Rainbow CTI & Media Bridge (CISCO) - INSTALLATION GUIDE

Rainbow CTI & Media Bridge

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1 Document History

Edition	Date	Changes / Comments / Details
01	16/02/2018	Initial Installation Guide created
02	24/09/2018	Screenshots for application UI has been added
03	19/08/2019	Pre-requisites section has been updated
04	22/08/2019	Screenshot has been updated for screen where CISCO connectivity details are provided
05	07/01/2020	Copyright information has been updated for pages footer
06	19/11/2020	**Section 3** Details about Pre-requisites has been updated according to Windows OS version. **Section 3.1** New section about IIS & .NET Framwork Configurations for Windows 7 has been added. **Section 3.2** New section about IIS & .NET Framwork Configurations for Windows 10 has been added. **Section 3.3** New section about IIS & .NET Framwork Configurations for Windows Server 2012,2016 & 2019 has been added. **Section 4** Installation process and related screenshots have been updated.
07	07/03/2021	Legal notice has been updated. **Section 3.1** Section about IIS & .NET Framework Configuration about Windows 7 has been removed and remaining sections have been renumbered. **Section 4** Some steps and screenshots related to Rainbow CTI & Media Bridge Installation have been removed. **Section 6** Screenshot has been updated.
08	25/05/2021	**Section 4** Screenshots have been added. **Section 6** Screenshot has been added. Information about application startup has been updated. Screenshot has been updated.

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2 Introduction

Rainbow CTI & Media Bridge works with a number of telephone systems e.g. Cisco Call Manager, Avaya IP Office, NEC 3C etc. This document describes the installation of Rainbow CTI and Media Bridge for Cisco Unified Communication Manager.

Rainbow CTI & Media Bridge application is installed on a local machine in customer premises. It connects with Rainbow Server to push the list of extensions so that they can be associated to Rainbow Users for CTI and VOIP calling, and it also interacts with third-party telephone systems to monitor those extensions for signaling information and call controls.

This document will take you step by step through the installation process. Everything is explained in detail to get hold of the understanding of the solutions architecture.

Note: ***Red Boxes and Arrows indicate the functional areas on every screen or window***.

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3 Pre Requisites

Following configurations have to be made in the IIS configurations as pre-requisites on the machine before proceeding with Rainbow CTI & Media Bridge installation.

Following configurations have to be done for all applicable version of Windows i.e. Windows 10 and Windows Server 2012, 2016 & 2019.

IMPORTANT: ***When installing the Rainbow CTI & Media Bridge, you must be logged in as a Local Administrator. Failing to do this may prevent that application from being installed correctly.***

3.1 IIS & .NET Framework Configurations for Windows 10

Please perform following configurations of IIS & .NET Framework on a machine that is operating on Windows 10 OS prior to installation of Rainbow CTI & Media Bridge on it.

1. Click on Start Icon and open Control Panel as displayed below:

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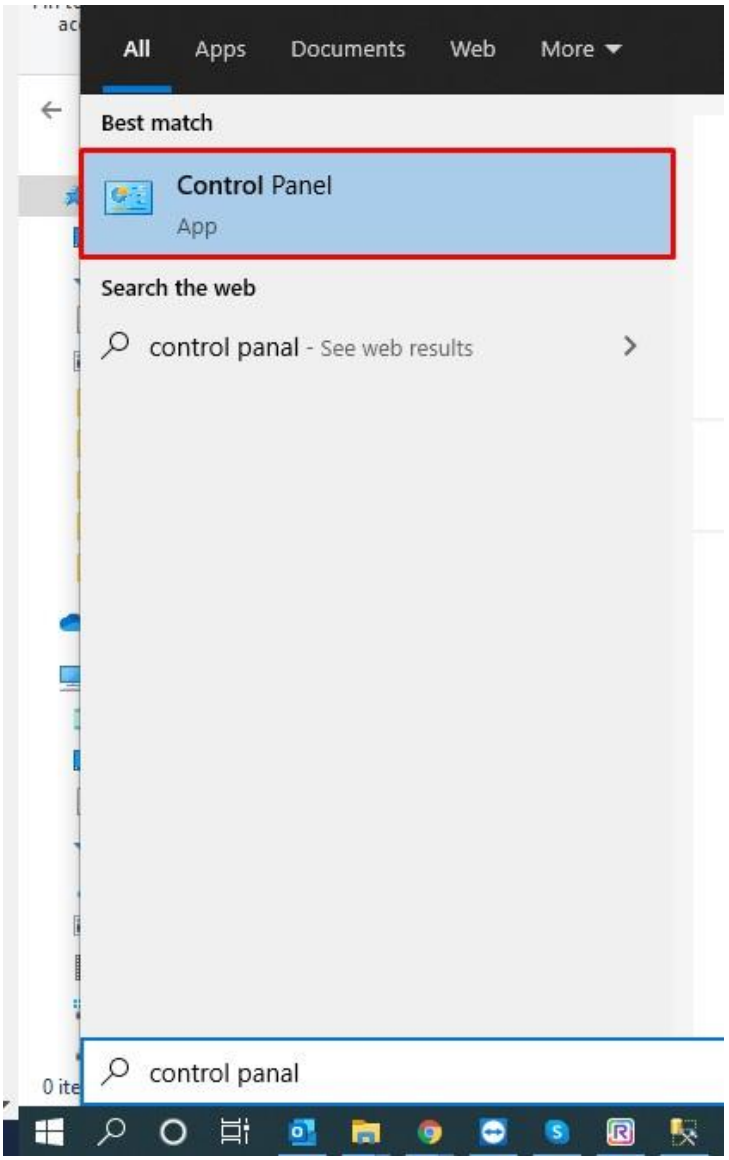

2. Select **Programs and Features** as highlighted below:

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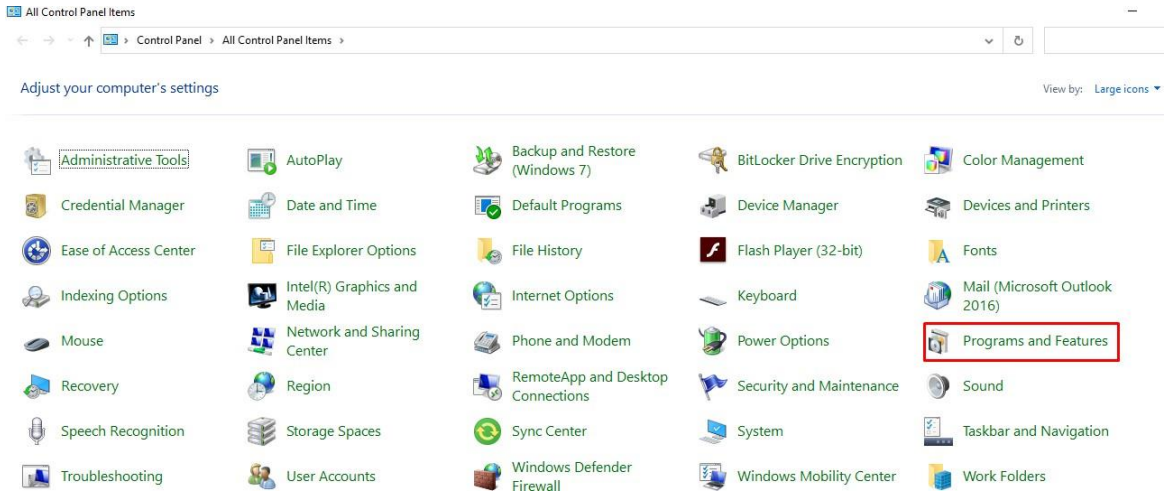
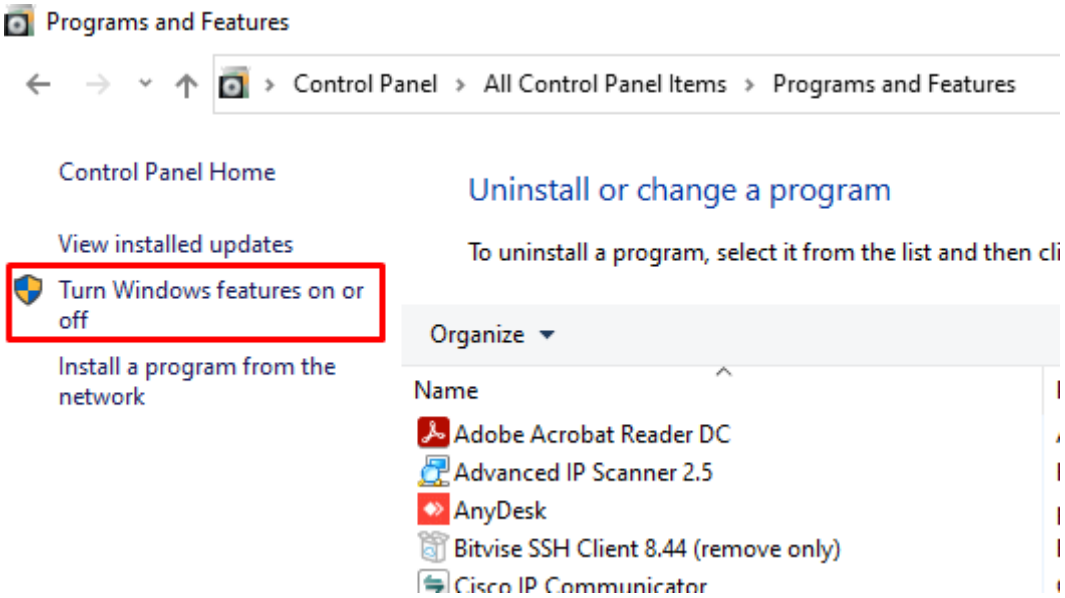


3. Click on **Turn Windows features on or off** option in the left hand menu as highlighted below:



4. You need to turn on a Windows feature by checking the boxes next to those features. Expand **.NET Framework 3.5 (includes .NET 2.0 and 3.0)** by clicking on ⊞ icon next to it as displayed below:

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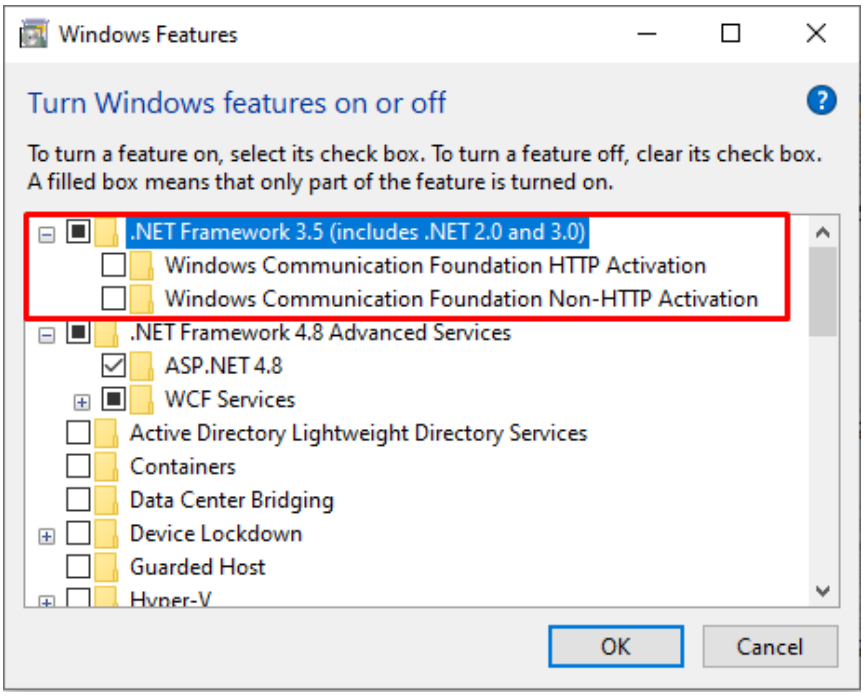
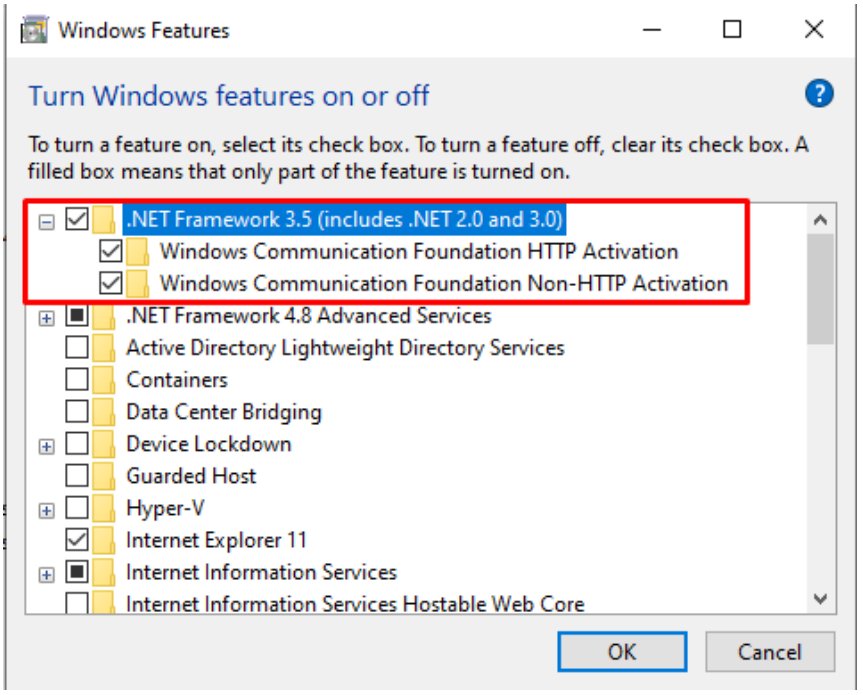


5. Check the boxes next to both options displayed below **.NET Framework 3.5 (includes .NET 2.0 and 3.0)** as shown:



6. Expand **Internet Information Services** (IIS) as displayed below:

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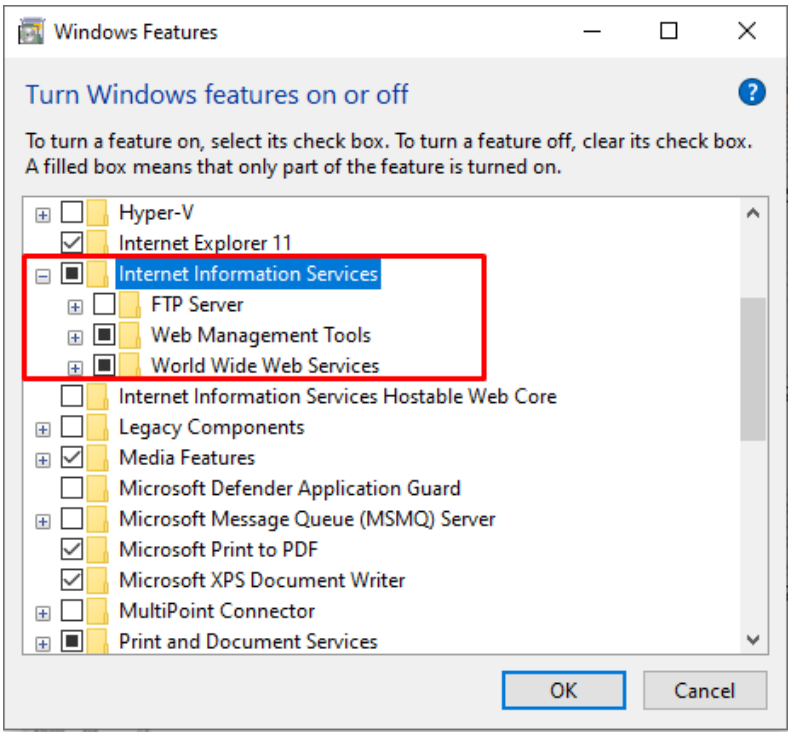
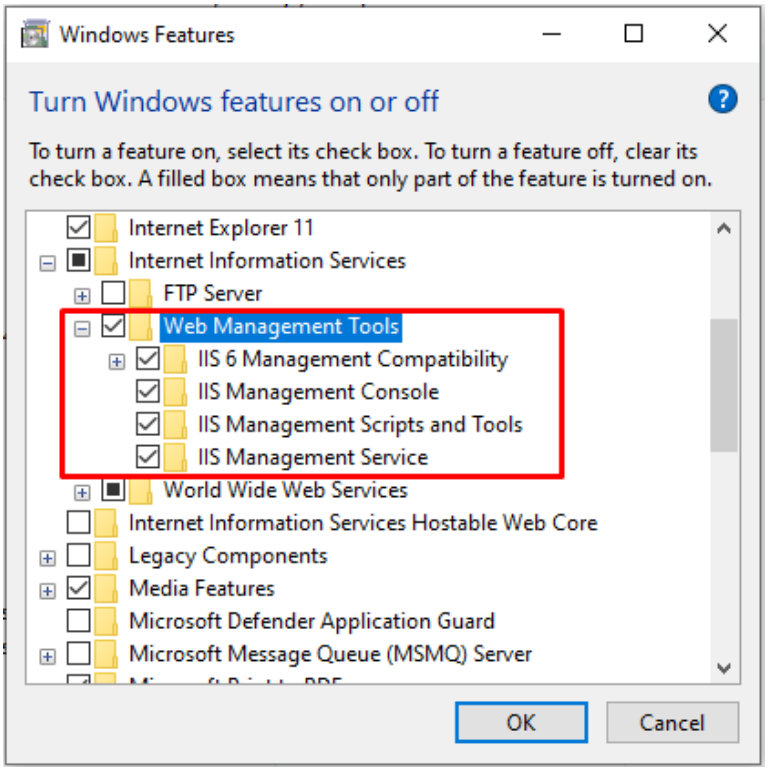


7. From the expanded options displayed expand **Web Management Tools.** Now check the boxes next to **IIS Management Console, IIS Management Scripts and Tools** and **IIS Management Service** options as shown below:



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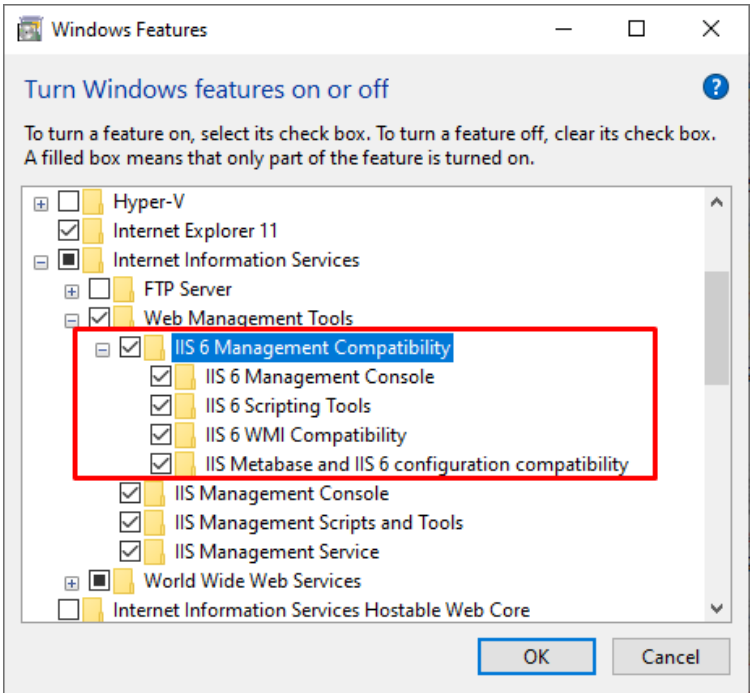
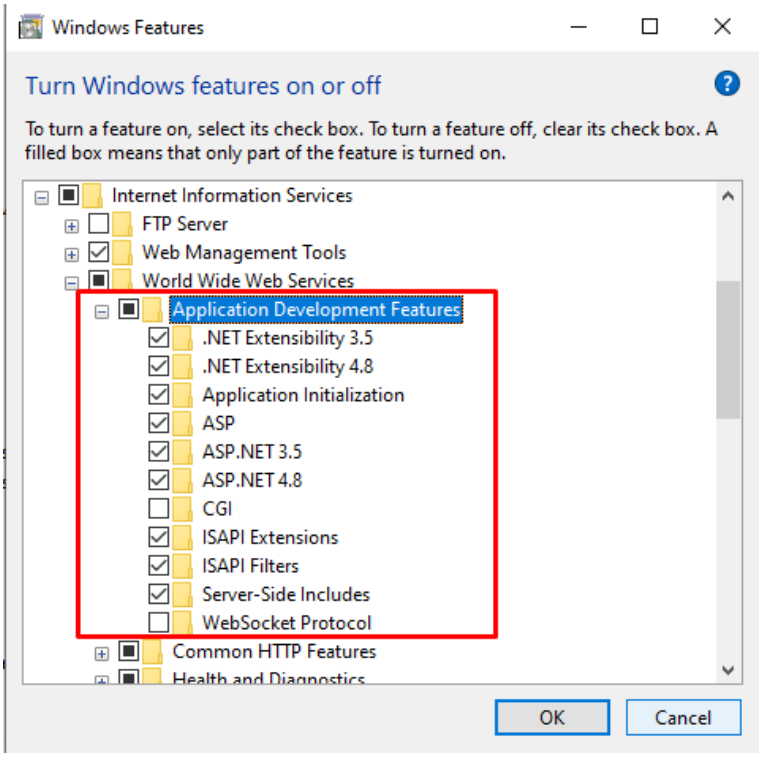
8. Expand **IIS 6 Management Compatibility** and check all the boxes next to the features listed under **IIS 6 Management Compatibility** as shown below:



9. Close expanded menu of **Web Management Tools** by clicking on the ⊟ icon displayed next to it and expand **Application Development Features** option**.** Check all the boxes next to the features listed in the menu except for **CGI** and **WebSocket Protocol** as shown below:



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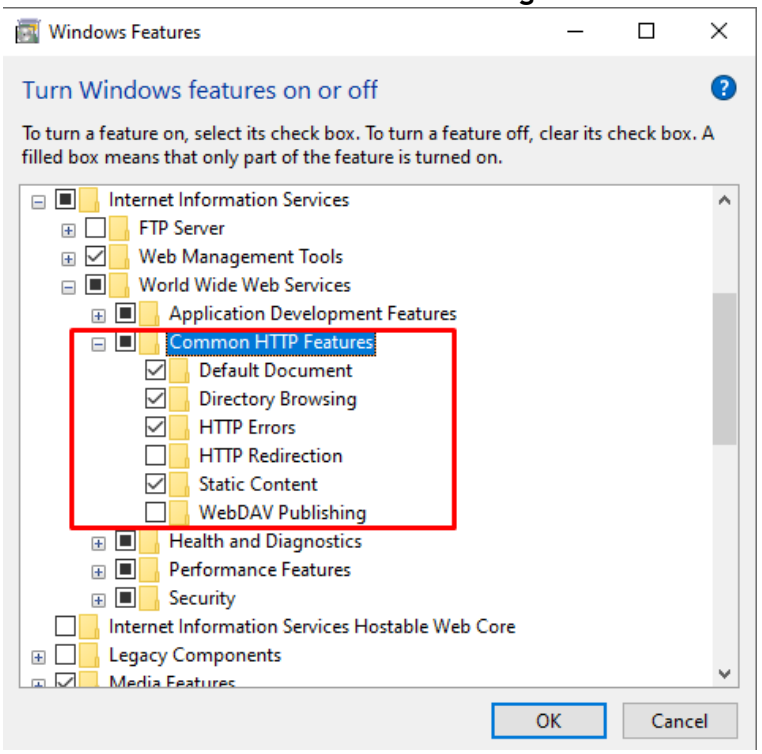
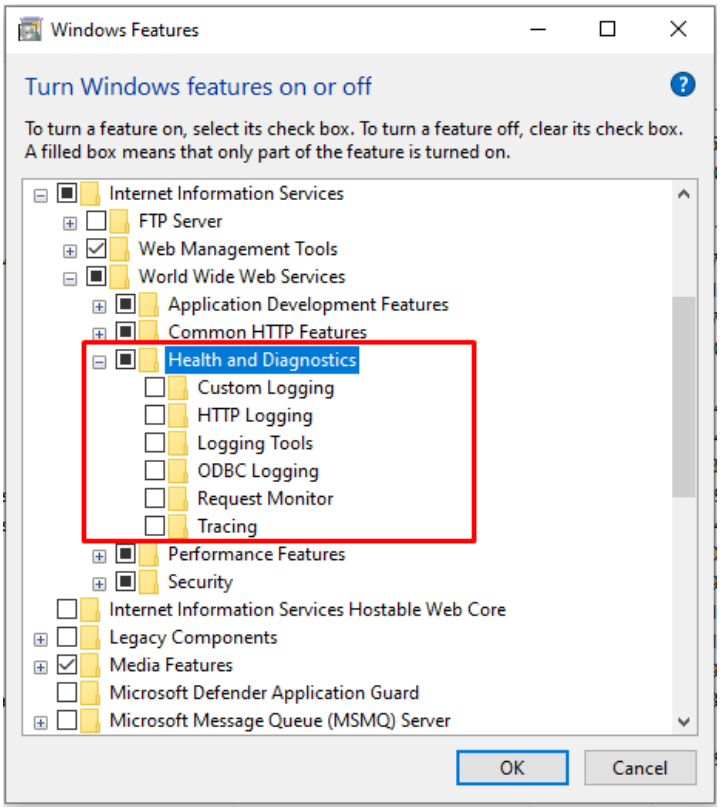
10. Now expand **Common HTTP Features** option**.** Check all the boxes next to the features listed in the menu except for **HTTP Redirection** and **WebDAV Publishing** as shown below:



11. Now expand **Health and Diagnostics** option**.** Following options are displayed:



Check the boxes next to **HTTP Logging** and **Request Monitor** options as shown below:

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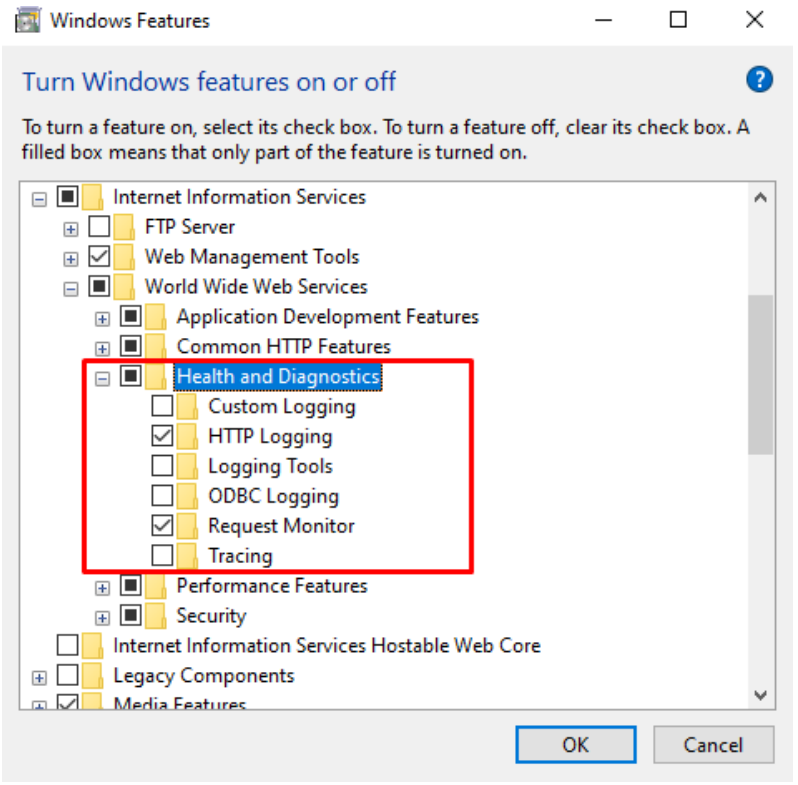
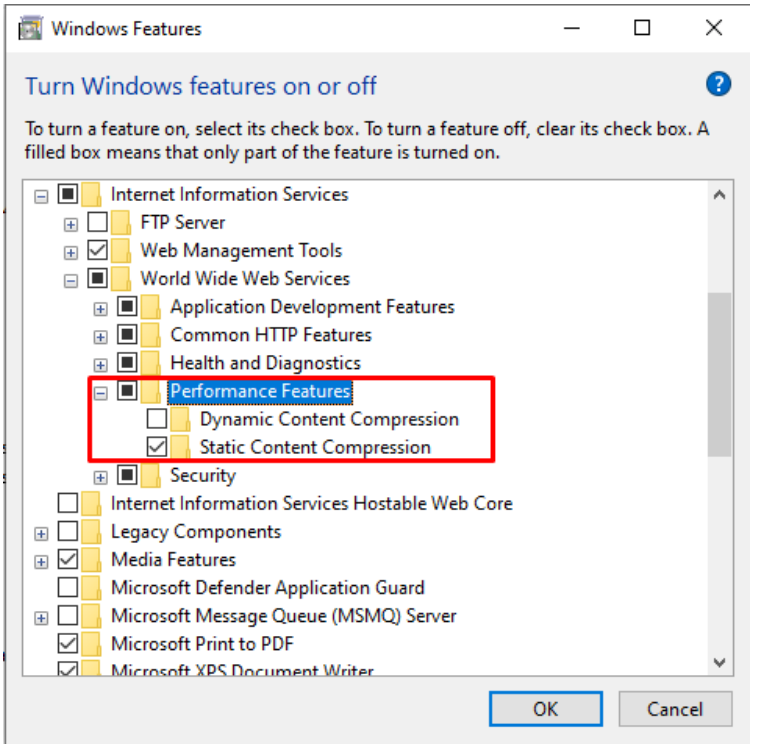


12. Now expand **Performance Features** option**.** Check the box next to **Static Content Compression** option as shown below:



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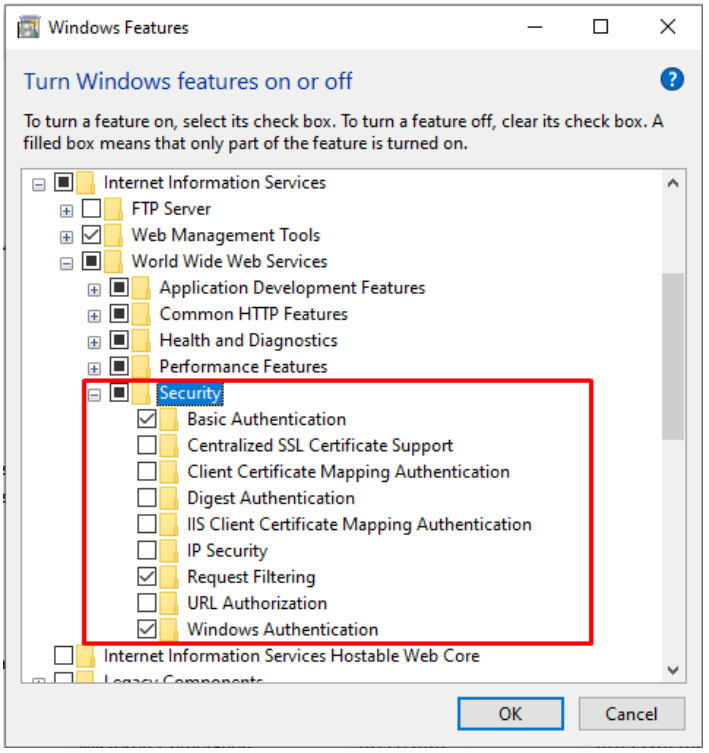
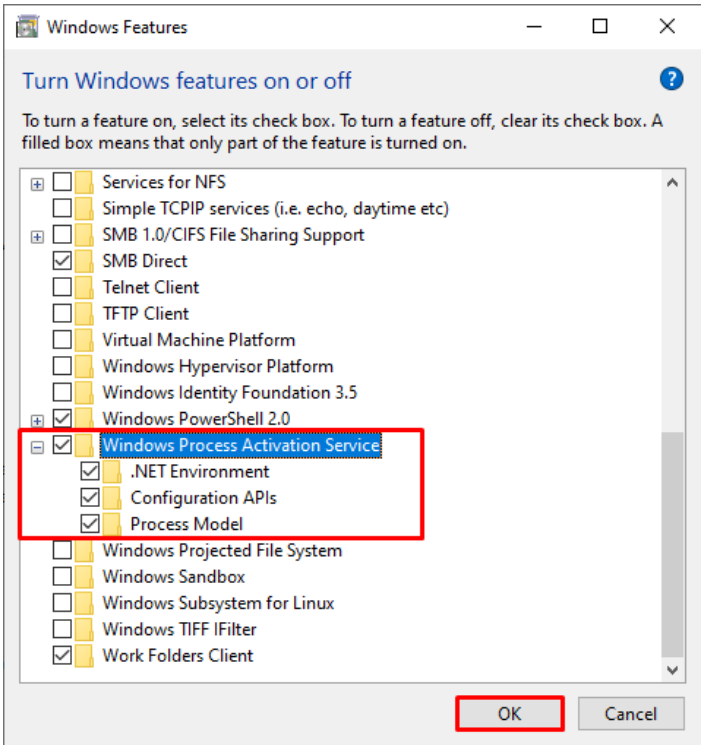
13. Now expand **Security** option**.** Check the box next to **Basic Authentication, Request Filtering** and **Window Authentication** options as shown below:



14. Now expand **Windows Process Activation Service** option**.** Check the boxes next to all 3 displayed options as shown below. Once you have made all the above configurations, click on the OK button highlighted below:



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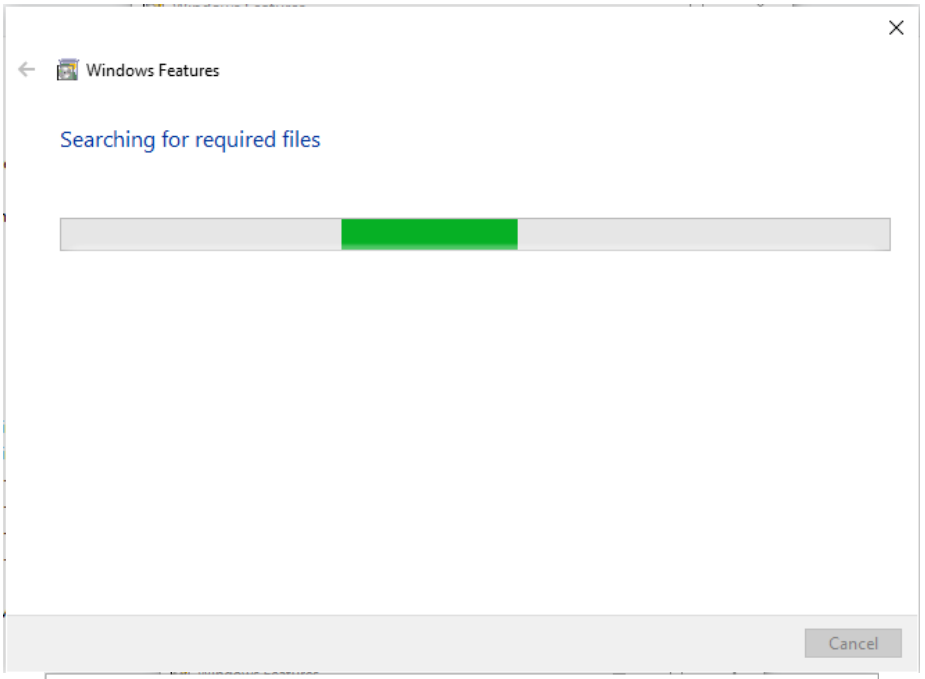
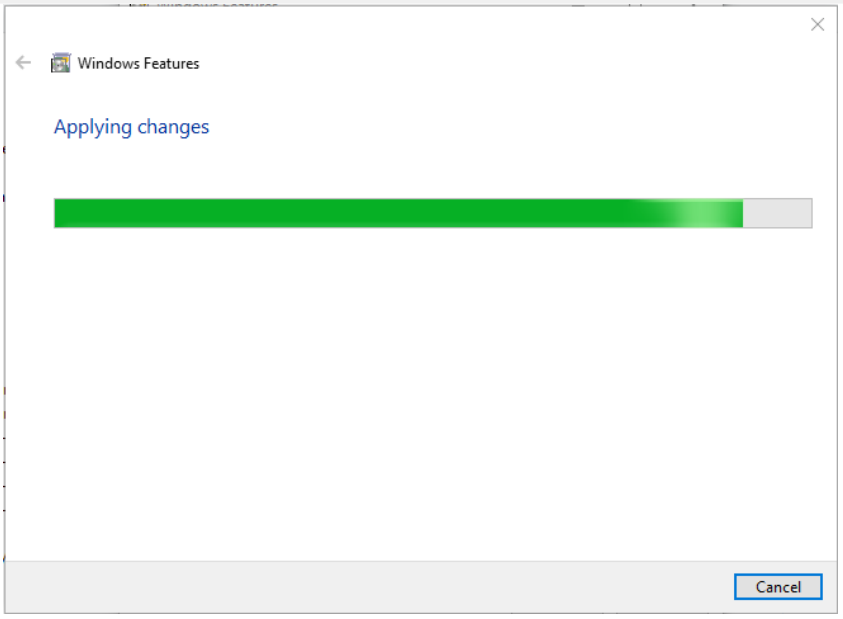
A new window will be displayed once you press OK button as shown below:





Note: *When the above progress window disappears, please restart your computer. This will ensure that the new configuration can take effect.*

15. Now go back to the **Control Panel** and select **Administrative Tools** as highlighted below:

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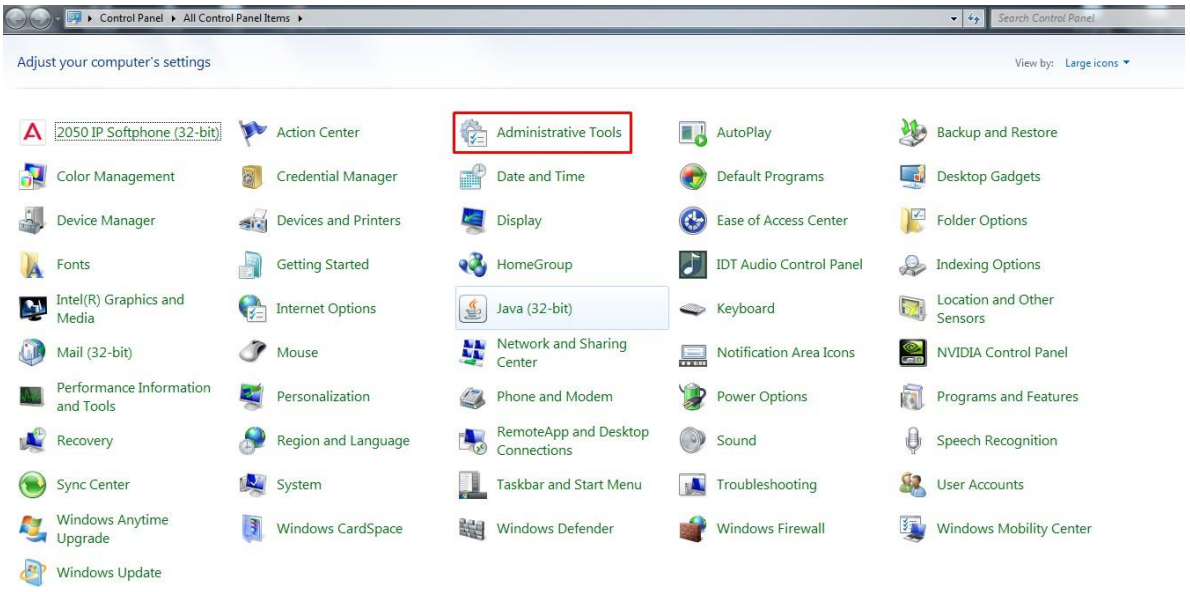
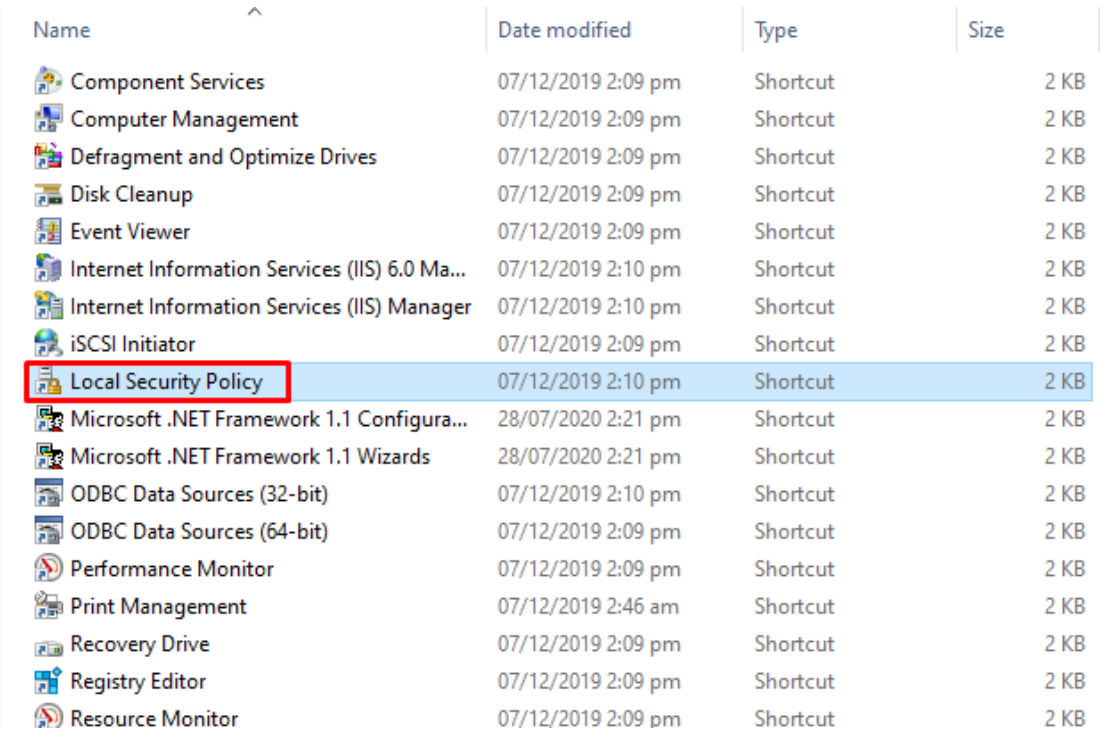


16. Select **Local Security Policy** as highlighted below:



17. Double Click on **Local Policies** option in the left menu and following options will be displayed:

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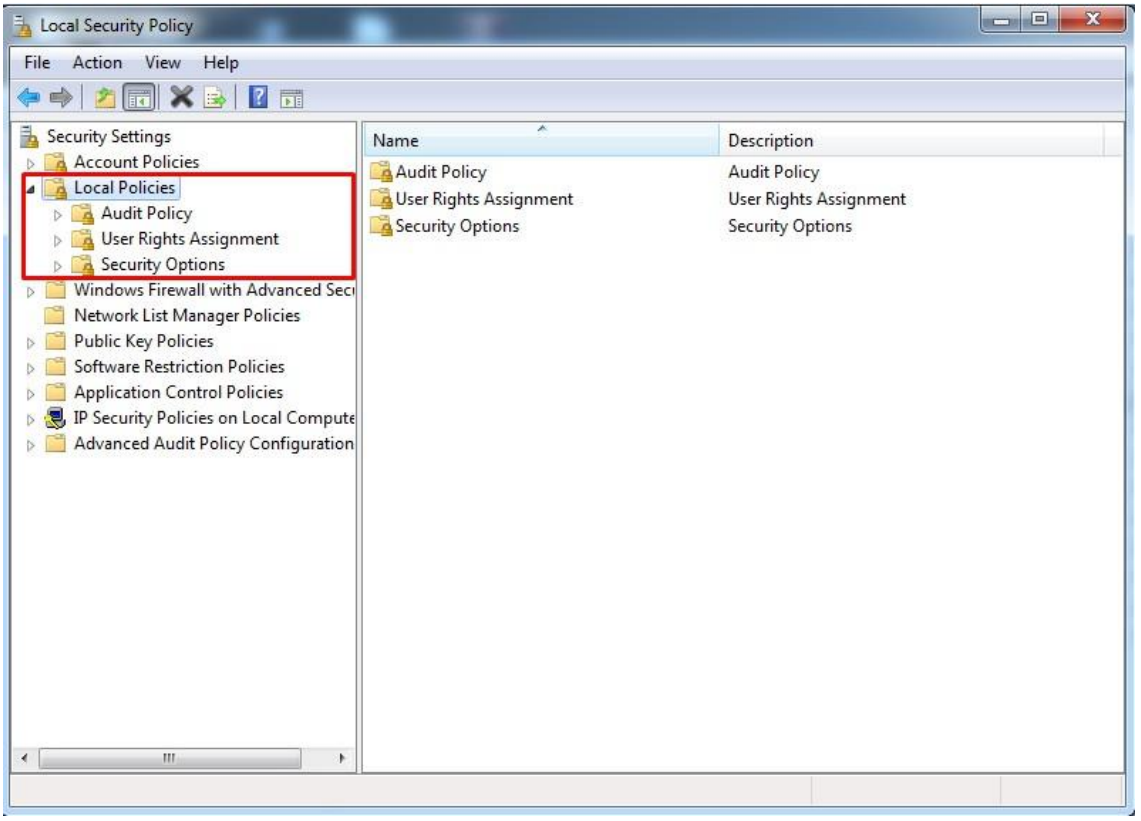
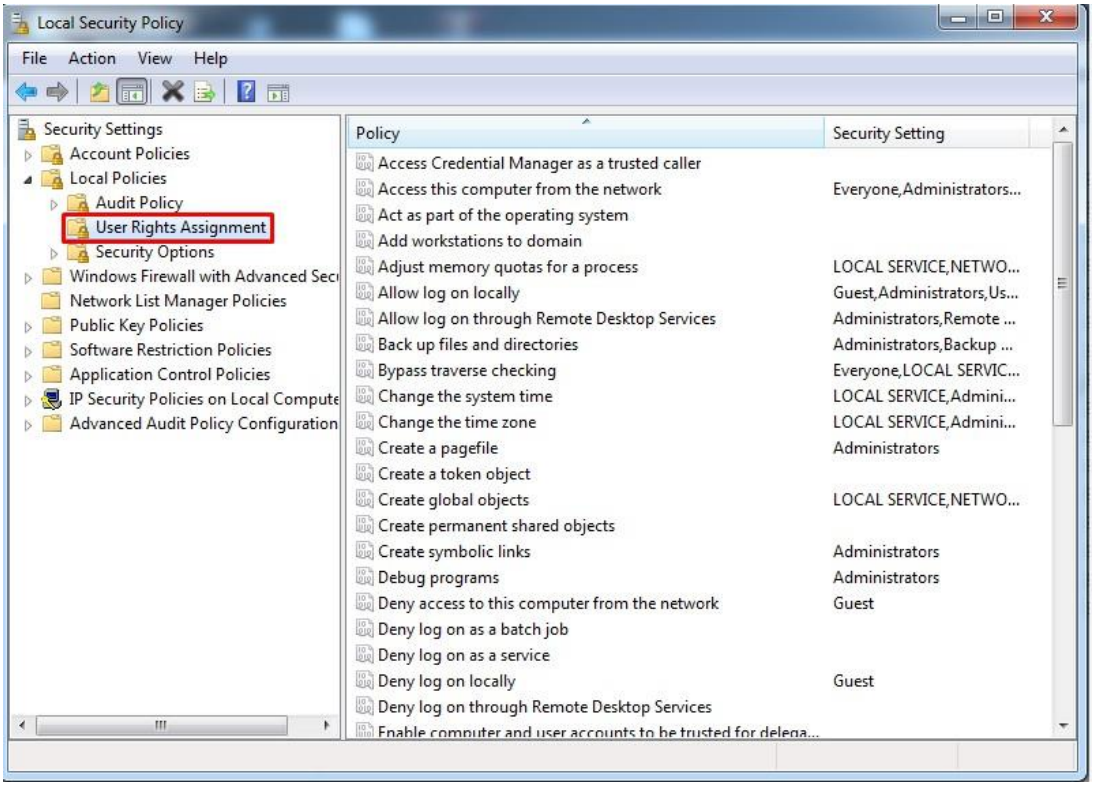


18. Double click on **User Rights Assignment** option from the displayed menu as highlighted below and the right hand screen will display a list of rights as shown below:



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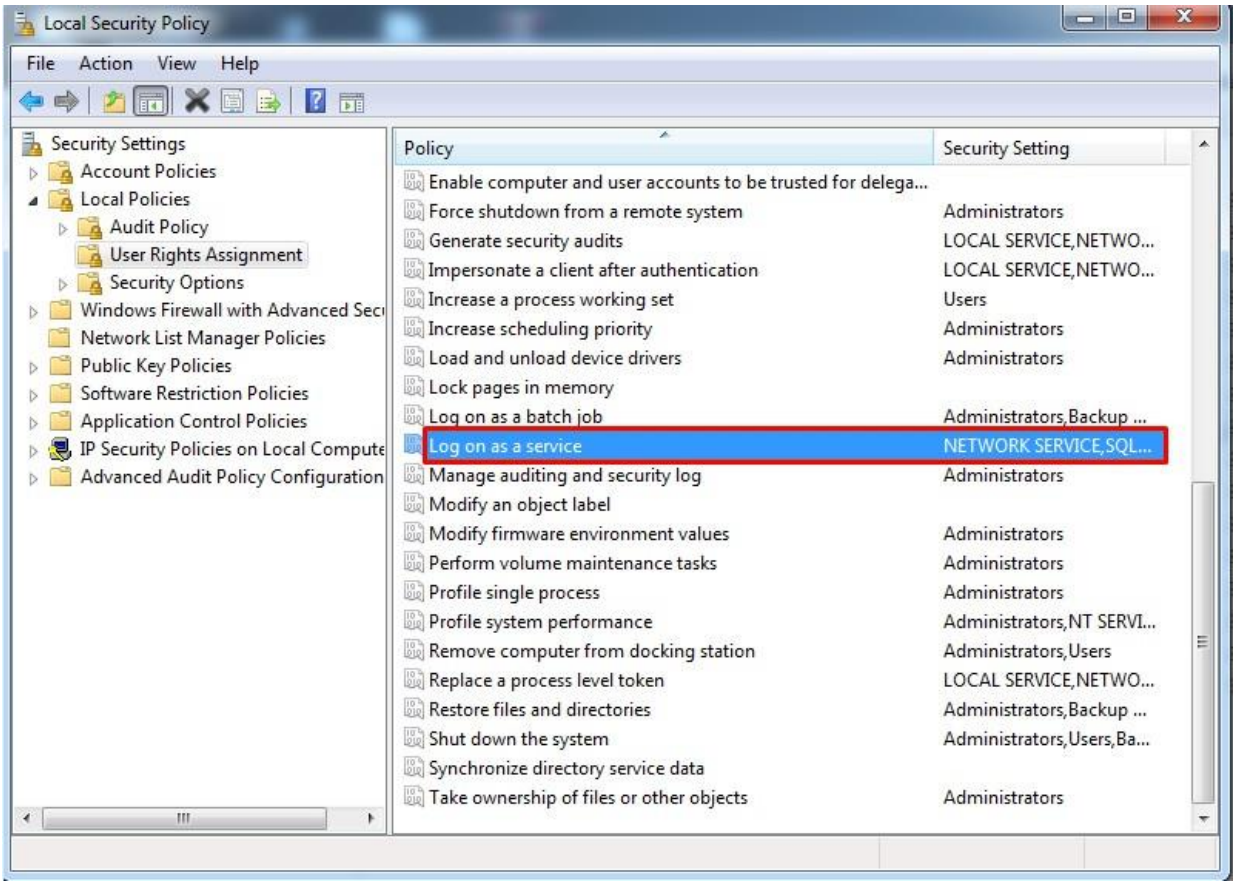
19. Now go to the right hand side panel, double click on the command **Log on as a service**, as shown below:



20. Click on **Add User or Group**, as shown below:

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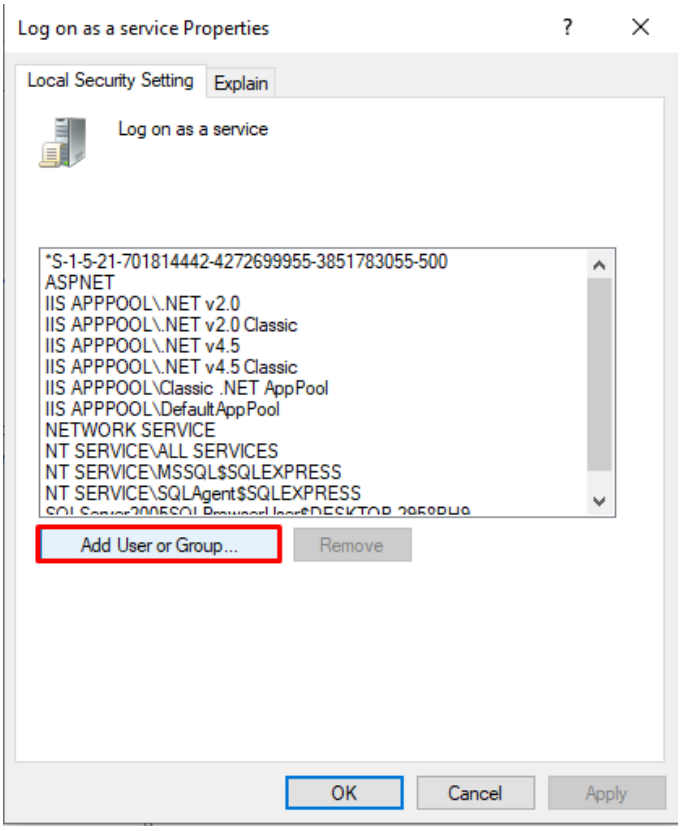
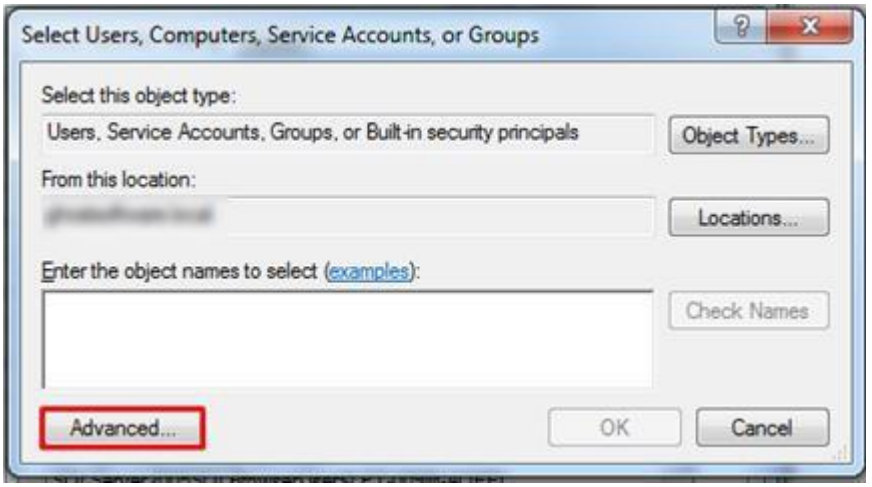


21. To add a New User, click on the highlighted button **Advanced**.



22. To display the **list of users**, click on the highlighted button **Find Now** as highlighted below:

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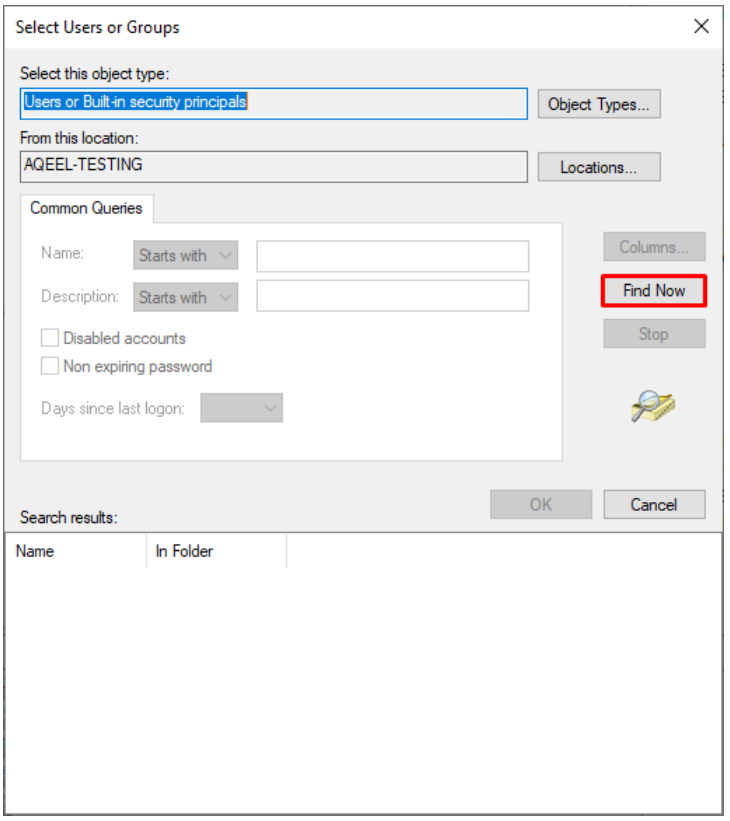

A list of users is displayed in the lower section Select the **Administrator** and click **OK** as shown below:

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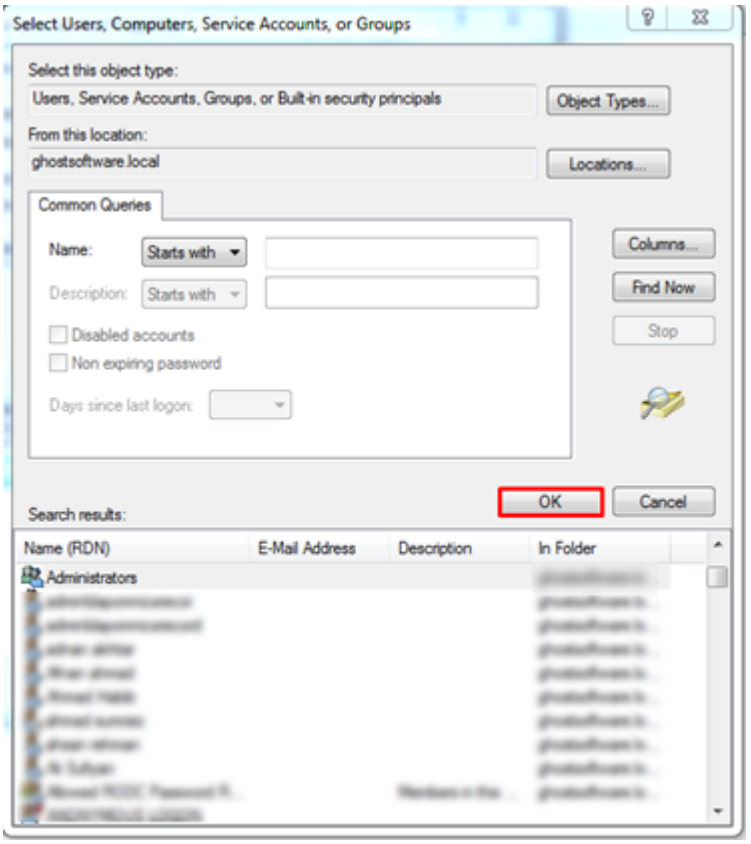
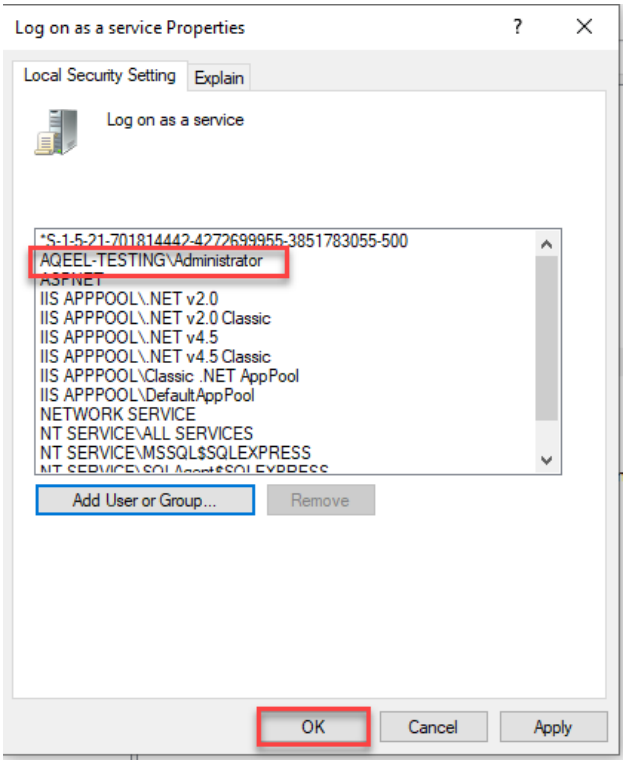


23. The **User** has now been selected so click **OK** to finish the process.

24. The user is shown below, under **Local Security Settings** section. Now click **OK**, as shown below.



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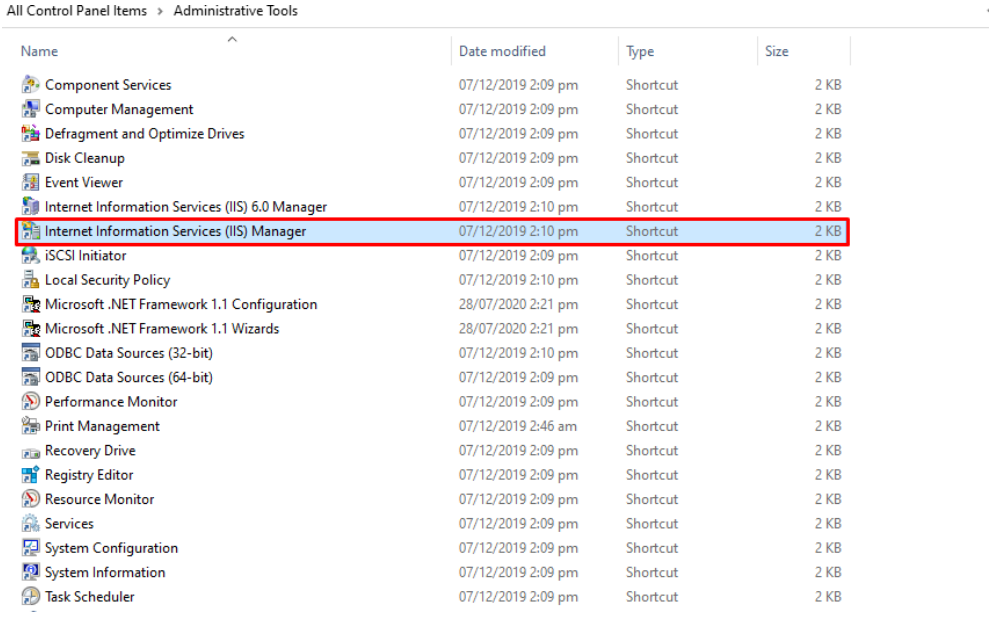
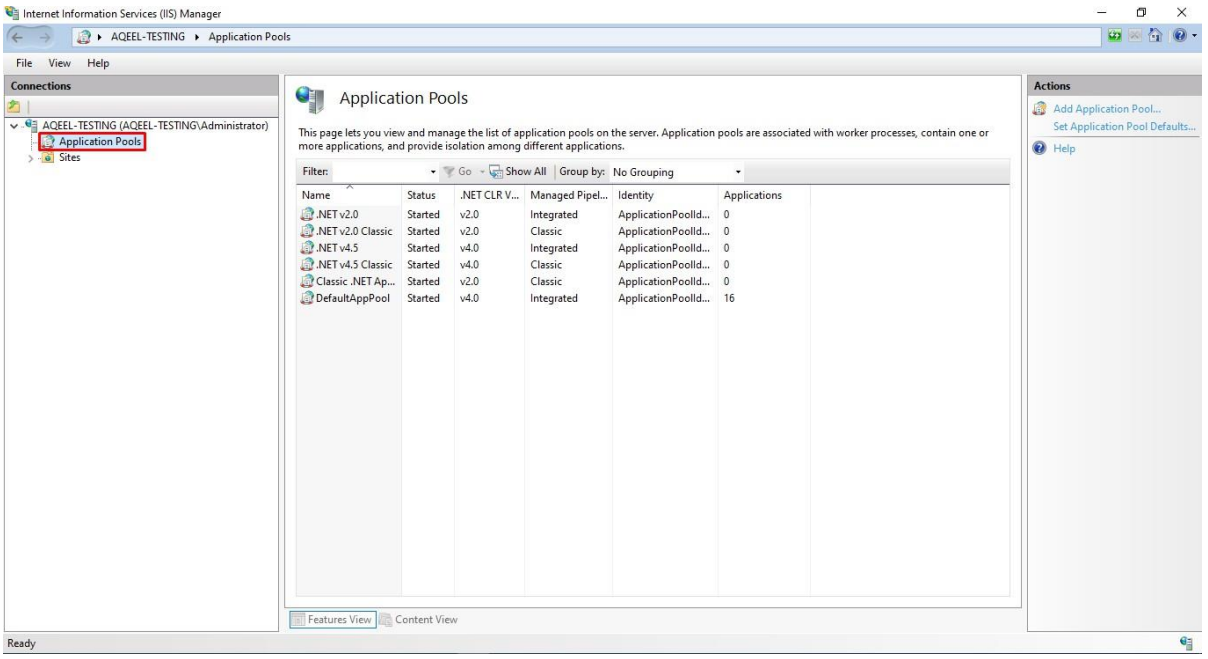
25. Close the **Local Security Policy** window, and also close the **Administrative Tools** window.
26. Go to the **Control Panel** select **Administrative Tools** and double click on the **Internet Information Services (IIS) Manager** window as shown below:



27. Now expand **PC name** from the left hand panel and select **Application Pools**, in the left hand side panel, as shown below:



28. The **Applications Pools** pane appears in the central pane. Click on **DefaultAppPool** as highlighted below:

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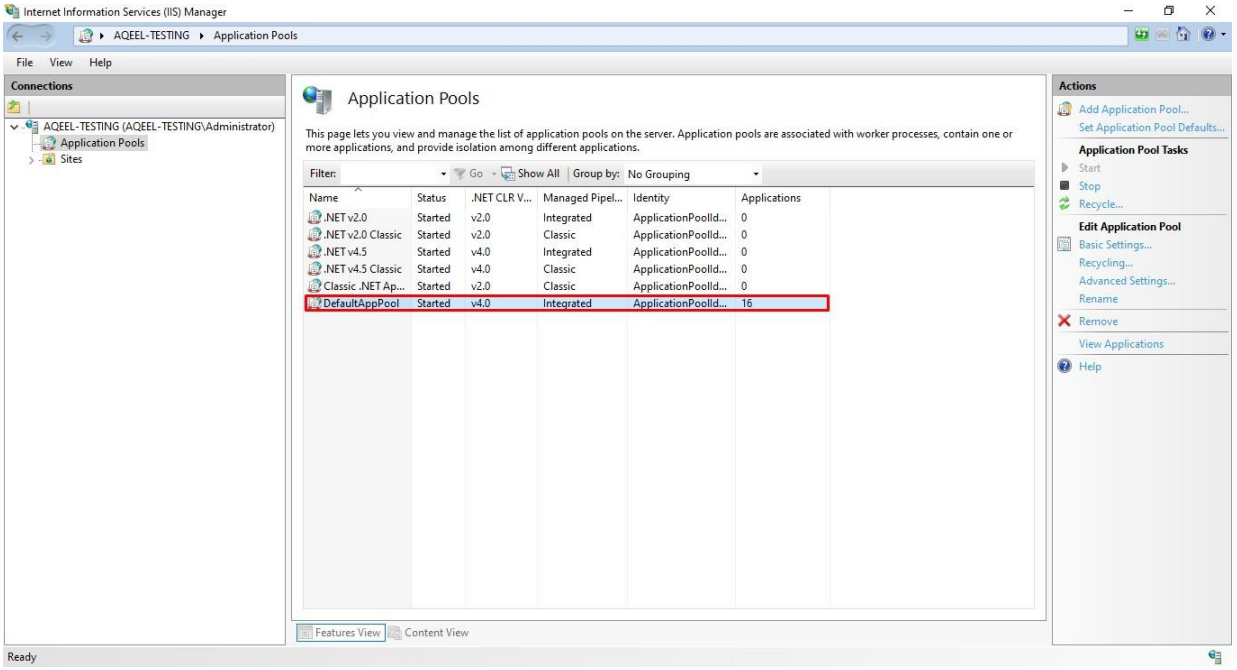
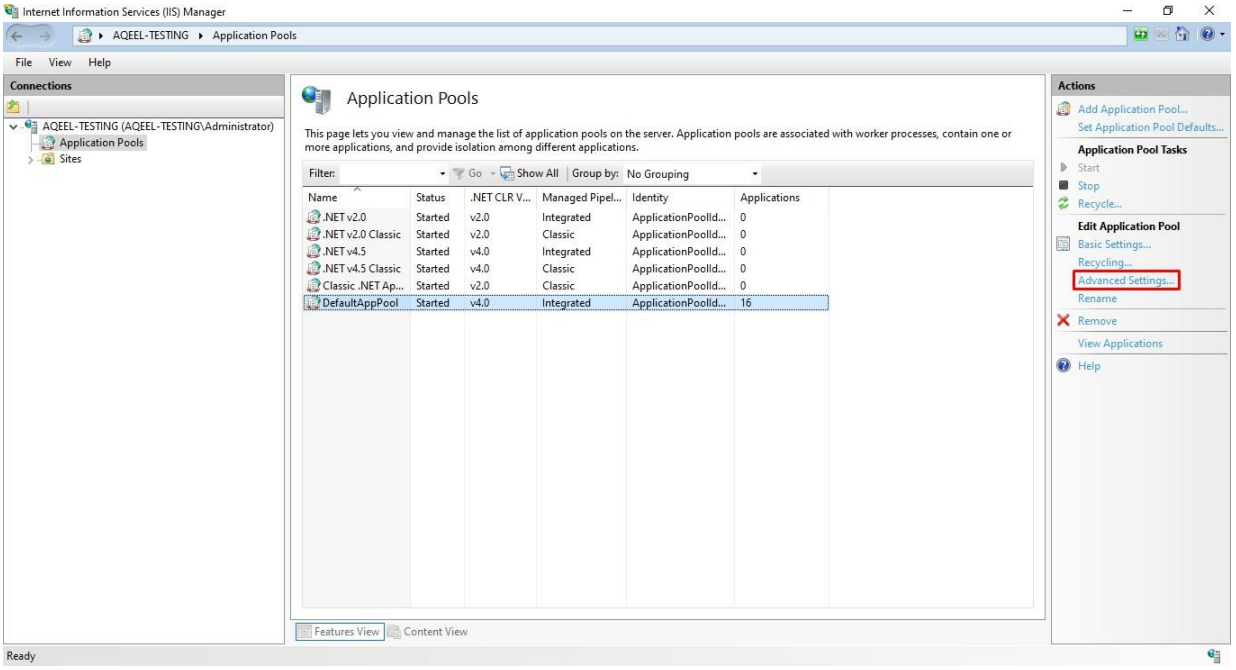


30. Now go to the **Actions** panel on the right hand side, and click on **Advanced Settings**, as shown below:



Following screen is displayed when you click on **Advanced Settings.** In **Advanced Settings,** if the **General** option is closed, with a + sign beside it, click on + sign to open and expand it.

31. Choose **.NET Framework Version** and set its value to **V4.0** as shown below:

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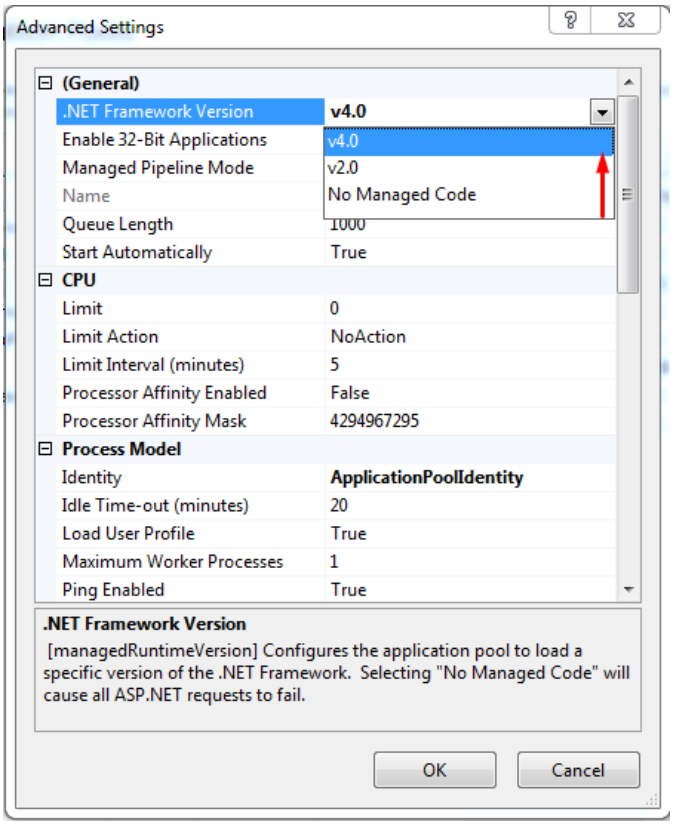
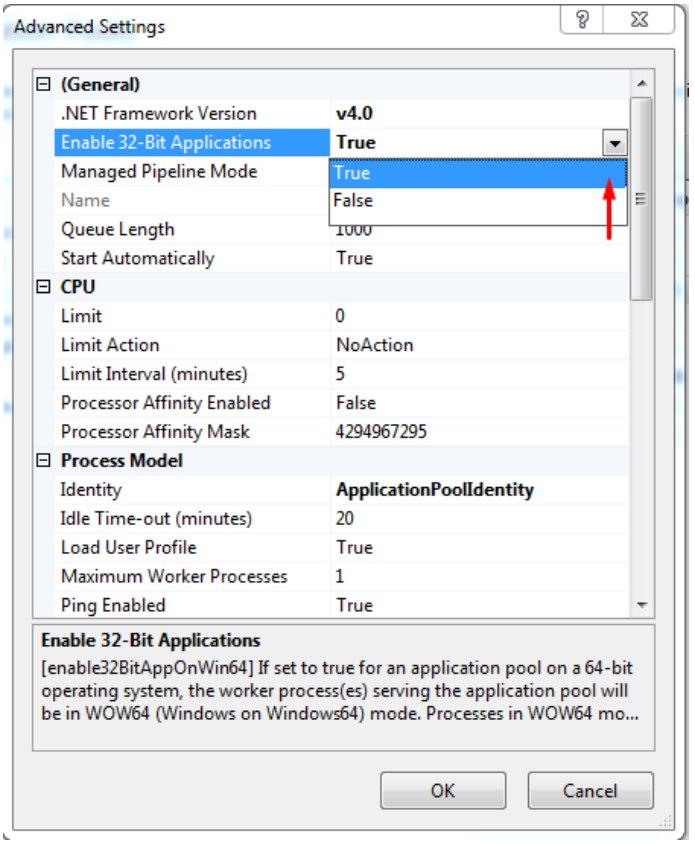


32. Choose **Enable 32-Bit Applications** and set its value to **True**, as shown below:



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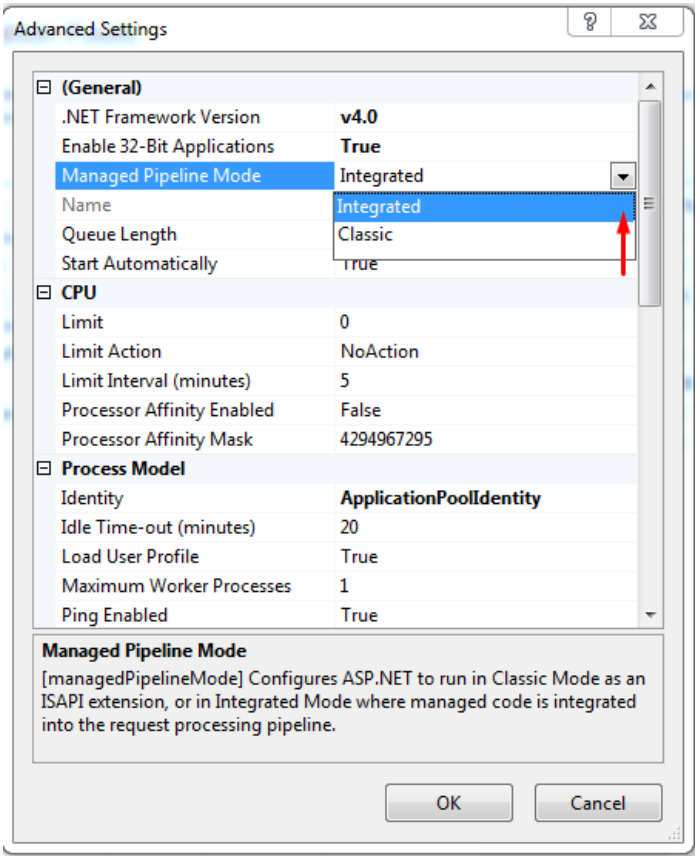
33. Select **Managed Pipeline Mode** option using the dropdown menu and select **Integrated** option as shown below:



34. Press **OK** and close the **Internet Information Services (IIS) Manager** and **Administrative Tools** window.

Please restart your computer after you have made the above mentioned configurations so that the changes can be applied.

3.2 IIS & .NET Framework Configurations for Windows Server 2012, 2016 & 2019

Please perform following configurations of IIS & .NET Framework on a machine that is operating on Windows Server 2012, 2016 or 2019 OS prior to installation of Rainbow CTI & Media Bridge on it.

1. Click on the Windows button by dragging the cursor to the bottom right corner. This opens the following screen:

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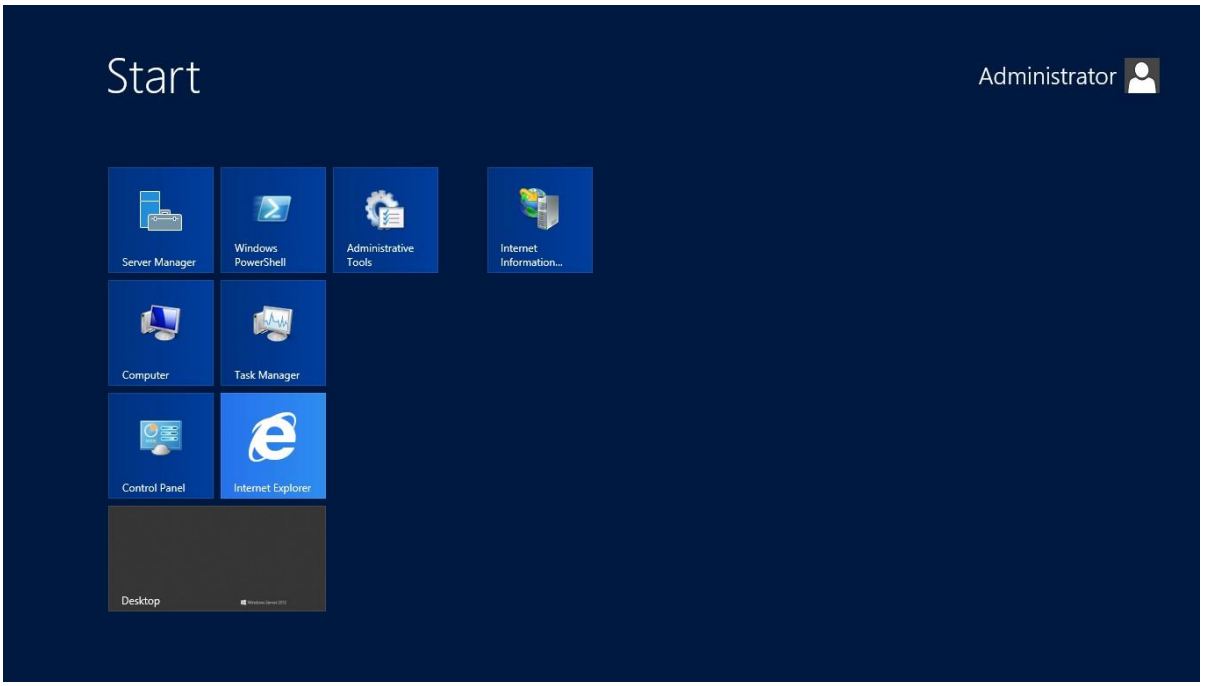
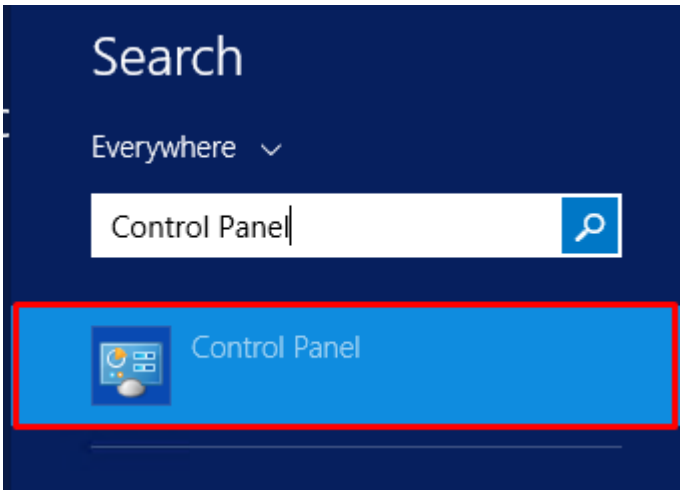


2. Go to search bar and type **Control Panel** as displayed below:



3. Click on **Programs** option that is highlighted below:

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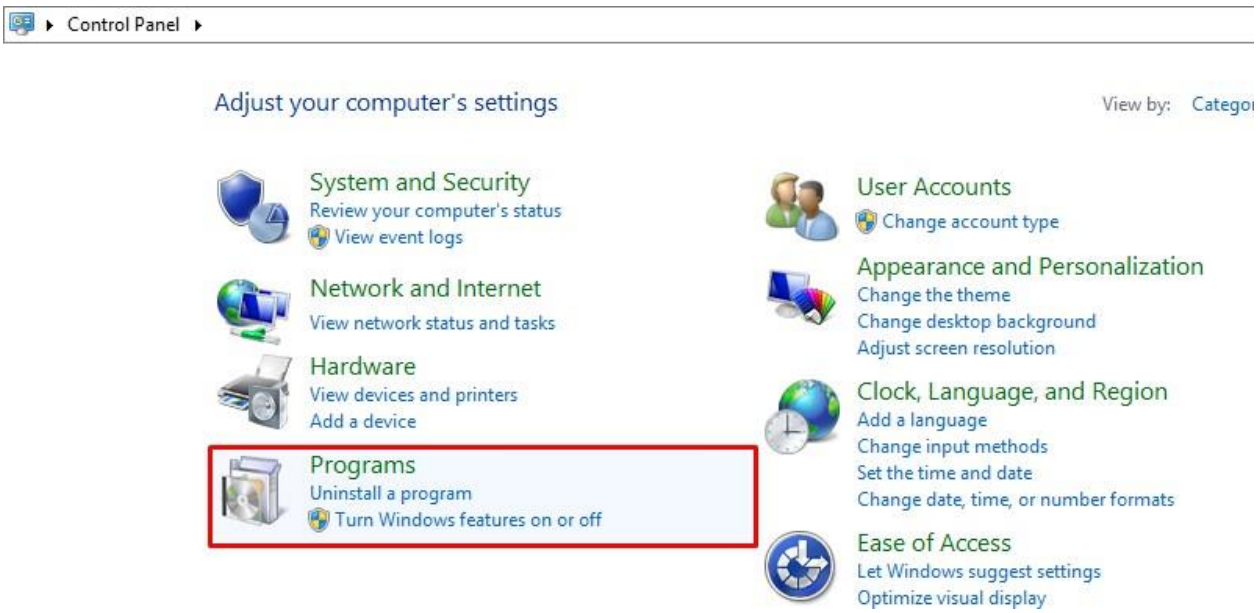
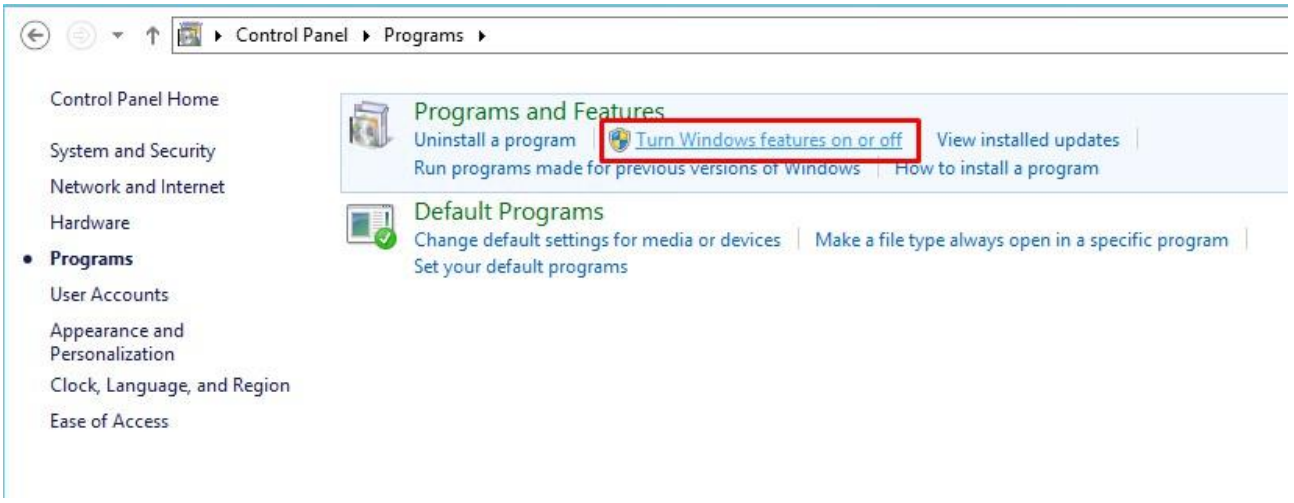


4. Click on **Turn Windows features on or off** as highlighted below:



Following screen is displayed when you click on **Turn Windows features on or off**:

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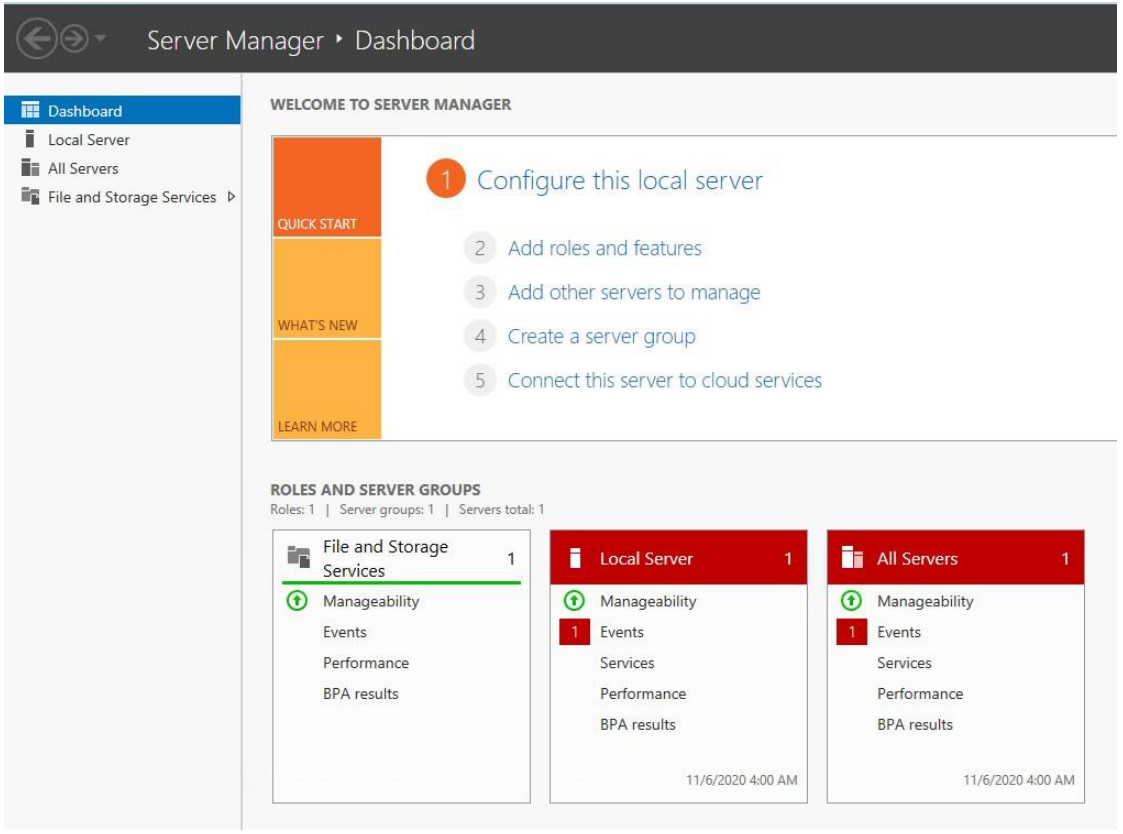

5. In the Server Manager, click on **Add Roles and Features** and click on **Next** button as highlighted below:

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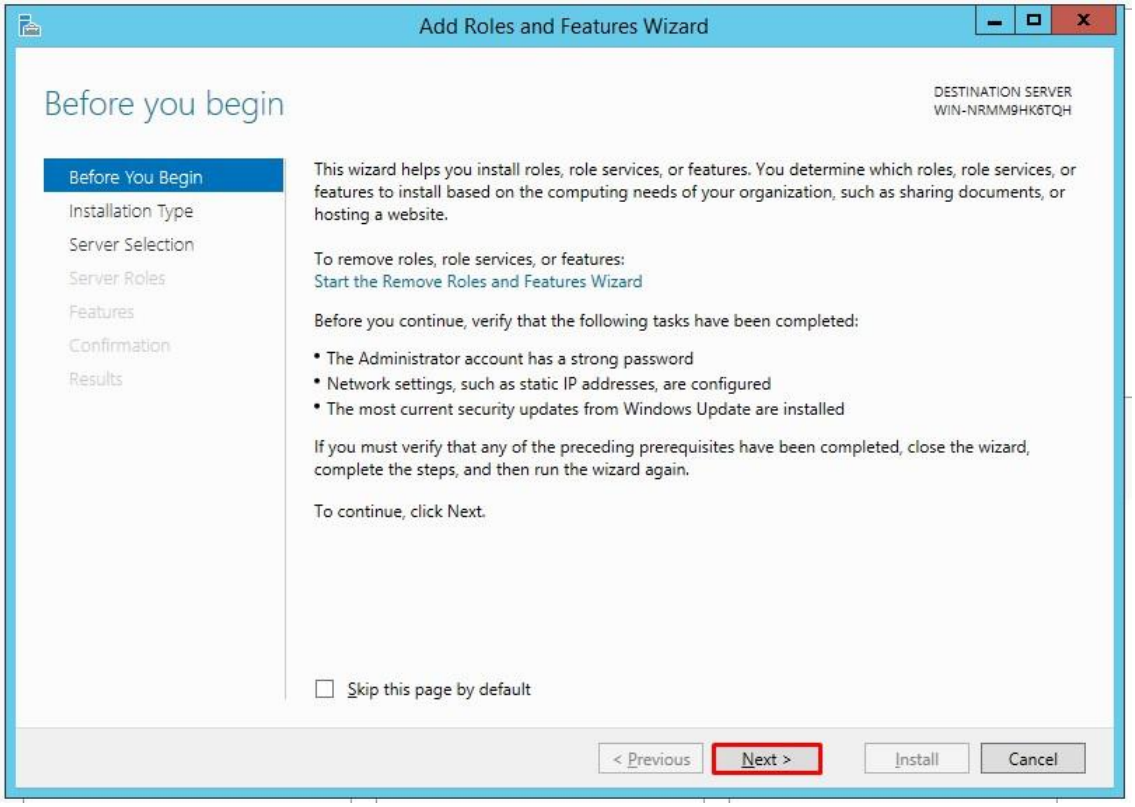
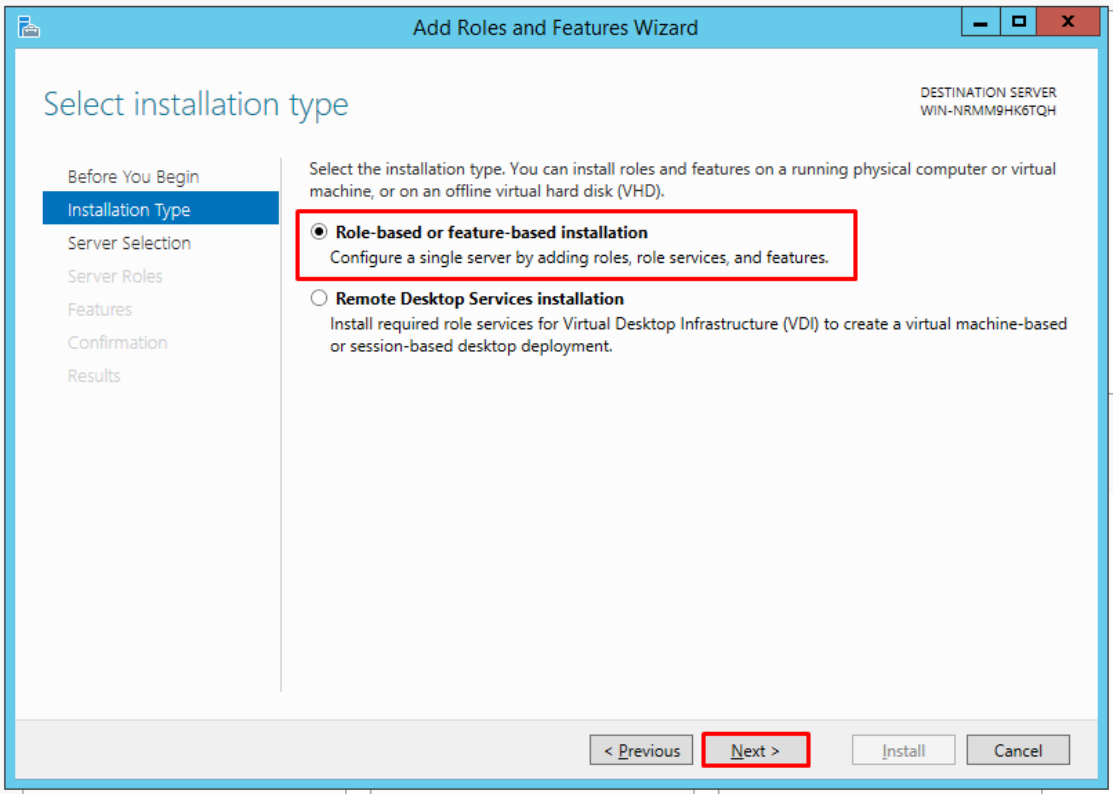


Once on next screen, click on **Role-based or feature-based installation** option and click on **Next** as highlighted below:



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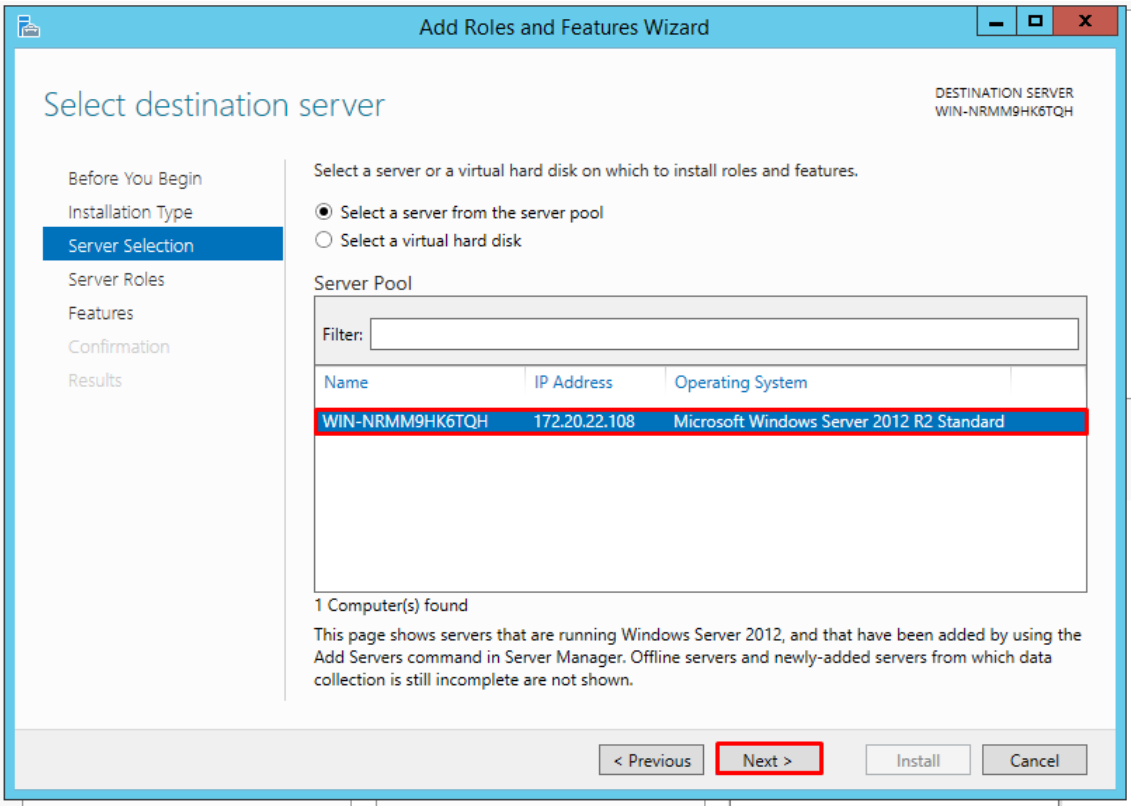
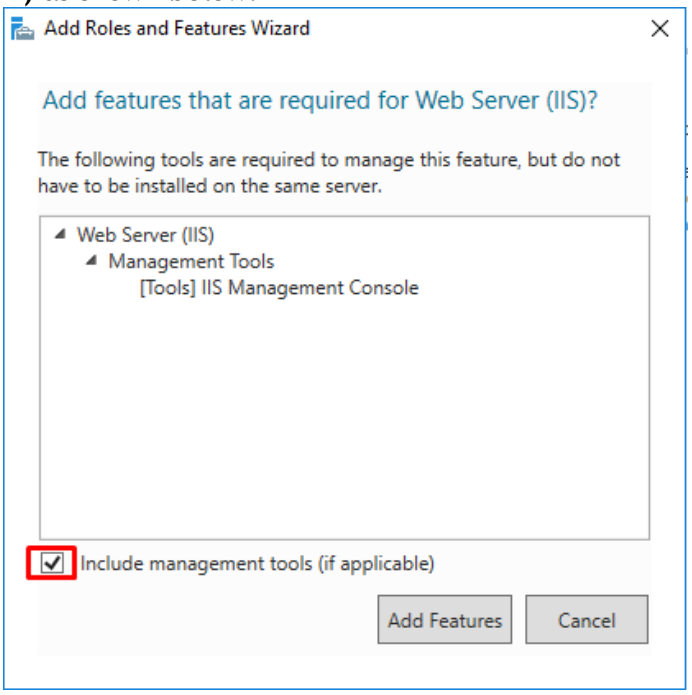
6. This is the server selection screen, select your desired **Server** and then Click **Next** as highlighted below:



On the next screen, scroll down and go to the **Web Server (IIS)** option.

