

Windows Server 2016

Install Windows Server 2016 Step by Step

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Inhoudsopgave

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Windows Server 2016

Install Windows Server 2016 Step by Step

Windows **Windows Server 2016** installation is one of the key tasks in the network. As an administrator you should know how to install and configure Windows server. To start administrating your network, surely you first need to install Windows server and configure it. Before installing Windows server make a plan for the installation. Surely you can plug installation media (DVD, USB flash, etc) to the server and click on next button several times. Then you're done and Windows server is installed. But that doesn't work surely.

Make a plan

Choose an appropriate edition of the Windows server. An edition of Windows server supports specific role/roles that others doesn't support. Think of your present needs and what you may need in the future. How many virtual machines (VM) do you need? How many VMs you may need in the future? Does your network need Web server now? What about the future? How many users work in your network? They are all the things that you should pay attention to while making a good plan for Windows server installation.

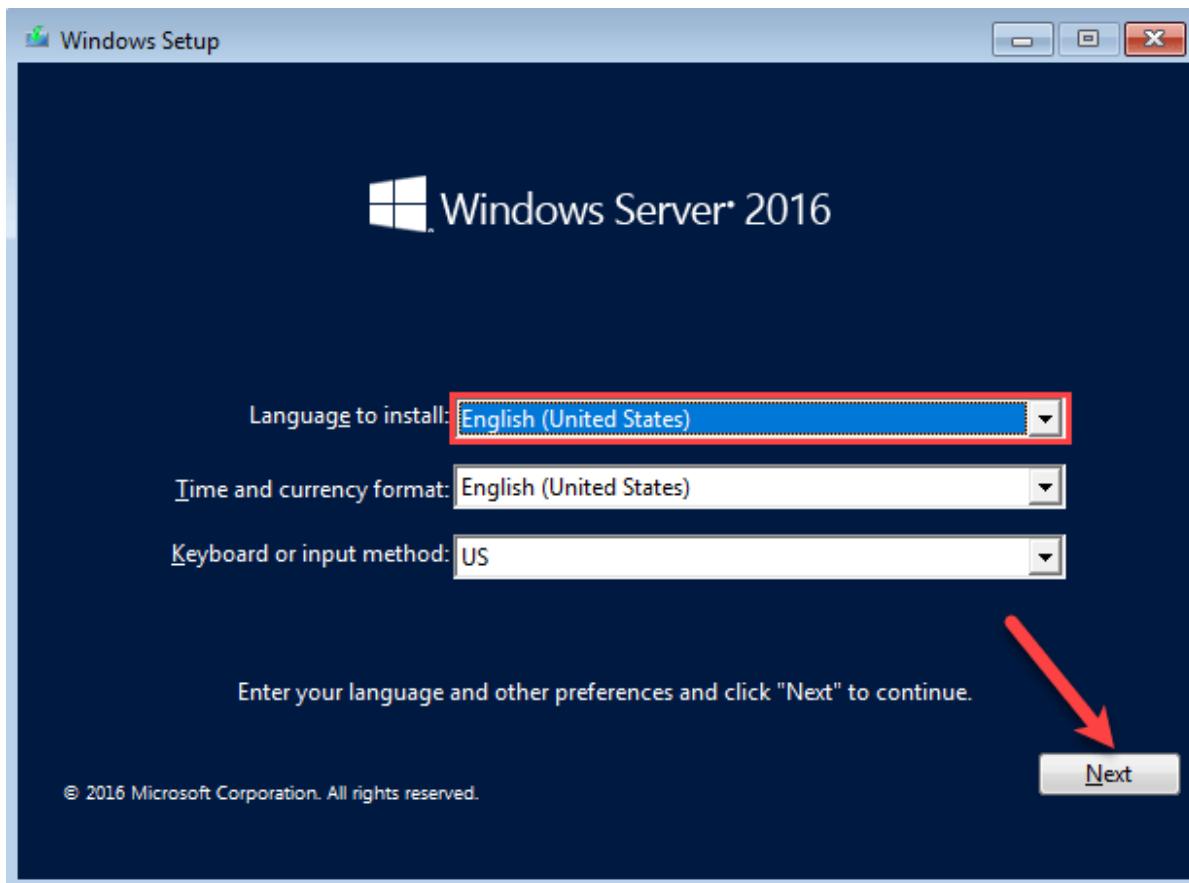
If you work on your personal lab, click on the link below to learn how to install Windows server 2016 on VMware Workstation.

- [Install Windows Server 2016 on VMware Step by Step](#)

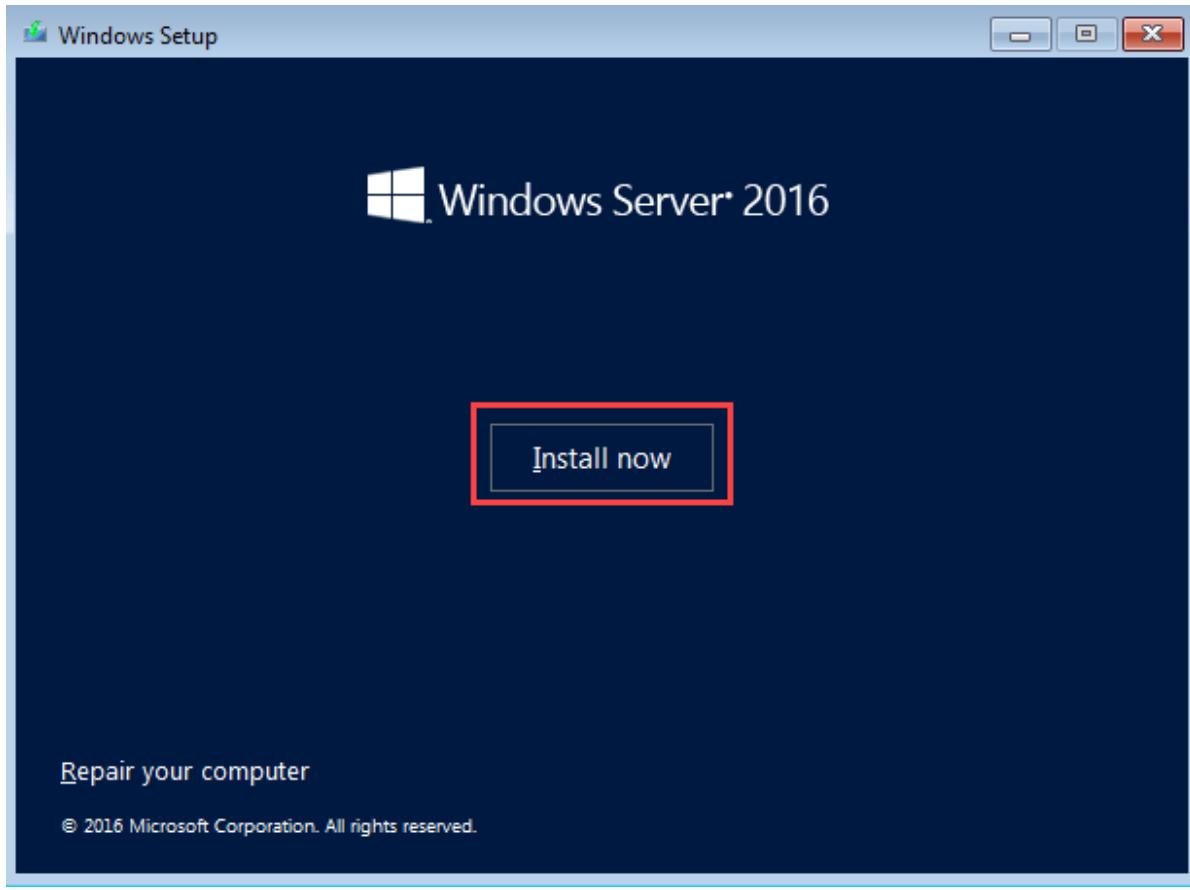
Install Windows Server 2016 Step by Step Guide

Prepare the installation media (DVD, USB flash, etc) and start the installation process. If you don't have the Windows Server 2016 installation software, [click here](#) and download the software from Microsoft website.

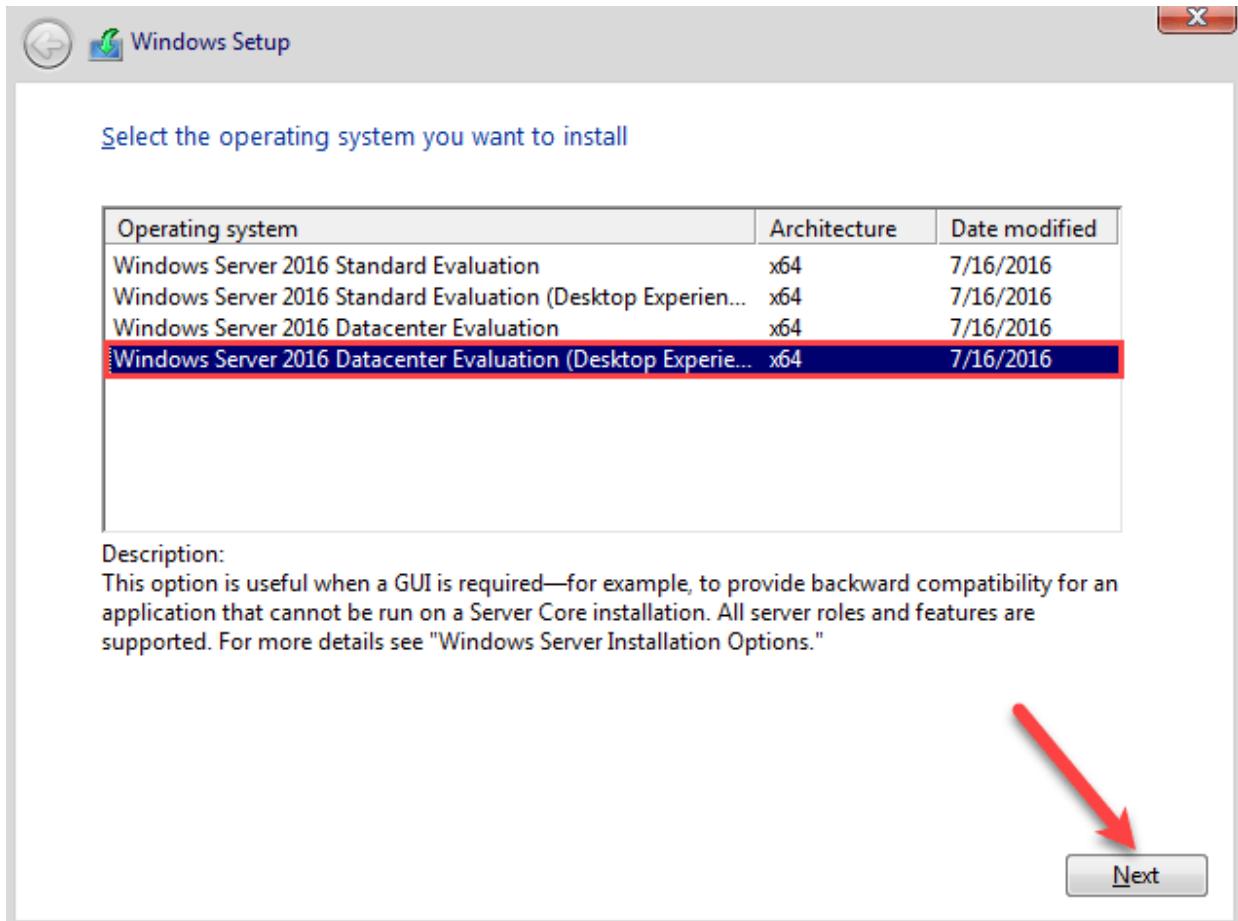
1. Plug the Windows Server 2016 boot drive (DVD, USB) to the computer and boot your computer. When the Windows Setup page appears, select your **language**, **time format** and **keyboard** then click on **Next** button.



2. Now click on **Install now** button to start the installation process.

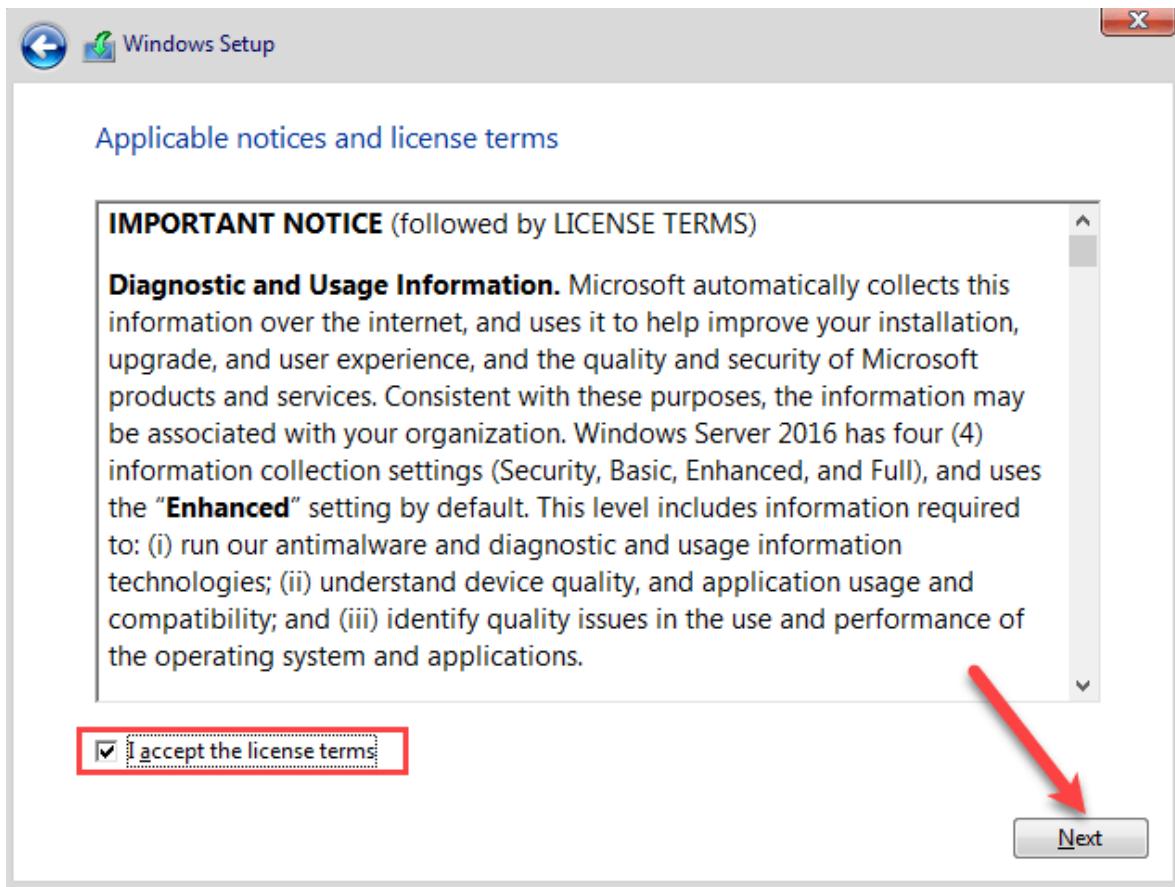


3. Select the appropriate version of the windows server that meets your organization's needs then click **Next**. Make sure that you've chosen an appropriate edition of Windows server.

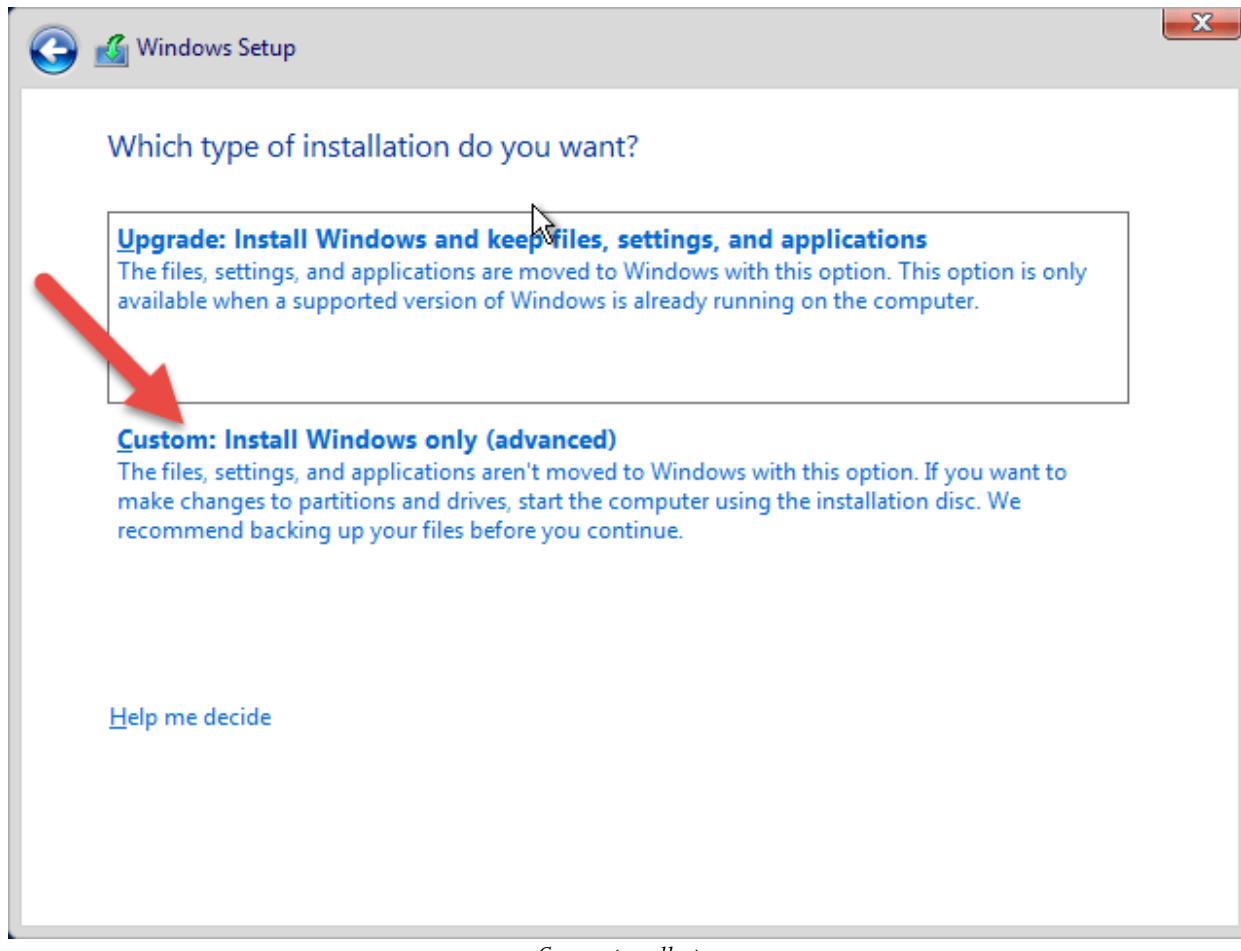


Select the operating system you want to install

4. Put a check mark in the box next to the **I accept license terms** and click on the **Next** button. License term is about the way you want to buy license for your server from Microsoft.

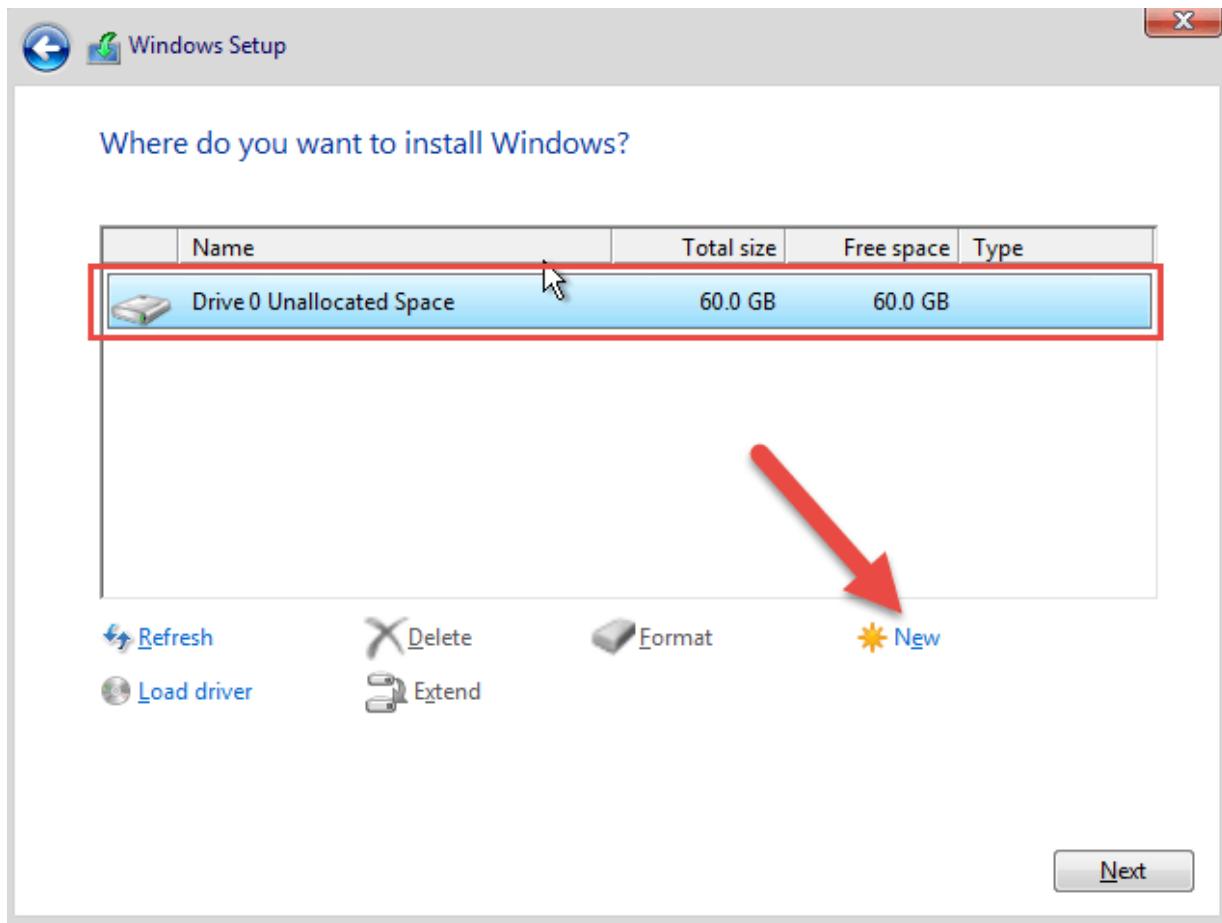


5. Select the **Custom: Install Windows only (advanced)** option for clean installation. Clean installation is the term used against upgrade. When you upgrade a Windows server you can have your settings, apps, etc from previous version of Windows. When you do the clean installation you can't have the settings, apps, etc.

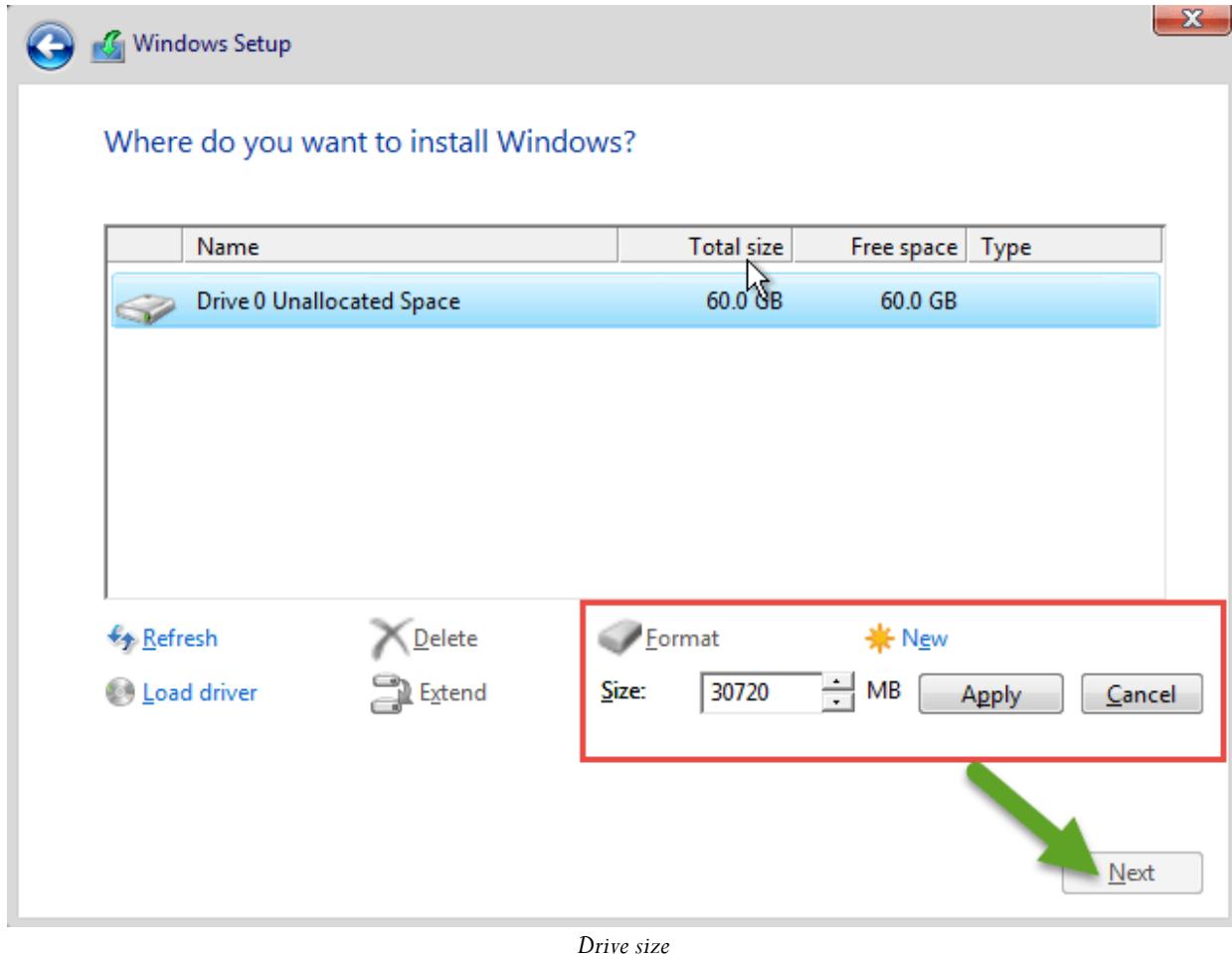


Custom installation

6. Select the hard drive that you want to install the windows server on, then click on the **New** button to do the partitions.



7. After clicking on the New button, some options appear. Specify the amount of the drive based on **MB** and click on the **Apply** button. A warning appears which wants you to give the permission to system to create a drive for system files. Click on **ok** button, if you want to add more drives do this process again. When finished hit **Next**.



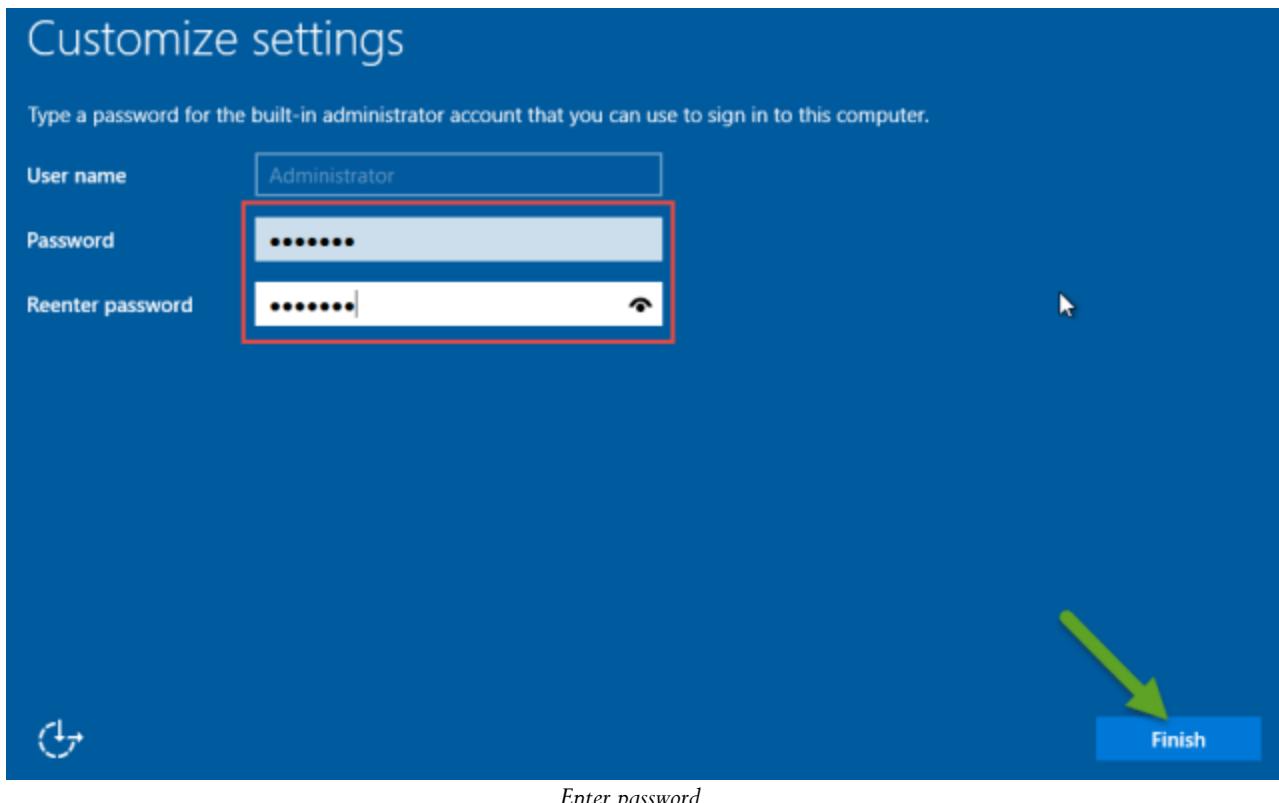
Drive size

8. After clicking **Next** the System starts coping all the files from the external drive to internal hard drive. It will take a while so be patient. Be aware that your system will be restarted several times.



Copying files on machine's hard drive

- 9.** When the system copied all the files and restarted, finalize your task by entering the required details. Type complex password (composed of uppercase, lowercase, symbol and numbers) twice in the boxes and click on the **Finish** button. User name is Administrator by default.



Enter password

- 10.** Press **Ctrl+Alt+Del** buttons to jump start the screen to a login page and inside the box below the administrator user name, enter the password and press **Enter** button from the keyboard to sign in the Windows.



11. After you logged in the Windows you see the some thing like the picture below. Welcome to Windows Server 2016.



Windows Server 2016 Evalution

Conclusion

Finally, we've installed the Windows Server 2016 successfully and is ready to work. When Windows installed you can't go back and for example change the edition. If so, do the clean installation again. For any question leave a comment below. I answer your questions as soon as possible.

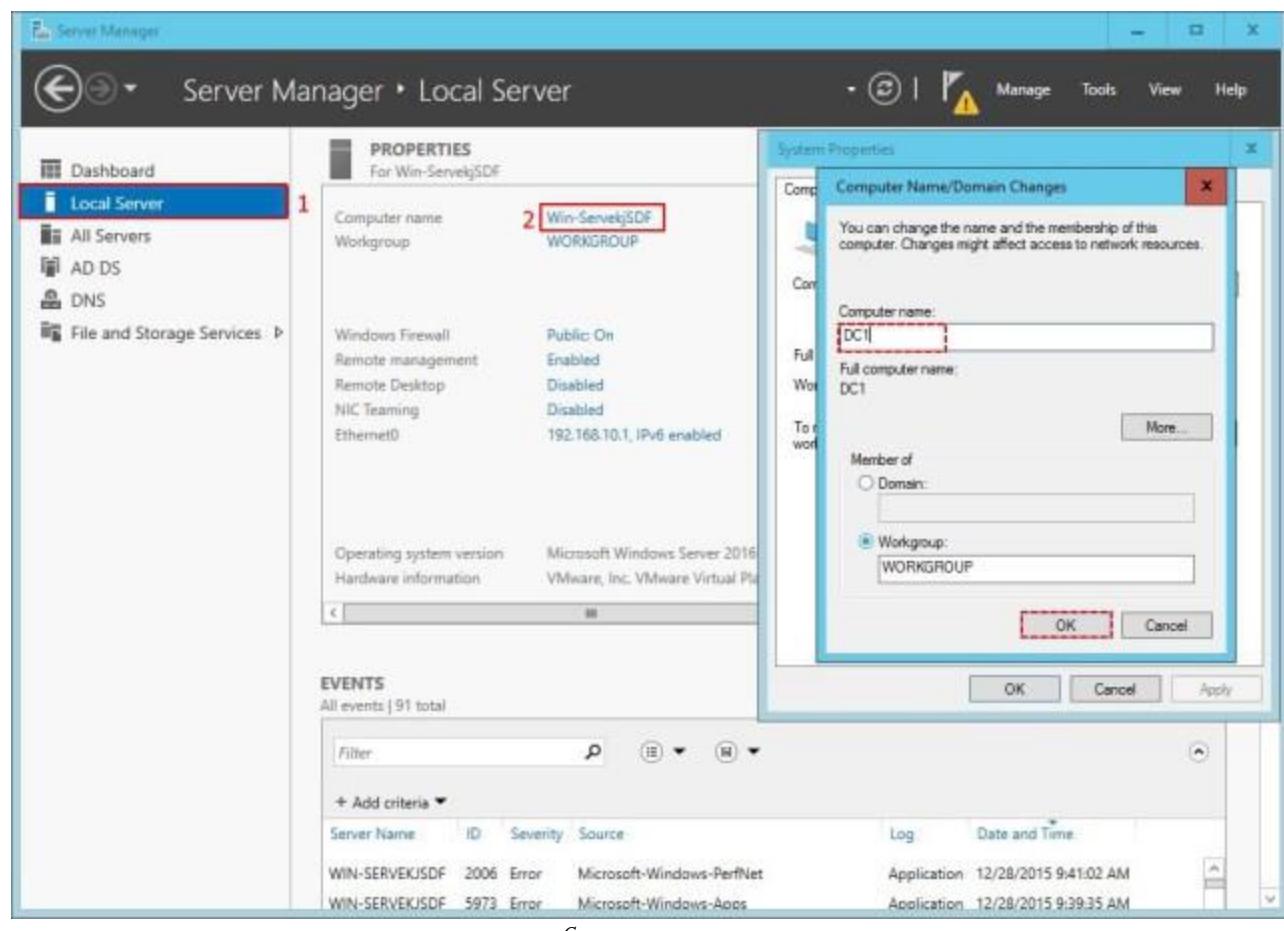
Now you need to initially configure Windows Server. Click on the link below to learn how to do the initial configurations.

After installing Windows Server 2016, you can start working but before that, there are some initial configuration to perform for making the server ready to work. These are the essential tips to do before start working with it. Here are the tasks to complete such as; renaming the server, setting the time zone, configuring the network connection, joining a domain, enabling remote desktop and some more. So let's get started.

Perform Initial Configuration of Windows Server 2016 Graphically

1. Rename server

Renaming the server is the first step of initial configuration. By default windows server has setup a unique name, to change it open **Server Manager** and click on **local Server** then click on your computer name. On the System, Properties click **change** and type a unique and short computer name then click **ok**. When you'll be asked for restarting just hit **Restart Now**.



