



veer

ZenLPR

Installation Guide

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1. Introduction

1.1. Overview

This document is provided to serve as a guide for the full installation of ZenLPR™ and all its related components.

1.2. Purpose

The main purpose of this document is to reduce any possible manipulation mistakes, errors and misinterpretations during the software installation phase by the integration team.

1.3. Scope

This document covers the installation of ZenLPR™, ARH Carmen FreeFlow™, and Configuring IIS.

1.4. Out of Scope

This document does not cover:

- Any 'third party' software mentioned in the pre-requisite
- Milestone™ Installation & Configuration
- Microsoft SQL Server™ Installation & Configuration
- Server Configuration
- Network communication
- Acceptance procedures
- Validation procedure
- Technical environment

Should any further information about the above topics be needed, please refer to the 'reference document' mentioned below (Section 3.2)

1.5. Pre-Requisites

- Nvidia drivers (version 396 or higher)
- Cuda drivers (version 9.1)
- .Net Framework 4.7
- Milestone Environment

1.6. General Principles

All deliveries must be compliant with the '*Project's System Requirements*' provided by the *technical team* (Hardware resources, Operating system, System architecture ...). *Whilst* at the same time respecting the operating methods and conditions.

Contractors must be able to distinguish between a 'full installation' and a 'patch delivery installation'. It is worth noting that an update installation is different than a full system deployment in terms of procedures, any wrongful installation falls under the contractor's reliability. All deliveries must contain a 'Release Note Document' & and 'Installation Procedure'. Please refer to the latest version of the above-mentioned document for complete detailed information, where each software release has its own "Release Note Document" with the respective updated "Installation Document".

2. Installation Manual

2.1. Pre-requisites

- Operating System: Windows Server 2012 or above, Windows 8 or above
- Database: Microsoft SQL Server 2012 or above (server edition is dependent on the size of the project, the number of simultaneous connections, and the data retention period effecting the database size)
- For more information, please check SQL SERVER website (<https://www.microsoft.com/en-us/sql-server/sql-server-2017-editions>)
- System Requirements: ZenLPR™ needs a minimum of 500MB RAM per stream
- CPU and Storage: dependent of the project size
- Milestone version: Milestone 2016 or above (any milestone version prior to 2016 is not supported by ZenLPR™)

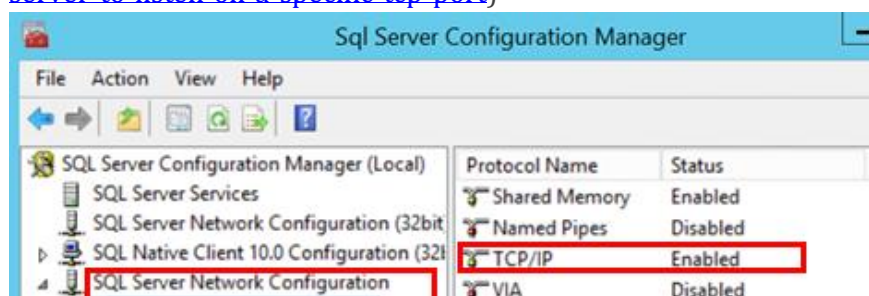
2.2. Pre-Installation Tasks

Before starting the installation procedure

- A database user must be created as *SYSADMIN*
- SQL Authentication must be enabled

It is worth noting that if SQL Server is on a remote server, *TCP/IP* protocol should be enabled

<https://docs.microsoft.com/en-us/sql/database-engine/configure-windows/configure-a-server-to-listen-on-a-specific-tcp-port>)



Before moving to the next step, make sure the machine has connectivity to the Milestone Management server and has connectivity to the SQL Server (in case it was on a remote server).

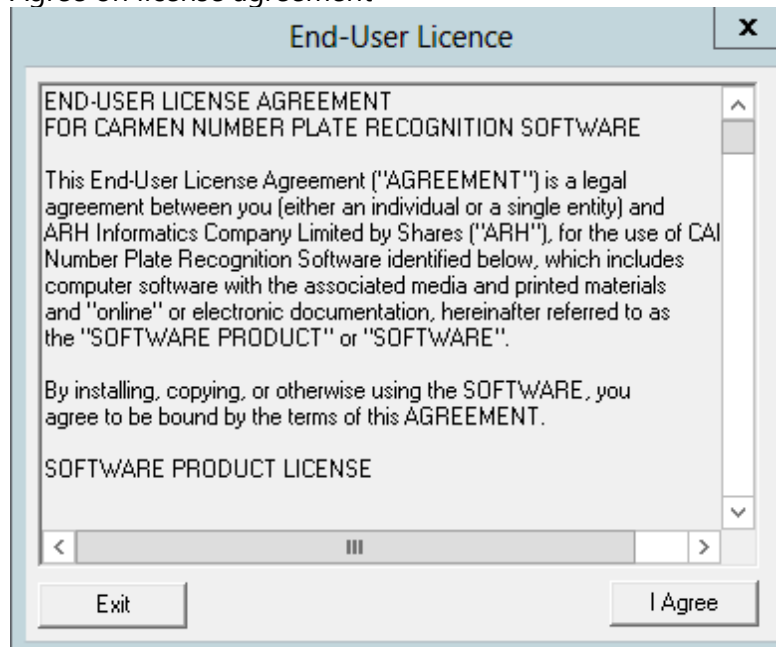
In case of a distributed LPR architecture, you will have many processing servers for LPR. ARH Carmen FreeFlow™ engine should be installed on all LPR Recognition servers. Installation of Carmen FreeFlow™ is found on section (Section 3.3) of this document Carmen FreeFlow™ Installation.

3. Carmen FreeFlow Installation

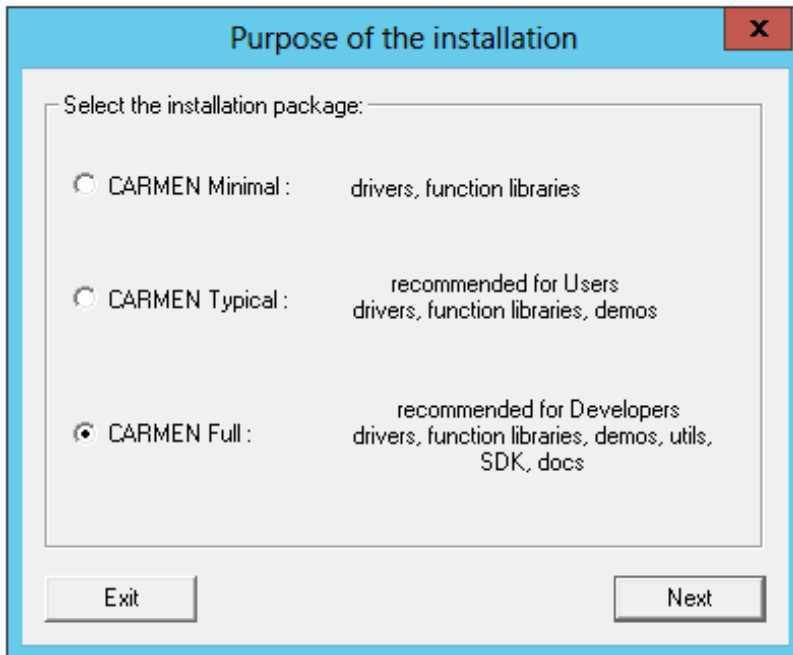
Navigate to the Carmen FreeFlow engine folder supplied to you with the ZenLPR Installation files, and go to setup.

ms	10/23/2017 6:59 PM	File folder	
setup.x64	10/23/2017 6:59 PM	File folder	
setup.x86	10/23/2017 6:59 PM	File folder	
setupdata	6/14/2017 10:39 AM	File folder	
Arh	1/9/2015 7:23 AM	ICO File	15 KB
autorun	4/21/2017 12:29 PM	Setup Information	1 KB
readme	6/21/2016 8:08 AM	TXT File	4 KB
setup	7/14/2016 7:36 AM	Application	932 KB

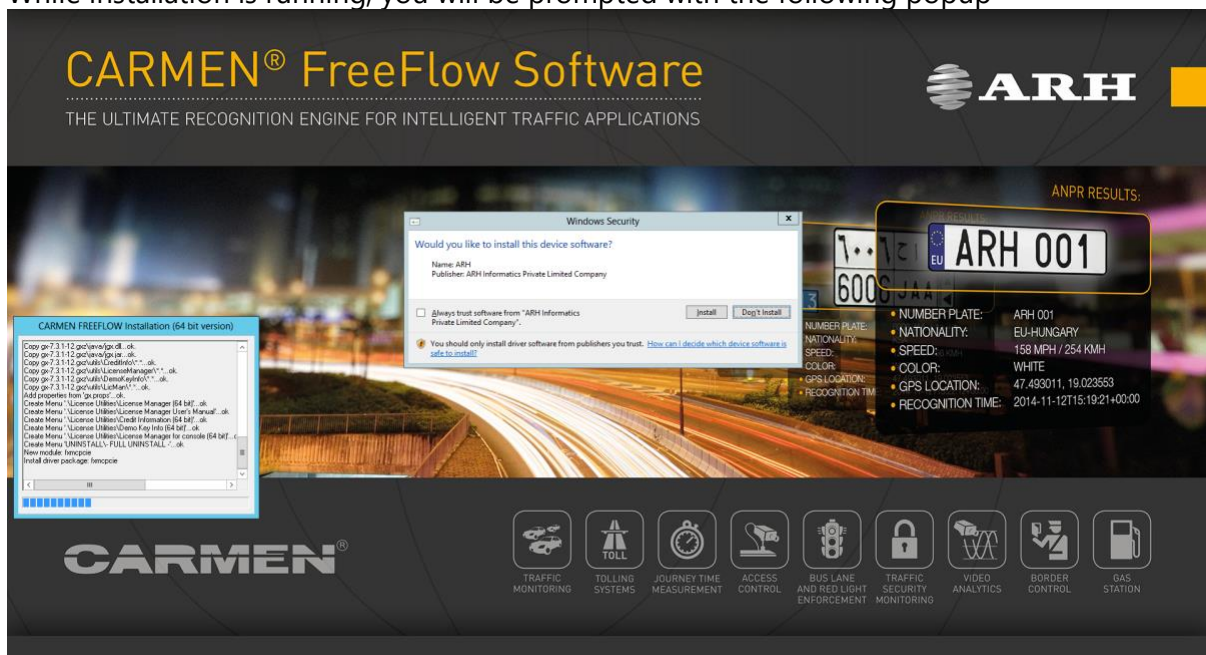
Agree on license agreement



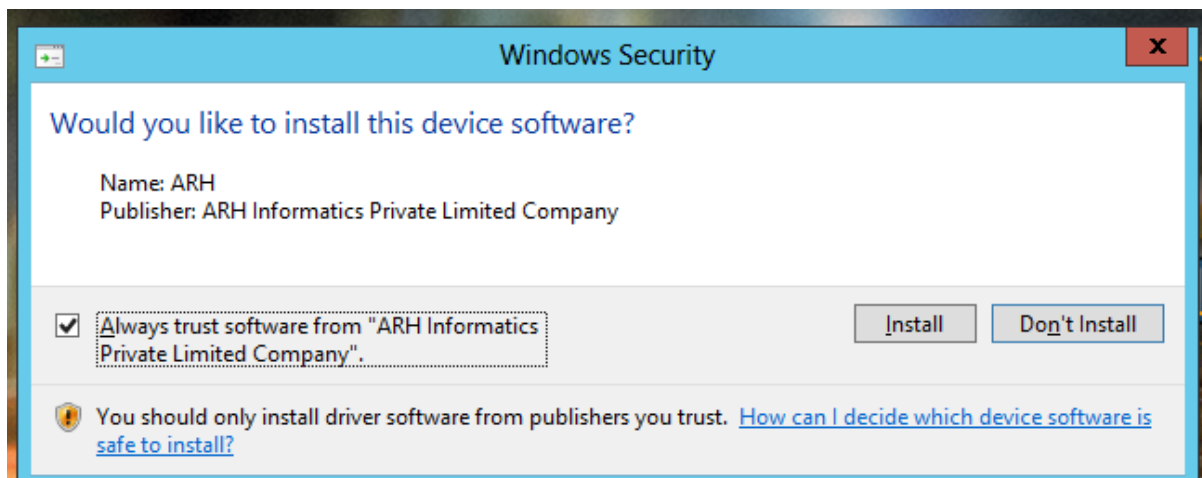
Select CARMEN FULL



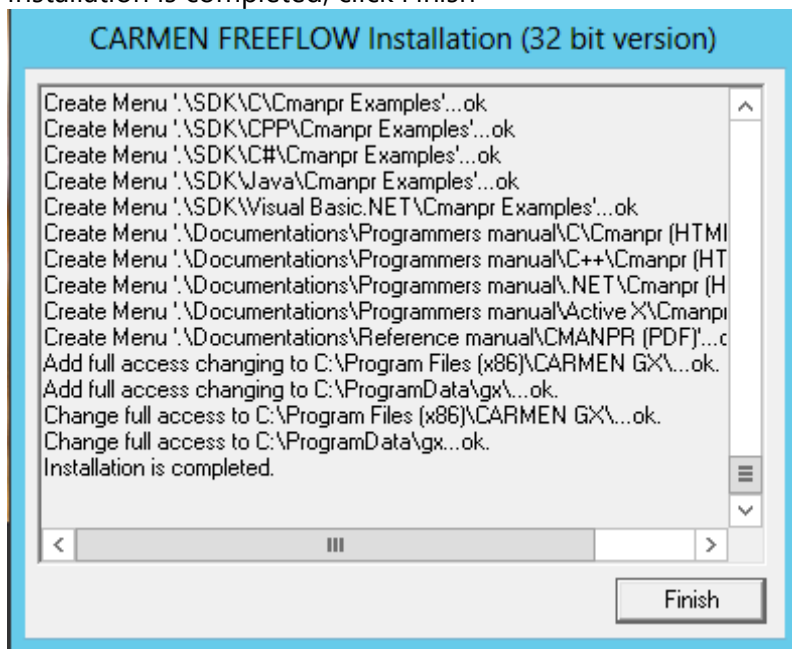
While installation is running, you will be prompted with the following popup



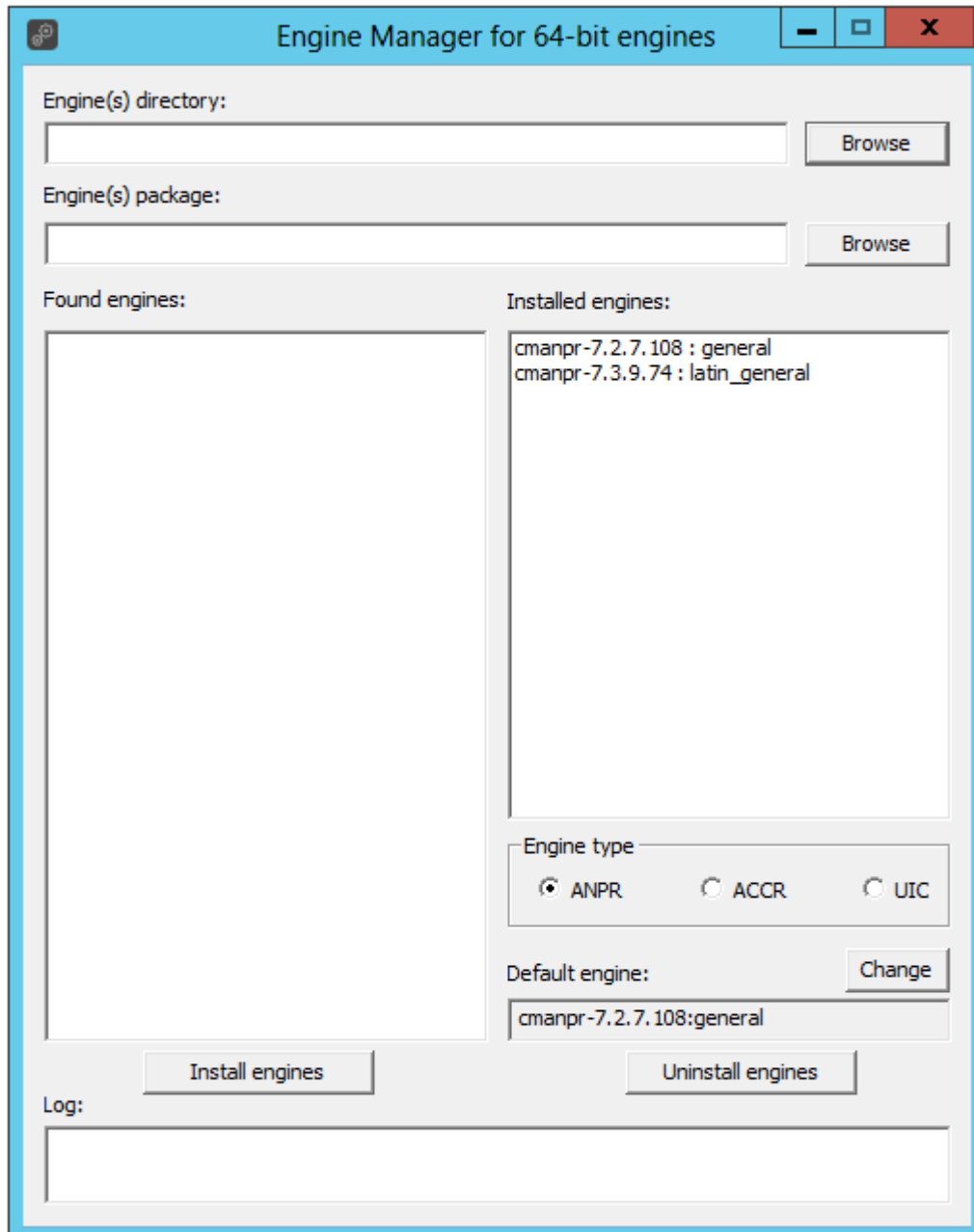
Make sure to select "Always trust software from ARH Informatics Private Limited Company" then click install.