When you click on the **Web Server (IIS)** option. Once open, click on the box next to **Include Management tools (if applicable)** as shown below:



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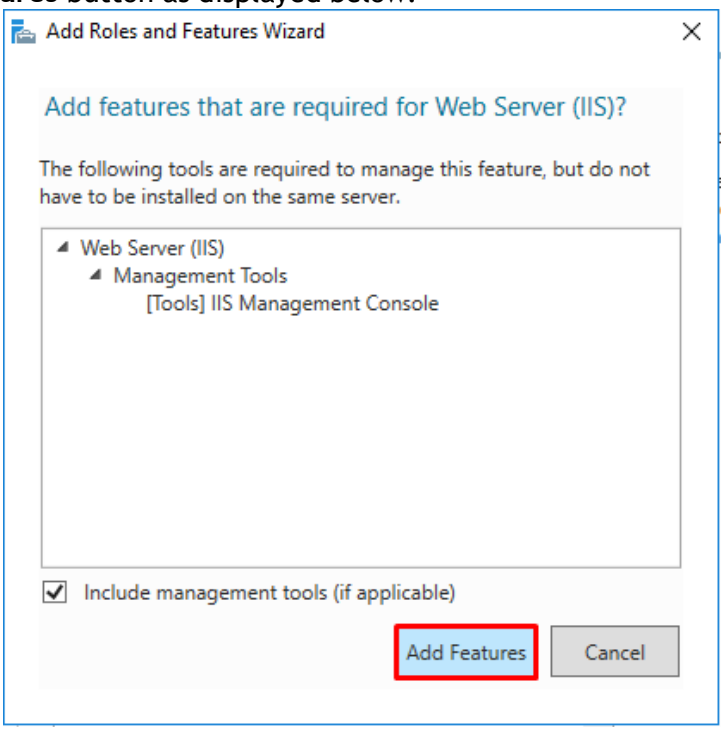
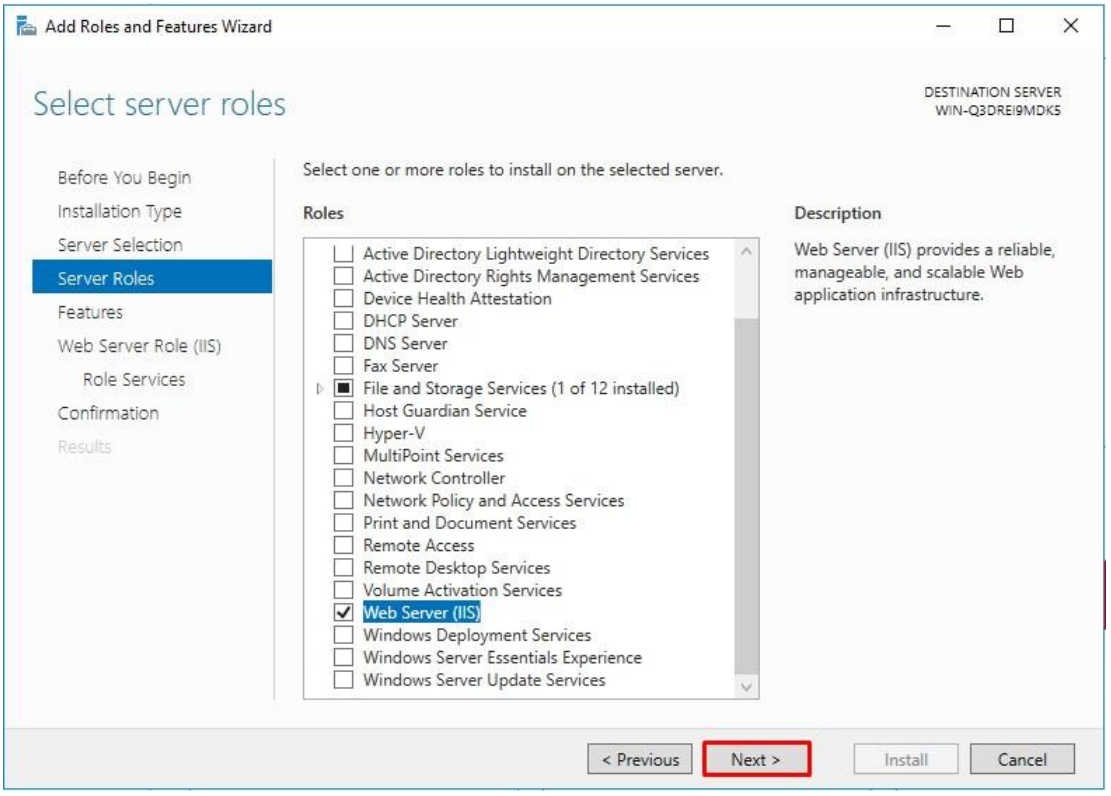
Then click on **Add Features** button as displayed below:



Following screen is displayed when you click on **Add Features** button. **Web Server (IIS)** option is checked. Click on **Next** button.



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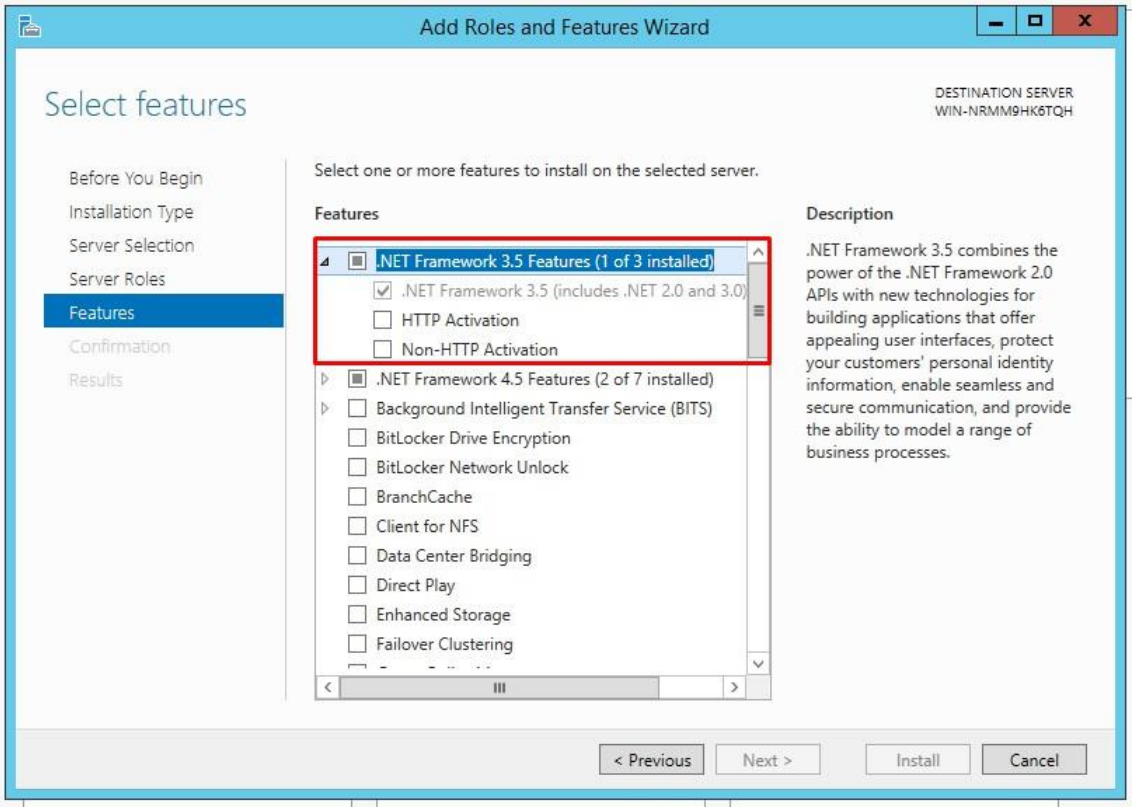
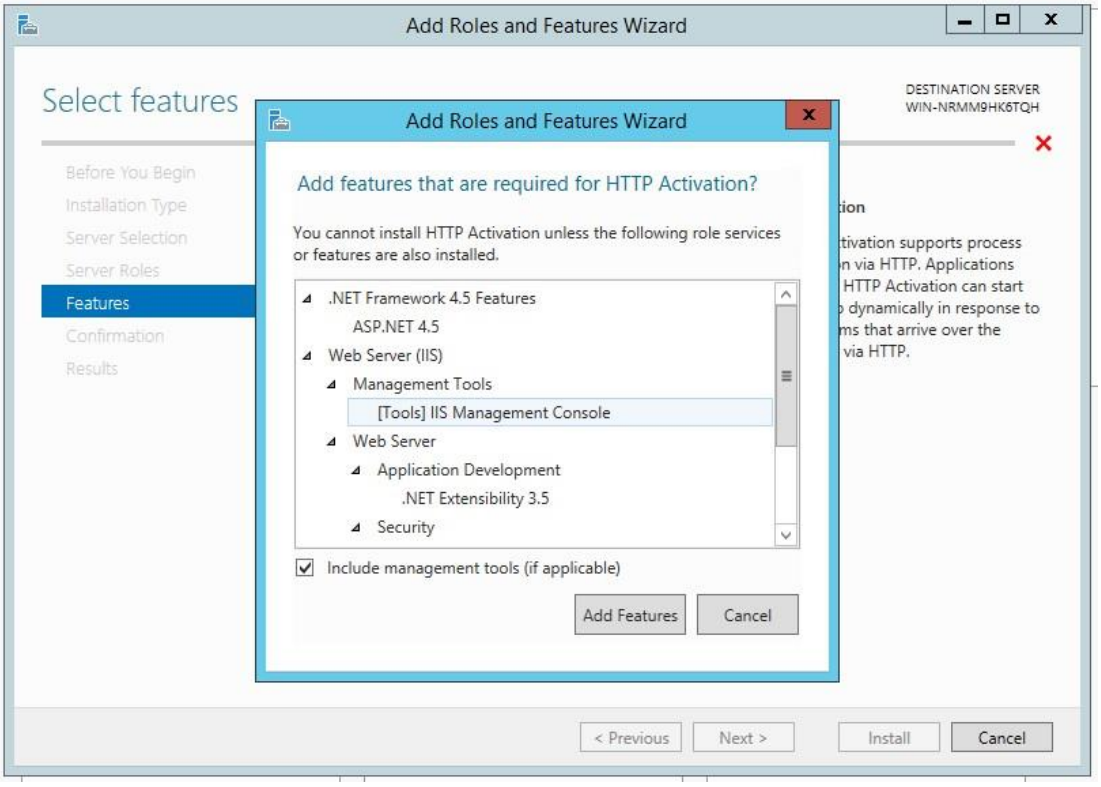
7. Expand the option of **NET Framework 3.5 Features** on the next screen by clicking on the ▷ icon. Following menu of features will be displayed:



8. Select **Features** from the left panel and a dialogue box will be displayed as shown below:



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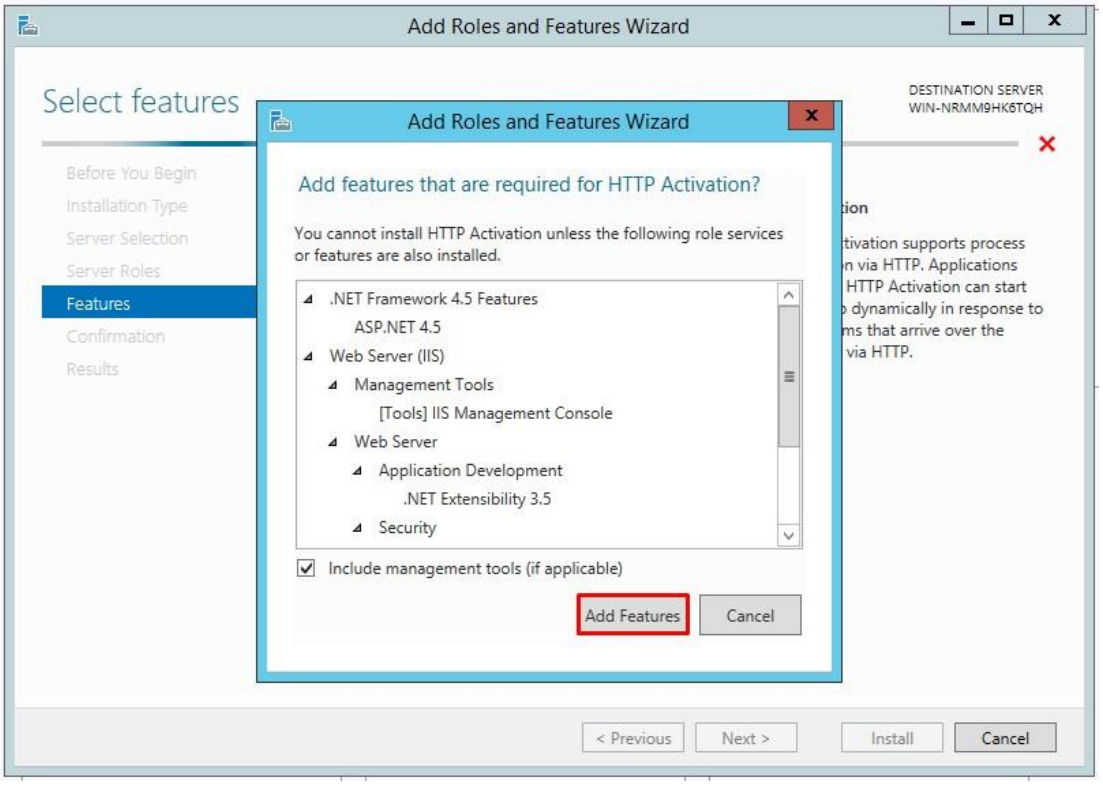
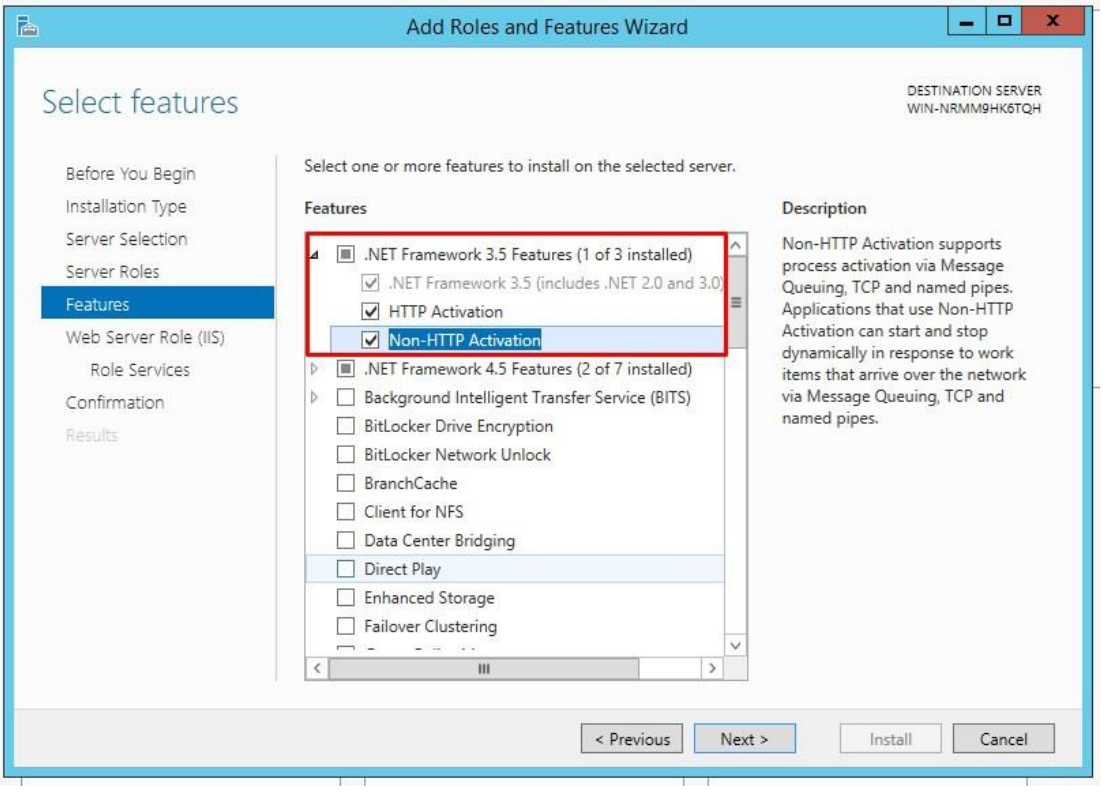
9. Select **[Tools] IIS Management Console** and click on **Add Features** option as highlighted below:



10. Both features will be activated in this manner as highlighted below:



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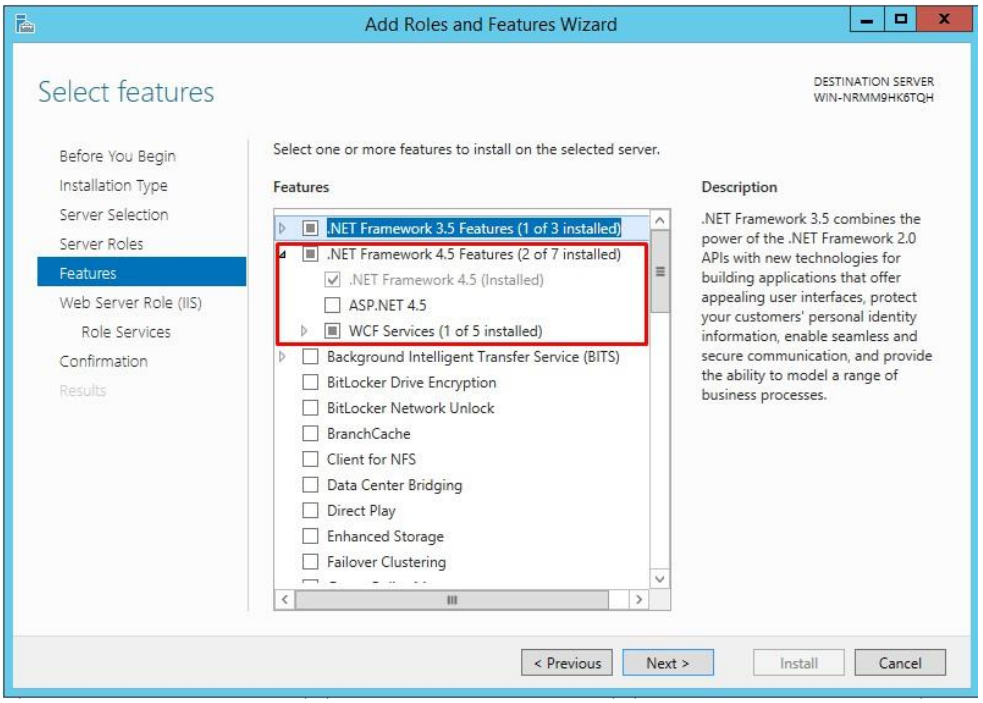
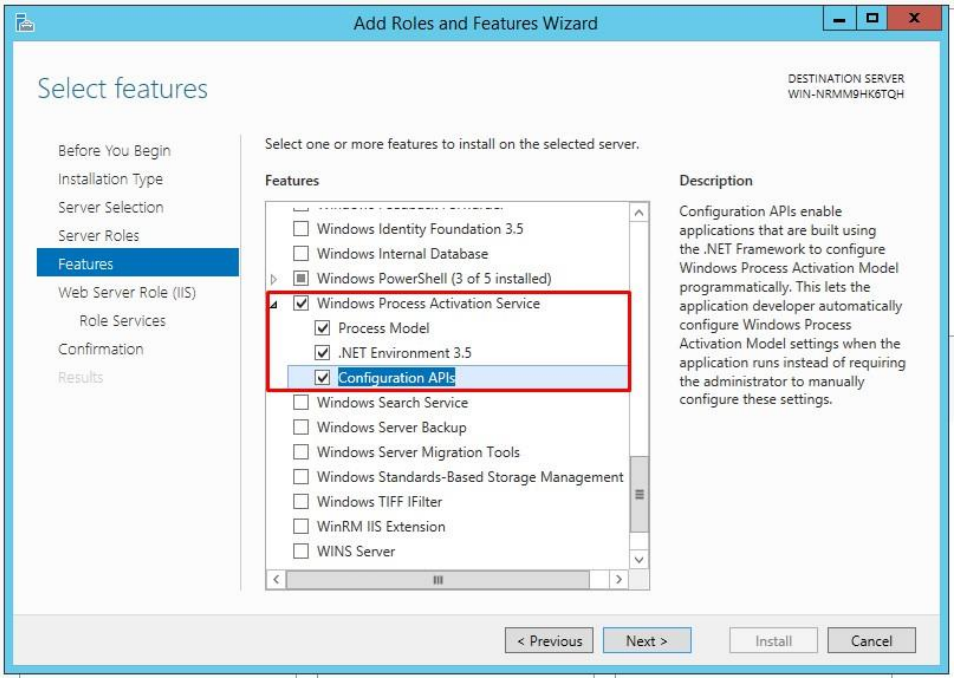
11. Now expand **.NET Framework 4.5 Features** as displayed below and check the box next to the feature **ASP .NET 4.5**



12. Expand **Windows Process Activation Service** and check all the features listed under this option as highlighted below



Press **Next** Button. Following screen of **Web Server Roles (IIS)** is displayed:

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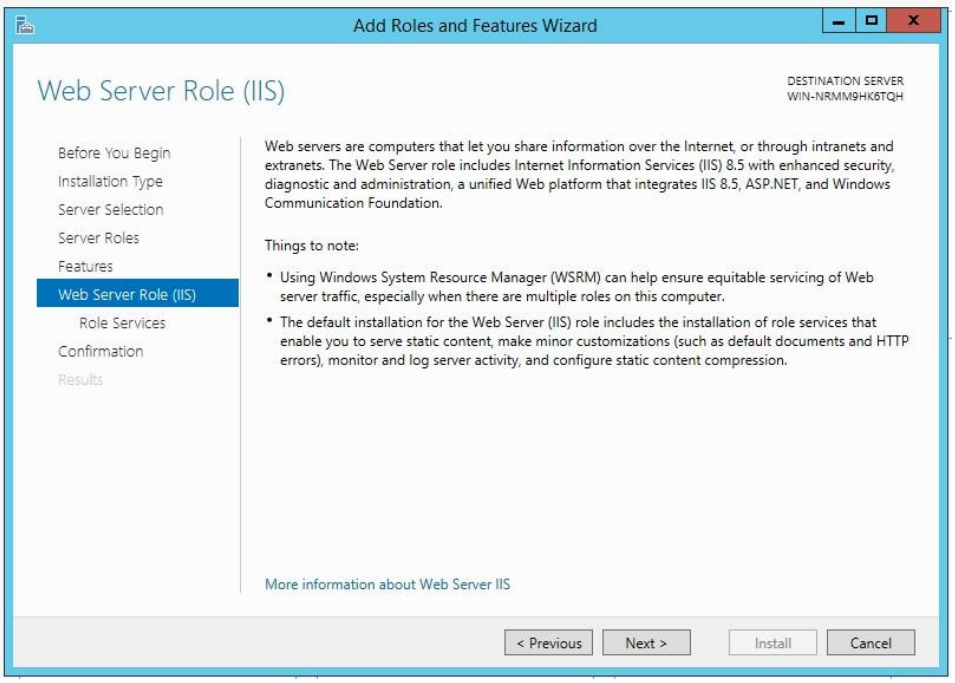
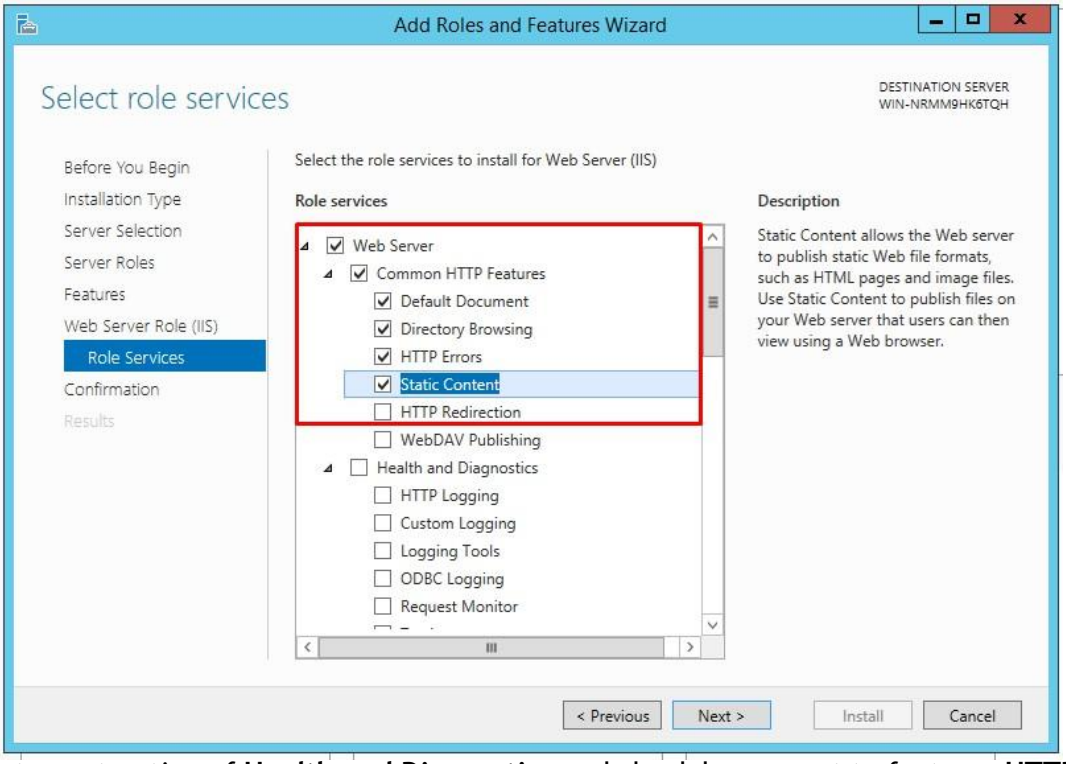


13. Click on **Next** and screen for **Role Services** is displayed. Check Boxes next to features **Common HTTP Features, Default Document, Directory Browsing, HTTP Errors** and **Static Content** as highlighted below:



14. Now move to next option of **Health and Diagnostics** and check boxes next to features **HTTP Logging** and **Request Monitor** as highlighted below:

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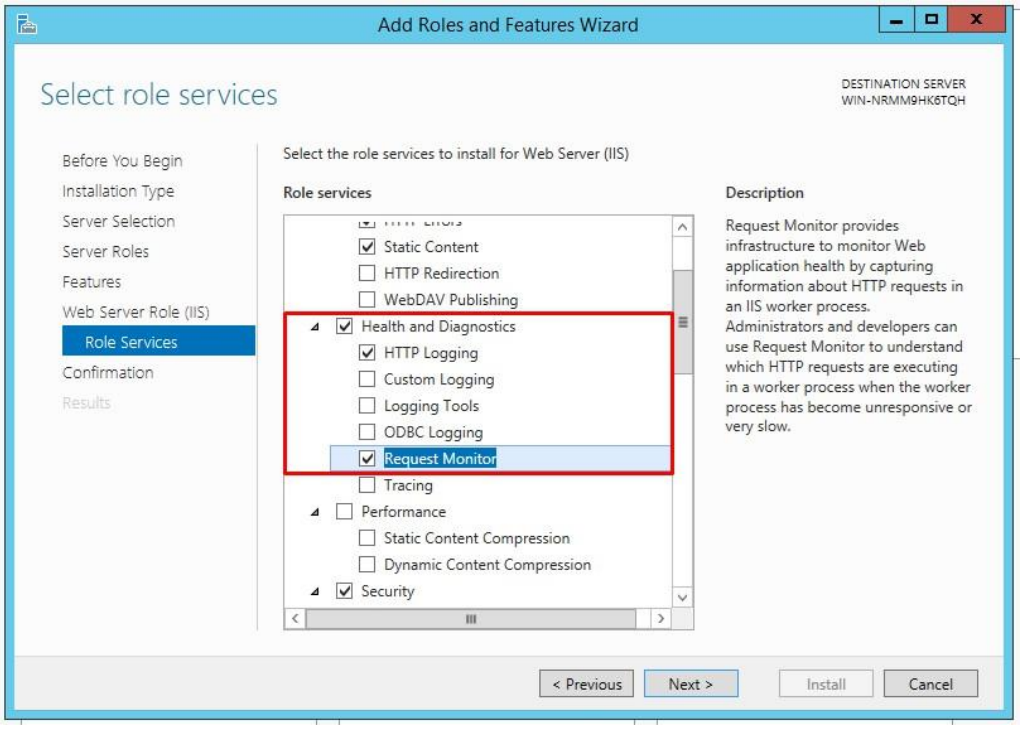
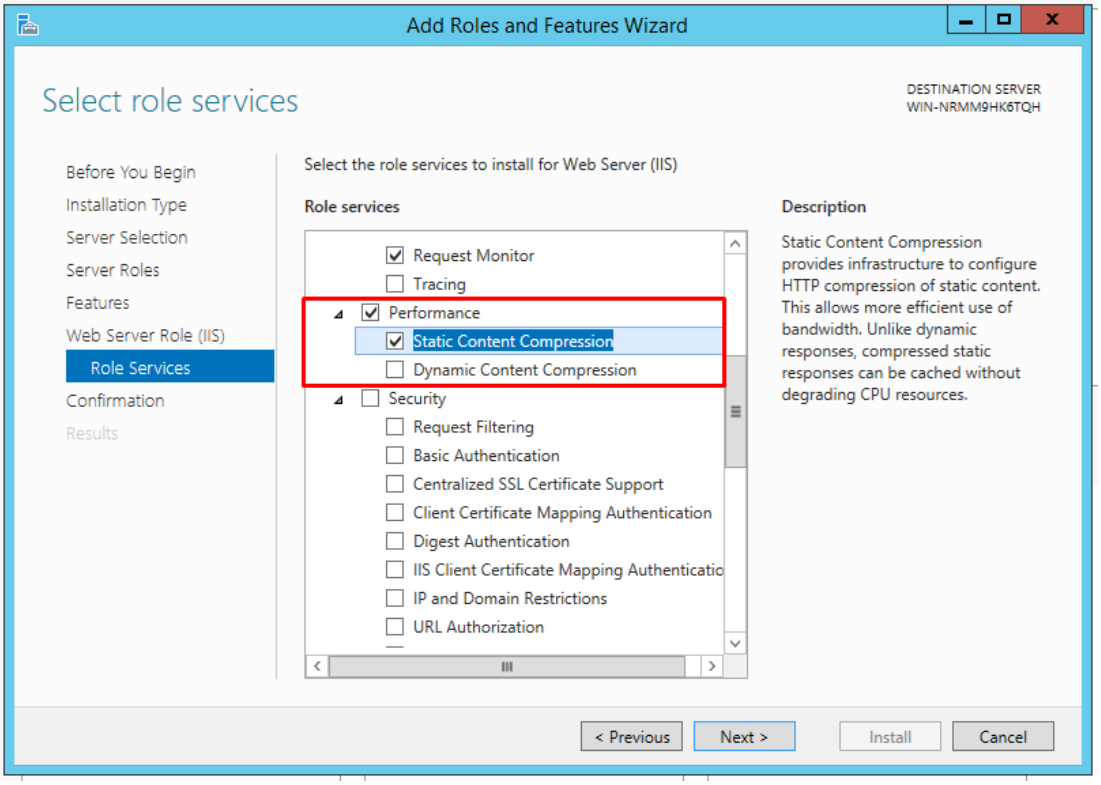


15. Now move to next option of **Performance** and check box next to feature **Static Content Compression** as highlighted below:



16. Now move to next option of **Security** and check boxes next to features **Request Filtering, Basic Authentication** and **Windows Authentication** as highlighted below:

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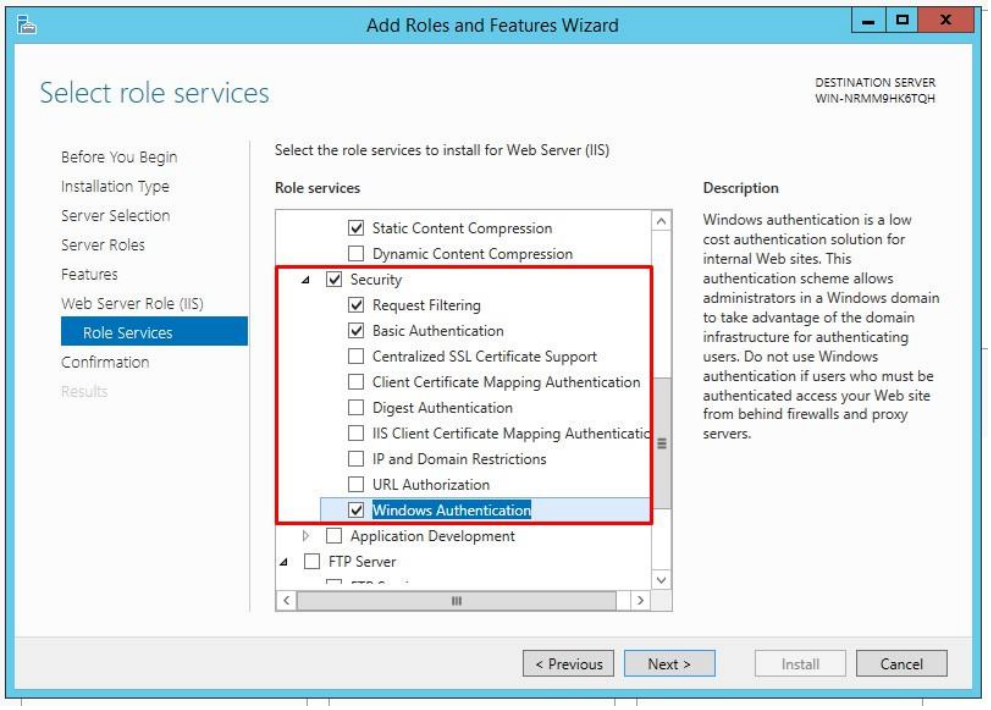
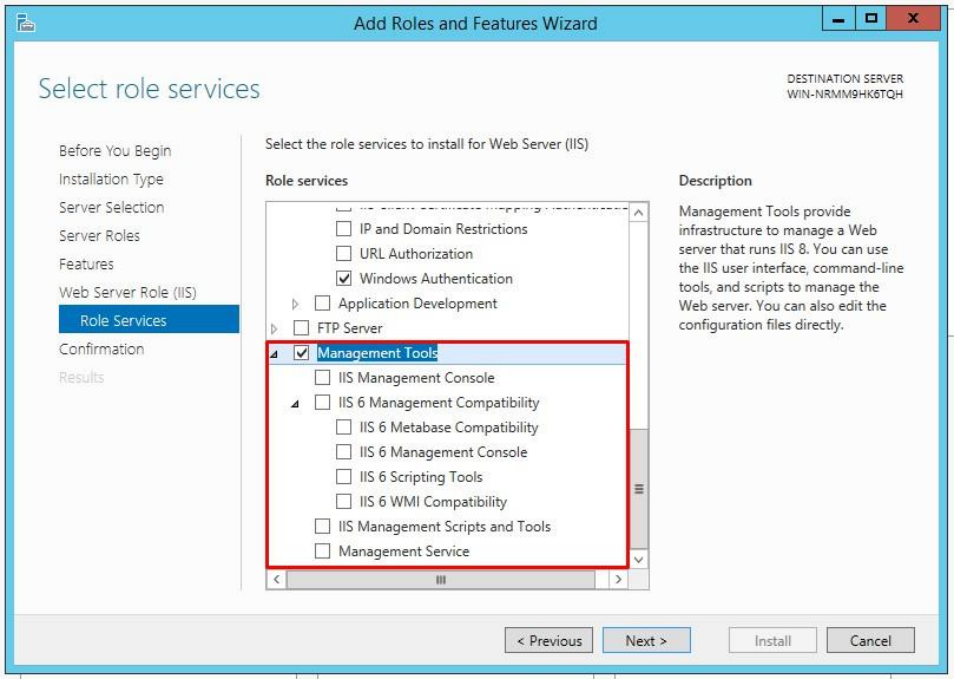


17. Now move to next option of **Management Tools** and check boxes next to features **IIS Management Console, IIS 6 Management Compatibility, IIS 6 Metabase Compatibility, IIS 6 Scripting Tools, IIS 6 WMI Compatibility, IIS Management Scripts and Tools** and **Management Service** as highlighted below:



When you click on any of the box next to the highlighted features above, following screen is displayed:

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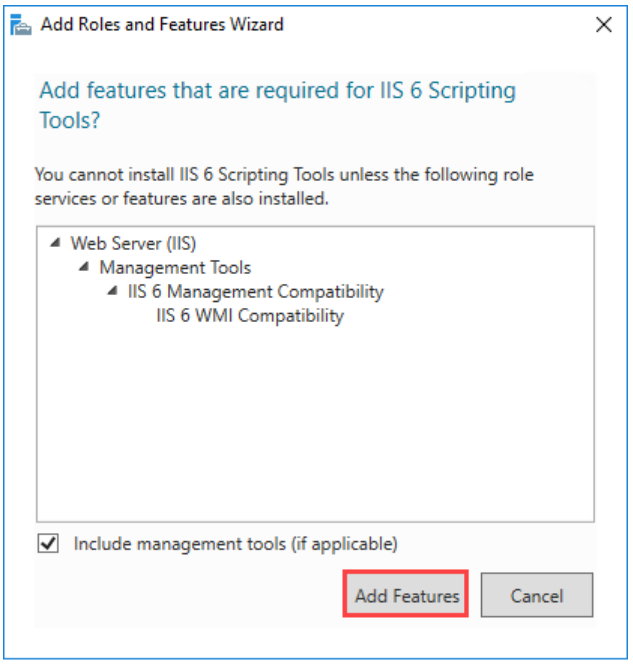
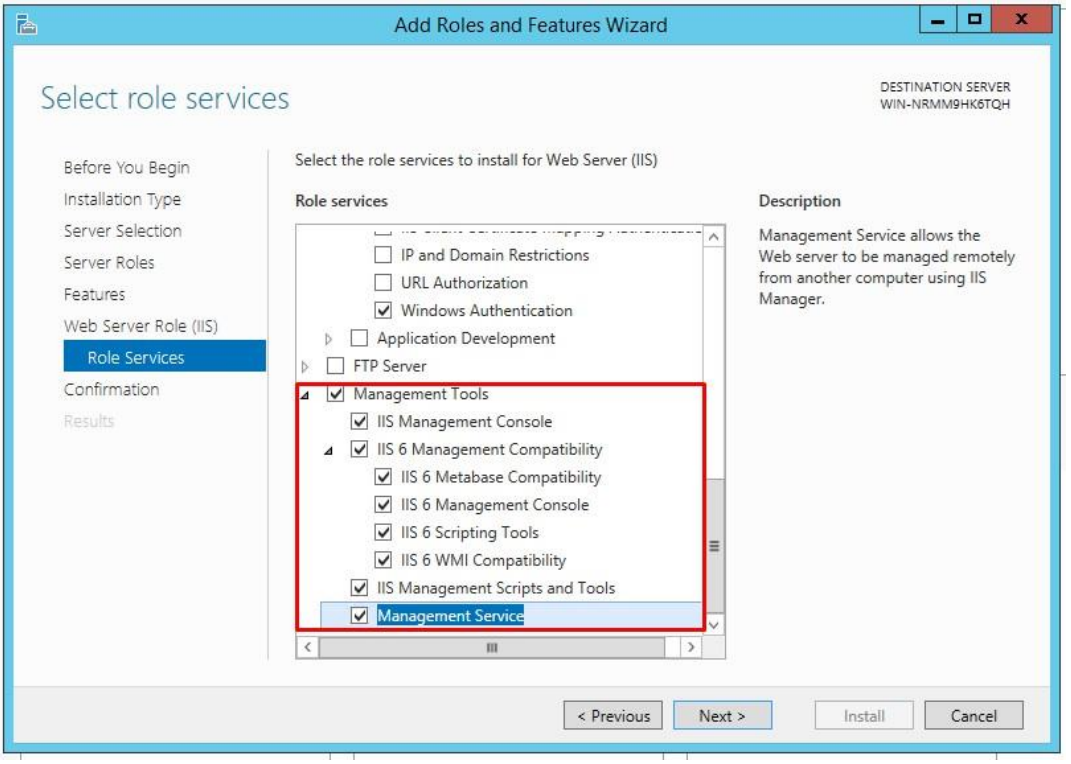
Click on **Add Features** button as displayed below:



Once all the options are checked, following screen will be displayed:



18. Now expand option of **Application Development** and check all features in its expanded menu except for **Web Socket Protocol** as highlighted below. Also add features of **ISAPI Extensions** and **ISAPI Filters** as displayed below:

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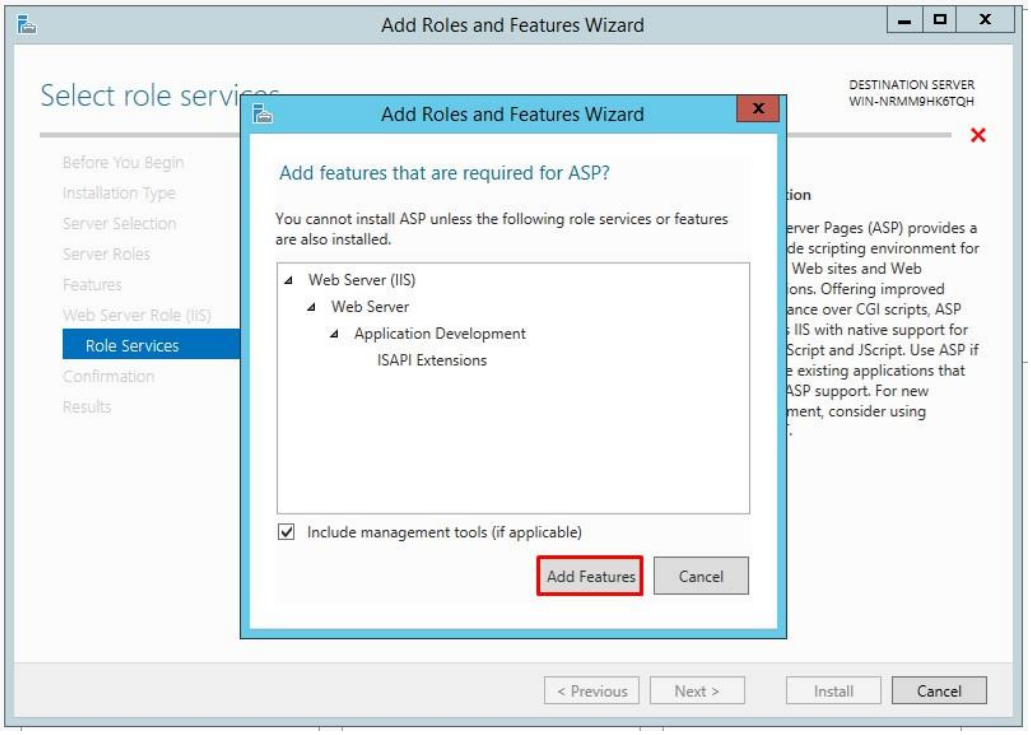

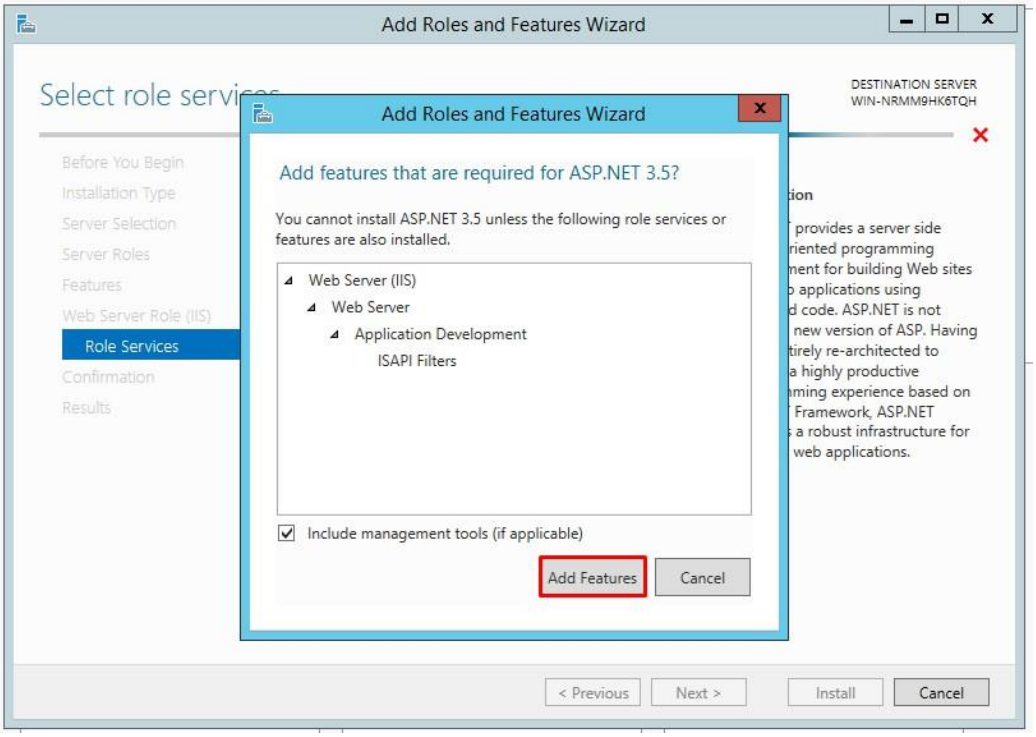

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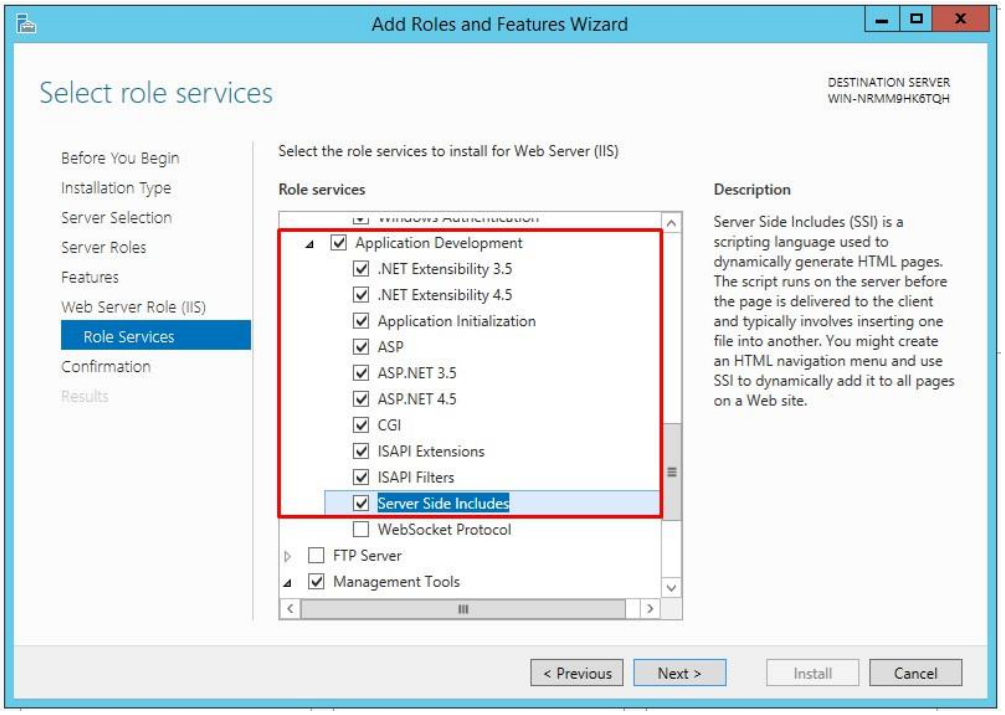
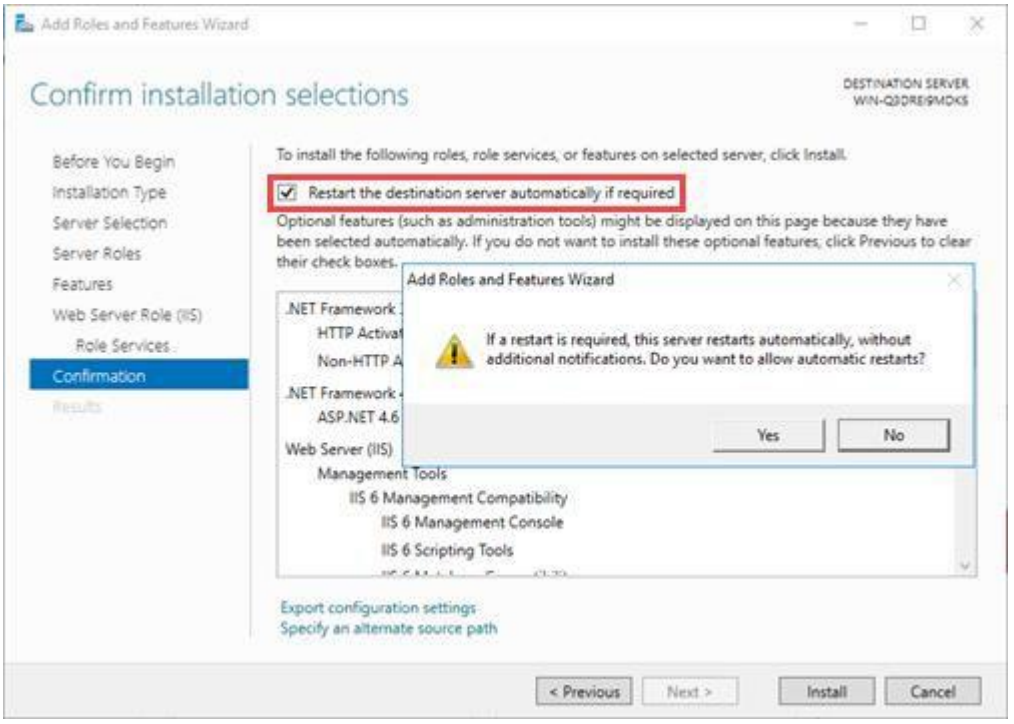


19. Click on **Next** button displayed at the bottom and confirmation screen will be displayed. Check the box next to **Restart the destination server** as highlighted below on confirmation screen. Following pop up will be displayed:



Click on **Yes** button as highlighted on the pop up window below:

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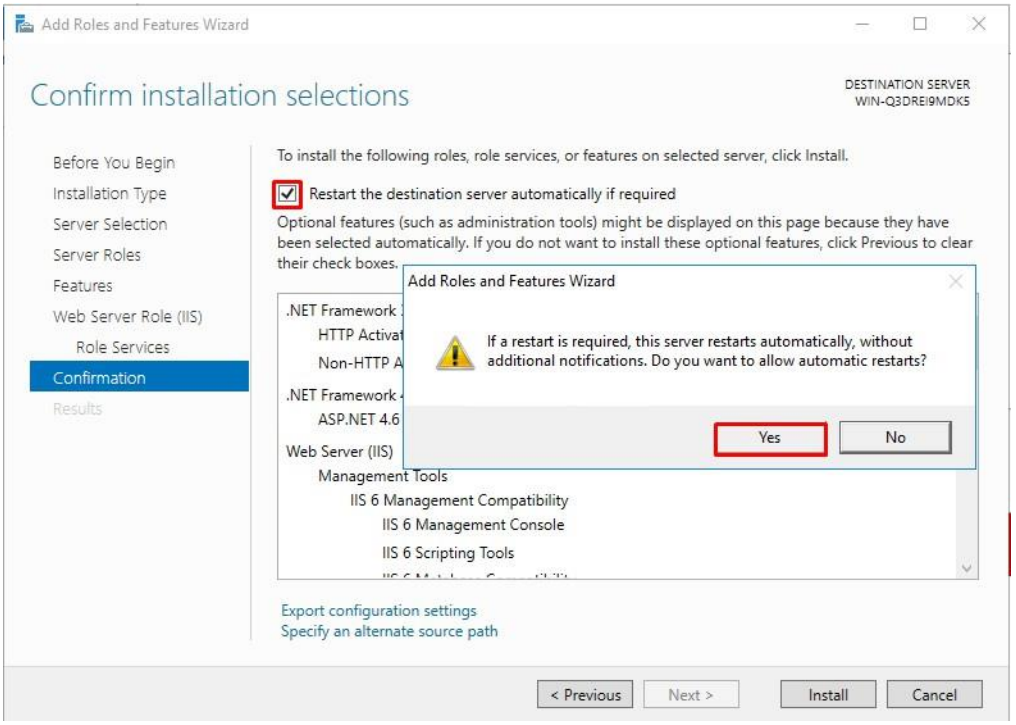
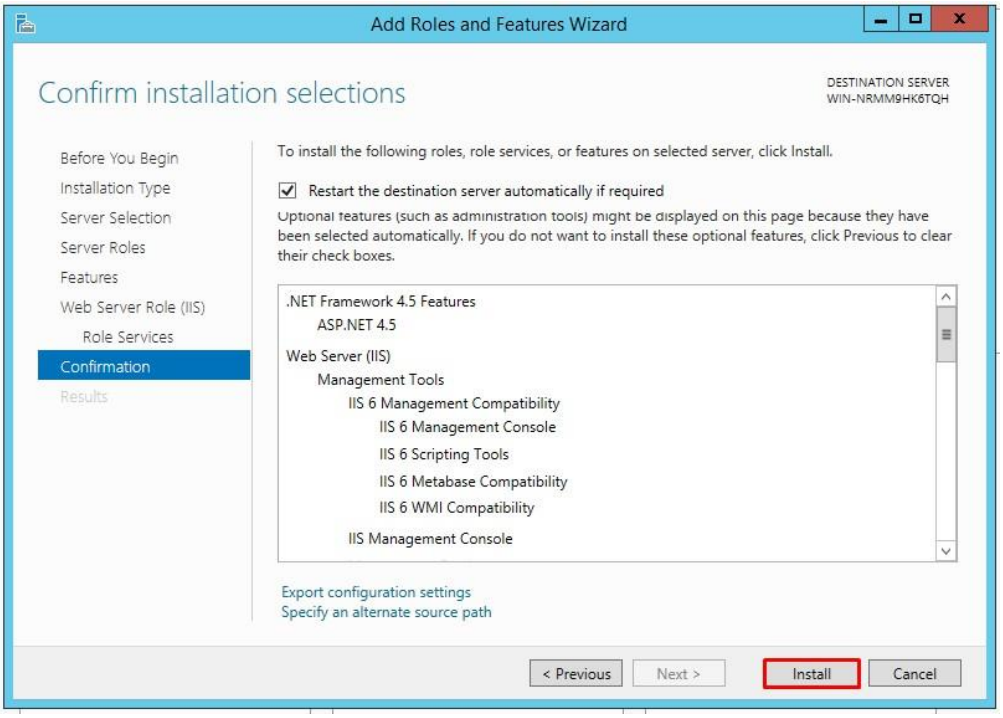


20. Now click on **Install** button available at the bottom of the window as highlighted below to install all the above selected features:



21. Once you click on **Install**, screen with installation progress bar will be displayed:

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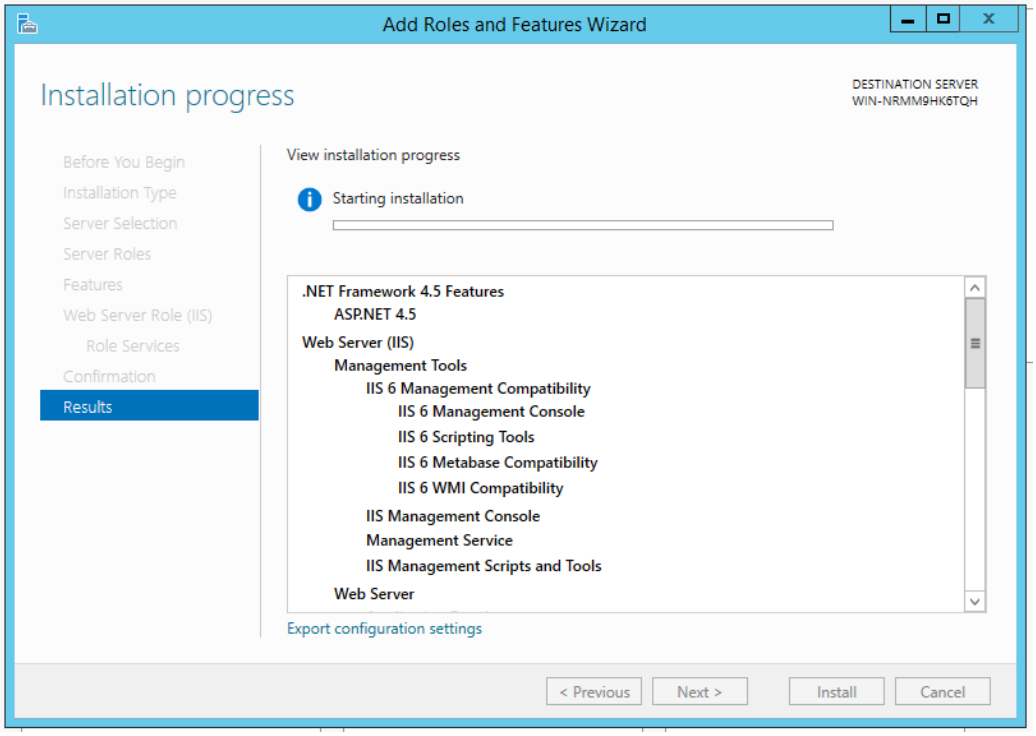

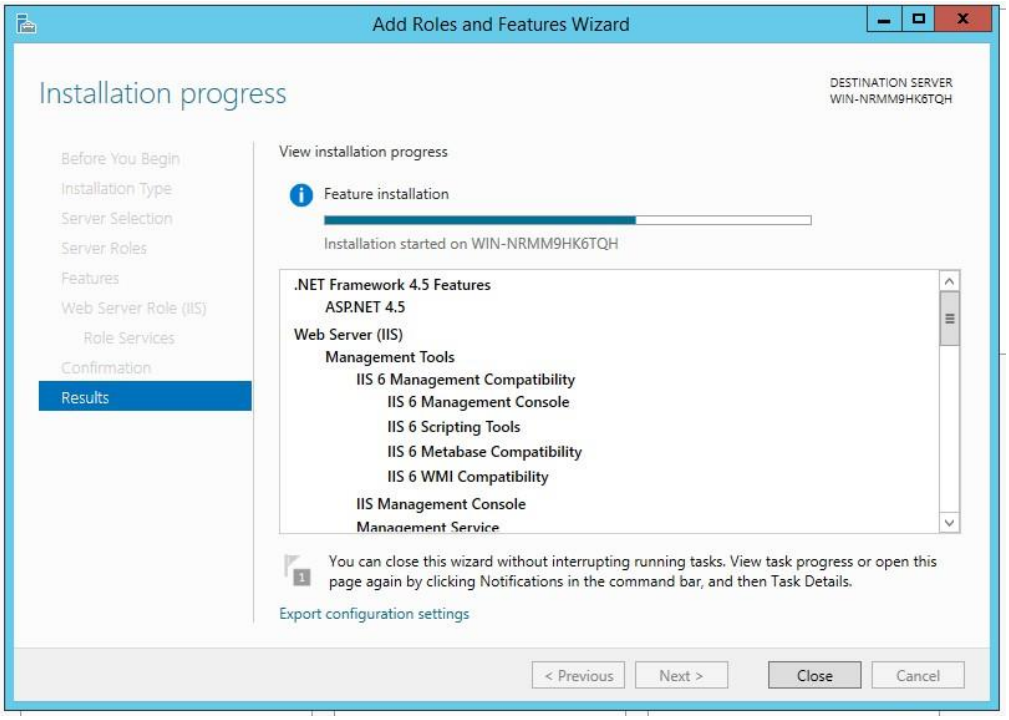

If you are installing Rainbow CTI & Media Bridge on Windows Server 2019 and face an error while performing the above step, then following steps have to be performed to resolve this issue:

- Insert the Windows installation media in the form of either a CD or through a bootable disc format.