2. Join a Domain or Promote Server to a Domain Controller

Here you have two options to select, the first one is to join a domain or promote this server to a domain controller see the article from the link below(Install AD DS to create and manage domain services).

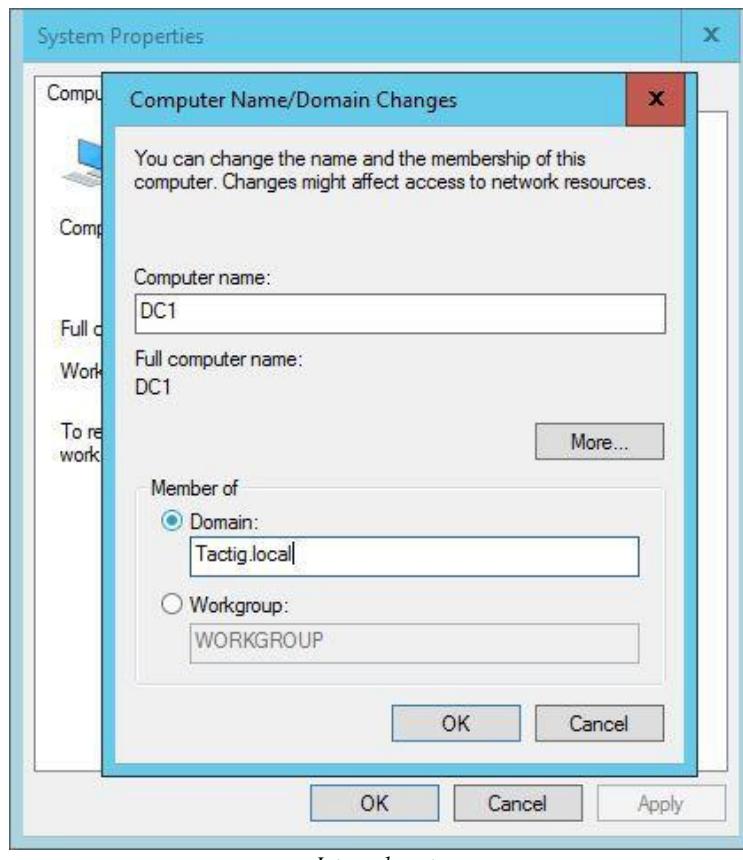
Note: Before joining to a domain or promoting to domain controller you must configure server's TCP/IP settings from the instructions below.

To join a domain, open **Run>Type Sysdm.cpl>click Change>Select Domain>Type the domain name and hit Ok like the shot. When you'll be asked for authentication then type the username and password of the domain user and click ok.** When the server joined to the domain click **Restart now** on the dialog box to sign in with the domain after restarting.

Notice: Before joining to a domain check the Domain controller and your computer if they are connected. If you got error like an error like connecting to domain service then check out the connection and ping them to check if they are connected then try joining the domain.

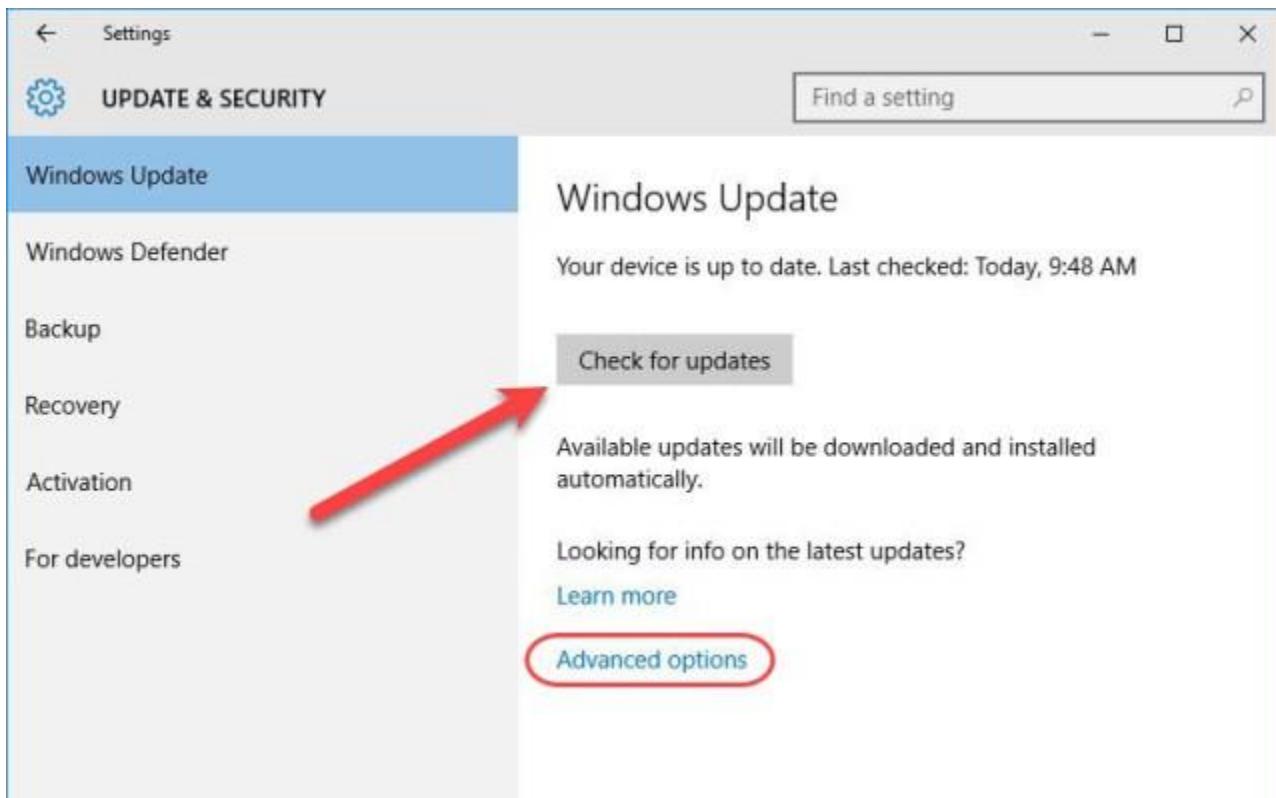
To promote this server to a domain controller, read the article based on

[**How to Install & Configure Active Directory Domain Services\(AD DS\)?**](#)



3. Turn on Automatic Updates

Keeping your server protected and updated is the most important. By turning on **Automatic Updates** on your server will be secure and latest, to configure open **Settings>Update & Security** and click on check for updates then when the update downloaded and installed.



On the Advanced options, choose **Automatic** update installing to let the Windows Server install updates when the server is not in use or you can set manually when to install updates.

The screenshot shows the 'Settings' interface with 'ADVANCED OPTIONS' selected. A red box highlights the 'Automatic (recommended)' dropdown menu, and a red arrow points to it from the left. Below the dropdown, there is descriptive text about automatic updates. Two checkboxes are present: one for giving updates for other Microsoft products and another for deferring upgrades. Links for 'View your update history' and 'Choose how updates are delivered' are also visible. The bottom of the screen displays the text 'Settings – Advanced options'.

← Settings

ADVANCED OPTIONS

Choose how updates are installed

Automatic (recommended) ▾

Keep everything running smoothly. We'll restart your device automatically when you're not using it. Updates won't download over a metered connection (where charges may apply).

Give me updates for other Microsoft products when I update Windows.

Defer upgrades [Learn more](#)

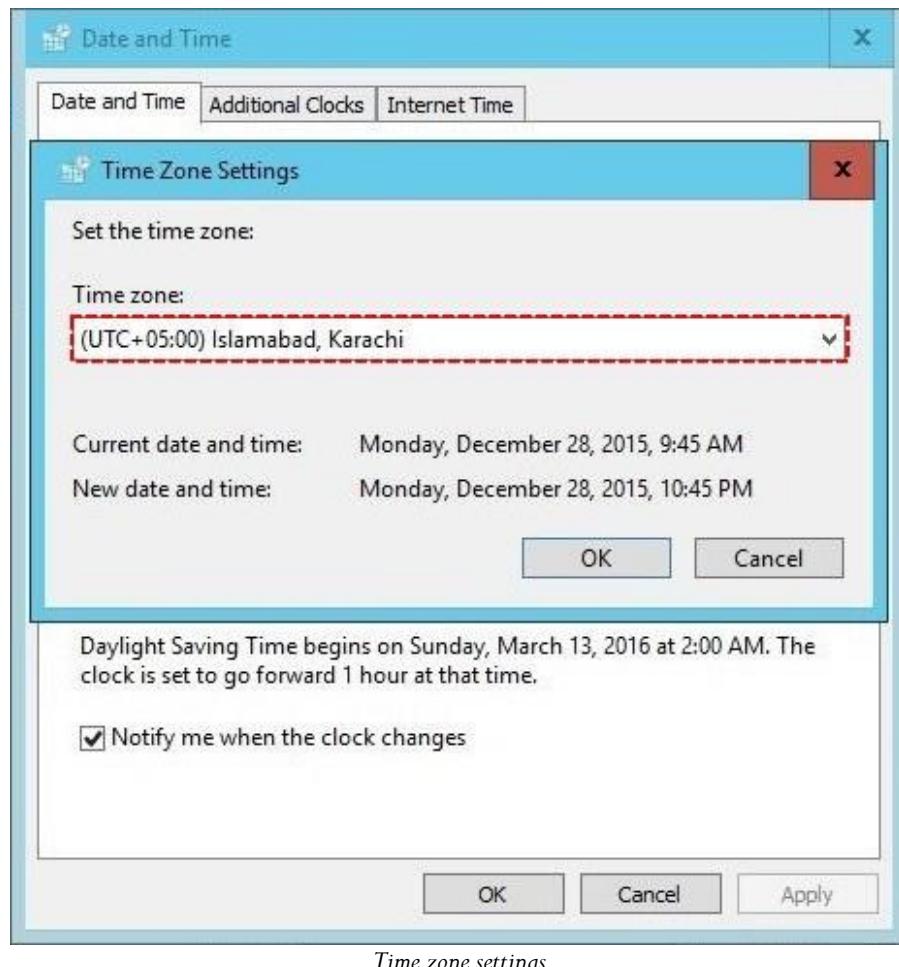
[View your update history](#)

[Choose how updates are delivered](#)

Settings – Advanced options

4. Setup time zone settings

Accurate time zone is essential for Server and services to work on exact timing. To setup open **Server Manager** click on **Local Server** and click on Time Zone hyperlink then click on **Change Time Zone**, select the correct time zone and click **Ok**.



5. Configure TCP/IP settings

A Server needs static IP for installing AD DS or using other features so to do it open **Server Manager** click on **Local Server** and click on your computer's network interface hyperlink(**Ethernet**).

The screenshot shows the Windows Server 2016 Server Manager interface. The left sidebar has a navigation menu with items like Dashboard, Local Server (which is selected and highlighted in blue), All Servers, AD DS, DNS, and File and Storage Services. The main content area is divided into two sections: PROPERTIES and EVENTS.

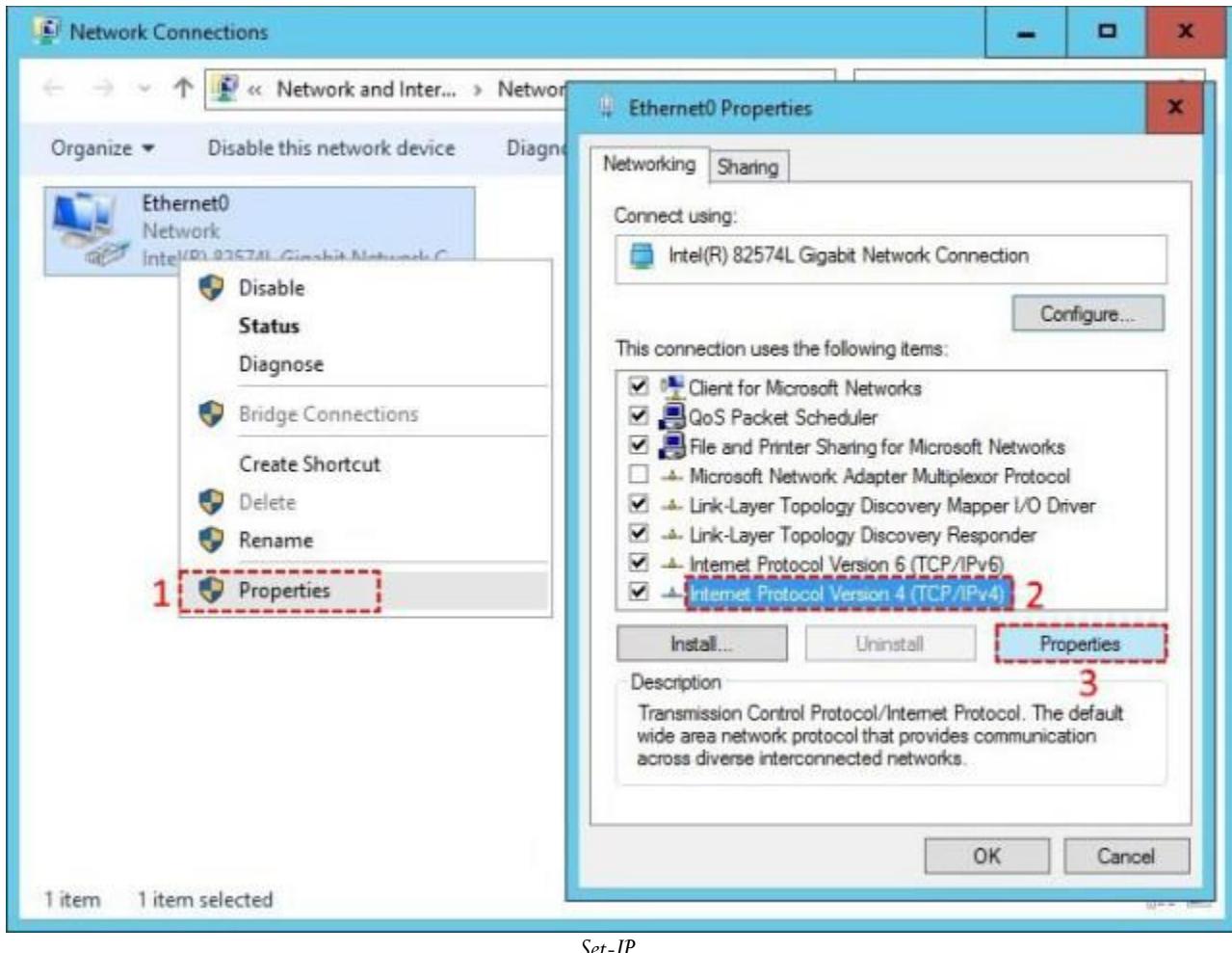
PROPERTIES section details:

For DC1	
Computer name:	DC1
Workgroup:	WORKGROUP
Windows Firewall:	Public: On
Remote management:	Enabled
Remote Desktop:	Enabled
MIC Teaming:	Disabled
Ethernet0	192.168.100.122; IPv6 enabled
Operating system version:	Microsoft Windows Server 2016 Technical Preview 3
Hardware information:	VMware, Inc. VMware Virtual Platform
Processors:	Intel(R) Core(TM) i3-3110M
Installed memory (RAM):	2 GB
Total disk space:	59.31 GB

EVENTS section details:

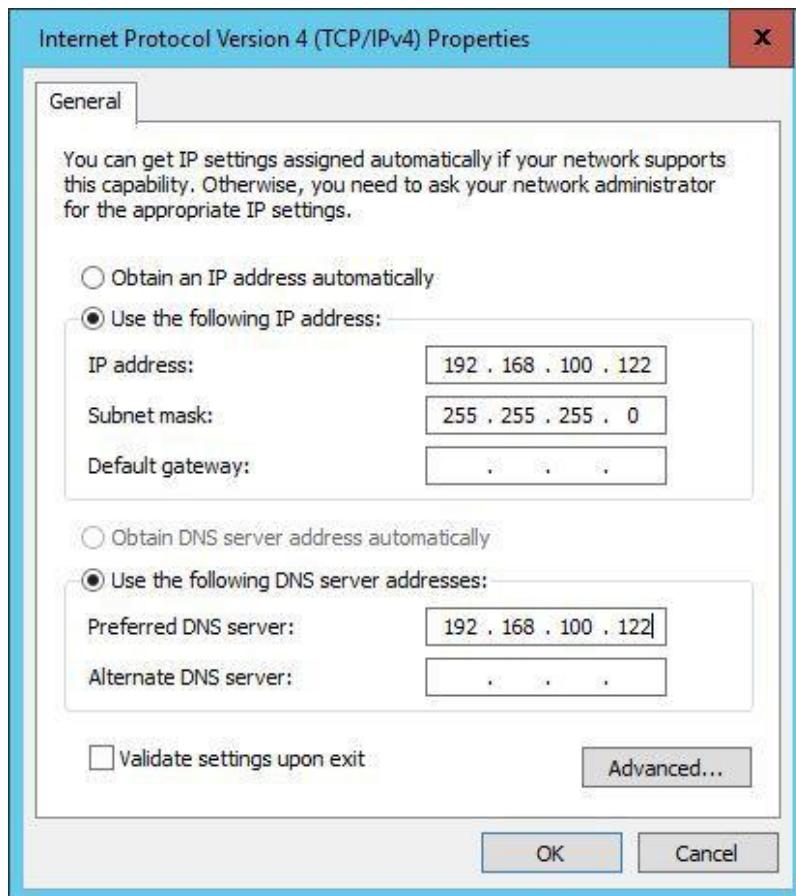
All events 88 total					
Filter	ID	Severity	Source	Log	Date and Time
	134	Warning	Microsoft-Windows-Time-Service	System	12/28/2015 11:59:02 PM
	1014	Warning	Microsoft-Windows-DNS Client Events	System	12/28/2015 11:59:02 PM

On the Network Connections select the correct network adapter to configure by right click and choose **Properties**.



Set-IP

Now click on **Internet Protocol Version 4 (TCP/IPv4)**, when the window opened select **Use the following IP address** and type a IP address, Subnet Mask, Default Gateway and Preferred DNS server.

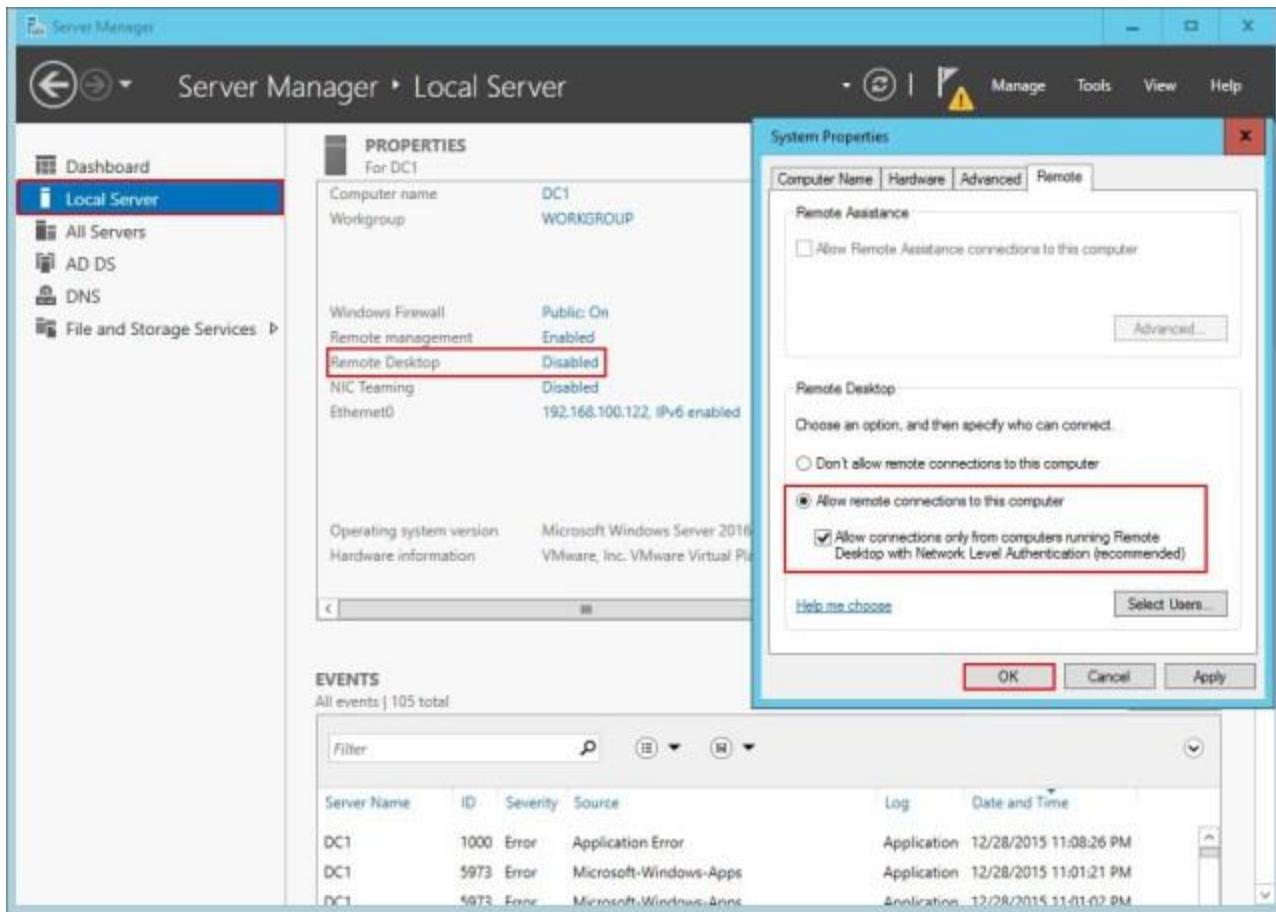


TCP IP Properties

6. Enable Remote Desktop

There are two ways to enable Remote Desktop in windows server, no matter we will do it with Server Manager. The Remote Desktop feature is the core

To enable open **Server Manager** click on **Local Server** and click on **Remote Desktop** hyperlink, it will directly open up the **System Properties** remote tab, just click on **Allow Remote Connections to this Computer** and click **ok**.



System Properties

Perform Initial Configuration of Windows Server 2016 with Command-line

1. Rename the Server

Netdom renamecomputer %ComputerName% /NewName: NewComputerName

```
C:\> Administrator: Command Prompt
Microsoft Windows [Version 10.0.10514]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>Hostname
Win-server21105

C:\Users\Administrator>netdom renamecomputer %computername% /newname:DC2tactig
This operation will rename the computer WIN-SERVER21105
to DC2tactig.

Certain services, such as the Certificate Authority, rely on a fixed machine
name. If any services of this type are running on WIN-SERVER21105,
then a computer name change would have an adverse impact.

Do you want to proceed (Y or N)?
y
The computer needs to be restarted in order to complete the operation.

The command completed successfully.
```

Rename computer

Type **Y** and hit enter to proceed. The server have renamed successfully.

2. Join a domain

Note: Before joining to a domain check the Domain controller and your computer if they are connected, also your computer should have taken IP with DHCP from the server correctly.

*Netdom join %ComputerName% /domain: DomainName /userd: UserName /passwordd:**

Type the username and password of the server user twice and hit enter to connect.

```
C:\> Administrator: Command Prompt
C:\Users\Administrator>netdom join %computername% /domain:Tactig.com /userd:Karar /passwrd:*
Type the password associated with the domain user:
The computer needs to be restarted in order to complete the operation.

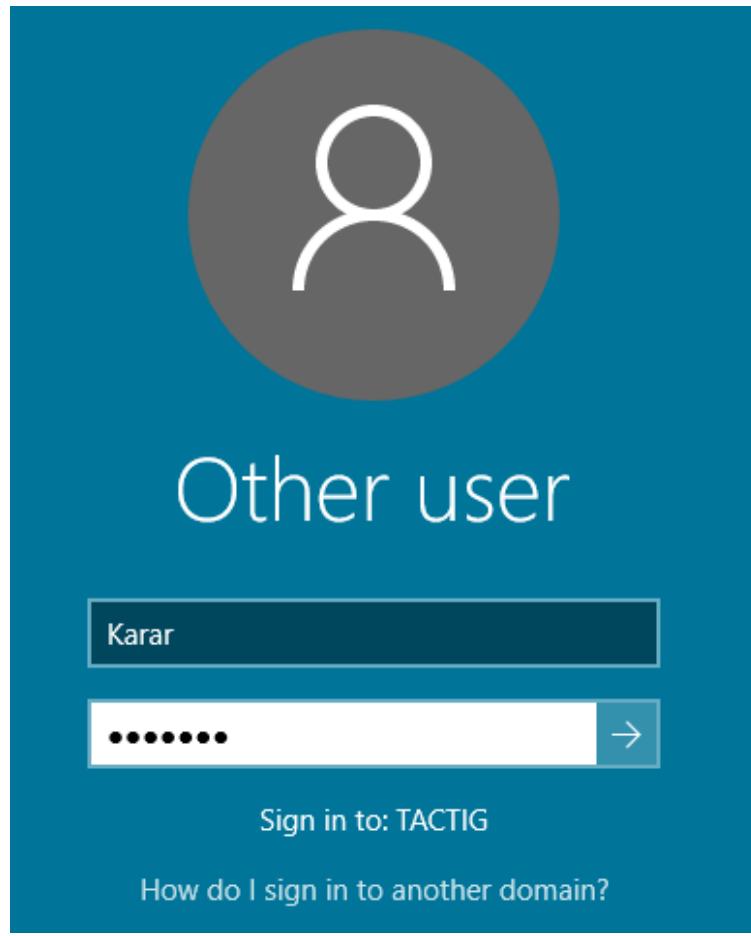
The command completed successfully.
```

Join to domain

Now restart to apply all commands and joining to domain by typing;

Shutdown -r -t 1

After you get started, check out your computer that it will have the other user option to sign in with domain user.



Here're all the command that are entered above.

The screenshot shows a Windows Command Prompt window titled "Administrator: C:\Windows\system32\cmd.exe". The window contains the following text:

```
Microsoft Windows [Version 10.0.10514]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>Hostname
Win-server109542

C:\Users\Administrator>netdom renamecomputer %computername% /newname:DC2Tactig
This operation will rename the computer WIN-SERVER10954
to DC2Tactig.

Certain services, such as the Certificate Authority, rely on a fixed machine
name. If any services of this type are running on WIN-SERVER10954,
then a computer name change would have an adverse impact.

Do you want to proceed (Y or N)?
Y
The computer needs to be restarted in order to complete the operation.

The command completed successfully.

C:\Users\Administrator>netdom join %computername% /domain:Tactig.com /userd:karan
ar /passwordd:*
Type the password associated with the domain user:

The computer needs to be restarted in order to complete the operation.

The command completed successfully.

C:\Users\Administrator>shutdown -r -t 150

C:\Users\Administrator>
```

All commands

3. Configure TCP/IP Properties

To configure IP address properties on a server or on any other computer follow the below commands.

To set IP address properties first identify your network adapters by typing:

netsh interface ipv4 show interfaces

Now to set a static IP address, subnet mask and default gateway type;

*Netsh interface ipv4 set address name=<> source=static address=<Ipaddress> mask=subnet
mask gateway=Gatewayaddress*

```
C:\Users\Administrator>netsh interface ipv4 show Interfaces
Idx      Met        MTU        State          Name
--  -----  -----  -----  -----
  1          50  4294967295  connected  Loopback Pseudo-Interface 1
  3          10        1500  connected    Ethernet0

C:\Users\Administrator>netsh interface ipv4 set address name=ethernet0 source=static address=192.168.10.1
Set Static IP address
```

You can set Just IP address without subnet mask and default gateway.

To set up DNS server IP address type;

Netsh interface ipv4 add dnsserver name=<> address=DNSIPAddress index=1

Note: “index=1” refers to position of added DNS server.

Index=1 is Preferred DNS server and index=2 is Alternate DNS server.

```
C:\Users\Administrator>netsh interface ipv4 add dnsserver name=ethernet0 address=100.10.1 index=1

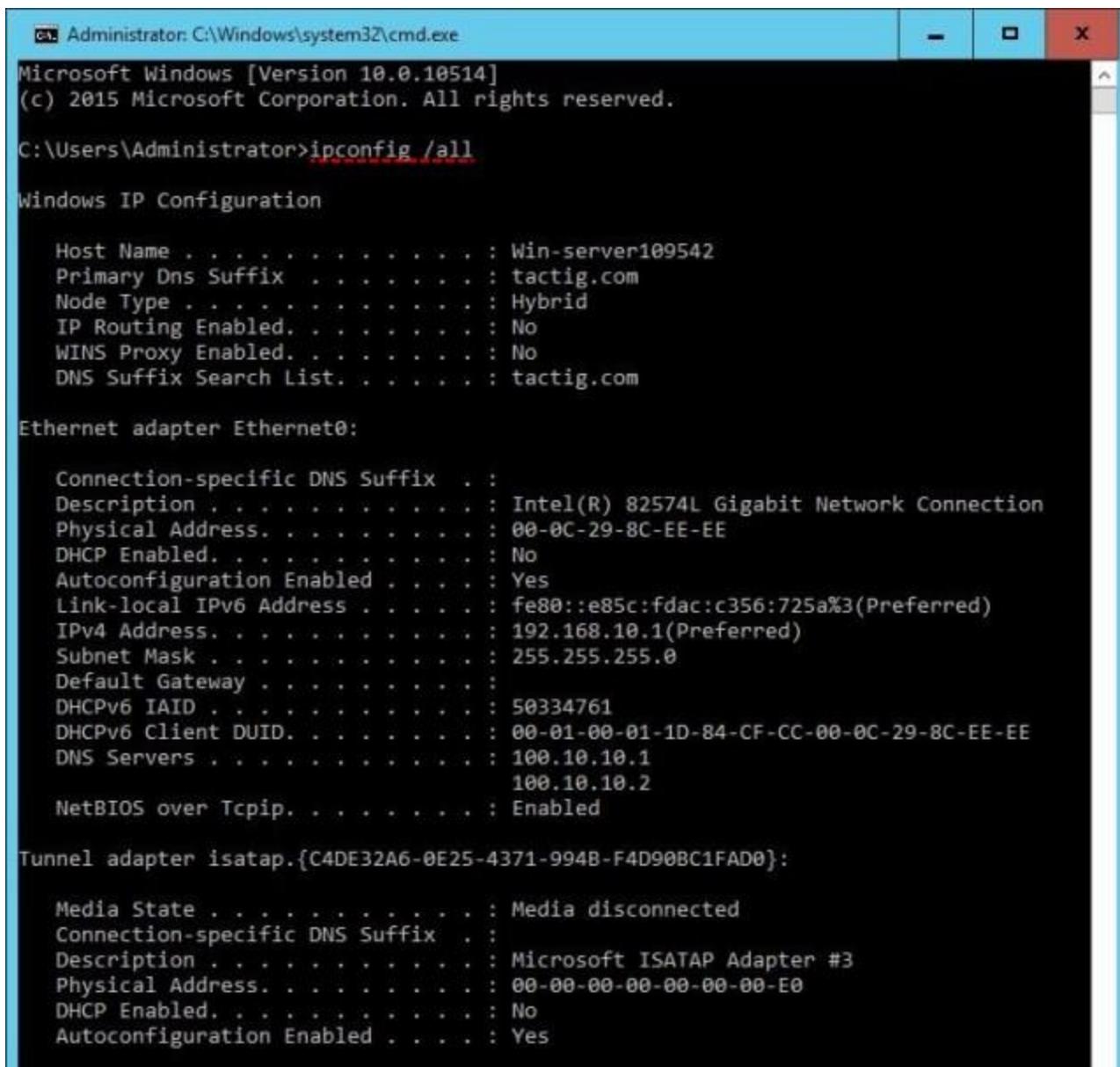
C:\Users\Administrator>netsh interface ipv4 add dnsserver name=ethernet0 address=100.10.2 index=2
```

Set DNS IP address

To confirm or check IP address type;

IPconfig /all

It shows all details of network including IP address, Subnet mask, DNS IP address.



```
Administrator: C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.10514]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>ipconfig /all

Windows IP Configuration

Host Name . . . . . : Win-server109542
Primary Dns Suffix . . . . . : tactig.com
Node Type . . . . . : Hybrid
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
DNS Suffix Search List. . . . . : tactig.com

Ethernet adapter Ethernet0:

Connection-specific DNS Suffix . . . . . :
Description . . . . . : Intel(R) 82574L Gigabit Network Connection
Physical Address. . . . . : 00-0C-29-8C-EE-EE
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::e85c:fdac:c356:725a%3(PREFERRED)
IPv4 Address. . . . . : 192.168.10.1(PREFERRED)
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
DHCPv6 IAID . . . . . : 50334761
DHCPv6 Client DUID. . . . . : 00-01-00-01-1D-84-CF-CC-00-0C-29-8C-EE-EE
DNS Servers . . . . . : 100.10.10.1
                           100.10.10.2
NetBIOS over Tcpip. . . . . : Enabled

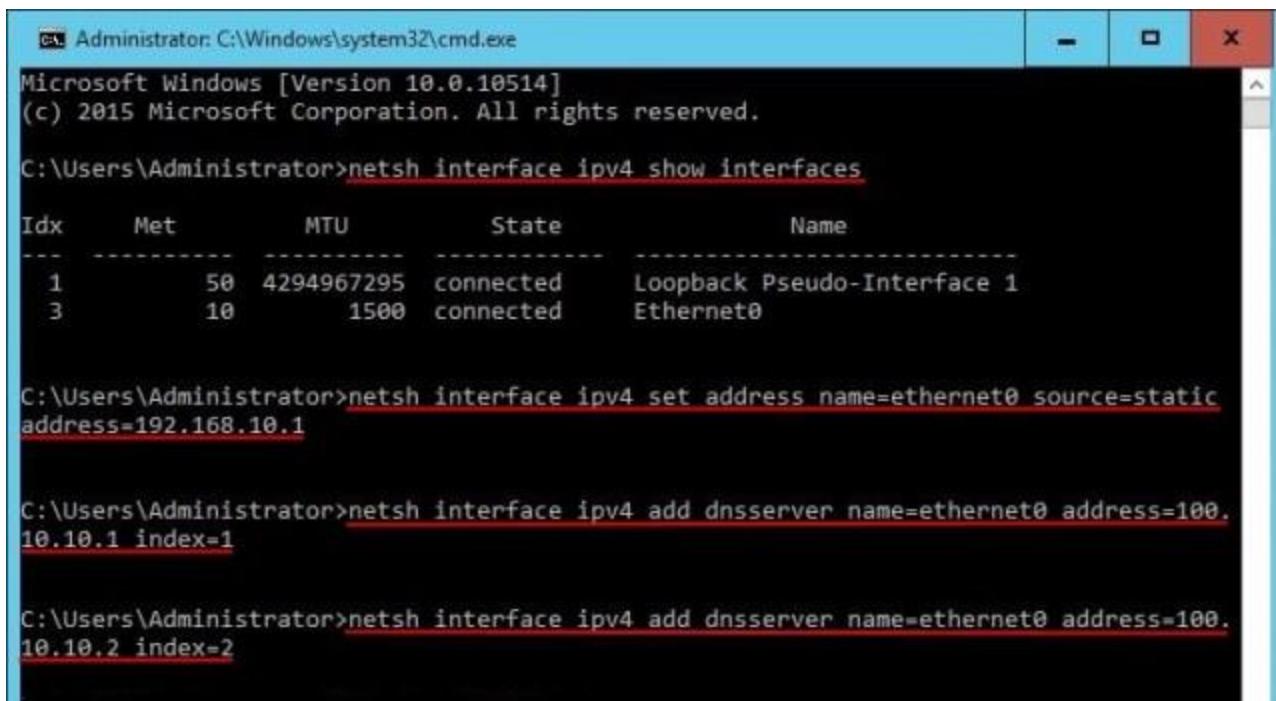
Tunnel adapter isatap.{C4DE32A6-0E25-4371-994B-F4D90BC1FAD0}:

Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . . . . . :
Description . . . . . : Microsoft ISATAP Adapter #3
Physical Address. . . . . : 00-00-00-00-00-00-E0
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . . : Yes
```

All IP details

You can see all IP addresses configured and work properly.

