DAT217x

Implementing ETL with SSIS

Lab 00 | Setting Up Your Lab Environment

Overview

In this course, you can choose to either install the SQL Server, SQL Server Management Studio, and SQL Server Data Tools for Visual Studio on an Azure Virtual Machine or on your local computer. This document will guide you through this process.

- Installing the software on an **Azure Virtual Machine**
- Installing the software on a **local computer**

Installing the software on an Azure Virtual Machine

You'll need an Azure subscription to complete the labs throughout this course. You may be able to gain access to Azure either through a free trial, a paid subscription, or through one of the following programs: MSDN, DreamSpark, BizSpark. (**Note:** All links on this page open to an exterior website in a new window.) Please explore these options before you start the course to ensure you can complete all the labs and homework.

Getting a Subscription

If you already have an Azure subscription, you can skip this section. Otherwise, follow these steps to create a free trial subscription. You will need to provide a valid credit card number for verification, but you will not be charged for Azure services.

Note: Trial subscriptions grant access only for a limited time. You may want to initiate your free trial when you are ready to begin your first lab assignment. The free trial is not available in all regions.

For more information, visit the Azure free trial FAQ page.

If you already have a Microsoft account that has not already been used to sign up for a free Microsoft Azure trial subscription, you're ready to get started. If not, don't worry—just create a new Microsoft account at https://signup.live.com.

After you've created a Microsoft account, browse to the Azure Free Trial page and click the **Start Free** button. Then follow the instructions to sign up for a free trial subscription to Microsoft Azure. You'll need to sign in with your Microsoft account if you're not already signed in. Then you'll need to:

- Enter your cellphone number and have Microsoft send you a text message to verify your identity
- Enter the verification code sent to you
- Provide valid payment details—don't worry, your credit card won't be charged for any services you use during the trial period, and the account is automatically deactivated at the end of the trial period, unless you expressly request to keep it active.

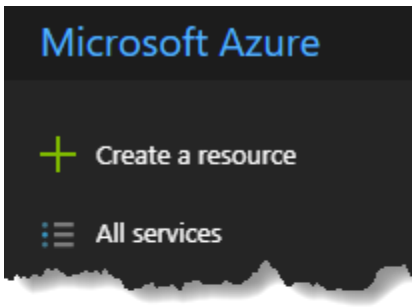
Provisioning an Azure VM

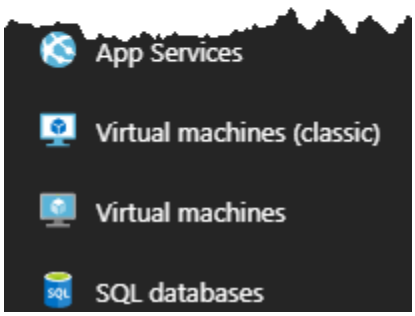
After signing into the Azure Portal by using your Azure subscription, you will provision an Azure VM to support all three labs for this course.

Important: The Azure VM will should be stopped (deallocated) at the end of each lab so that your subscription is not charged (for free trial subscriptions, this will ensure you will have sufficient credits left to complete the labs over the duration of the course).

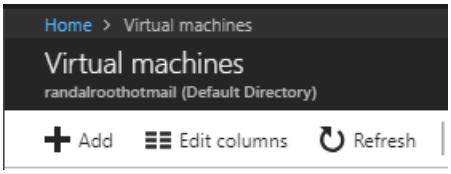
1. Sign in to the Azure Portal by using your subscription.

2. In the left pane, select **Virtual Machines**—do not select **Virtual Machines (Classic)**.



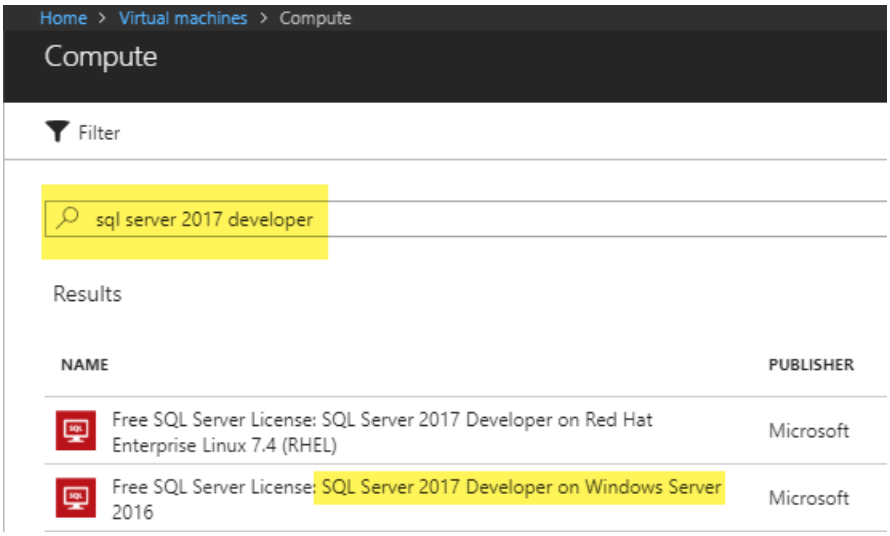


3. In the **Virtual Machines** blade, click **Add**.

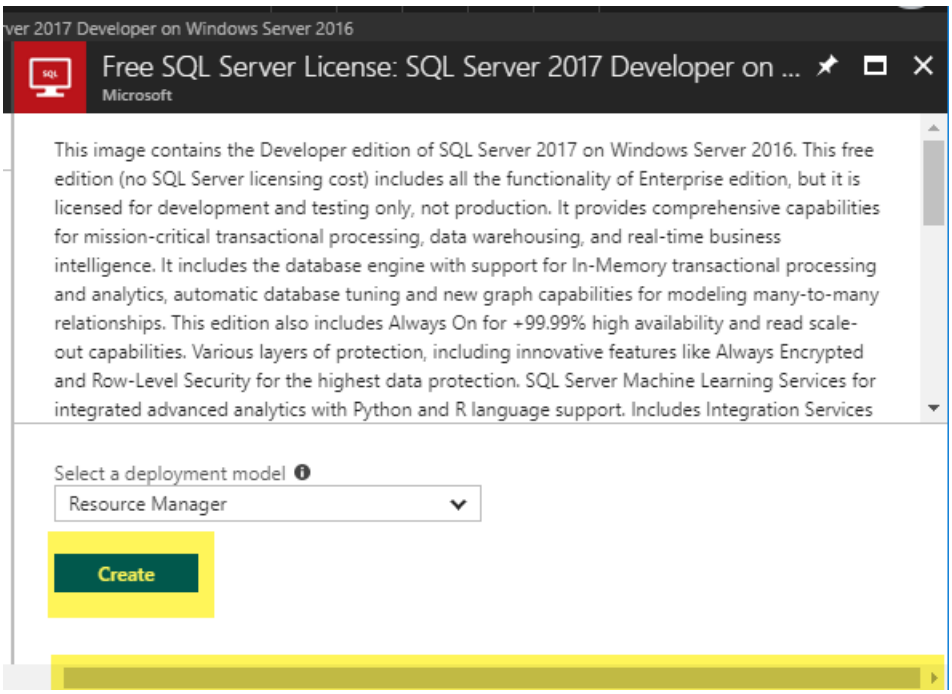


4. In the **Compute** blade, in the search box, enter **SQL Server 2017 Developer**, and then press **Enter**.

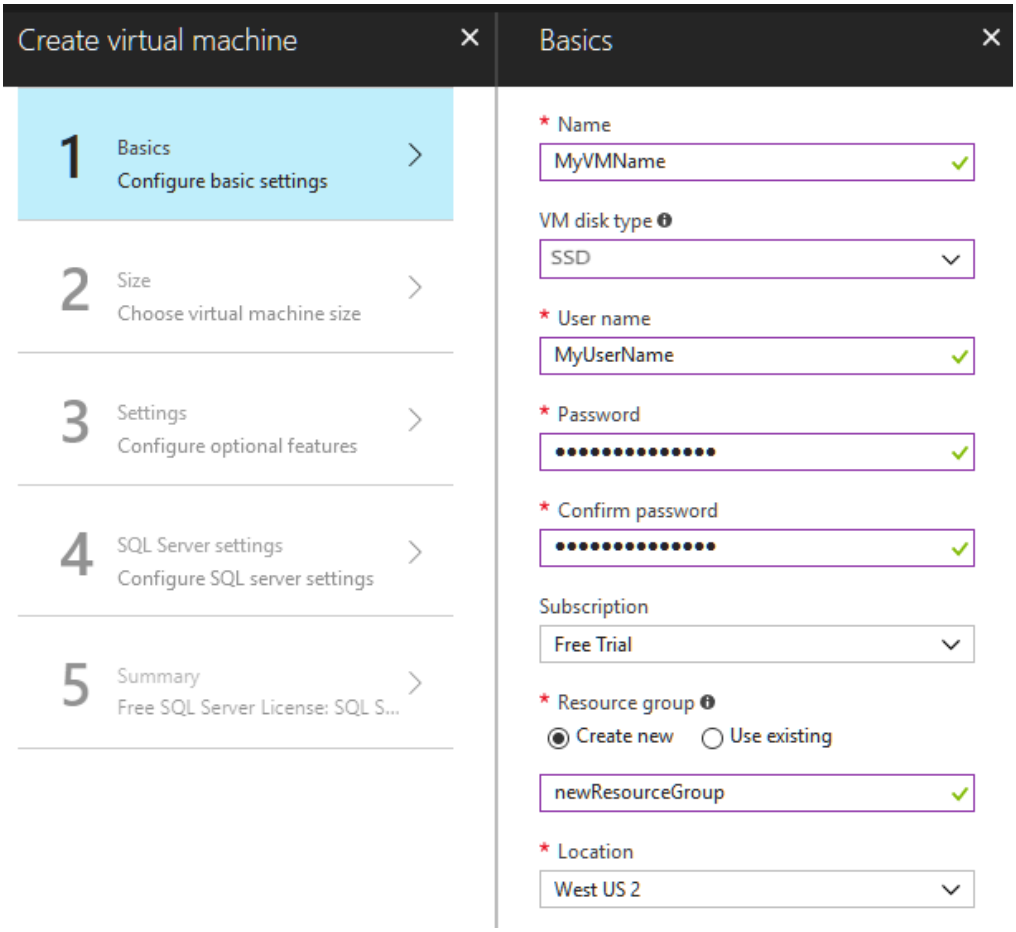
5. Select the **Free SQL Server License: SQL Server 2017 Developer on Windows Server 2016** image.



