

GOMC Capstone

Deployment Guide

Version 0.2

December 3, 2017

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REVISION HISTORY

Version #	Implemented By	Revision Date	Scope of Change
0.1	Ahmed T	12/3/17	Added screenshots
0.2	Muamer B	12/3/17	Created cover page, revision history, table of contents and everything else (formatting, writing, etc), also added several screenshots

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1. Overview

The GOMC Deployment Guide is designed to encompass in detail of all the different software needed to run the GOMC – Capstone web application. In the following sections of this document, you will find descriptions and screenshots of the required tasks needed to be done before running the web application.

2. Required Software

The following software that is required on the server end includes:

- Windows Server 2008
- IIS 7.5
- SQL Server
- .Net 4.6 or better
- Web Deploy 3.5
- MiKTeX 2.9
- Pandoc 2.0 or better
- Python 2.7
- Pygments
- Pip

The following is required on the development machine:

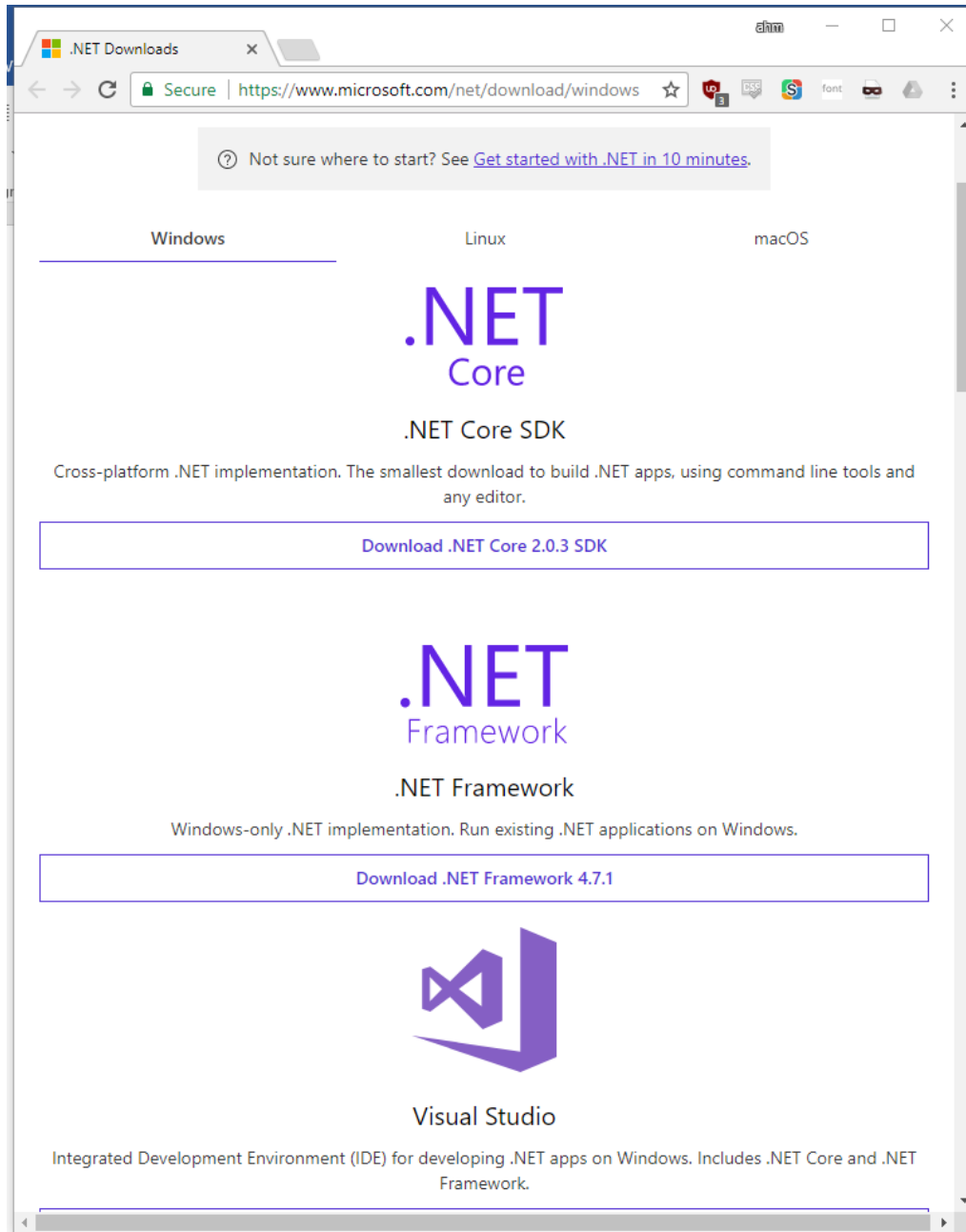
- Visual Studio 2017
- Windows 7 or better
- SQL Server Management Studio 17
- High speed internet

3. Installments

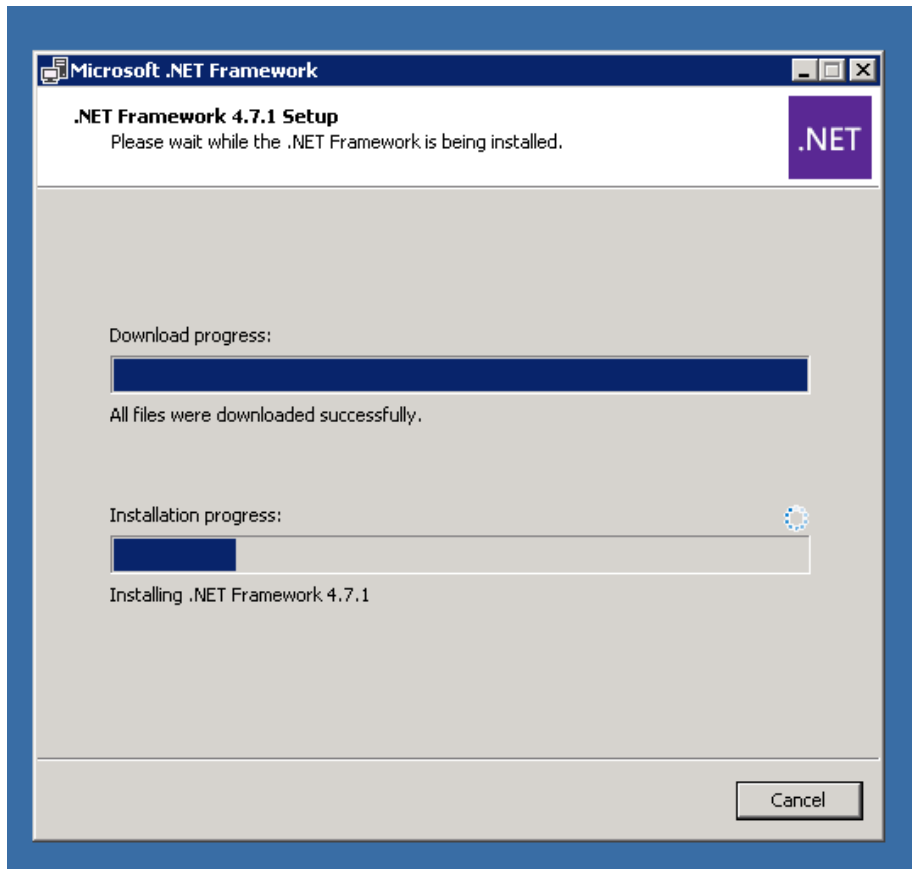
This section will go over the steps of installing a number of different required software. Screenshots are included to better help explain of exactly what needs to be done.

3.1 .NET

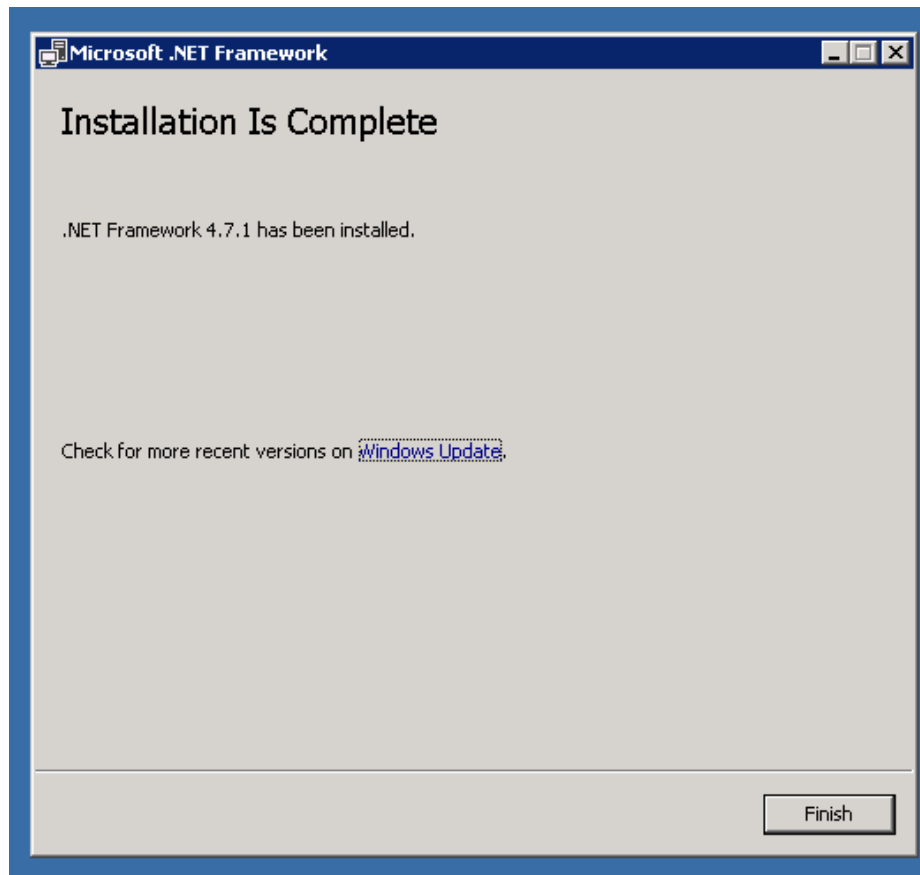
To install .NET, you can simply click on the following link and it will take you to the page as shown below: <https://www.microsoft.com/net/download/windows>



After clicking "Download .NET Framework 4.7.1", you will go through the download process as shown below:

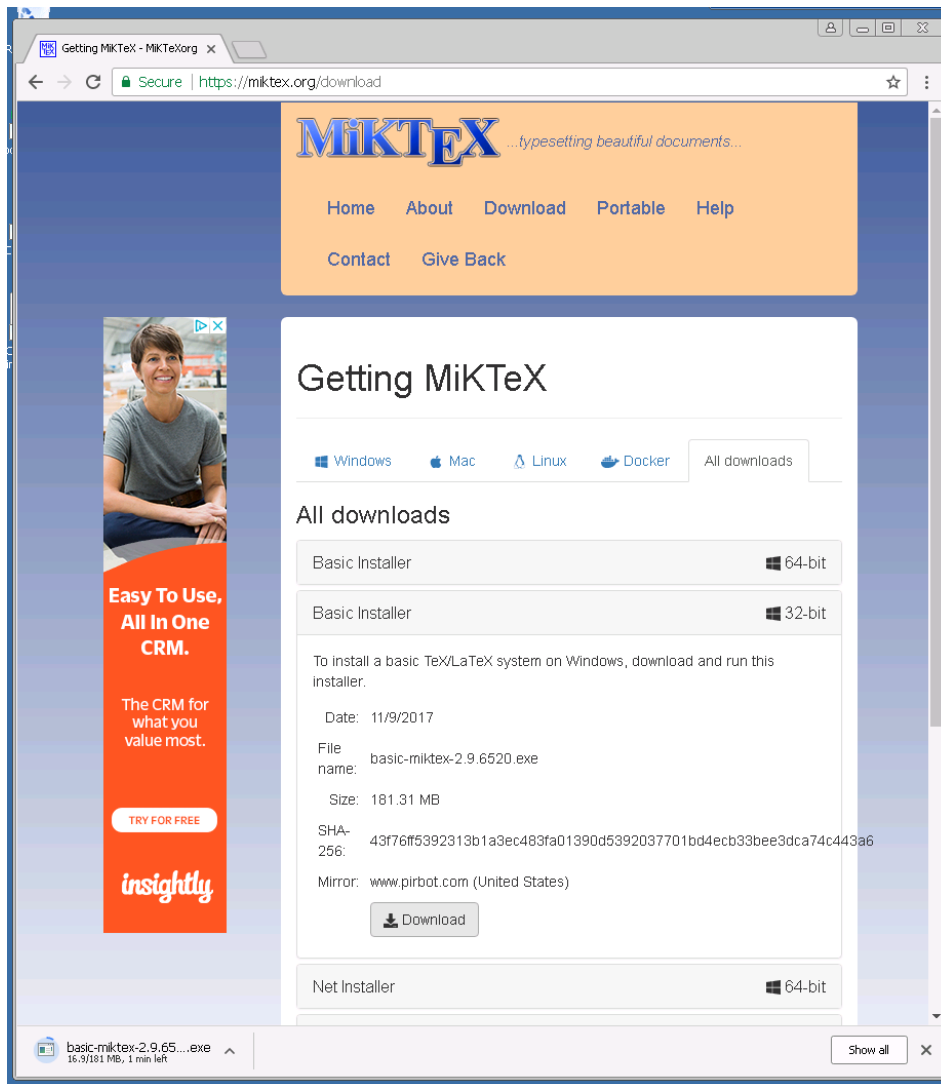


Once download is complete, figure below will be shown and you have successfully downloaded .NET Framework 4.7.1:

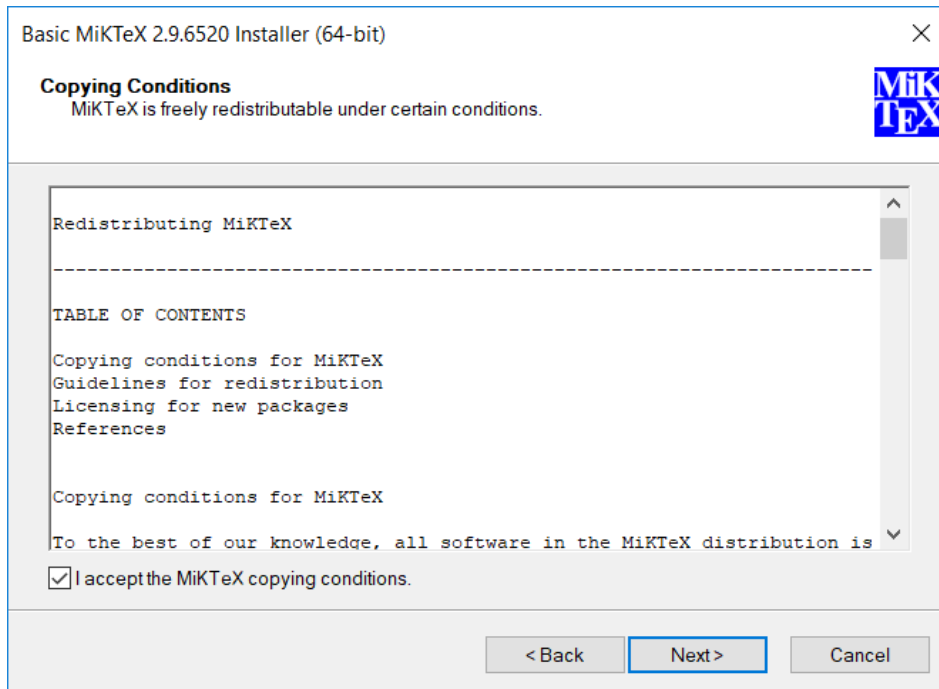


3.2 MiKTeX

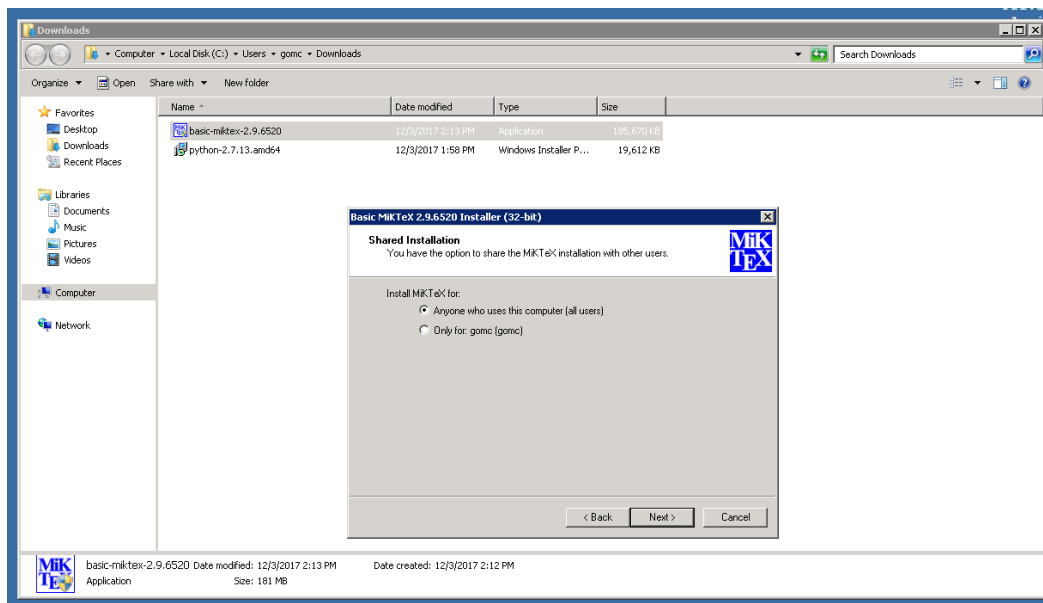
To install MiKTeX, you can simply click on the following link and it will take you to the page as shown below: <https://miktex.org/download>