Here're all commands of IP properties.



The screenshot shows a Windows Command Prompt window titled 'Administrator: C:\Windows\system32\cmd.exe'. The window displays the following text:

```
Microsoft Windows [Version 10.0.10514]
(c) 2015 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>netsh interface ipv4 show interfaces
Idx      Met        MTU      State          Name
-----  -----
  1        50    4294967295  connected  Loopback Pseudo-Interface 1
  3        10           1500  connected    Ethernet0

C:\Users\Administrator>netsh interface ipv4 set address name=Ethernet0 source=static
address=192.168.10.1

C:\Users\Administrator>netsh interface ipv4 add dnsserver name=Ethernet0 address=100.
10.10.1 index=1

C:\Users\Administrator>netsh interface ipv4 add dnsserver name=Ethernet0 address=100.
10.10.2 index=2
```

All commands of IP properties

And at the end, if you're using Hyper-v or VMware take a snapshot of the Server so you can restore it later. That's all, this was all the initial configuration of windows server using command-line.

That's all, this was all about the initial configuration of windows server 2016 graphically + command-line.

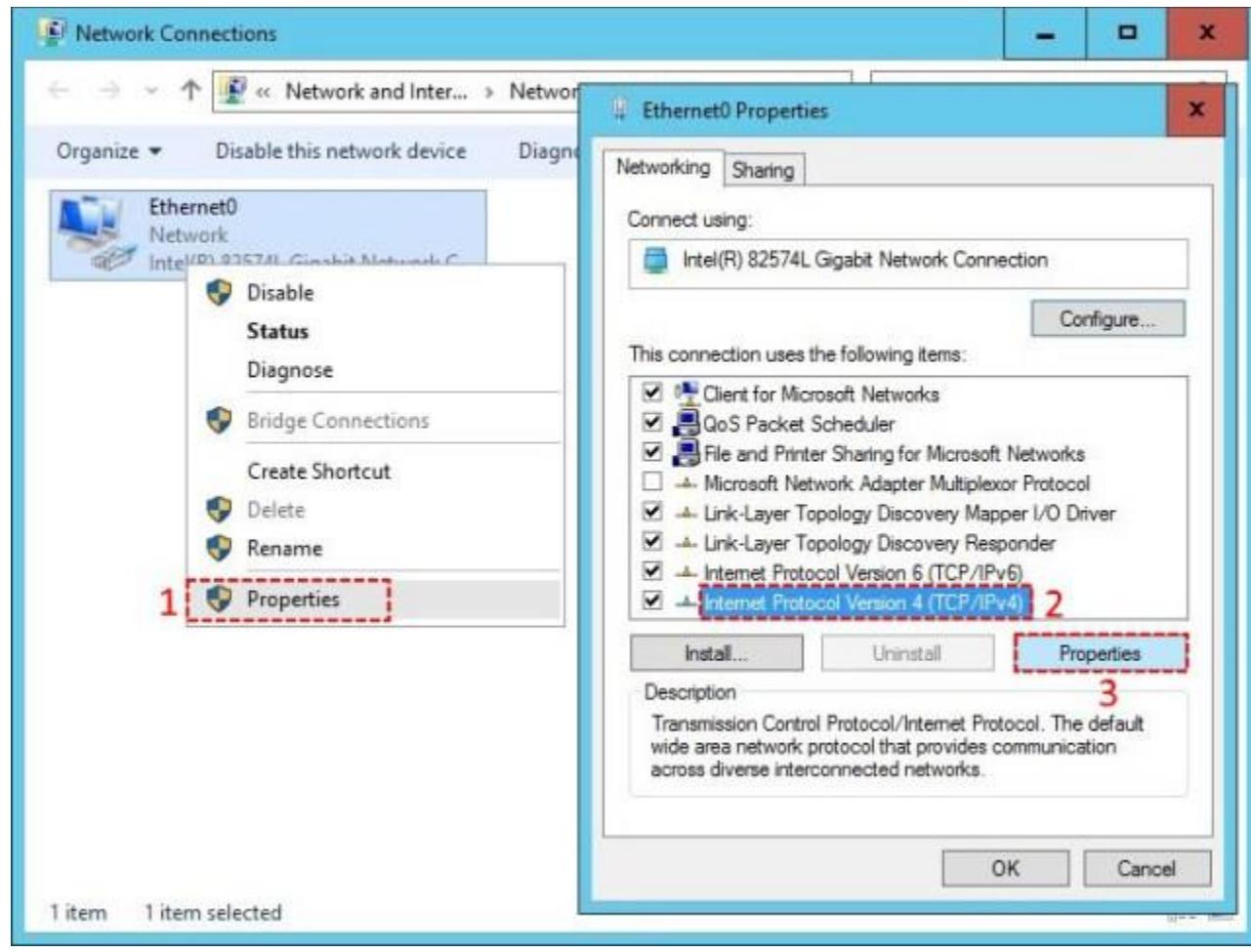
The Active Directory Domain Services is the feature of creating domain and managing it, but it's never had been easy to do in a new platform due to many changes or having no experience of it. Surely you need some steps to follow to install and configure Active Directory Domain Services(ADDS) fully by following up the steps here. No matter if you have installed your server now or if you are doing it on a VM machine you can do it now, so let's get started.

Install Active Directory Domain Services (AD DS)

To get started, first you have to install it then setup a domain controller.

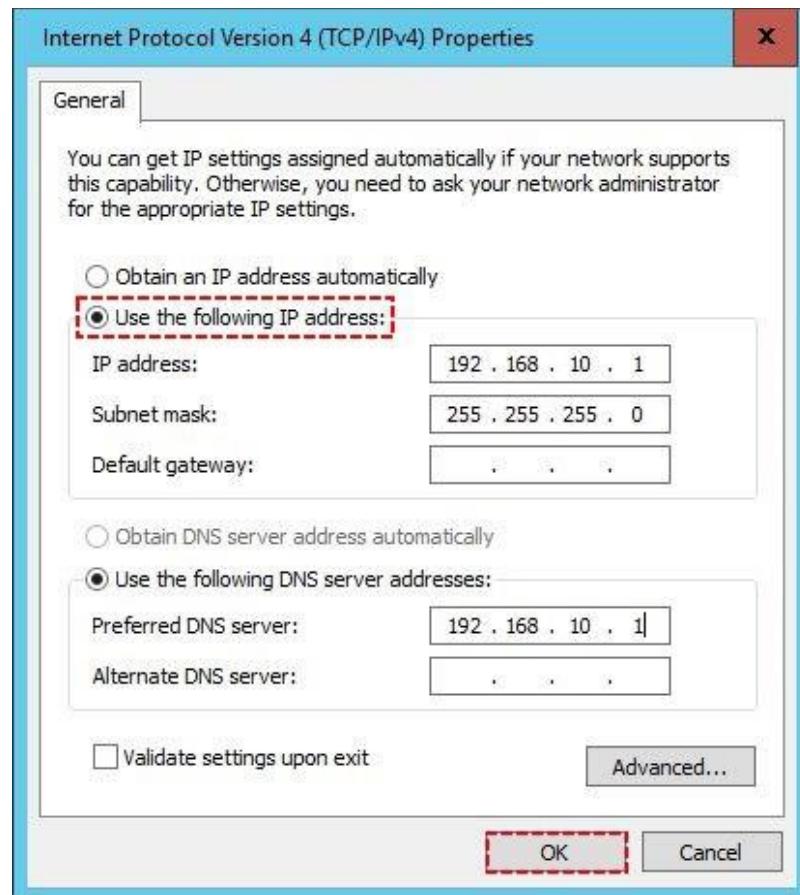
Before starting, make sure that you have renamed the server properly and have given static IP address to it. If you don't know how to do it then see the instructions below.

To setup static IP address open **Run** (Windows + r) type **Ncpa.cpl** and hit enter, when the **Network Connections** opened select the network and right click on it choose **Properties**. Now select **Internet Protocol Version 4 (TCP/IPv4)** and click on **Properties**.



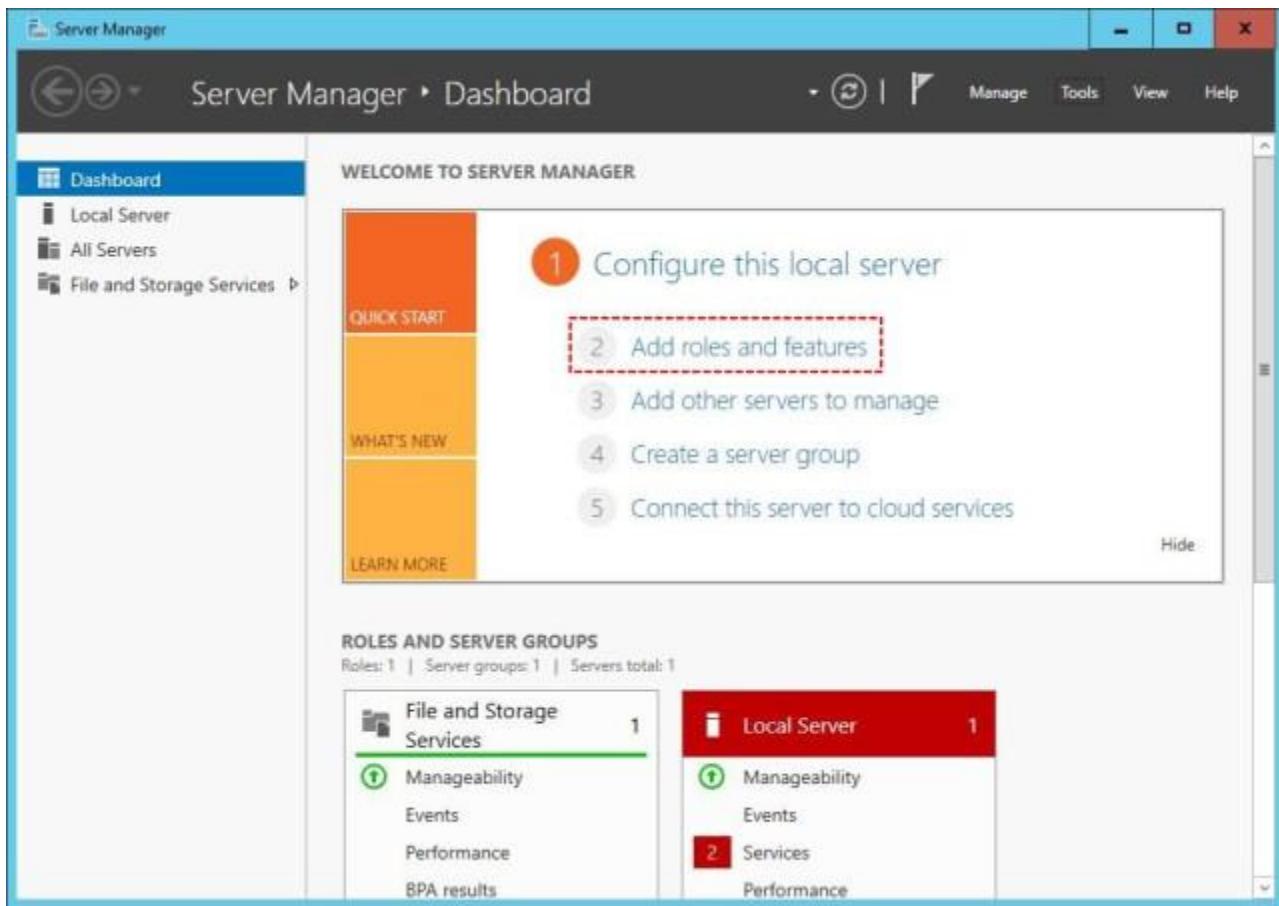
Setup IP

When the window appears, select **Use the following IP address** then enter an **IP address**, **Subnet mask**, **Preferred DNS server addresses** and click **ok**.

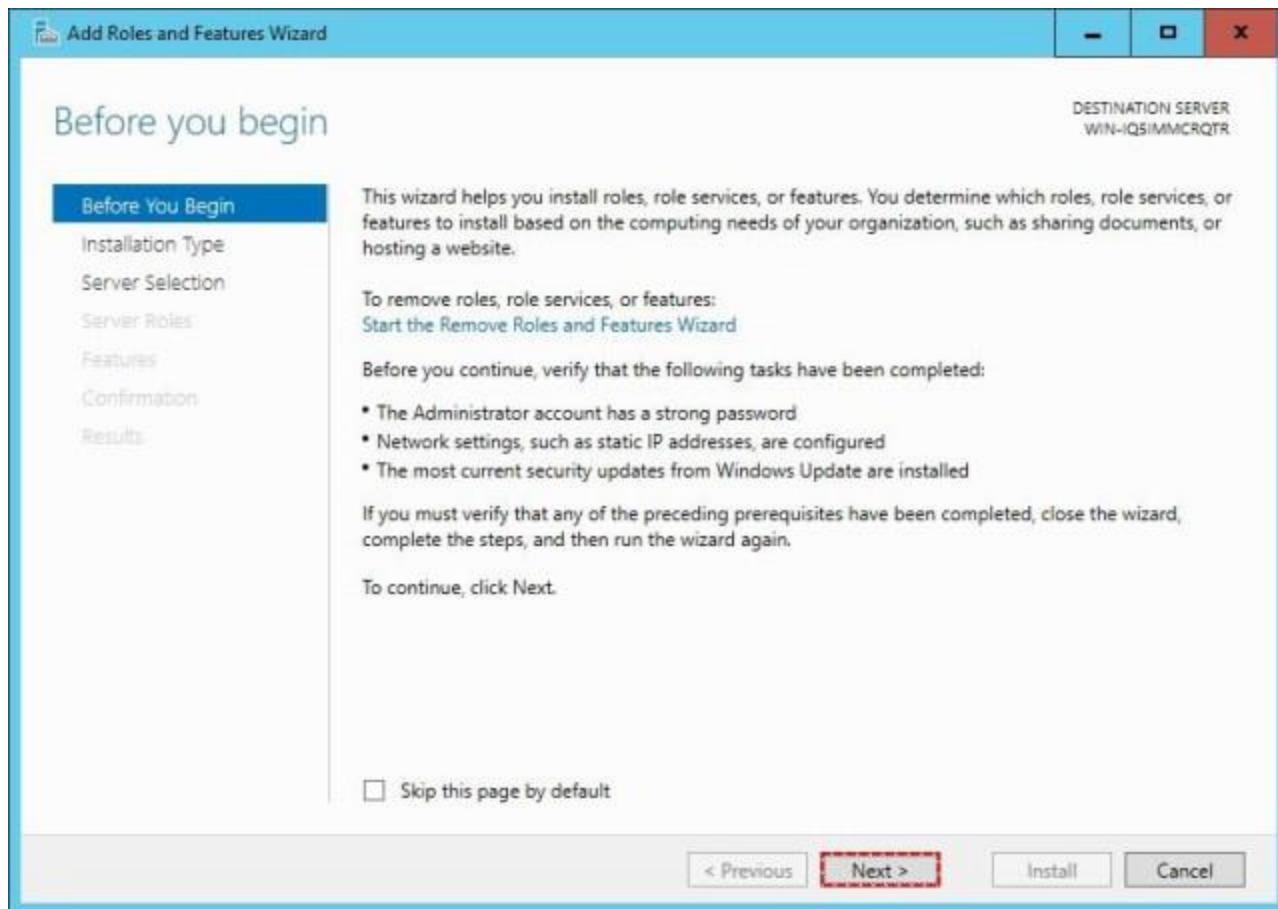


Enter IP Address

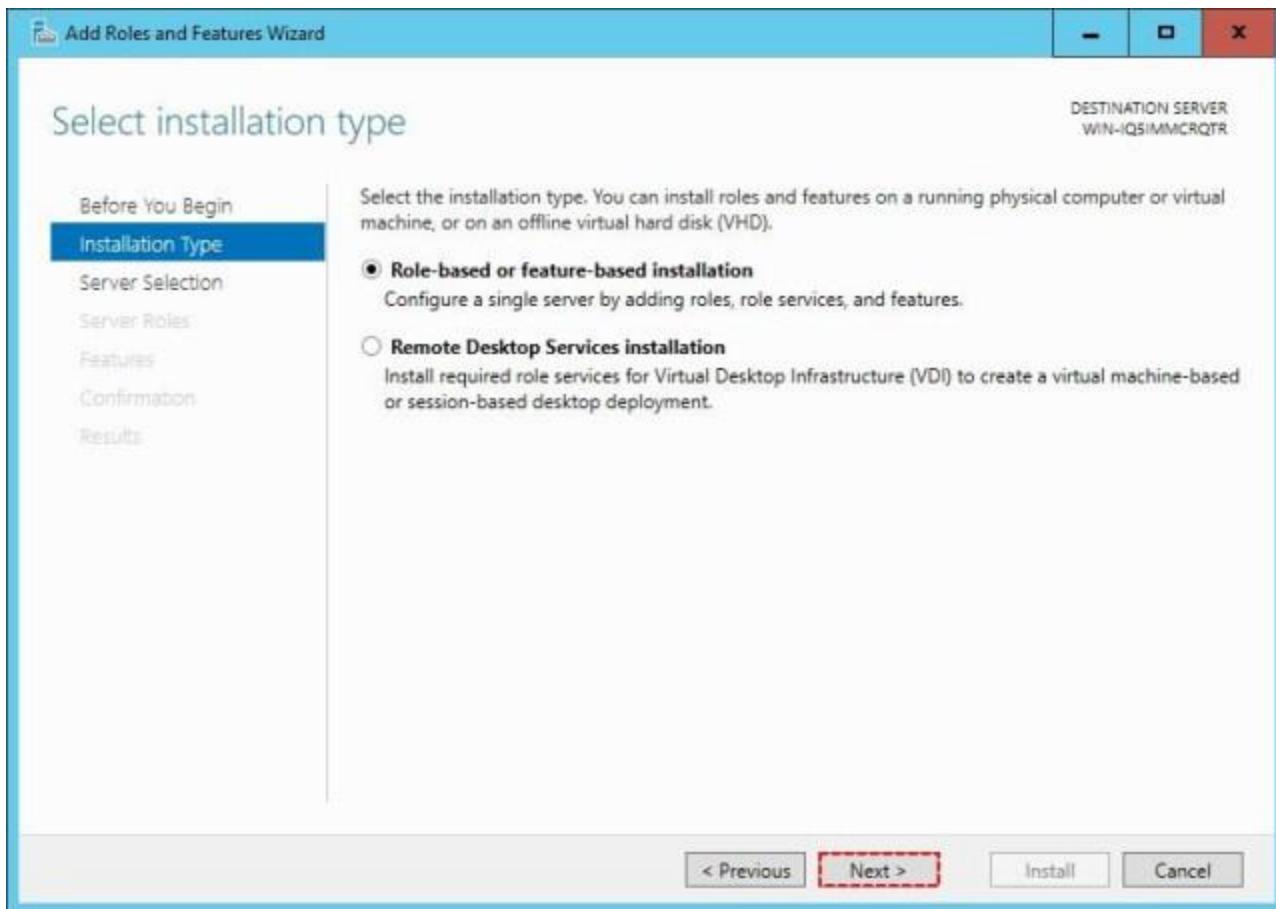
1. Now to install AD DS open **Server Manager** and click on **Add Roles and features**.



2. Read the important notes and click **Next** to verify and continue the installation.

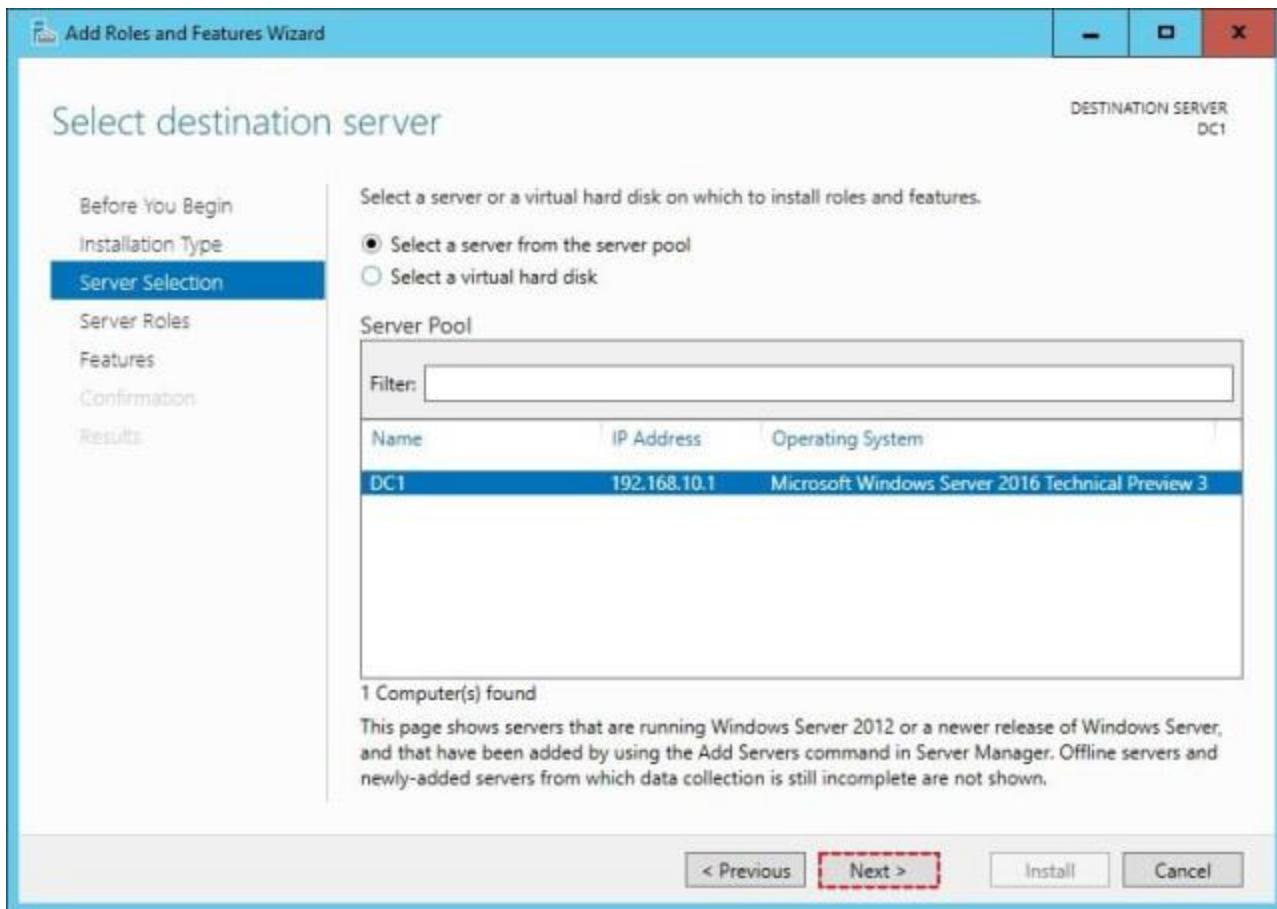


3. Here let the **Role-based** be selected, just click **Next**.



Installation Type

4. Select the server you want to install AD on it then click **Next**.

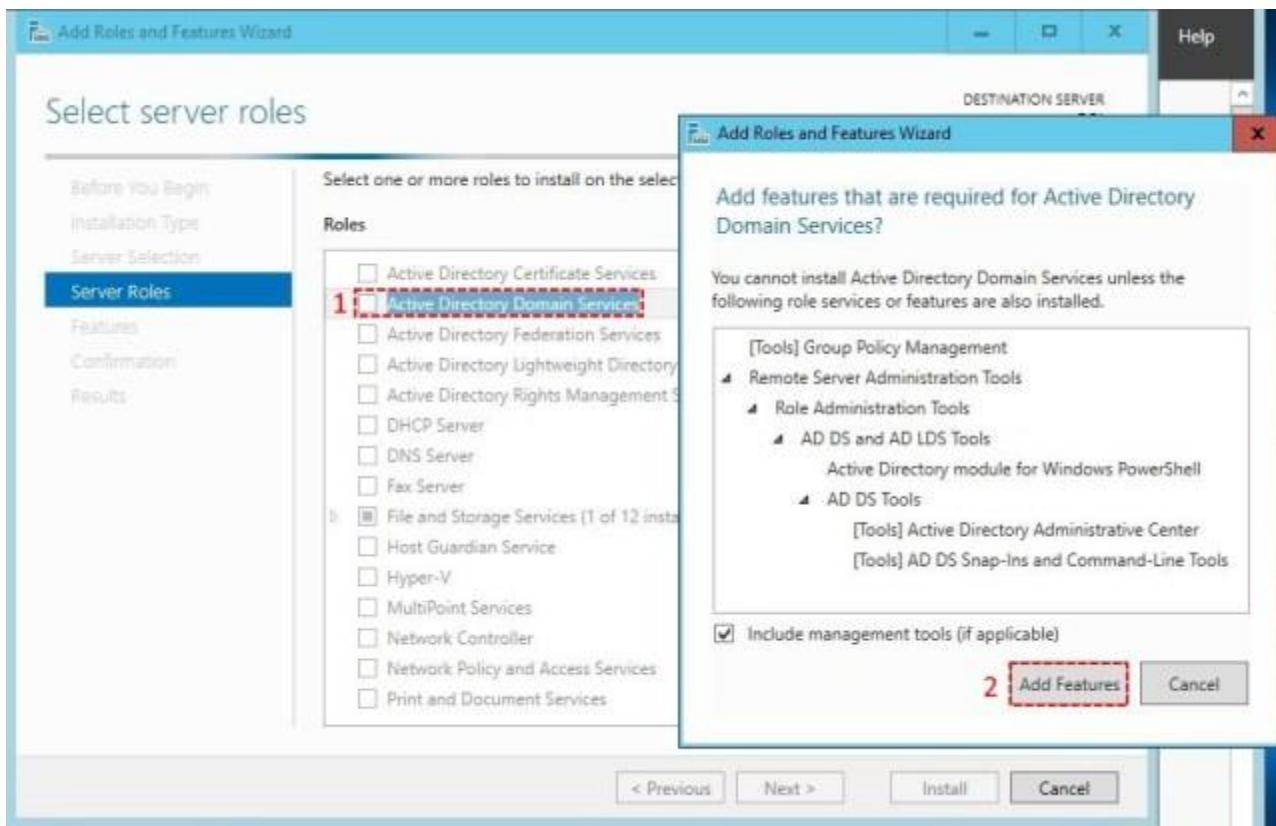


Select Server

5. Now select **Active Directory Domain Services** then click **Add Features** to include the required features within AD and click **Next**.

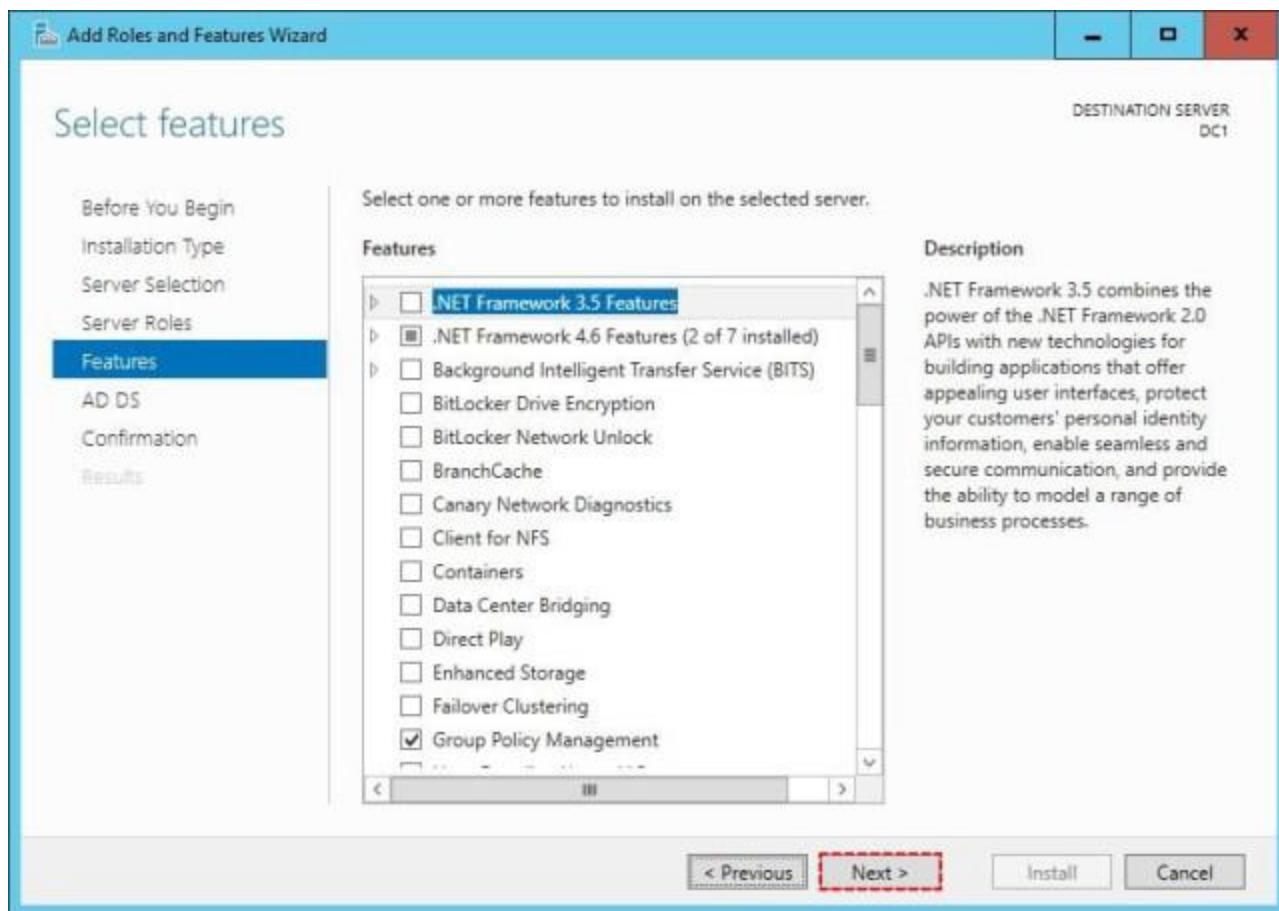
While installing AD it will install some other features with it such as:

- DFS Namespace
- DFS Replication
- File Replication Services



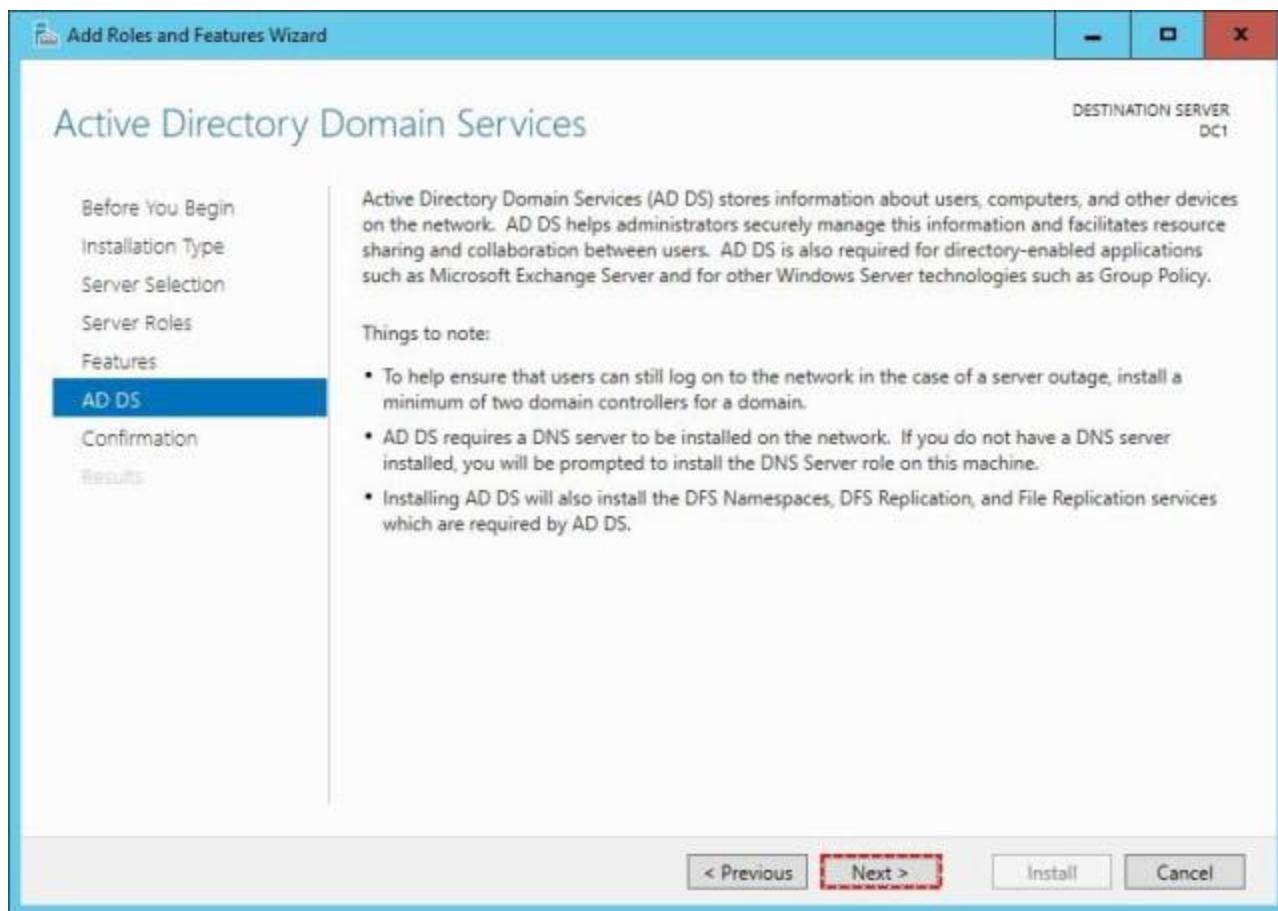
Install Active Directory Domain services and add Features