6. Scroll to the right so see the image blade, review the text content, and then click **Create**.



7. When the the **Create Virtual Machine** blade opens to the **Basics** blade (step 1), enter a name for the virtual machine the **Name** box.



8. In the **User Name** and **Password** boxes, enter appropriate values (this will become the machine administrator account).

Note: Be sure to securely record these credentials, as you will be required to use them to sign in to the VM for each lab over the next three weeks.

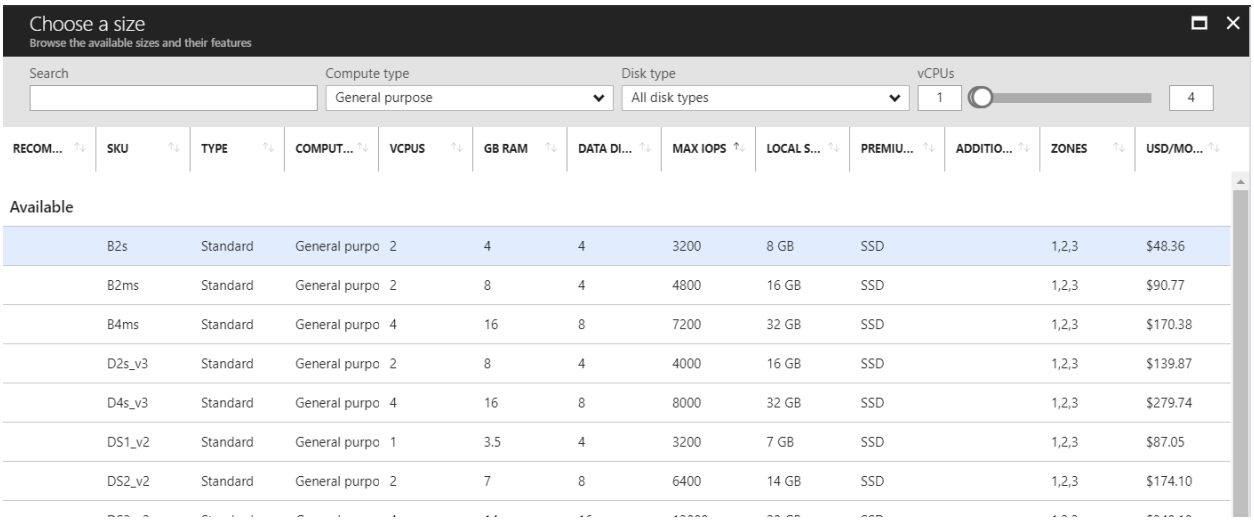
9. In the **Resource Group** box, select **Create new**, and enter a name for your resource group.

10. In the **Location** box, enter a data center that is in close proximity to you.

11. Click **OK** to advance to the next blade.

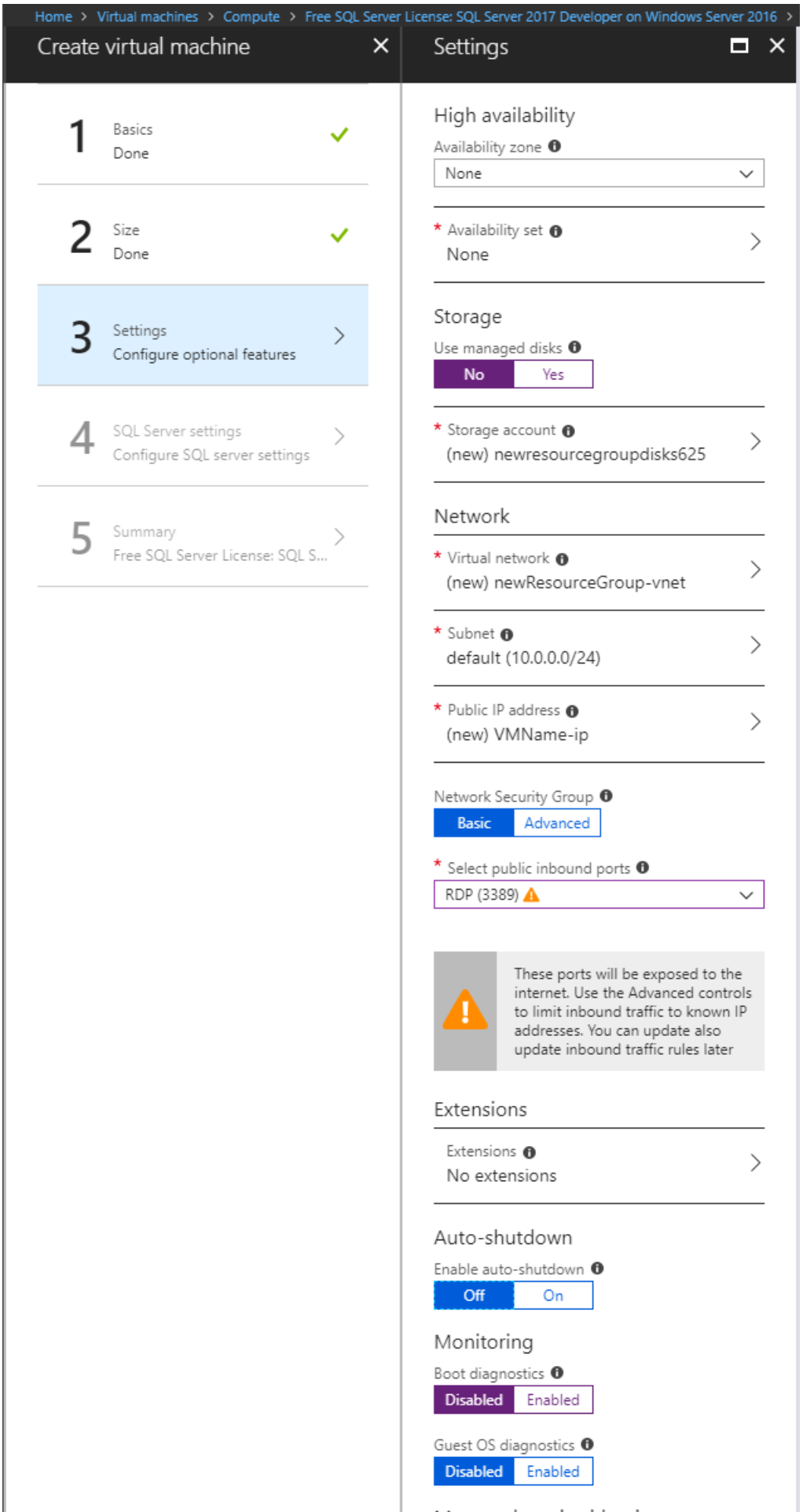
12. In the **Create Virtual Machine** blade, select **Size**.

13. In the **Choose a Size** blade, select from the sizes available to your subscription. Choose that smallest available option with **one or more** virtual processors **(vCPU), eight or more** Gigabytes **(GB)** of disk space.