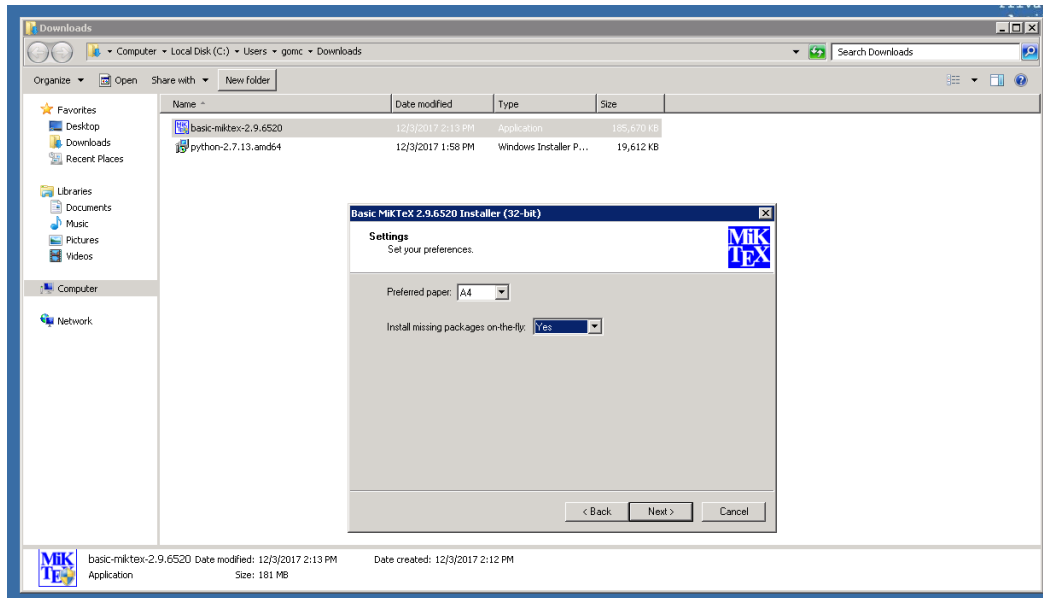
After clicking "Download", you will go through the download process as shown below. Here we simply click to accept the conditions and then click "Next":



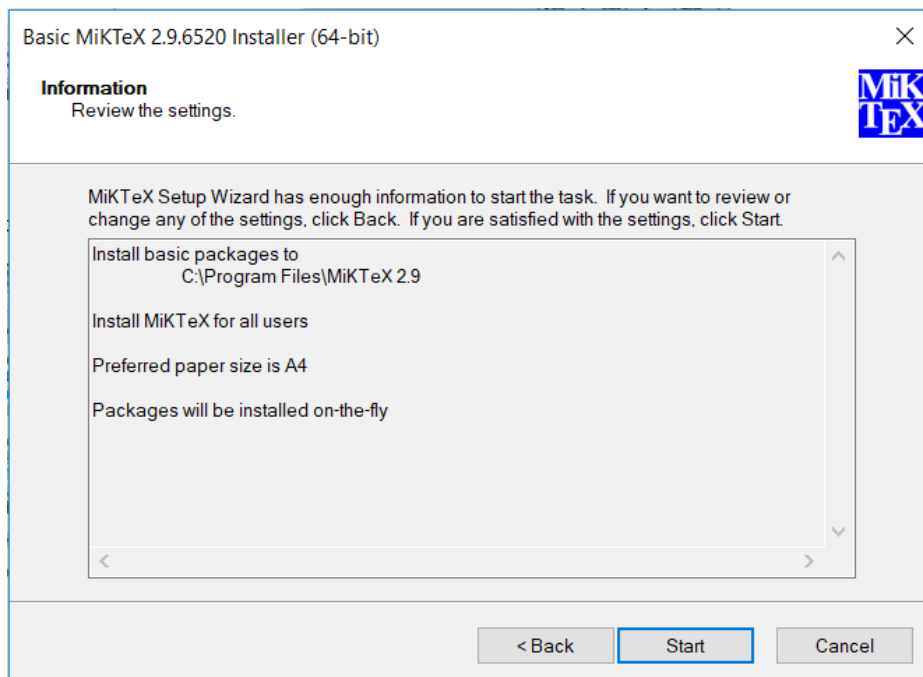
Below, select the option that applies to you and click "Next":



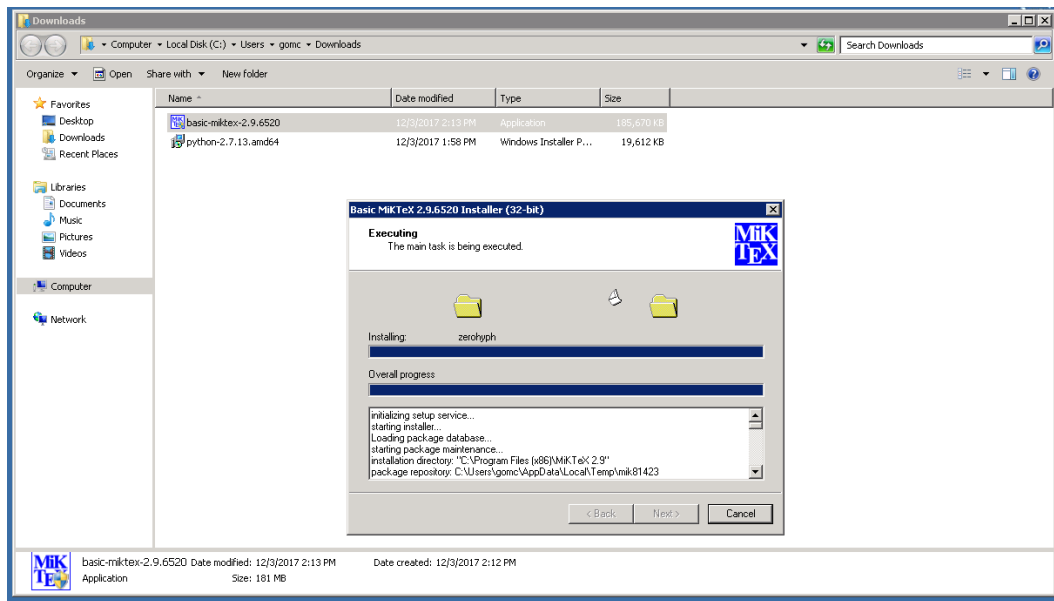
Make sure "A4" is selected in the first box and "Yes" is selected in the second box as shown below and click "Next":



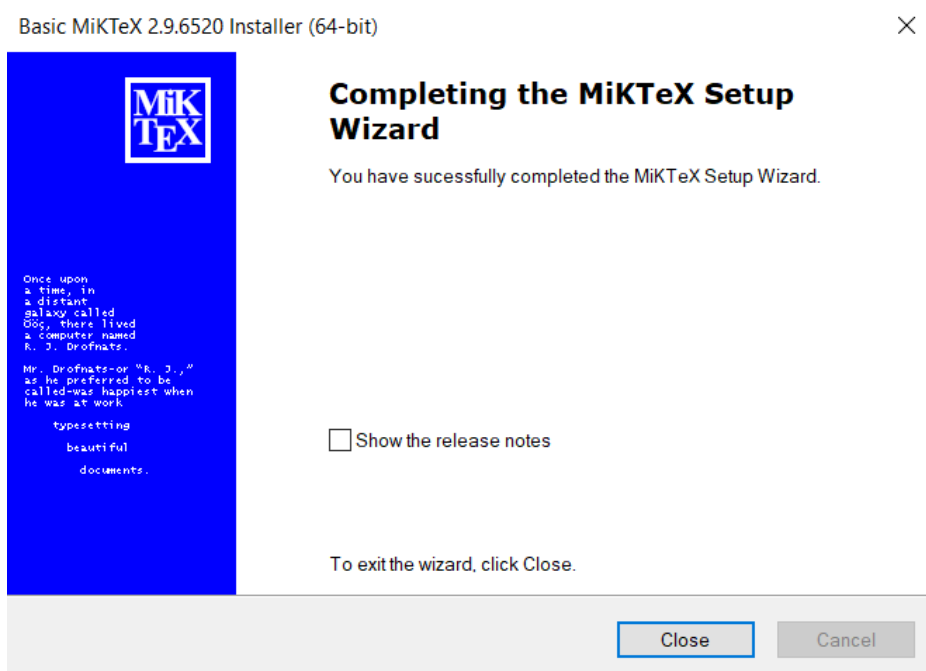
At this point, we click "Start" to start the download process as shown below:



The download will start as shown below:

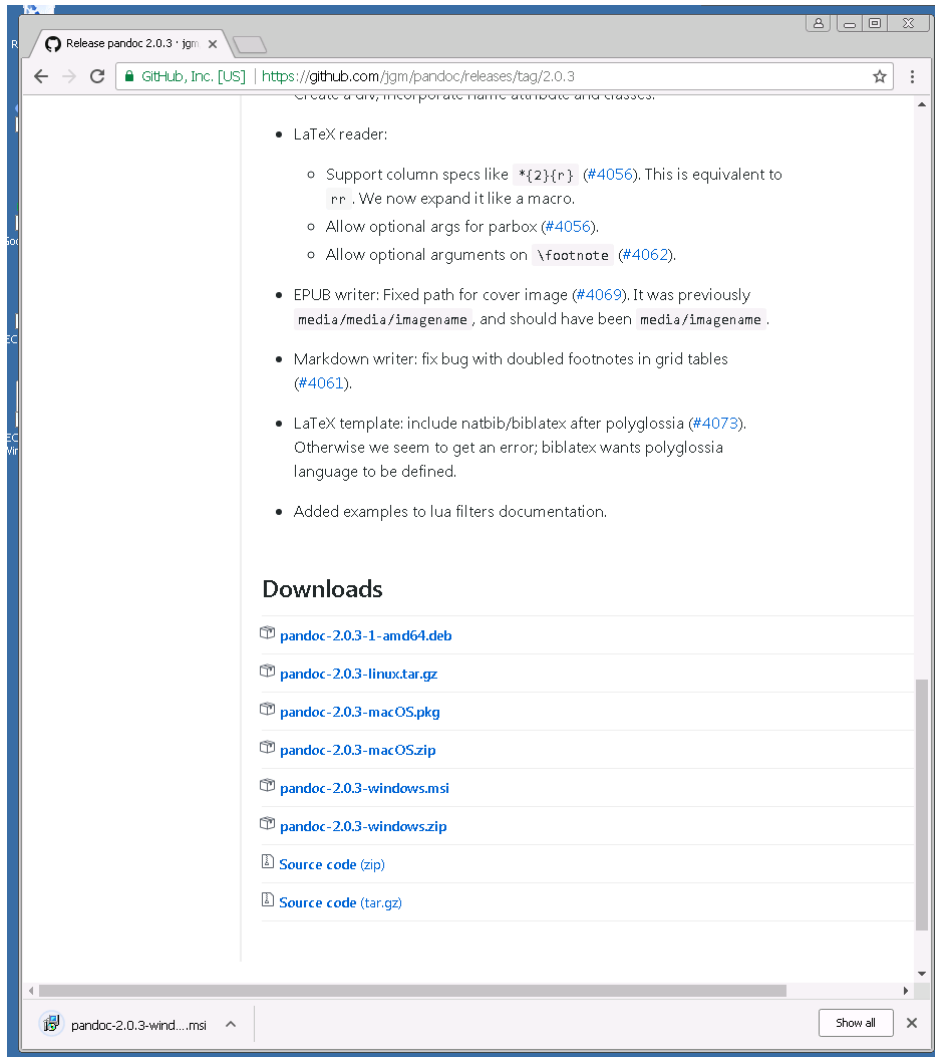


Once download is complete, figure below will be shown and you have successfully downloaded MiKTeX:

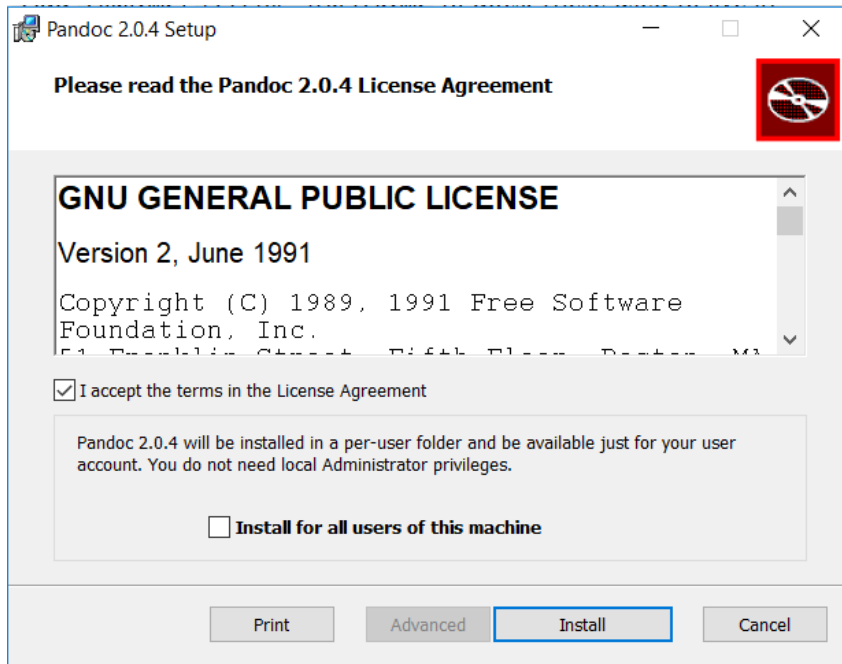


3.3 Pandoc

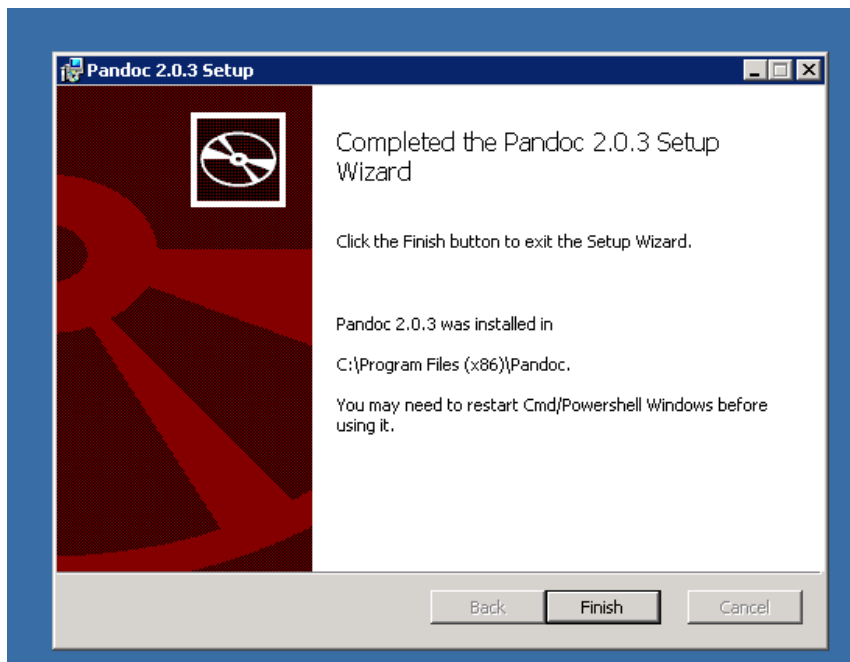
To install Pandoc, you can simply click on the following link and it will take you to the page as shown below: <https://github.com/jgm/pandoc/releases/tag/2.0.4>