6. Leave the features window by default and click **Next**.



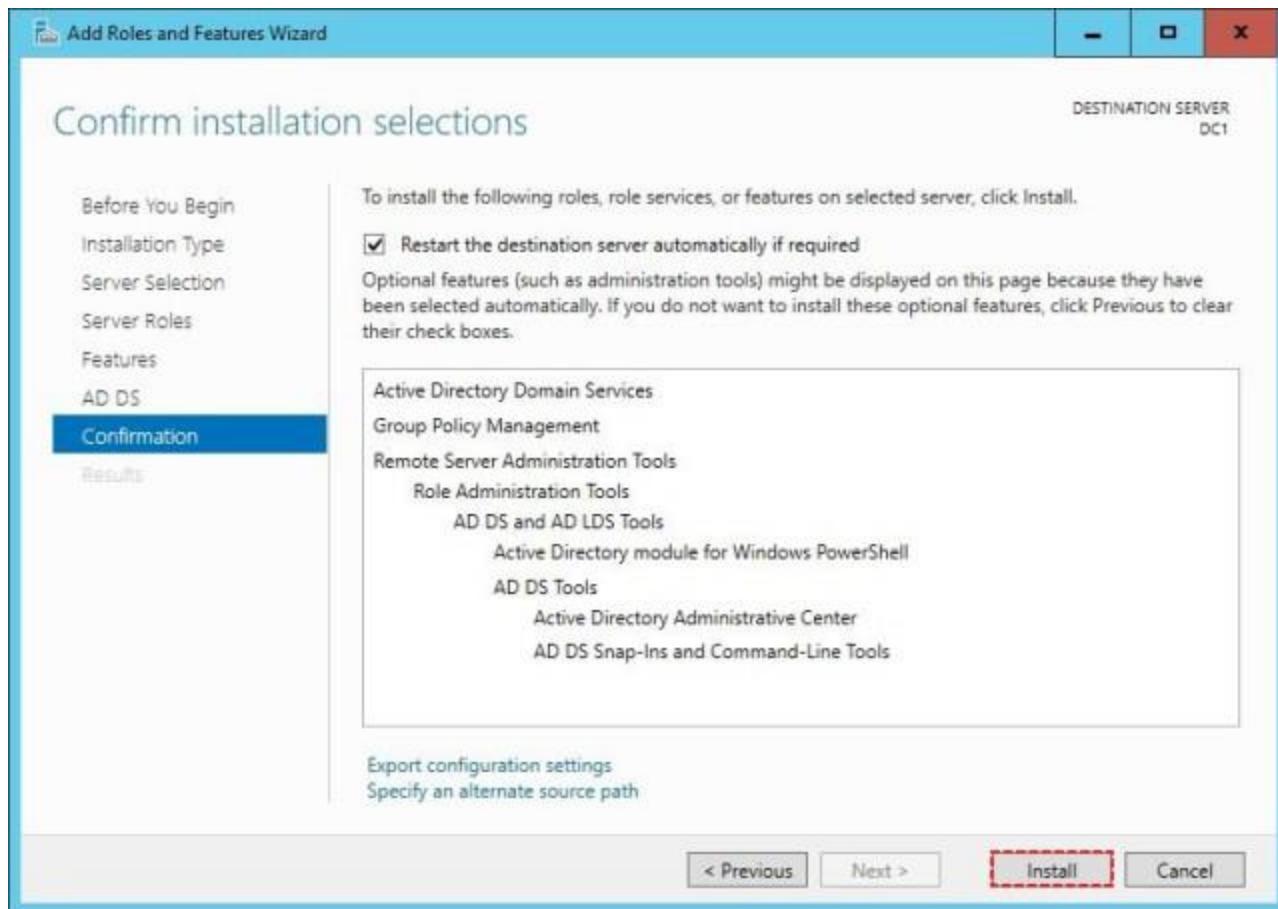
Windows Server 2016 Features

7. Read all the info about the AD and click **Next**.



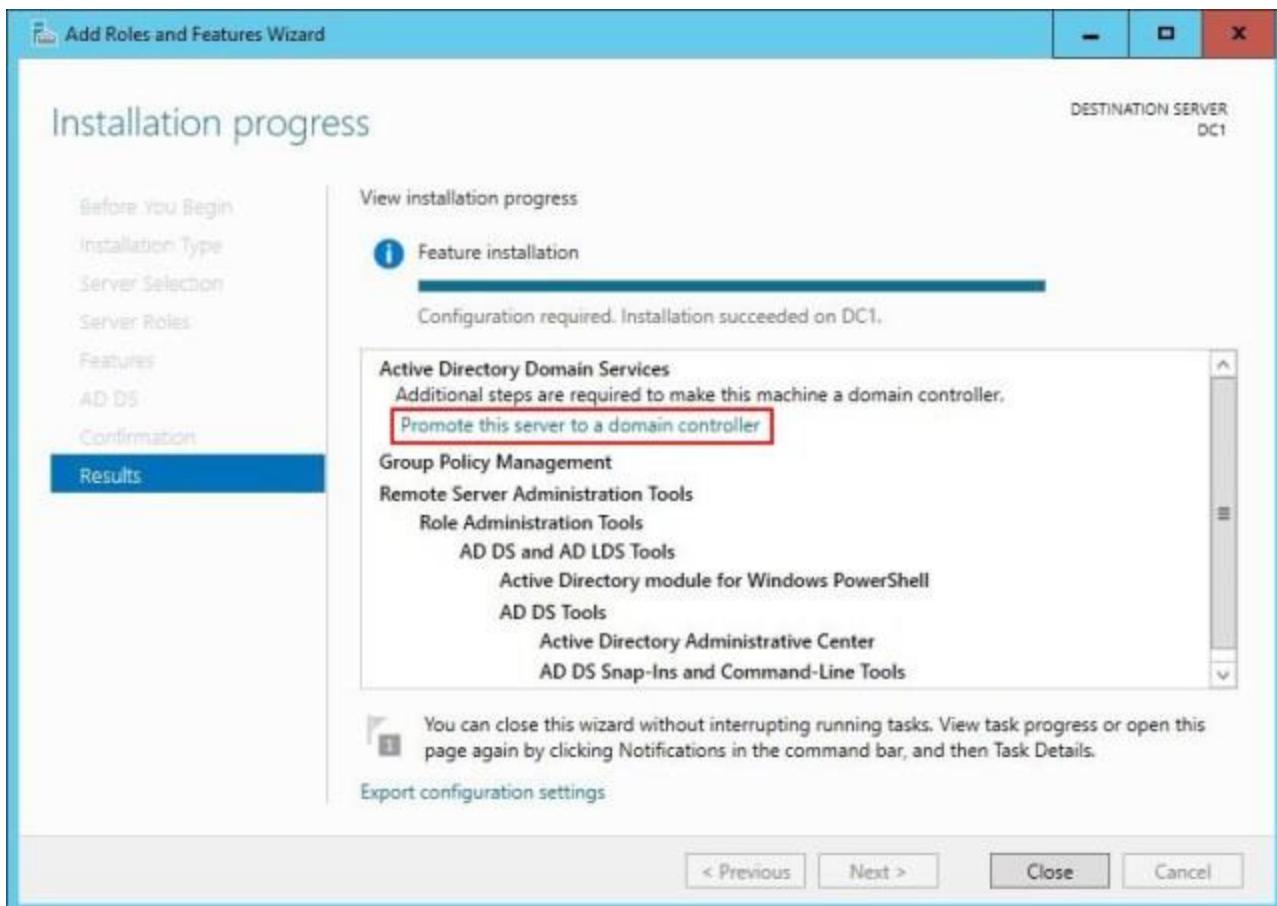
AD DS Info Page

8. Now the ADDS is ready to install, click **Install** to begin the installation.



ADDS Confirmation

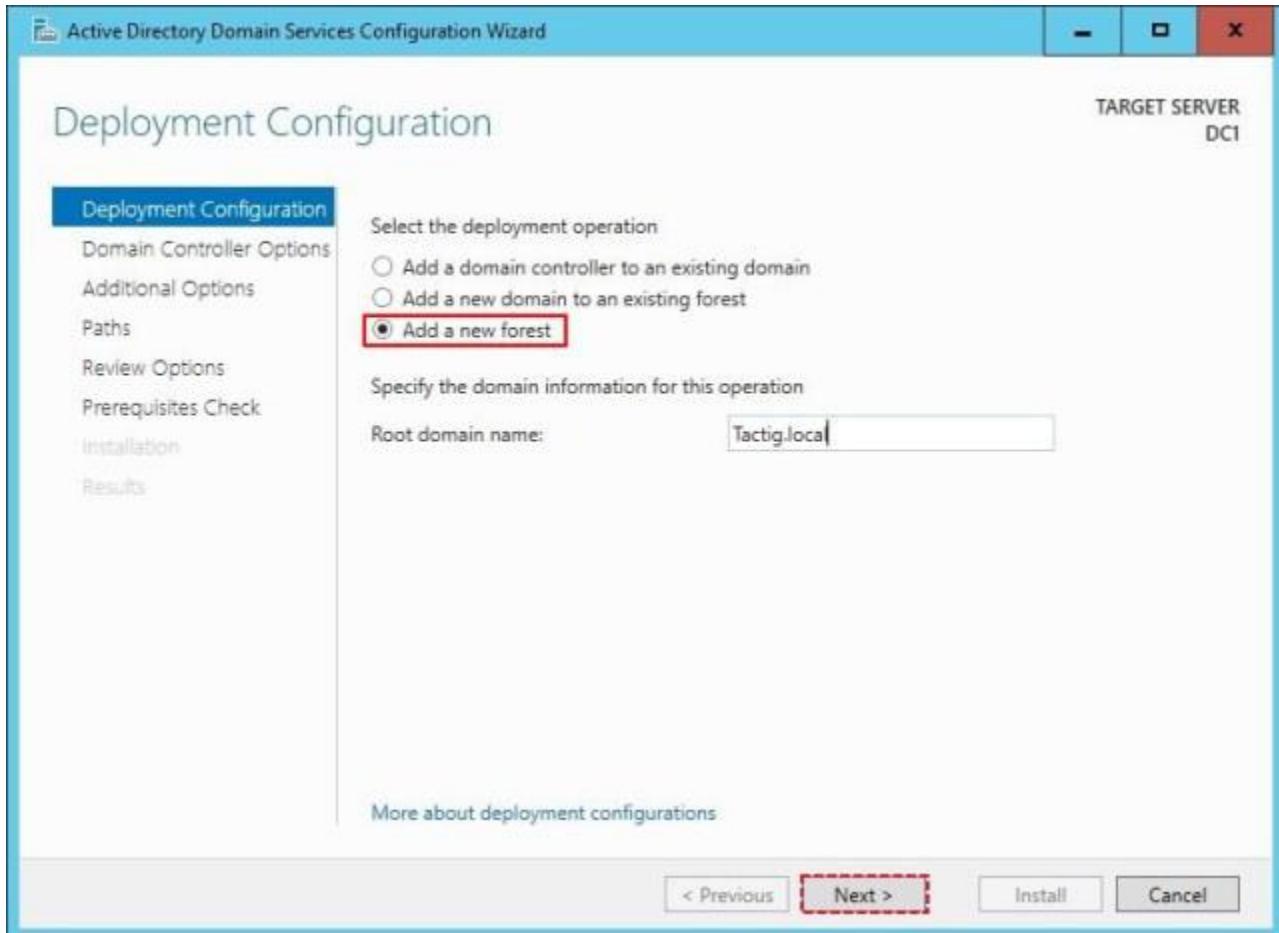
9. Wait for the installation to complete, then click on **Promote this server to a domain controller**.



ADDS Installation wizard

Configure Server to Domain Controller

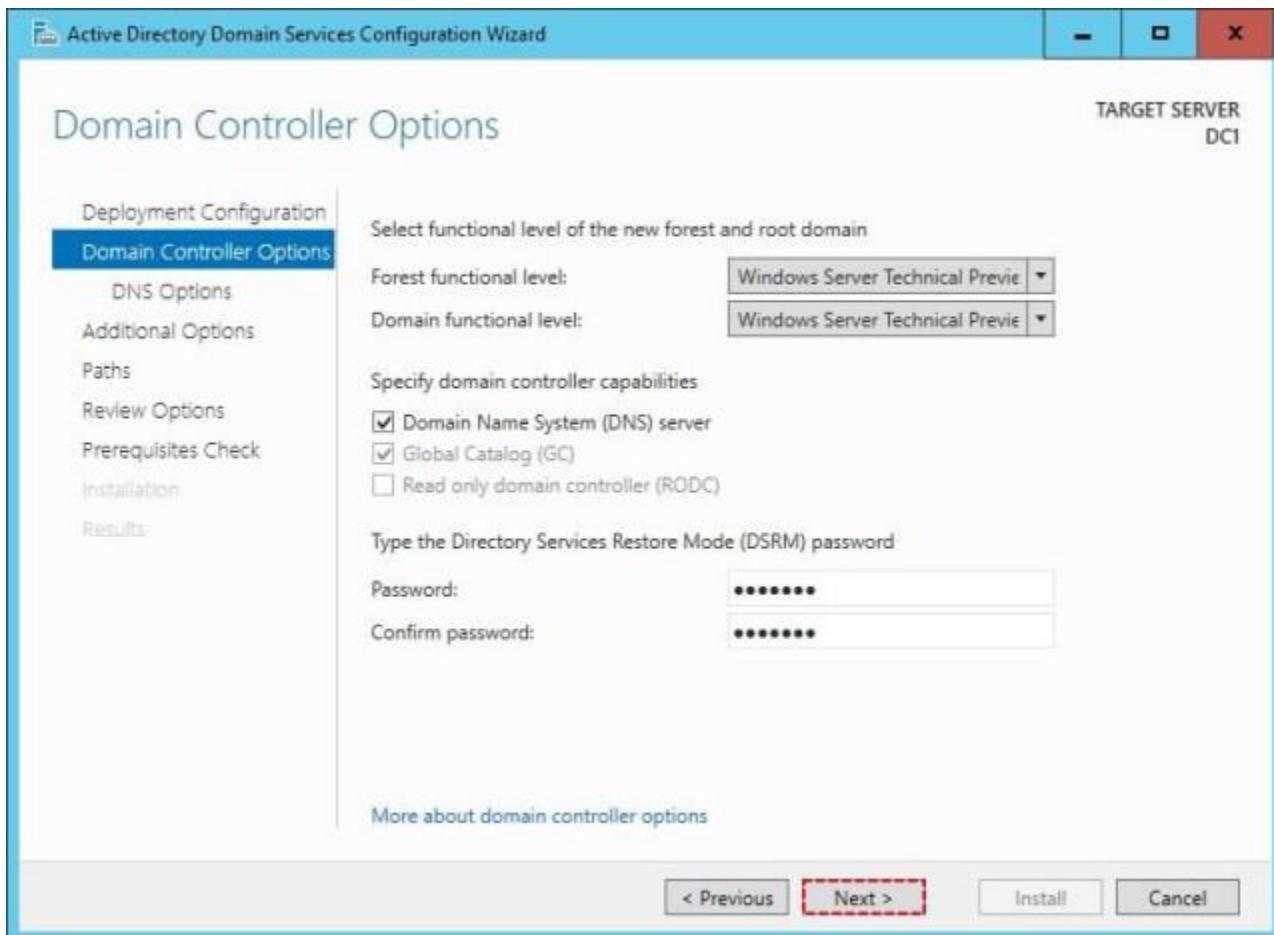
1. When the window opened click on **Promote this server to a domain controller**, now click on **Add a new forest** then type the domain name in the **Root domain name** blank and click **Next**.



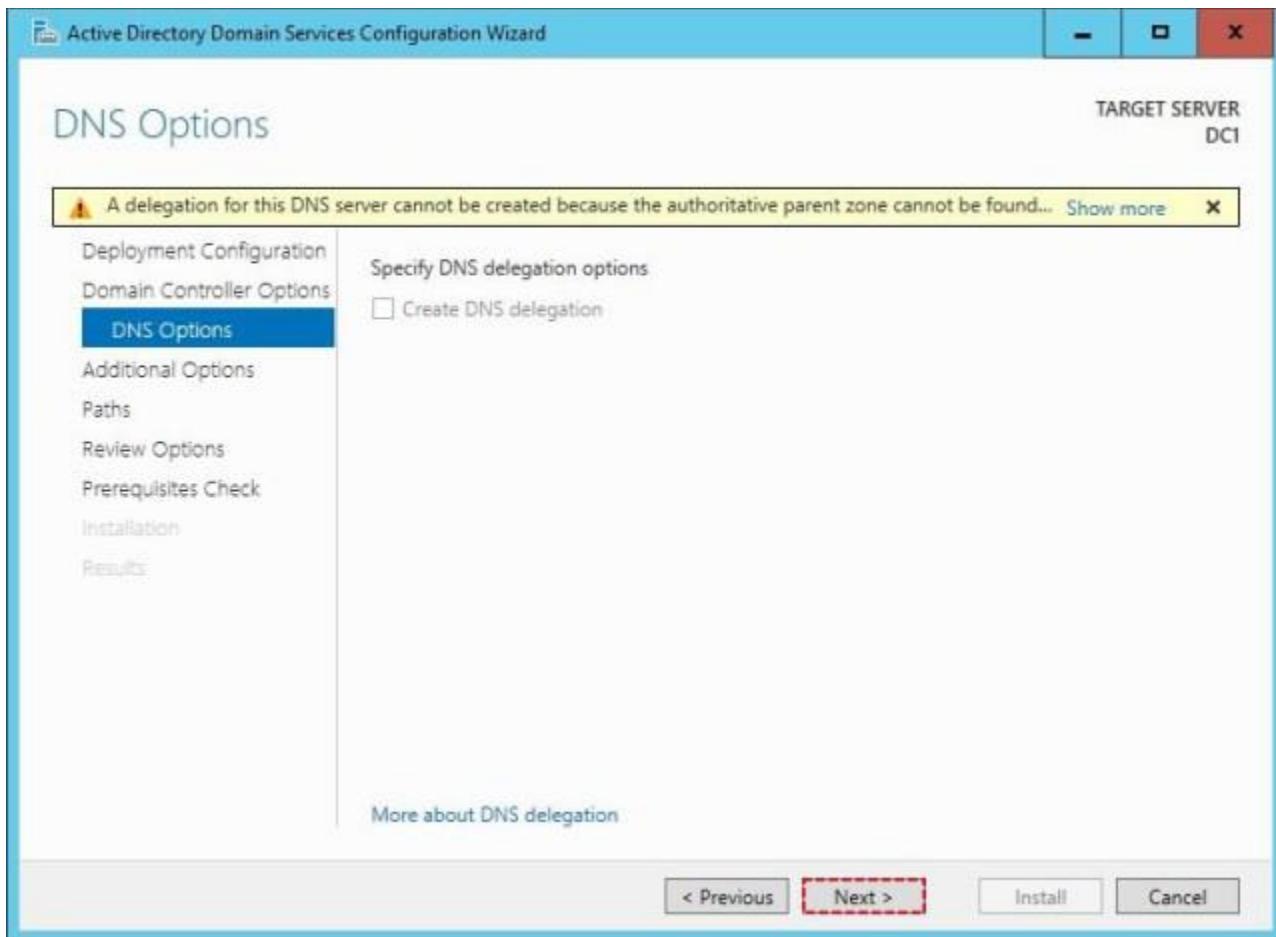
Specify Domain

2. Let the Domain Controller options be by default and type a password for **DSRM** then click **Next**.

Notice: Set the **Forest functional level** the highest so your environment can support and make sure that all the domain controller are supported with that operating system.



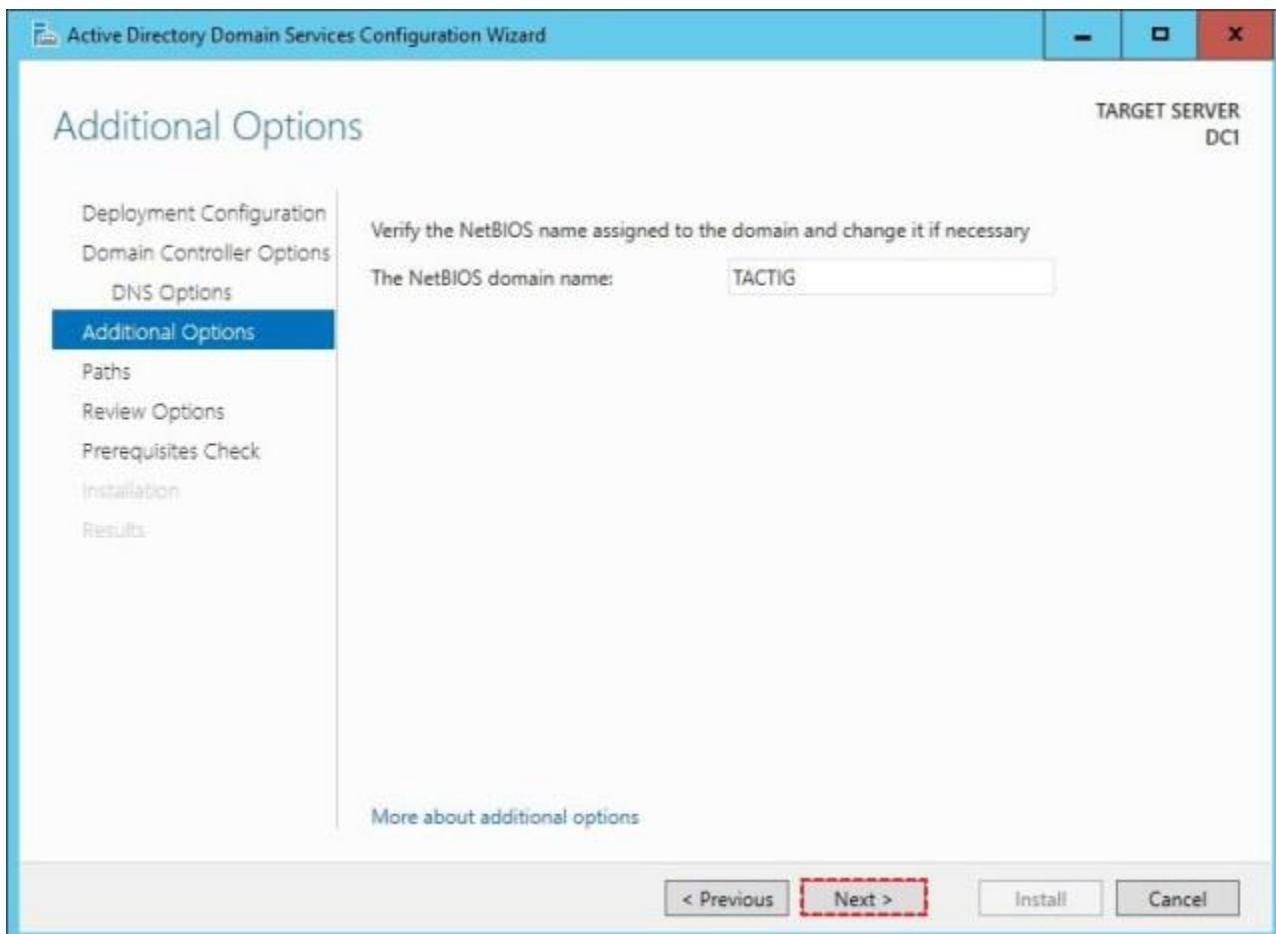
3. Ignore the **DNS delegation** warning because its due to not installed DNS server on the server, and click **Next**.



DNS Options

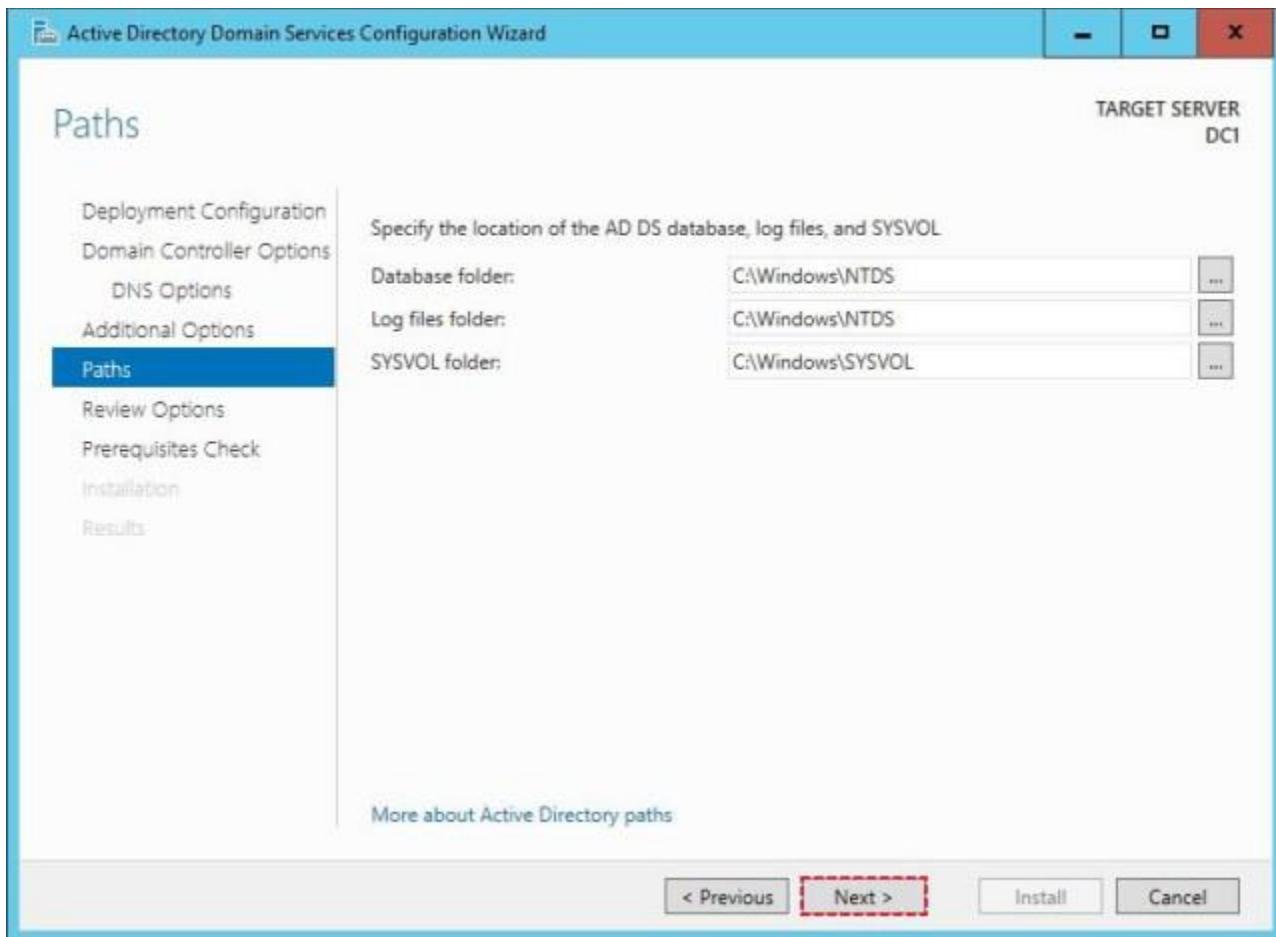
4. Now verify the NetBIOS name and change it if necessary then click **Next**.

Note: NetBIOS name is a Network Basic Input/output system that allow applications on separate computers to communicate over a local network and can be required by some applications and network devices.



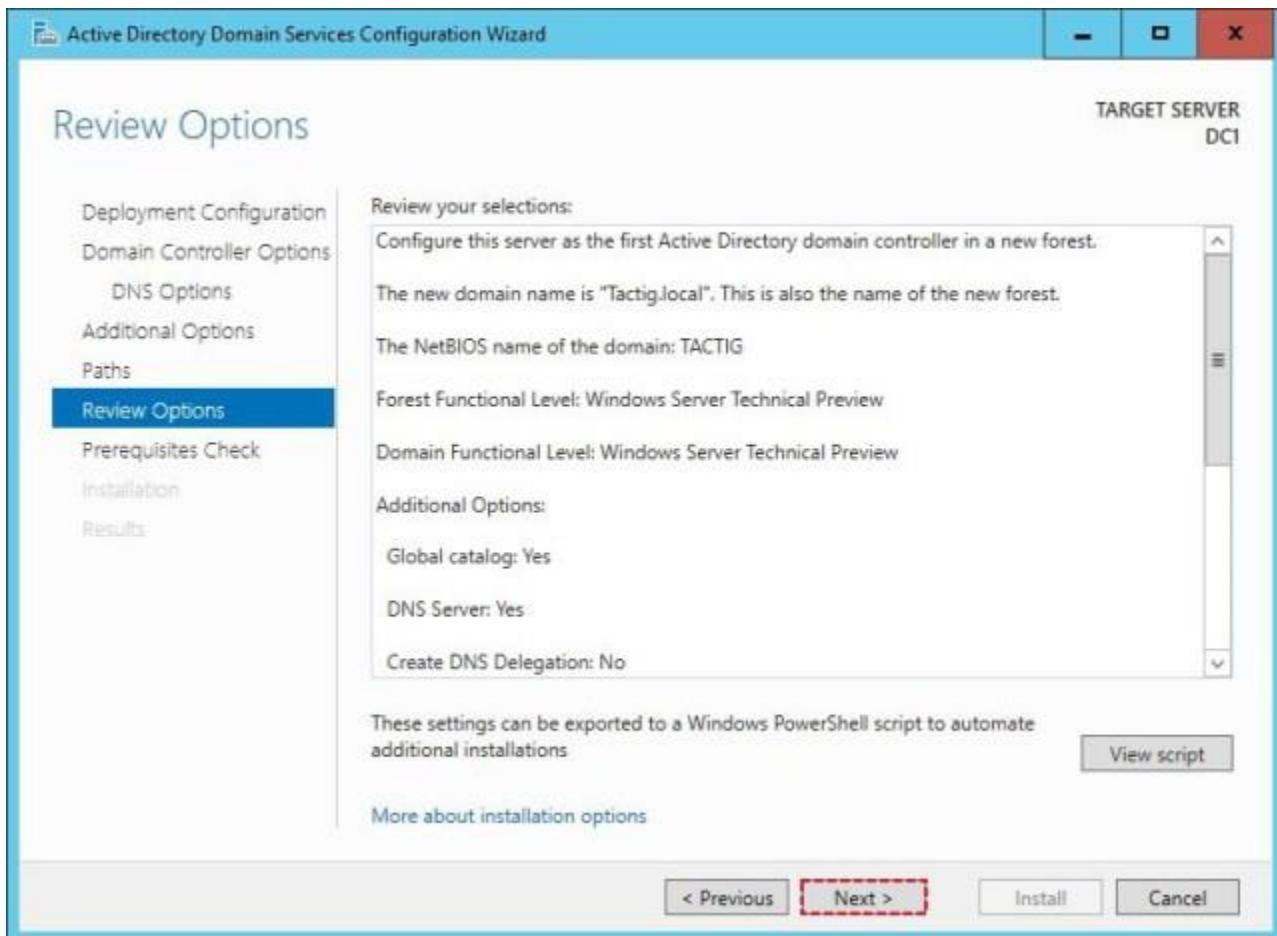
Additional options

5. Specify the location of AD DS database, log files, SYSVOL and change it if necessary then click **Next**.



Path for installing AD DS

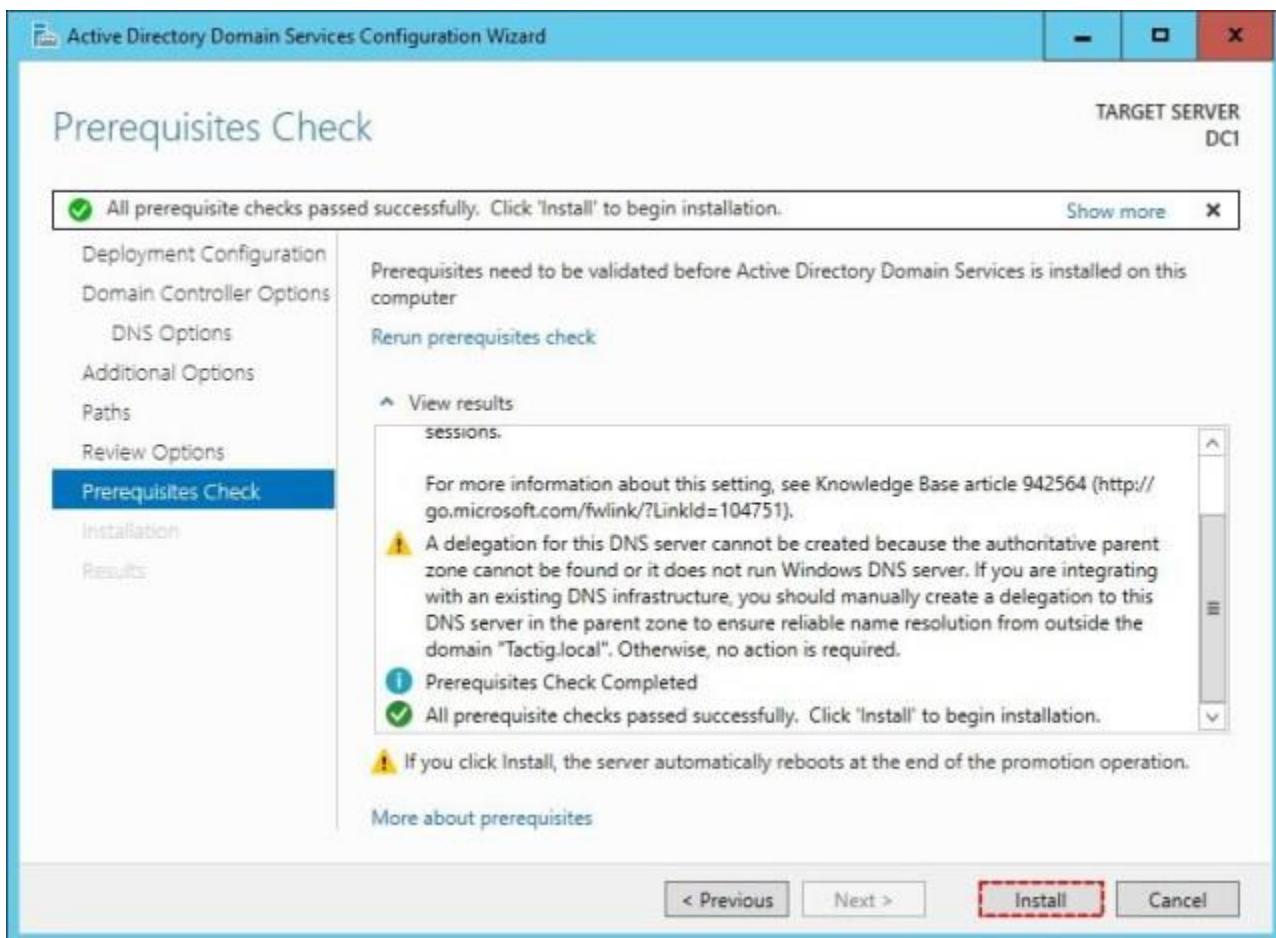
6. Now review all the configuration you've done then click **Next**.