14. Click **Select** to advance to the next blade.

15. In the **Settings** blade, set the **Storage**, **use managed disk** to No.

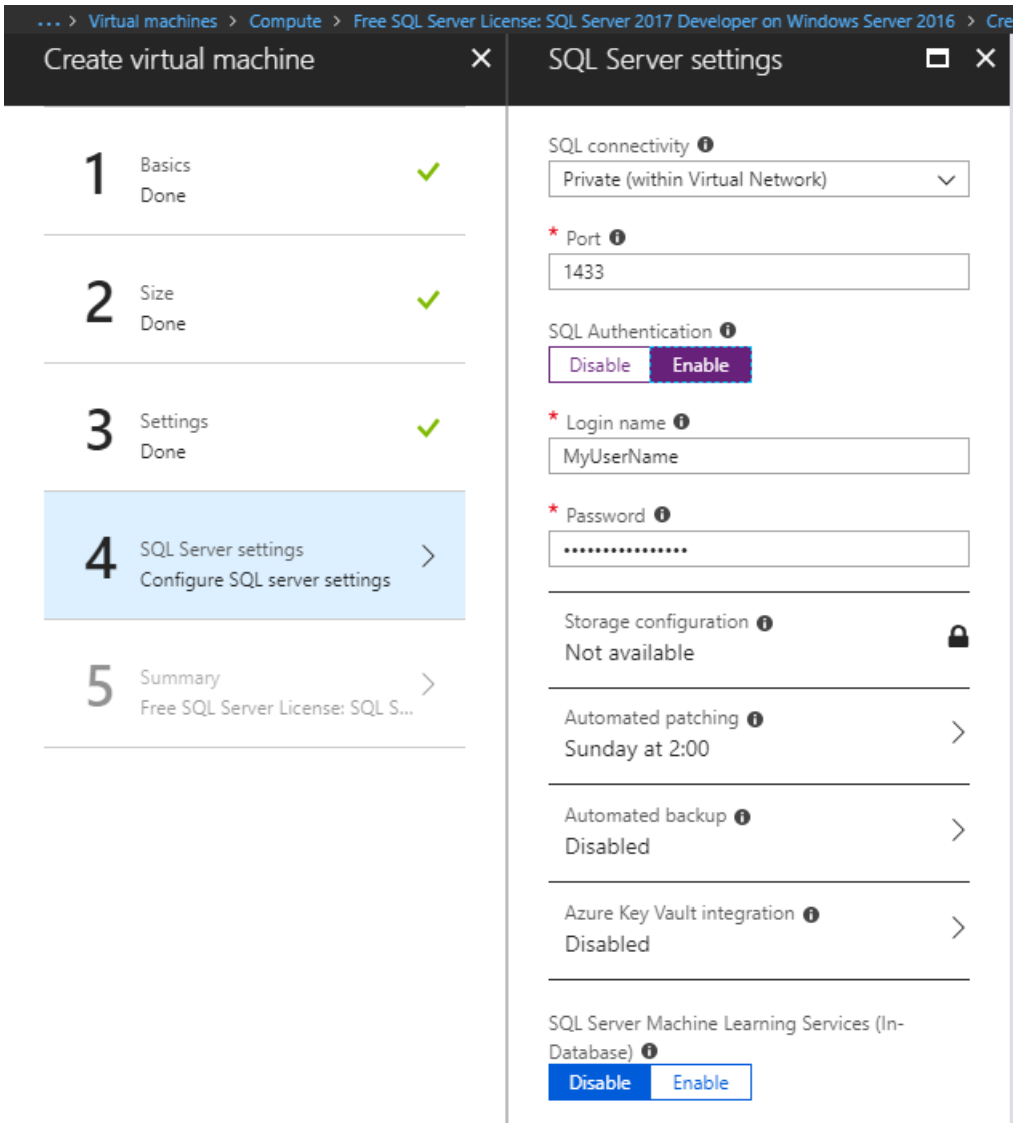

Home > Virtual machines > Compute > Free SQL Server License: SQL Server 2017 Developer on Windows Server 2016 >
Create virtual machine
1 Basics
Done
2 Size
Done
3 Settings
Configure optional features
4 SQL Server settings
Configure SQL server settings
5 Summary
Free SQL Server License: SQL S...
Settings
High availability
Availability zone
None
* Availability set
None
Storage
Use managed disks
No
Yes
* Storage account
(new) newresourcegroupdisks625
Network
* Virtual network
(new) newResourceGroup-vnet
* Subnet
default (10.0.0.0/24)
* Public IP address
(new) VMName-ip
Network Security Group
Basic
Advanced
* Select public inbound ports
RDP (3389)
These ports will be exposed to the internet. Use the Advanced controls to limit inbound traffic to known IP addresses. You can update also update inbound traffic rules later
Extensions
Extensions
No extensions
Auto-shutdown
Enable auto-shutdown
Off
On
Monitoring
Boot diagnostics
Disabled
Enabled
Guest OS diagnostics
Disabled
Enabled

16. Set **Select public inbound ports** to RDP (3389)

17. Set **Monitoring**, **Diagnostics** to disabled.

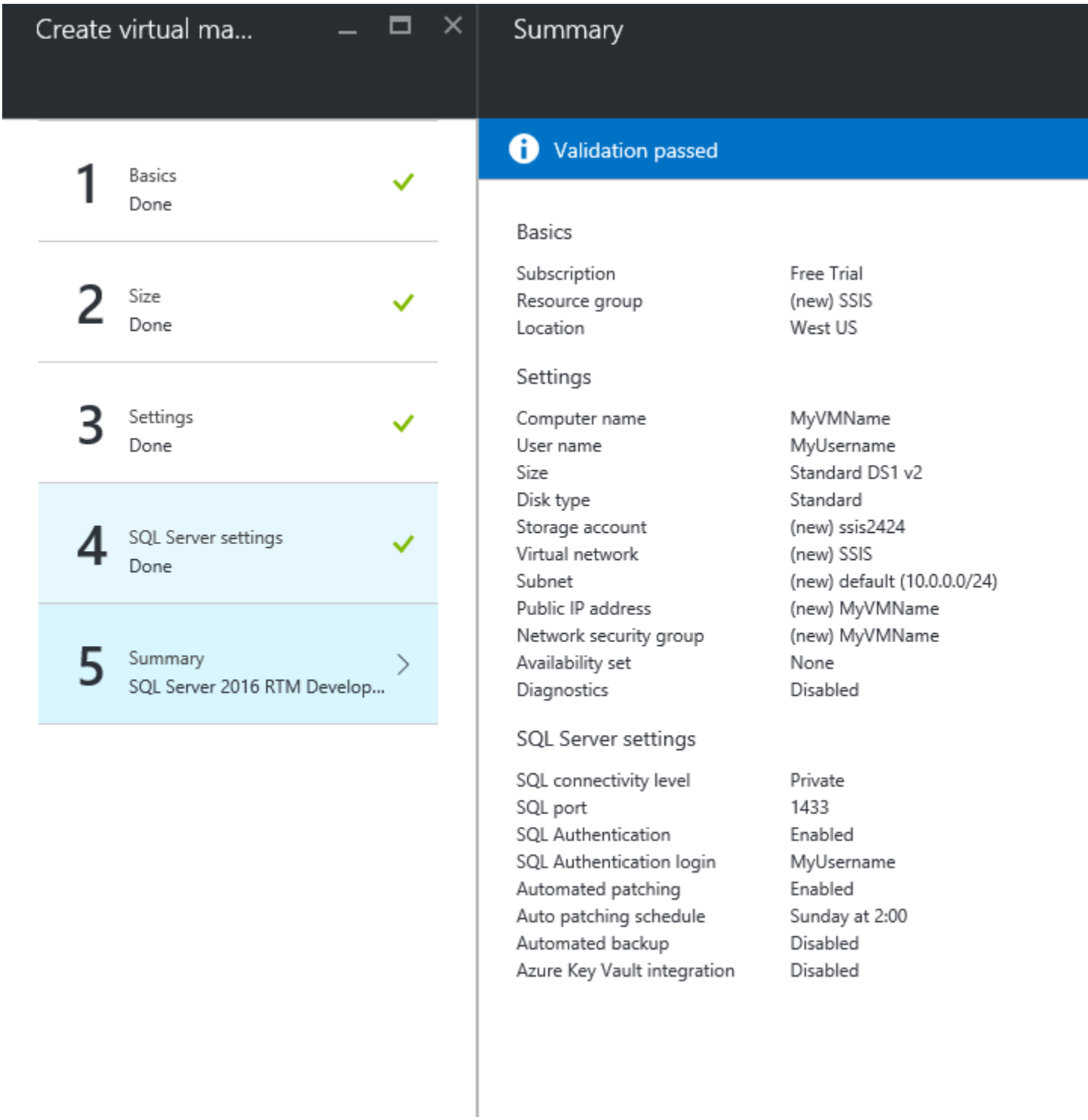
18. Click **OK** to advance to the next blade.

19. In the **Create Virtual Machine** blade, set **SQL Authentication** to Enable.



20. Click **OK** to advance to the next blade.

21. In the **Summary** blade, review the configuration, and then click **Create** to create the VM.



22. On the **Azure Portal Dashboard**, notice the tile providing status of the deployment process.

The deployment usually takes 15-20 minutes to deploy, and this time depends largely on the VM size selected. The VM blade will open when the deployment completes.

You cannot proceed to the next task until the deployment completes.

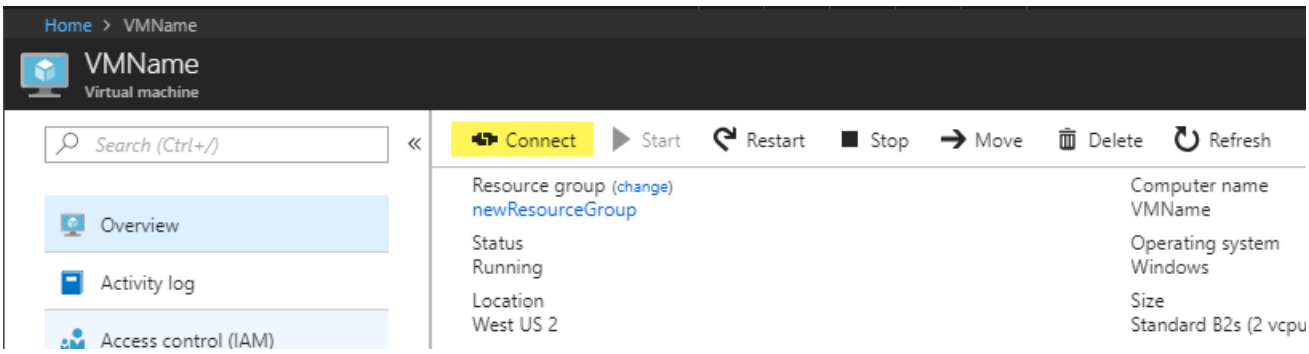
23. Leave the **Azure Portal Dashboard** open.

Connecting to the VM

Once the VM has successfully deployed, you will connect to the VM.

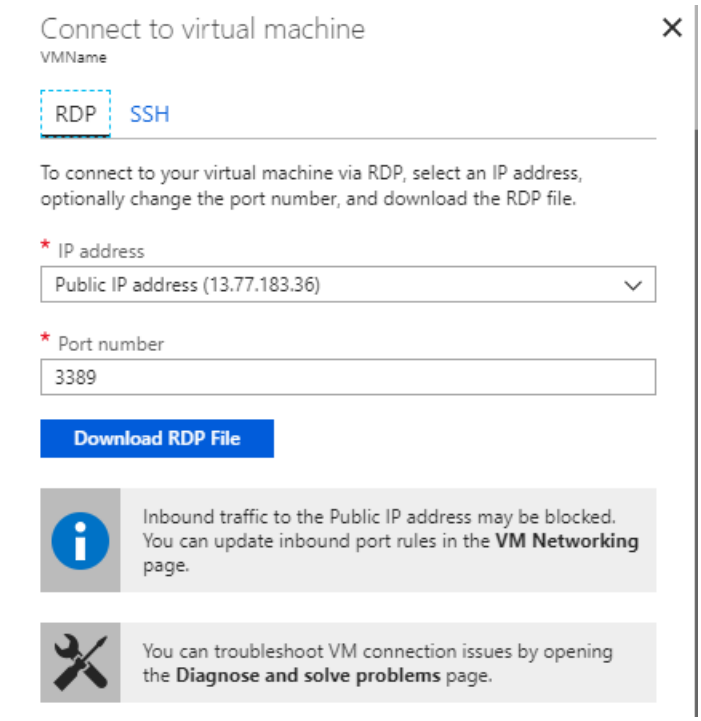
Note: You are charged when the VM status is **Running**, but you are not charged when the VM status is **Stopped (Deallocated).** The labs will include steps to remind you to stop the VM.