After choosing your computer operating system, you will go through the download process as shown below by making sure you accept the terms and clicking "Install":



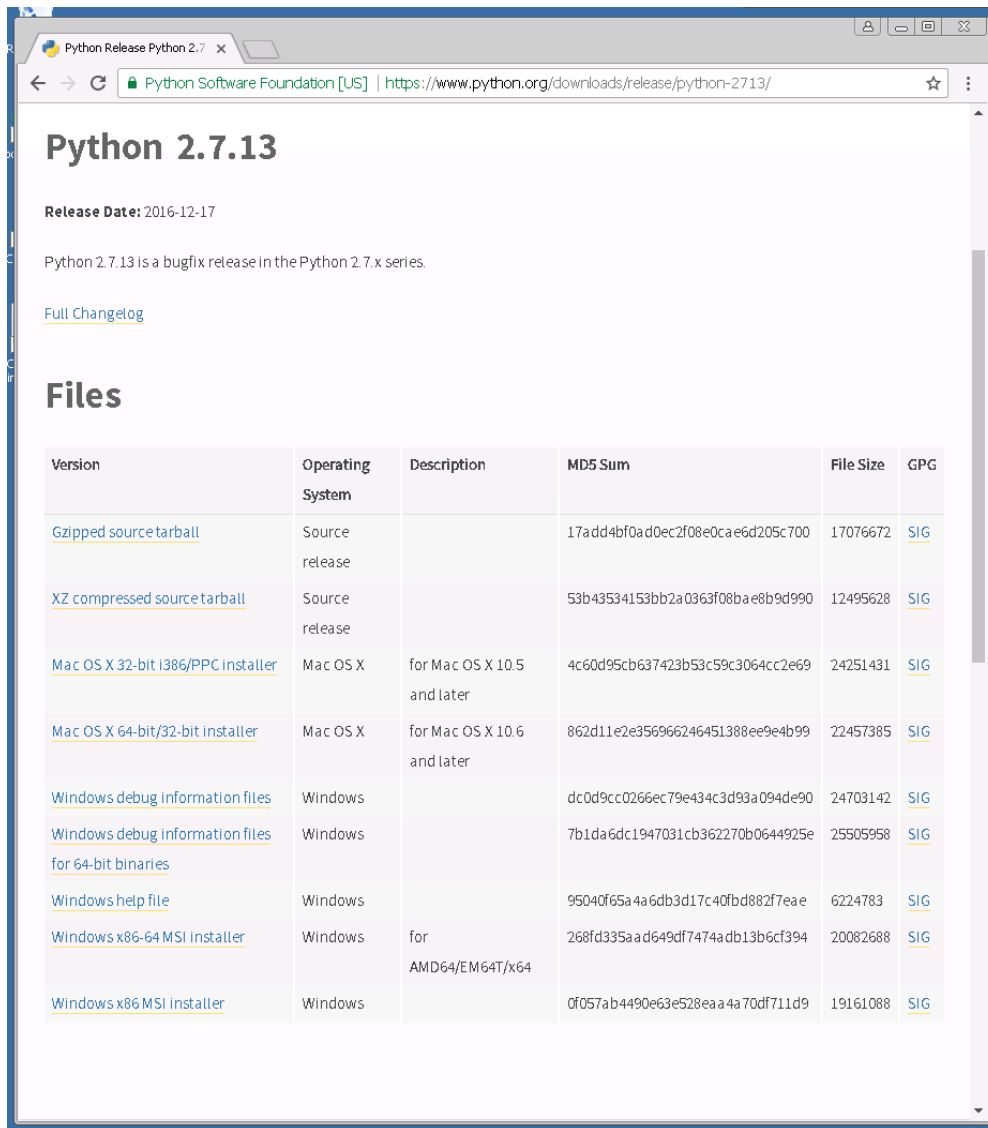
Once download is complete, figure below will be shown and you have successfully downloaded Pandoc 2.0.3.



3.4 Python 2.7.13

To install Python 2.7.13, you can simply click on the following link and it will take you to the page as shown below: <https://www.python.org/downloads/>

Here you can choose your computer's operating system and click on it to start the download process.



Python 2.7.13

Release Date: 2016-12-17

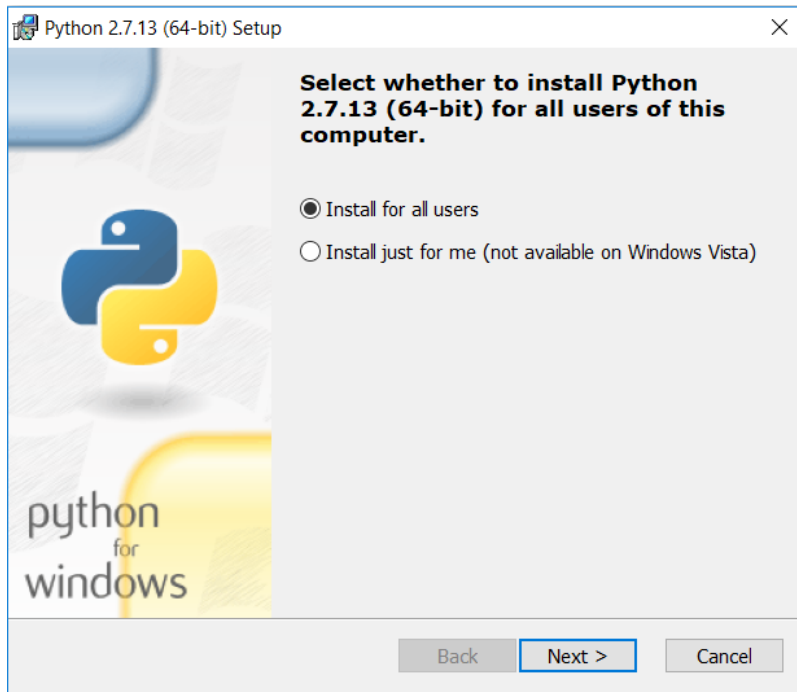
Python 2.7.13 is a bugfix release in the Python 2.7.x series.

[Full Changelog](#)

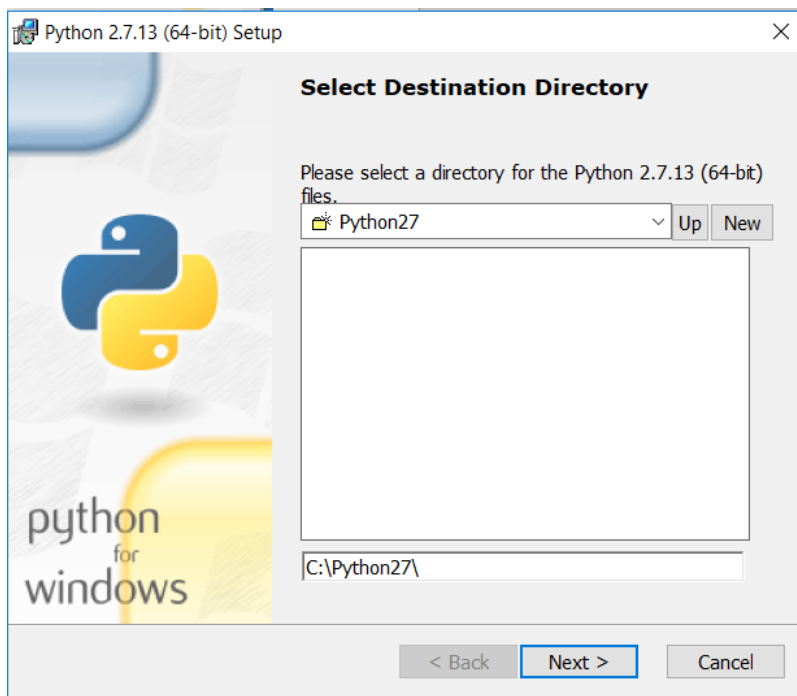
Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
Gzipped source tarball	Source release		17a dd4bf0a d0ec2f08e0ca e6d205c700	17076672	SIG
XZ compressed source tarball	Source release		53b43534153bb2a0363f08bae8b9d990	12495628	SIG
Mac OS X 32-bit i386/PPC installer	Mac OS X	for Mac OS X 10.5 and later	4c60d95cb637423b53c59c3064cc2e69	24251431	SIG
Mac OS X 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	862d11e2e356966246451388ee9e4b99	22457385	SIG
Windows debug information files	Windows		dc0d9cc0266ec79e434c3d93a094de90	24703142	SIG
Windows debug information files for 64-bit binaries	Windows		7b1da6dc1947031cb362270b0644925e	25505958	SIG
Windows help file	Windows		95040f65a4a6db3d17c40fbd882f7eae	6224783	SIG
Windows x86-64 MSI installer	Windows	for AMD64/EM64T/x64	268fd335aad649df7474adb13b6cf394	20082688	SIG
Windows x86 MSI installer	Windows		0f057ab4490e63e528eaa4a70df711d9	19161088	SIG

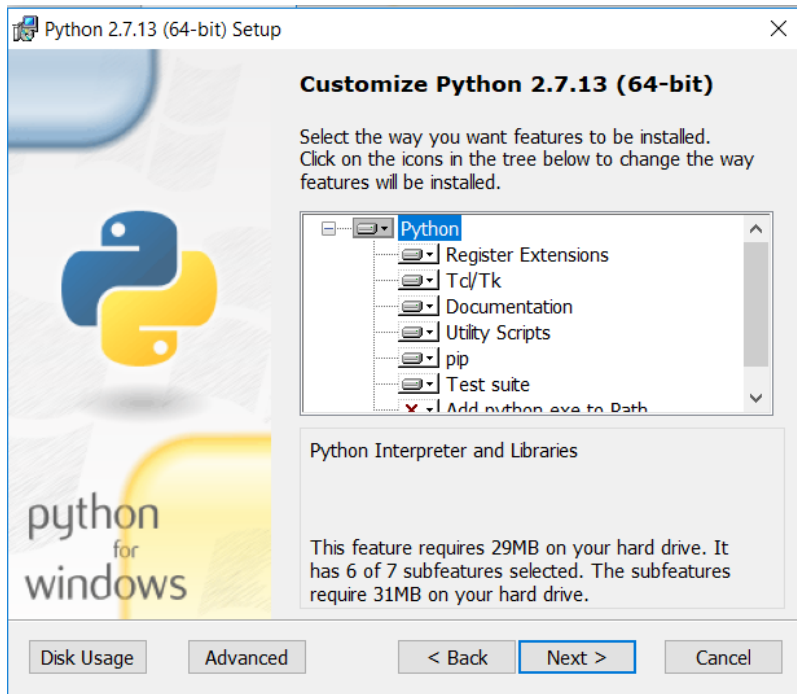
After choosing your computer operating system, you will go through the download process as shown below by selecting either of the two options and then clicking "Next":



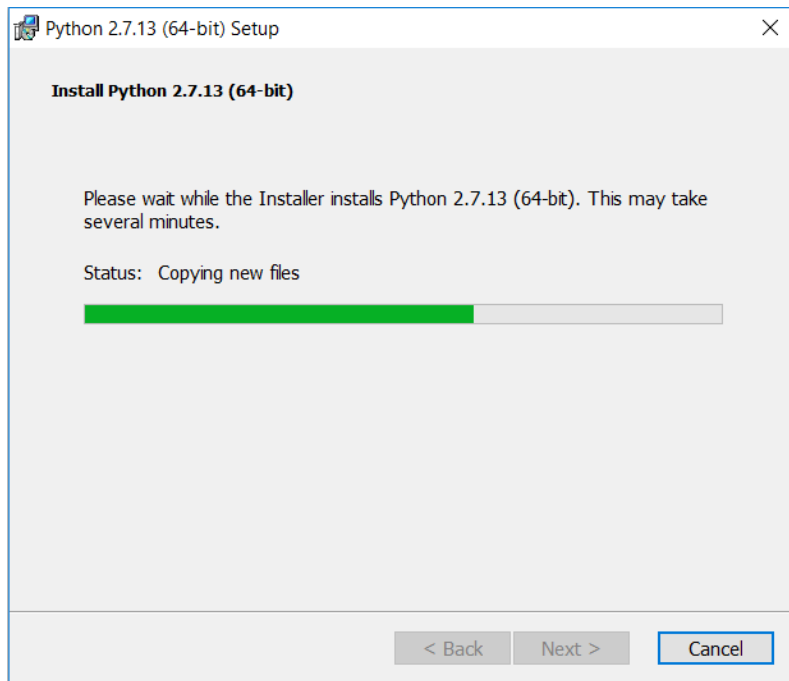
Below you are able to select a directory of your choice to store Python 2.7.13. You can just click "Next":



Below you are able to customize how you want features to be installed. You can simply just click "Next" once again:



After clicking "Next", the download will start as shown below:

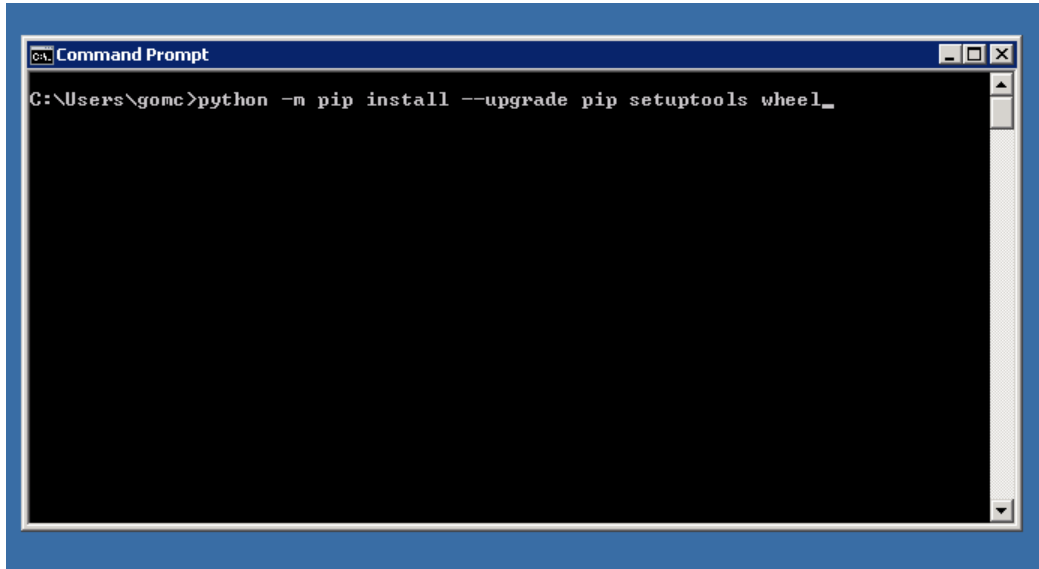


Once download is complete, figure below will be shown and you have successfully downloaded Python 2.7.13:



3.5 Pip

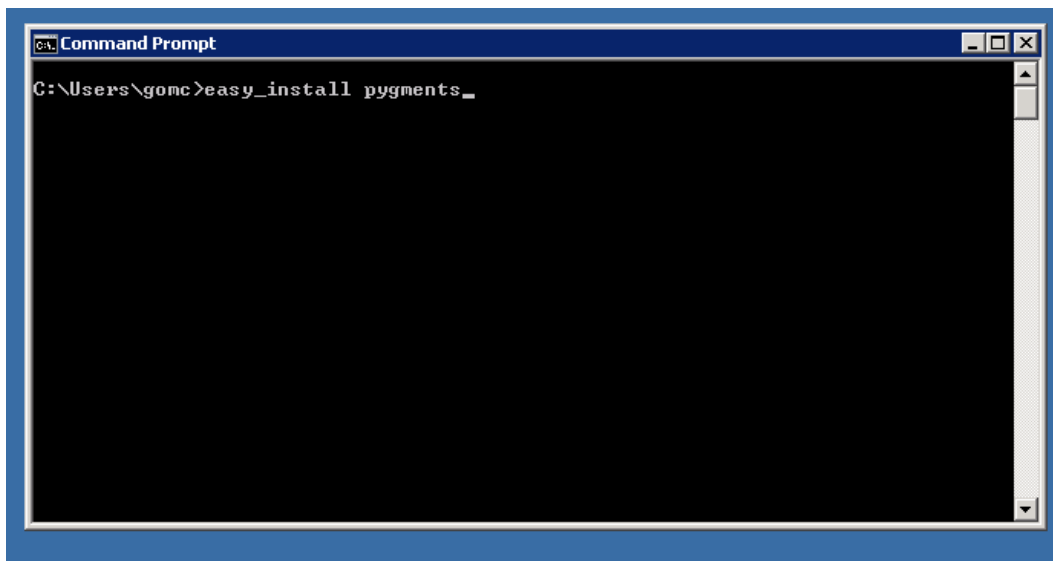
To install Pip, easy_install and Wheel in Python, you can simply input the following command line argument as shown below:



```
Command Prompt
C:\Users\gomc>python -m pip install --upgrade pip setuptools wheel_
```

3.6 Pygments

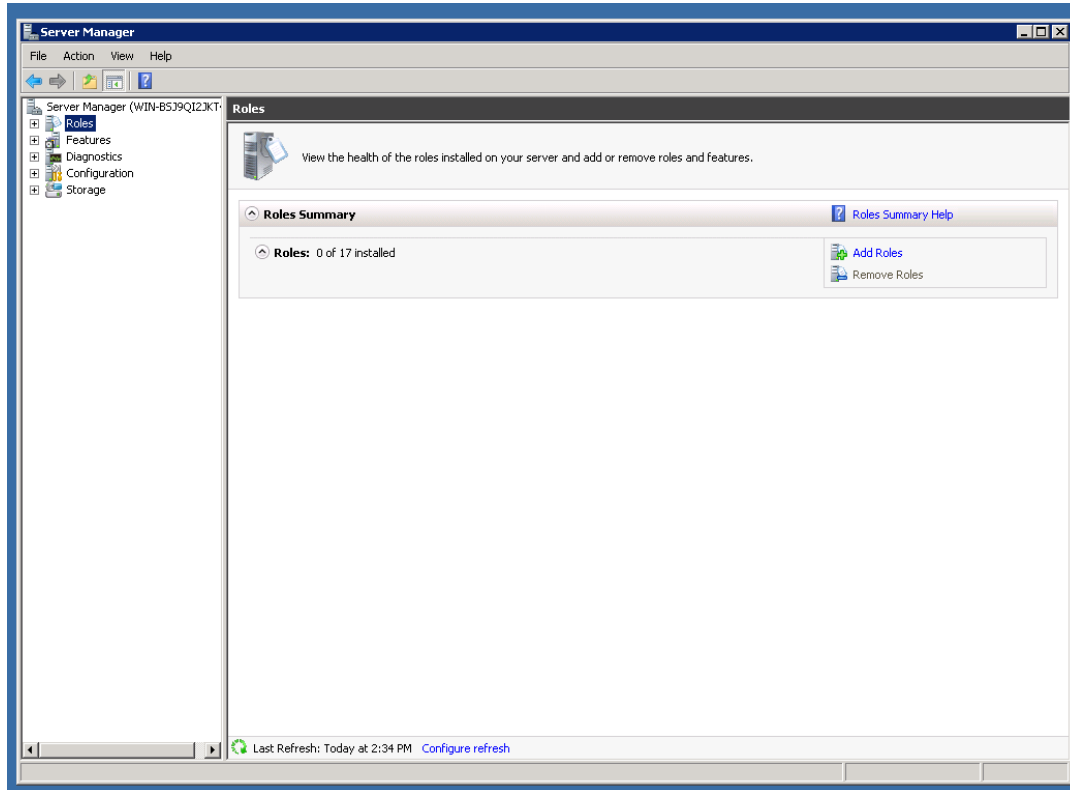
To install Pygments in Python, you can simply input the following command line argument as shown below :



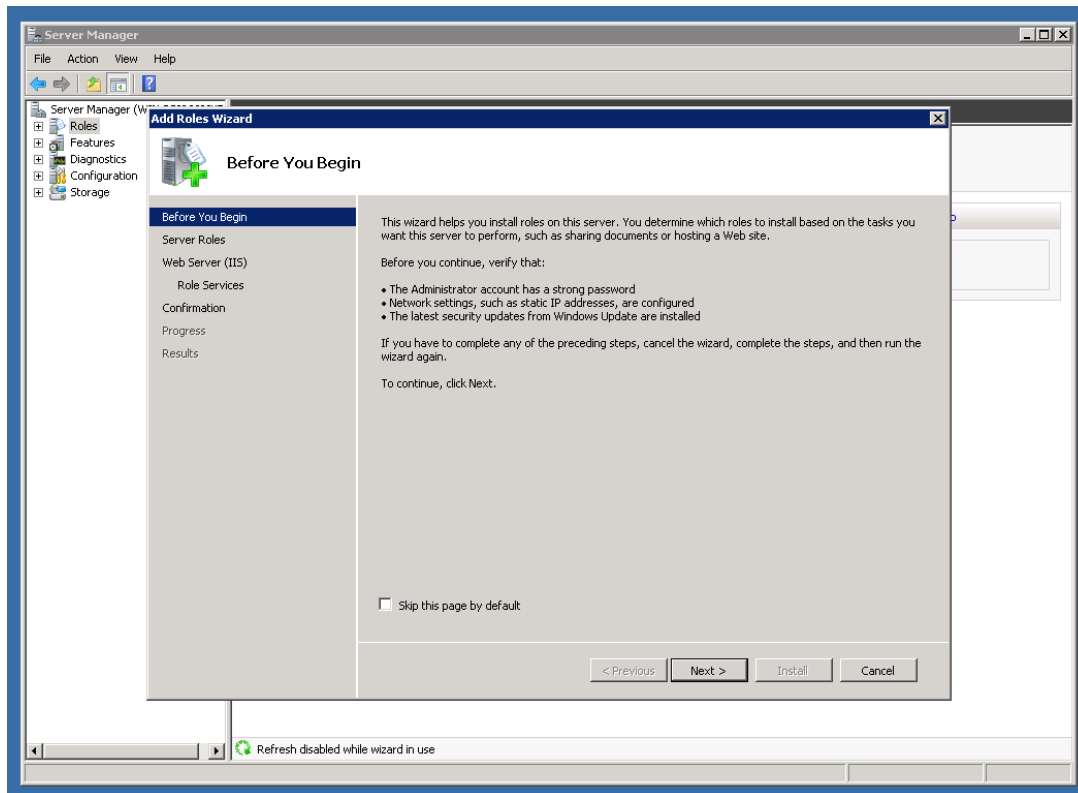
```
Command Prompt
C:\Users\gomc>easy_install pygments_
```

3.7 IIS 7.5

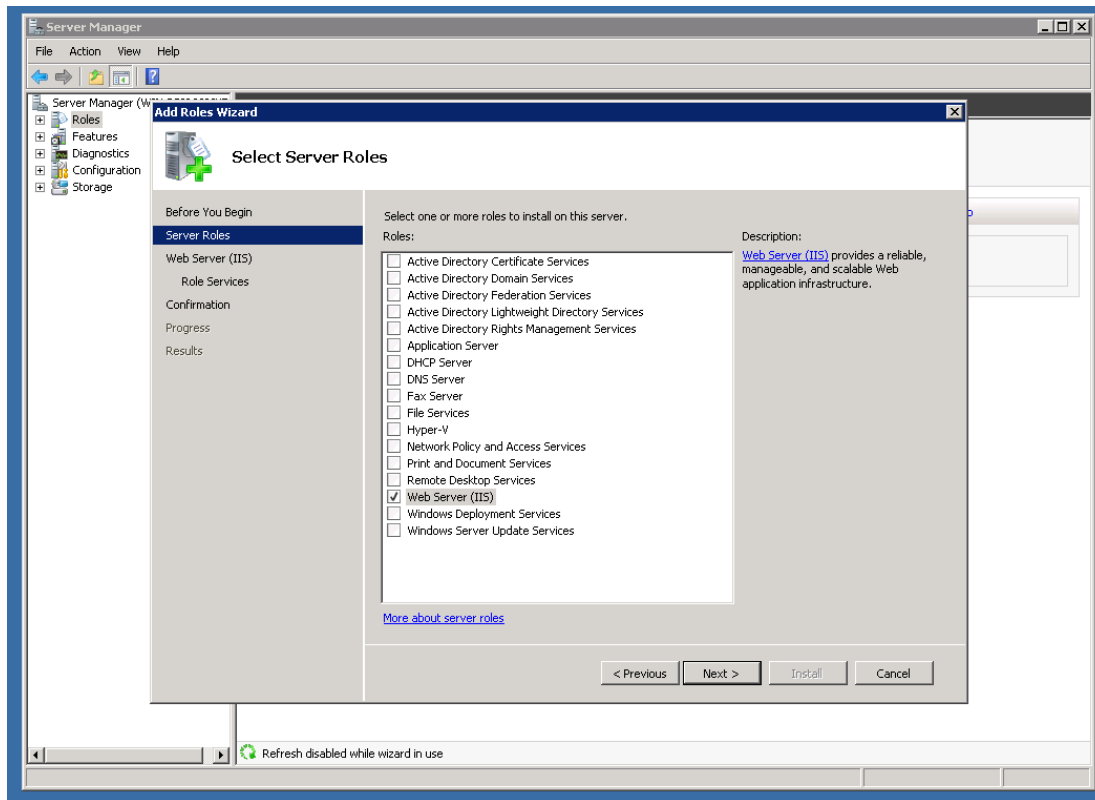
To install IIS 7.5, you will have to use Server Manager by adding a web server role as shown below:



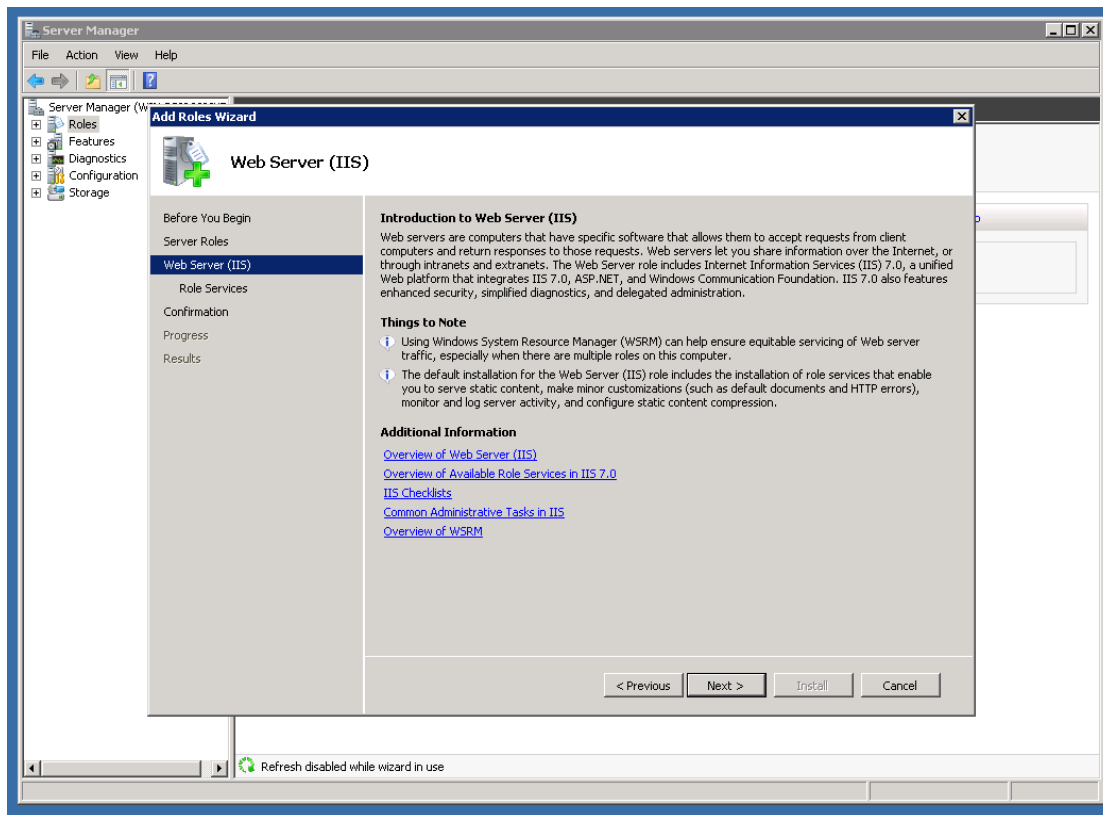
After clicking "Add Roles", you will go through the process as shown below. Click "Next":