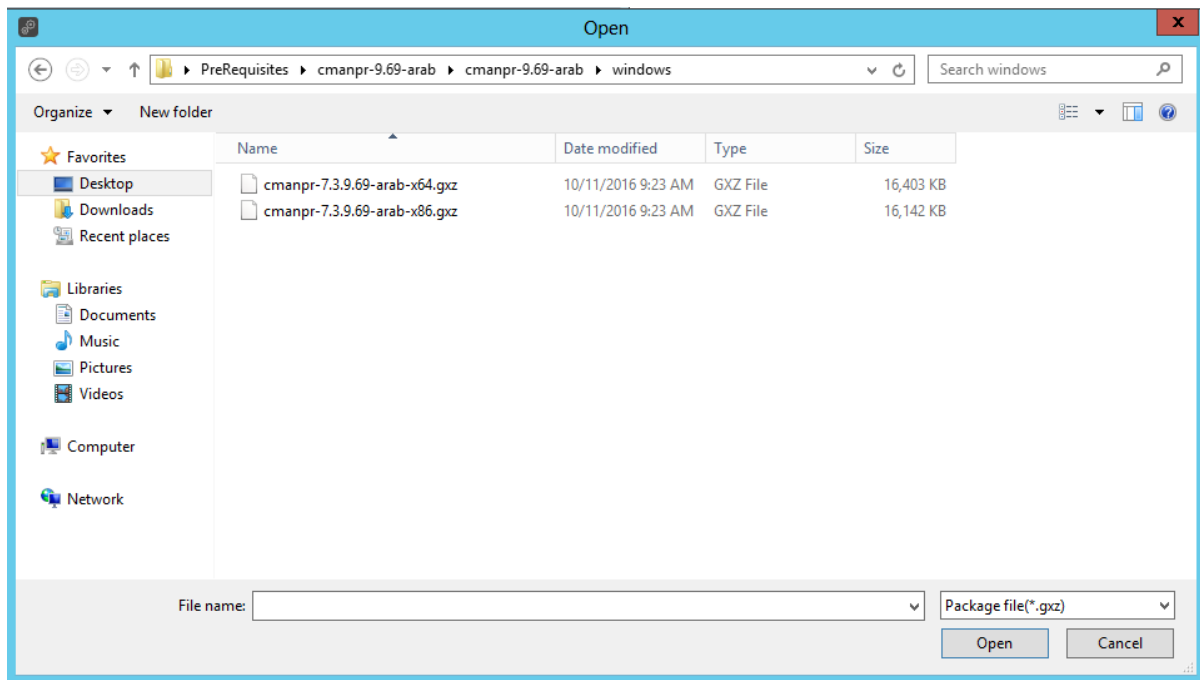
Installation is completed, click Finish



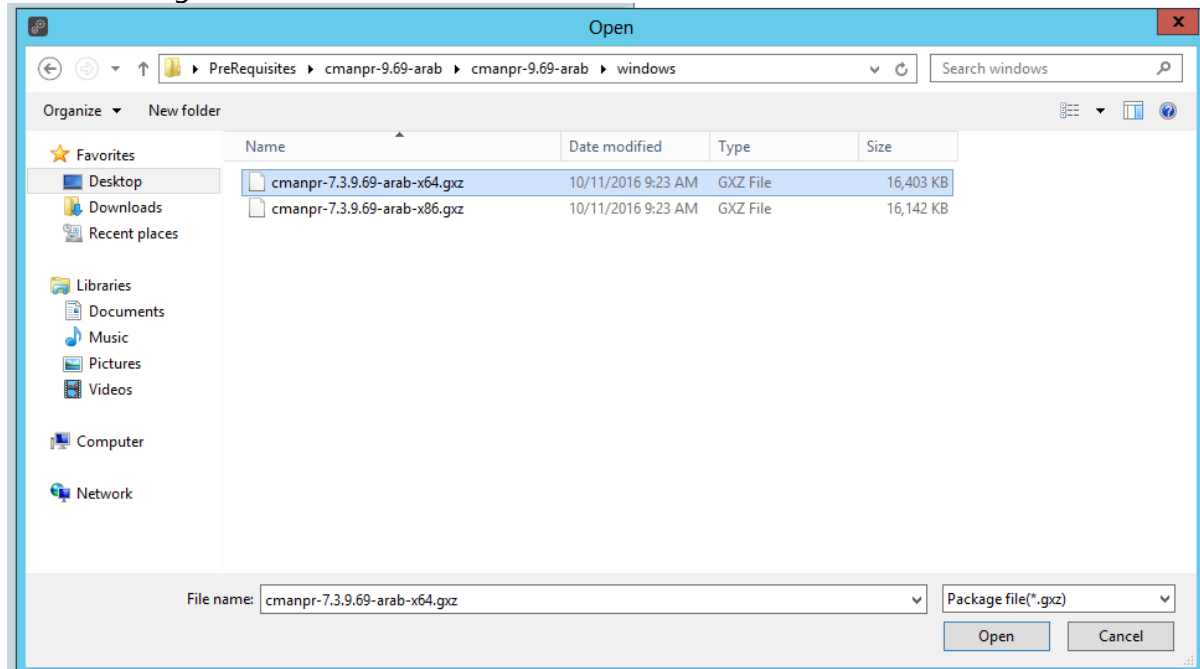
Now adding the supplied country engine, hit Start -> Engine Manager (x64), and this window should open



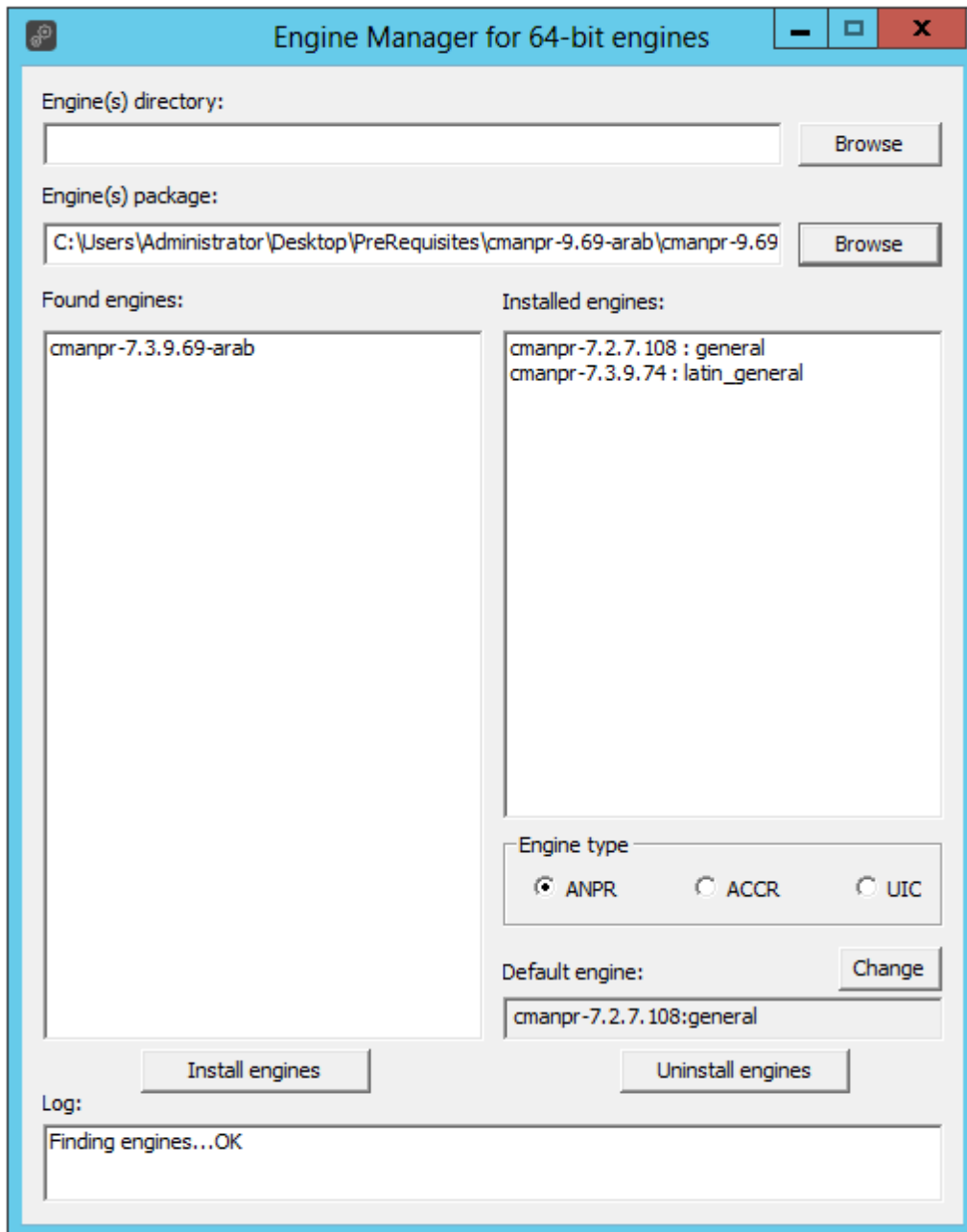
Click "Browse" which is next to "Engine(s) Package" and navigate to the folder where your country engine is located, usually provided along with ZenLPR



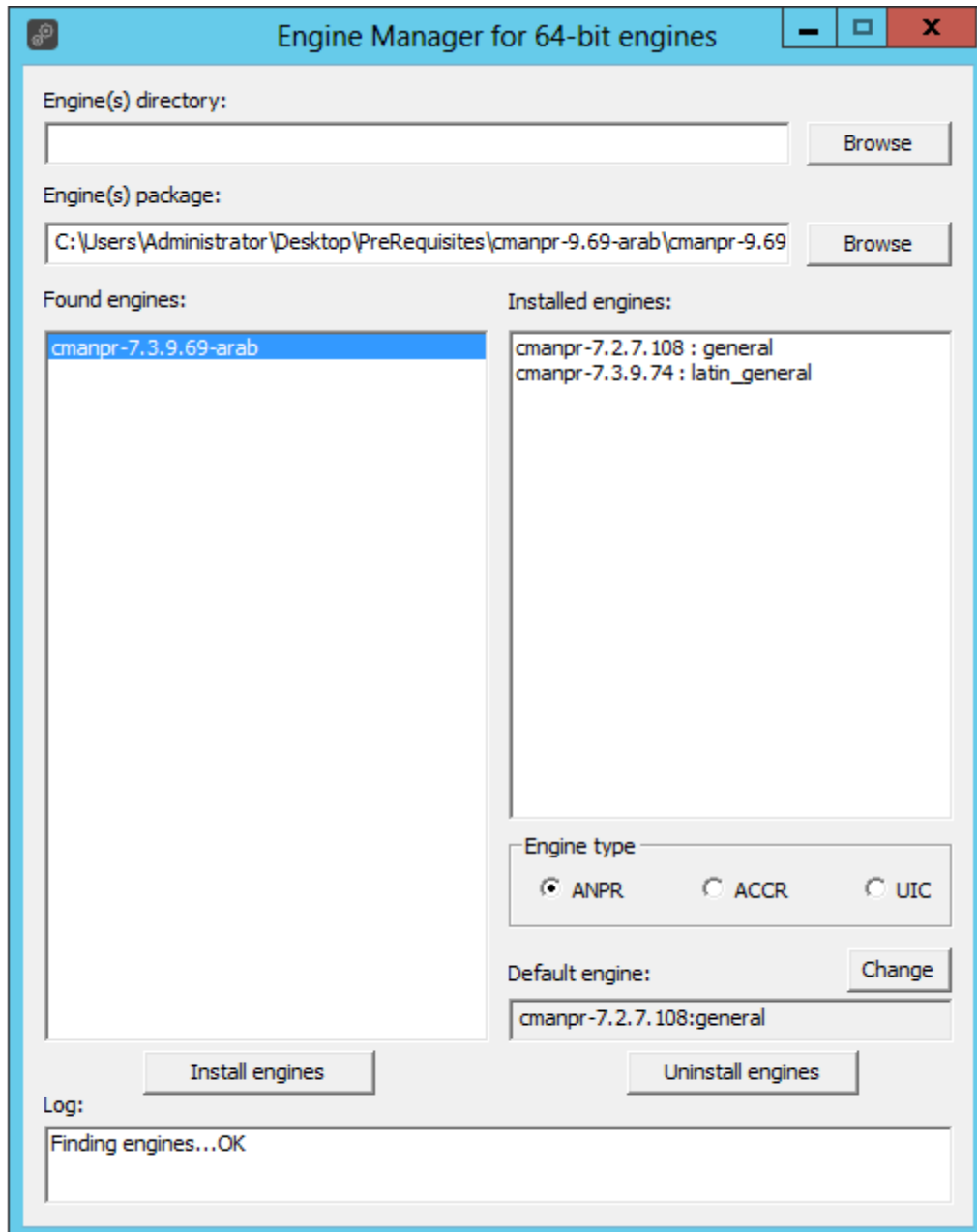
Select the engine with x64



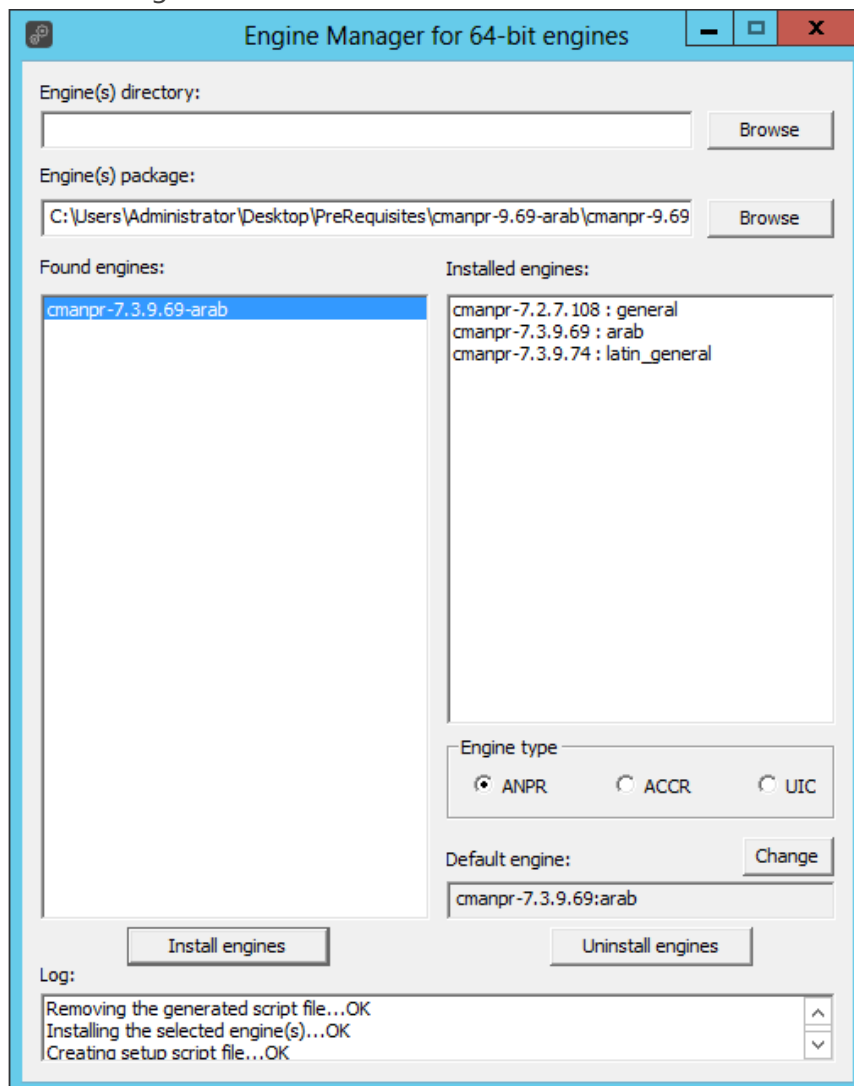
The engine name should appear on the left as displayed