Review Options

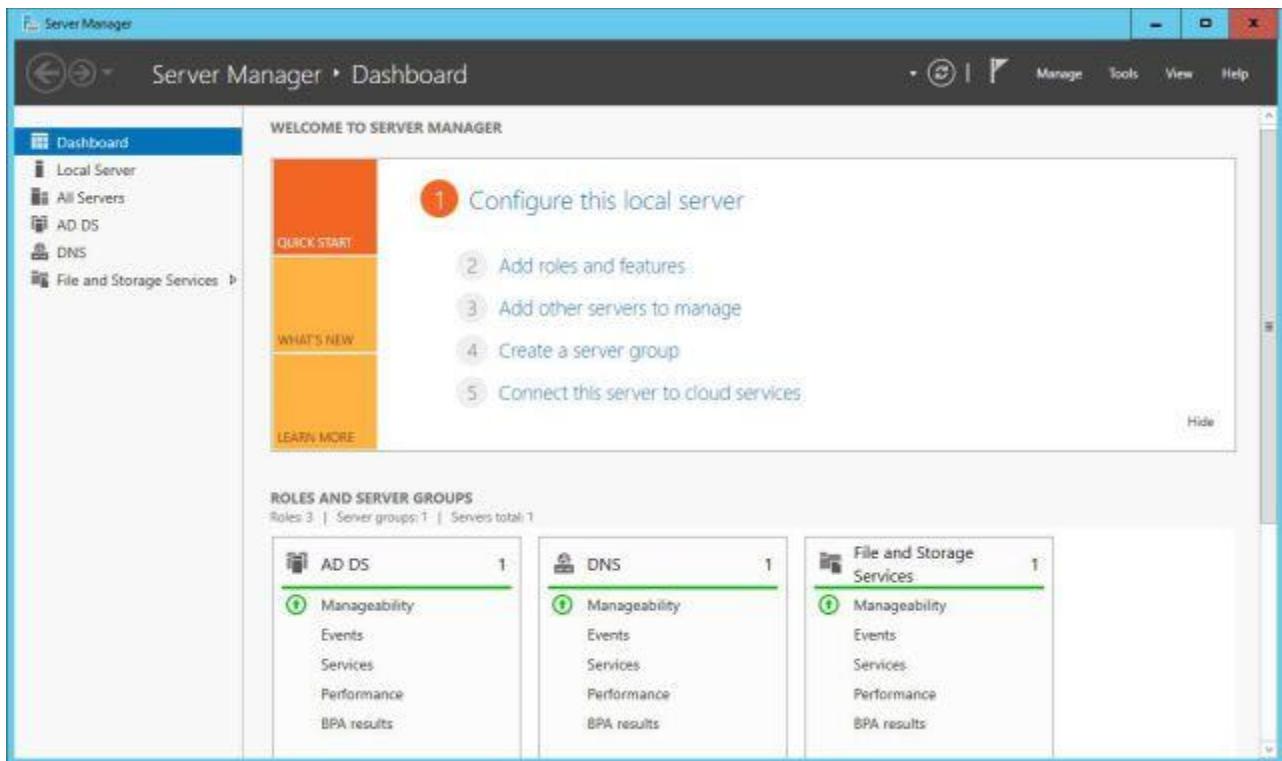
7. The configuration is done now, click **Install** to begin the installation and ignore the warnings.

Note: It will install DNS role too.



Prerequisites Check

After installing the system will reboot automatically, when the system restarted the domain will work successfully and you can log in and see the domain features.



Installed Active Directory Domain Services

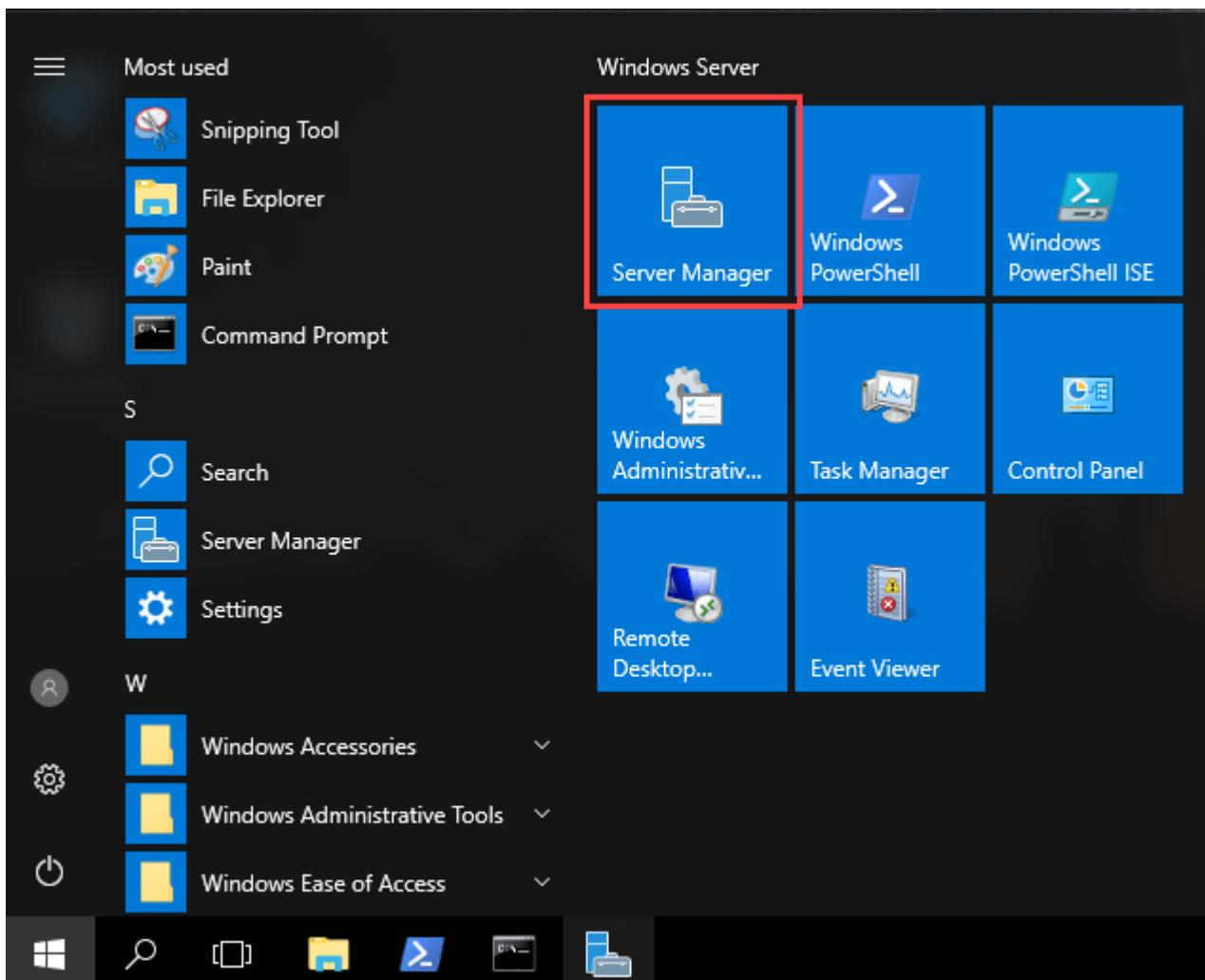
Active Directory Domain Services (AD DS) is the center for management tasks (Users, Groups, Computers, Organizational Units, Schema) in Windows networks. You can manage the network by AD DS easily. Imagine if you were a network administrator. You could create user accounts and gave them access to special files manually. It was practical if you were engaged with less than 50 users and computers. If you were engaged with 12000 users and computers, what did you do? You can do the complete the task with AD DS easily. You create a group and add user accounts as members and define to which files the group access by installing Active Directory to manage the network easily. It is a simple task that you can do in Windows network using AD DS.

You can find every kind of information about the users, computers, hardware, software and etc in the Active Directory Domain Services. Windows Server 2016 is the latest version of Windows Server and in this article I show you how to install active directory.

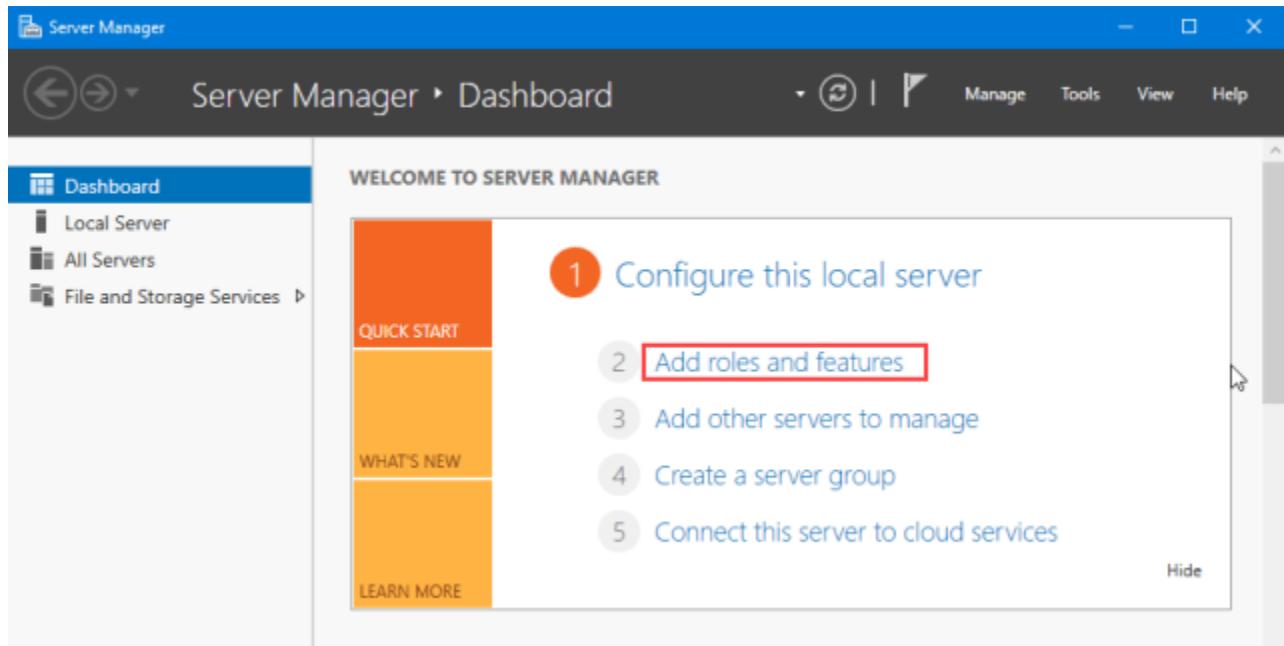
Install AD DS Graphically

Follow the steps below to install Active Directory Domain Services on Windows Server 2016.

1. Press the Start Menu button and click on the **Server Manager** icon which is the management tool in Windows Server 2016.

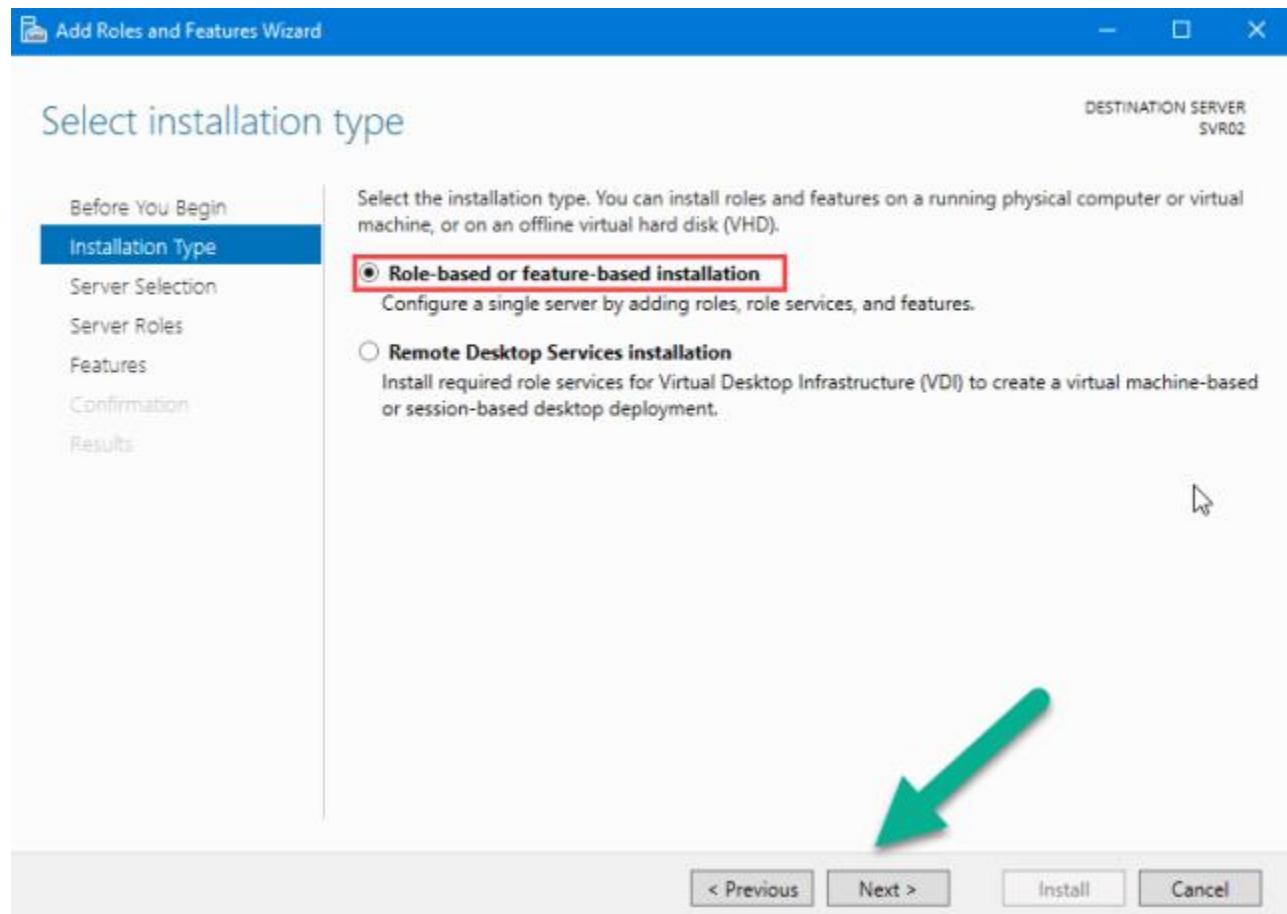


2. Active Directory Domain Services is a Windows Server role. Click on **Add Roles and features** option to install the role.

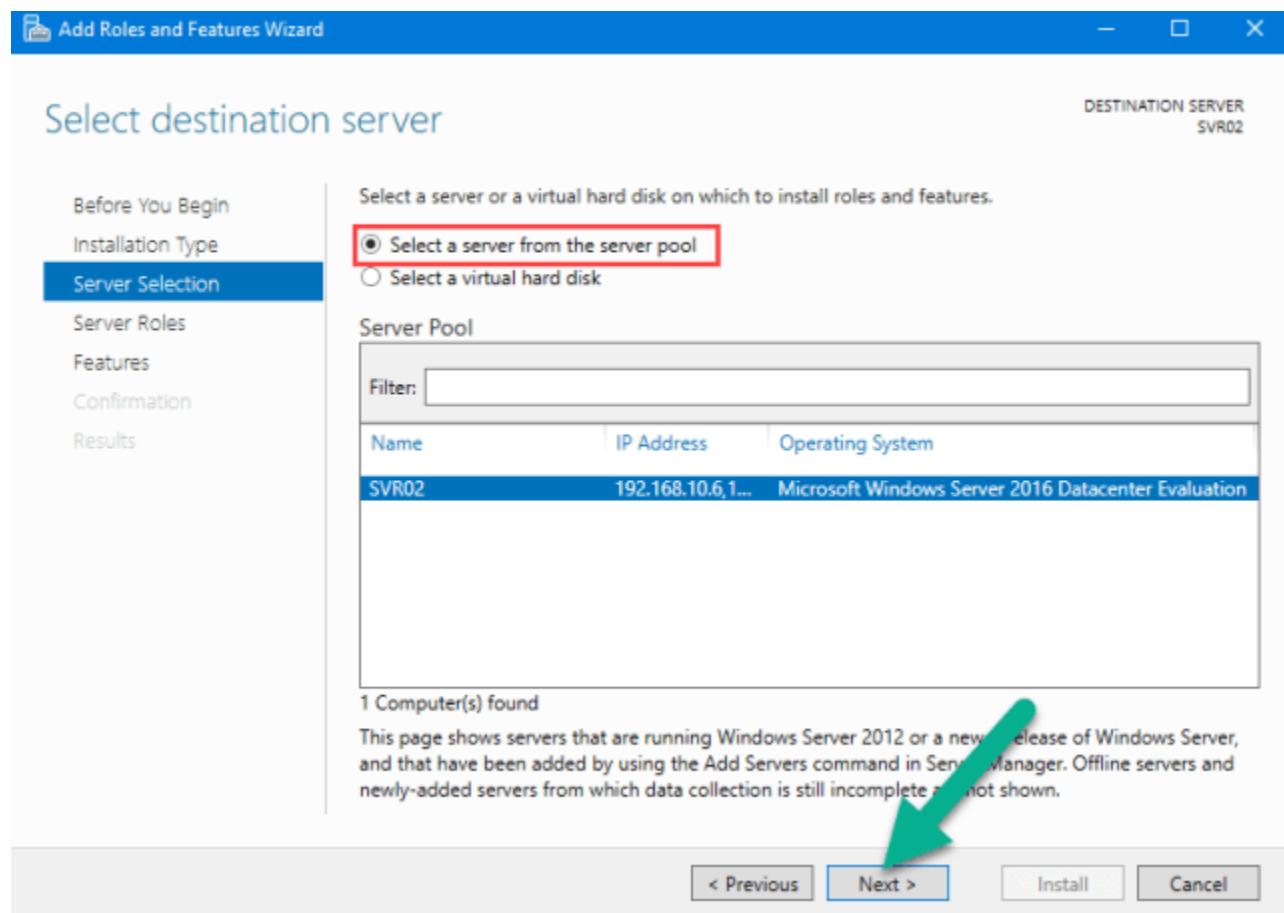


Add roles and features

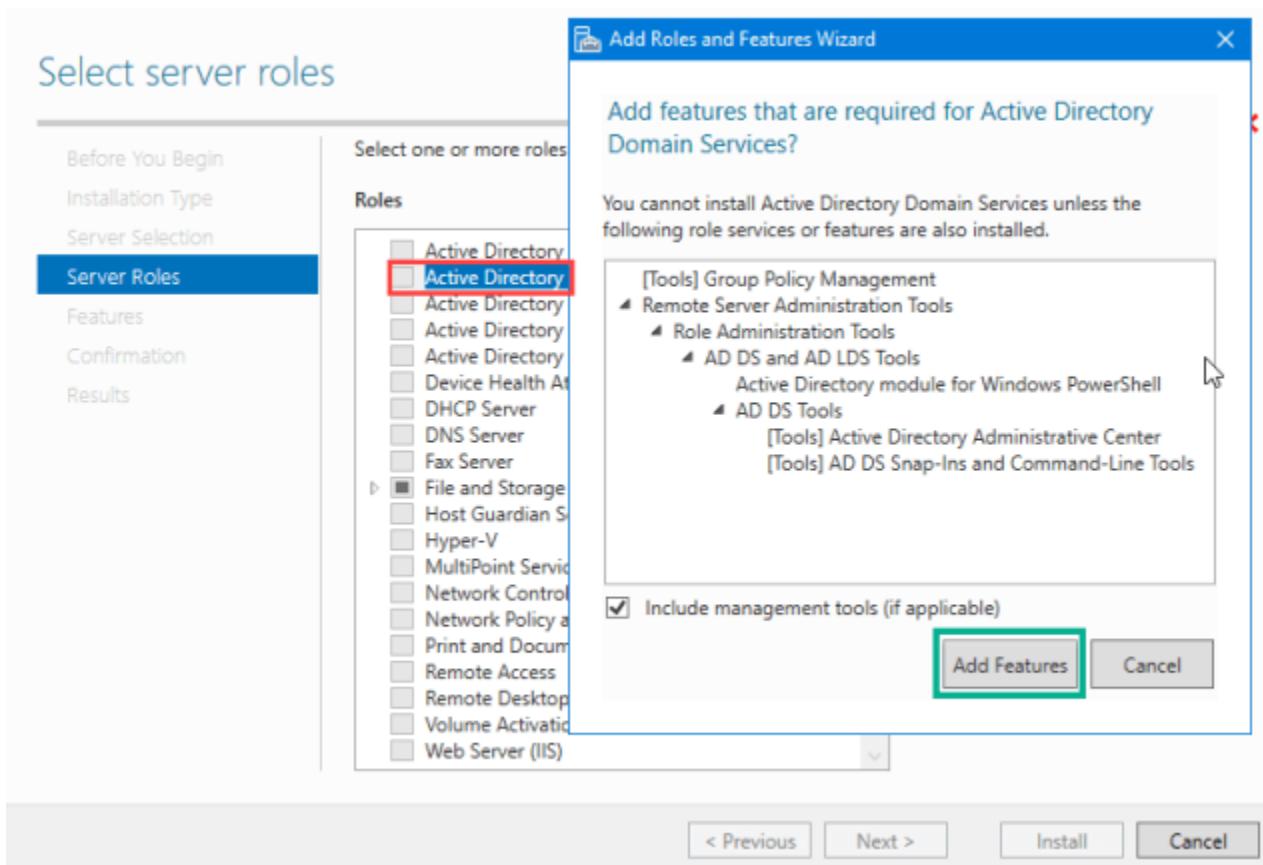
3. In the Before you begin you have nothing to do. Click on **Next** button. In the Select Installation Type page, Select the **Role-based or Feature-based Installation** option. Click **Next** on button.



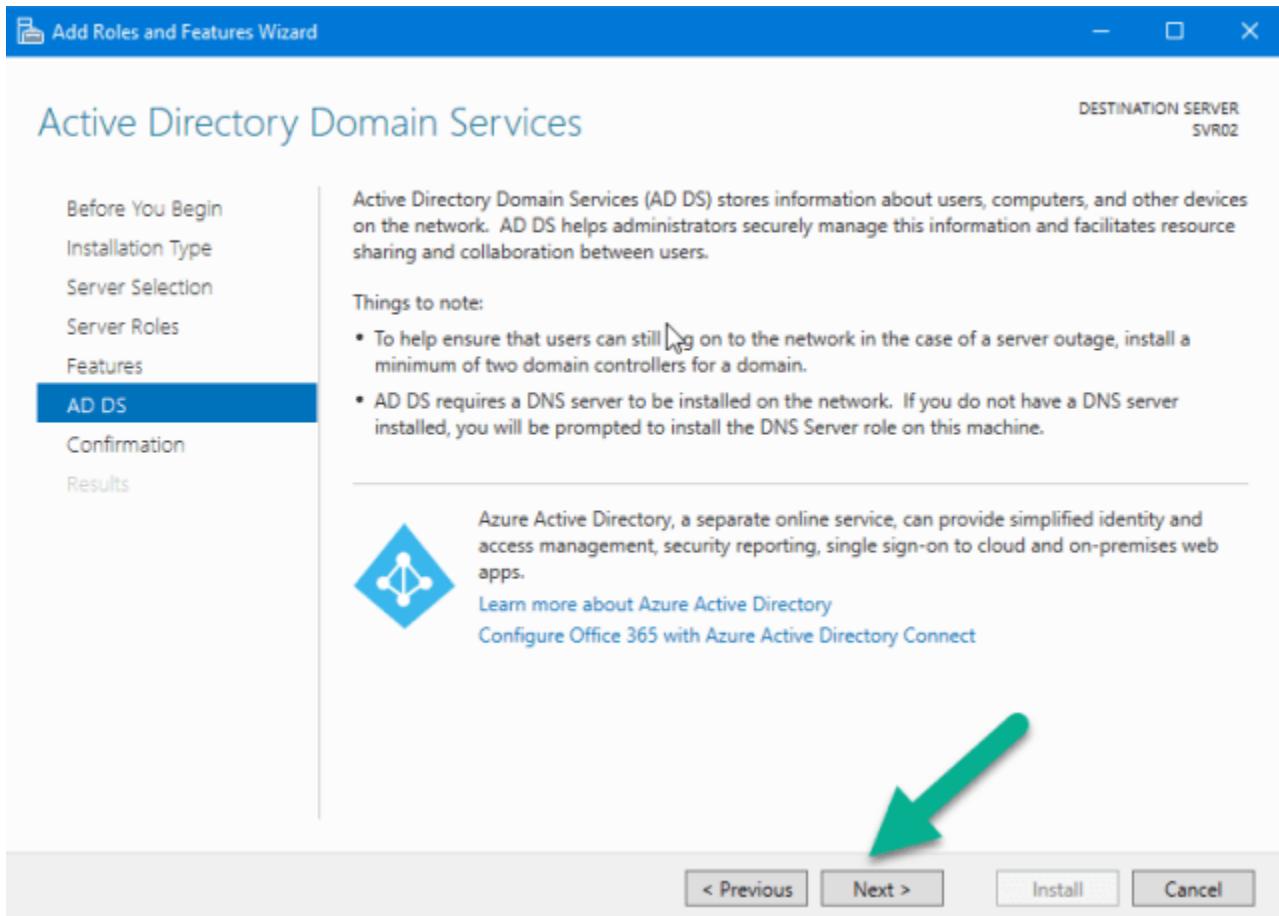
4. Let the **Select a server from the server pool** option selected. Specify the server that you want to install the role on, from the Server Pool. Click on **Next** button.



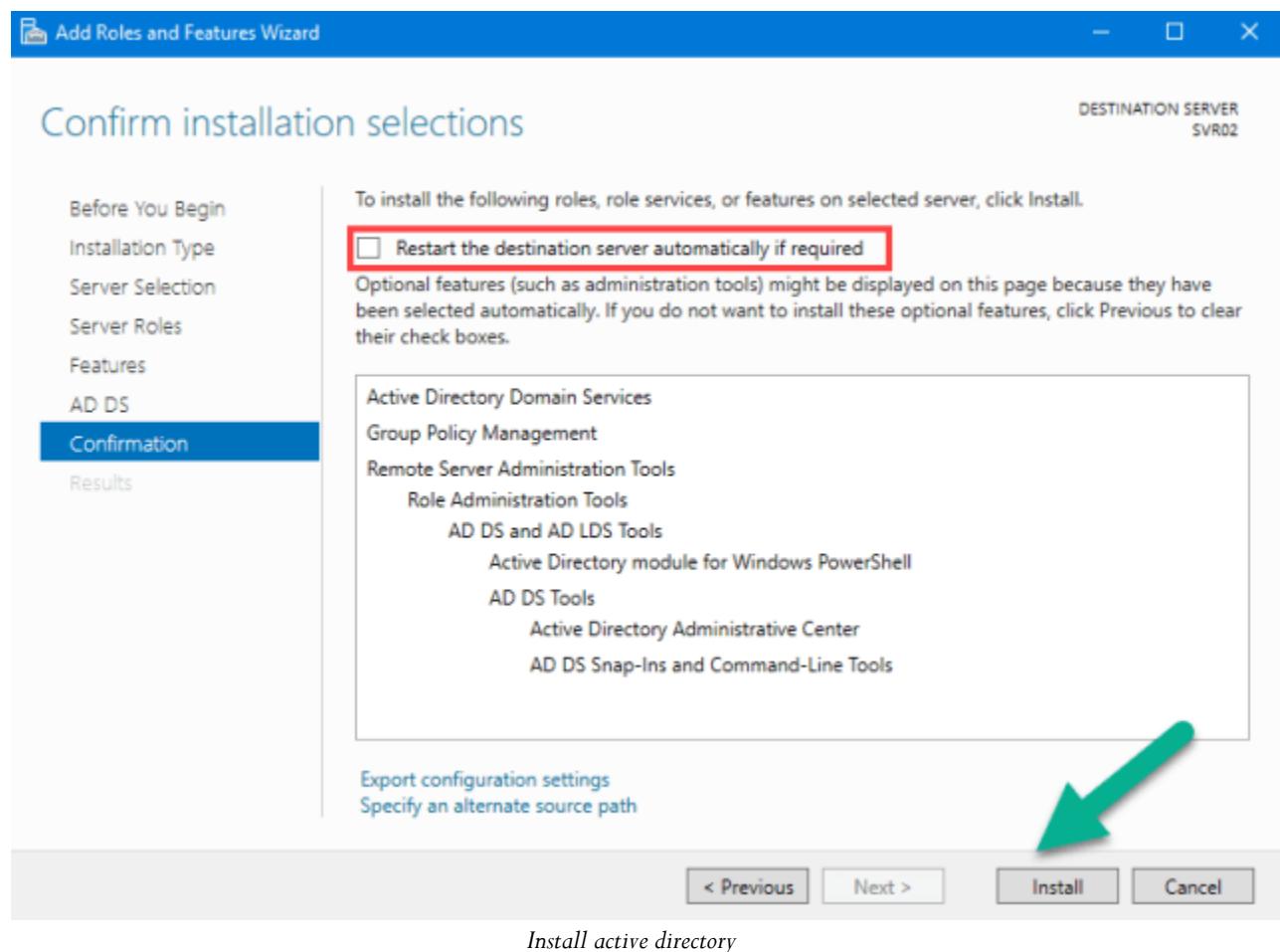
5. Select the **Active Directory Domain Services** role. A new windows opens and ask you to install management tools. Installing AD DS role, you just install the core services. Click on **Add Features** button to install management tools. then click on **Next** button.



6. In the Feature page, you got nothing to do. Just click on **Next** button. In the **Active Directory Domain Services** page you can read some information about AD DS. Click on **Next** button to move in the next page.



7. At the last step of the Active Directory installation is the confirmation of the selections. So confirm the selection by clicking on the **install** button. After the installation of the role, the server needs to be rebooted. You can restart it manually or let the system decide by putting the mark on **Restart the destination server automatically if required** option. Click on Install button to start the installation.

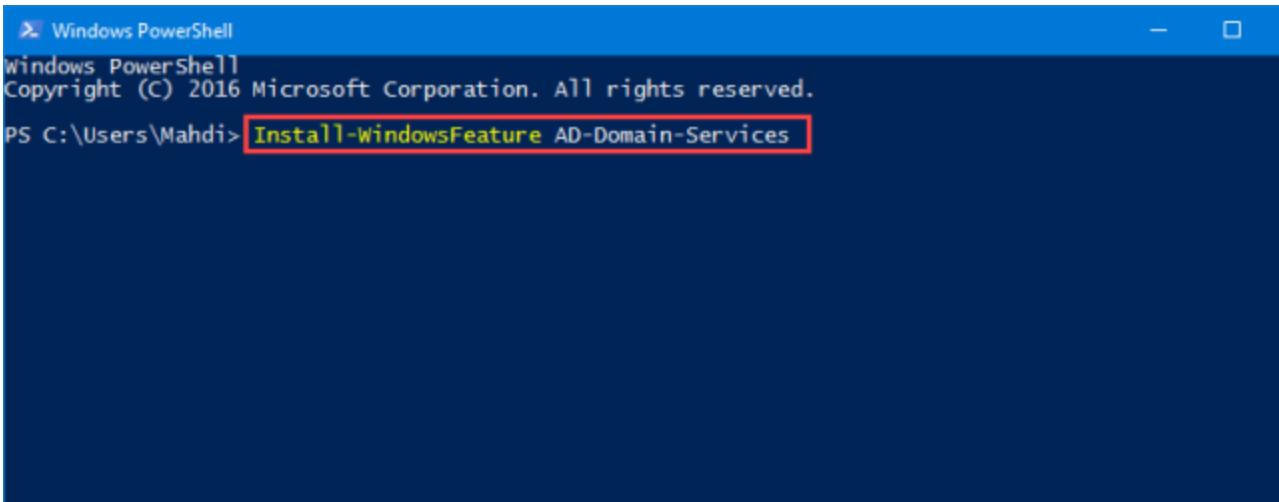


Install AD DS through PowerShell

You can install AD DS through PowerShell. You need to run `Install-WindowsFeature` cmdlet. This cmdlet helps you to install roles and features on Windows Server. After that, you need to type name of the feature you want to install. Type `AD-Domain-Services` for installing AD DS role.

Complete cmdlet: **Install-WindowsFeature AD-Domain-Services**

After typing the cmdlet press the **Enter** button.



A screenshot of a Windows PowerShell window. The title bar says "Windows PowerShell". The content shows the following text:
Windows PowerShell
Copyright (C) 2016 Microsoft Corporation. All rights reserved.
PS C:\Users\Mahdi> **Install-WindowsFeature AD-Domain-Services**

PowerShell

Conclusion

While server rebooted, log in to server with your domain account. Default user name is Administrator. After that you can do post-installation configurations to promote this server to domain controller.

For any kind of question feel free and leave a comment below.

Watch out: [Promote Windows Server 2016 to Domain Controller step by step](#)

Active Directory which is the management service in Windows Server is installed on a server that is called Domain Controller (DC). When active directory have been installed on a server. You can promote the server to a domain controller. Every network needs at least two domain controllers. When one of them is down, the other domain controller takes the place and responds to clients. The Domain controllers respond to security authentications like logging in, checking permissions, files access, system check up and many more.

When you want to log in to a server from a client computer, you should have a user name and a password. Your system will be checked to have updated anti-virus and etc.

Permissions are the level of the tasks that you can do in the domain. File access is about the level of your access to sources. These and a lot more duties are done through domain controller.

In this article, I am going to show some easy steps outlined to promote server to domain controller. First, make sure that you logged in as an administrator.

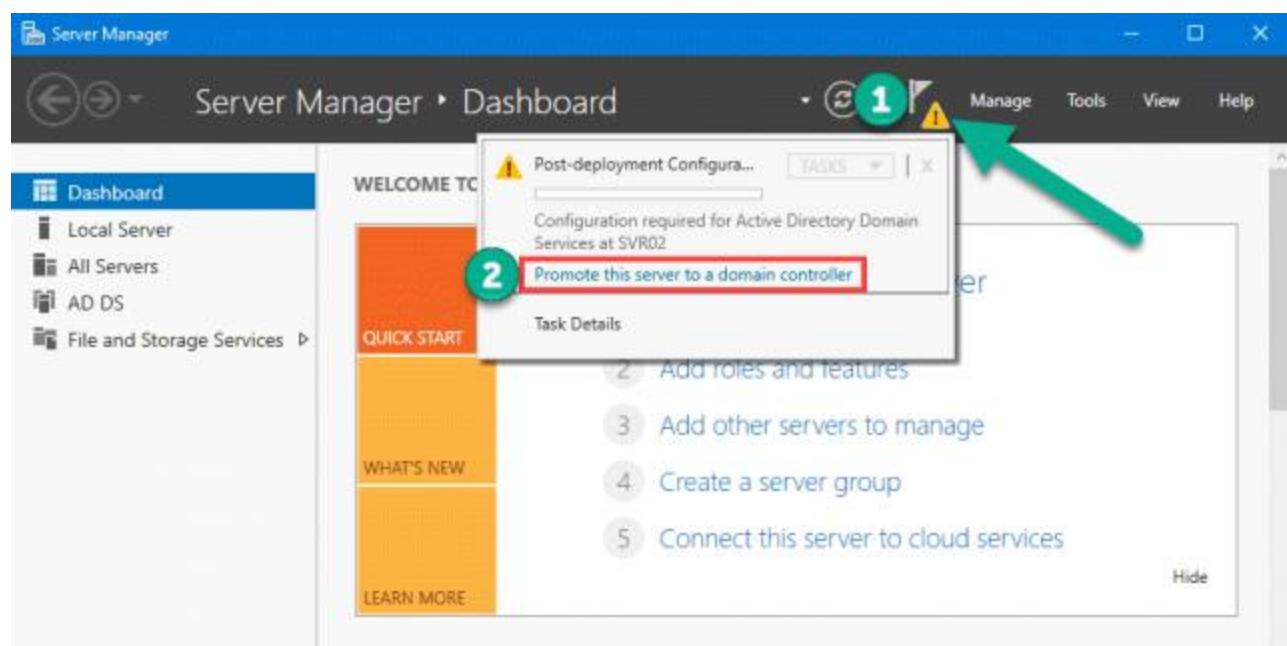
Prerequisites

Install Active Directory Domain Services (AD DS) role on the server you want to promote it to domain controller (DC).