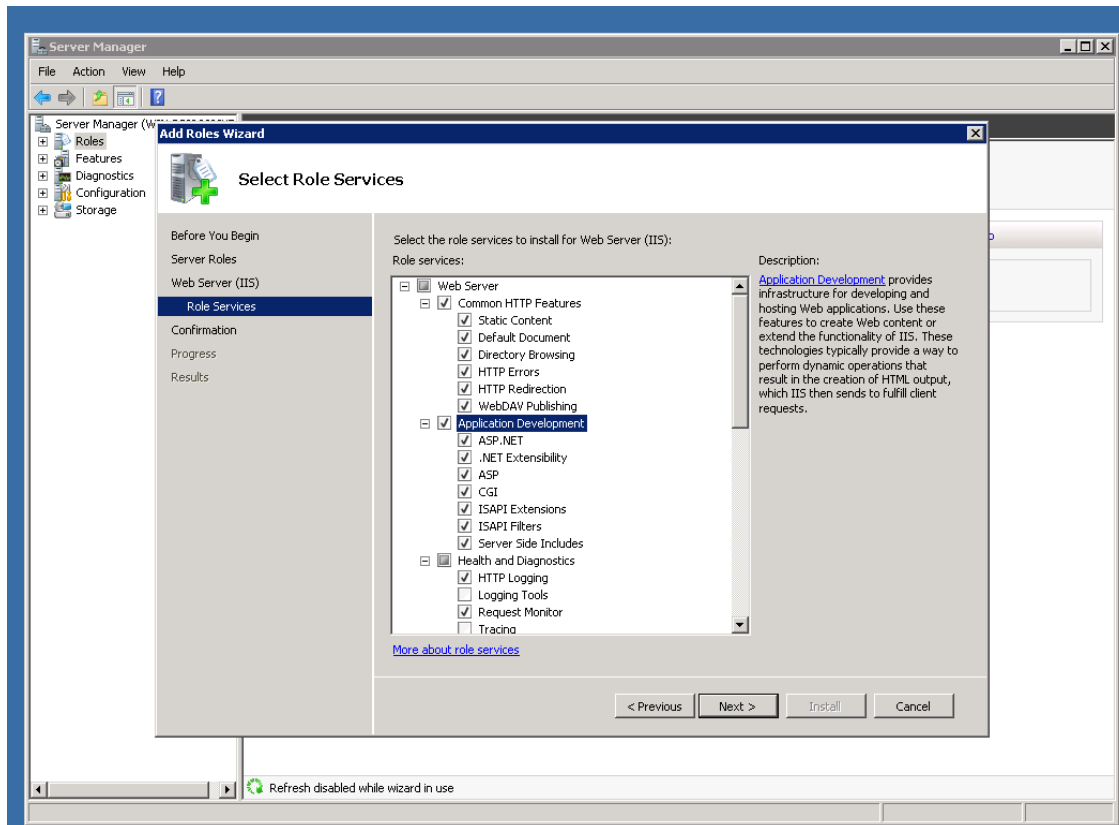
On the "Server Roles" section, make sure to check the "Web Server (IIS)" check box as shown below and click "Next":



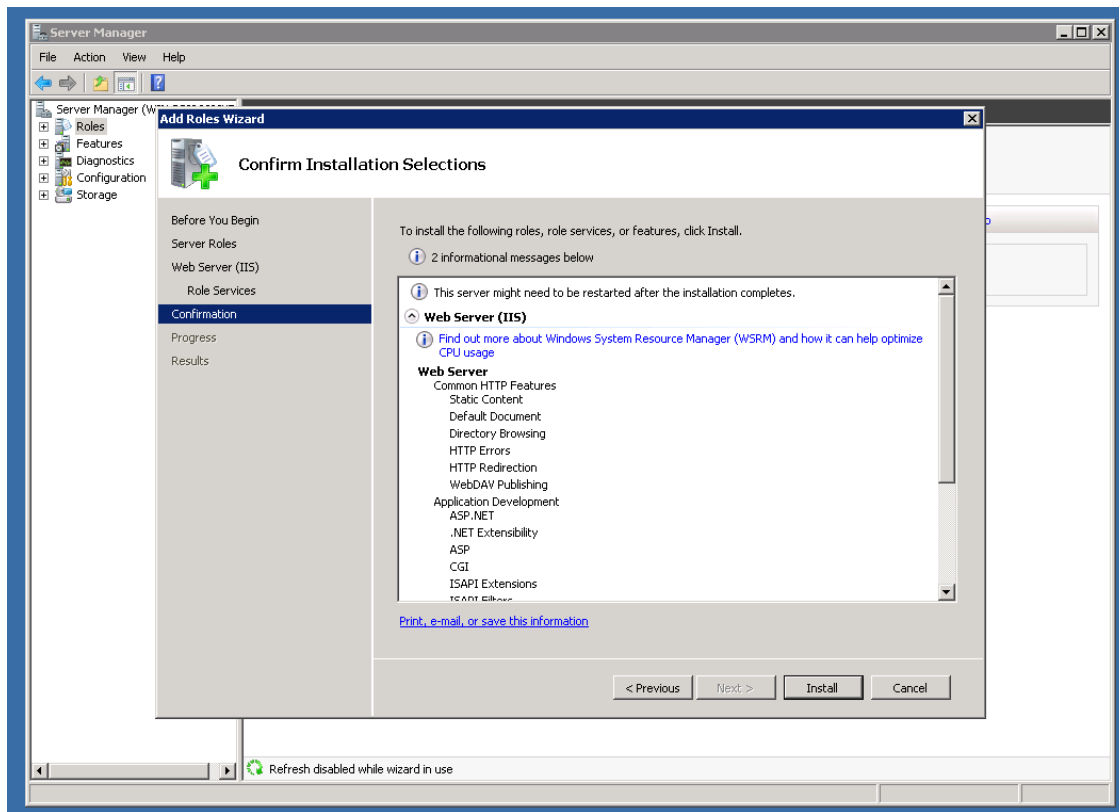
On "Web Server (IIS)" section, read through and click "Next" as shown below:



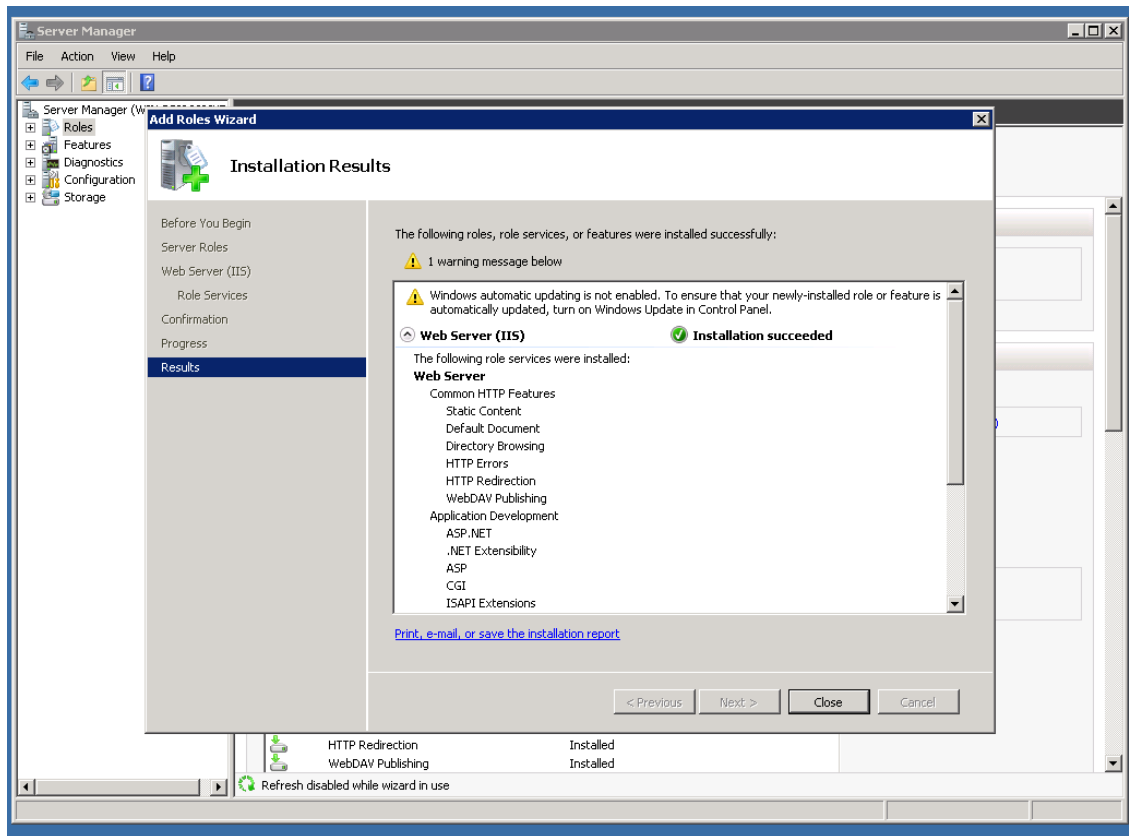
Under "Role Services" section, make sure to check all options in "Application Development" and "Common HTTP Features" as shown below and click "Next":



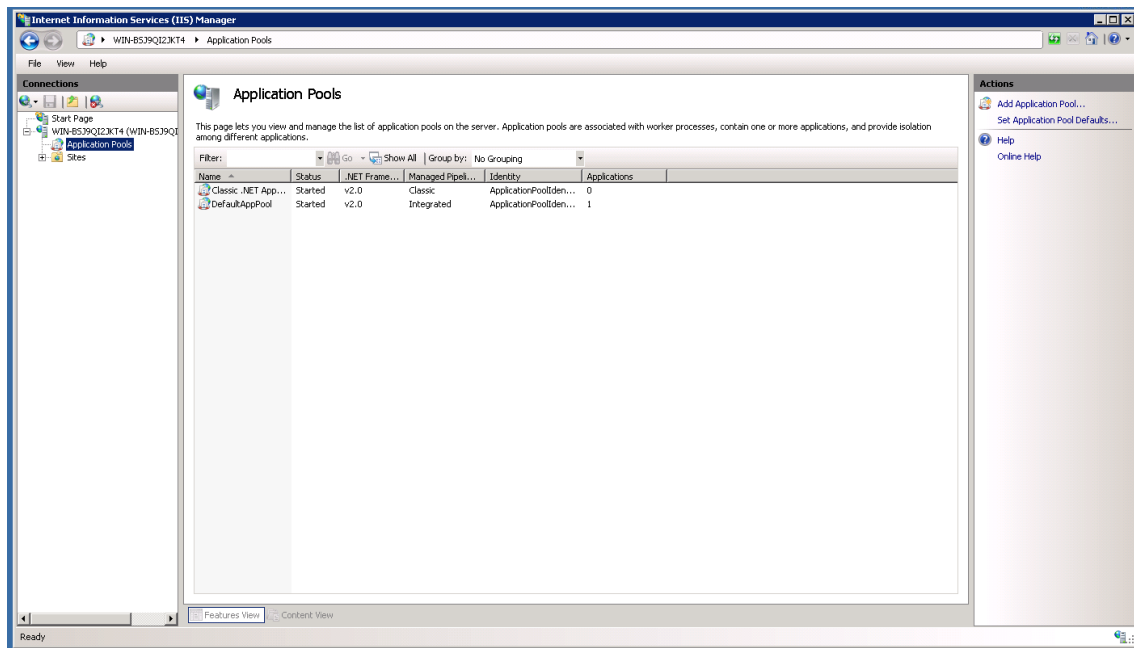
The "Confirmation" section will be shown as below. Click "Install":



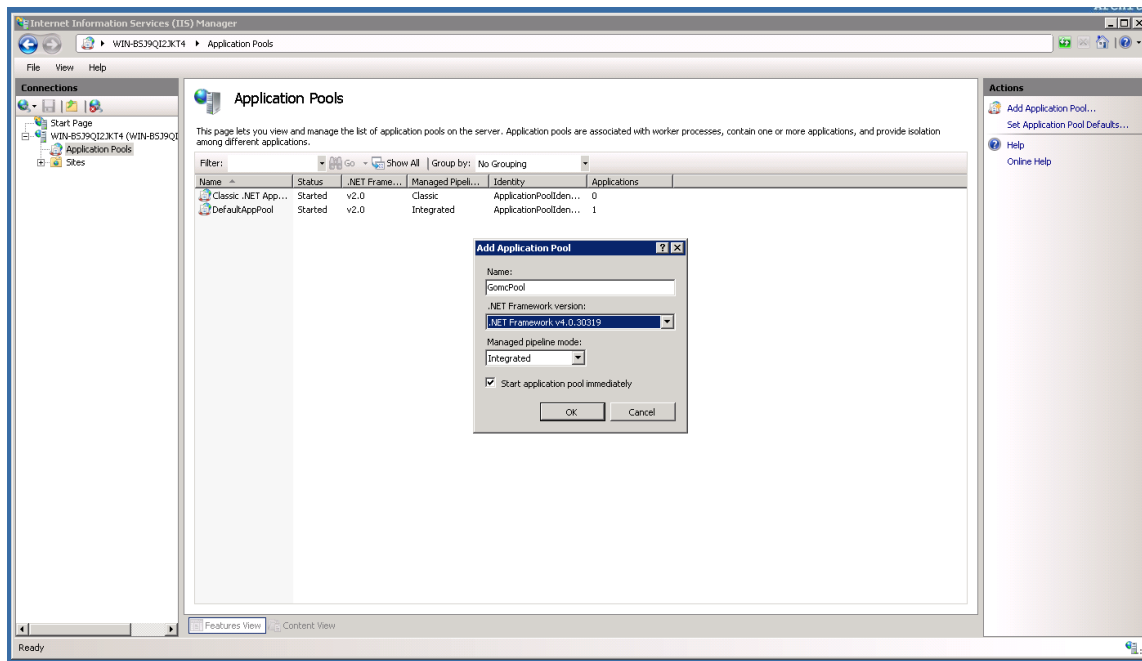
Once installation is complete, figure below will be shown and you have successfully installed a role as shown below:



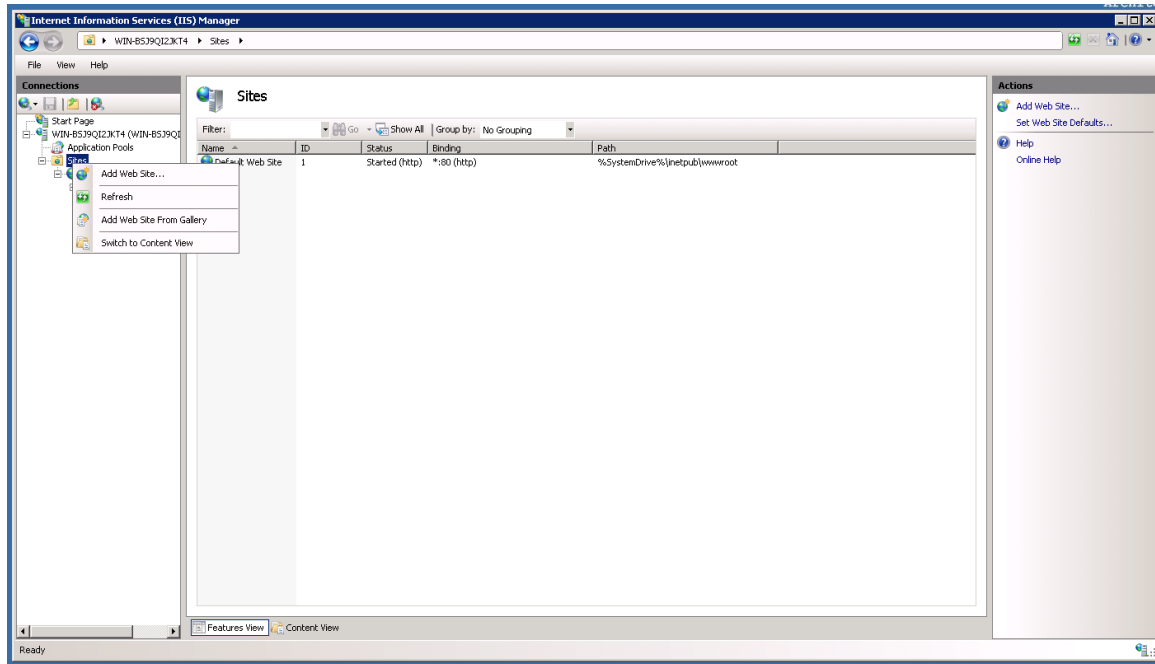
Next, open IIS console as shown below:



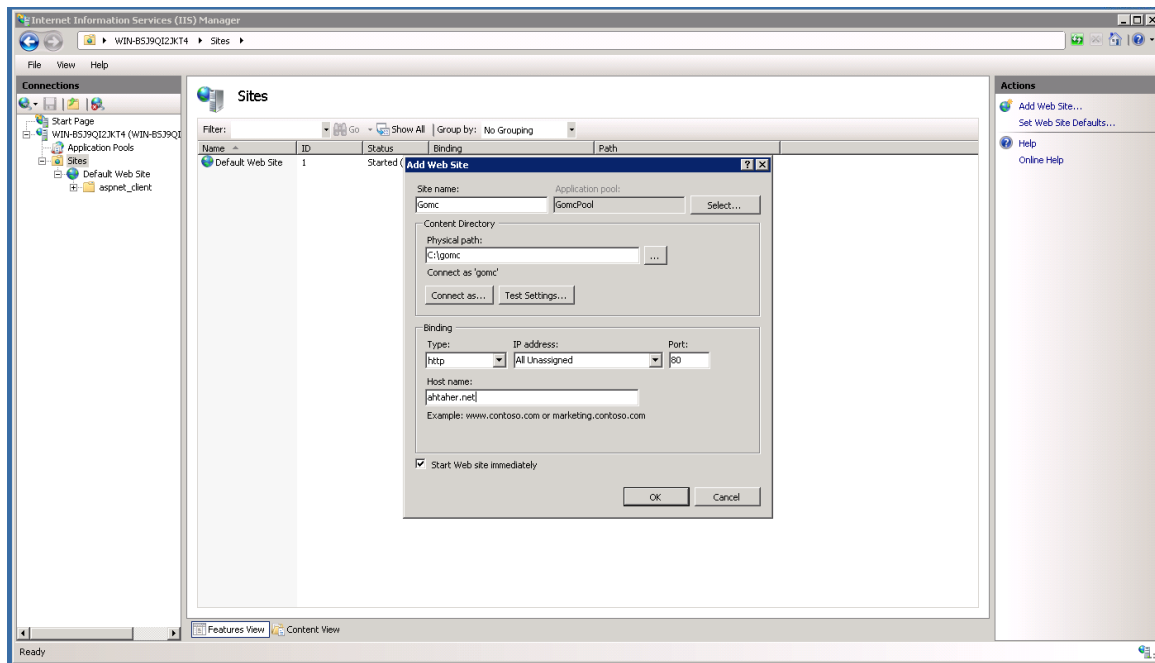
Add a new application pool with framework version set to ".NET Framework v4.0 30319" and pipeline mode set to "Integrated" as shown below:



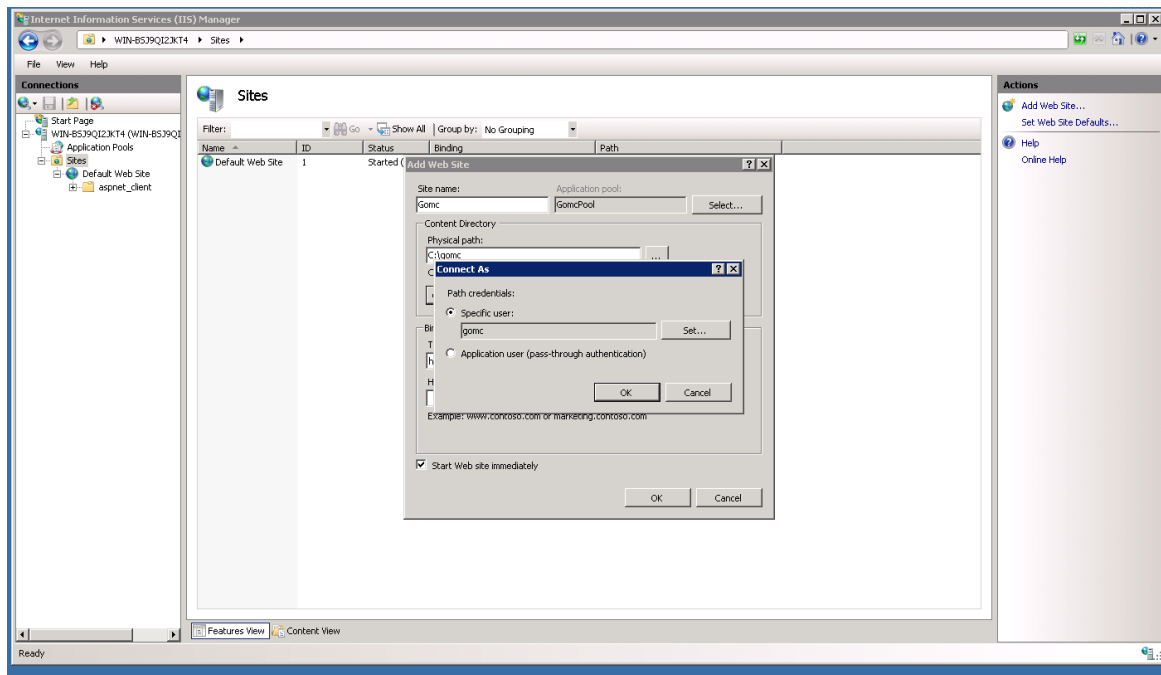
Add a web site with the pool set to the same one created above as shown below:



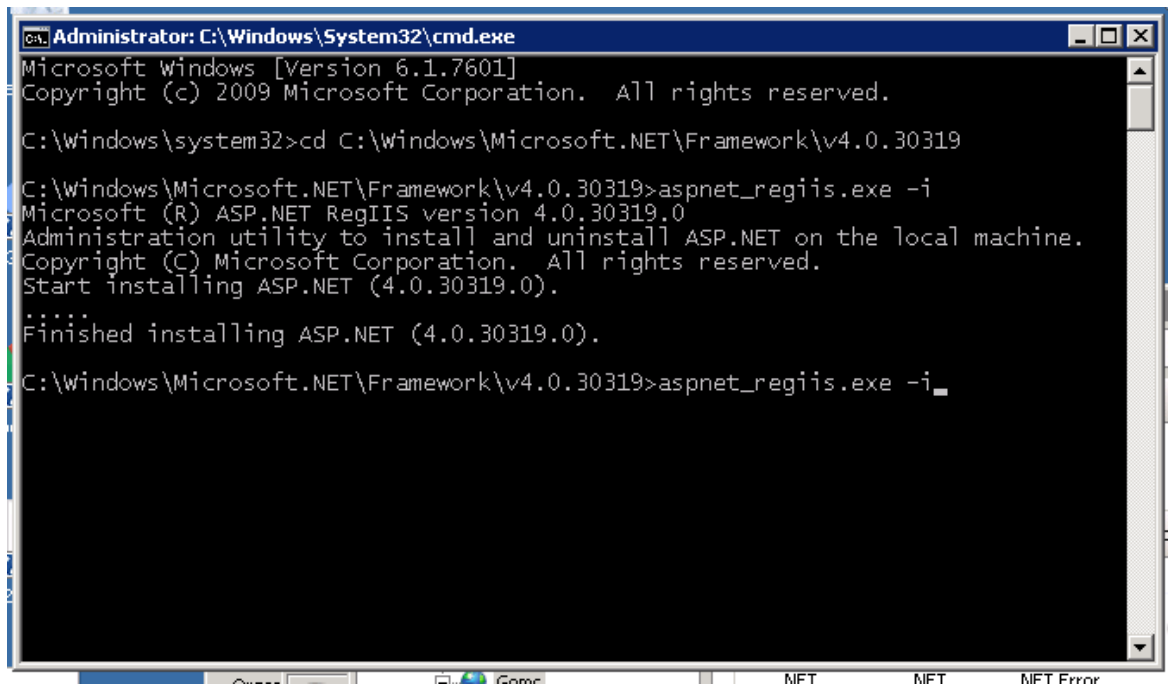
To add the new web site, you must fill in the boxes as shown below:



Here we connect as a user with admin permissions as shown below and click "OK":



Lastly, run `aspnet_regiis.exe` in cmd as an admin as shown below:



```
Administrator: C:\Windows\System32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

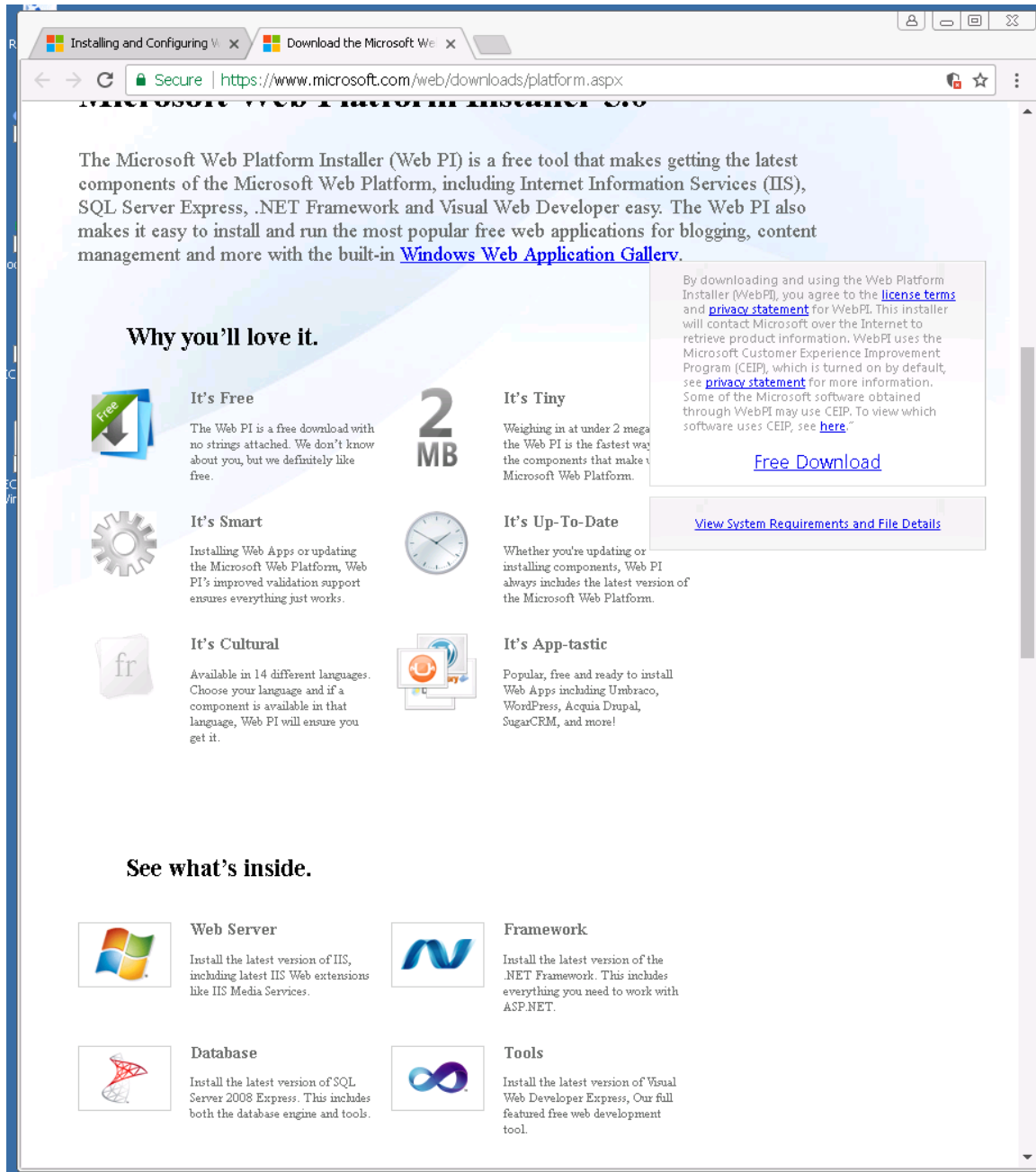
C:\Windows\system32>cd C:\Windows\Microsoft.NET\Framework\v4.0.30319

C:\Windows\Microsoft.NET\Framework\v4.0.30319>aspnet_regiis.exe -i
Microsoft (R) ASP.NET RegIIS version 4.0.30319.0
Administration utility to install and uninstall ASP.NET on the local machine.
Copyright (C) Microsoft Corporation. All rights reserved.
Start installing ASP.NET (4.0.30319.0).
.....
Finished installing ASP.NET (4.0.30319.0).

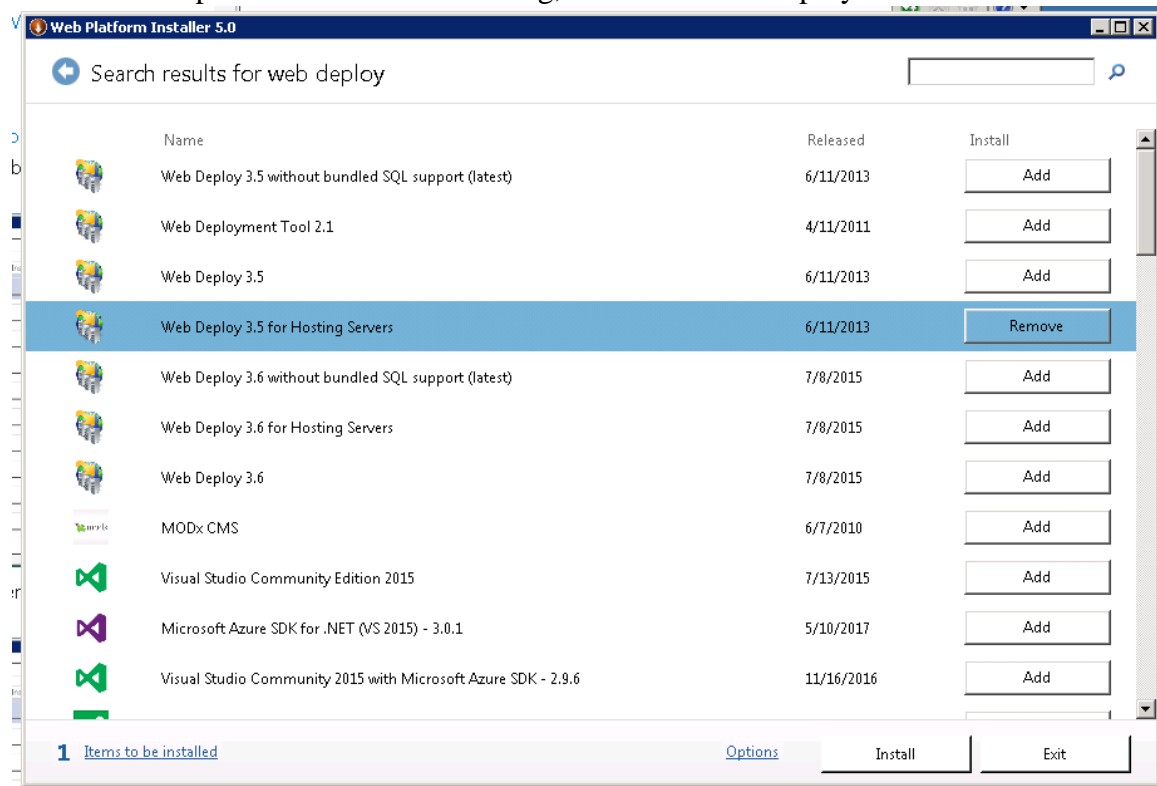
C:\Windows\Microsoft.NET\Framework\v4.0.30319>aspnet_regiis.exe -i_
```