1. To connect to the VM, click **Connect**.

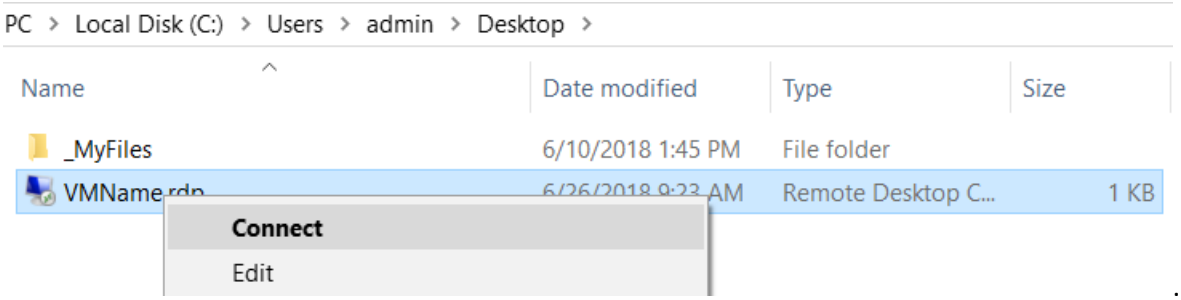


2. In the **Connect to virtual machine dialog**, click **Download RDP File.**

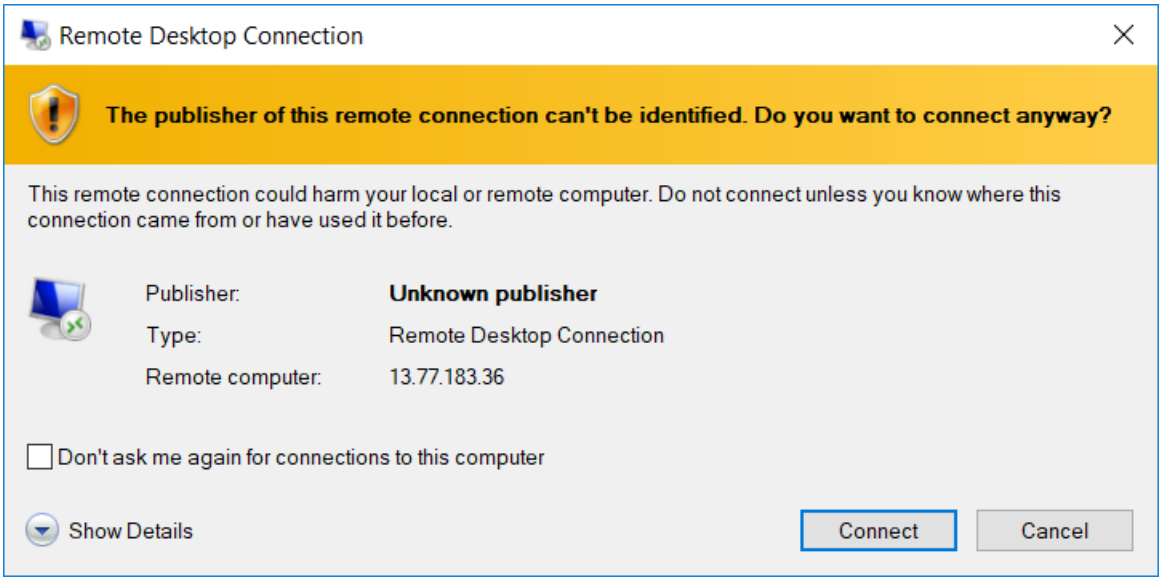
Note: This process will download A Remote Desktop File (.rdp) file to your computer. This file can be used to reconnect to the remote desktop session but note that when you deallocate the VM and later re-start the VM, it will be likely that a different IP address will be assigned.



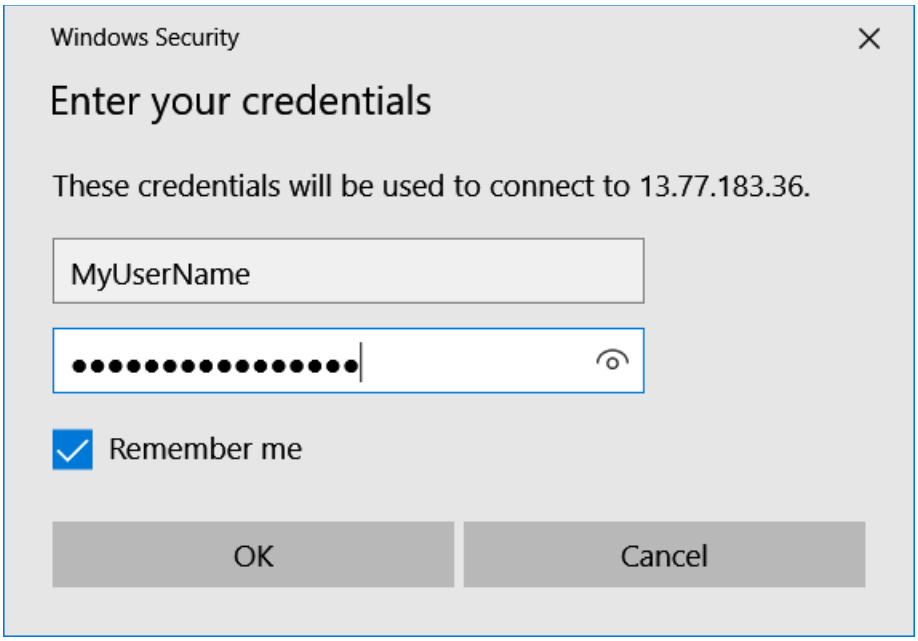
3. Locate the downloaded file, right-click on the file can choose **Connect** from the context menu.



4. If prompted to connect to the unknown publisher, click **Connect**.



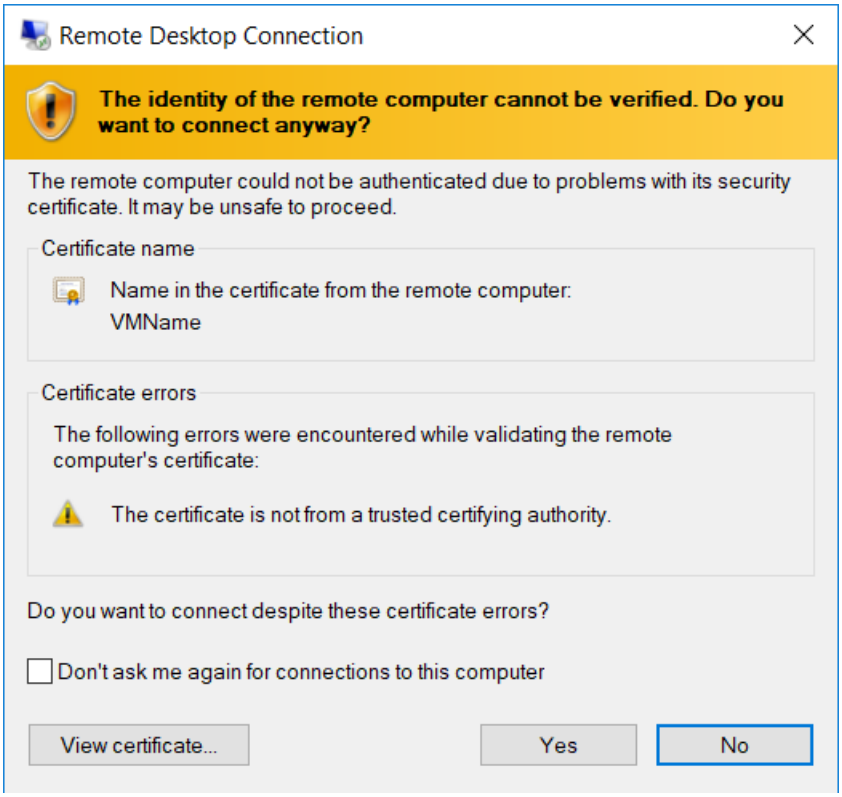
5. In the **Windows Security** dialog window, enter the credentials you created for your VM.



6. Check the **Remember Me** checkbox.

7. Click **OK**.

8. In the **Remote Desktop Connection** dialog window, click **Yes**.



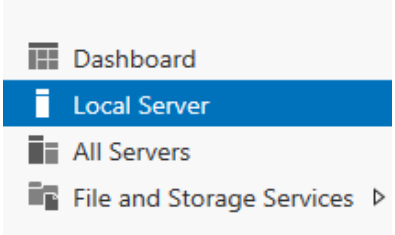
Tip: If you have multiple monitors, maximize the Remote Desktop window inside a single monitor.

Configure the Azure VM Operating System

After you have connected to the VM, you still need to complete several setup tasks.

1. Notice that **Server Manager** has automatically opened.

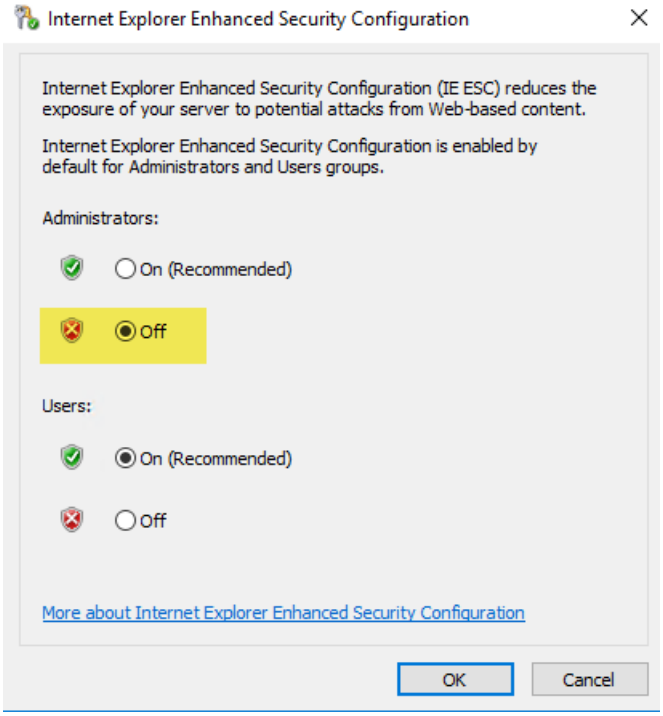
2. In the left pane, select **Local Server**.