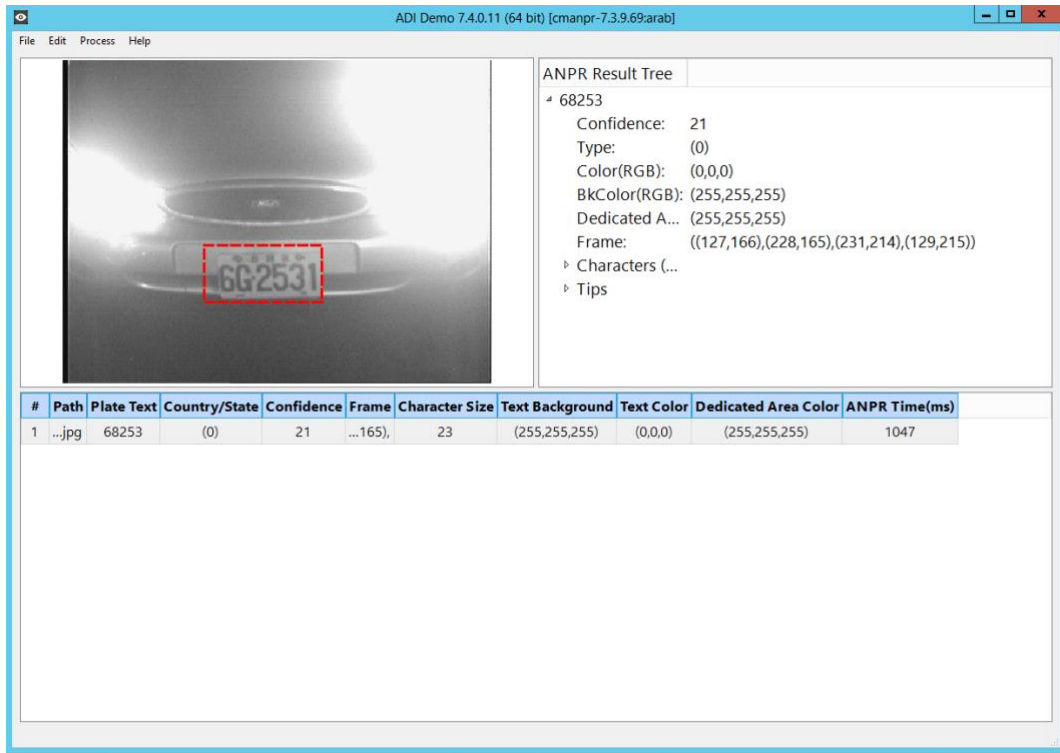
Select the engine from the list on the left and hit "Install Engines"



After completing successfully, the screen should be like this with the engine name in the "Default Engine"



Next plugin the ARH Dongle in the server in order to make sure it is activated and the engine is running correctly. After plugging in, type "ANPR Demo for Images(x64)" in the start menu and open, the following window should open and display the rectangle on the plate with the result below and the added engine name should be displayed in the title of the window. If this is not the case, please refer to Carmen Installation manual or contact support before proceeding.



4. Configure IIS

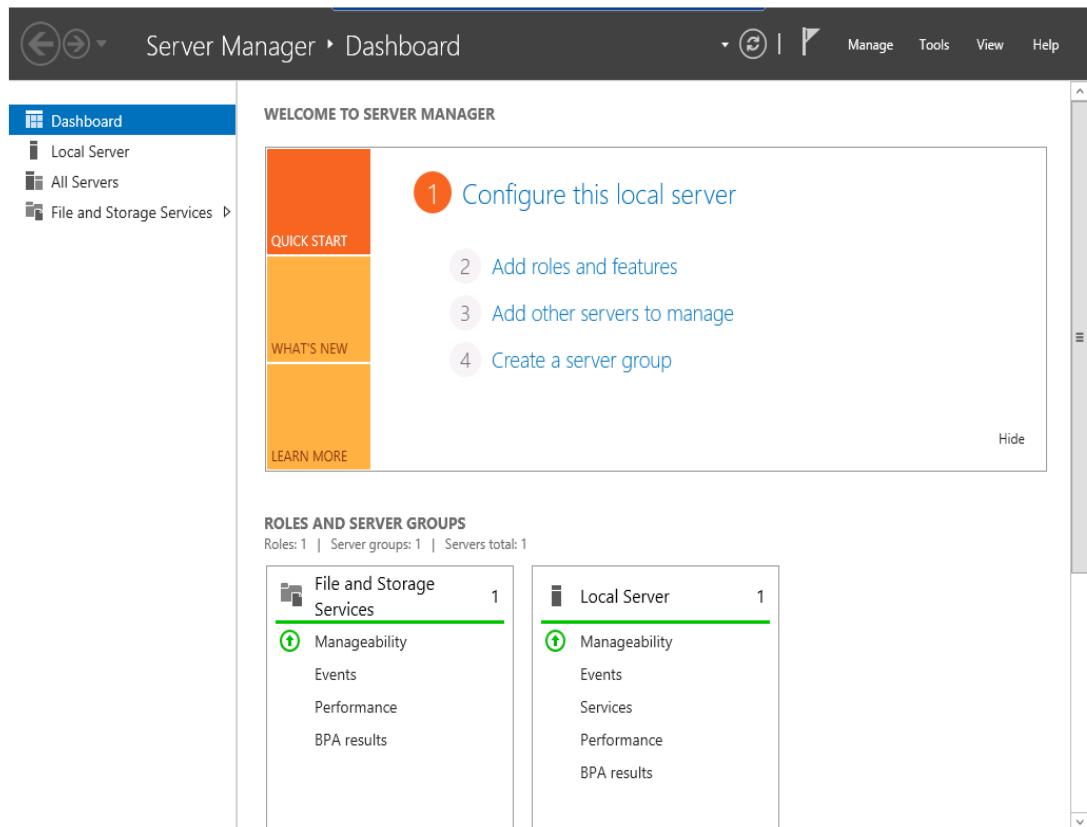
By default, all role services are not installed while installing IIS 8.0 on Win2k12, Win 2K12 R2 server. You need to manually select Application Development and IIS Management role services while installing the web server (IIS). These are essential services and should be up and running prior to installing Zen LPR Broadcaster.

This section helps to install web server (IIS) with role services required

- Log on to **Win2k12** server.



- Click **Server Manager** icon available in the task bar. Server Dashboard displays.



The screenshot shows the Windows Server Manager Dashboard. The title bar reads "Server Manager Dashboard" and includes navigation icons and menu options like "Manage", "Tools", "View", and "Help".

WELCOME TO SERVER MANAGER

QUICK START

- 1 **Configure this local server**
- 2 Add roles and features
- 3 Add other servers to manage
- 4 Create a server group

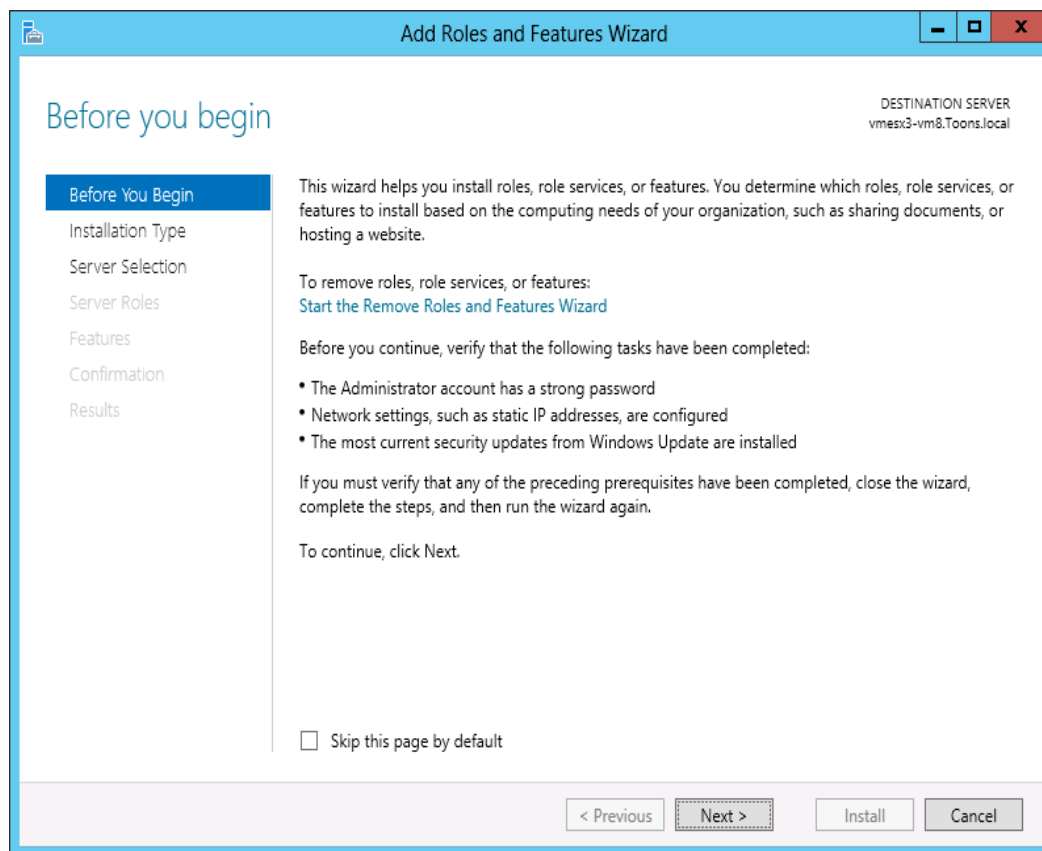
WHAT'S NEW

LEARN MORE Hide

ROLES AND SERVER GROUPS
Roles: 1 | Server groups: 1 | Servers total: 1

File and Storage Services	Local Server
1	1
<ul style="list-style-type: none"> Manageability Events Performance BPA results 	<ul style="list-style-type: none"> Manageability Events Services Performance BPA results

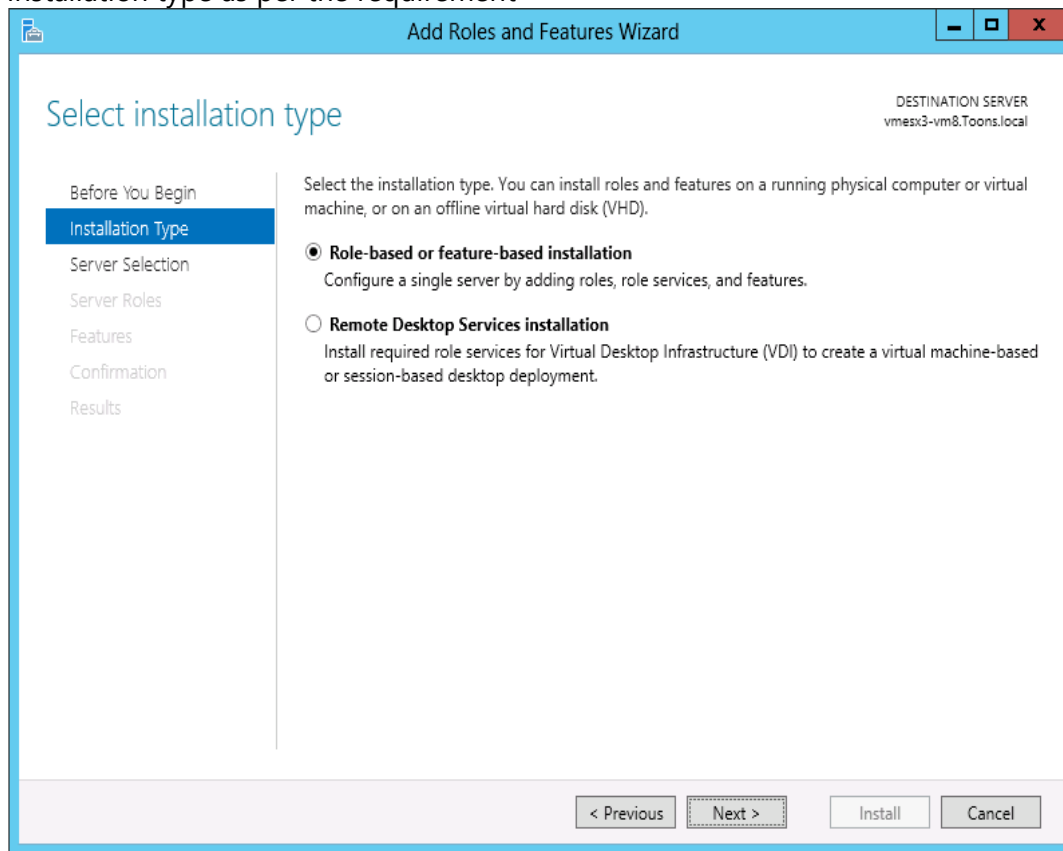
- Select Add Roles and Features.
Add Roles and Features Wizard displays.



Click **Next >**

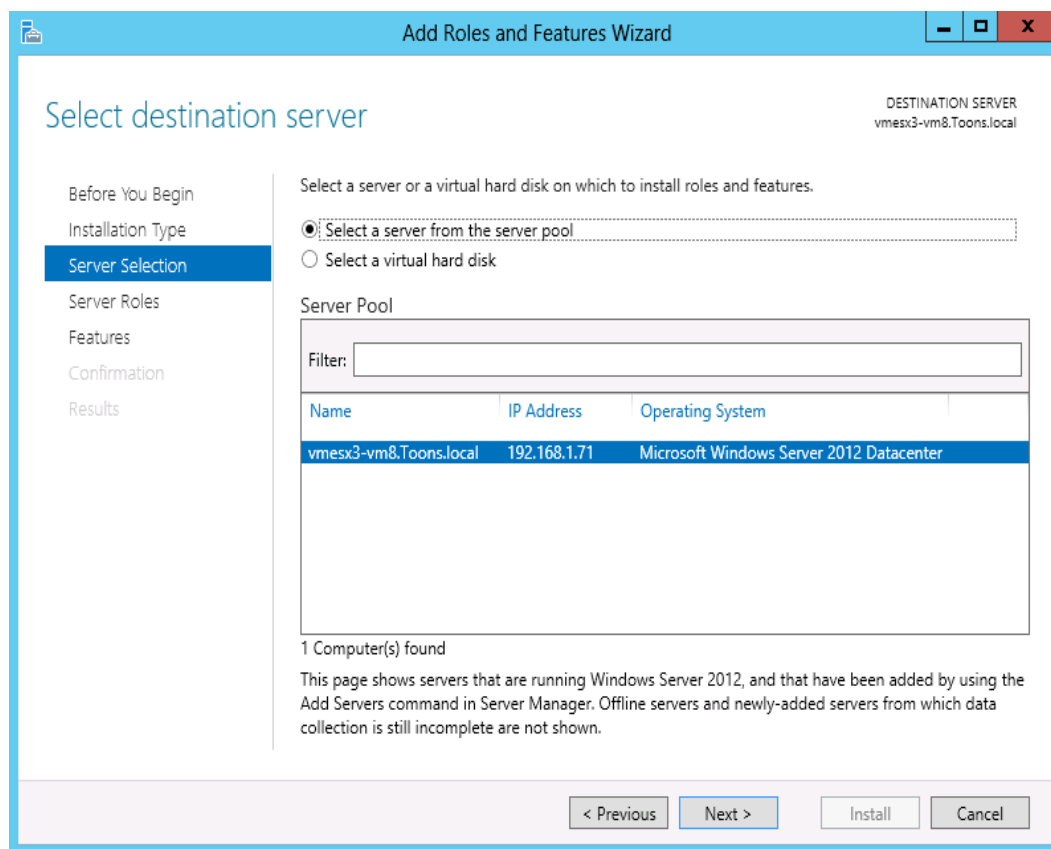
Select Installation Type window displays

'Role based or feature based selection' option is selected by default. You can select the installation type as per the requirement