3.8 Web Deploy 3.5

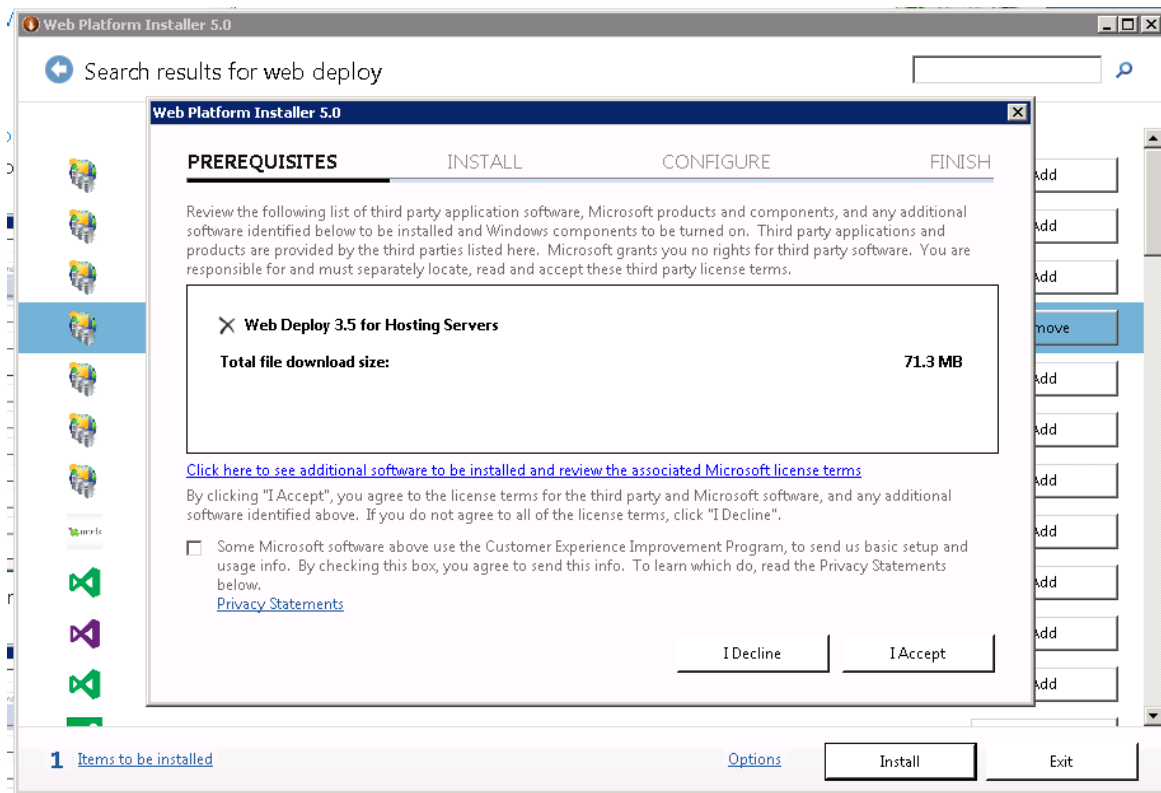
To install Web Deploy 3.5, you can simply click on the following link and it will take you to the page as shown below: <https://www.microsoft.com/web/downloads/platform.aspx>



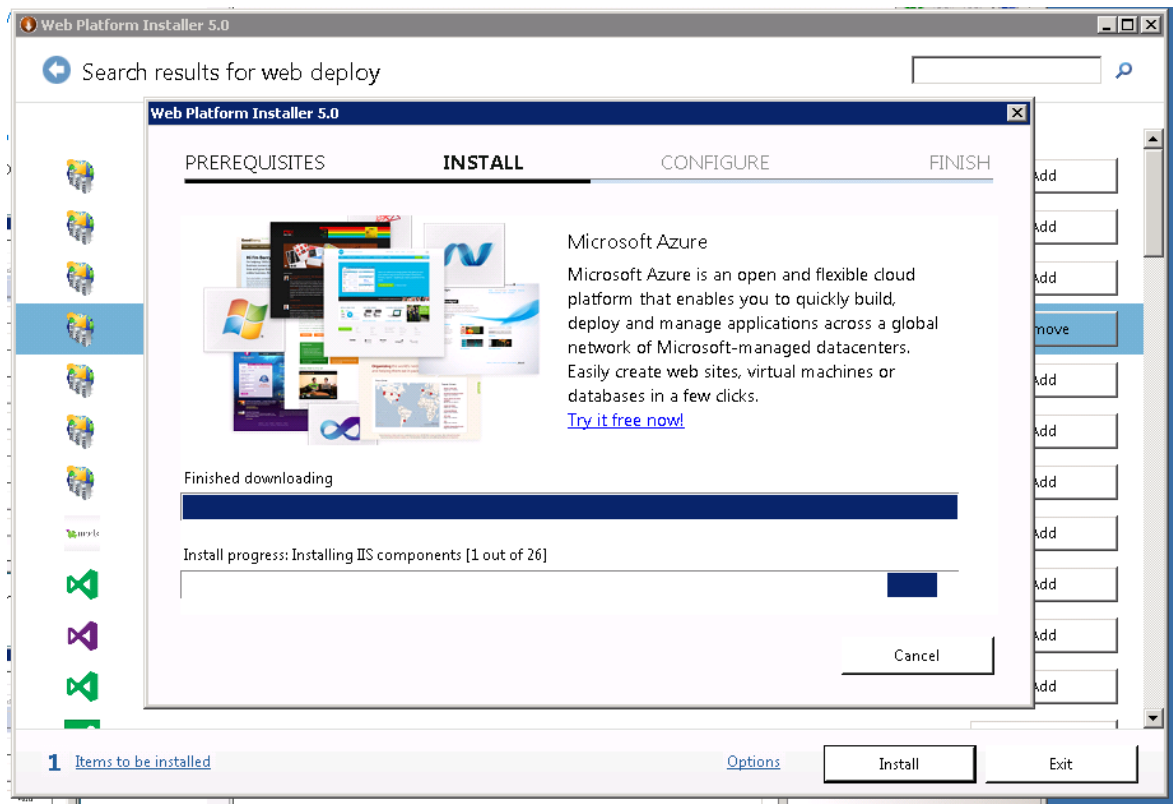
Once the web platform installer is running, search for web-deploy as shown below:



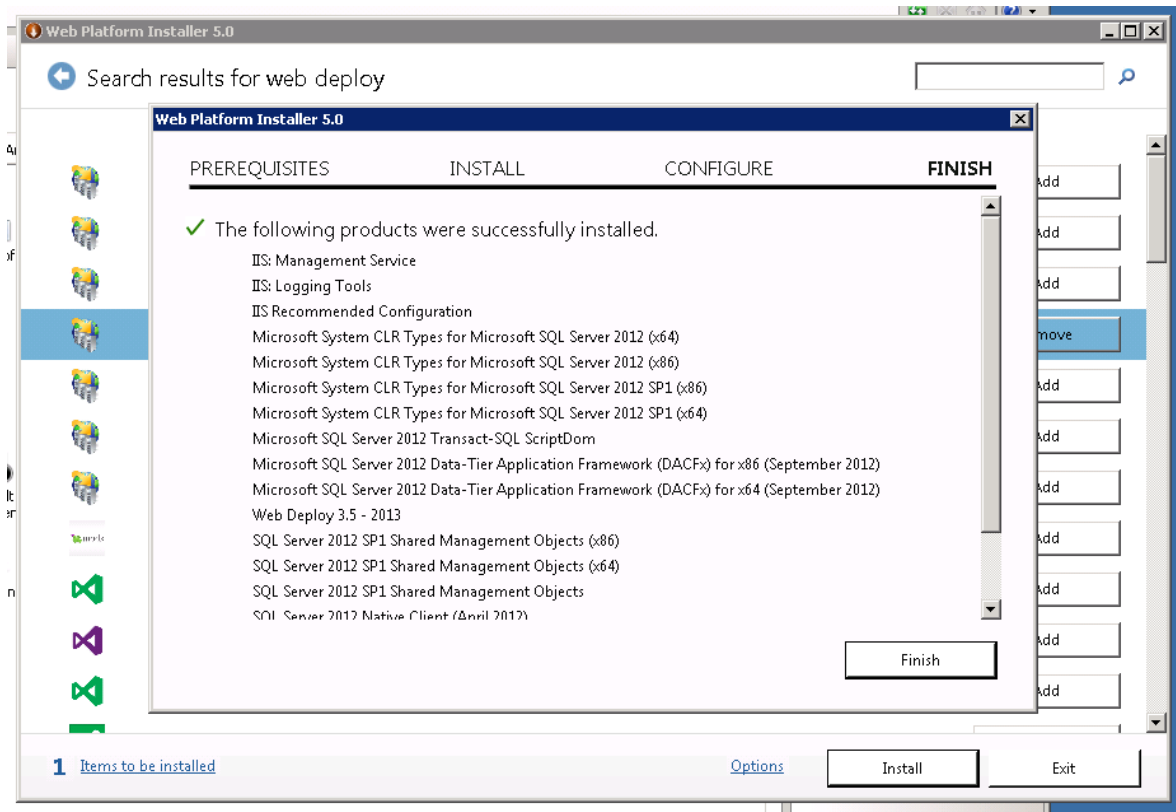
Click install and "I accept" as shown below:



The download will begin as shown below:



Once installation is complete, figure below will be shown and you have successfully installed Web Deploy 3.5:



3.9 SQL Management Studio

To install SQL Management Studio, you can simply click on the following link and it will take you to the page as shown below: <https://docs.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms>

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

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Download SQL Server Management Studio (SSMS)

10/09/2017 • 6 minutes to read • Contributors

SSMS is an integrated environment for managing any SQL infrastructure, from SQL Server to SQL Database. SSMS provides tools to configure, monitor, and administer instances of SQL. Use SSMS to deploy, monitor, and upgrade the data-tier components used by your applications, as well as build queries and scripts.

Use SQL Server Management Studio (SSMS) to query, design, and manage your databases and data warehouses, wherever they are - on your local computer, or in the cloud.

SSMS is free!

SSMS 17.x is the latest generation of *SQL Server Management Studio* and provides support for SQL Server 2017.

[Download SQL Server Management Studio 17.3](#)

[Download SQL Server Management Studio 17.3 Upgrade Package \(upgrades 17.x to 17.3\)](#)

The SSMS 17.x installation does not upgrade or replace SSMS versions 16.x or earlier. SSMS 17.x installs side by side with previous versions so both versions are available for use. If a computer contains side by side installations of SSMS, verify you start the correct version for your specific needs. The latest version is labeled *Microsoft SQL Server Management Studio 17*, and has a new icon:

Microsoft SQL Server Management Studio 17 Desktop app

Feedback Edit Share

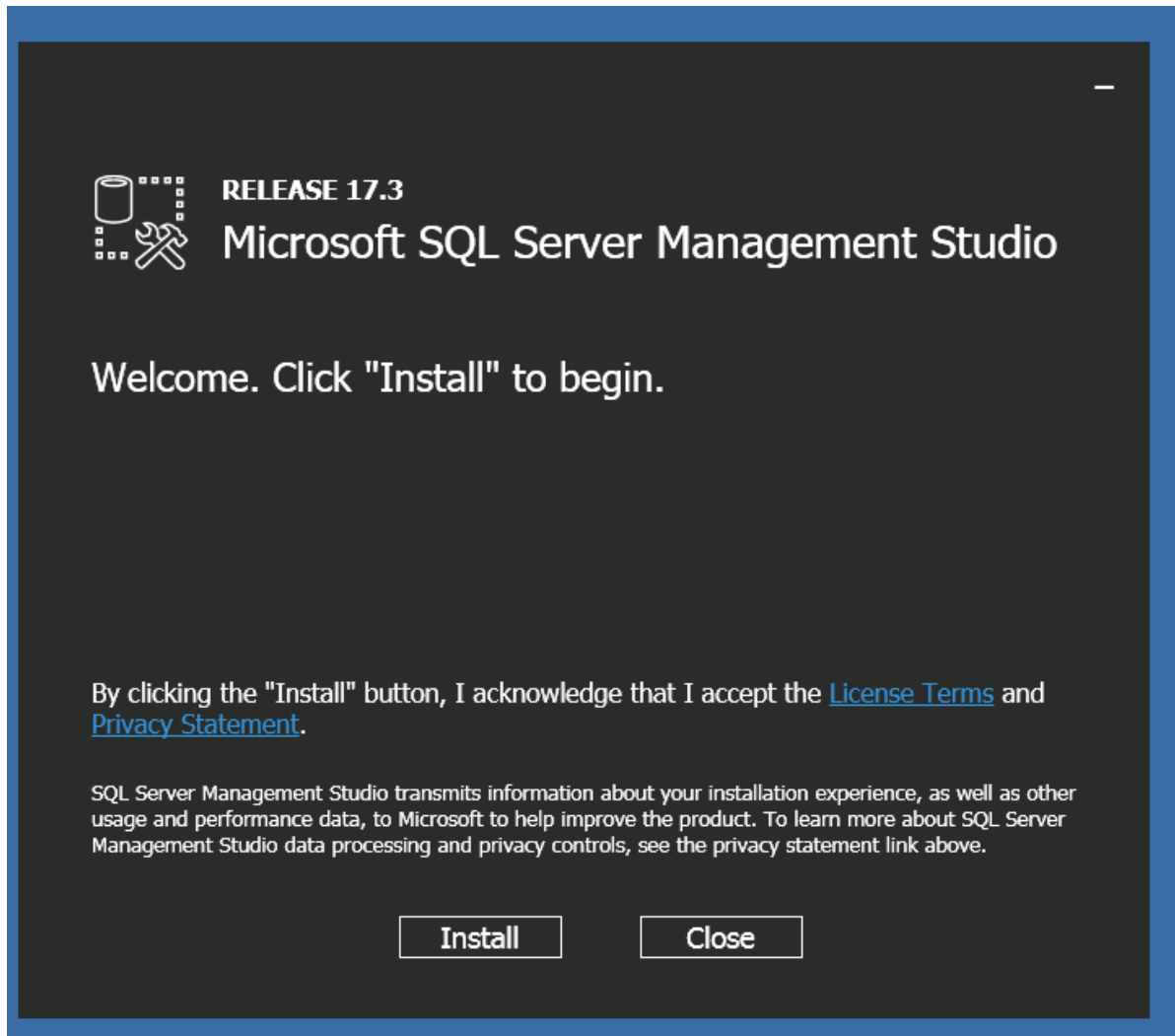
Theme Light

In this article

- [SQL Server Management Studio](#)
- [New in this Release](#)
- [Supported SQL offerings](#)
- [Supported Operating systems](#)
- [SSMS installation tips and issues](#)
- [Available Languages](#)
- [Release Notes](#)
- [Previous releases](#)
- [Feedback](#)
- [See Also](#)