3. In the **Properties** pane, locate that the **IE Enhanced Security Configuration**.

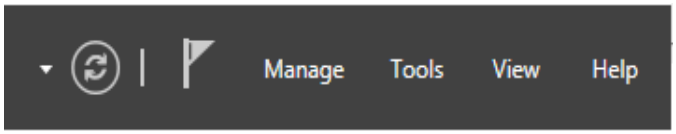
4. Click the **On** setting to open the **Internet Explorer Enhanced Security Configuration** dialog window

5. In the dialog window, for **Administrators**, select the **Off** option.

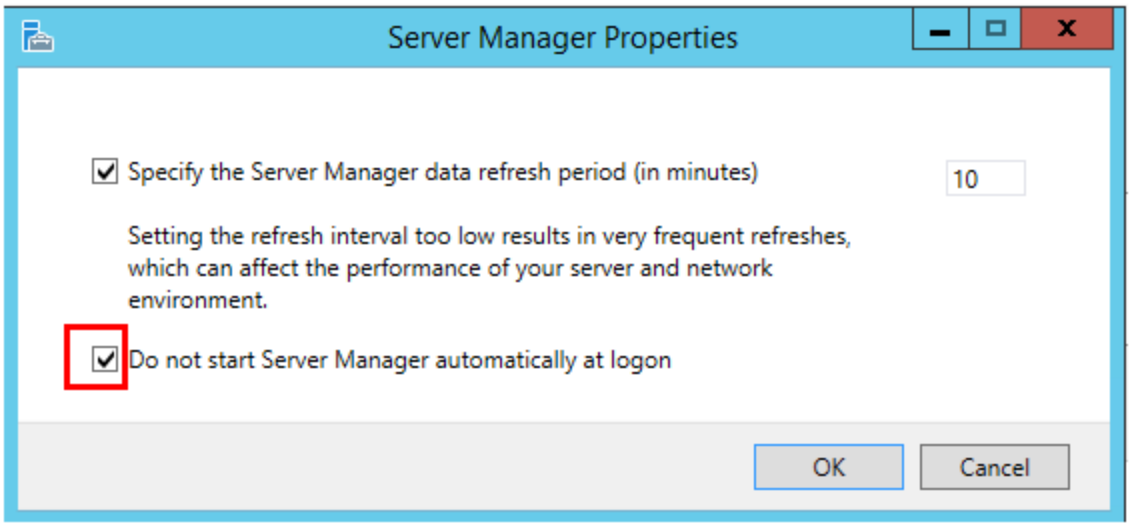


6. Click **OK**.

7. Located at the top-right corner, select **Manage**, and then select **Server Manager Properties**.



8. In the dialog window, check the **Do Not Start Server Manager Automatically at Logon**.



9. Click **OK**.

10. Close the Server Manager window.

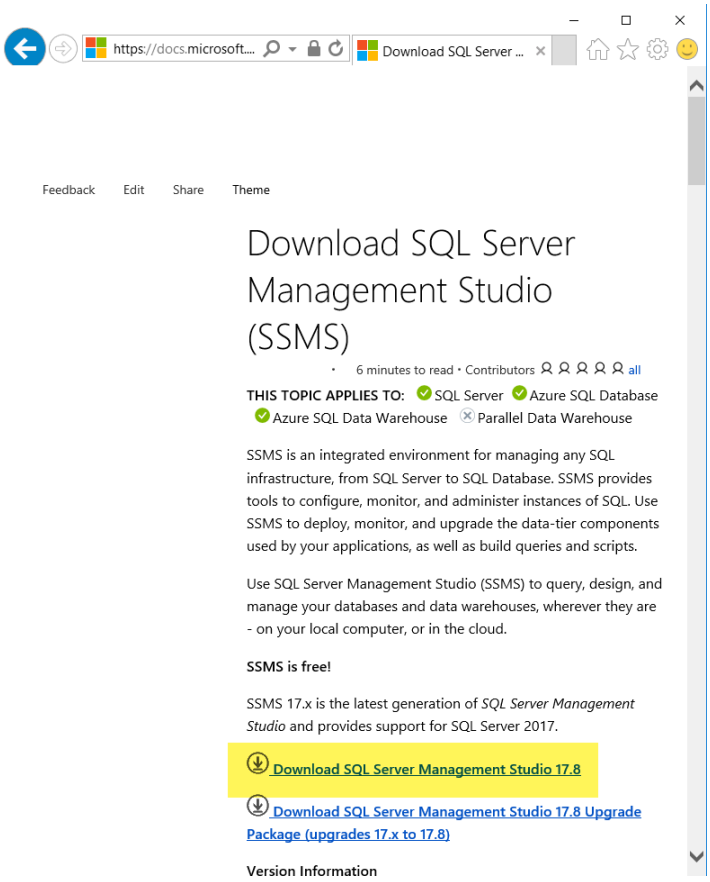
Install SQL Server Management Studio

You need a SQL Code editing tool for this course. We recommend installing SQL Server Management Studio for this task.

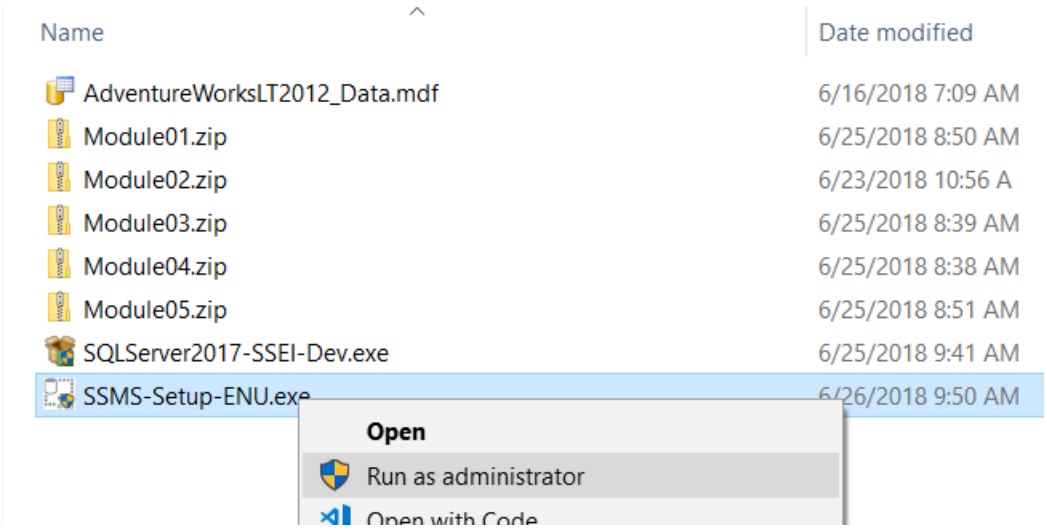
1. Perform an Internet search for **SQL Server Management Studio 2017** and locate the current download site.

https://docs.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms?view=sql-server-2017

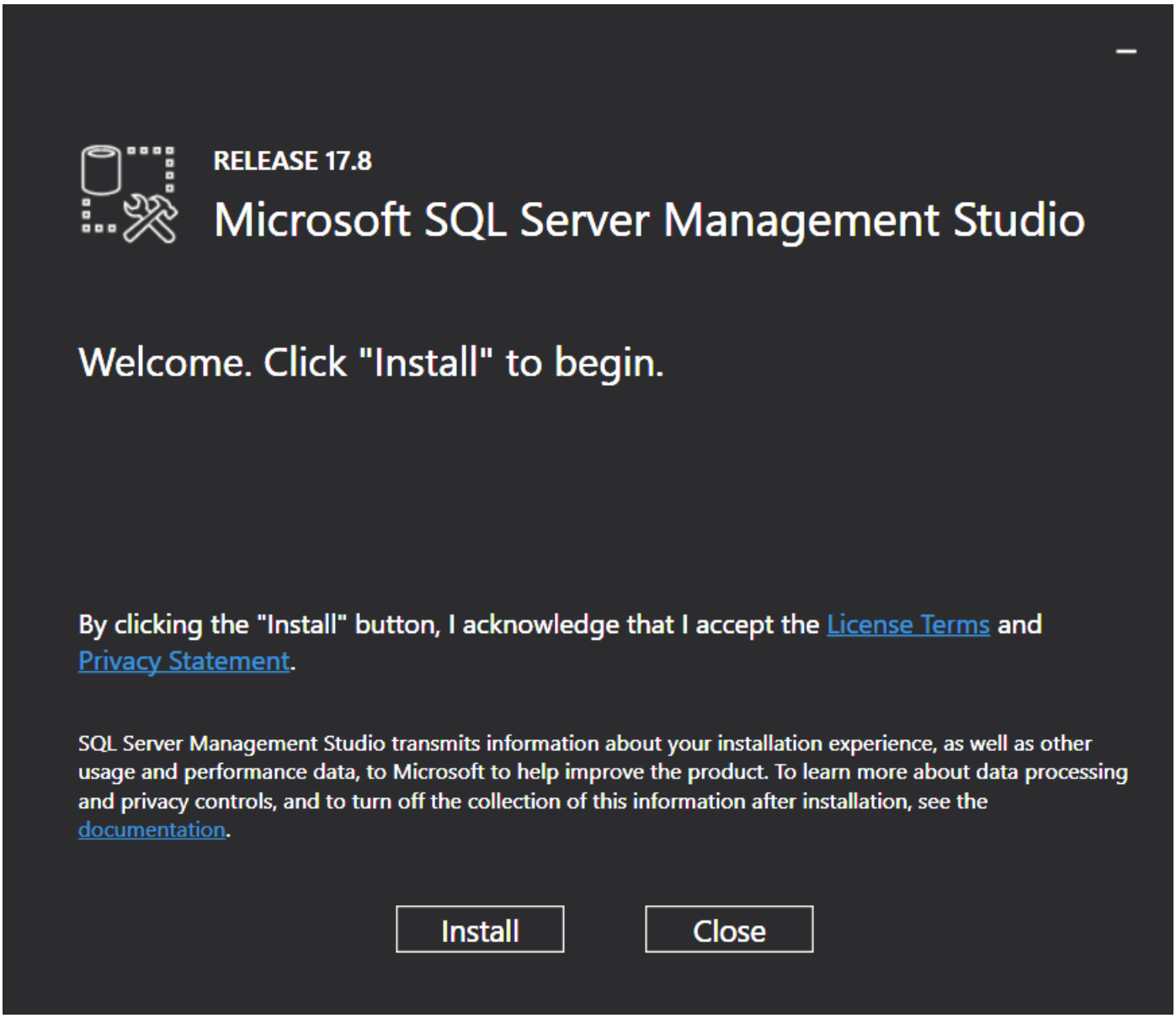
2. Use the **Download** link to download the software.