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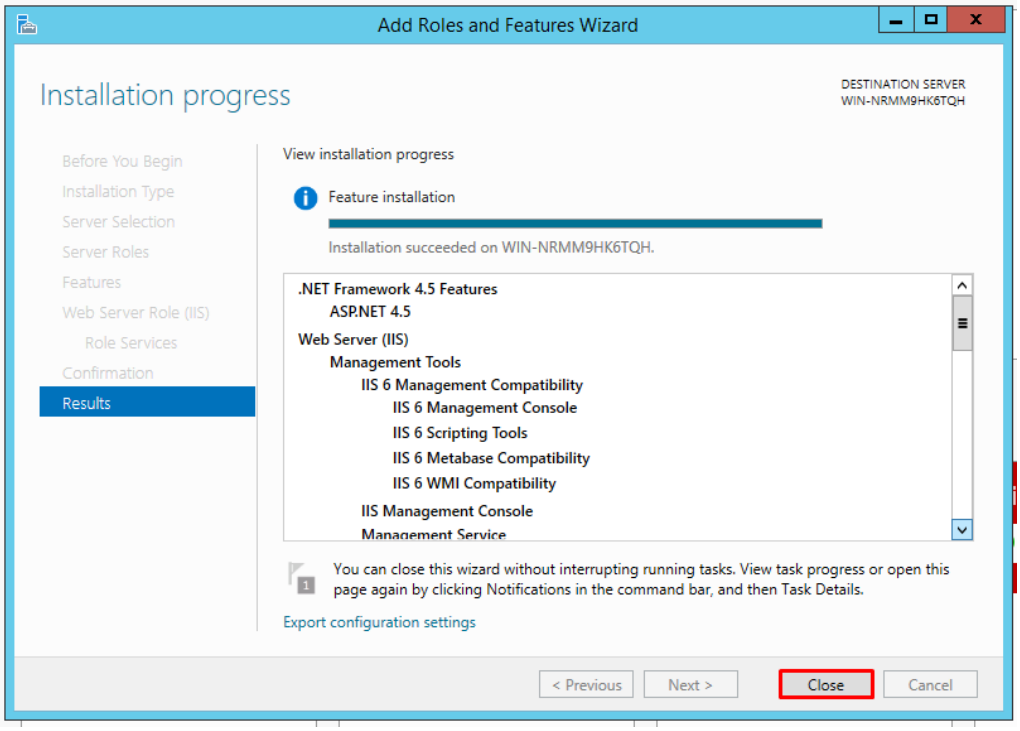
- Launch Command Prompt. You can employ multiple options to launch a command prompt, though the simplest ones would be to type in cmd in the Windows Search field.
- Type in the following command in Command Prompt interface:
  Dism /online /enable-feature /featurename:NetFX3 /All /Source:[CD DRIVE]:\sources\sxs /LimitAccess

  IMPORTANT!! Make sure that in the highlighted portion, you enter the drive name that is associated with your CD-ROM/bootable device.

  Once you have performed these actions, start performing the pre-requisite IIS & .NET framework configurations on Windows Server 2019 from step 1.

22. Once installation is completed, click on **Close** button as highlighted below:



23. Now go back to the **Control Panel** and select **Administrative Tools** as highlighted below:

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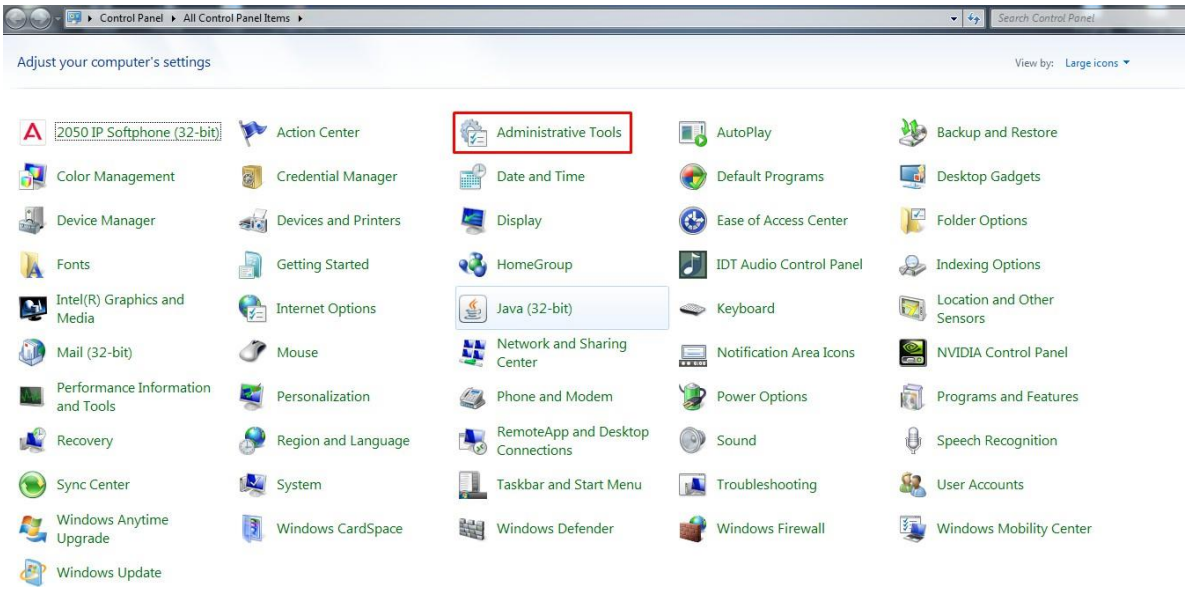
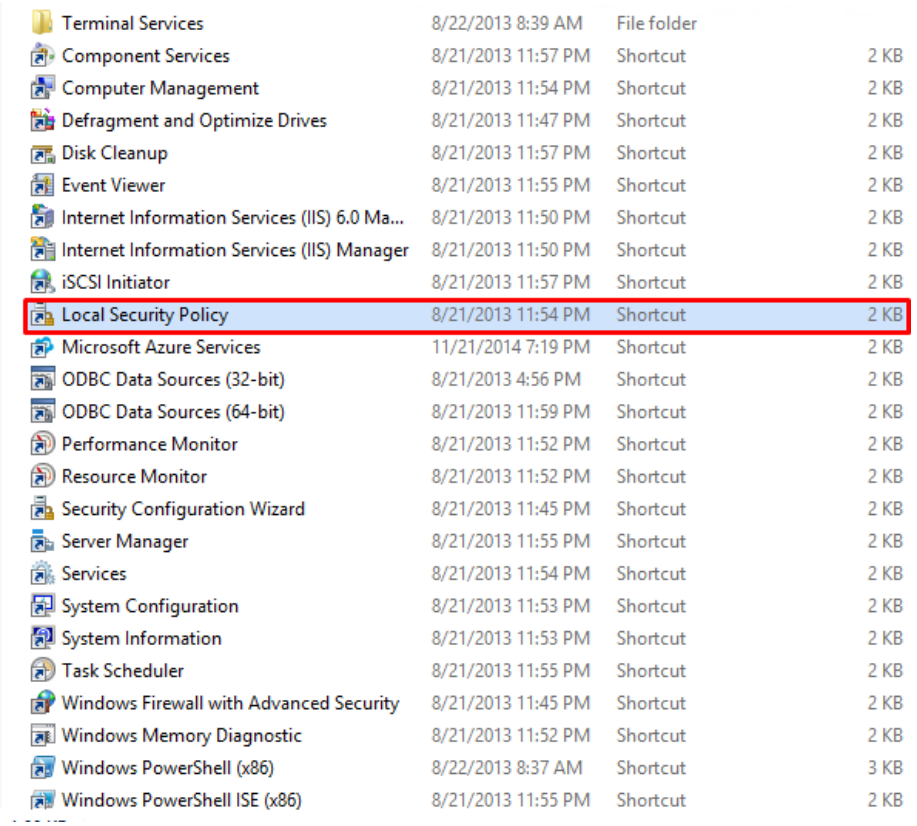


24. Select **Local Security Policy** as highlighted below:



Double Click on **Local Policies** option in the left menu and following options will be displayed:

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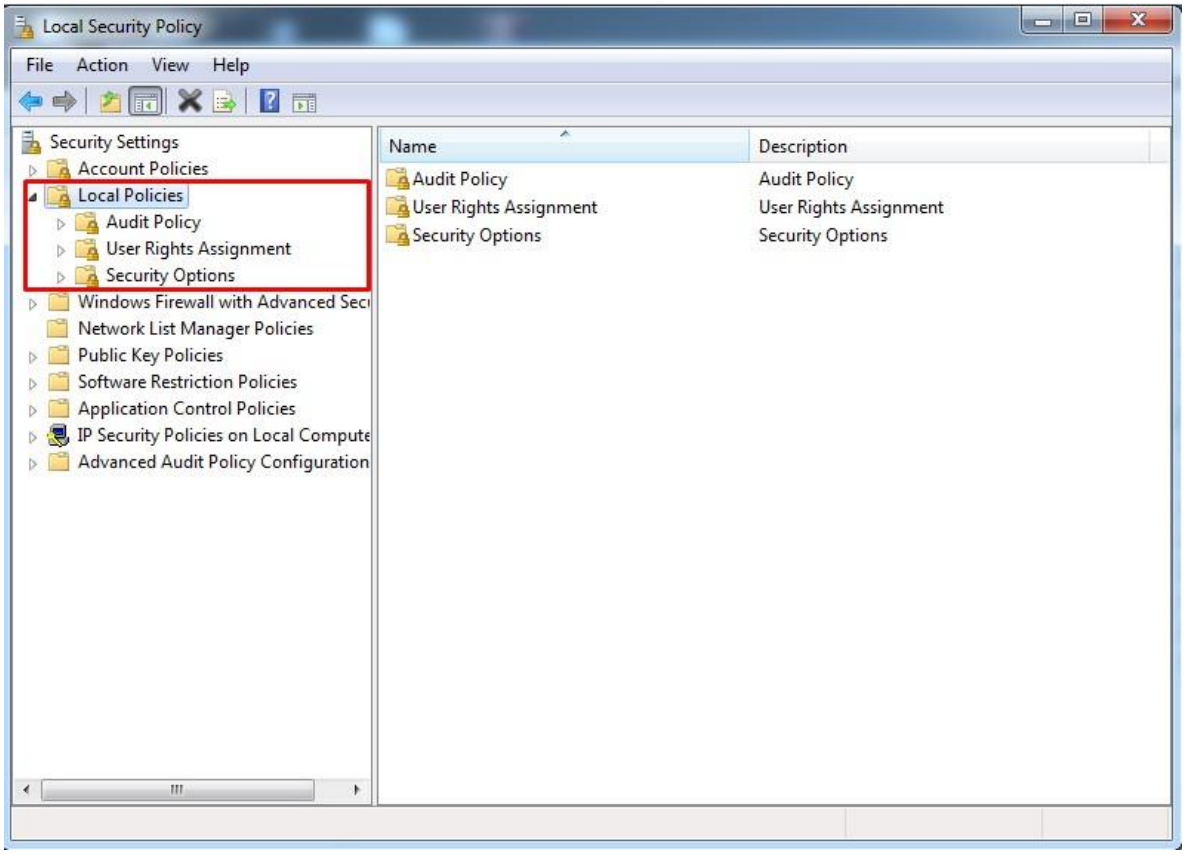

25. Double click on **User Rights Assignment** option from the displayed menu as highlighted below and the right hand screen will display a list of rights as shown below:

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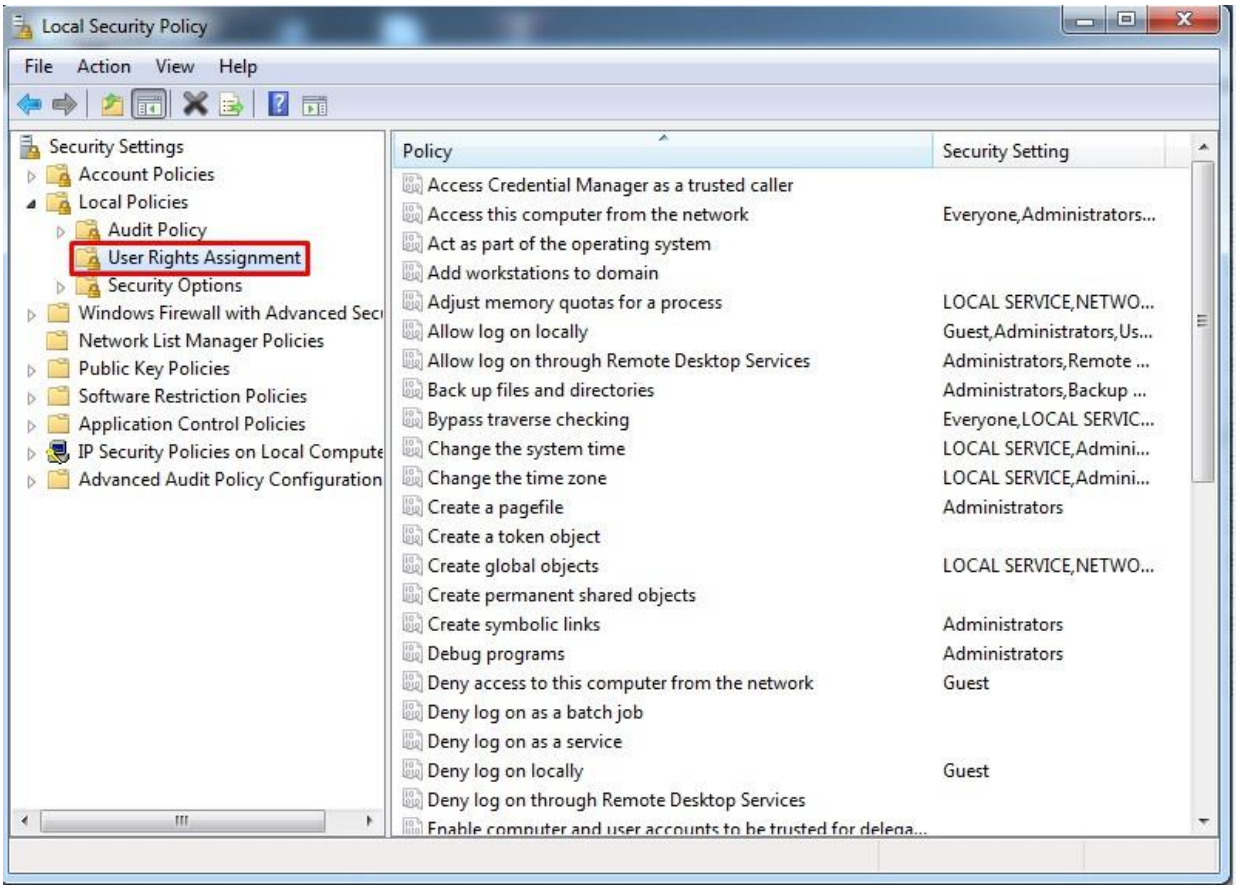

26. Now go to the right hand side panel, double click on the command **Log on as a service**, as shown below:

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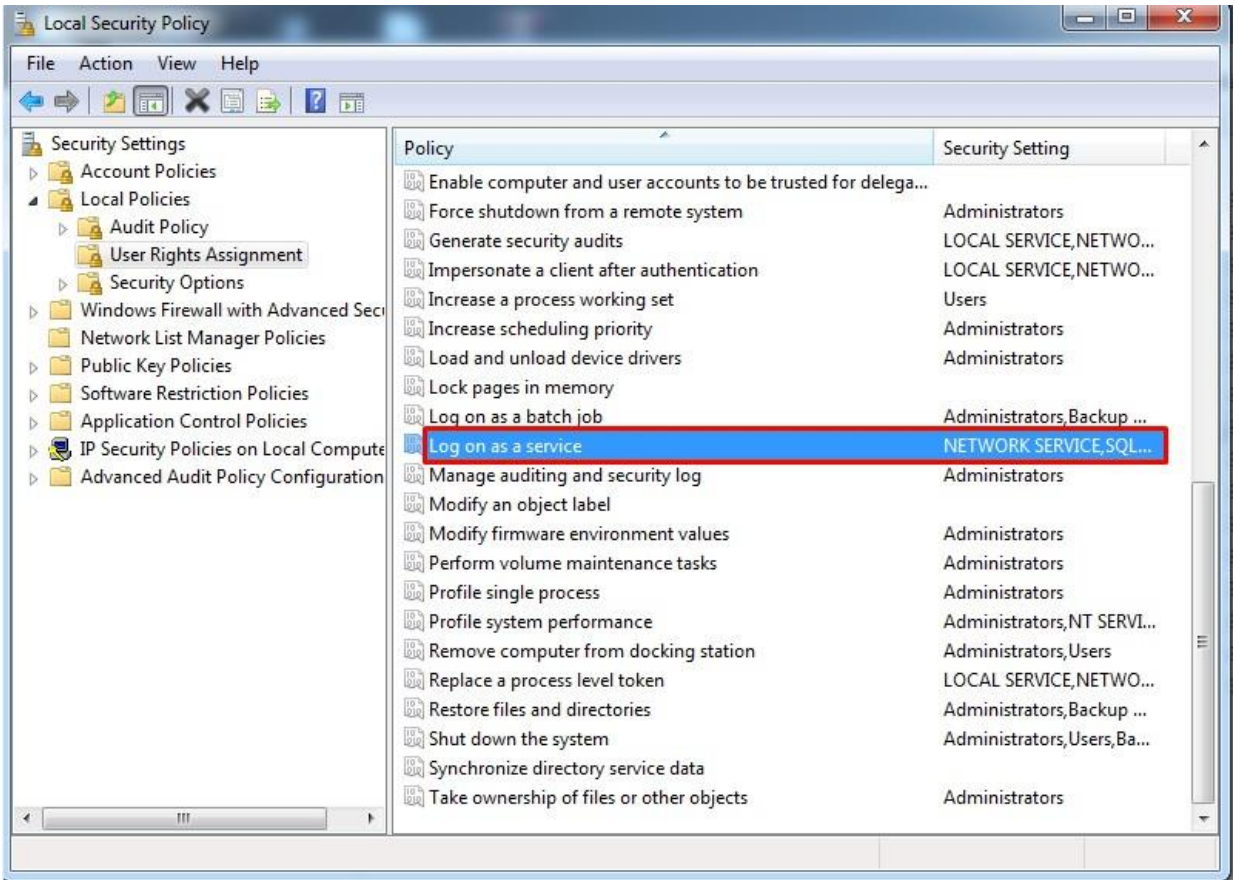

27. Click on **Add User or Group**, as shown below:

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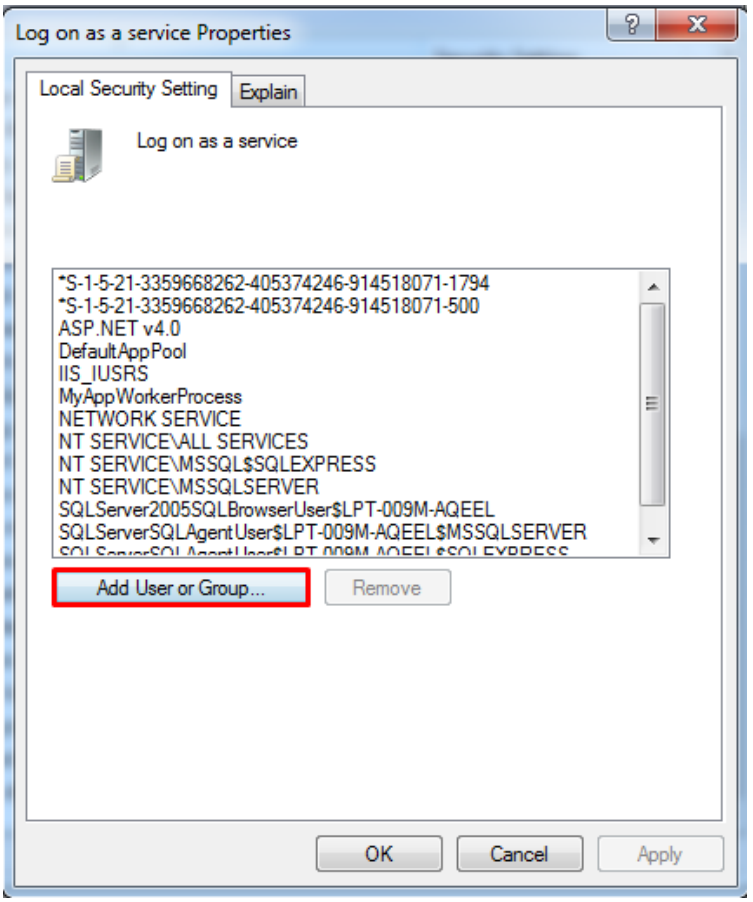

28. To add a New User, click on the highlighted button **Advanced**, as shown below:

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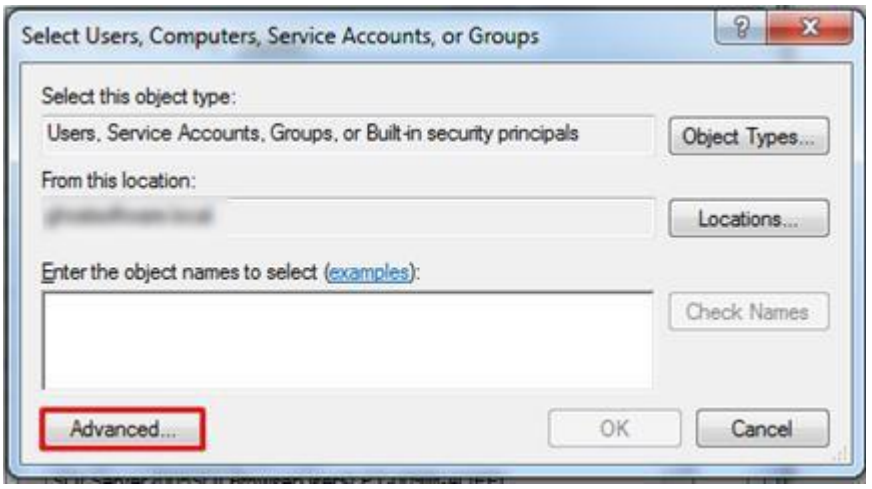
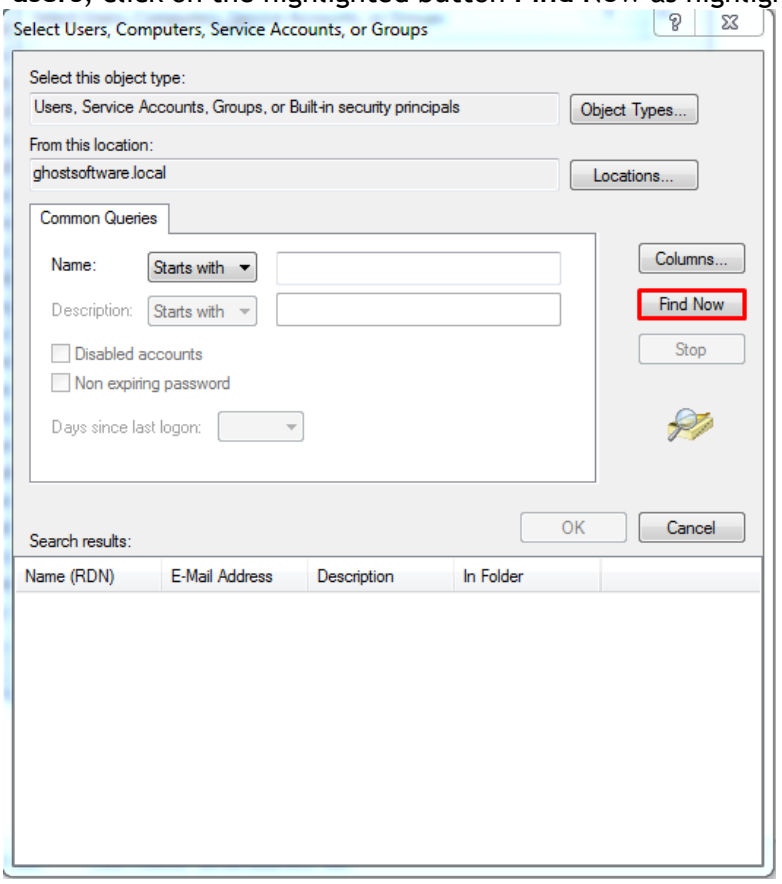


29. To display the **list of users**, click on the highlighted button **Find Now** as highlighted below:



30. A list of users is displayed in the lower section as displayed below. Select the **Administrator** and click **OK** as shown below:

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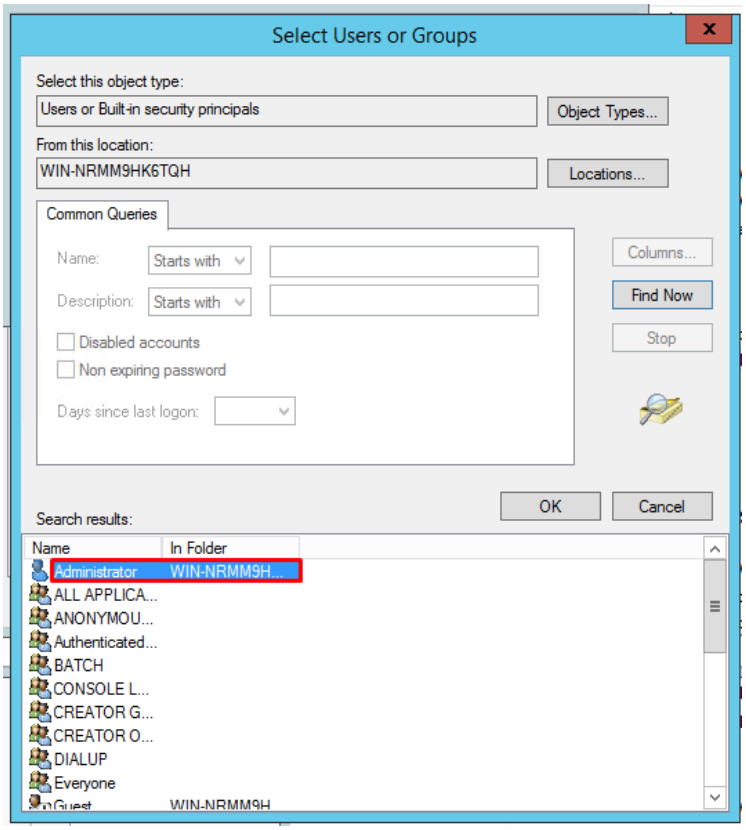
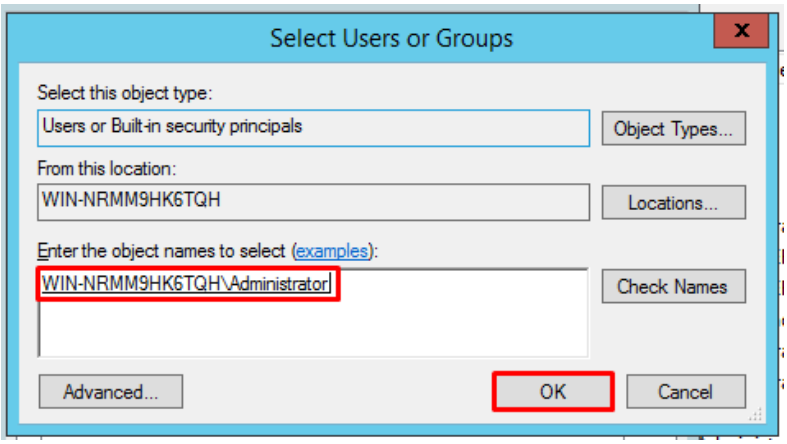


The **User** has now been selected so click **OK** to finish the process as shown below:



31. The user is shown below, under **Local Security Settings** section. Now click **OK**, as shown below.

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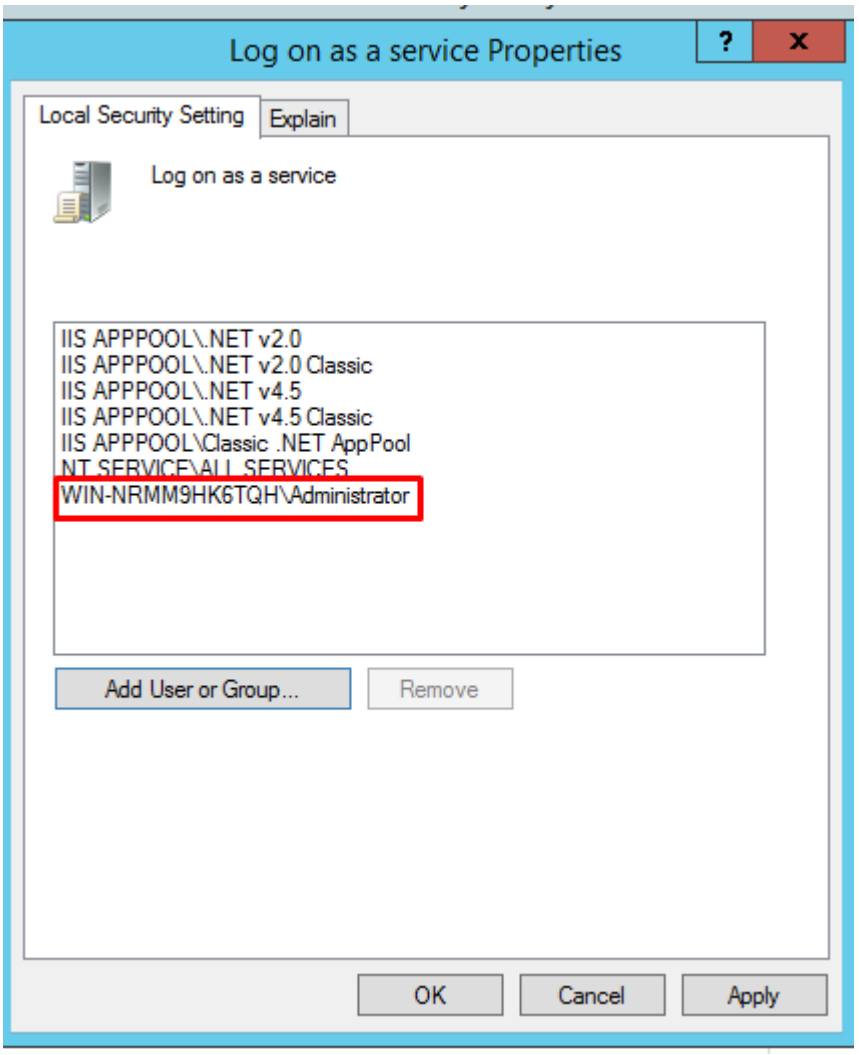

32. Close the **Local Security Policy** window and also close the **Administrative Tools** window.
33. Go to the **Control Panel** select **Administrative Tools** and double click on the **Internet Information Services (IIS) Manager** window as shown below:

ALE International proprietary and confidential.
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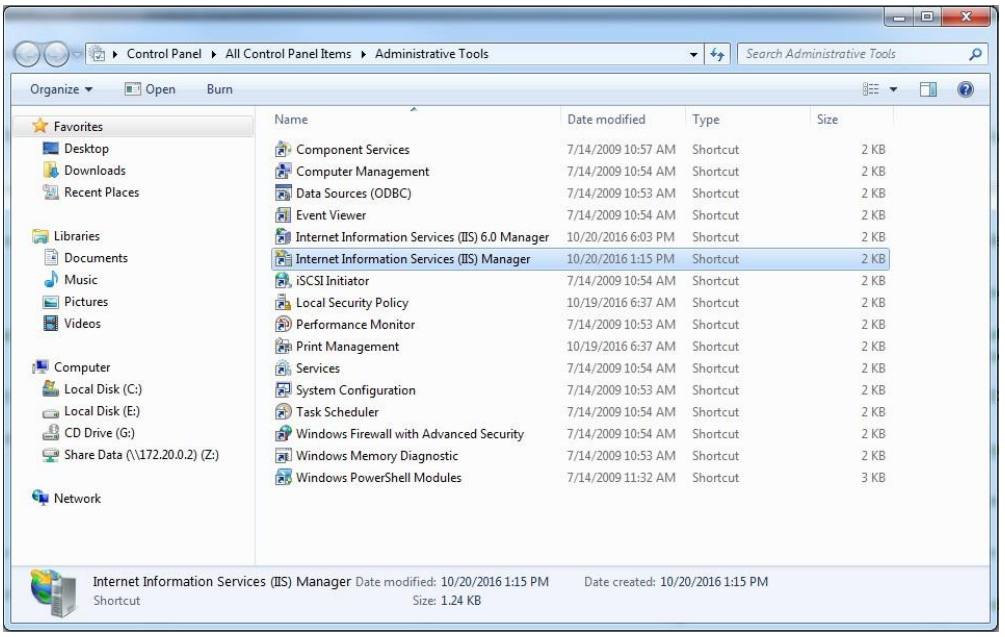
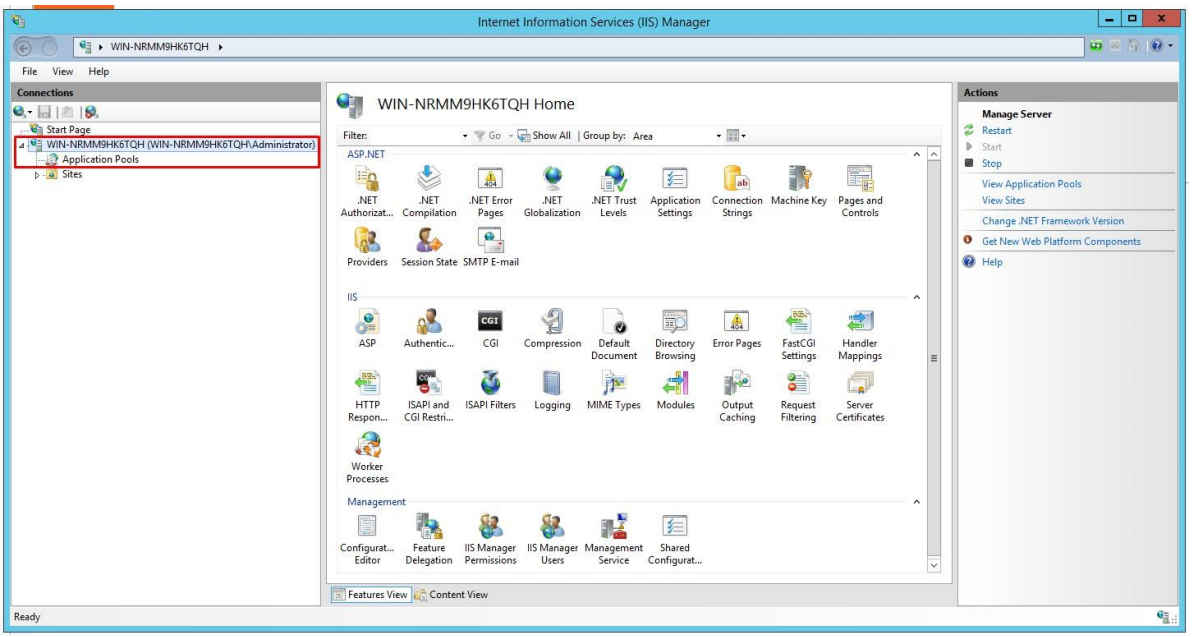


Following Window is displayed:



34. Now expand **PC name** from the left hand panel and select **Application Pools**, in the left hand side panel, as shown below:

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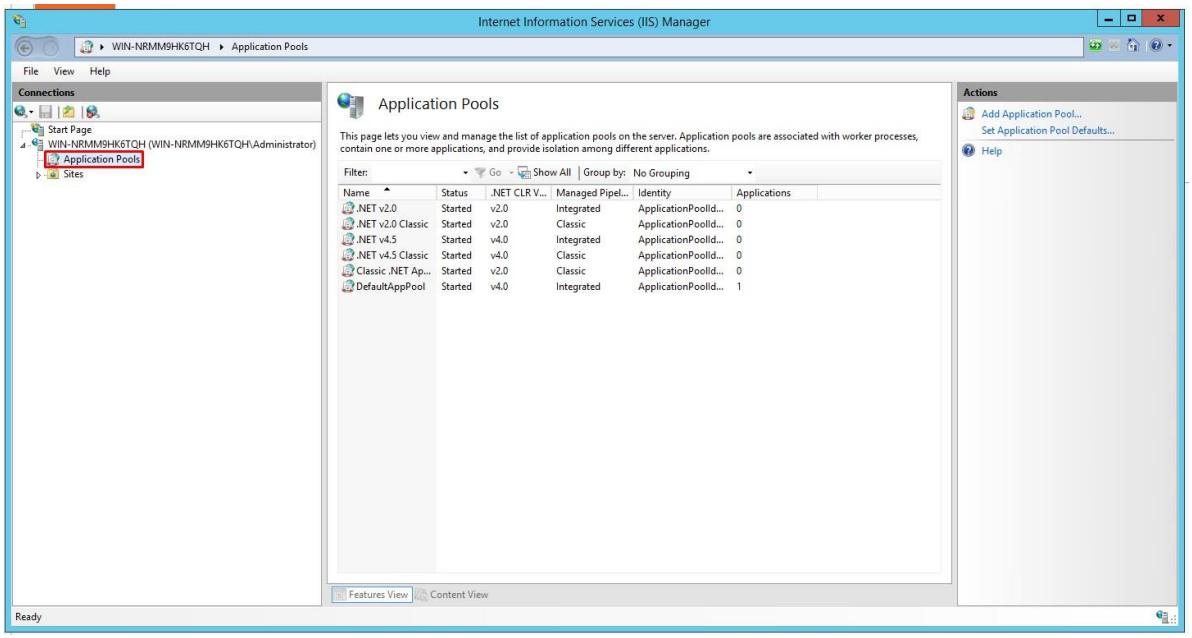
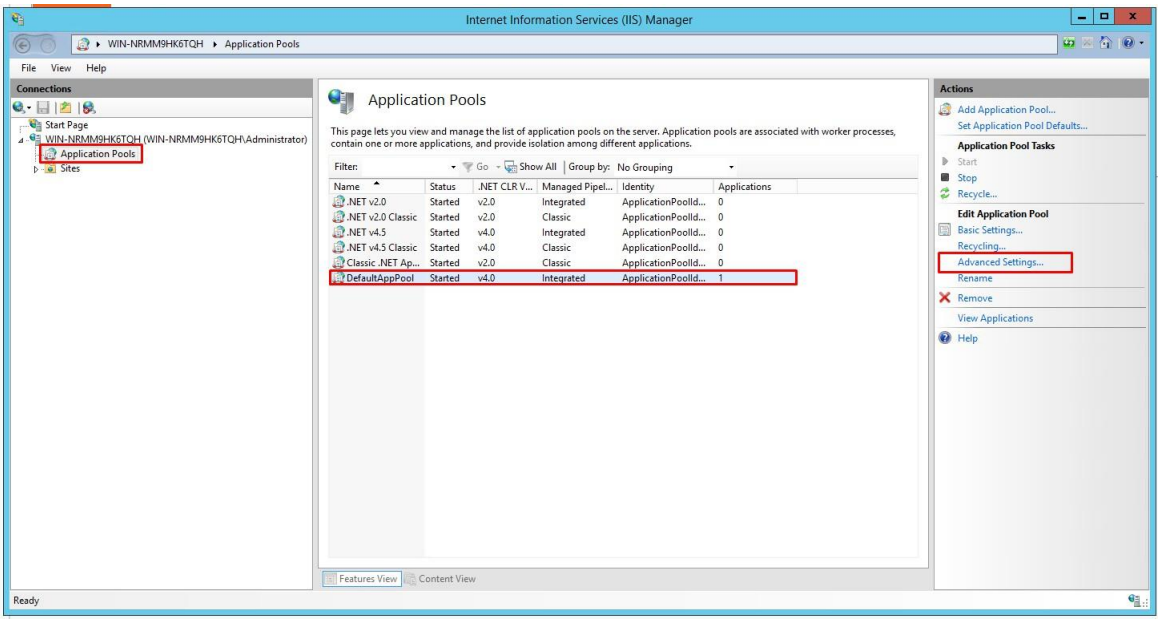


35. The **Applications Pools** pane appears in the central pane. Click on **DefaultAppPool** as highlighted below. Now go to the **Actions** panel on the right hand side, and click on **Advanced Settings**:



Following screen is displayed when you click on **Advanced Settings.** Click on **Enable 32-Bit Applications** and set its value to **True**, as shown below:

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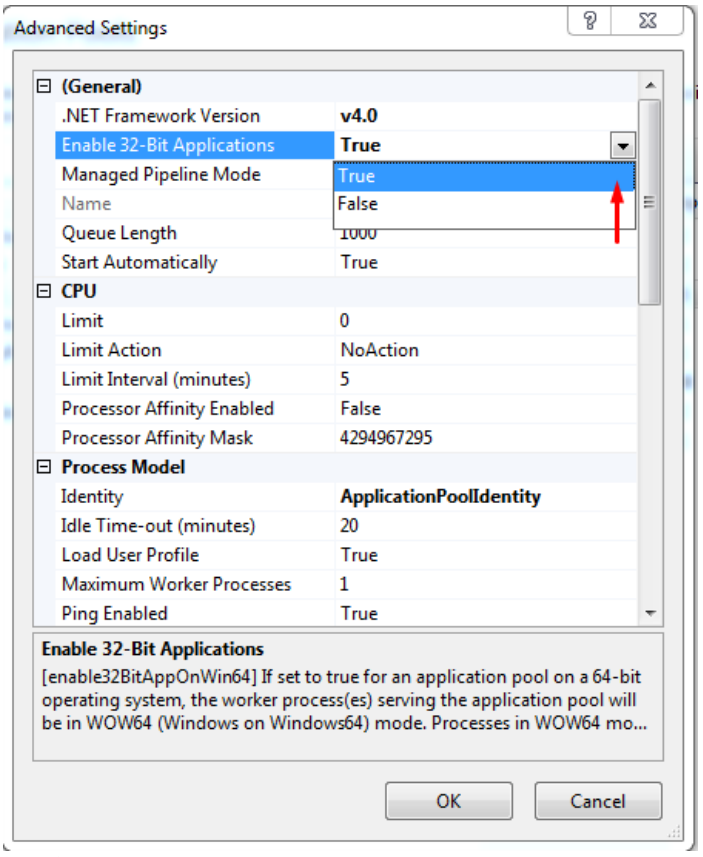
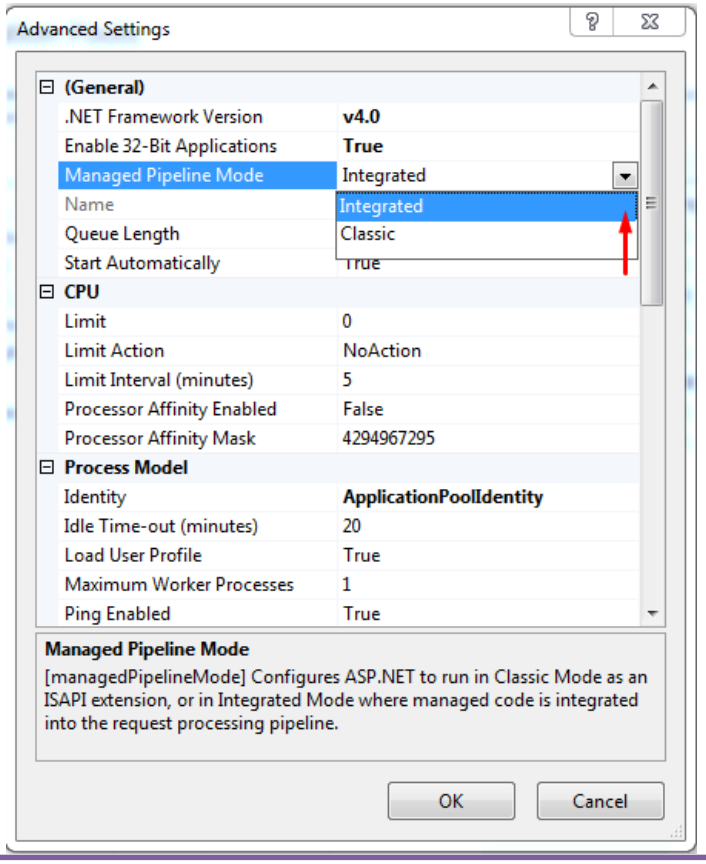


36. Select **Managed Pipeline Mode** option using the dropdown menu and select **Integrated** option as shown below:



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37. Press **OK** and close the **Internet Information Services (IIS) Manager** and **Administrative Tools** window.

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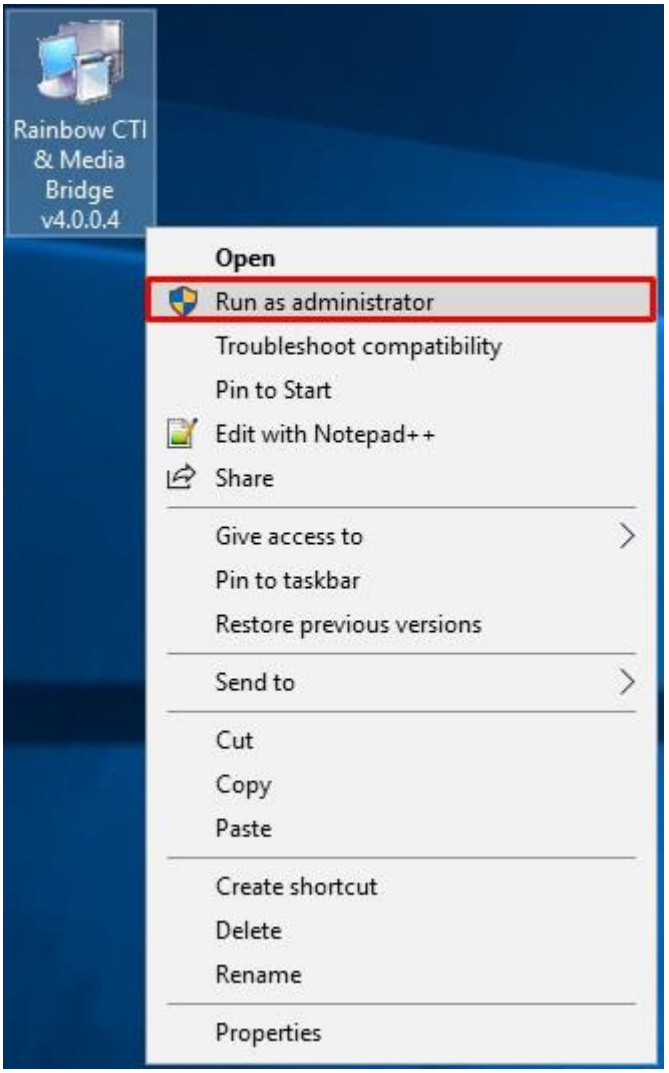
4 Rainbow CTI & Media Bridge Installation

IMPORTANT!! Windows Defender must be turned off during installation.

1. All the above listed configurations must be made before you proceed to this section. Double click the Rainbow CTI & Media Bridge.exe to start the installation. It is important that you run the setup as administrator as highlighted below:



2. Your installation will begin by extraction of files as shown below:

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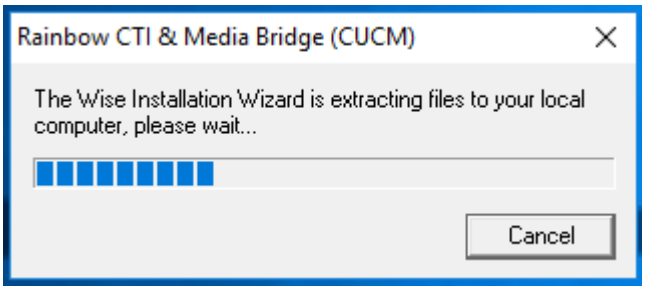
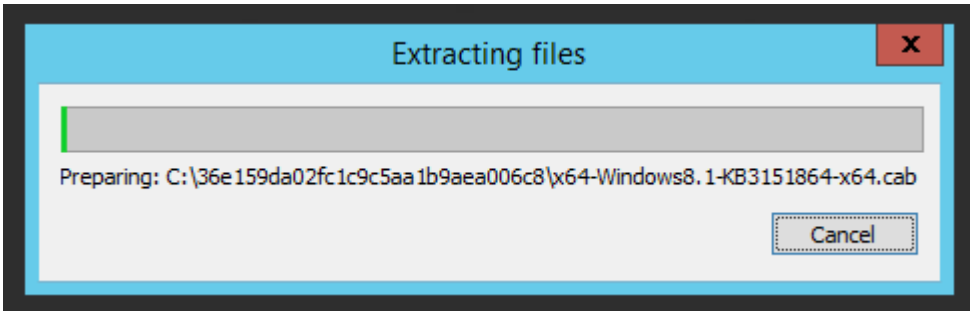
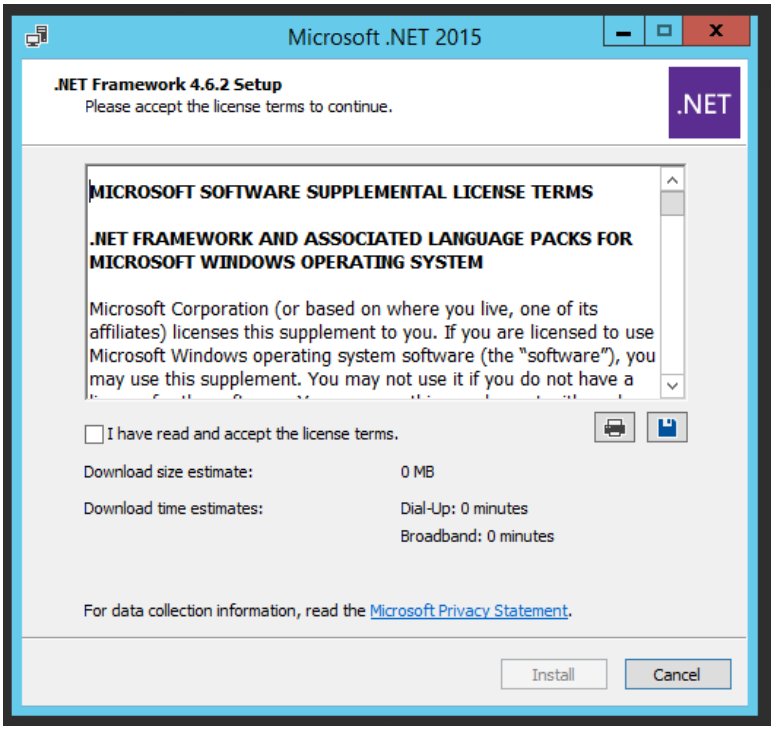




3. You will be prompted to install Microsoft .NET Framework 4.6.2:



4. Check the option box next to **I have read and accept the license terms** and click on **Install** button that becomes enabled as soon as you click on the option next to I have read and accept the license terms.

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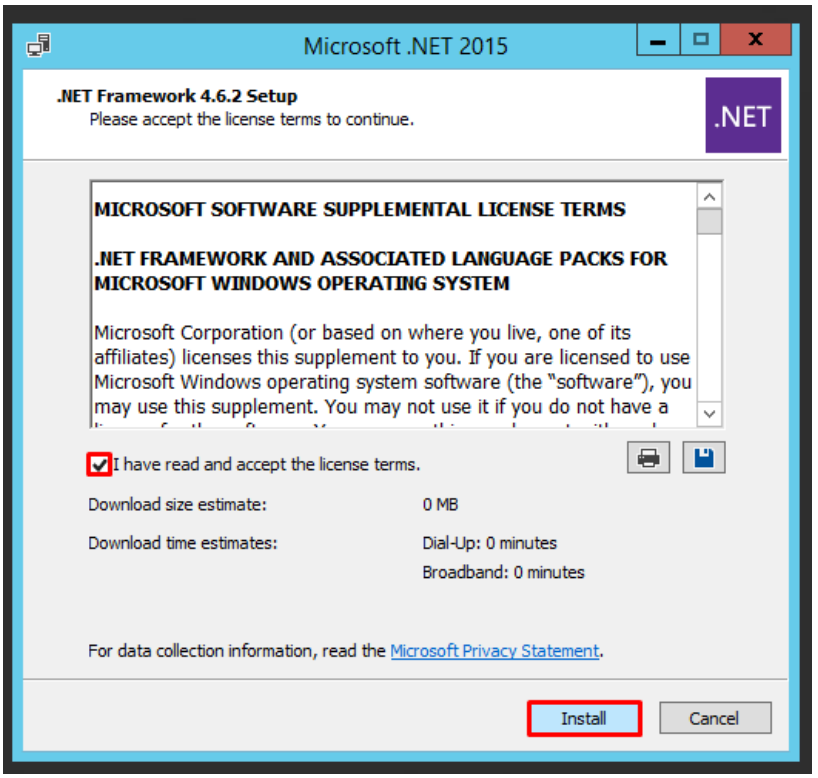
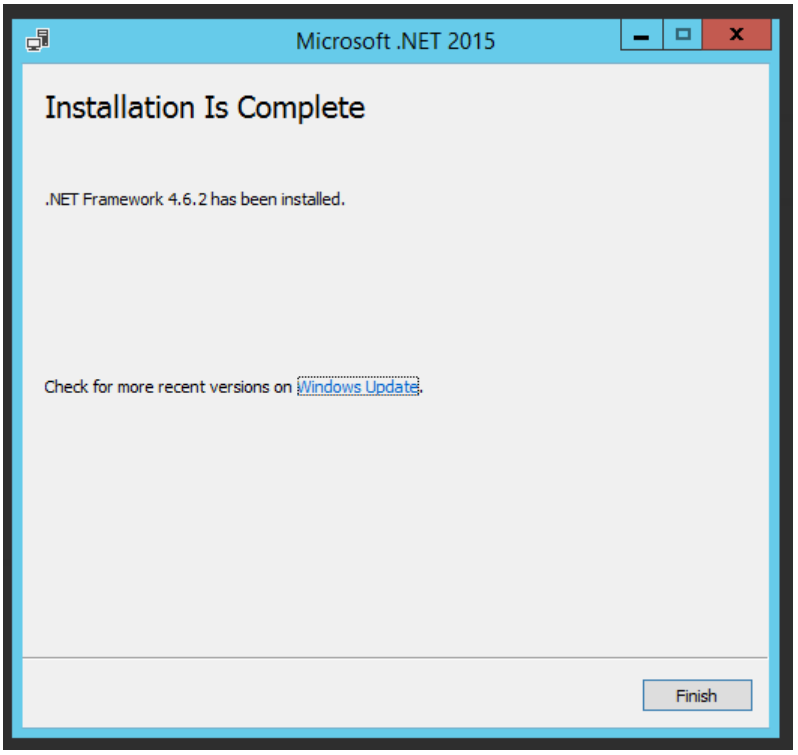


5. Installation will start off and following screen is displayed once Microsoft .NET Framework is successfully installed.



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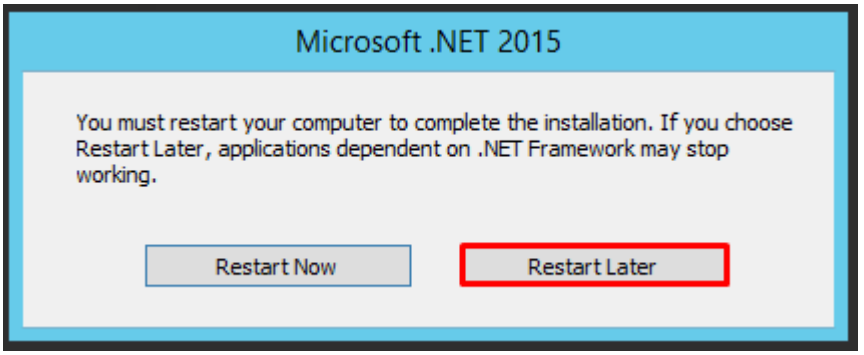
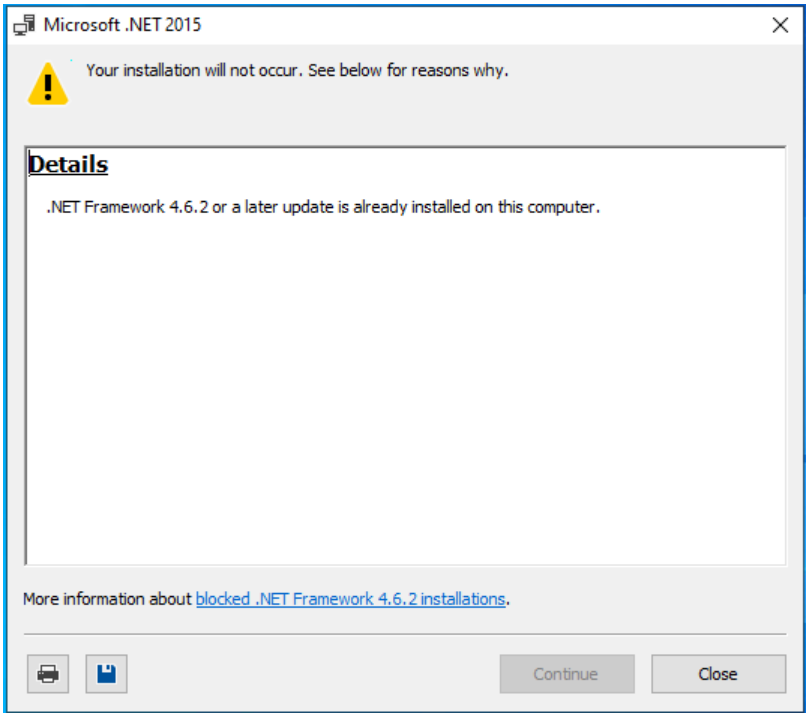
Once you click on **Finish** button, you might receive a pop up prompting you to restart your machine. Click on **Restart Later** option as highlighted below to continue with installation process.



If .NET Framework is already installed on your machine, then following Window will be displayed:



6. Now you will be prompted to install Microsoft Visual C++ 2015 as shown below:

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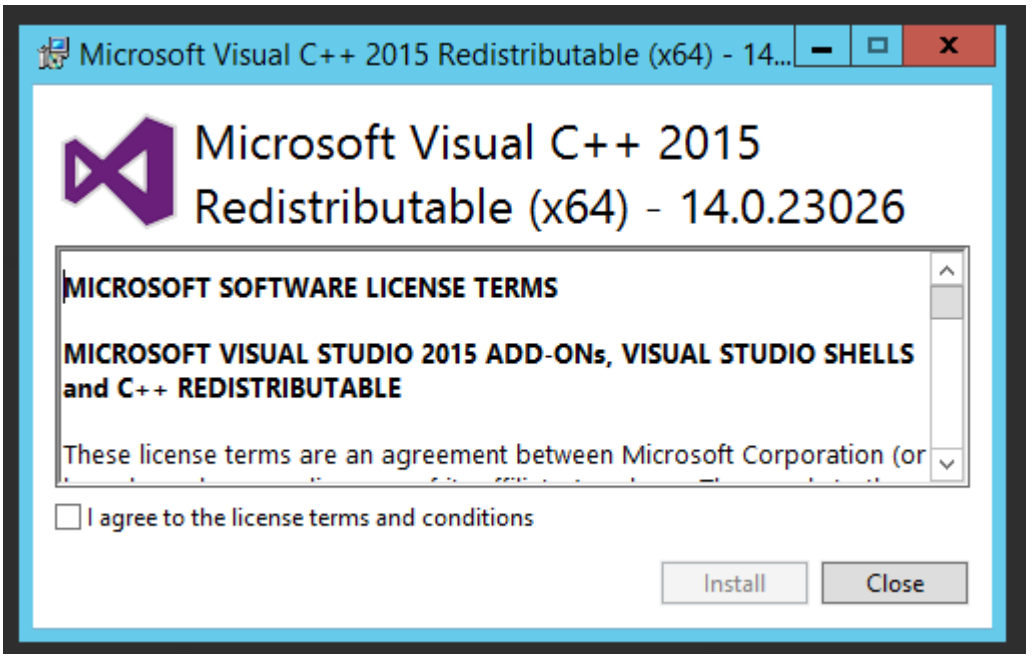
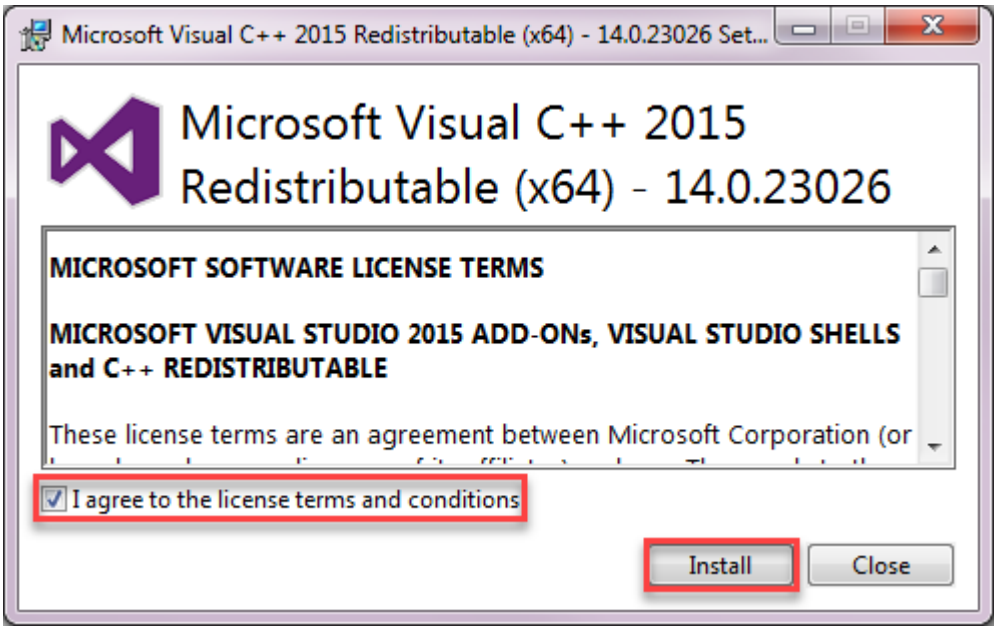


7. Tick the check box to accept the license agreement and then click **INSTALL** to begin the installation as shown below:



Following screen will be presented.

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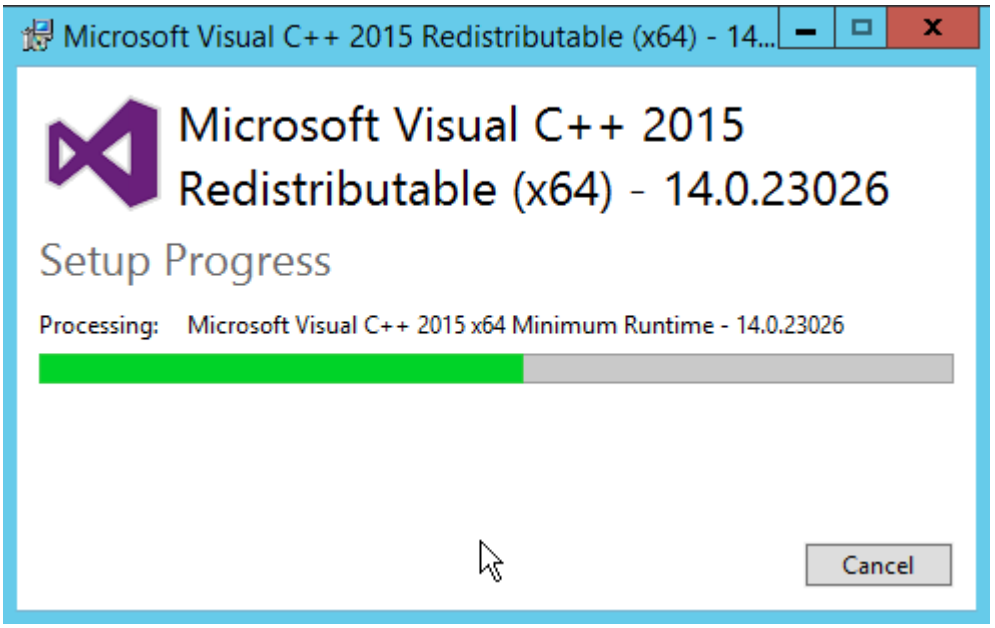
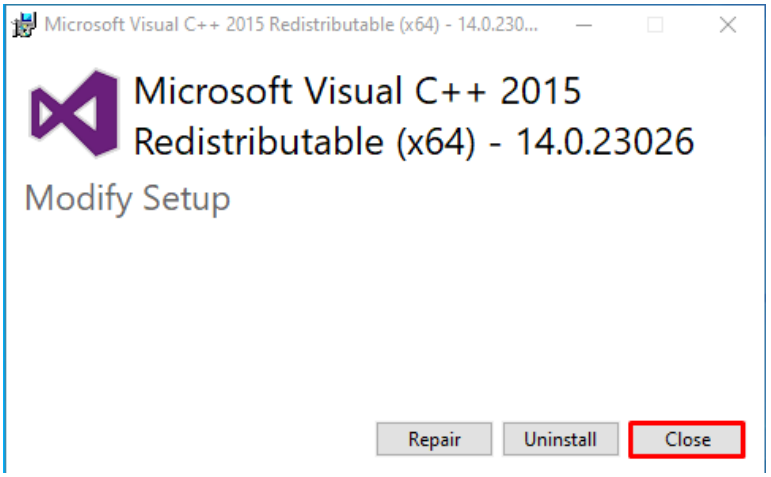


Wait, for the installation to be completed.