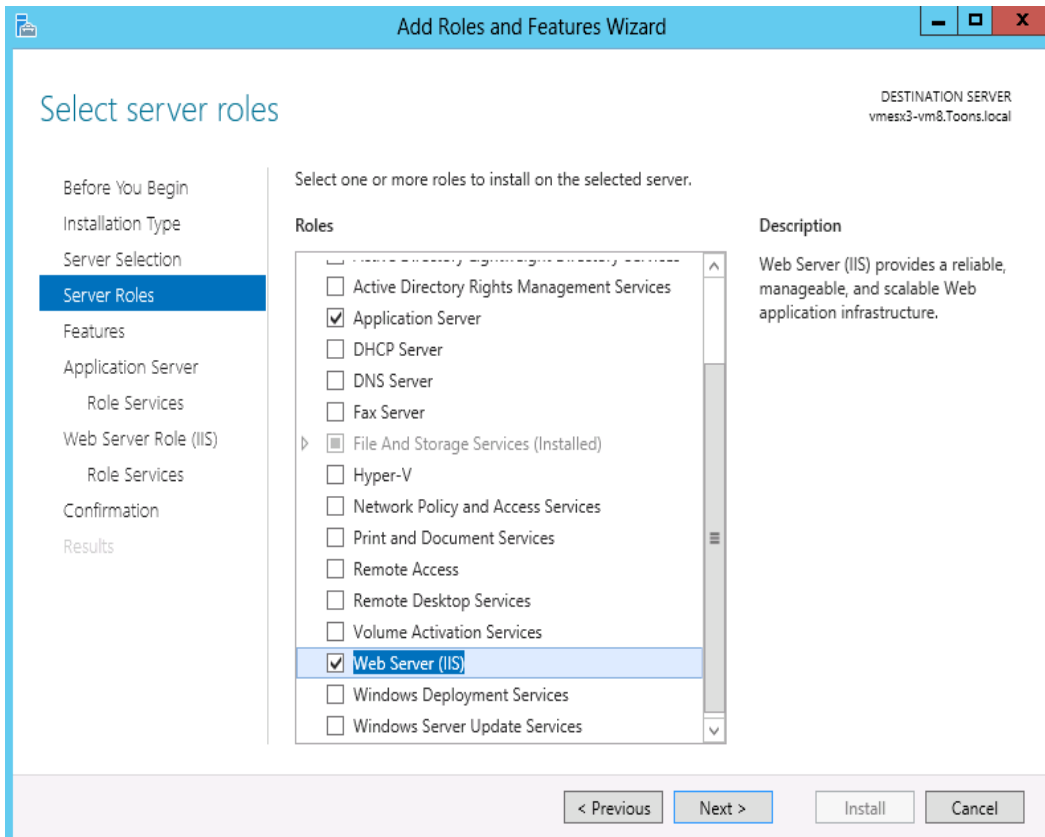
Click **Next >**

Select destination server window displays

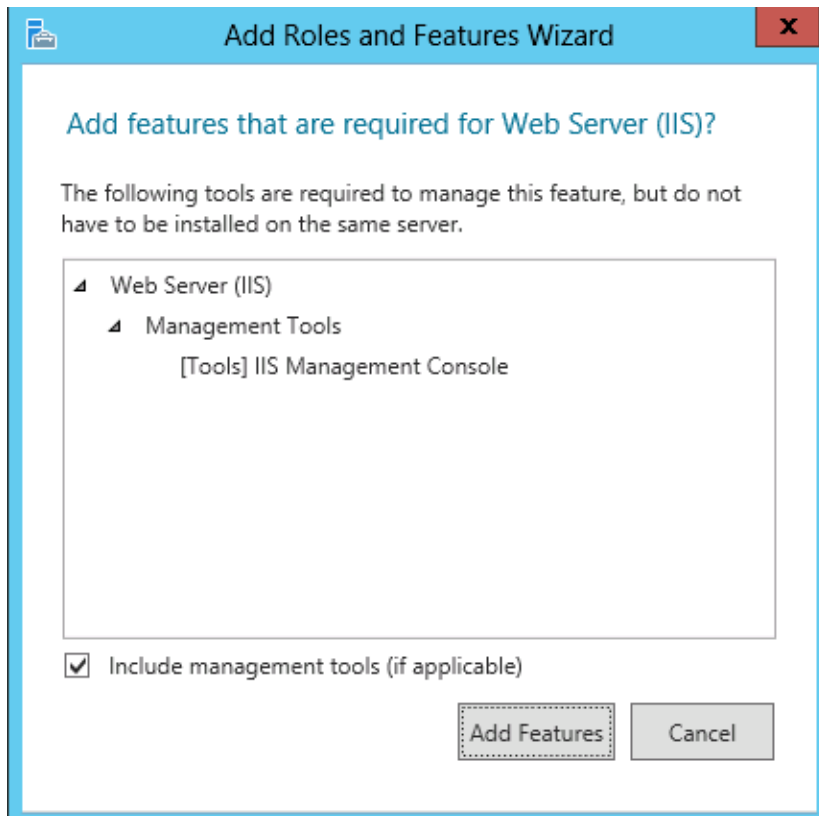


- Select Local Server from the server pool, and then select Next >

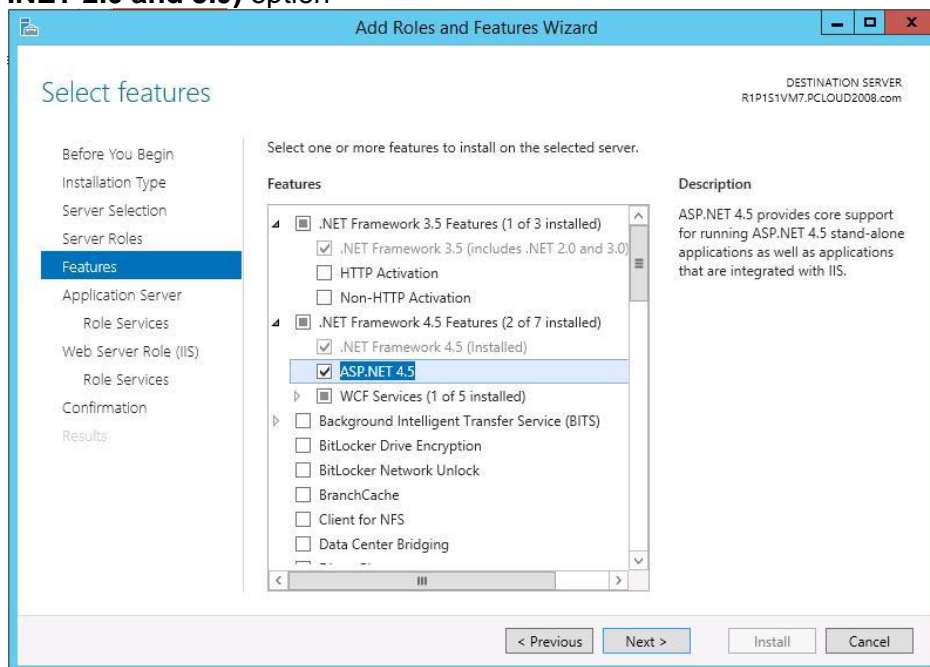
- In **Roles** pane, select the **Application Server**, and then select **Web Server (IIS)**



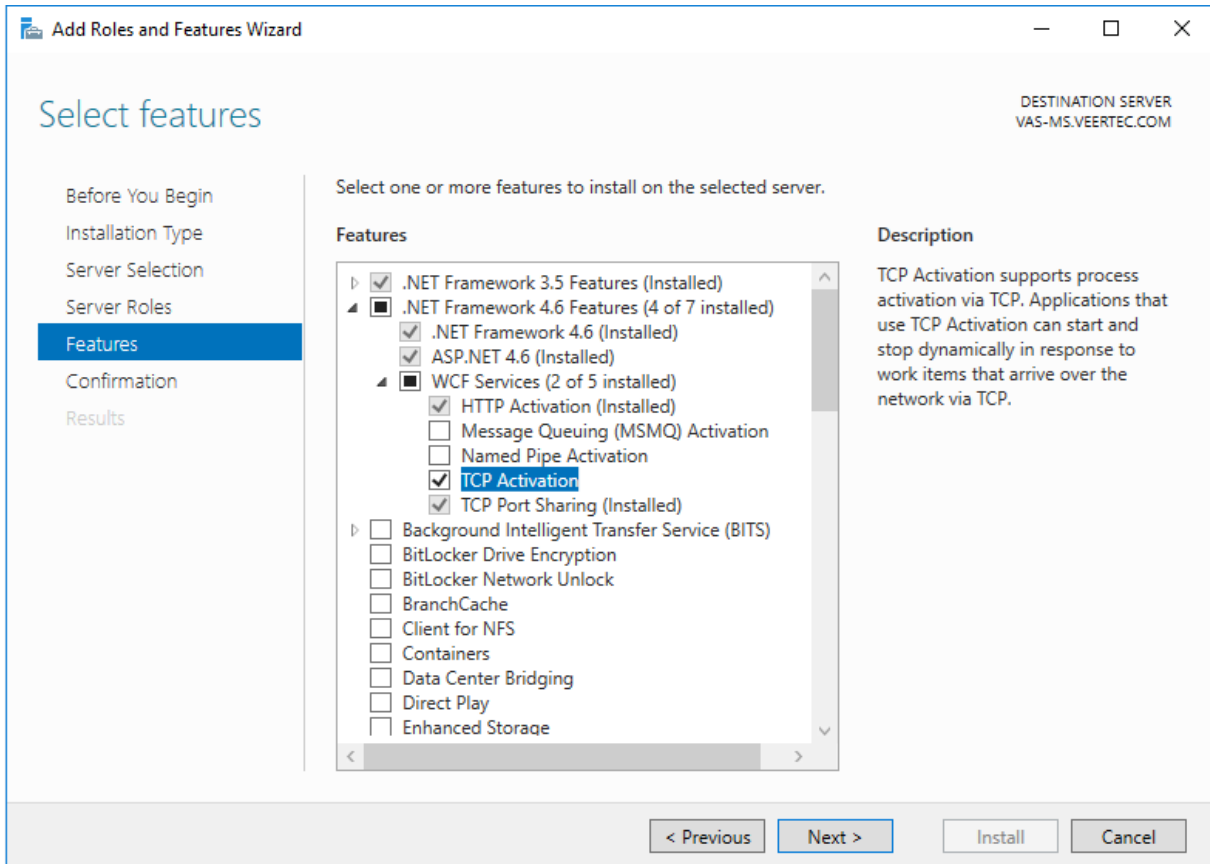
Add Roles and Features Wizard displays the confirmation message



- Click **Add Features**, Click **Next**
- Select **.NET Framework 3.5 Features**, and then select **.NET Framework 3.5 (includes .NET 2.0 and 3.0)** option



- Select **.NET Framework 4.5 Features**, and then select **WCF Services** and then **Enable TCP Activation**.



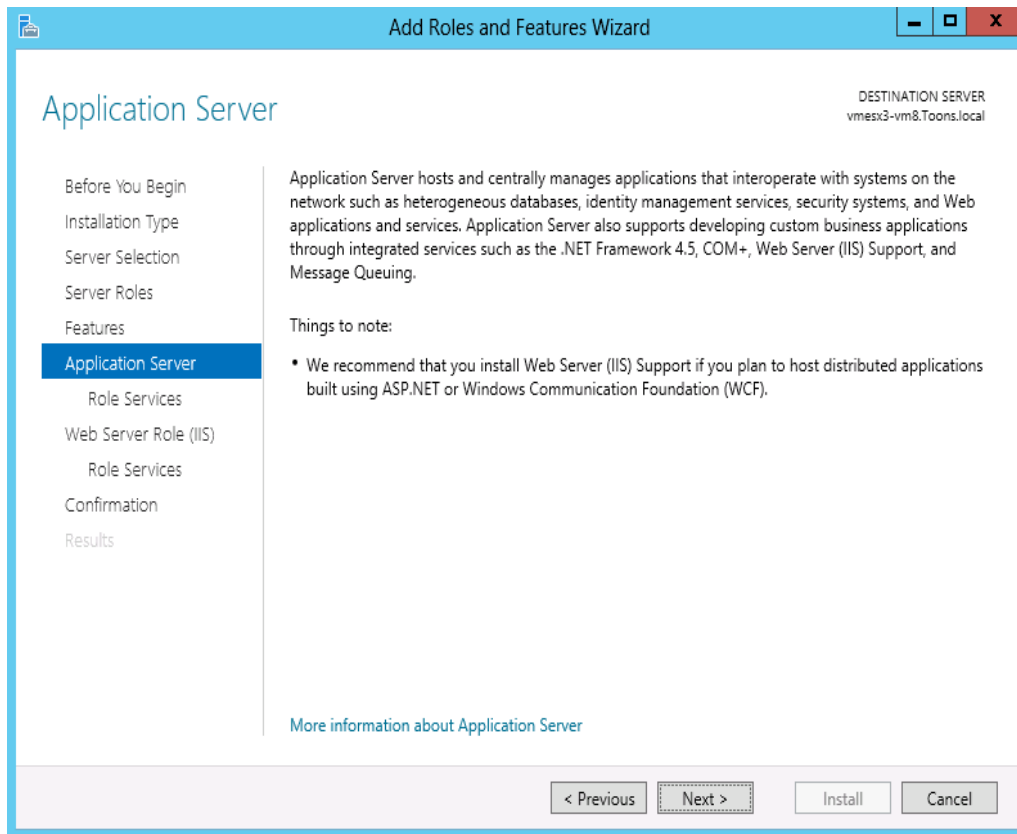
DESTINATION SERVER
VAS-MS.VEERTEC.COM

Select one or more features to install on the selected server.

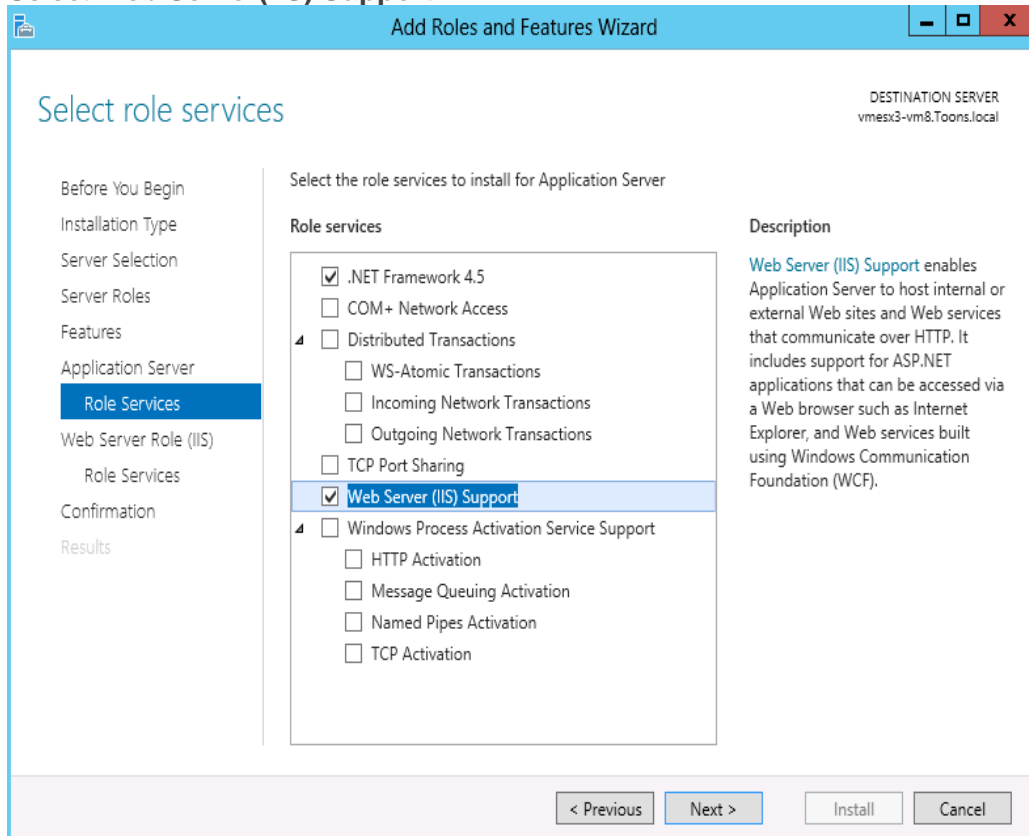
Features	Description
<input checked="" type="checkbox"/> .NET Framework 3.5 Features (Installed)	
<input checked="" type="checkbox"/> .NET Framework 4.6 Features (4 of 7 installed)	
<input checked="" type="checkbox"/> .NET Framework 4.6 (Installed)	
<input checked="" type="checkbox"/> ASP.NET 4.6 (Installed)	
<input checked="" type="checkbox"/> WCF Services (2 of 5 installed)	
<input checked="" type="checkbox"/> HTTP Activation (Installed)	
<input type="checkbox"/> Message Queuing (MSMQ) Activation	
<input type="checkbox"/> Named Pipe Activation	
<input checked="" type="checkbox"/> TCP Activation	TCP Activation supports process activation via TCP. Applications that use TCP Activation can start and stop dynamically in response to work items that arrive over the network via TCP.
<input checked="" type="checkbox"/> TCP Port Sharing (Installed)	
<input type="checkbox"/> Background Intelligent Transfer Service (BITS)	
<input type="checkbox"/> BitLocker Drive Encryption	
<input type="checkbox"/> BitLocker Network Unlock	
<input type="checkbox"/> BranchCache	
<input type="checkbox"/> Client for NFS	
<input type="checkbox"/> Containers	
<input type="checkbox"/> Data Center Bridging	
<input type="checkbox"/> Direct Play	
<input type="checkbox"/> Enhanced Storage	