3. Locate the downloaded file, Right-click on **the SSMS-Setup-ENU.exe,** and select the **Run as administrator** option from the context menu to start the installation.



4. Click the **Install** button and follow the prompts to install the software.



Install SQL Server Data Tools (SSDT)

You need Visual Studio's SQL Server Integration Services development tool for this course. This requires that you install the SQL Server Data Tools (SSDT) for Visual Studio.

1. Open a browser on you VM.

2. Navigate to the following URL: https://msdn.microsoft.com/en-us/library/mt204009.aspx (This link opens to an external website in a new window.)

Download and install SQL Server Data Tools Studio

06/04/2018 • 4 minutes to read • Contributors all

THIS TOPIC APPLIES TO: SQL Server Azure SQL Database Azure SQL Data Warehouse

SQL Server Data Tools is a modern development tool for building SQL Server relational databases, models, Integration Services (IS) packages, and Reporting Services (RS) reports. With SSDT, you can with the same ease as you would develop an application in Visual Studio.

For most users, SQL Server Data Tools (SSDT) is installed during Visual Studio installation. Installing SS SSDT functionality, so you still need to run the SSDT standalone installer to get AS, IS, and RS tools.

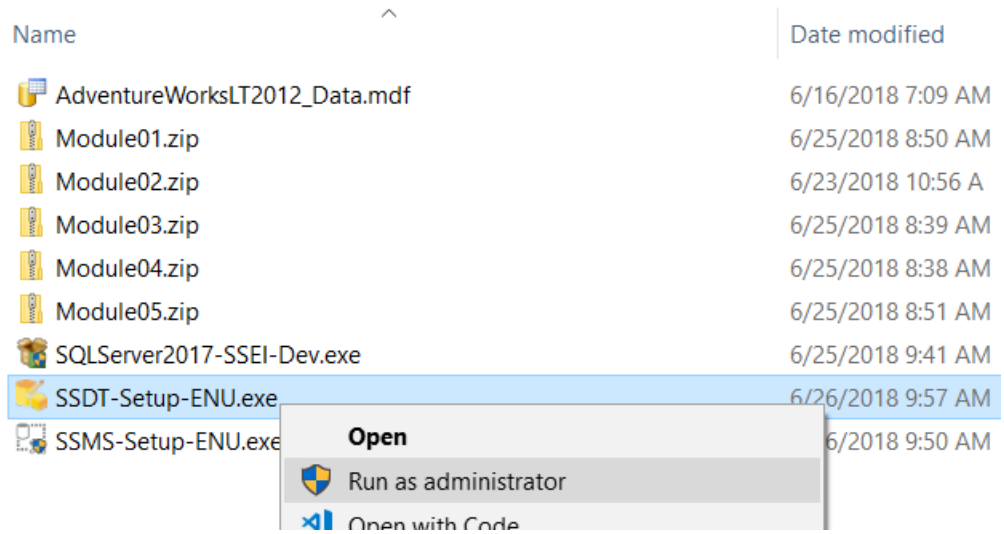
3. Scroll down the page or click the **SSDT standalone installer link**.

4. Select **Download SSDT for Visual Studio 2017**

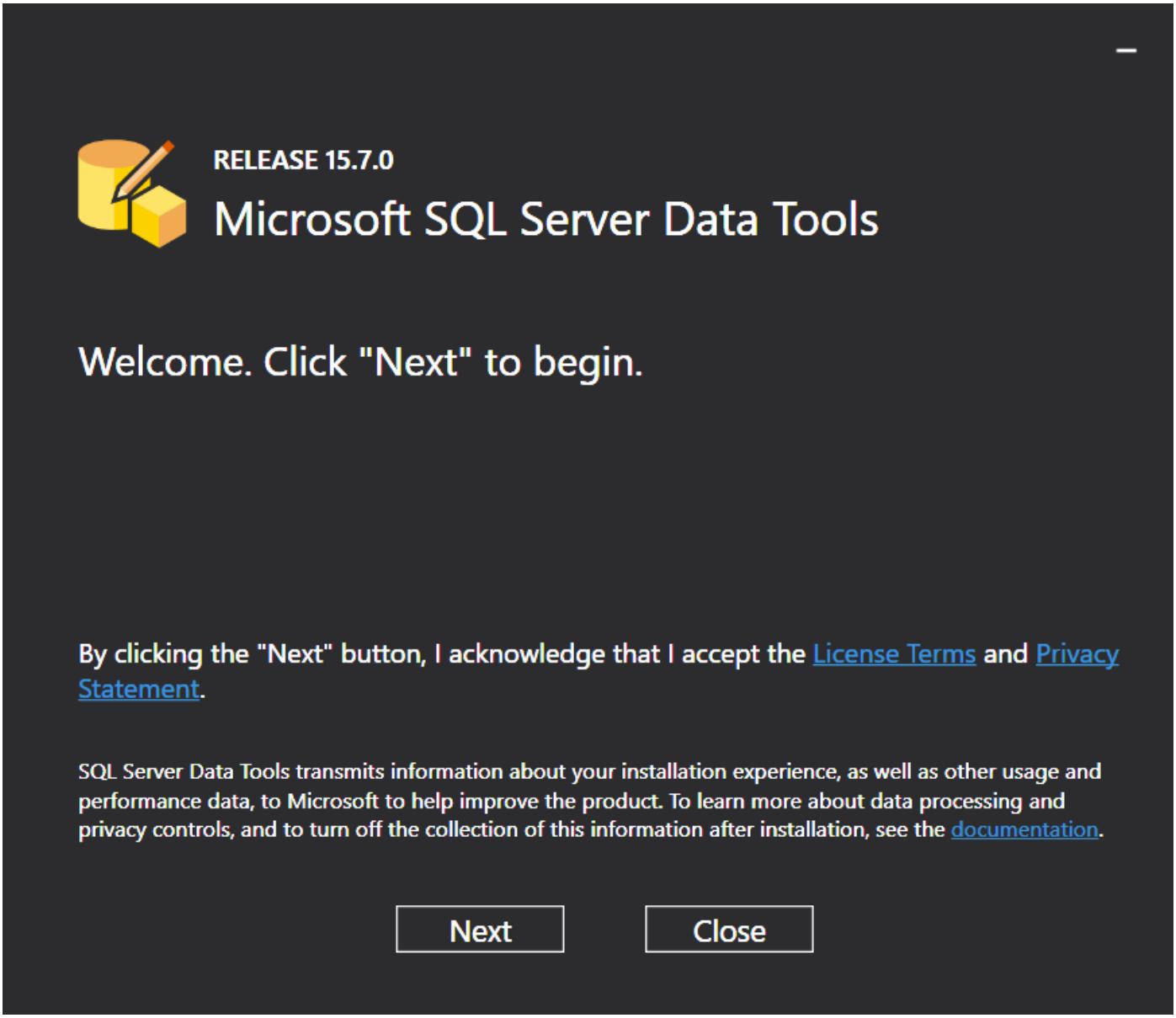
SSDT for VS 2017 (standalone installer)

Download SSDT for Visual Studio 2017 (15.7.0)

5. Locate the downloaded file, Right-click on **the SSMS-Setup-ENU.exe,** and select the **Run as administrator** option from the context menu to start the installation.



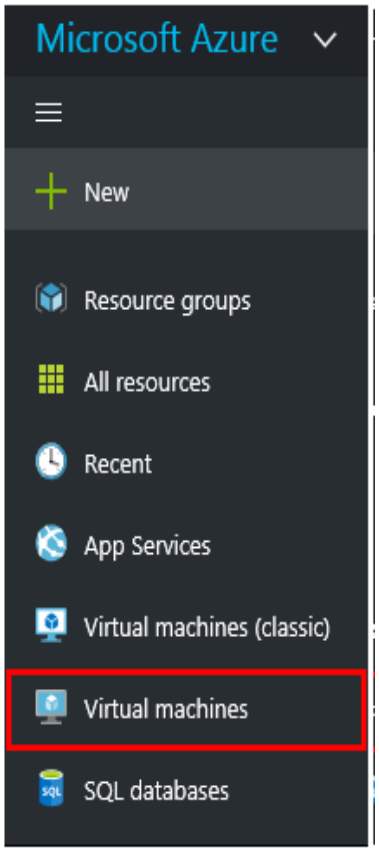
6. Click the **Install** button and follow the prompts to install the software.



IMPORTANT STEP | Deallocating your Machine

You must deallocate you VM after you are done using it to avoid additional charges from your Azure subscription after your free trial period has expired.

1. Return to the **Azure Portal** and select **Virtual Machines**.



2. Right click your **VM** and select **Stop**.

3.In the dialog **Stop this virtual machine**, select **Yes**.

4. In the **Virtual machines blade**, confirm that your VM **status** is stopped.

Installing the software on a local computer

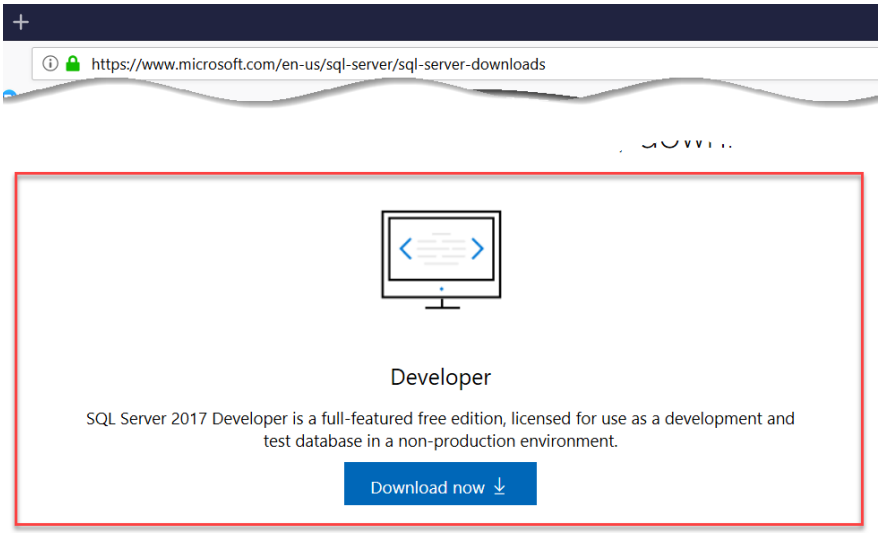
Instead of using an Azure virtual machine you can install SQL Server, SQL Server Management Studio, and the SQL Server Data Tools on your own local computer. Perform the following steps, if you choose to download and install the software on your local PC.