Installation successful. Click **CLOSE.** Once you click on **Close** button, you might receive a pop up prompting you to restart your machine. Click on **Restart Later** option to continue with installation process.

If Microsoft Visual C++ 2015 is already installed on your machine, then you will be asked to modify setup. Simply click on Close button as displayed below:



A pop up will be displayed to confirm cancellation of Microsoft Visual C++ 2015 setup. Click on Yes, as shown below:

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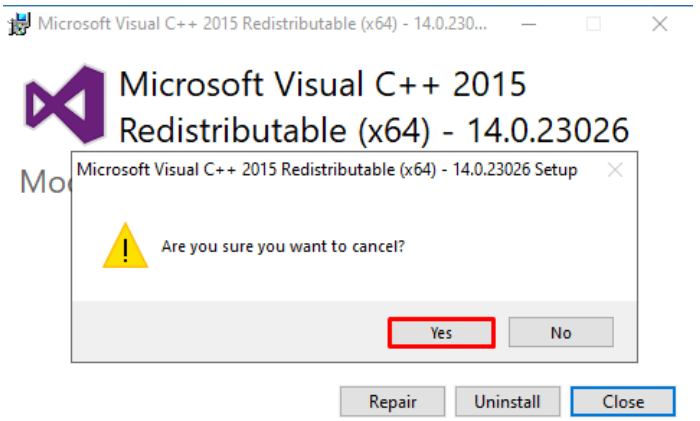

8. Now you will be presented with the installation screen for Rainbow CTI & Media Bridge. Click on Next as shown below:

9. Please read the information on the screen carefully. Once read, select “I accept the license agreement” option and then click on the **Next** button, as shown below.

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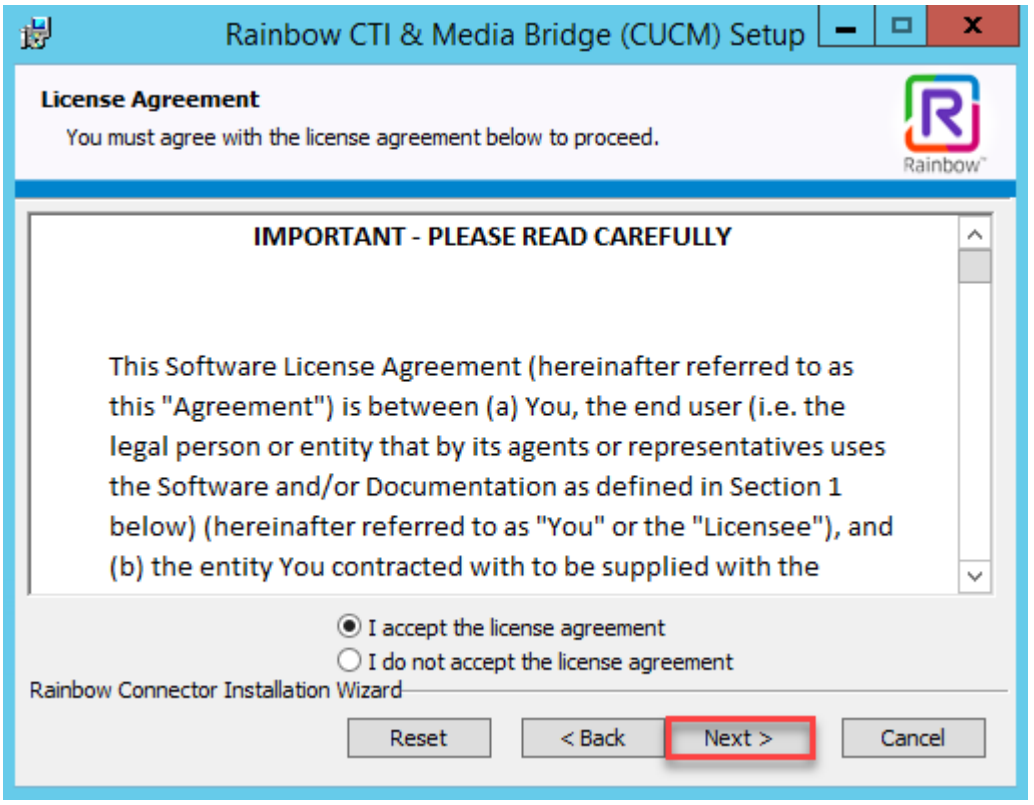

Screenshot - Welcome Window

10. You are now asked to provide local machine account or domain **Username** and **Password** that will allow Rainbow CTI & Media Bridge for logging onto servers or to run application services.

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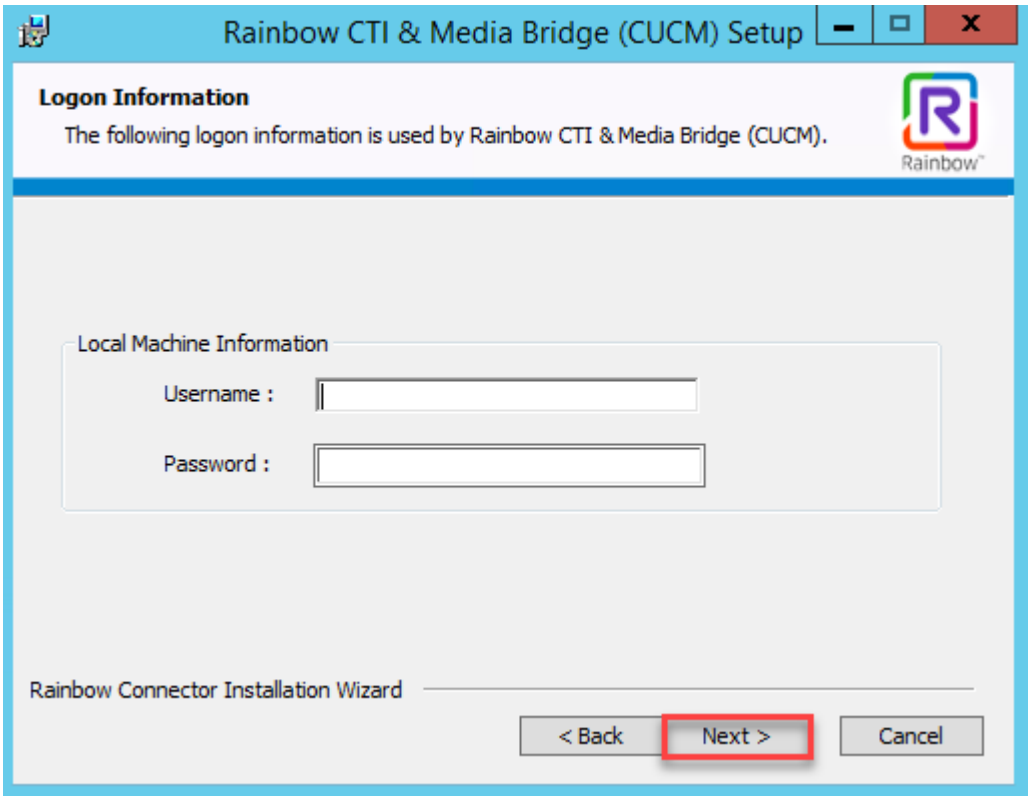

11. The program is asking you to browse for a suitable directory for Rainbow CTI & Media Bridge. If you have no preference, accept the default and click **Next**, as shown below.

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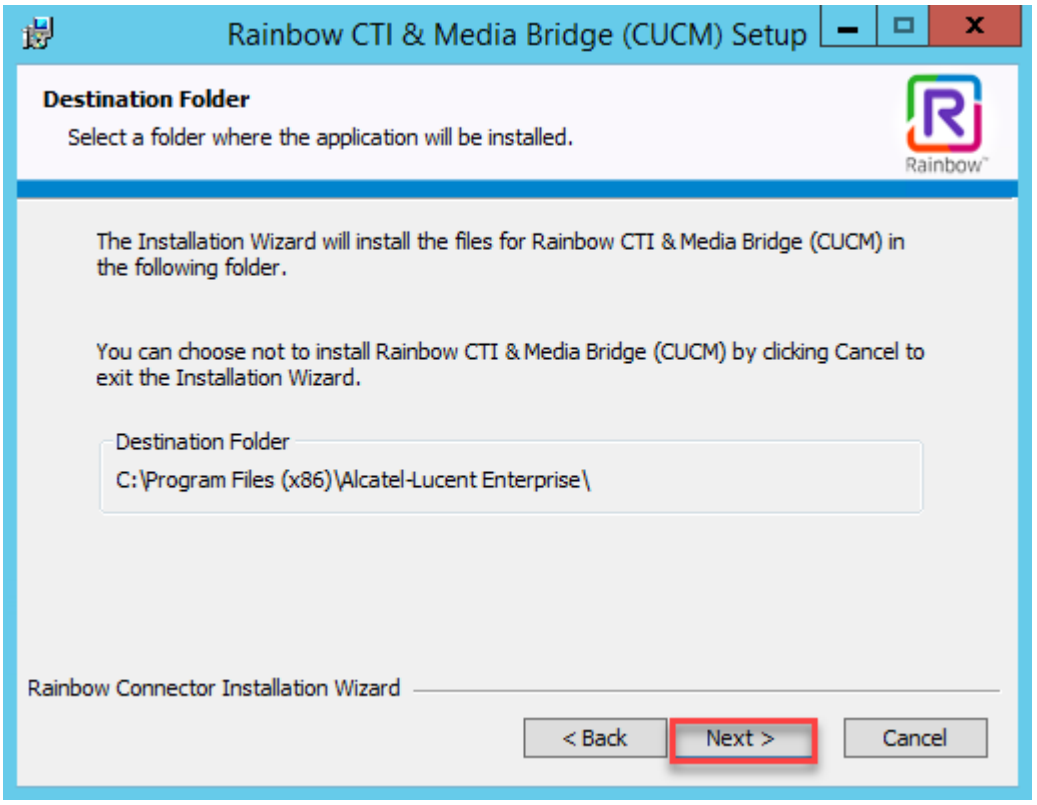

Screenshot-Request for folder selection

12. Behind this screen is an install script ready to execute and configure the files of the Rainbow CTI & Media Bridge application
    - To begin the process, click the **Next** button, as shown below.

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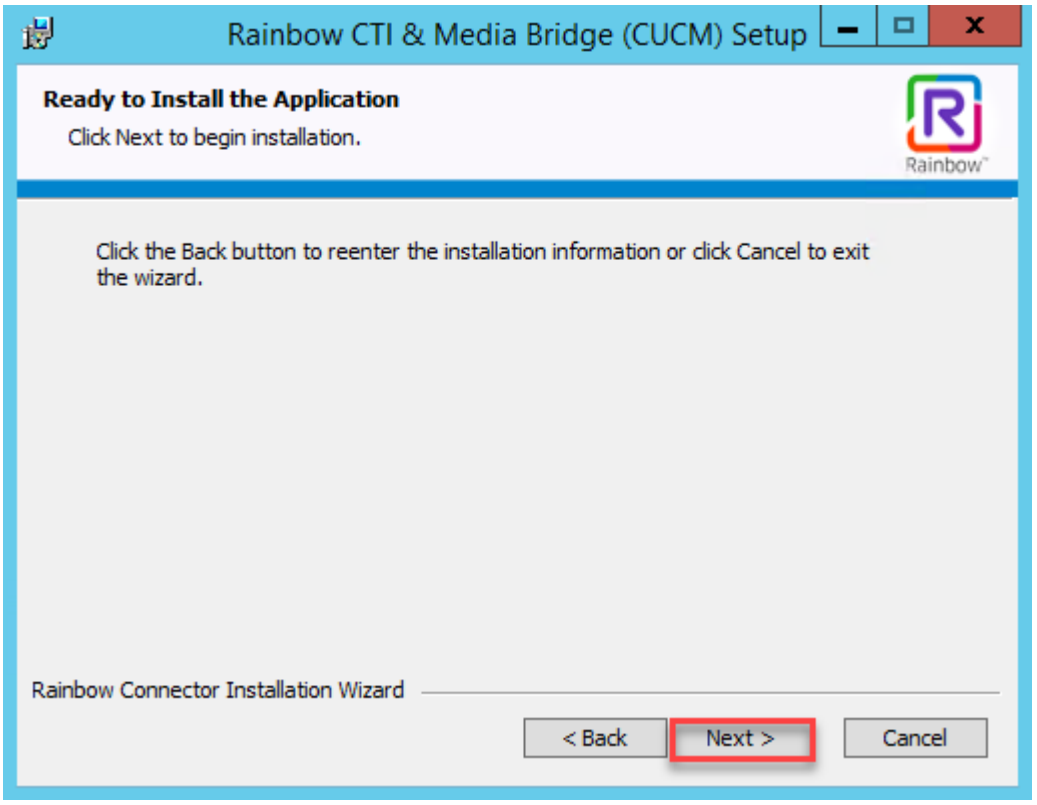

Screenshot-Ready for Installation

13. All the choices and options you have made with regards to Rainbow CTI & Media Bridge are now being implemented.
    - A progress bar will appear while the application is being installed, as shown below.

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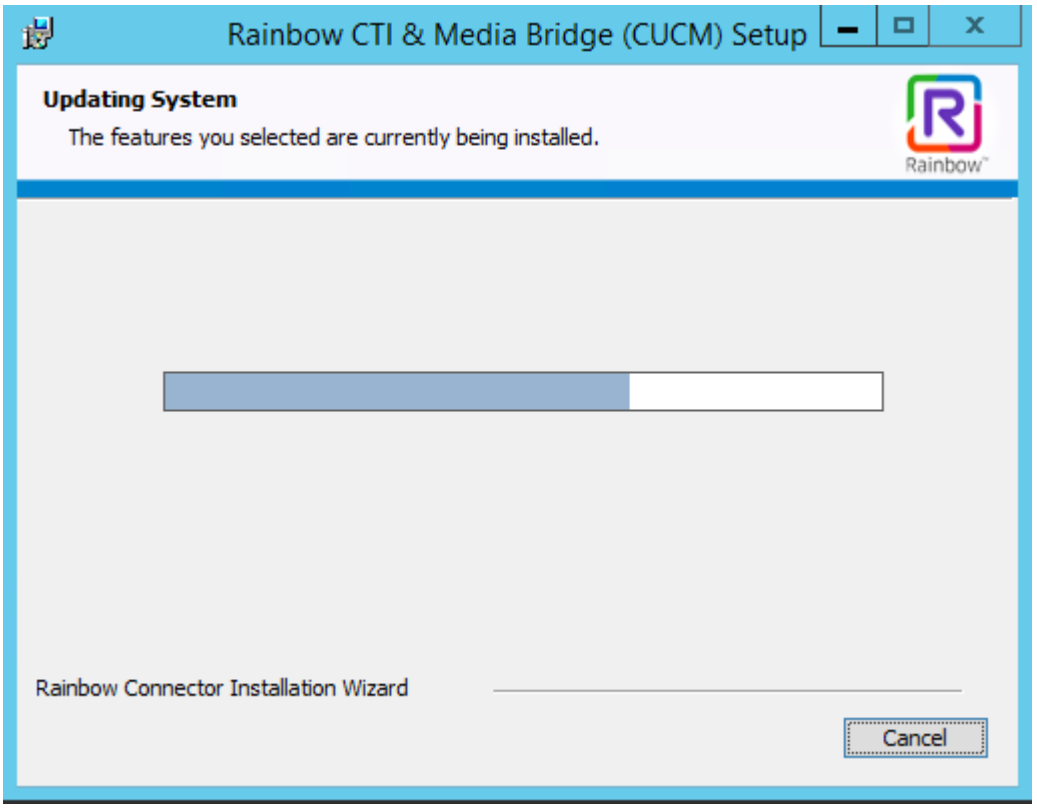

Screenshot-Updating System

14. Your application has been successfully installed when you see this screen. Click **Finish** button, as shown below.

Screenshot - Installation Complete Window

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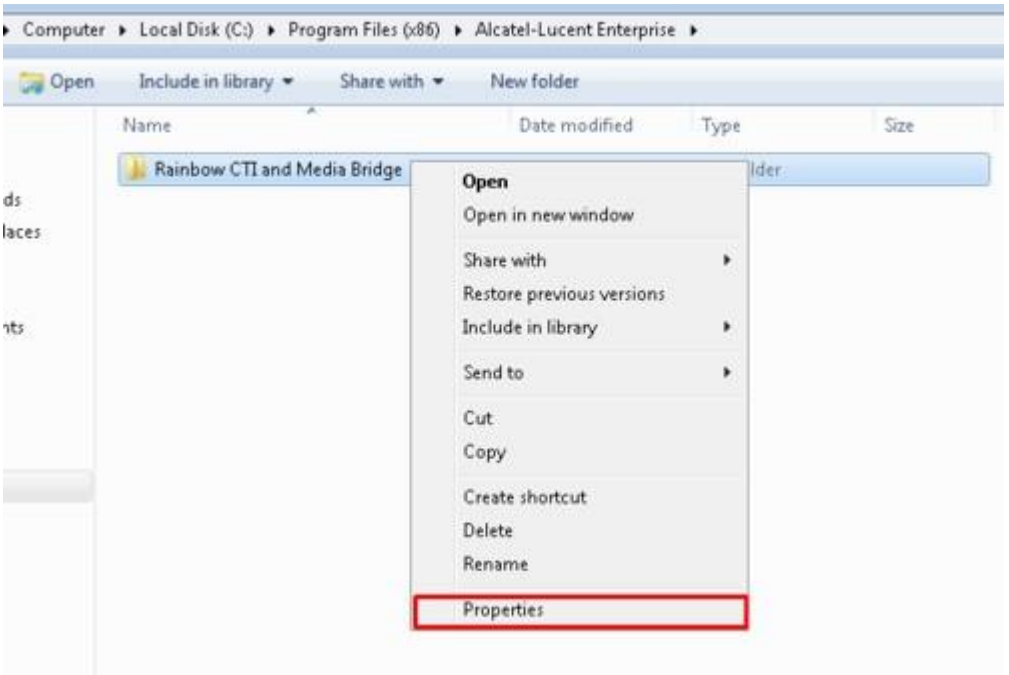
Now Rainbow CTI & Media Bridge has been successfully installed in your system.

Once installation has been completed, you need to provide necessary permissions to the user for the installation path. So go to the default installation path as mentioned below:

C:\Program Files (x86)\Alcatel-Lucent Enterprise

If you have provided a different installation path at the time of installation then go that particular installation path.

Once you have accessed the above path, select the **Rainbow CTI and Media Bridge** folder and right click on it. Go to **Properties** option as highlighted below:



Click on **Security** tab and click on **Edit** button to change permissions.

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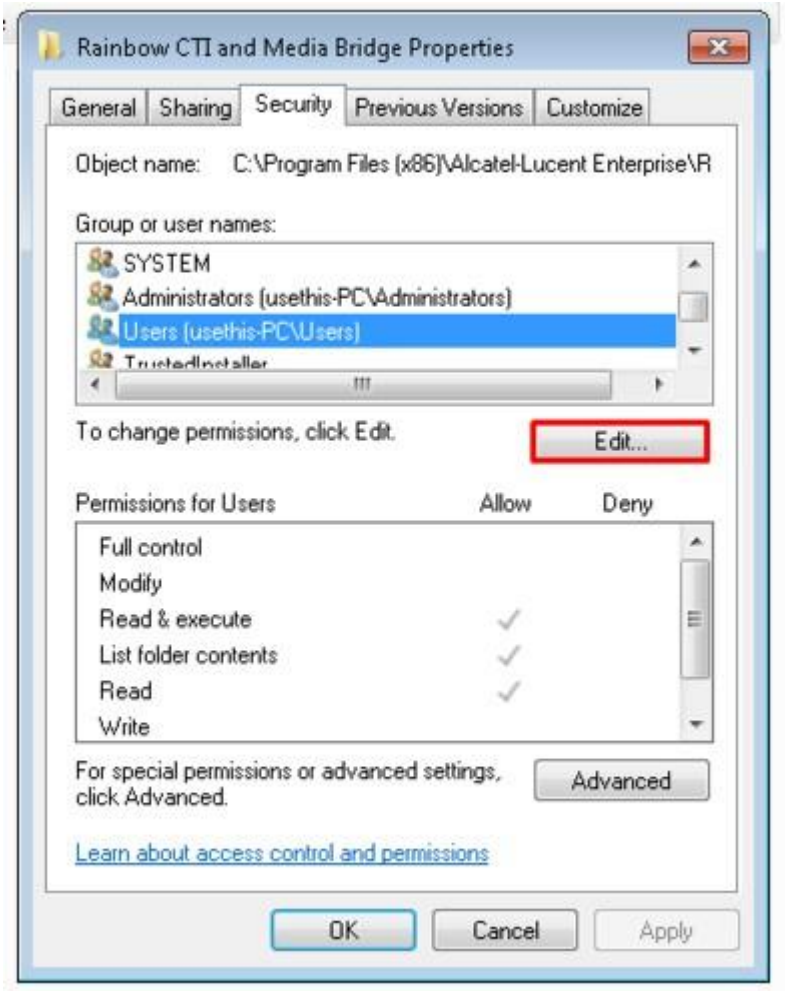

Check all the permissions for logged in user as highlighted below and then press **Ok.**

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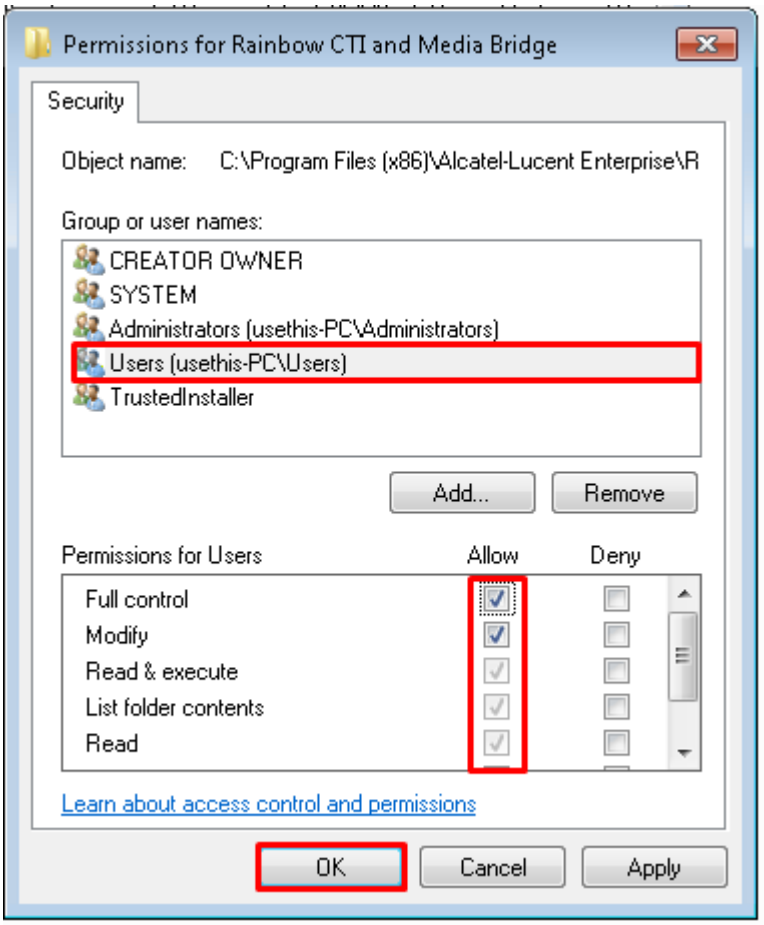

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5 Verification Procedure

Once you have done with **Rainbow CTI & Media Bridge** installation, you will find a shortcut on your desktop. You can verify the installation by double clicking the icon.

Rainbow CTI & Media Bridge Shortcut

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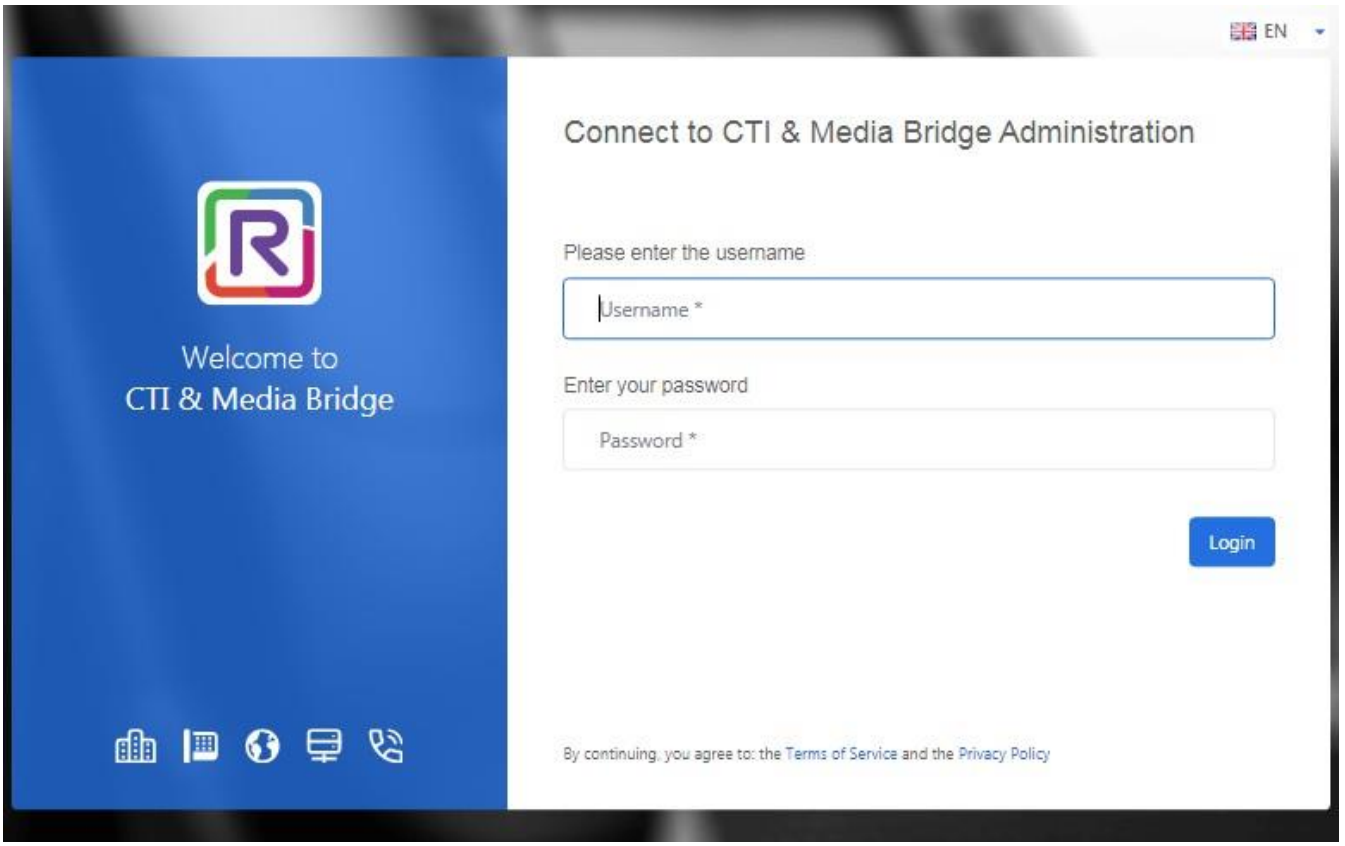
6 Rainbow CTI & Media Bridge Interface

The installation is now completed and after you click Rainbow CTI & Media Bridge Shortcut a login screen is displayed as shown below:



Please enter following credentials when you are logging into the Rainbow CTI & Media Bridge for the first time after installation:

Username: admin

Password: admin

You should be able to view the main screen below.

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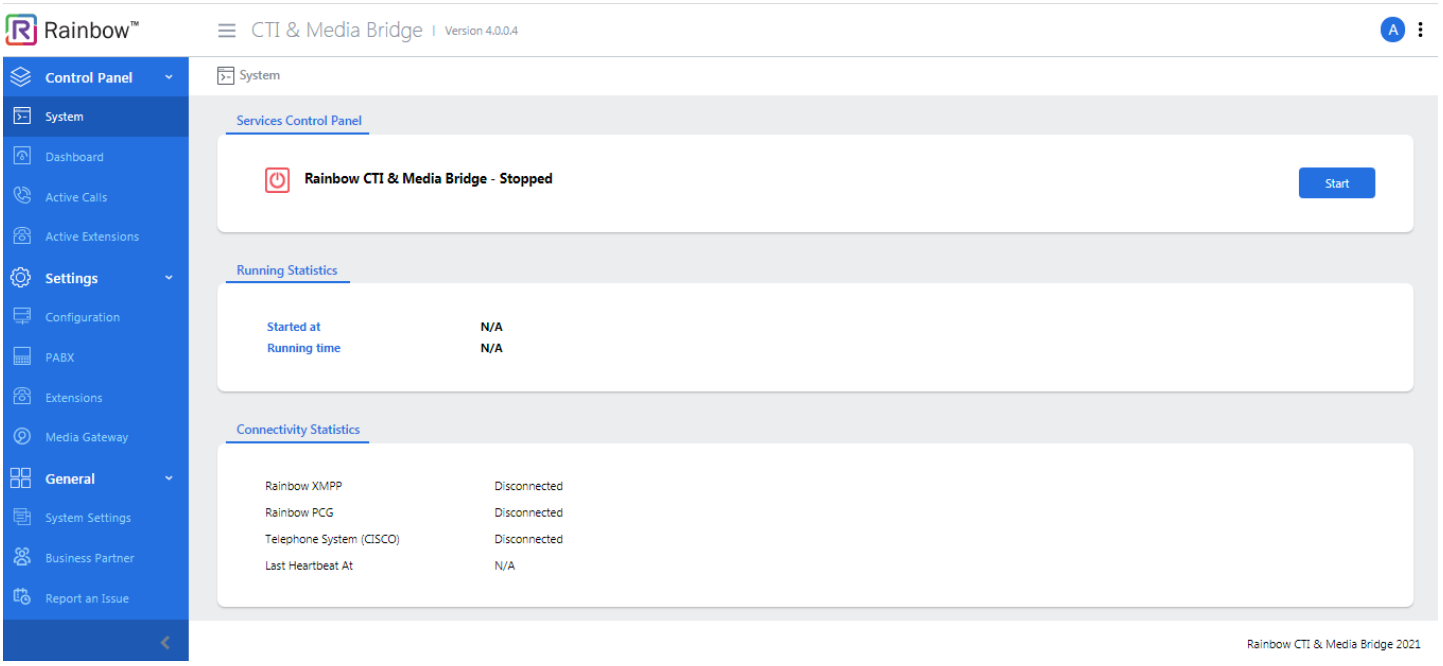

Screenshot-Web Admin Control Panel

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