< Previous **Next >** Install Cancel

Click **Next >**

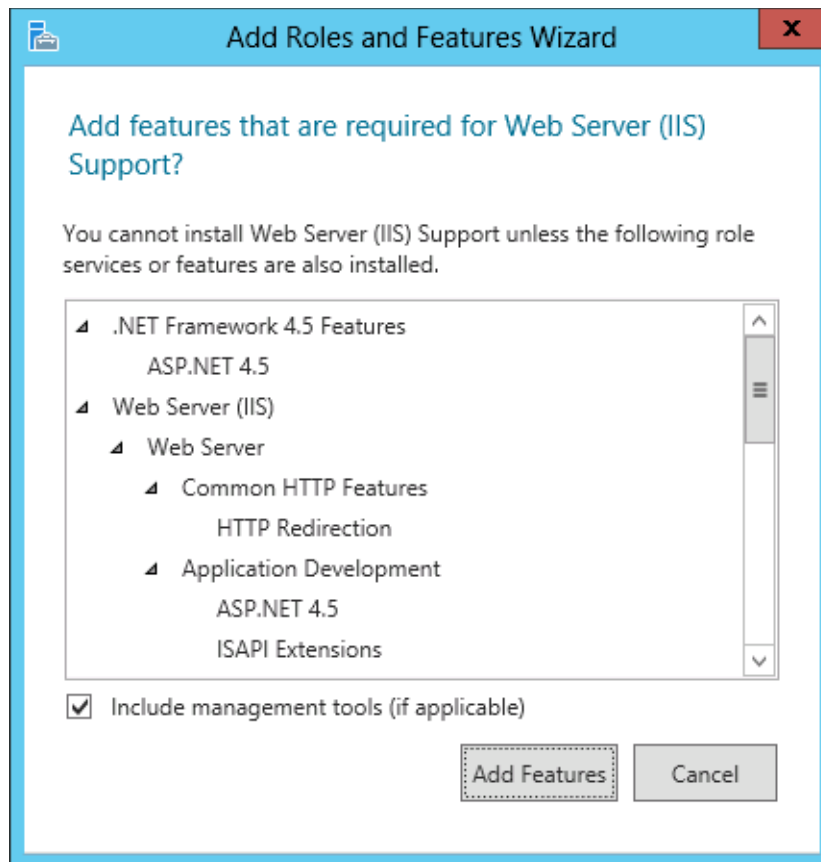


Select Web Server(IIS) Support

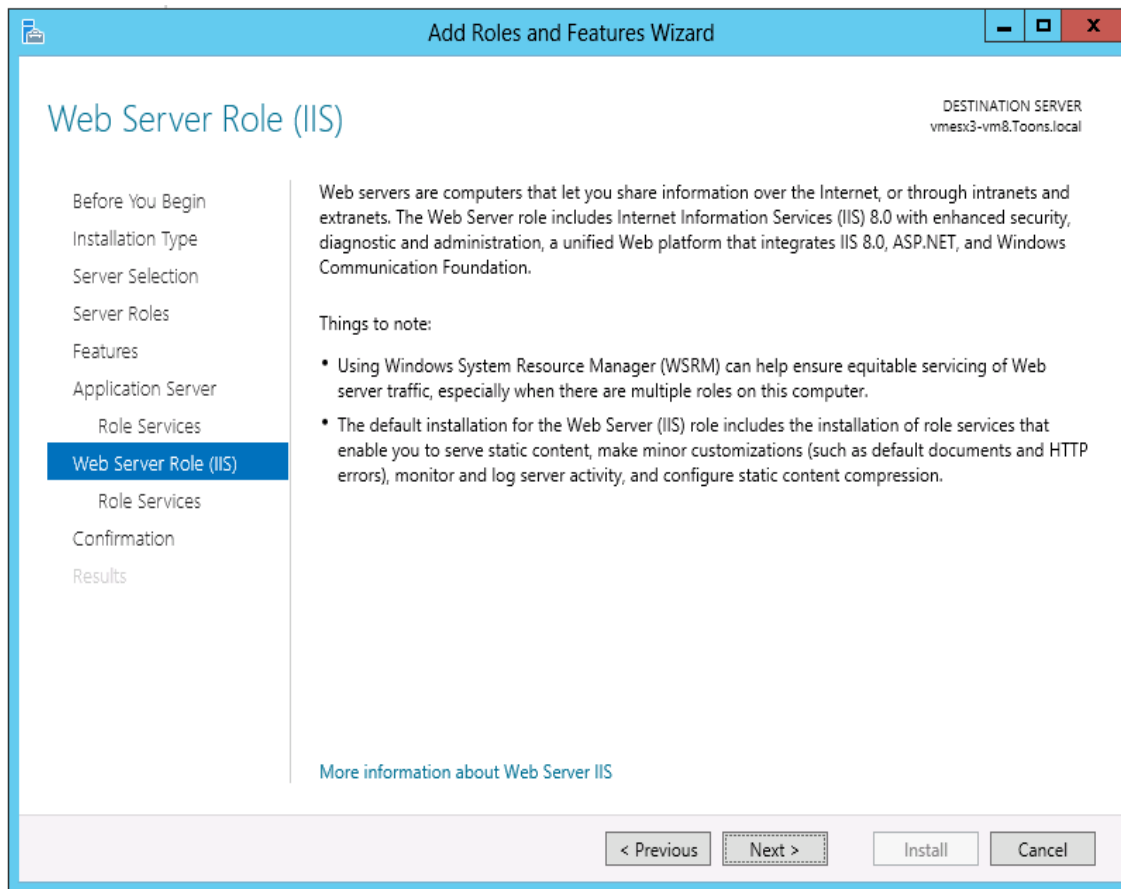


Add Roles and Features Wizard displays the confirmation message.

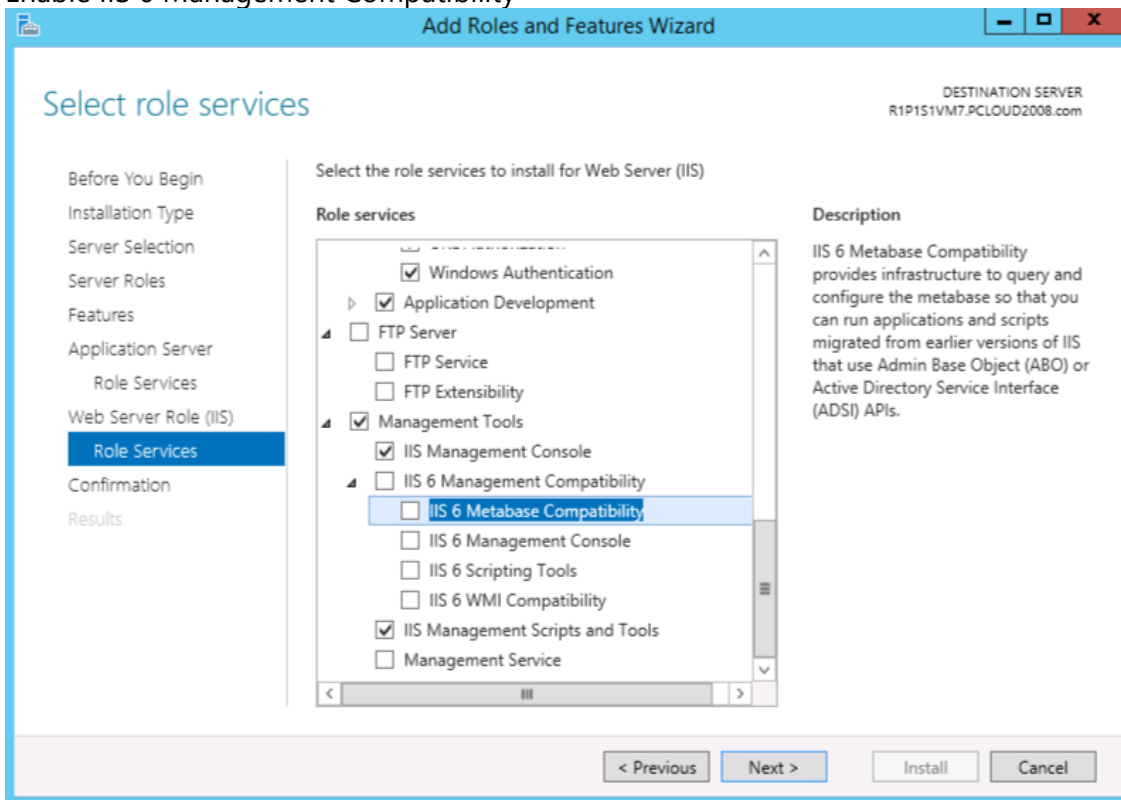
Click **Add Features**



Click **Next >**

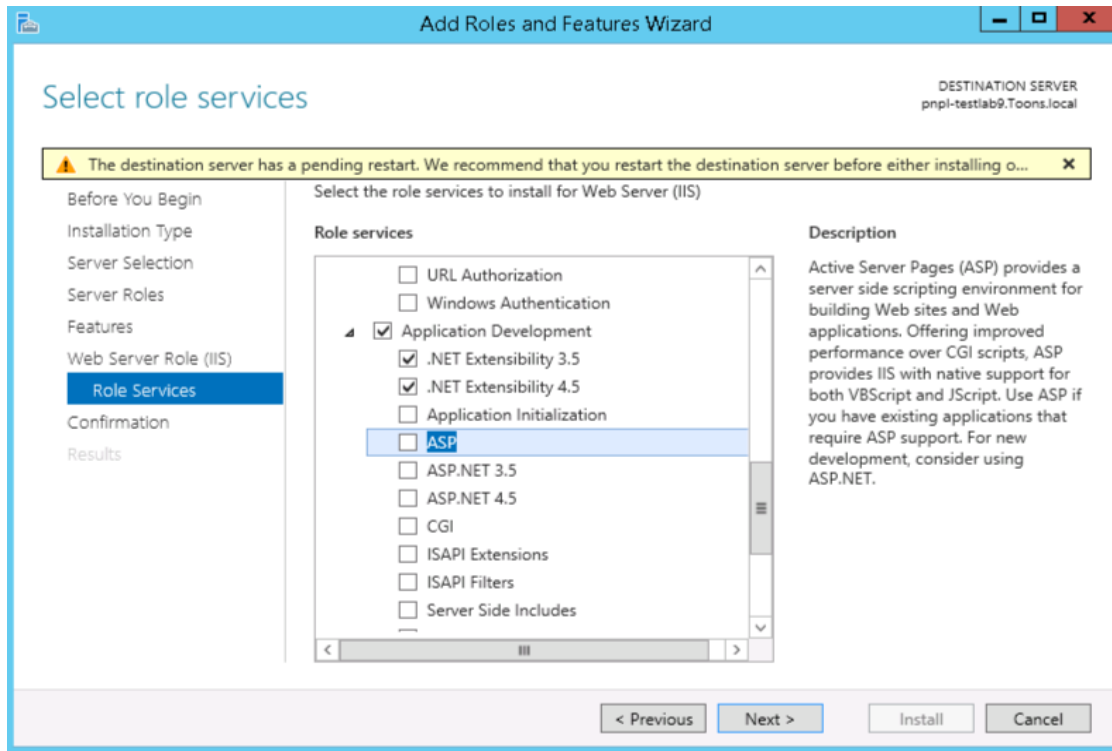


- Enable IIS 6 Management Compatibility



Scroll down and expand Application Development node. Select .NET Extensibility 3.5, ASP.NET

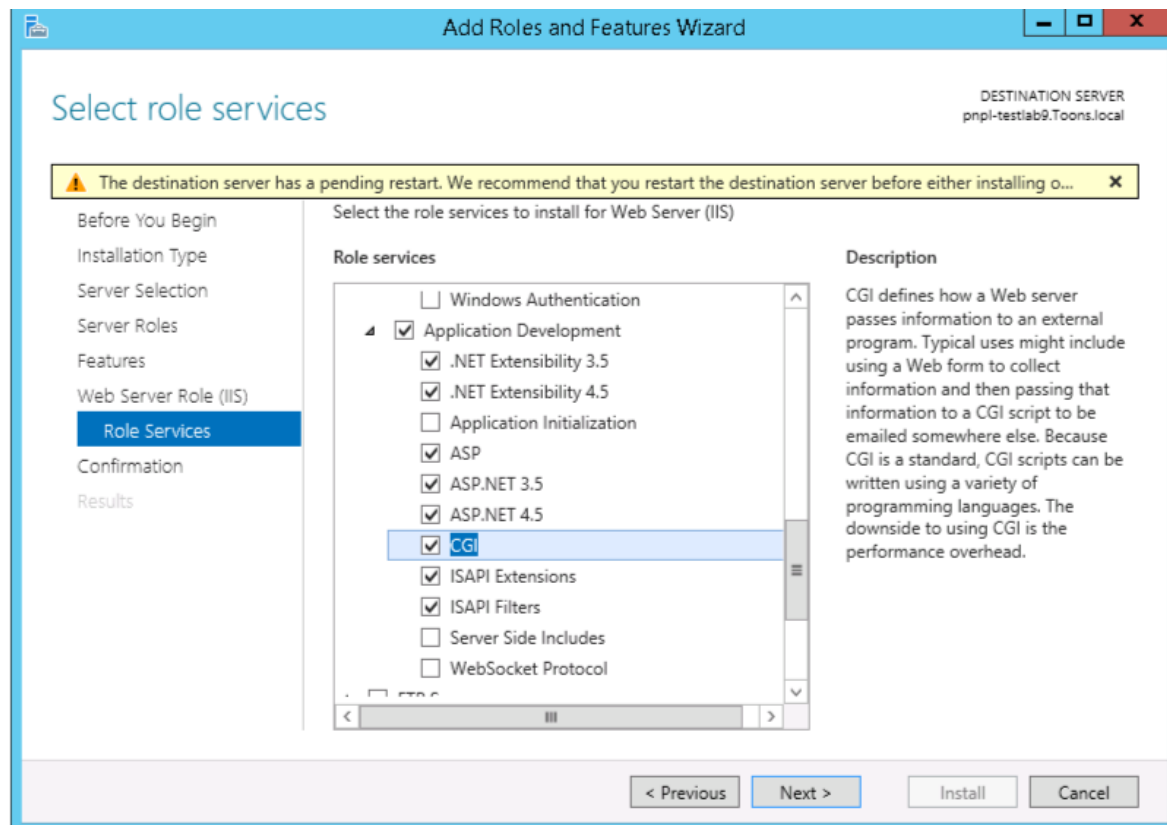
3.5.