Install the SQL Server Database Engine Software

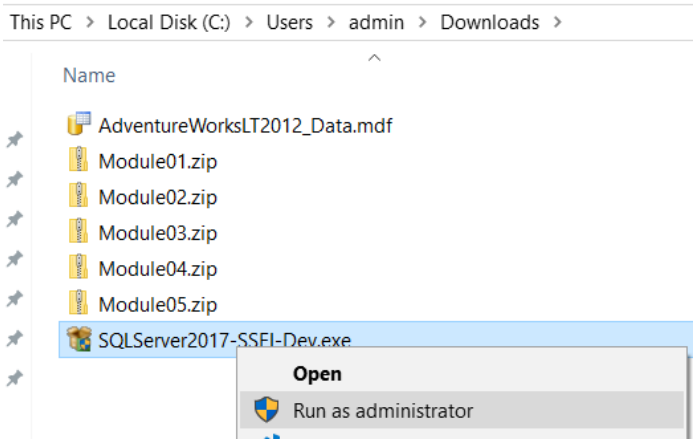
1. Search the internet with the following string “Download SQL Server Developer Edition” and locate the current Microsoft download page.

Note: These instructions are for SQL 2017, but are similar if used with SQL 2016.

For example in June 2018 the page was: https://www.microsoft.com/en-us/sql-server/sql-server-downloads

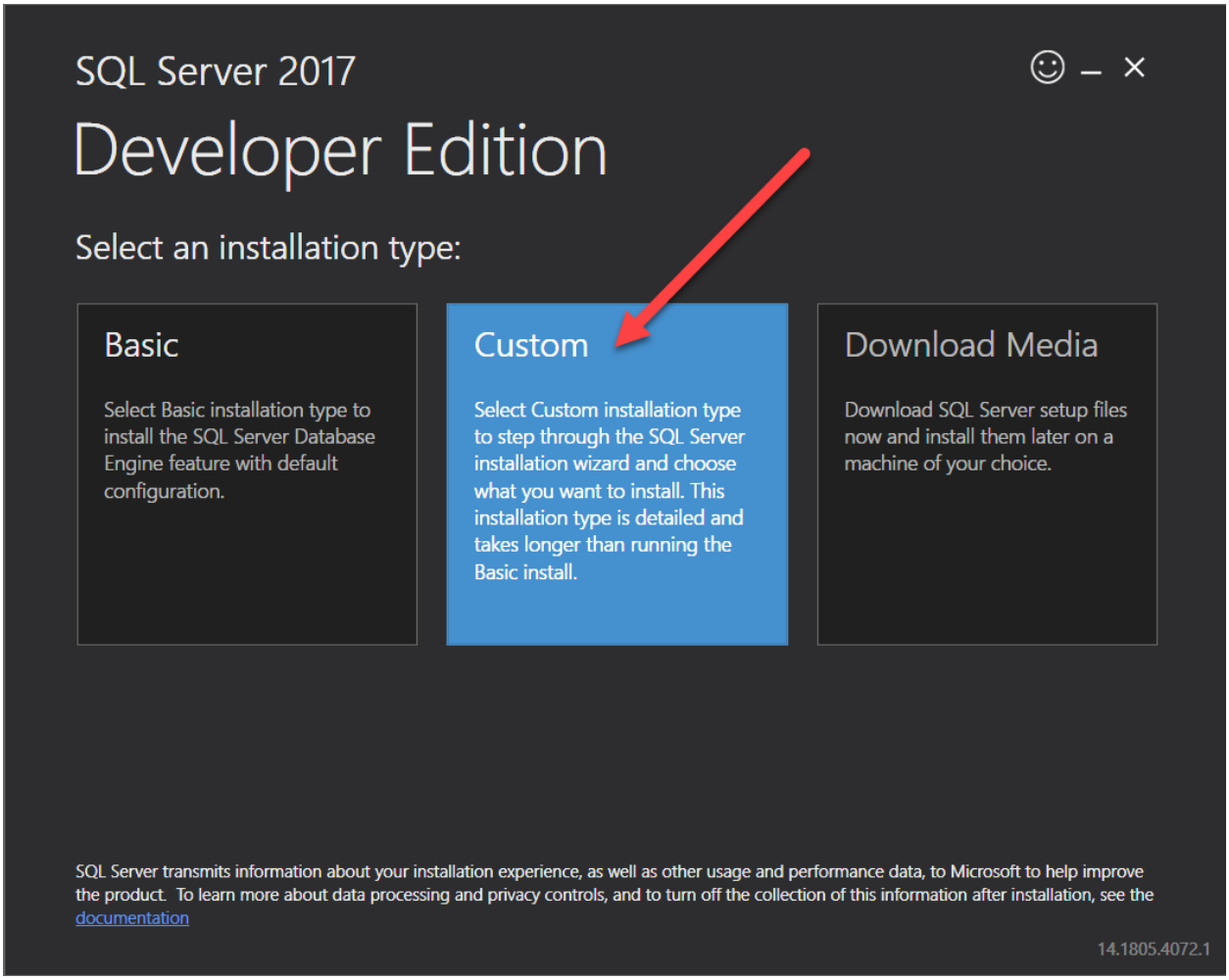


2. Once it is downloaded, locate the installation file and run it as an administrator.

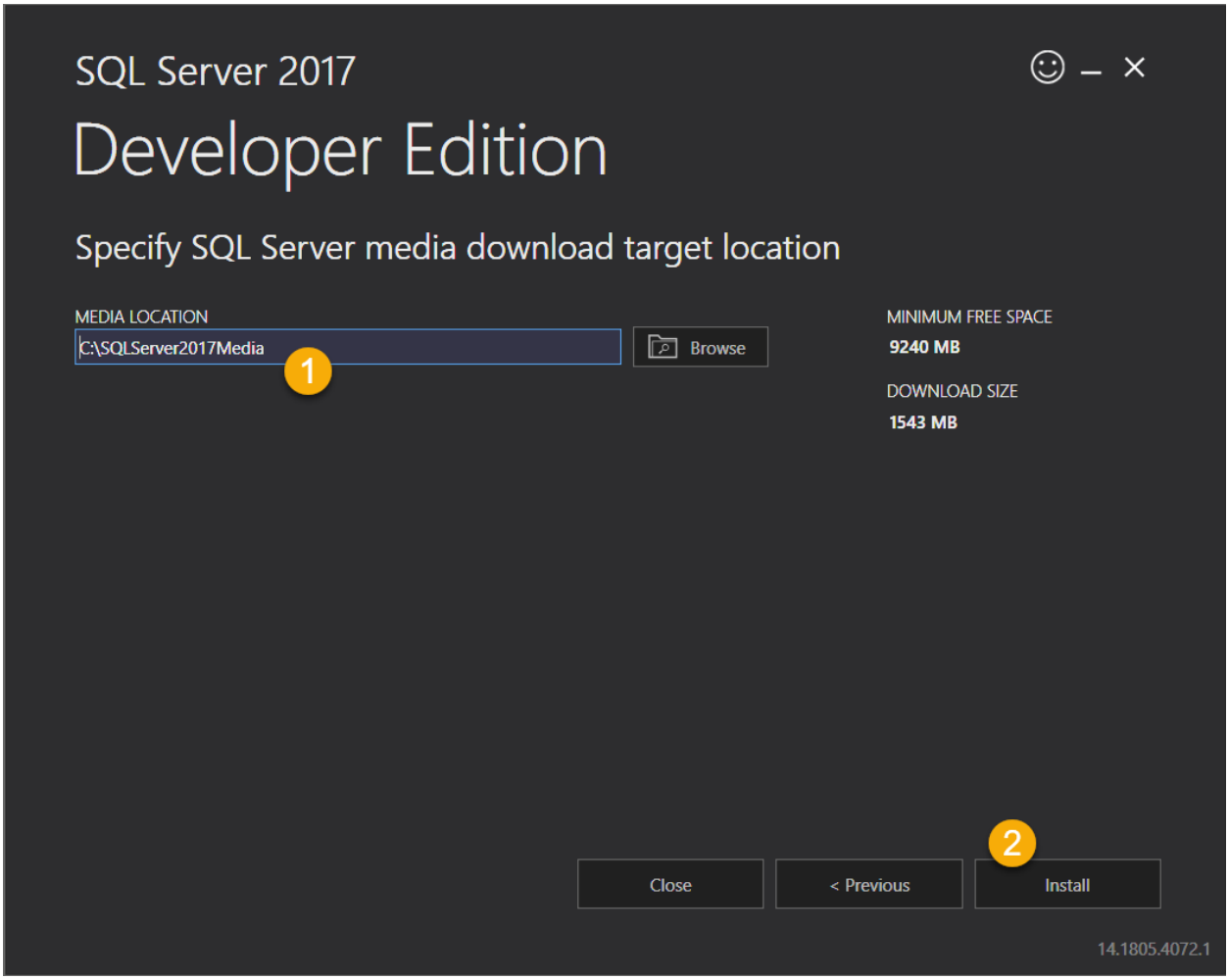


3. Click **OK** on the User Access Control dialog window.

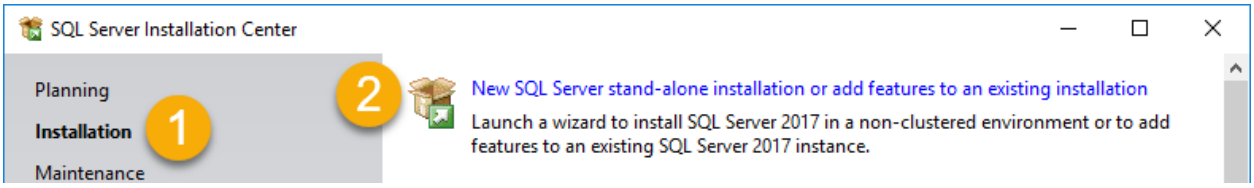
4. Click **Custom** on the Select Installation Type dialog window.


