    - Just-In-Time debugger
    - .NET Core 2.0 development tools
    - Windows Communication Foundation
    - SQL Server Express 2016 LocalDB
8. On the **Workloads** page, under **Web & Cloud (7)**, select **Azure development** and on the summary pane, select the following check box:
    - Azure Resource Manager tools
9. Click **individual components** and select the check boxes under **Class Designer**.
10. Click **Install**.
11. If a **Reboot required** dialog box appears, click **Restart**.
12. After the system restarts, open **Visual Studio 2017**.
13. On the Visual Studio **Welcome** page, click **Not now, maybe later.**
14. On the **Start with a familiar environment** page, select a theme of your choice, and then click **Start Visual Studio**.

    Click **Start** and, if necessary, click **All Apps**, scroll down, right-click the **Visual Studio 2017** tile, and then select **Pin to Start**.

2. Install SQL Server 2017 Express Edition

In this task you will install SQL Server 2017 Express Edition.

1. Download SQL Server 2017 Express from this location: https://www.microsoft.com/en-us/sql-server/sql-server-editions-express.

2. After the download is complete, click **Run**.
3. If you are asked to provide permission, click **Yes**.
4. On the **Select an installation type** page, select **Basic**.
5. On the **Microsoft SQL Server 2017 License Terms** page, click **Accept**.
6. On the **Specify SQL Server install location** page, click **Install**.
7. On the **Installation has completed successfully!** page, click **Install SSMS**.
8. If the **How do you want to open this?** page appears, select **Microsoft Edge**, and then click **OK**.
9. After the page loads, click **Download SQL Server Management Studio 17.4**.

   NOTE: Verify whether you have the older 17.x version installed. If you have older versions installed, to download the patch, click **Download SQL Server Management Studio 17.4 Upgrade Package (upgrades 17.x to 17.4)**.
10. After the download is complete, click **Run**.
11. On the **user account control** dialog box, click **Yes**.
    - If you are prompted to restart the system, click **Restart**.
    - After the computer restarts, continue from Step7.
12. On the **Welcome** screen, click **Install**.
13. On the **Restart required in order to complete setup** page, click **Restart**.
14. Open a command prompt, and run the following command **c:/> SqlLocalDb info**. If the output doesn't include **MSSQLLocalDB**, create the instance by running the following command **SqlLocalDb create "MSSQLLocalDB"**.

3. Get Allfiles and the associated instructions from GitHub

The source files (Allfiles directory) for this course are hosted and maintained in GitHub.

1. In your browser, type **https://github.com/MicrosoftLearning/20486-DevelopingASPNETMVCWebApplications** in the address bar.
2. Expand **Clone or Download**, and then click **Download ZIP**.
3. After the download is complete, navigate to your **Downloads** folder, right-click the downloaded archive, and then click **Extract All...**.
4. In the **Extract Compressed (Zipped) Folders** window, delete the default path from the textbox, type **c:**, and then click **Extract**.
5. The downloaded folder includes all the relevant documentation:
   a. Lab Manual. A set of tasks for each module.
   b. LAK. A set of step-by-step instructions for performing the labs.

   c. DEMO. A set of instructions for executing the included demos.
   d. Allfiles. A directory which contains all the needed source code.
6. Once the extraction is complete, navigate to **C:\ 20486-DevelopingASPNETMVCWebApplications-master**, highlight the **Allfiles** and **Instructions** folders, right-click any of them, and then click **Copy**.
7. Navigate to **C:** and paste the two folders directly under C:\
8. After completing the above steps, you should have the **Allfiles** and **Instructions** folders under **C:**. The rest of the files that were downloaded as a part of the repository from GitHub are not needed.

4. Get the PowerPoint slide deck – instructor machine only

In this task, you will download the PowerPoint slide deck for this course.

1. Go to the MCT Download Center at: https://learningdownloadcenter.microsoft.com.
2. Sign in with your MCT credentials.
3. In the search box, type **20486**, and then press **Enter**.
4. In the search results, expand **20486D: Part 1 - Trainer Files - Developing ASP.NET MVC 5 Web Applications**.
5. Locate the PowerPoint resource in the list, select the checkbox next to it, and then click **Add to Download Queue**.
6. To download the PowerPoint files, follow the instructions on the webpage.
7. Save the files to the **C:\ 20486-DevelopingASPNETMVCWebApplications** folder, which was created when the GitHub repository was extracted in the previous section.

5. Install Node.js

In this task you will install Node.js.

1. Download Node.js from this location: https://nodejs.org/en
2. After the download is complete, click **Run**.
3. On the **Node.js Setup installation** window, click **install**.
4. After the installation is complete, open a command prompt and run the command **Node -v**. Check if the output includes the latest node version you installed.