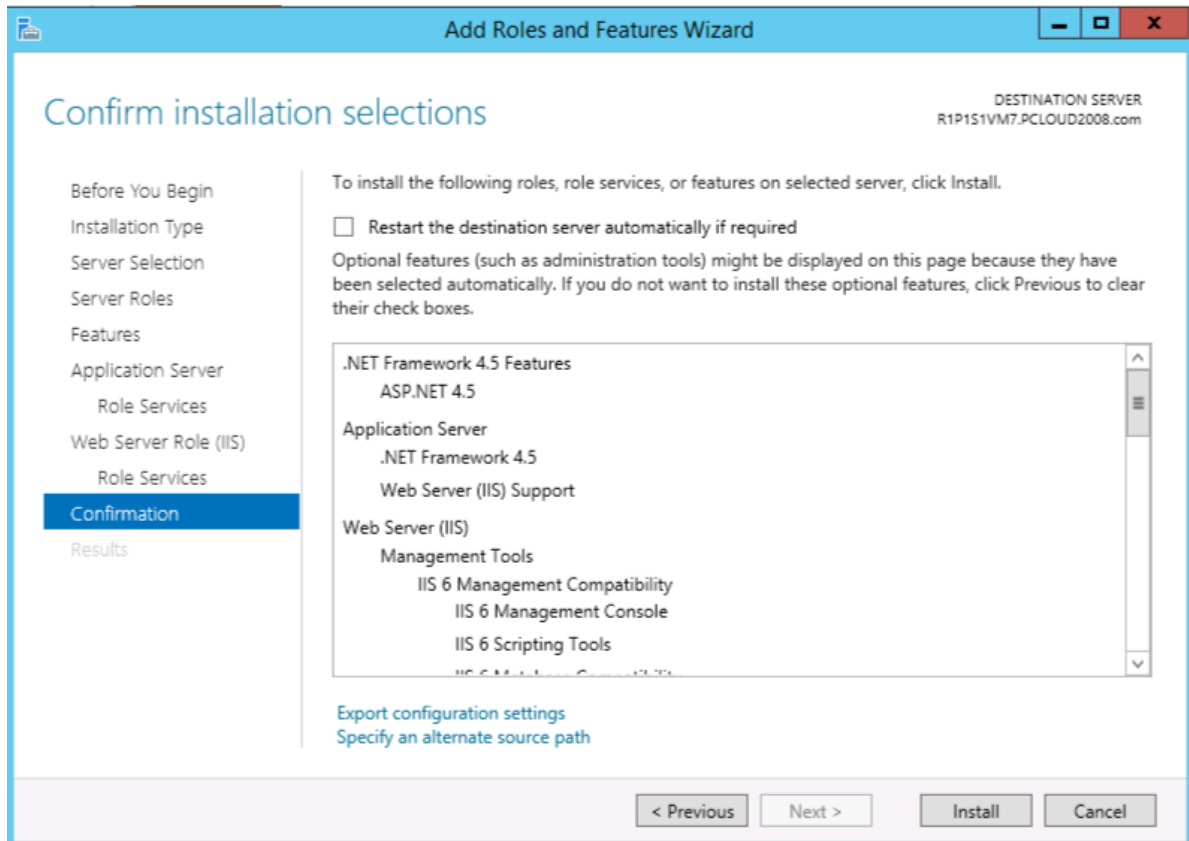
Enable ASP



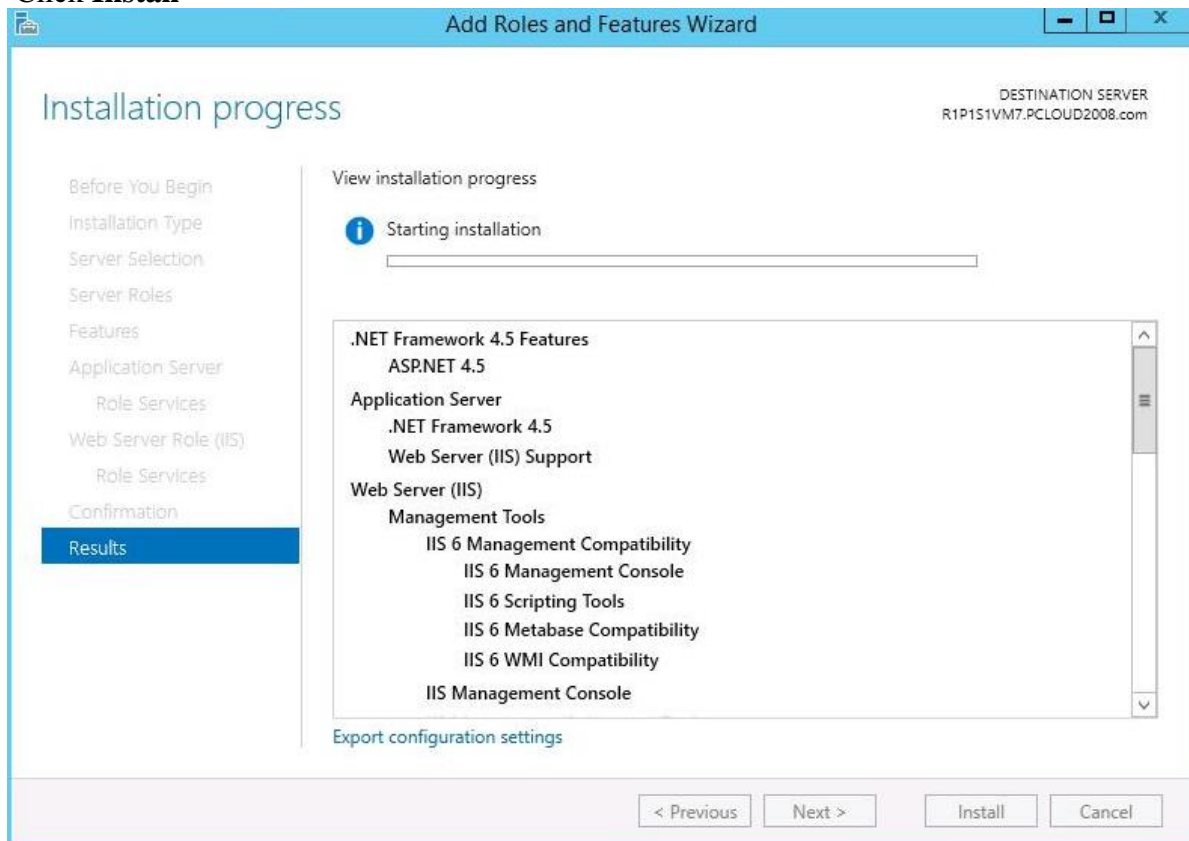
- Click on **Add Features**
- Similarly, select the checkbox ASP.Net



- Scroll down and expand **Management Tools** node. Select **Management Tools** and all the **Sub options**
- Enable IIS 6 Management Console
- **Add Roles and Features Wizard** displays with confirmation message.



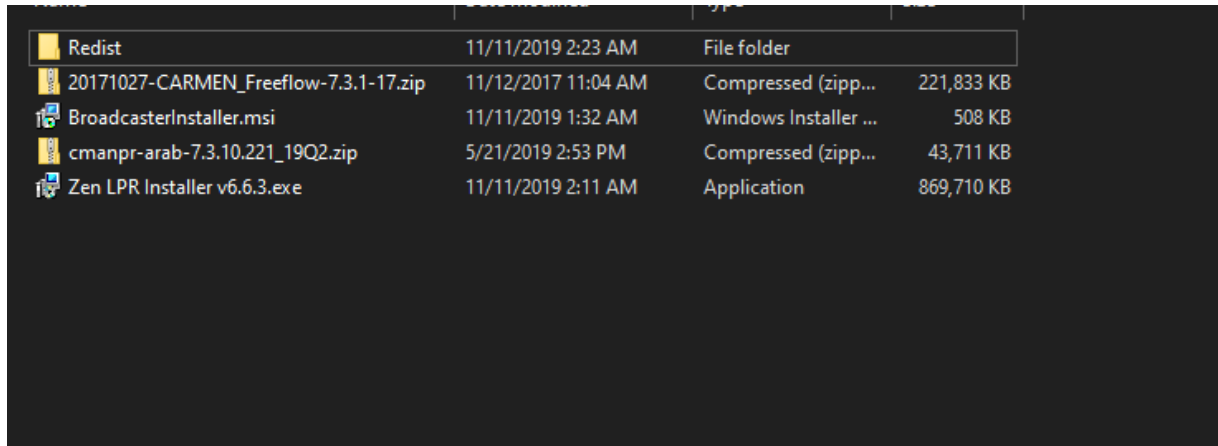
- Click **Install**



5. Installation

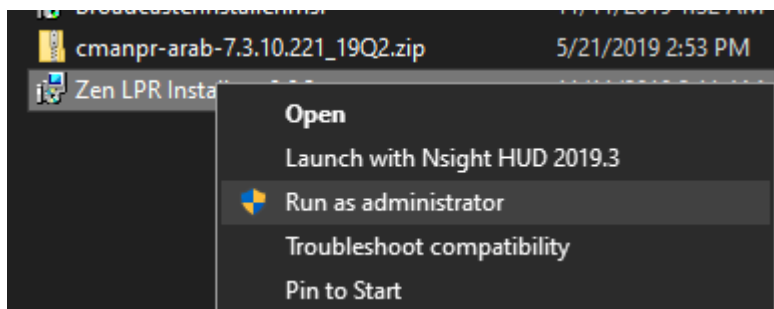
NOTE: Installer should be launched "**As Administrator**", as below:

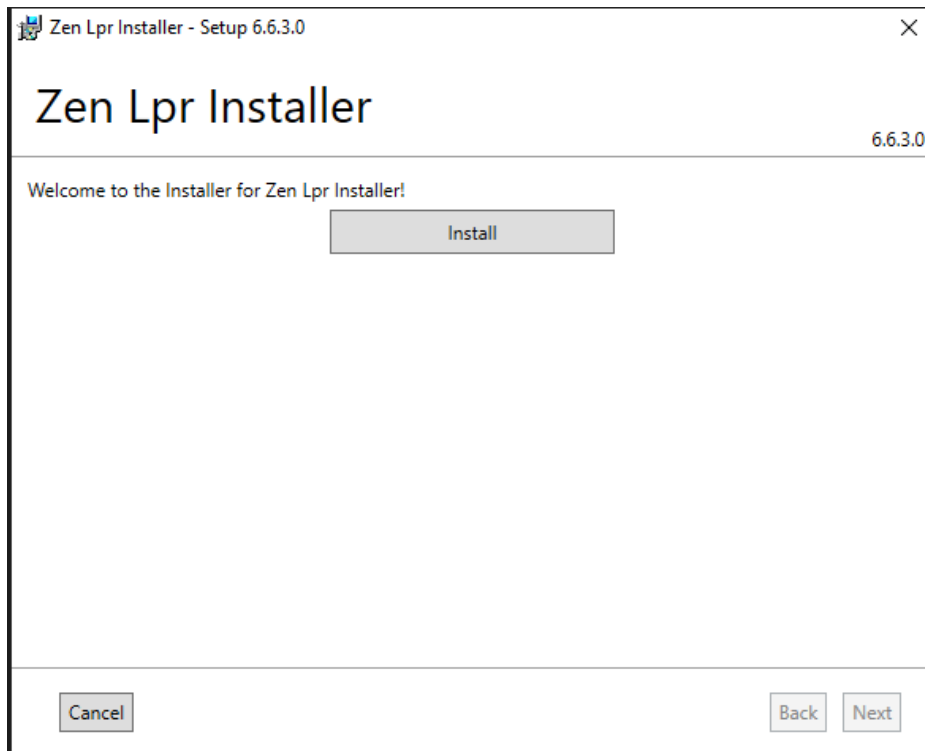
Go to Package Directory, where you will find the Installers for the system, including the Carmen ANPR Installer and Arab Engine.



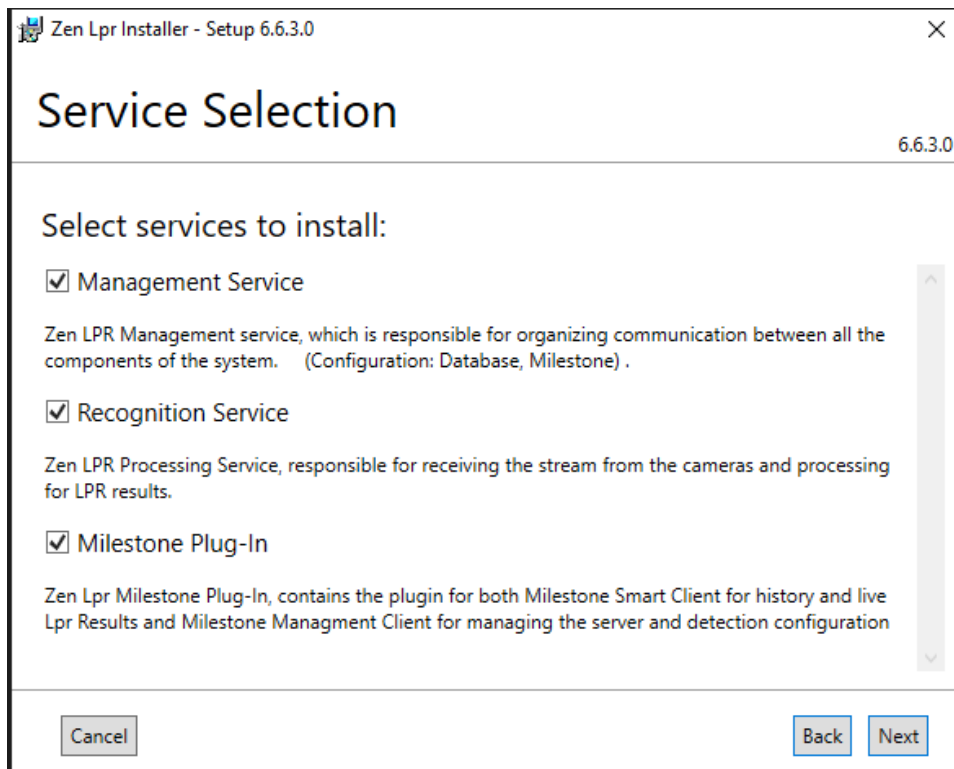
Name	Modified	Type	Size
Redist	11/11/2019 2:23 AM	File folder	
20171027-CARMEN_Freeflow-7.3.1-17.zip	11/12/2017 11:04 AM	Compressed (zipp...	221,833 KB
BroadcasterInstaller.msi	11/11/2019 1:32 AM	Windows Installer ...	508 KB
cmanpr-arab-7.3.10.221_19Q2.zip	5/21/2019 2:53 PM	Compressed (zipp...	43,711 KB
Zen LPR Installer v6.6.3.exe	11/11/2019 2:11 AM	Application	869,710 KB

Right click on ZenLPR Installer v6.6.3.exe and "**Run as administrator**"





The Installer loads and checks for a newer version (if there is an internet connection)



The system components are by default all selected in order to have a full system deployment on 1 machine.

Zen Lpr Installer - Setup 6.6.3.0

Managment Service Installation

6.6.3.0

Configure Database Server

Local Instance

Create and Configure New Local Sql Instance on the Current Machine.

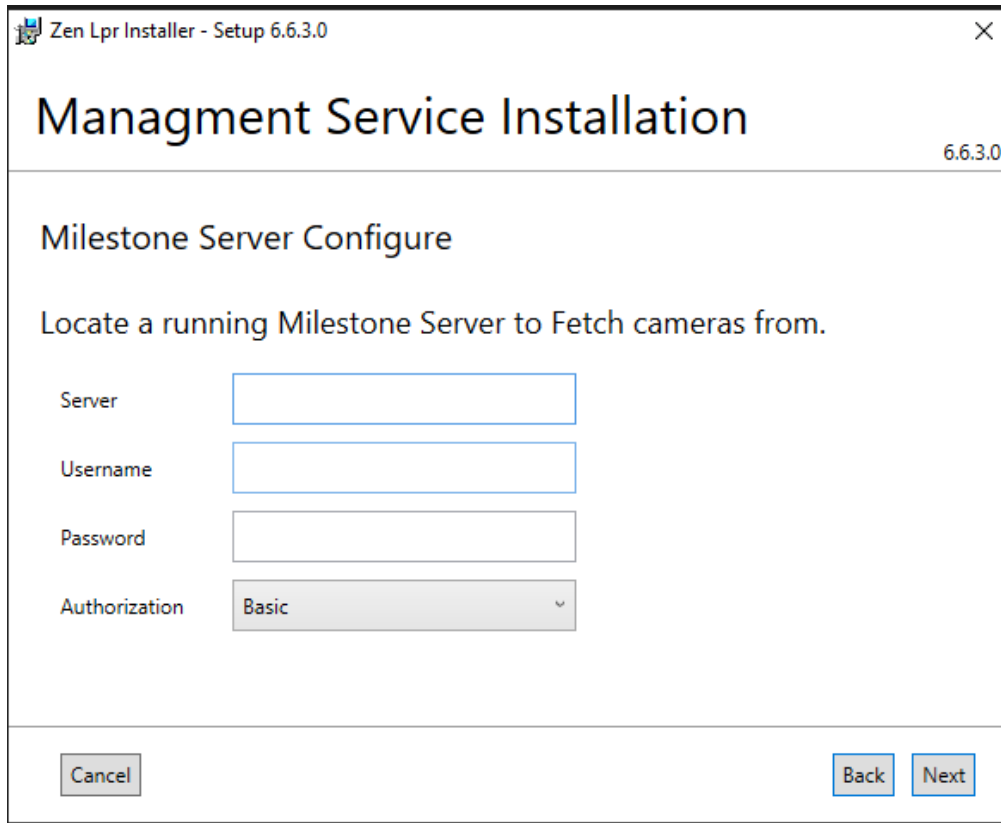
Existing/Remote Server

Server

Username

Click next in order to start with the main component, which is the Management Service configuration. First step is configuring the Database. Either select Local Instance, where a new local SQL Express instance is installed on the machine; or input the connection information to an Existing Instance (Local or Remote). And after that you have the option to either select an Existing Database (from a previous ZenLPR installation) or Create a New Database.

Fill in the Information desired and Click Next.



Zen Lpr Installer - Setup 6.6.3.0

Management Service Installation

6.6.3.0

Milestone Server Configure

Locate a running Milestone Server to Fetch cameras from.