Promote Server to Domain Controller

Follow the following steps to promote server to domain controller.

1. After the role installation, open Server Manager. Click on the flag, then click on **Promote this server to a domain controller** hyperlink.

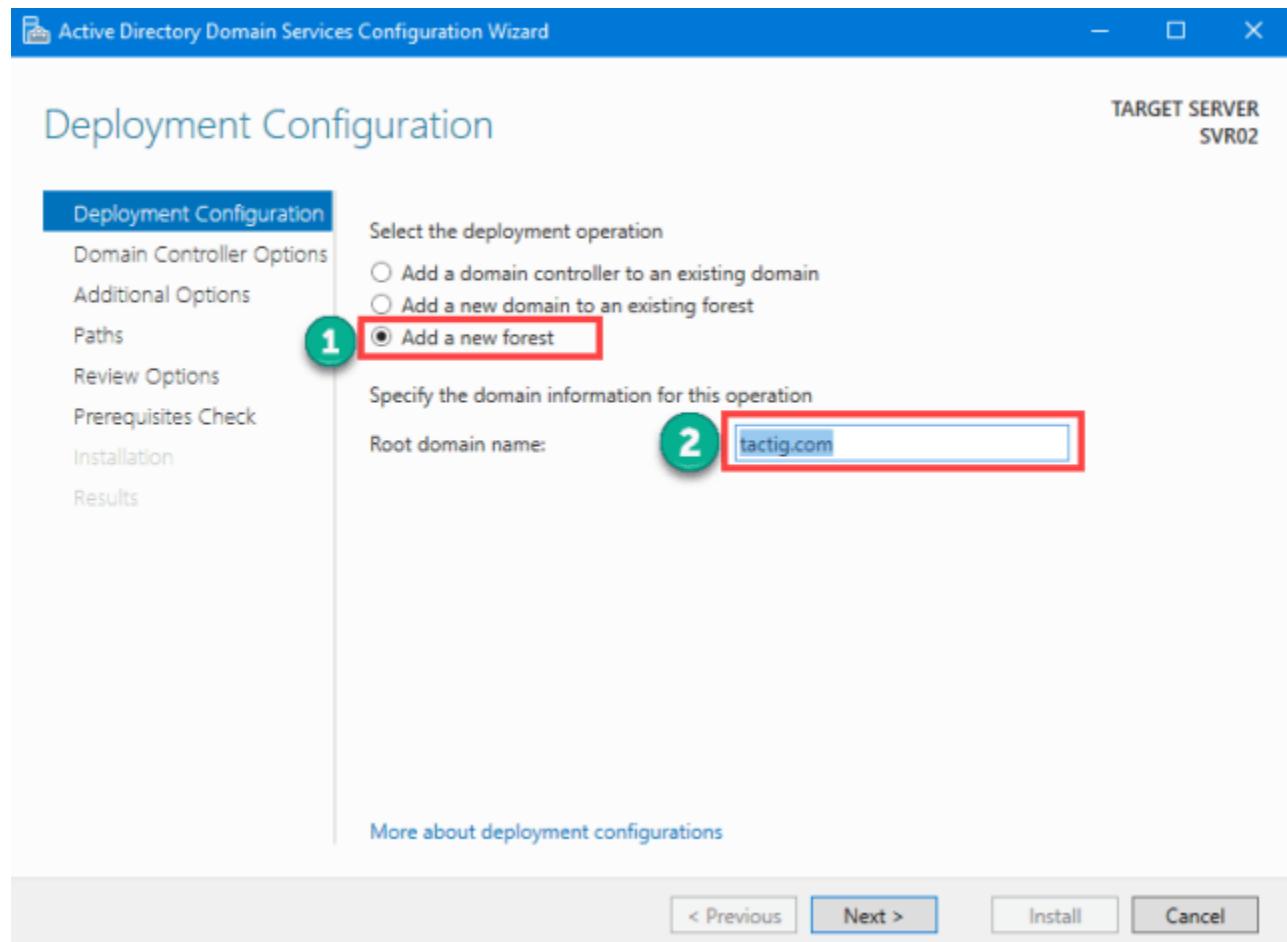


Promote this server to domain controller

2. When the Deployment Configuration page appears, you see three options.

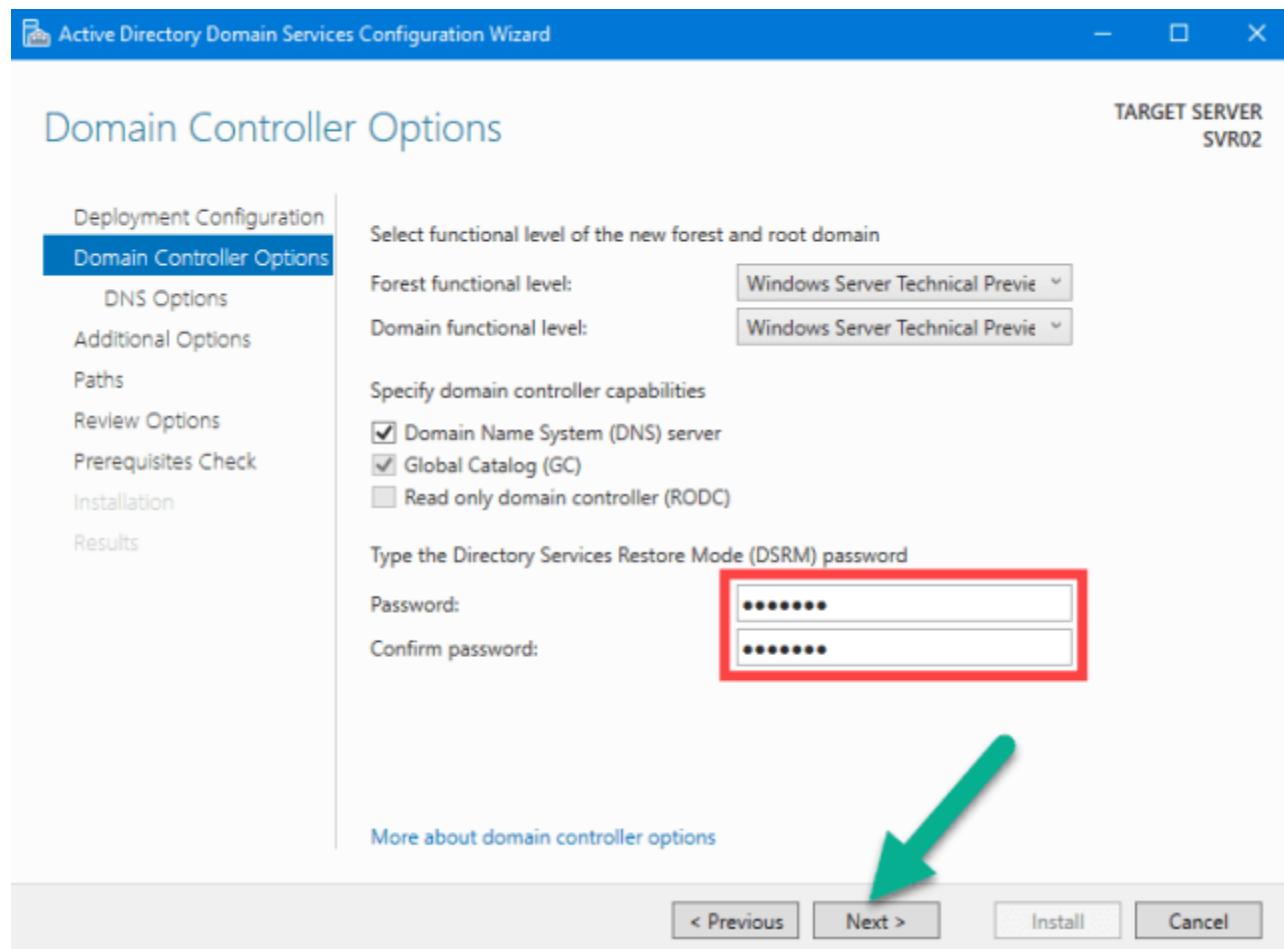
- **Add domain controller to existing domain:** This option is used when you want to add additional domain controller.
- **Add a new domain to an existing forest:** This option is used for adding a new domain to existing forest.
- **Add a new forest:** It is used for creating a new forest.

Select the third option: **Add a new forest**. Enter a **Root domain name** and click on **Next** button.

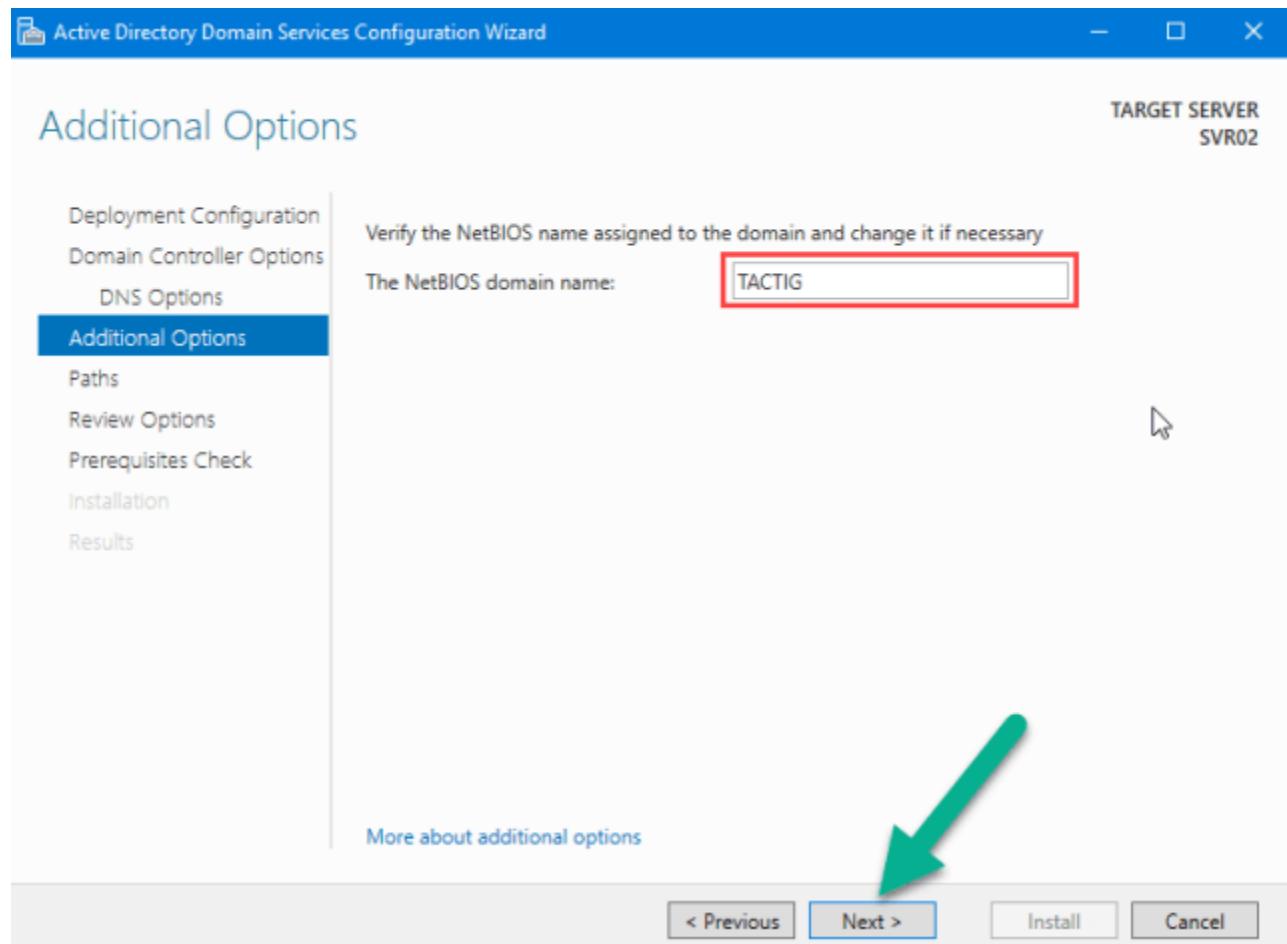


3. Specify the **forest and domain functional levels** (2008, 2008R2, 2012, 2012R2, 2016). Type a complex password (composed of capital letters, small letters, numbers, symbols).

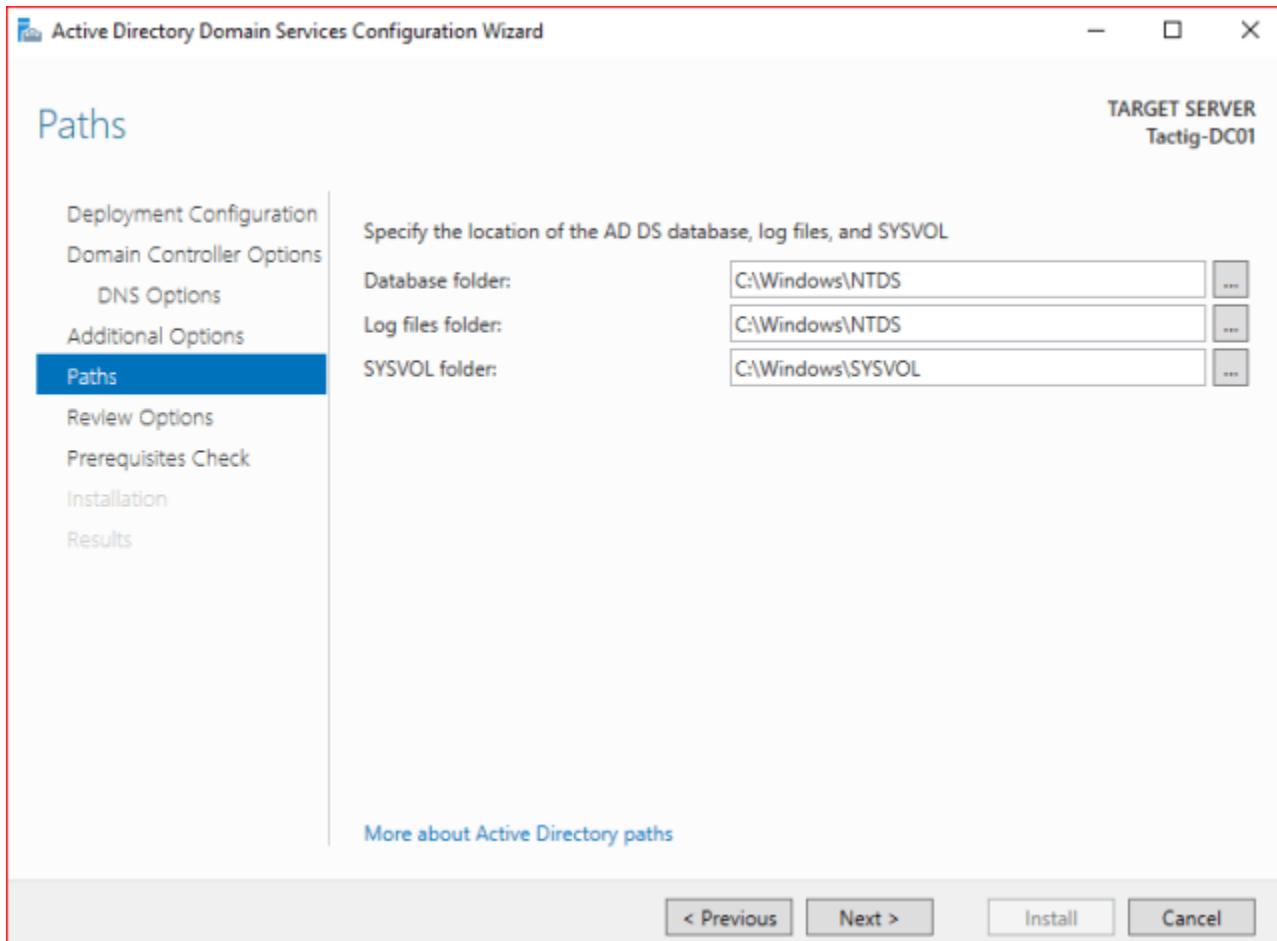
By default, Domain Name Services (DNS) server is installed at the same time when you are promoting the server to domain controller. If you want to install DNS server later, remove the selection from the box next to Domain Name Services (DNS) server. Click on **Next** button when you're finished here.



4. On the Additional options page, let the NetBIOS domain name as selected by default. If you want, you can change the NetBIOS name. Click on **Next** button to move on next page.

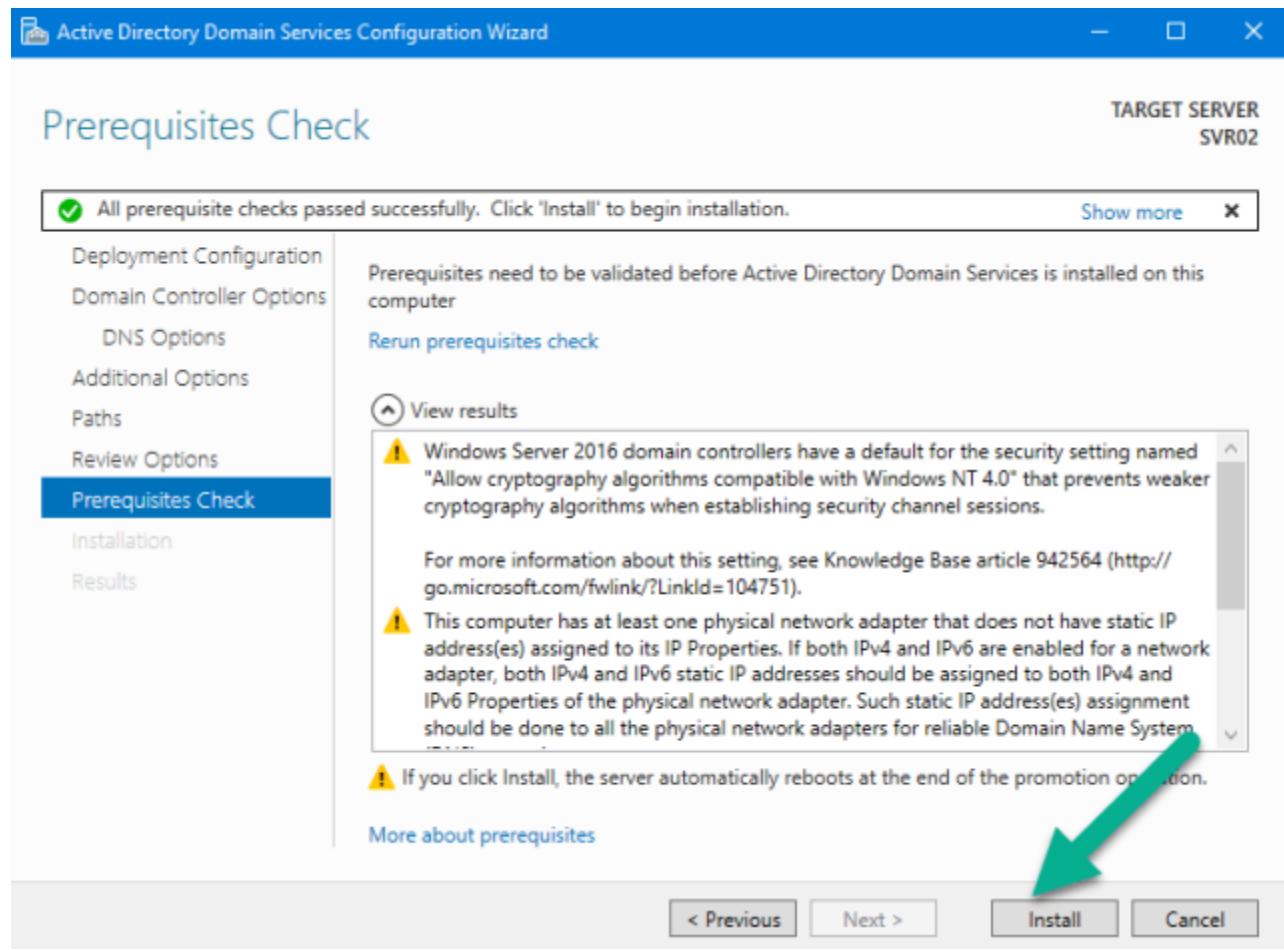


5. Thus you can specify the path that you want to restore your Database files, log files and SYSVOL files. The path page give you the options to specify location of the sources to be restored. When you finished your work, click on **Next** button.



Paths page

6. The next page is **Review options**. You go nothing to do. Click on **Next** button. The Prerequisites Check page shows you the summary of all prerequisites that are verified or not. If it's verified click **Next**. If not, recheck the steps you did just before and be sure you have done all correctly. Click on **Install** button. After the installation succeeded, the system automatically reboots.



Conclusion

After the restart, the server is domain controller. It is really easy to promote server to domain controller (DC). Also, you can start managing and controlling users from your server. For any questions leave a comment below. I would be glad to answer your questions as soon as possible.

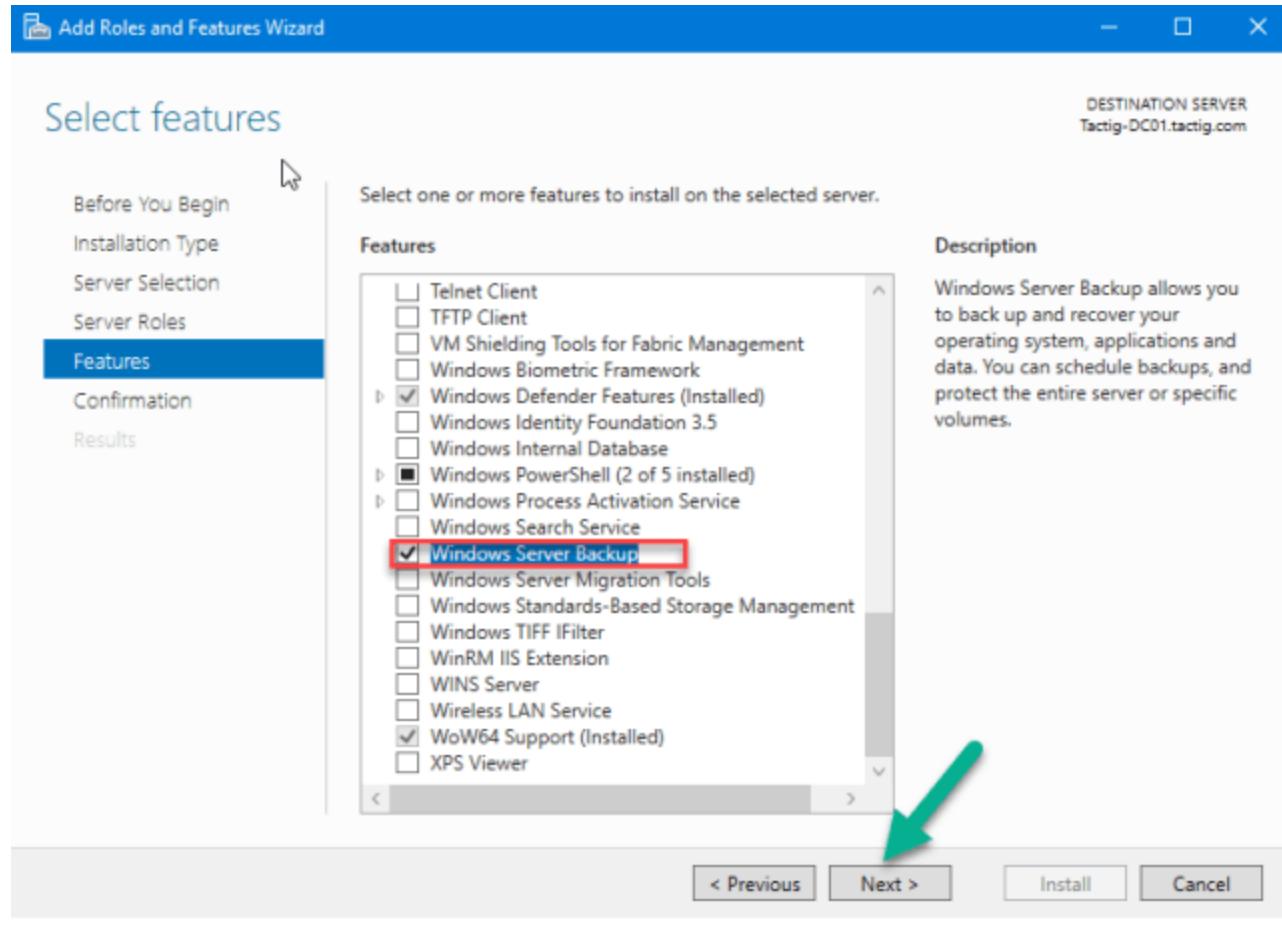
Managing network is a critical task in the networking world but not much tough with active directory. The [Active Directory](#) was first time introduced in [Windows Server 2000](#) for centralized domain management. Before the active directory, [Microsoft](#) had introduced tools to manage users, computers but they were not as efficient as active directory. Active Directory Services (AD DS) or simply Active Directory (AD) is the repository of management and information, you can manage and have information of every type of information about users, computers, services also it offers great services like [load balancing](#), [failover cluster](#) etc and as much as its efficient that much you need to just take it important or serious and take care of it means you need to take backup of the active directory, if someone accidentally delete something or being hacked etc, if domain controller stops working, you should be able to restore the data back. Don't worry, because we have the solution of every of your problem, let's move on and do it now.

Backup Active Directory fully in Windows Server 2016

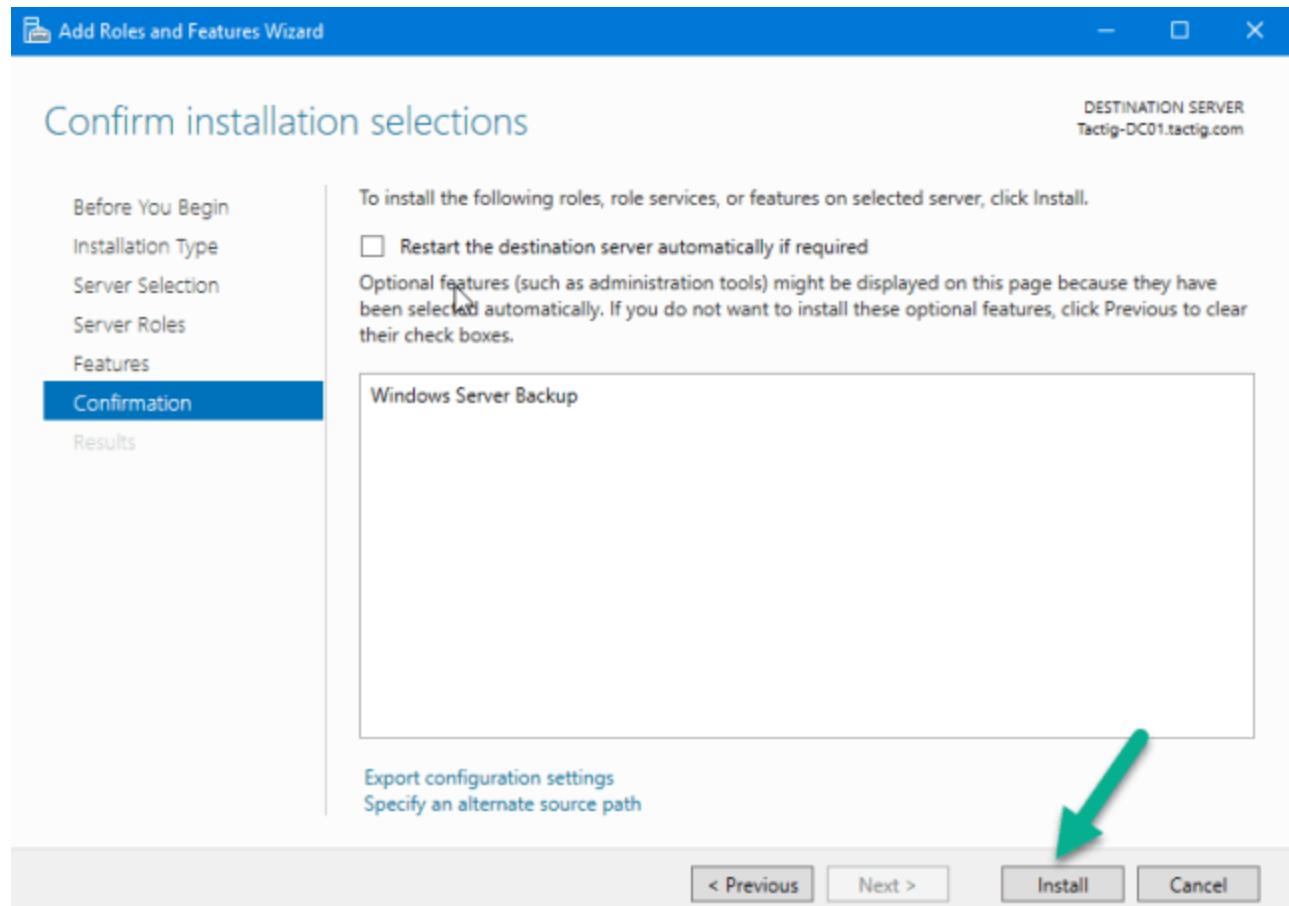
The Active directory backup is not much difficult certainly, you can learn and do it easily.

First of all, you need to install the Windows Backup Server, using Server Manager.

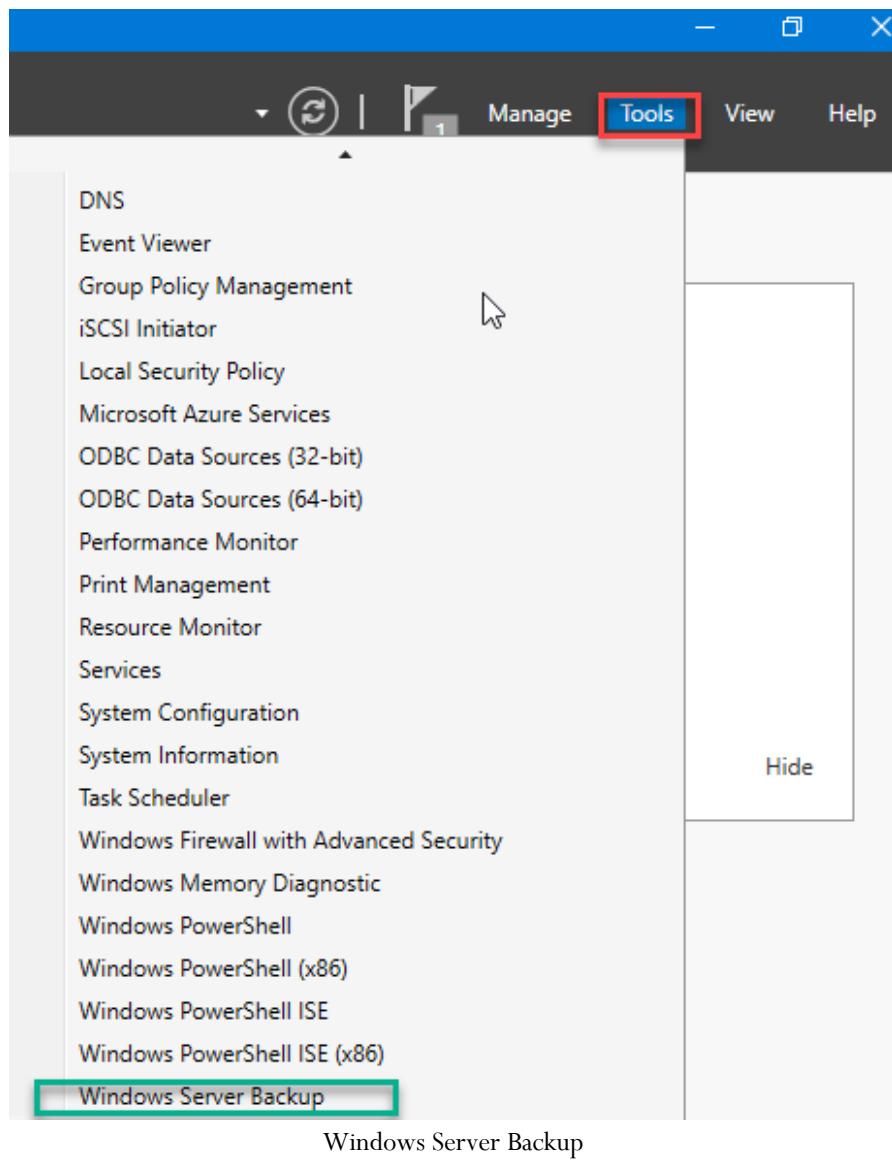
1. Open **Server Manager**, click on **Add roles and features**, skip the Welcome page clicking on **Next** button, then select the server you want to install the backup server on, click on **Next** button. It is not role, it is a feature, skip the select server role page. In the feature page, scroll down and check the **Windows Server Backup**, hit next!



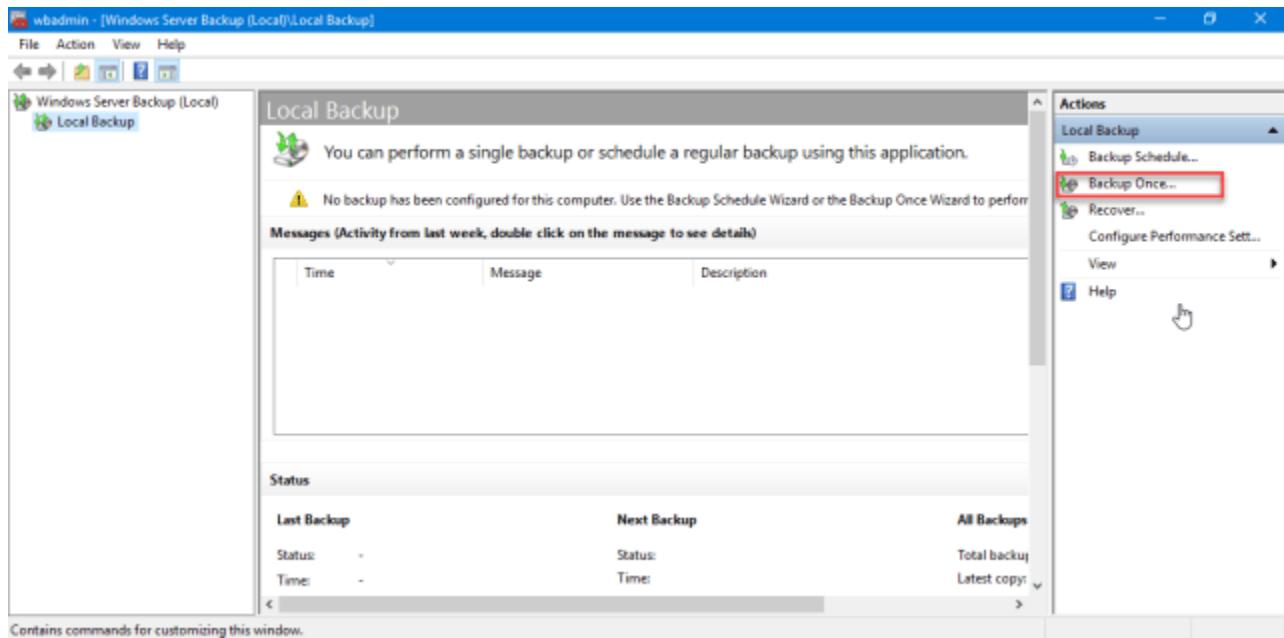
2. In the **Confirm installation selections** page, click on **Install** button. Take a rest, because it takes a while, no reboot is needed.