Is this page helpful? YES

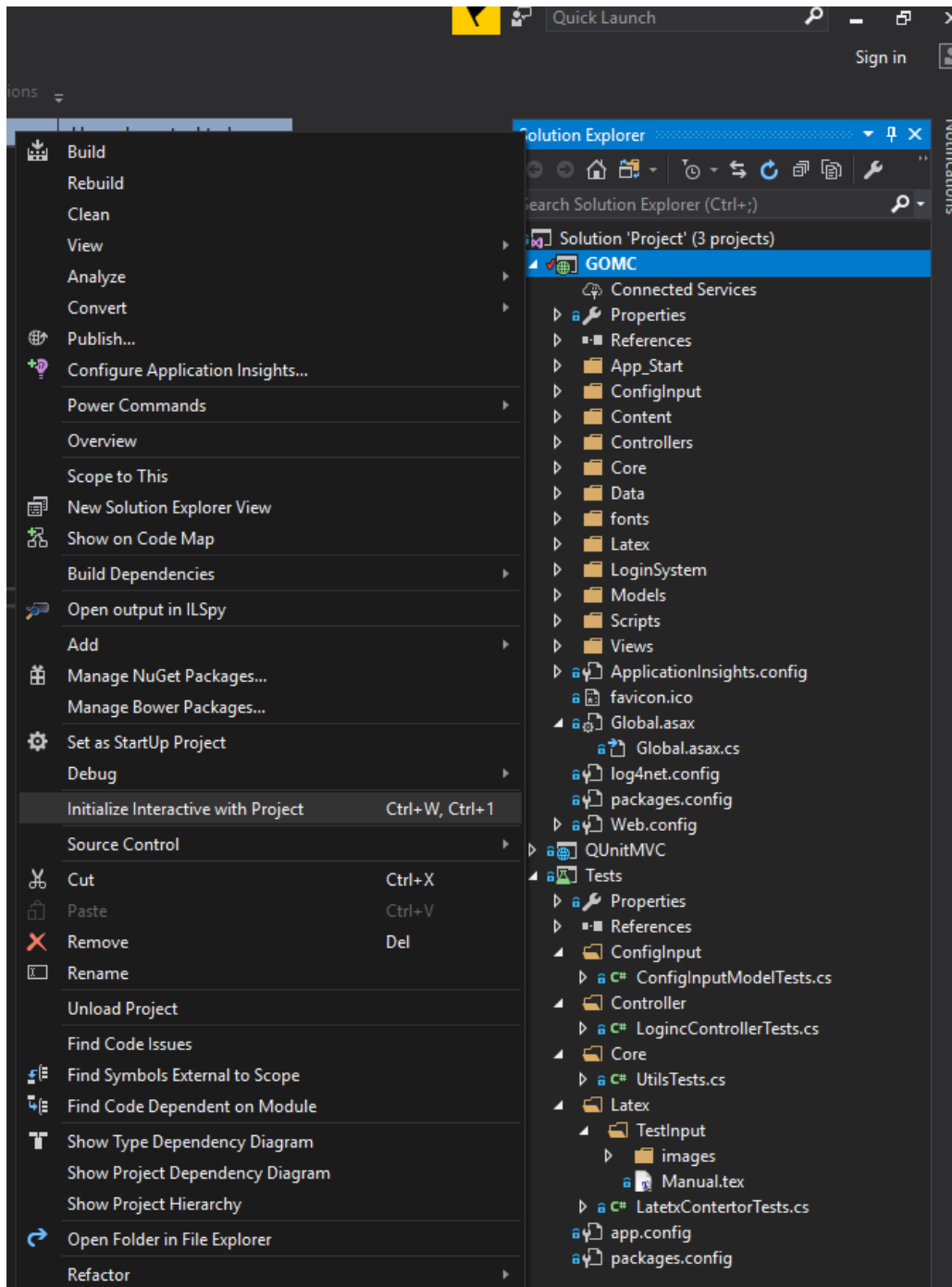
After clicking "Download SQL Server Management Studio 17.3", you will go through the download process as shown below. Simply press "Install":



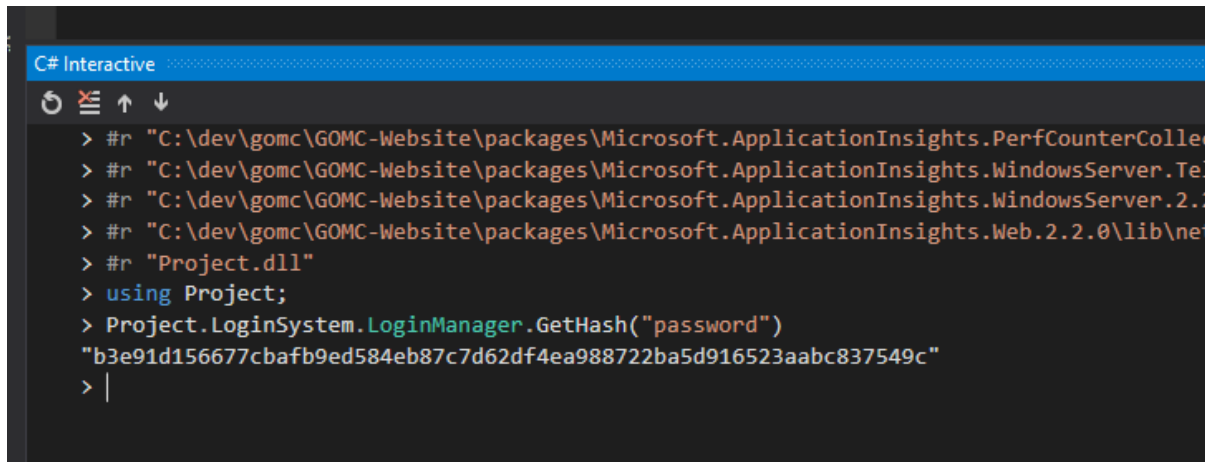
Using SQL Management studio, execute all queries in the SQL folder of the project. This will setup the database.

4. Generating Salted Password Hash

To generate a salted password hash, we can use the GetHashCode function. The simplest way to do so is to use Visual Studio's C# interactive. The first step is to initialize the interactive with project as shown below:



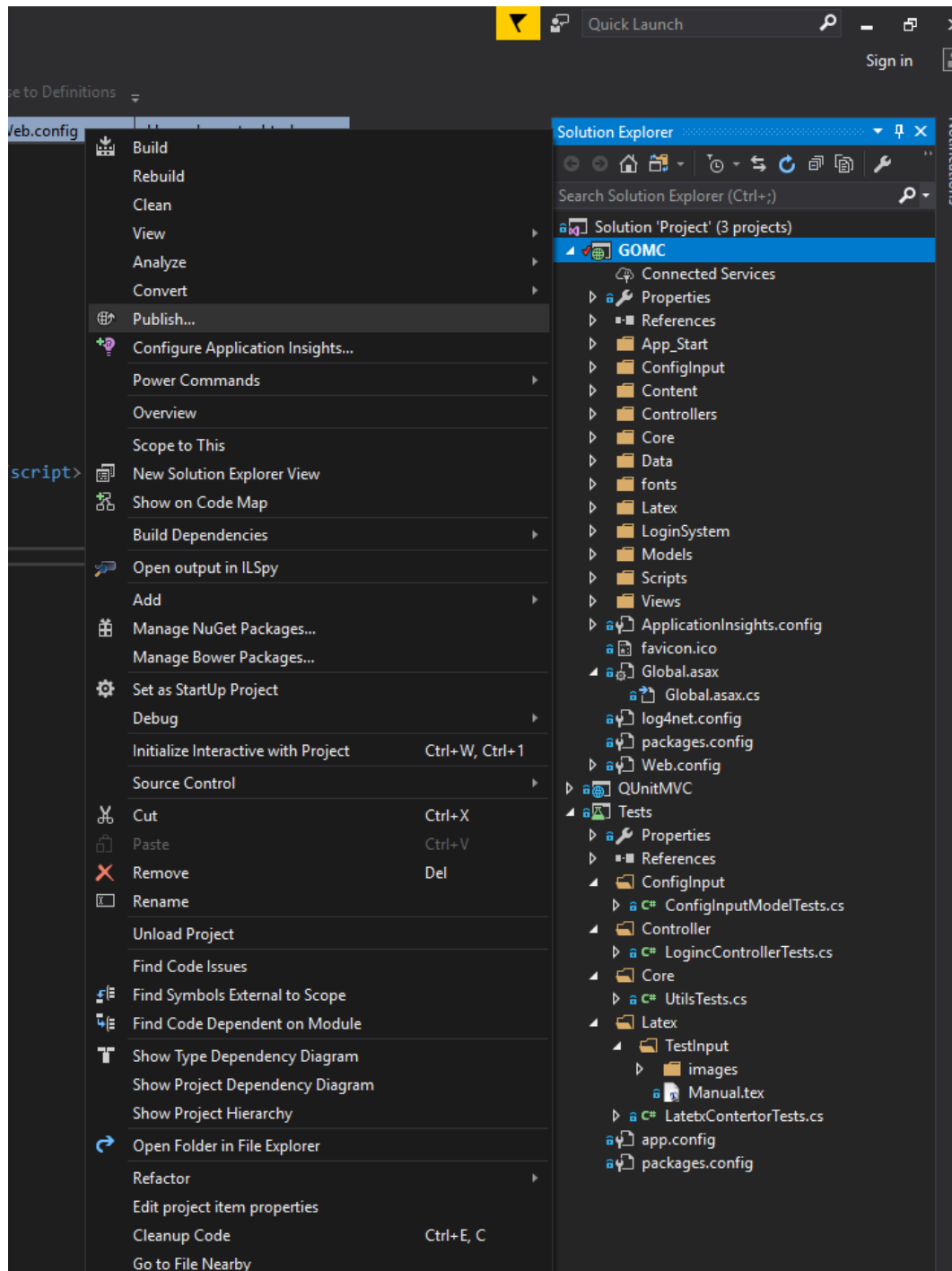
The interactive window will appear and now we can call the GetHashCode function directly with any password we want. We can use “password” as an example as shown below:



```
C# Interactive
> #r "C:\dev\gomc\GOMC-Website\packages\Microsoft.ApplicationInsights.PerfCounterCollector\
> #r "C:\dev\gomc\GOMC-Website\packages\Microsoft.ApplicationInsights.WindowsServer.Telemetry\
> #r "C:\dev\gomc\GOMC-Website\packages\Microsoft.ApplicationInsights.WindowsServer.2.2.0\
> #r "C:\dev\gomc\GOMC-Website\packages\Microsoft.ApplicationInsights.Web.2.2.0\lib\net
> #r "Project.dll"
> using Project;
> Project.LoginSystem.LoginManager.GetHashCode("password")
"b3e91d156677cbafb9ed584eb87c7d62df4ea988722ba5d916523aabc837549c"
> |
```

5. Publishing Website

To publish a website from Visual Studio from your development machine onto the web server, you use Web Deploy. Visual Studio already has that feature built in where all you do is right click on the project in the solution explorer and click "Publish" as shown below:



On the "Connection" section, set the server address and credentials as shown below (replace values with the actual values in your server):

The screenshot shows a 'Publish' dialog box with a 'Connection' tab selected. The dialog is titled 'Publish' and has a 'CustomProfile1' header. The 'Publish method' is set to 'Web Deploy'. The 'Server' field contains 'ec2-18-217-150-30.us-east-2.compute.amazonaws.com'. The 'Site name' field contains 'Gomc'. The 'User name' field contains 'gomc'. The 'Password' field is masked with dots, and the 'Save password' checkbox is checked. The 'Destination URL' field contains 'ahtaher.net'. There is a 'Validate Connection' button below the 'Destination URL' field. At the bottom of the dialog are four buttons: '< Prev', 'Next >', 'Save', and 'Cancel'.

Publish

Connection

Settings

CustomProfile1

Publish method: Web Deploy

Server: ec2-18-217-150-30.us-east-2.compute.amazonaws.com

Site name: Gomc

User name: gomc

Password: ••••••••

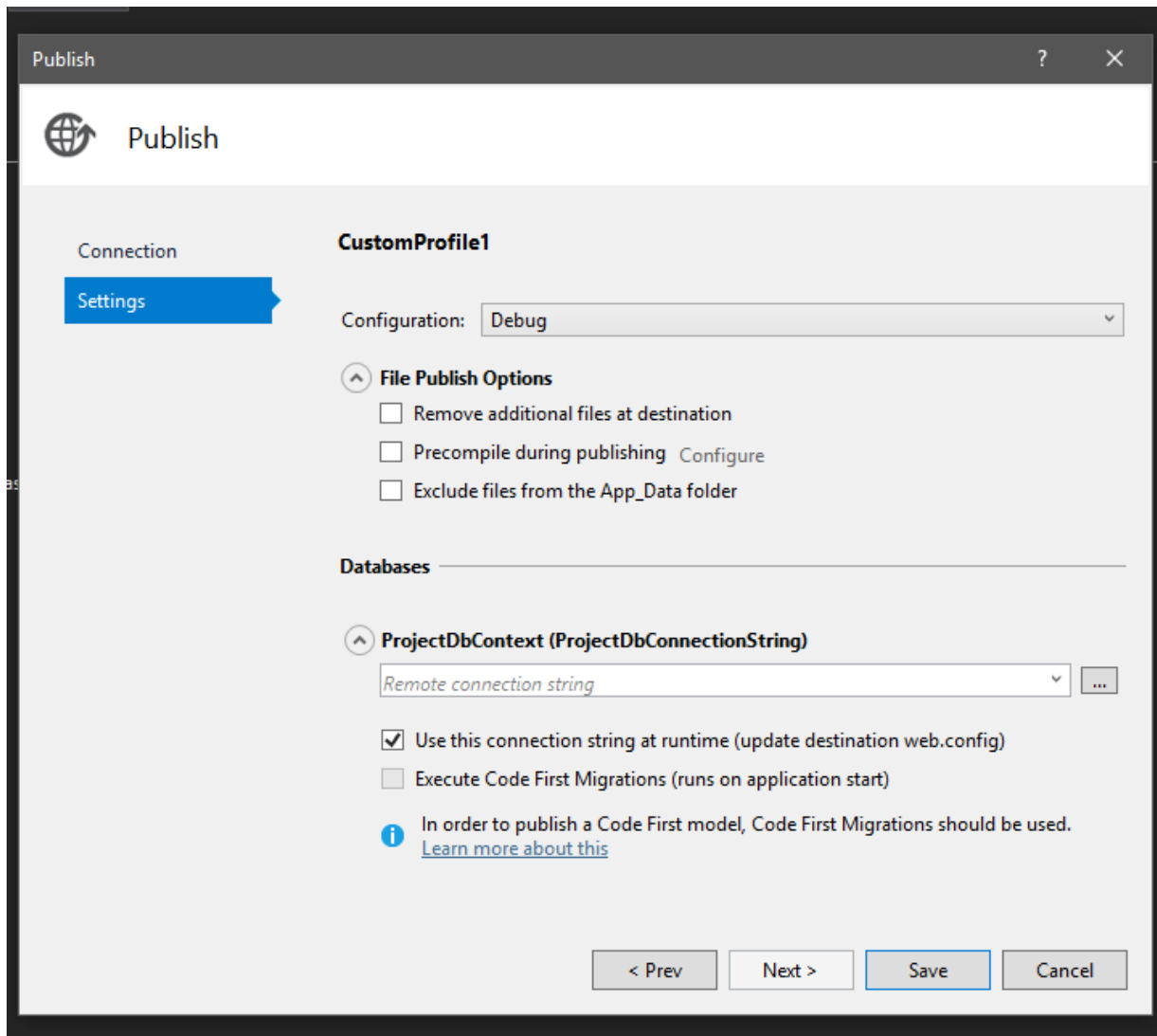
☒ Save password

Destination URL: ahtaher.net

Validate Connection

< Prev Next > Save Cancel

On the "Settings" section, make sure the selected options are checked and then click "Save"



The screenshot shows the 'Publish' dialog box in Visual Studio. The 'Settings' tab is selected under the 'Connection' section. The profile is 'CustomProfile1' and the configuration is 'Debug'. Under 'File Publish Options', three checkboxes are listed: 'Remove additional files at destination' (unchecked), 'Precompile during publishing' (unchecked, with a 'Configure' link), and 'Exclude files from the App_Data folder' (unchecked). Under 'Databases', the 'ProjectDbContext (ProjectDbConnectionString)' is selected. The 'Remote connection string' is entered in the text box. The checkbox 'Use this connection string at runtime (update destination web.config)' is checked, while 'Execute Code First Migrations (runs on application start)' is unchecked. An information message states: 'In order to publish a Code First model, Code First Migrations should be used. [Learn more about this](#)'. At the bottom, there are four buttons: '< Prev', 'Next >', 'Save' (highlighted with a blue border), and 'Cancel'.

Publish

Connection

Settings

CustomProfile1

Configuration: Debug

File Publish Options

- ☐ Remove additional files at destination
- ☐ Precompile during publishing [Configure](#)
- ☐ Exclude files from the App_Data folder

Databases

ProjectDbContext (ProjectDbConnectionString)

Remote connection string

- ☒ Use this connection string at runtime (update destination web.config)
- ☐ Execute Code First Migrations (runs on application start)

i In order to publish a Code First model, Code First Migrations should be used. [Learn more about this](#)

< Prev Next > Save Cancel