Server

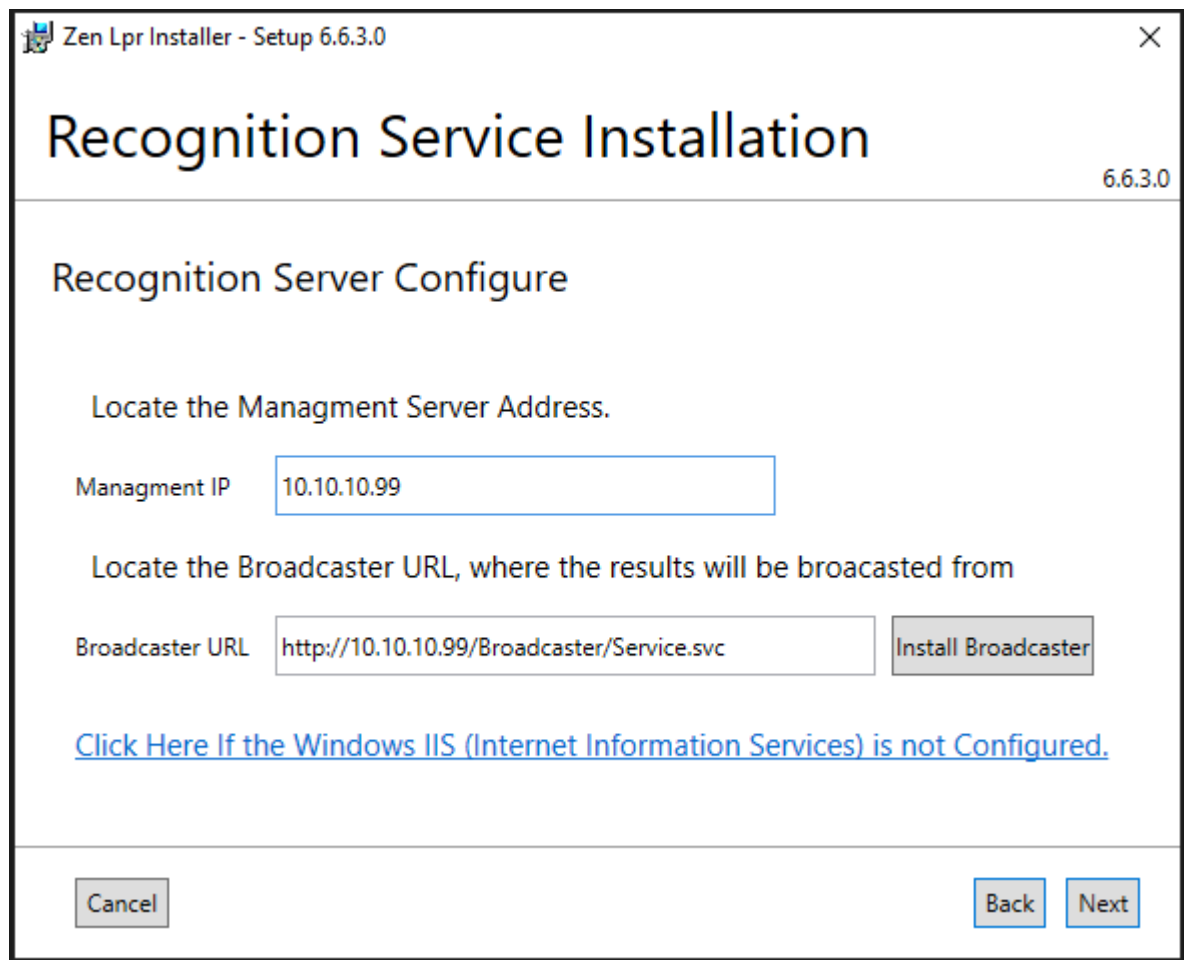
Username

Password

Authorization

Management Service needs to have the credentials to the Milestone Management Server, therefore the connection credentials are needed at this stage.

After adding the information, click Next.



This step is for Zen Recognition Service Configuration, where the Management IP address and the Broadcaster Service URL are required.

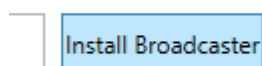
Management IP is the IP address where the Zen Management Service is located, in this case since it is a Single Machine deployment, the IP would be the same as the local, and it can be replaced by **localhost**.

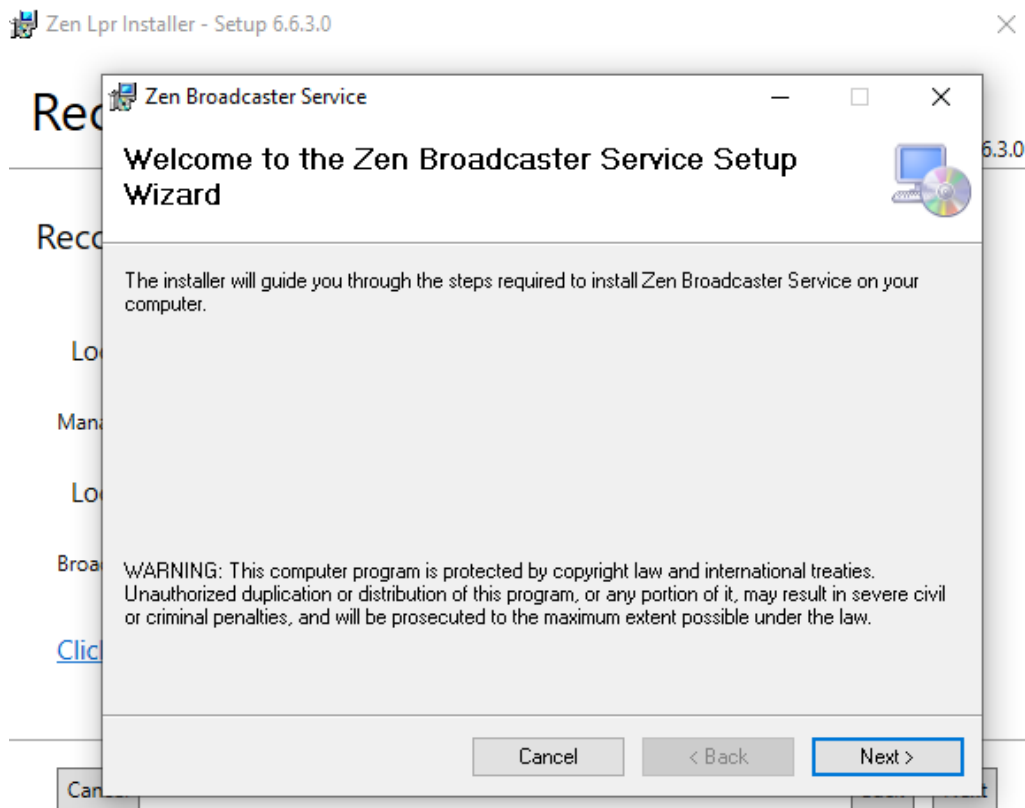
Broadcaster URL is the location of the service responsible for the LIVE result distribution, in case it hasn't been installed and configured yet, please proceed with the Install Broadcaster section. Otherwise you may skip to section 2 Resume Installation

1. Installing Broadcaster

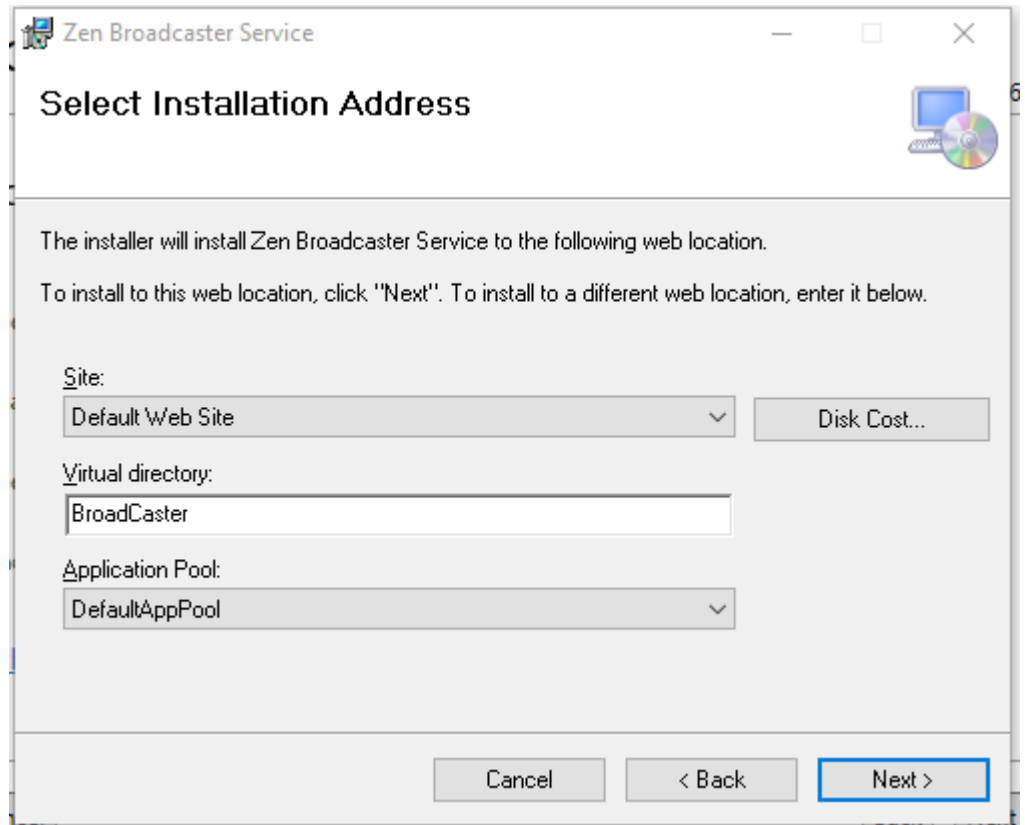
NOTE: IIS should already be configured and running before the Broadcaster service is installed.

In order to proceed with the installation, click on Install Broadcaster, where it launches another installer.



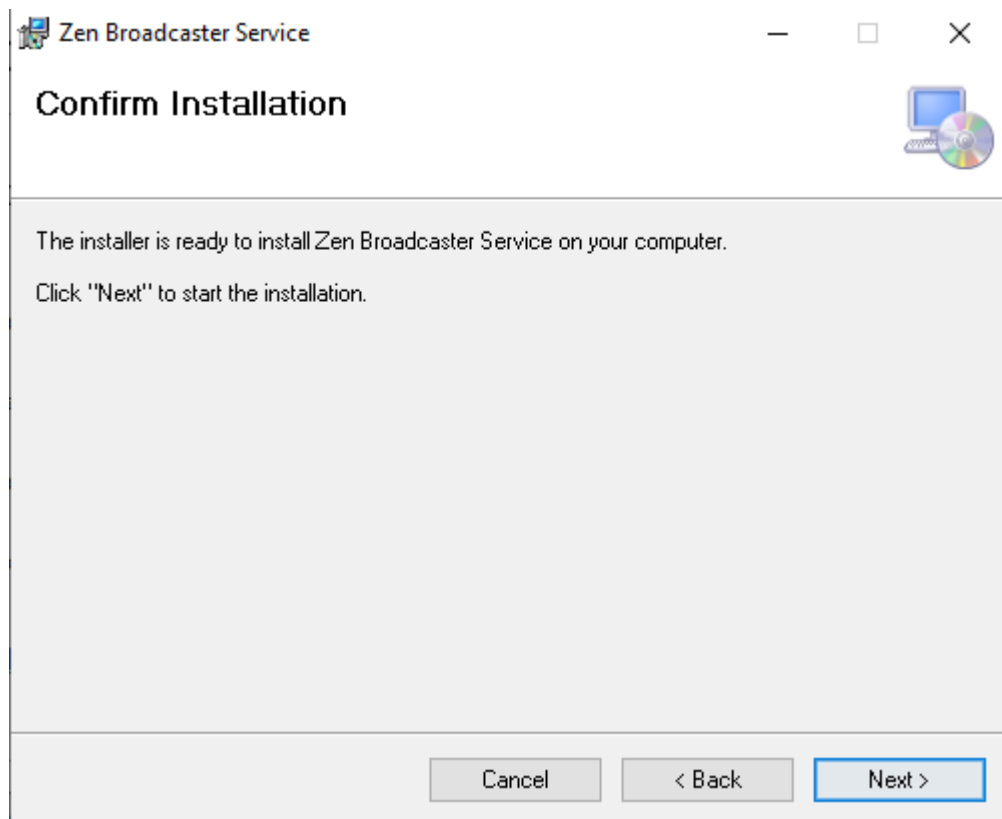


Click Next



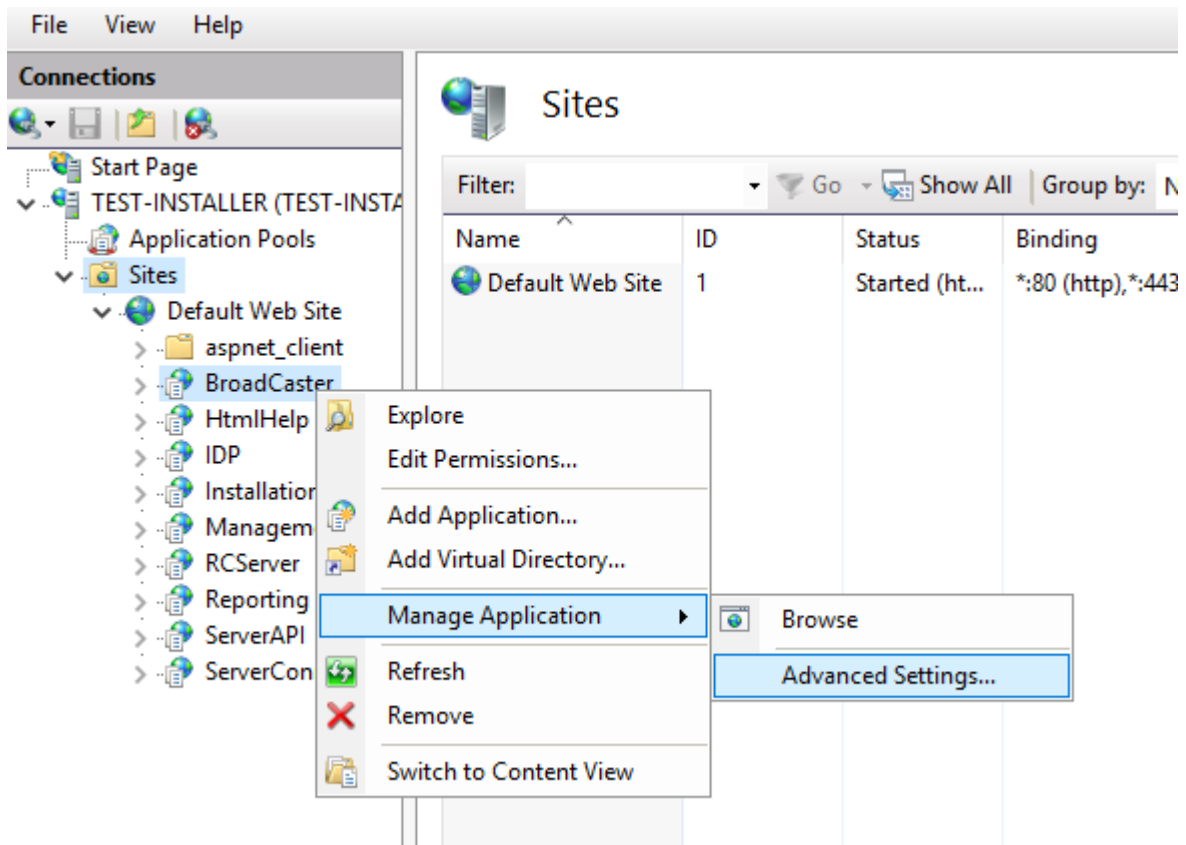
In case there are more than 1 local site, you can select the desired Site to host the

Broadcaster. And input the Virtual Directory where this resembles the name to be used as a sub url.

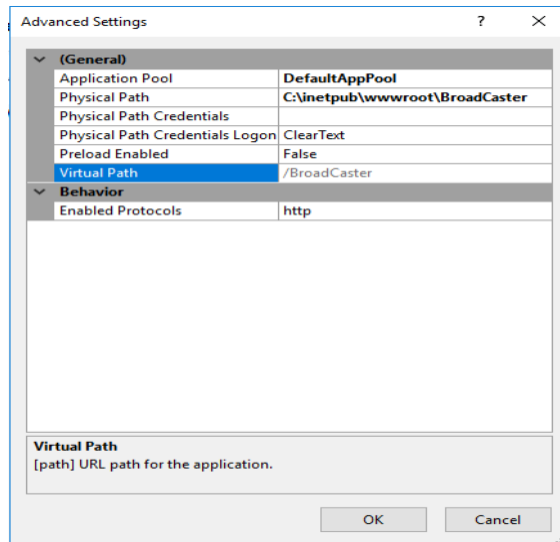


Confirm before installation. Click Next.

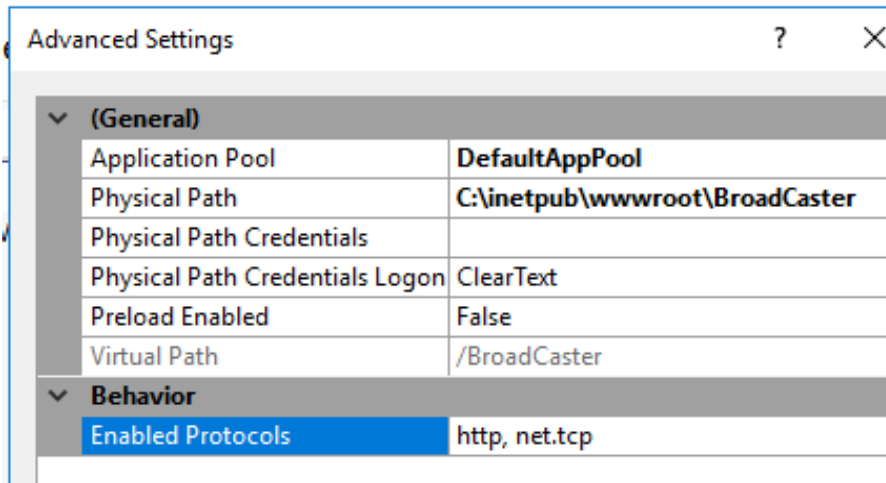
- After the Broadcaster installation is done, we need to enable net.TCP protocol to the broadcaster Settings in IIS.
 - Open Internet Information Services (IIS) Manager > Expand "Sites" > Expand Default Web Site > Right Click on Broadcaster > Select "Manage Application"



- Click on "Advanced Settings"



- Add in the Behavior Part > "Enabled Protocoles" ", **net.tcp**"



Click "OK"

- To test if the Broadcaster is fully functional, open any browser and type the following address: "http://localhost/boadcaster/service.svc"

BroadcasterService Service

You have created a service.