3. Now on the **Server Manager**, click on **tools**, then click on **Windows Server Backup** at the end of the list to open the server.

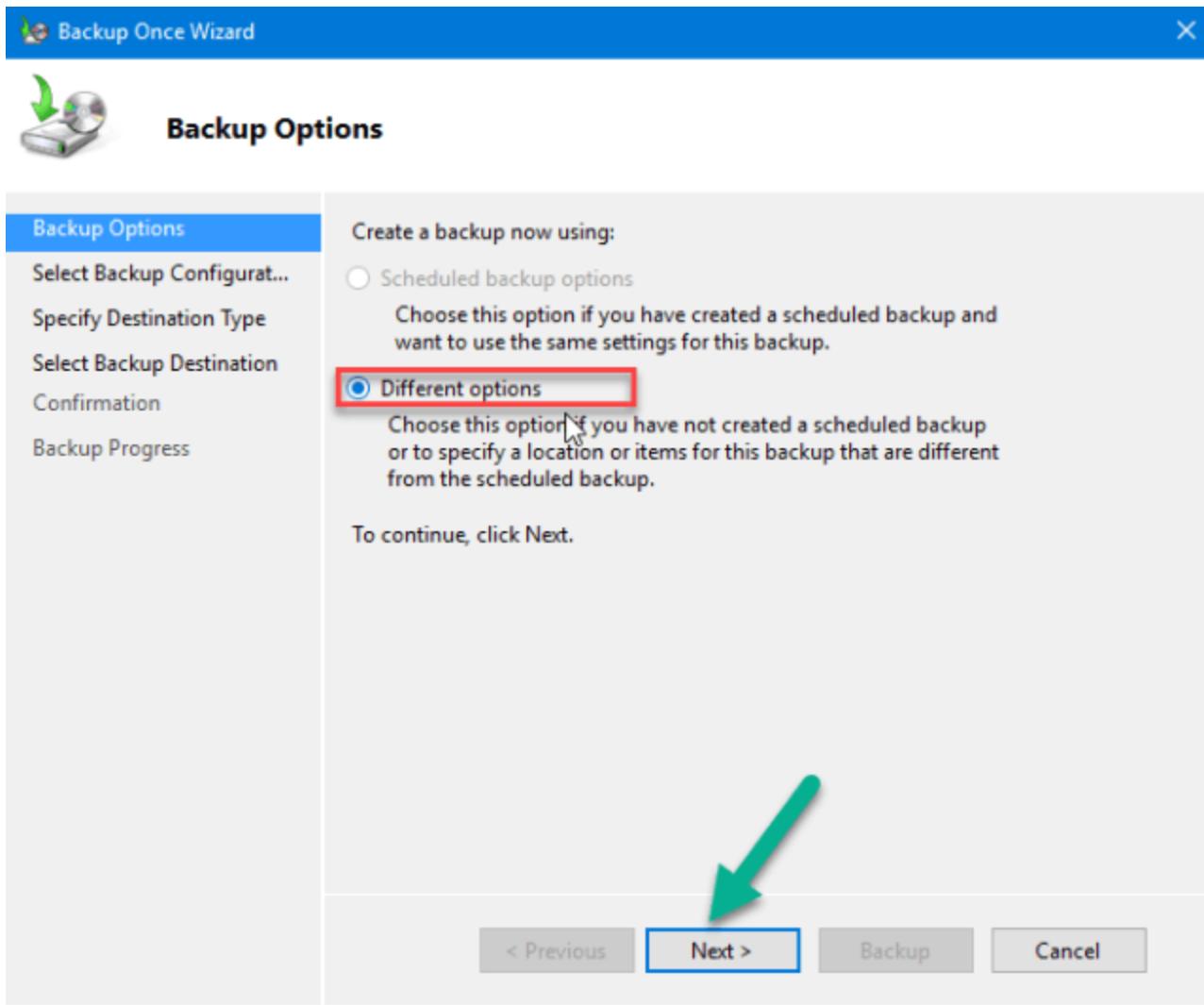


4. Now the server backup is opened, click on **backup once**. If you like to make a schedule for active directory backup, so click on Backup schedule.



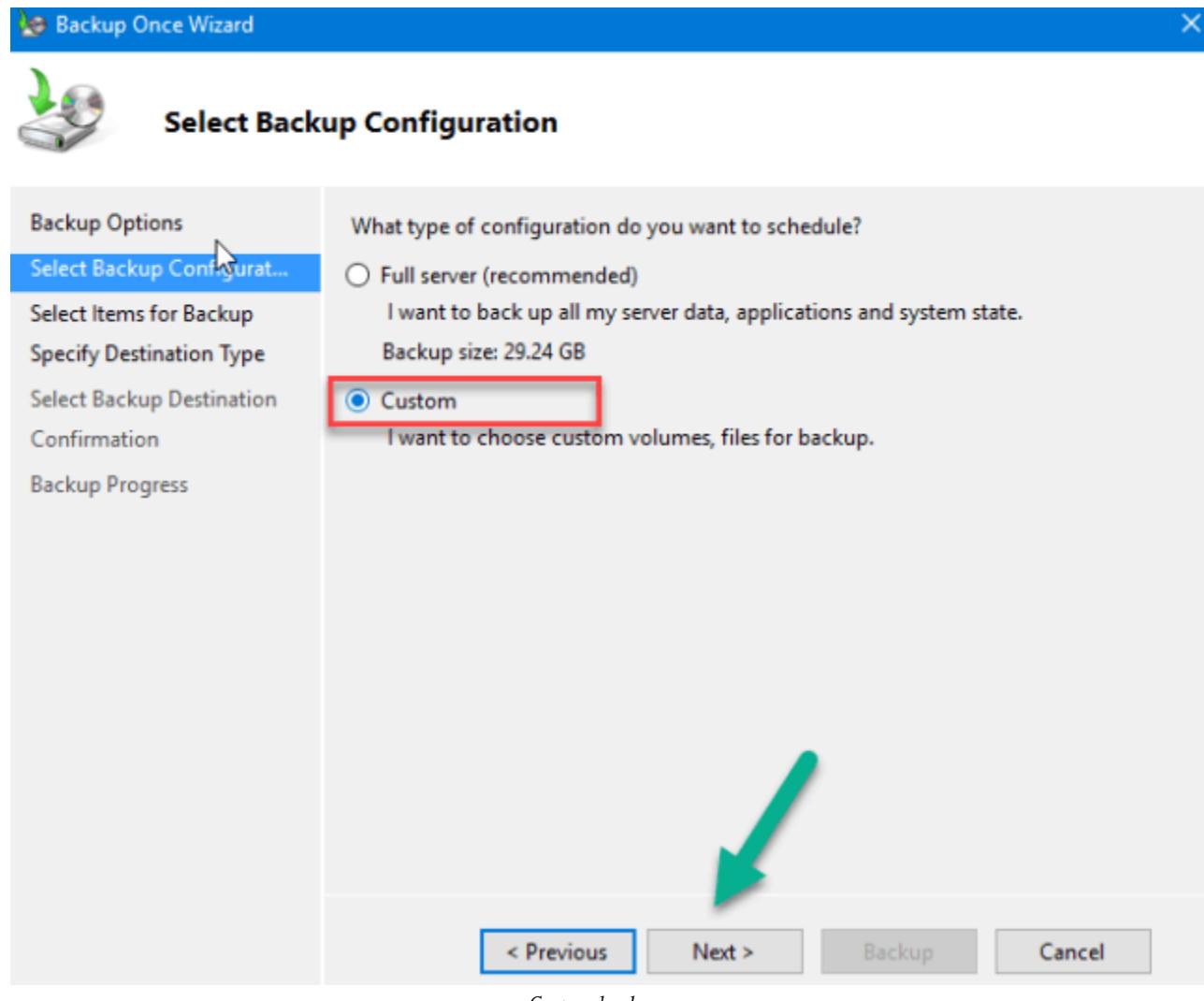
Backup once

5. Select **Different options**, click on **Next** button because Different options is used while we don't have any schedule for backup.

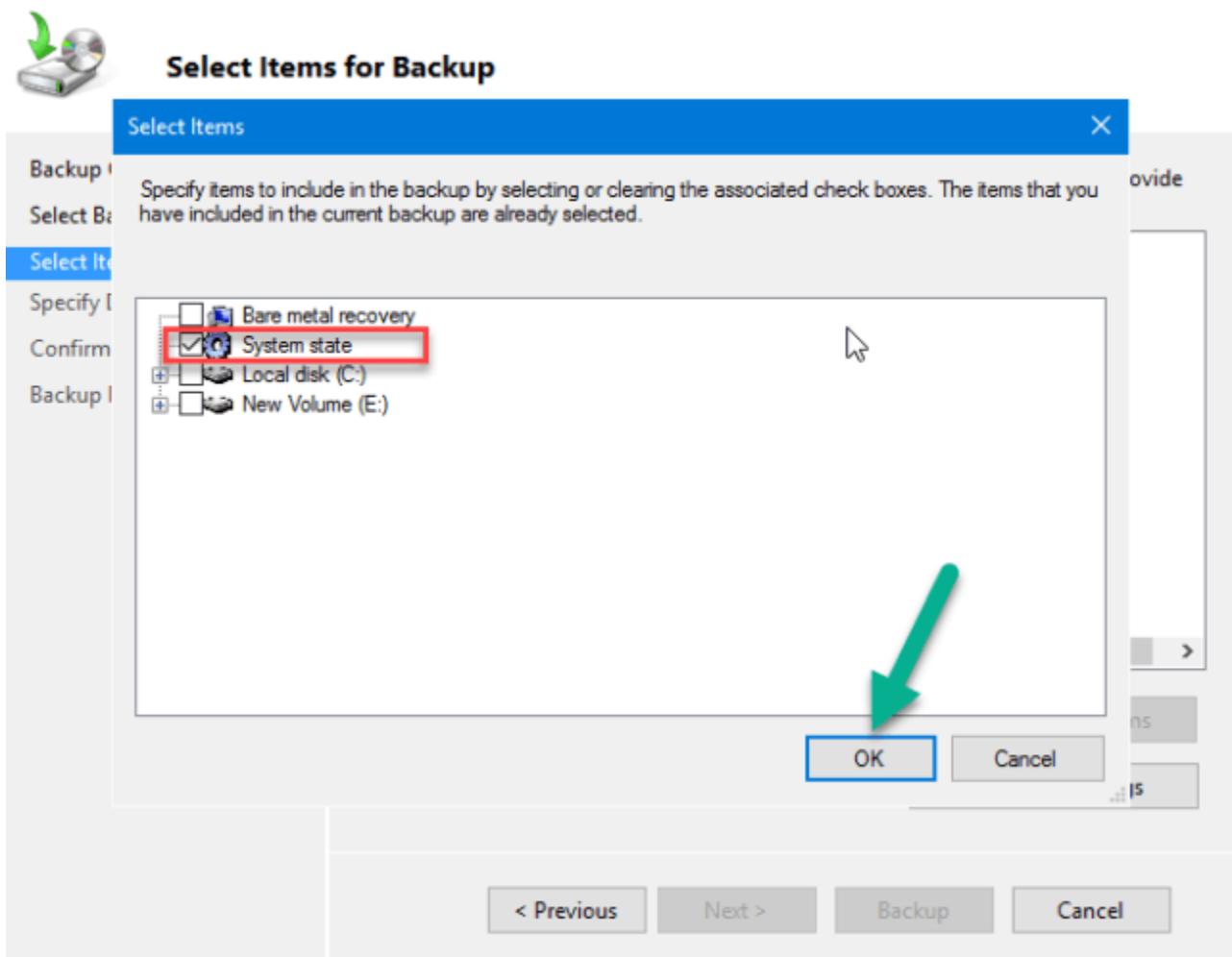


Different option

6. On the **Select backup configuration** page, two options are available, **Full Server** and **Custom**. We just want to take backup of the active directory, so we choose the second option.

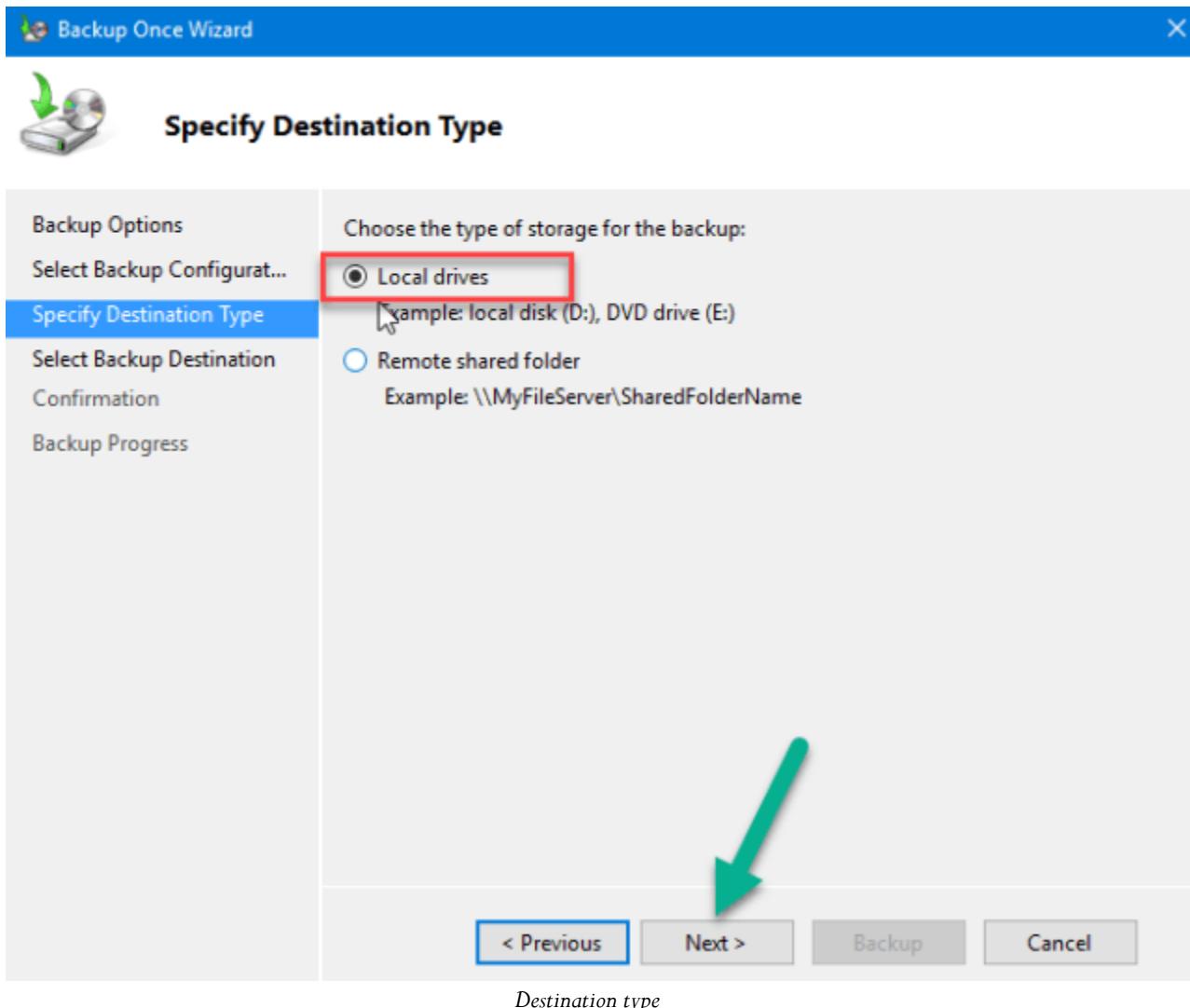


7. In the Select items for the backup page, click on **Add items** button, select system state option and click on **Ok** button. so you are done here, hit **next!**

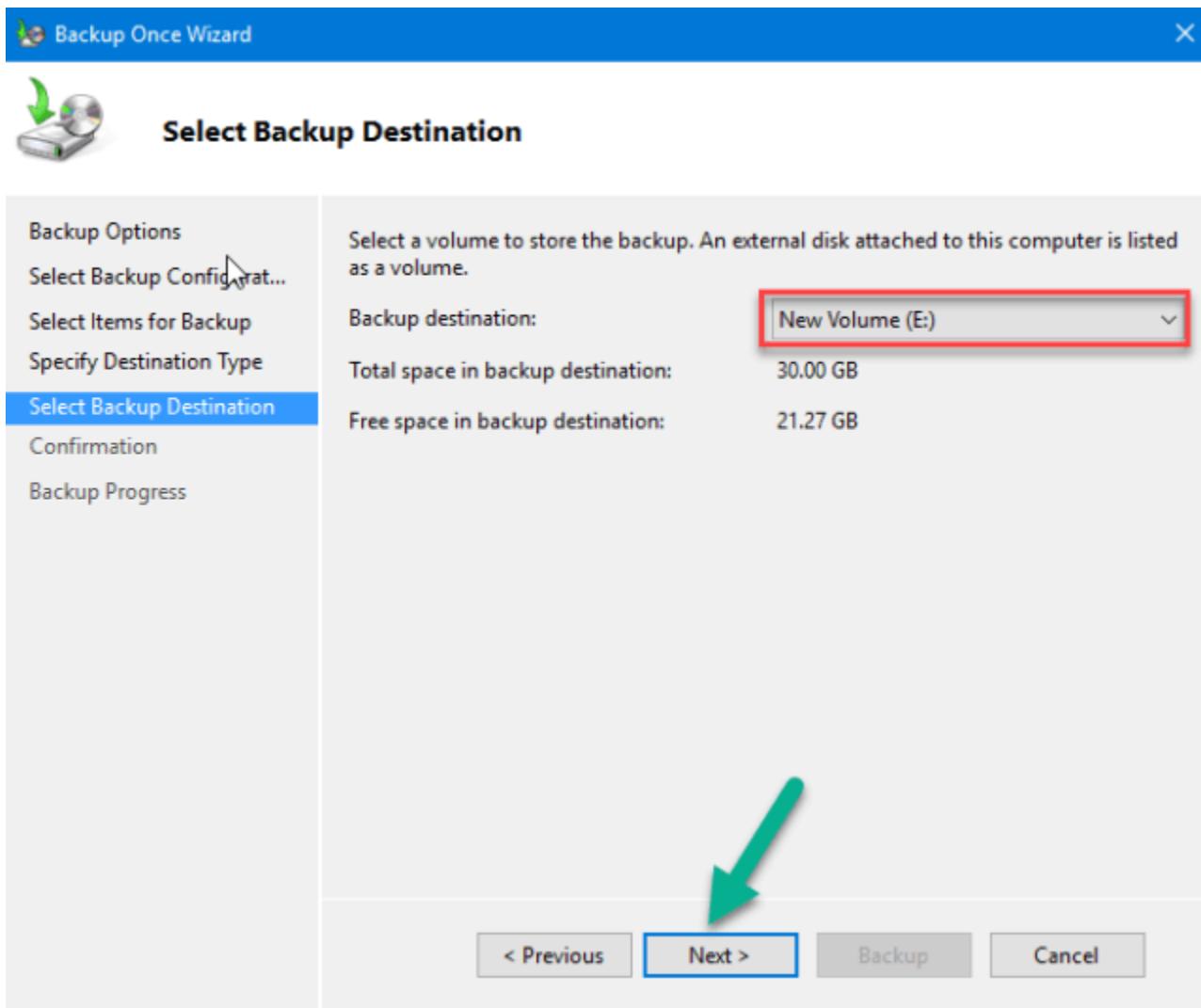


Add items, system state

8. It is the time to decide where to restore the backup files, **Local drives** or **shared folder**, I choose the local drive.

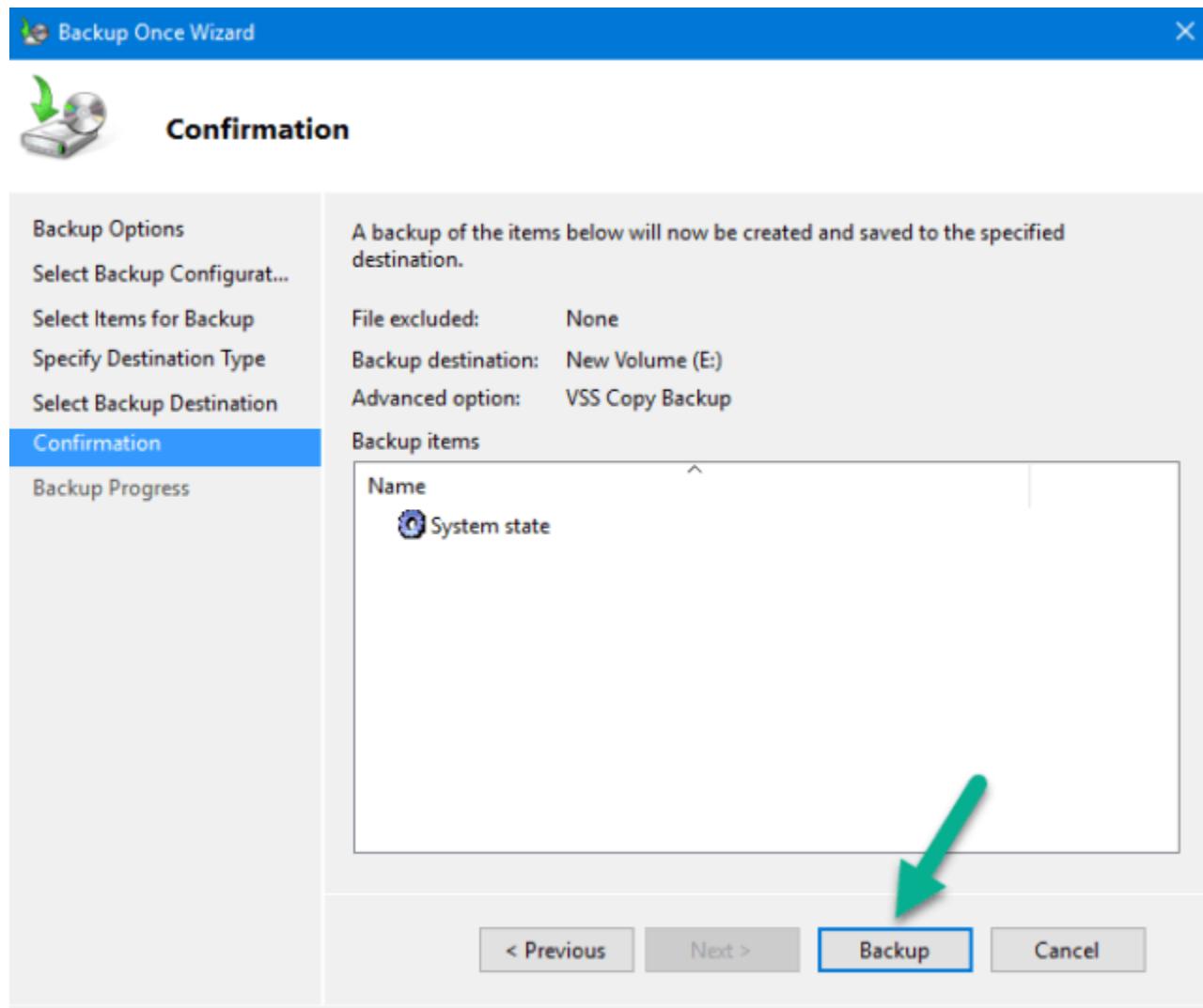


9. In the **Select backup destination** page, the place for backup files restoration is specified.



Destination page

10. We are done, so click on **Backup** button, take a rest. Let the server do its work.



Backup Active Directory Fully on Windows Server 2016

Conclusion

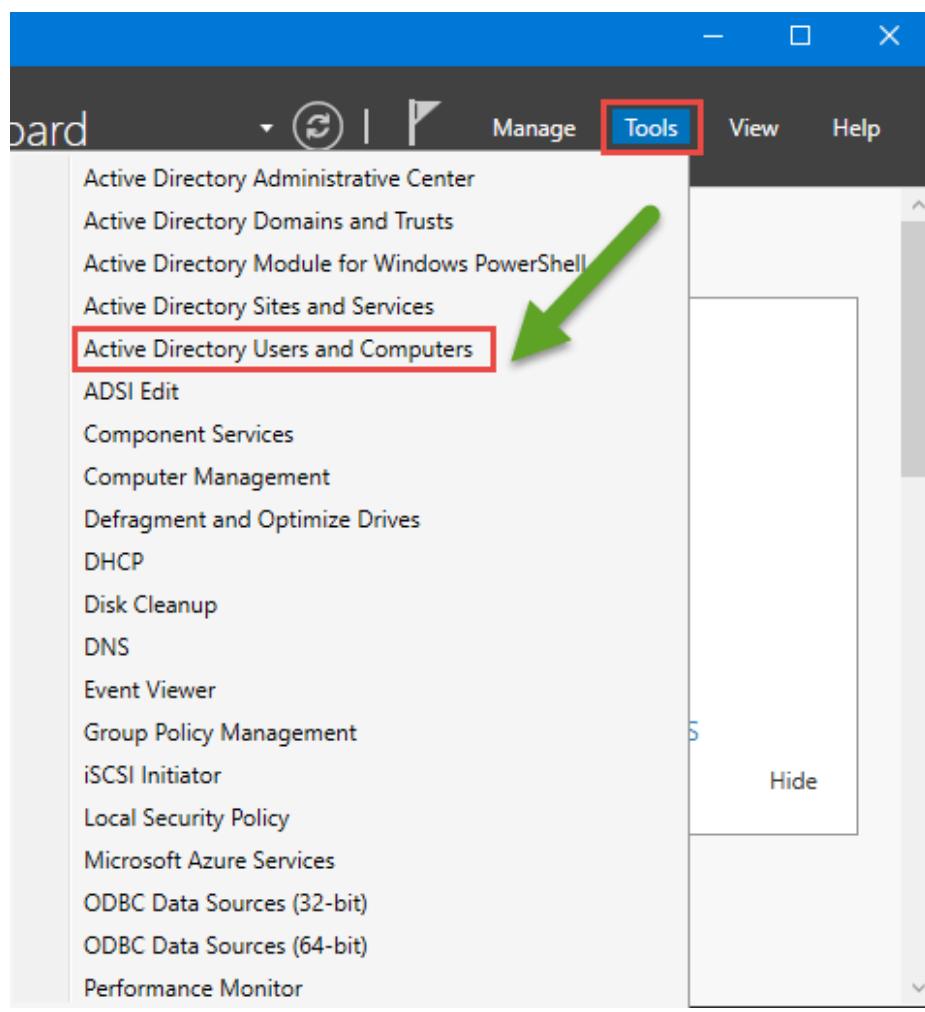
Ok, hope it was informative and helpful, to restore the Active Directory backup, follow our next article covering restoring active directory's backup.

The **Active Directory** is a depository of all information computers, users, and services and the **Active Directory users and computers** are the container of all the information about the users and computers and more than the information, you can manage users and computer accounts through this management tool whether you create, remove or manage users. In this article, I'll show you how to create users, computer accounts in **Windows server** 2016.

Create Users and Computers in Server 2016

#1: Create users

1. Open **Server Manager** and click on **Tools** tab then select **Active Directory Users and Computers**.



2. Expand the server node and click on the **Users** node, when you see all the default users and groups just click on the **Create a new User** button on the top as shown to create a new user account.

The screenshot shows the Windows Server 2016 Active Directory Users and Computers console. A green arrow points from the left margin towards the 'tactig.com' node in the navigation pane. The 'Users' node under 'tactig.com' is highlighted with a red box. In the top toolbar, there is a blue 'Create User' button, which is also highlighted with a red box. The main pane displays a list of default Active Directory objects, including security groups and users, with columns for Name, Type, and Description.

Name	Type	Description
Allowed RODC Password R...	Security Group...	Members in this group c...
Cert Publishers	Security Group...	Members of this group ...
Cloneable Domain Controll...	Security Group...	Members of this group t...
DefaultAccount	User	A user account manage...
Denied RODC Password Re...	Security Group...	Members in this group c...
DHCP Administrators	Security Group...	Members who have ad...
DHCP Users	Security Group...	Members who have vie...
DnsAdmins	Security Group...	DNS Administrators Gro...
DnsUpdateProxy	Security Group...	DNS clients who are per...
Domain Admins	Security Group...	Designated administrato...
Domain Computers	Security Group...	All workstations and ser...
Domain Controllers	Security Group...	All domain controllers i...
Domain Guests	Security Group...	All domain guests
Domain Users	Security Group...	All domain users
Enterprise Admins	Security Group...	Designated administrato...
Enterprise Key Admins	Security Group...	Members of this group ...
Enterprise Read-only Doma...	Security Group...	Members of this group ...
Group Policy Creator Owners	Security Group...	Members in this group c...
Guest	User	Built-in account for gue...
Hussein	User	
Key Admins	Security Group...	Members of this group ...

Create User button

3. Enter the user details like name, last name, logon name etc. The logon name is the name that you want to logon to the network through, you will be given an email address in the network like mine is **mehdi@tactig.com** as shown then hit **Next**.

New Object - User X

Create in: tactig.com/Users

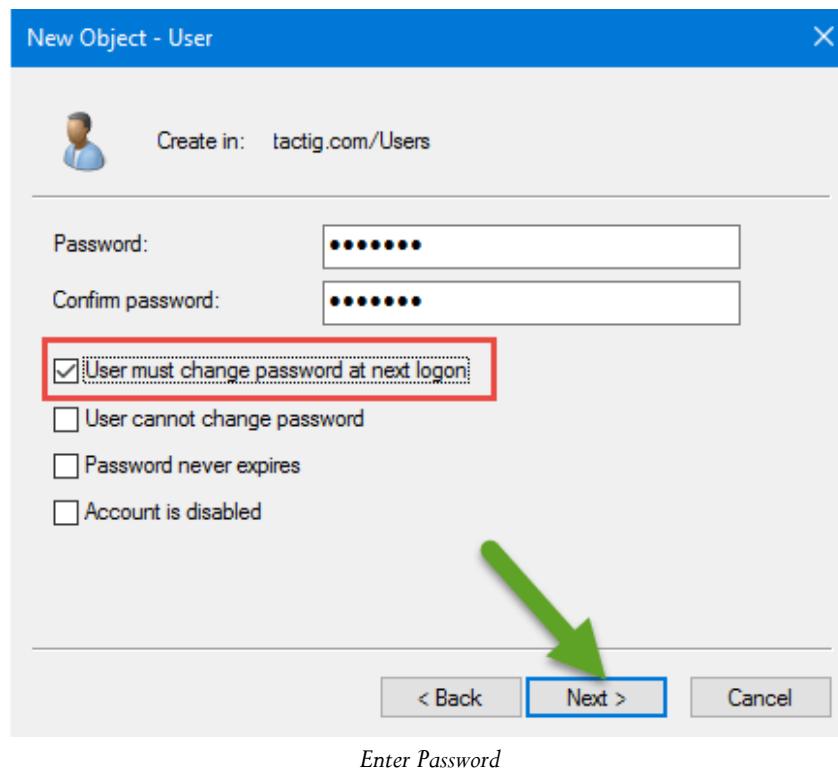
First name:	Mehdi	Initials:	<input type="text"/>
Last name:	Karimi		
Full name:	Mehdi Karimi		
User logon name:	<input type="text" value="mehdi"/>	@tactig.com	<input type="button" value="▼"/>
User logon name (pre-Windows 2000):	TACTIG\	<input type="text" value="mehdi"/>	

[< Back](#) Next > [Cancel](#)

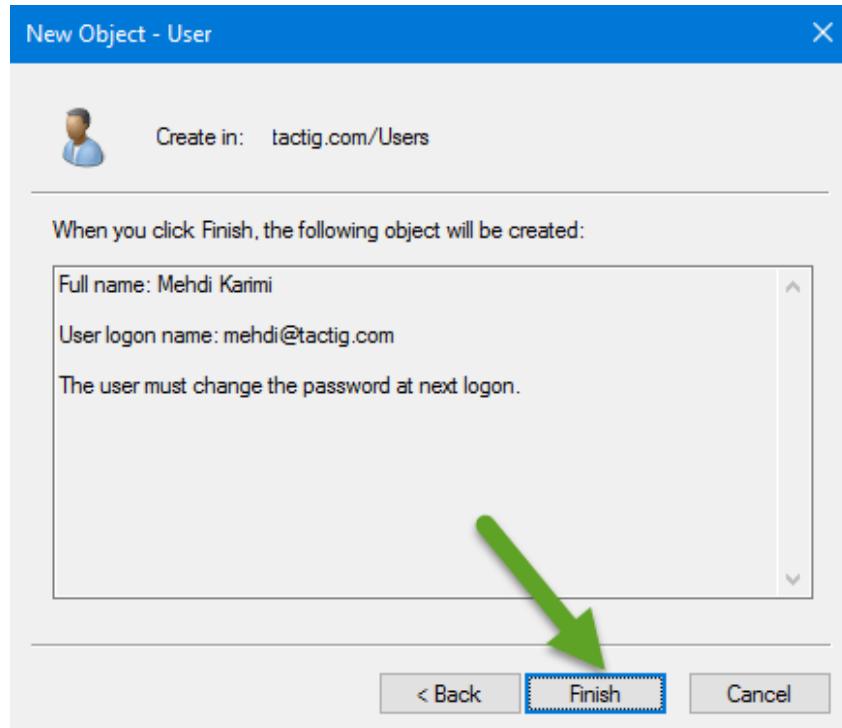
User details

4. Now enter a complex password then confirm your password and below the password box you'll see some options that should know them;

- **User must change the password at next logon;** is used when you create a user and give a simple password as a network administrator then you want the user to change the password at first logon.
- **User cannot change password;** is used when you don't want a user to change his account password.
- **Password never expires;** is used when you don't want users to change the password frequently. Most organizations force the users to change the password after a particular time. It is good to have the most secure account.
- **Account is disabled;** is used when you want to disable unused accounts. Leave the first option selected and hit **Next**.