SQL Server 2017
Developer Edition
Select an installation type:
Basic
Select Basic installation type to install the SQL Server Database Engine feature with default configuration.
Custom
Select Custom installation type to step through the SQL Server installation wizard and choose what you want to install. This installation type is detailed and takes longer than running the Basic install.
Download Media
Download SQL Server setup files now and install them later on a machine of your choice.
SQL Server transmits information about your installation experience, as well as other usage and performance data, to Microsoft to help improve the product. To learn more about data processing and privacy controls, and to turn off the collection of this information after installation, see the documentation
14.1805.4072.1

5. Configure the **Media Location** to match your computer's drive space and click Install.

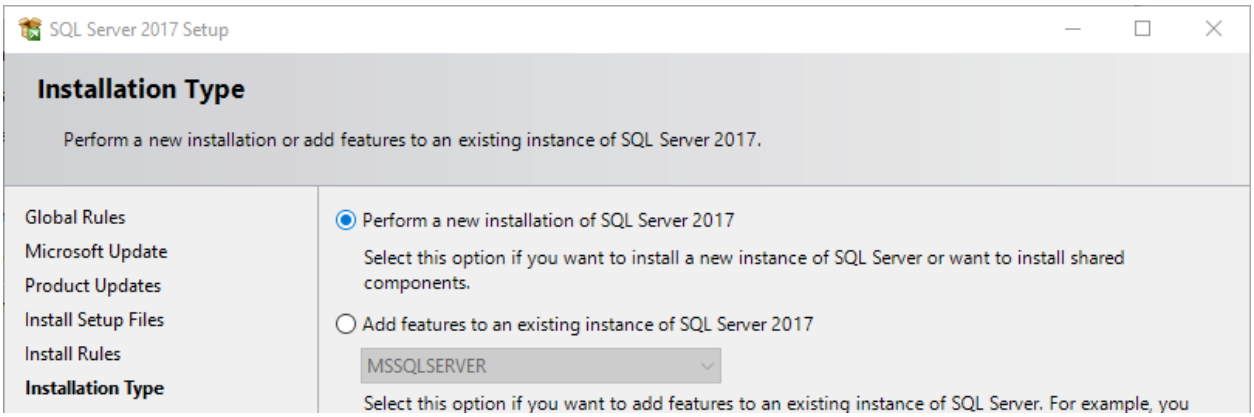


6. In the SQL Server Installation Center navigate to the **Installation page** and use the **New SQL Server stand-alone installation or add features to an existing installation** link.



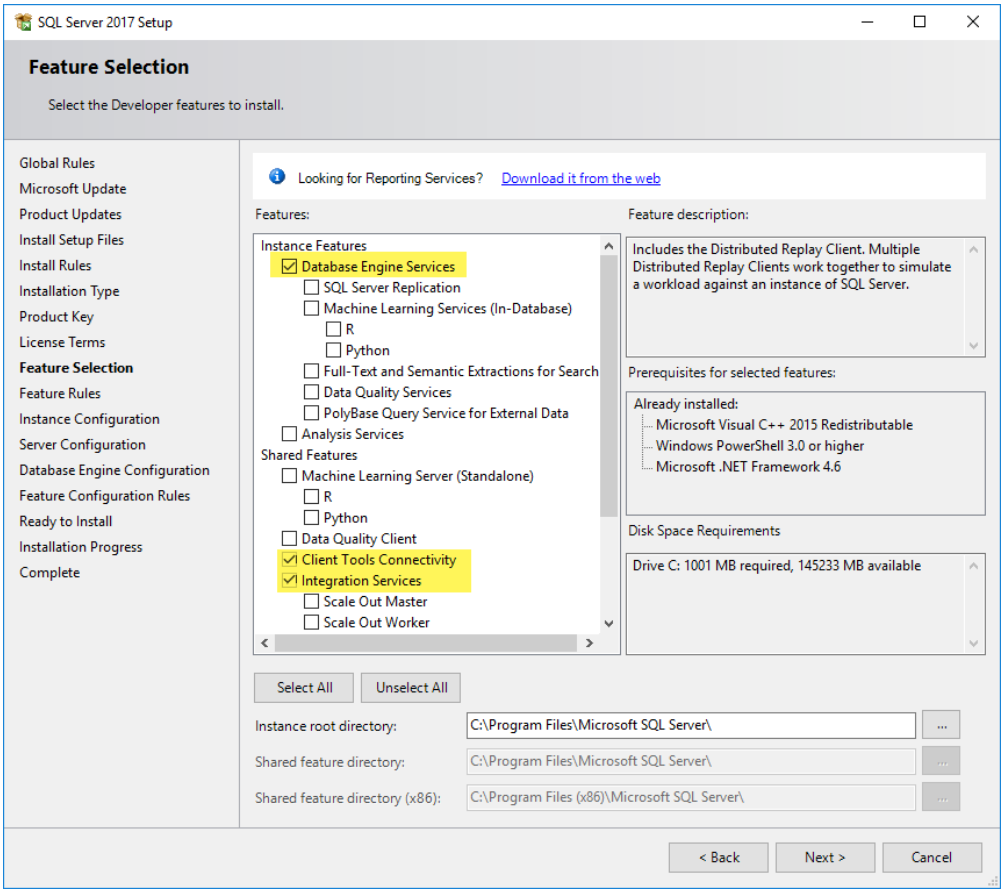
Note: This launches the SQL Server Setup Wizard.

7. Navigate through the Setup Wizard using the **Next** button until you come to the **Installation Type** page. Once there, use the **Perform a new installation of SQL Server 2017** option and use the **Next** button.



8. On the **Product Key** page, Specify the free **Developer Edition** and use the **Next** button.

9. Navigate through the Setup Wizard using the **Next** button until you come to the **Feature Selection** page, then select the **Database Engine, Client Tools Connectivity, and Integration Services** in the Features Tree.



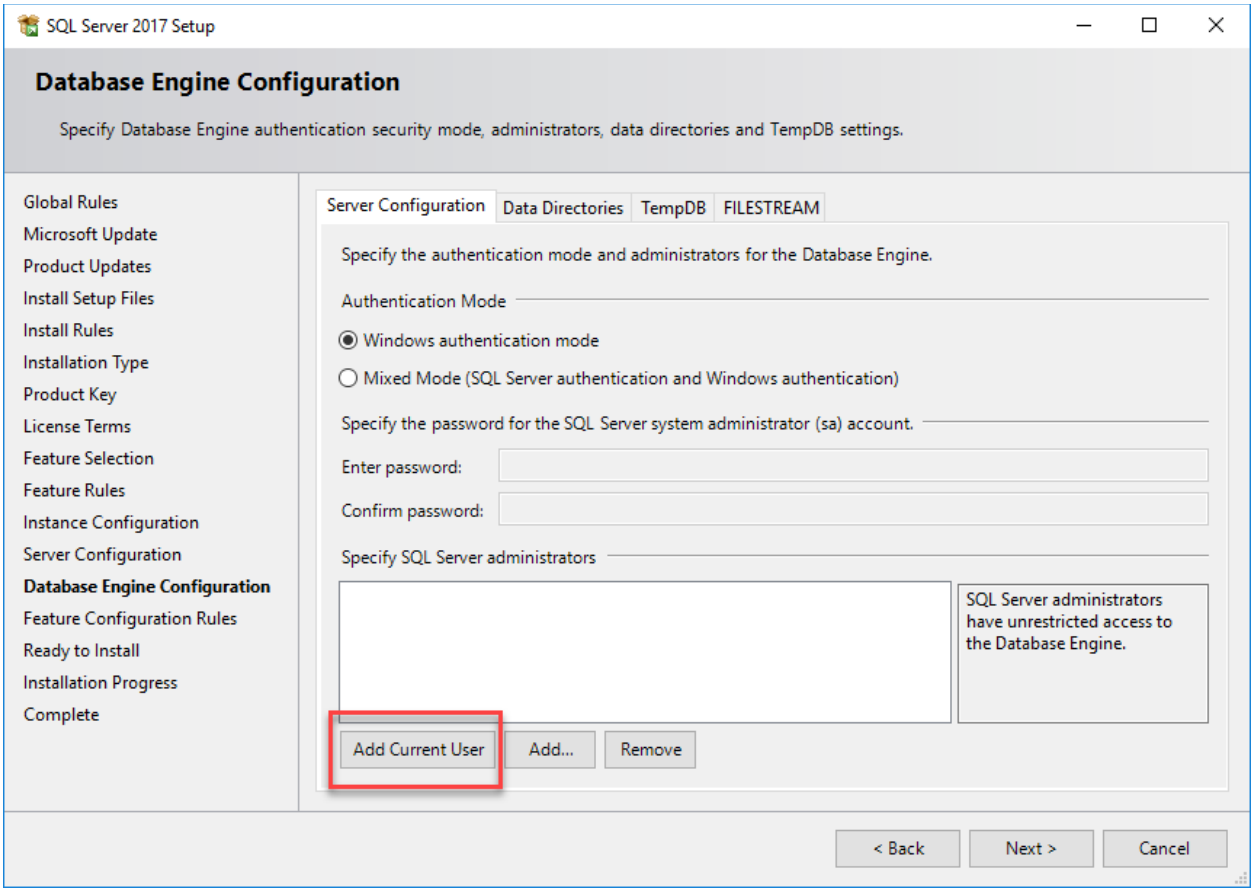
10. Navigate through the Setup Wizard using the **Next** button until you come to the **Instance Configuration** page, then select either the **Default instance** (preferred) or **Named instance** option and use the Next button

Tip: For more information on Named Instances see this web page (external link):

https://docs.microsoft.com/en-us/sql/sql-server/install/instance-configuration?view=sql-server-2017

11. Navigate through the Setup Wizard using the **Next** button until you come to the **Database Engine Configuration page**, then use the **Add Current User** button to add yourself as a SQL Administrator. Wait for your Windows login name to appear before using the **Next** button.

Caution: This step is easy to miss!



12. On the **Ready to Install** page, use the **Install** button to complete the installation.

13. Follow the same steps to install SQL Server Management Studio and SQL Server Data Tools as you would in an Azure VM.

Install SQL Server Management Studio

Install SQL Server Data Tools (SSDT)