To test this service, you will need to create a client and use it to call the service. You can do this using the svcutil.exe tool from the command line with the following syntax:

```
svcutil.exe http://test-installer/BroadCaster/Service.svc?wsdl
```

You can also access the service description as a single file:

```
http://test-installer/BroadCaster/Service.svc?singleWsdl
```

This will generate a configuration file and a code file that contains the client class. Add the two files to your client application and use the generated client class to call the Service. For example:

C#

```
class Test
{
    static void Main()
    {
        BroadcasterServiceClient client = new BroadcasterServiceClient();

        // Use the 'client' variable to call operations on the service.

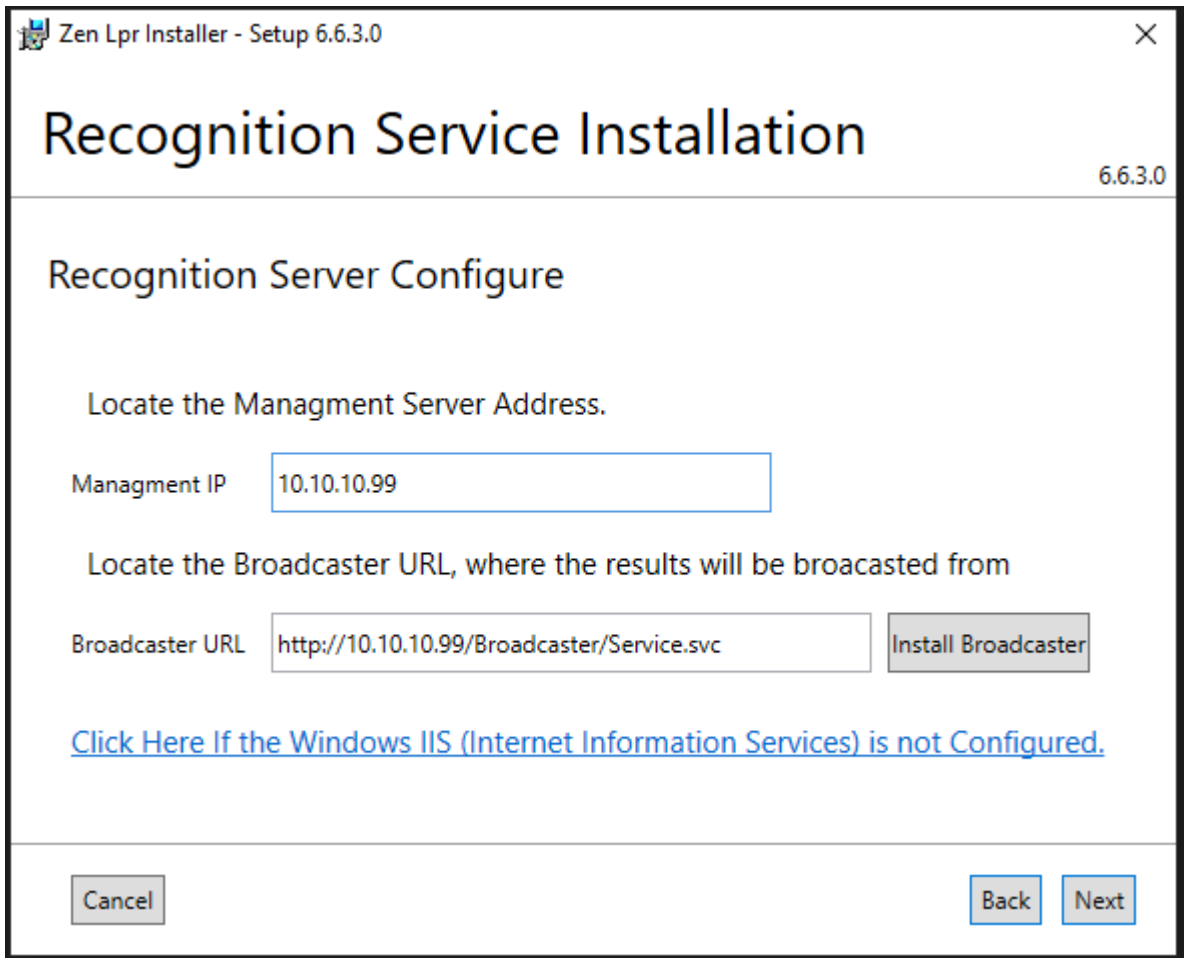
        // Always close the client.
        client.Close();
    }
}
```

Visual Basic

```
Class Test
    Shared Sub Main()
        Dim client As BroadcasterServiceClient = New BroadcasterServiceClient()
        ' Use the 'client' variable to call operations on the service.

        ' Always close the client.
        client.Close()
    End Sub
End Class
```

2. Resume Installation



Zen Lpr Installer - Setup 6.6.3.0

Recognition Service Installation

6.6.3.0

Recognition Server Configure

Locate the Managment Server Address.

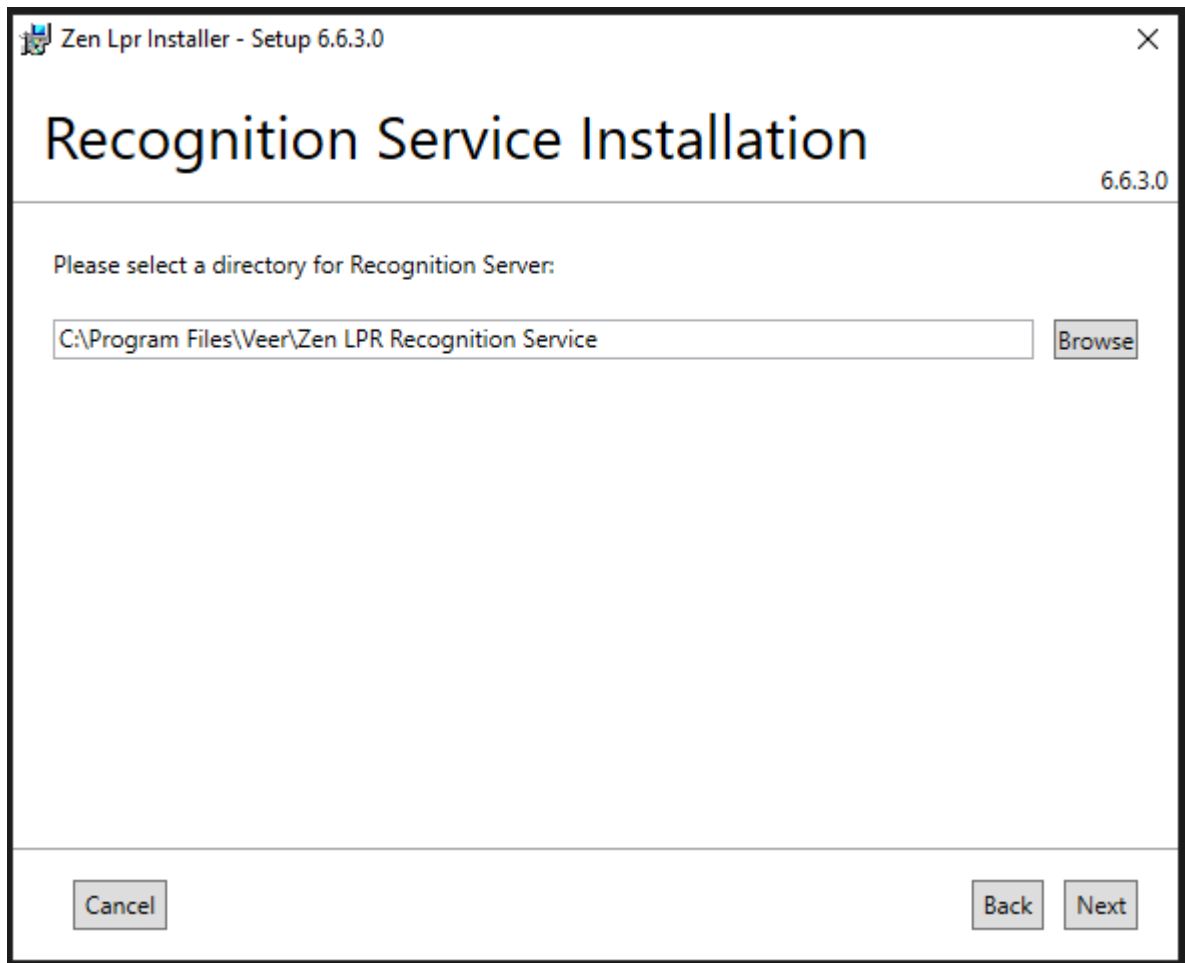
Managment IP

Locate the Broadcaster URL, where the results will be broadcasted from

Broadcaster URL

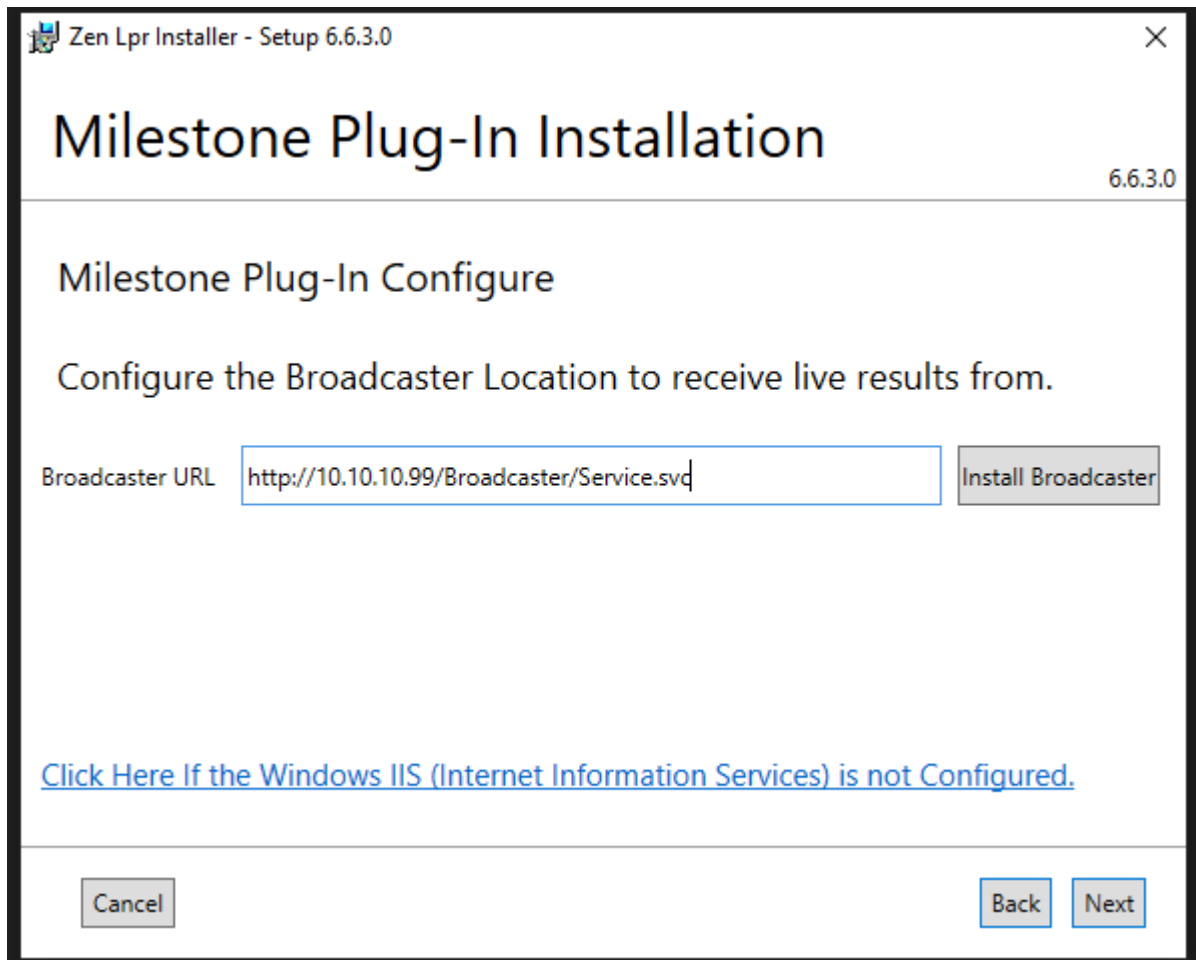
[Click Here If the Windows IIS \(Internet Information Services\) is not Configured.](#)

Fill the required information, Copy the Broadcaster URL to Clipboard to be used in the next Step and click Next.



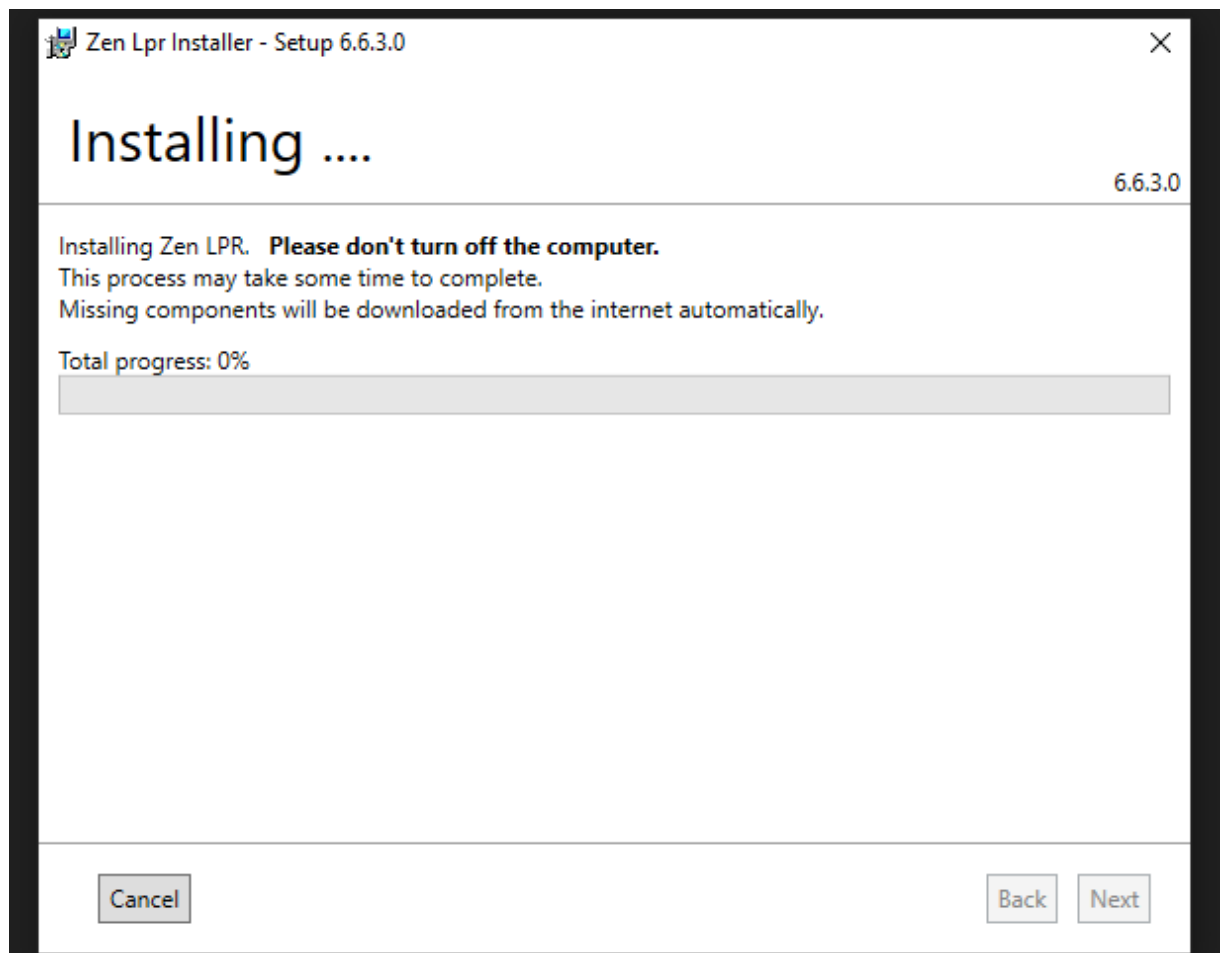
Select the desired directory to install the Recognition Service.

Click Next



The Milestone Plugin Configuration, the same Broadcaster URL is required previously copied.

Paste the URL and Click Next;



Installation process started, you will be prompted in case of error, and will be notified once done.

6. Manually Registering Machine

In case after installation is complete and the Recognition Server is not being listed inside the Management Interface, it is recommended to execute the "GetMachineUUID.exe" located at the Recognition Service directory.

The executable will connect to the Management Service and attempt to register through its GUID.