5. When the user is created in Users container, finish the wizard by clicking on the **Finish** button.

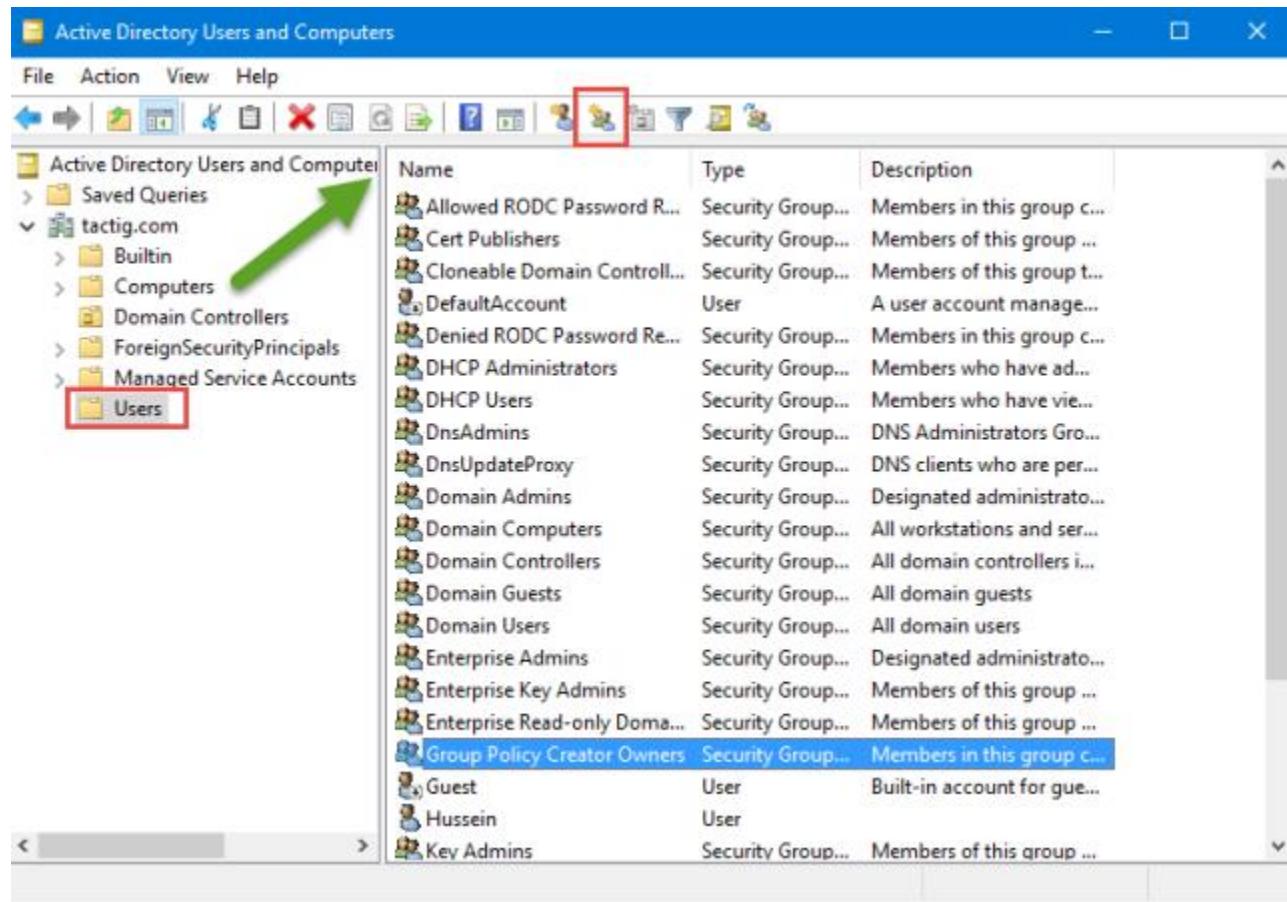


Finish wizard

#2: Create group

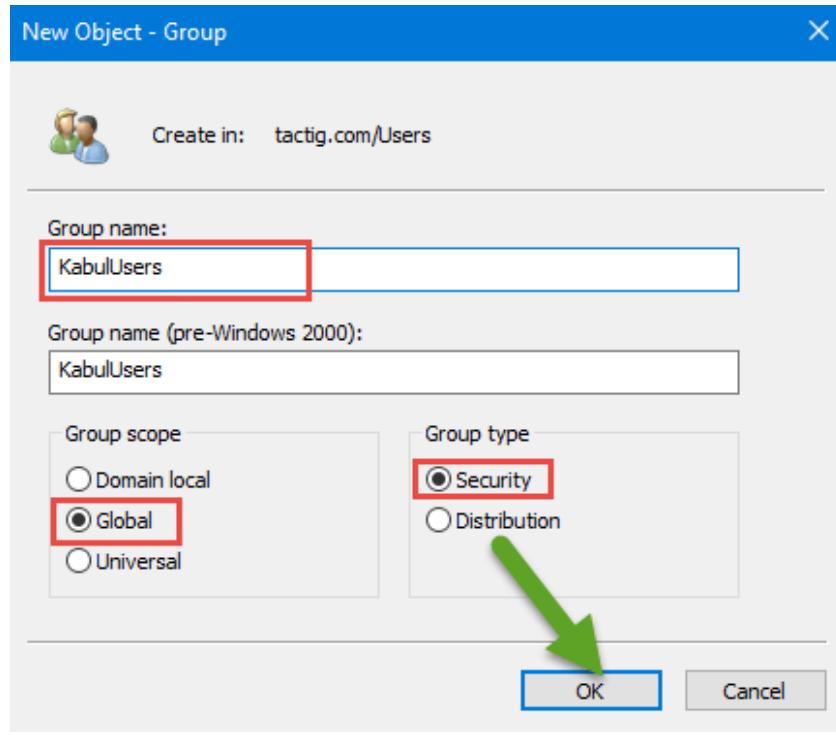
After creating users, now it's time to create the groups we need for our specific team, location or jobs. Groups are created for simplifying the management. When you create a group, specify some people as member of that group, you give some rights to that group instead giving ever single user that right. Members of the group is not users only, they can be admins. You can make a group member of other group which is called nesting-group.

1. In order to create a group click on the **Users** node, then click on **Create a new group** button on the top as shown.



Create new group

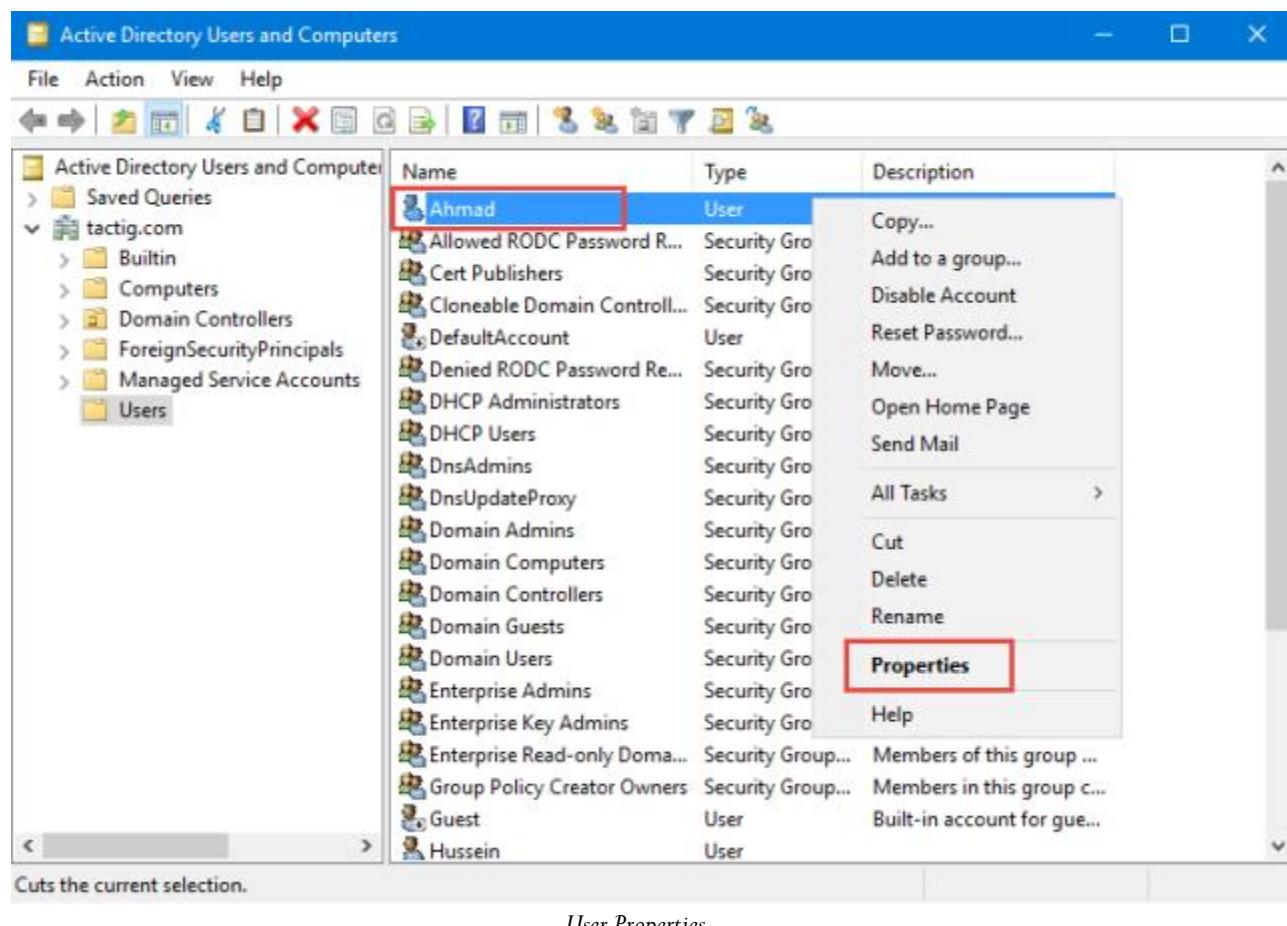
2. Enter the group name and you'll see group scopes are available, select the **Global** scope. It is used when you want to make a group according to geography, common job, department, functions. Now choose the **Group type (Security)** option: It is used when you want to specify which group can have access to which resource.



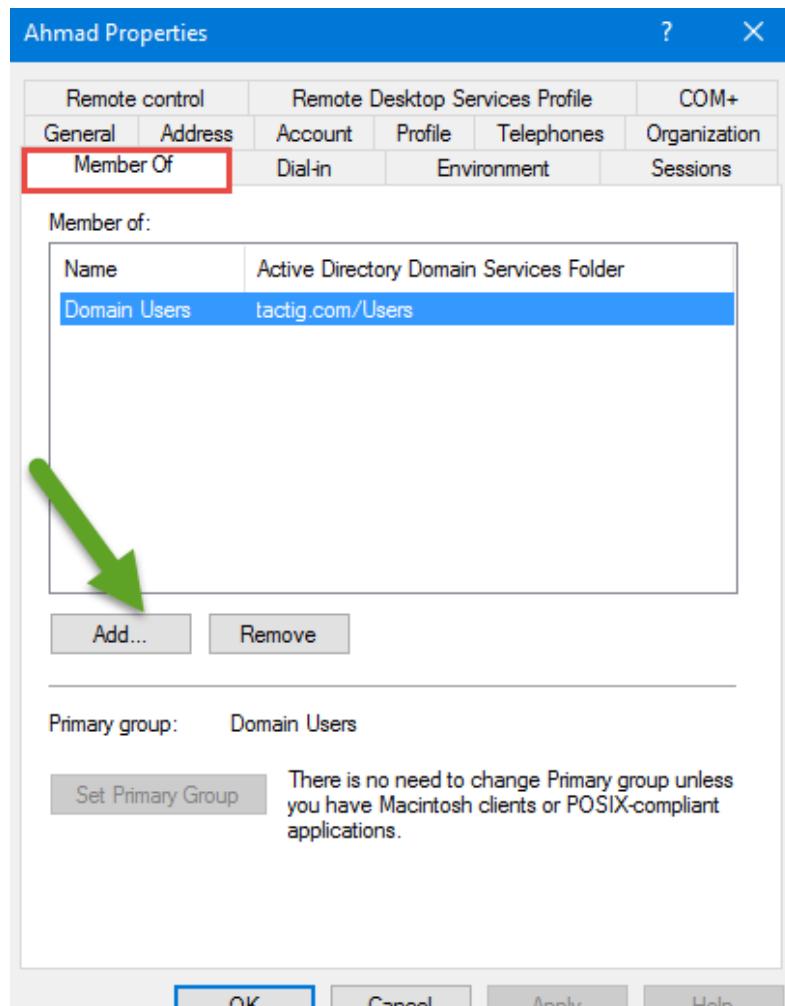
New object – group

#3: Group Membership

1. If you want someone to be member of a group, you can do it from user properties > member of and make it member of a group. Also you can go to group properties > members and add a user. I follow the first way, right-click on the user and select Properties.

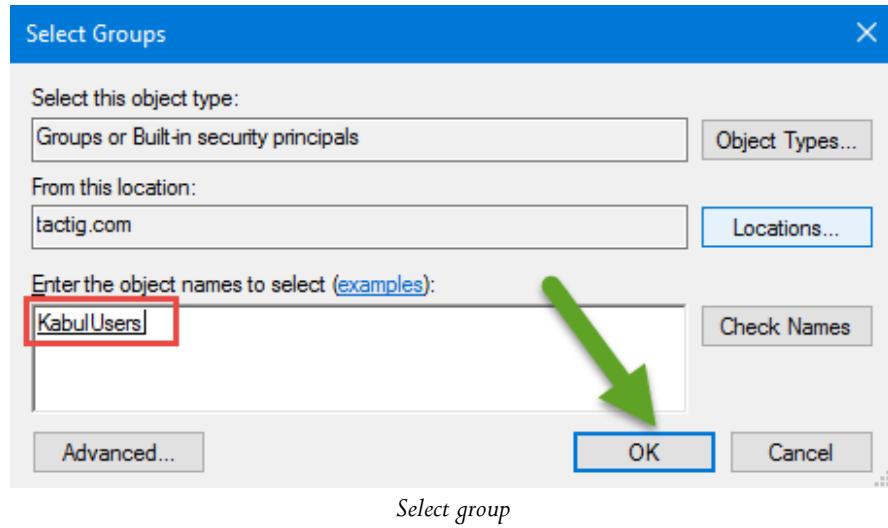


2. Here click on the **Member Of** tab then click on the **Add** button to add your account to a group.

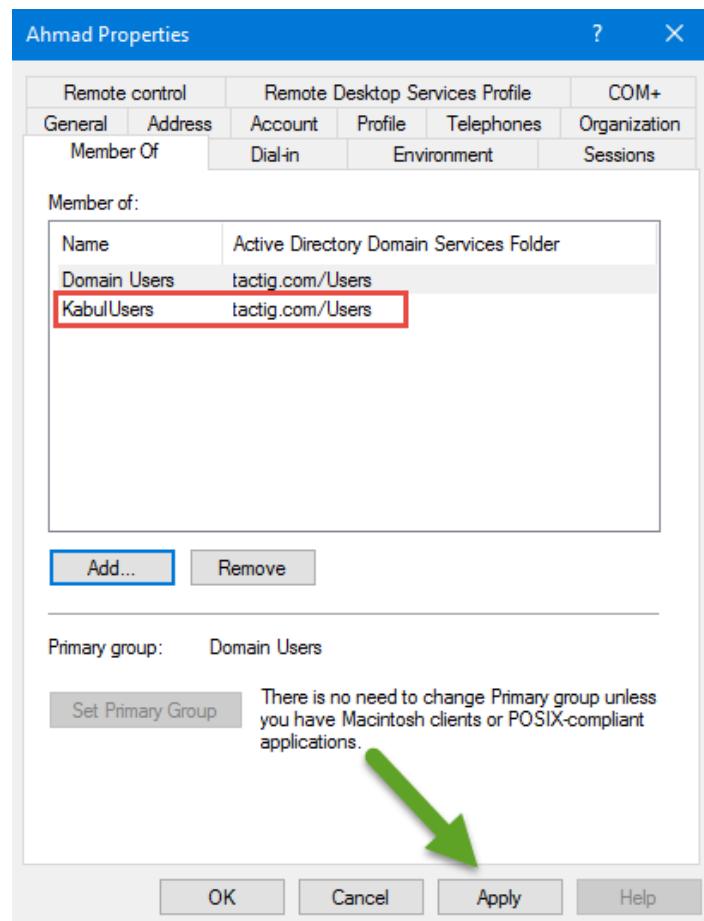


Member Of tab

3. Type name of the group in the box as shown then click on the **OK** button.



4. And now you're in the group of KabulUsers. Now just click on the **OK** button to finish the wizard and apply the function.



Apply changes

Conclusion: Active Directory Users and Groups is an important title in network. I hope you learn this easy steps, how to create users and computer accounts. For advanced details of the users and groups, other articles will be published here. For any question leave a comment.

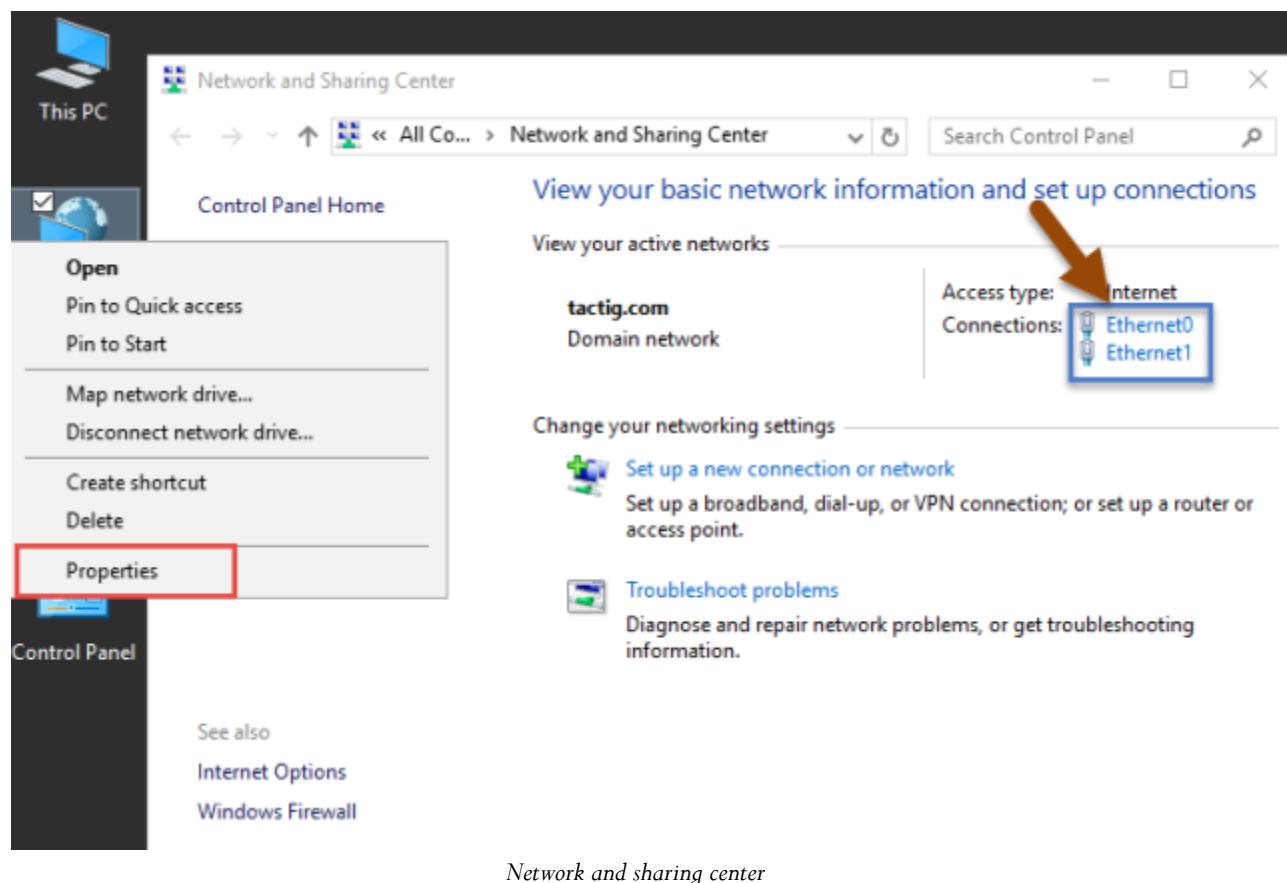
Dynamic Host Configuration Protocol (DHCP) is a network protocol used in Internet Protocol (IP) networks. Server that supports the protocol is called DHCP server. As its name indicates, DHCP server dynamically distributes IP for network interfaces and devices. When somebody sends a request for IP, DHCP server distributes IP address based on the DHCP server configurations. DHCP is a role in Windows server 2016.

In this article you learn how to install and configure DHCP server on Windows Server 2016. Let me tell you that you can install DHCP server role on Windows server 2008, 2012 and 2012R2.

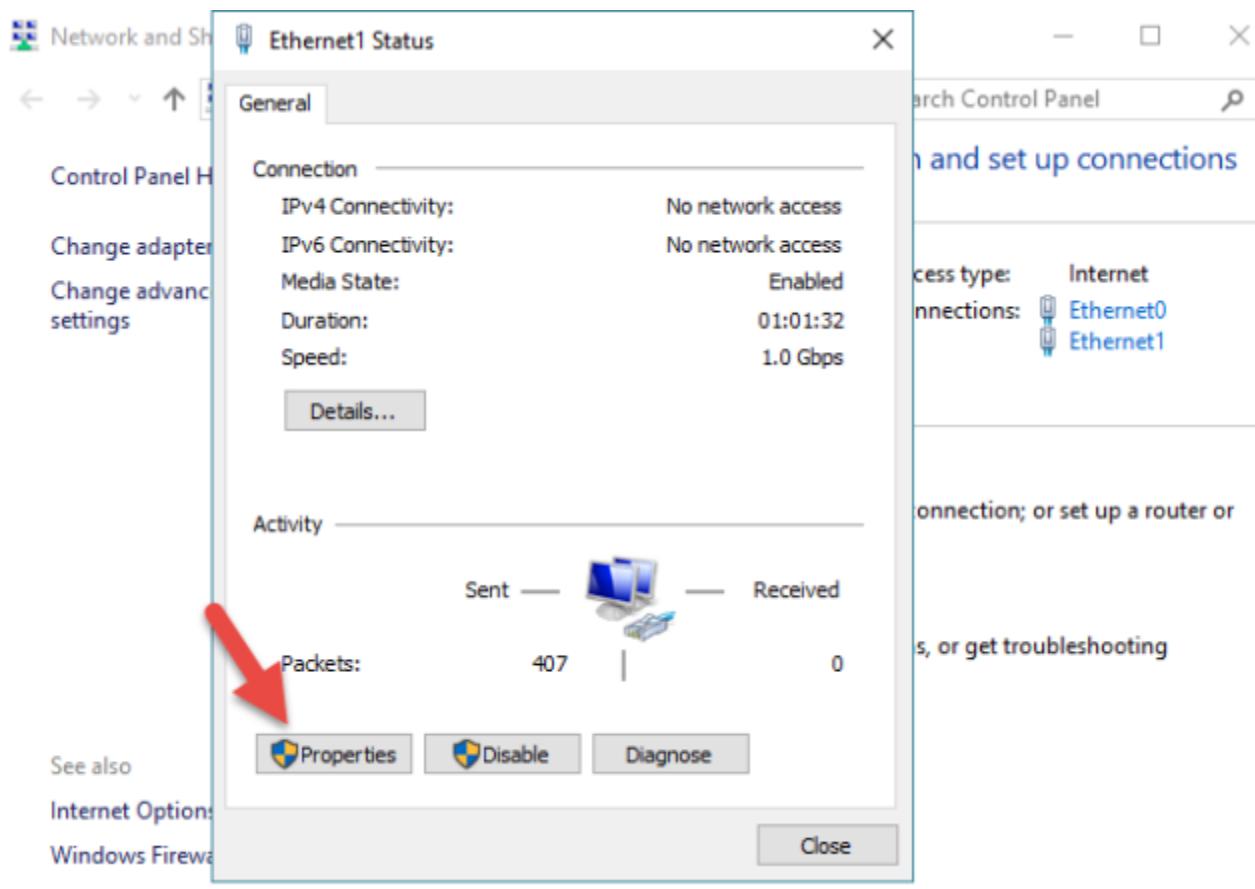
Assign Static IP Address to Server

Static IP address is needed for server. Because other computers need to have access to the server. If it is changed, client computers can't find the server.

1. Right-click on the **Network** icon on the **Desktop**. Select **Properties**. On the top-right side click on the network card.

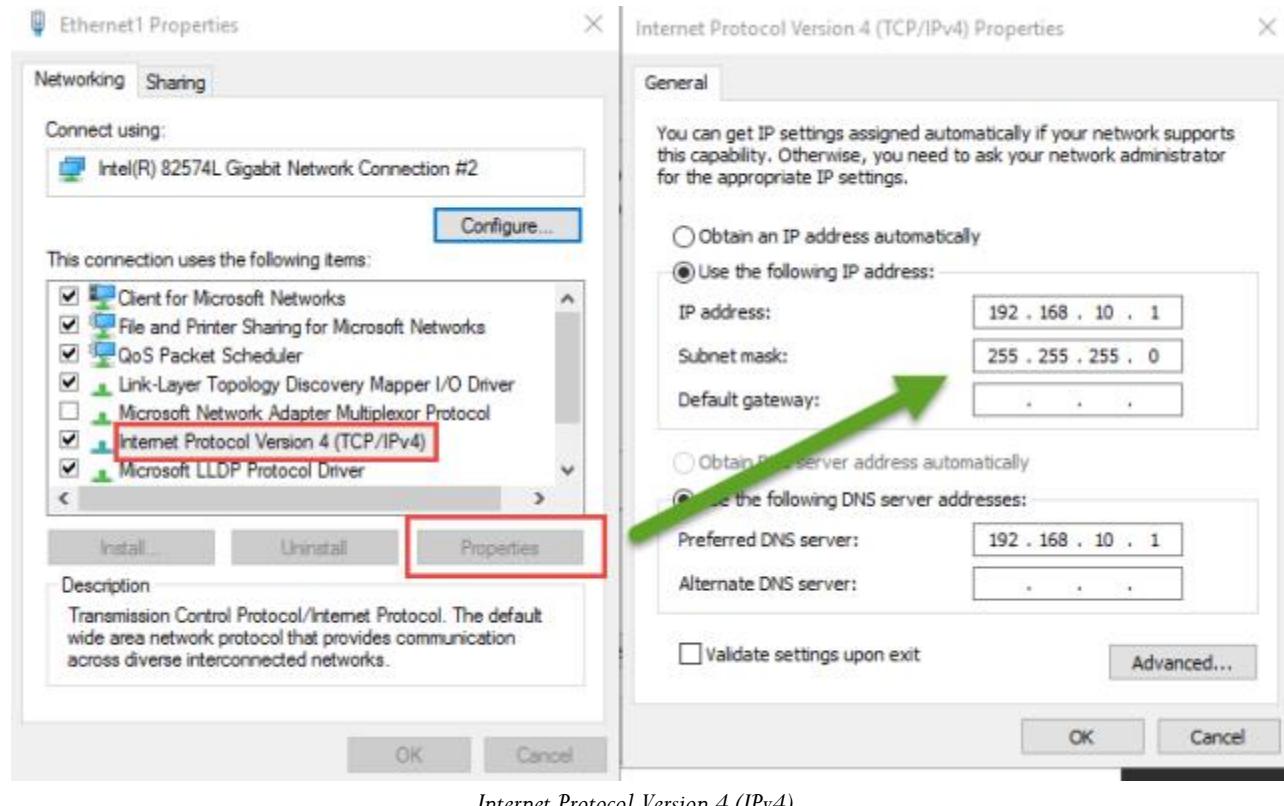


2. Click on the **Properties** button.



Properties

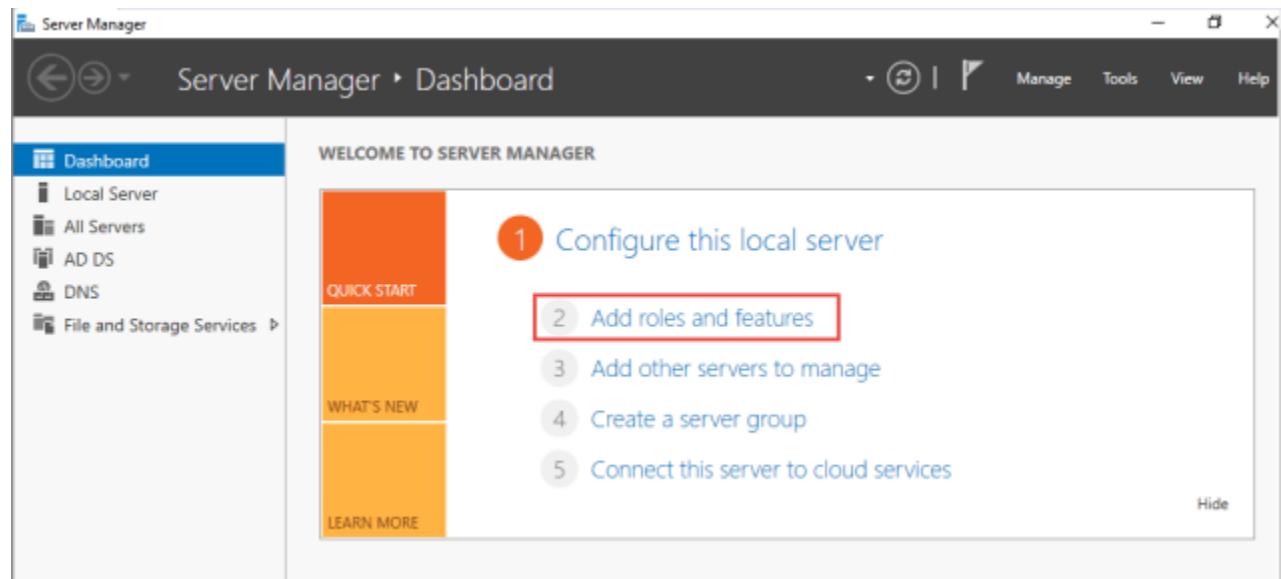
3. Select **Internet Protocol version 4**, click on **Properties** button. When a new window opens, enter this IP address: 192.168.10.1 , and DNS Server and click **Ok**.



Now your server is ready for DHCP role installation.

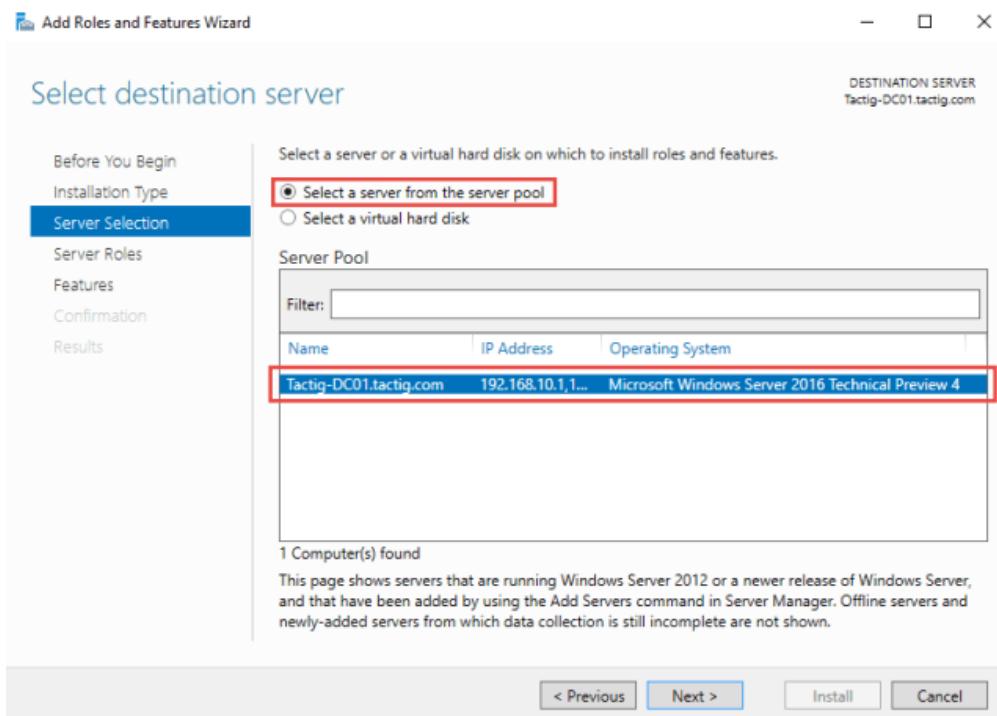
Install DHCP Server Graphically

1. Now open **Server Manager** tool and click on the **Add role and features**.



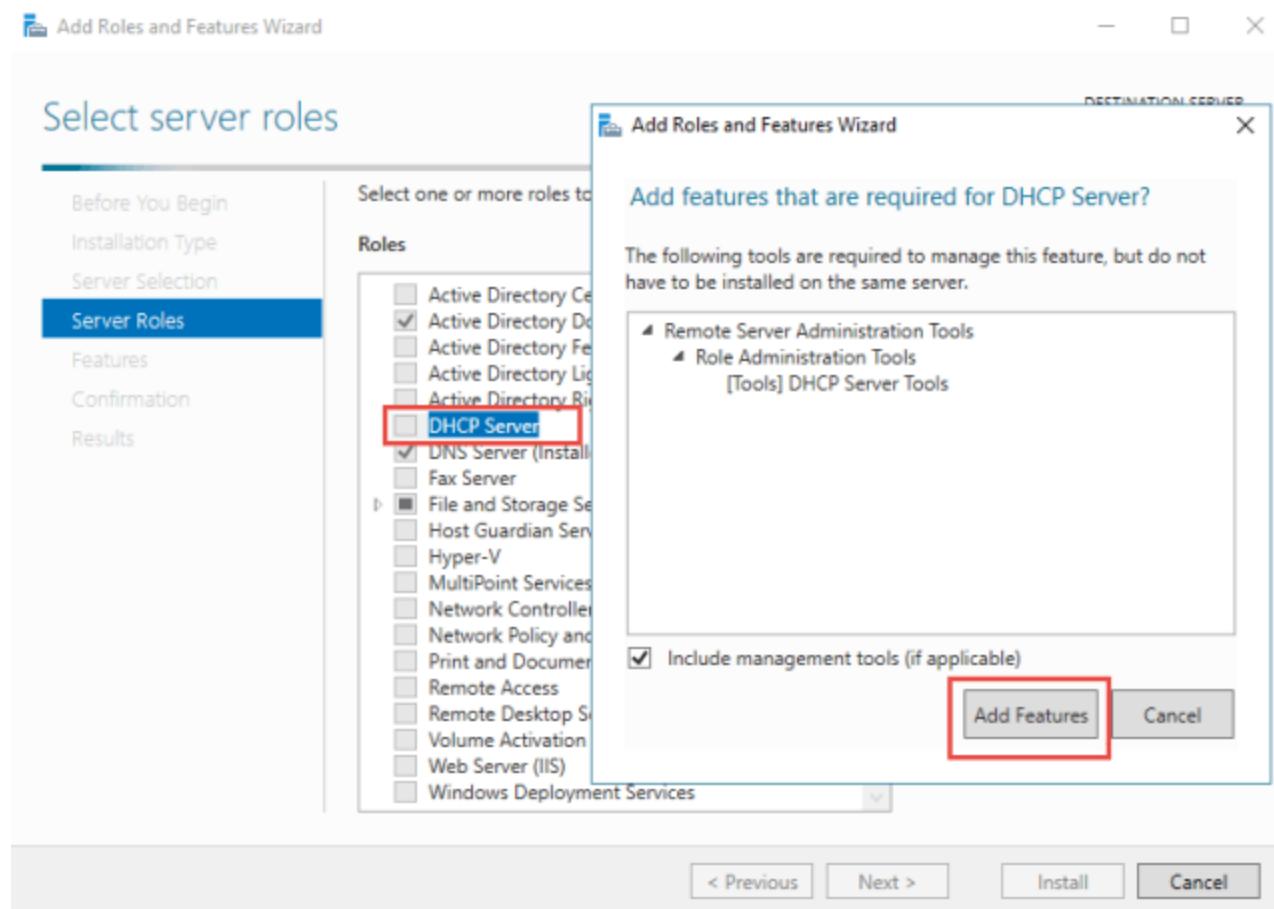
Server Manager page

2. Skip the **Before you begin page** clicking on the **Next** button. On this page, select the server that you want to use it as DHCP server.



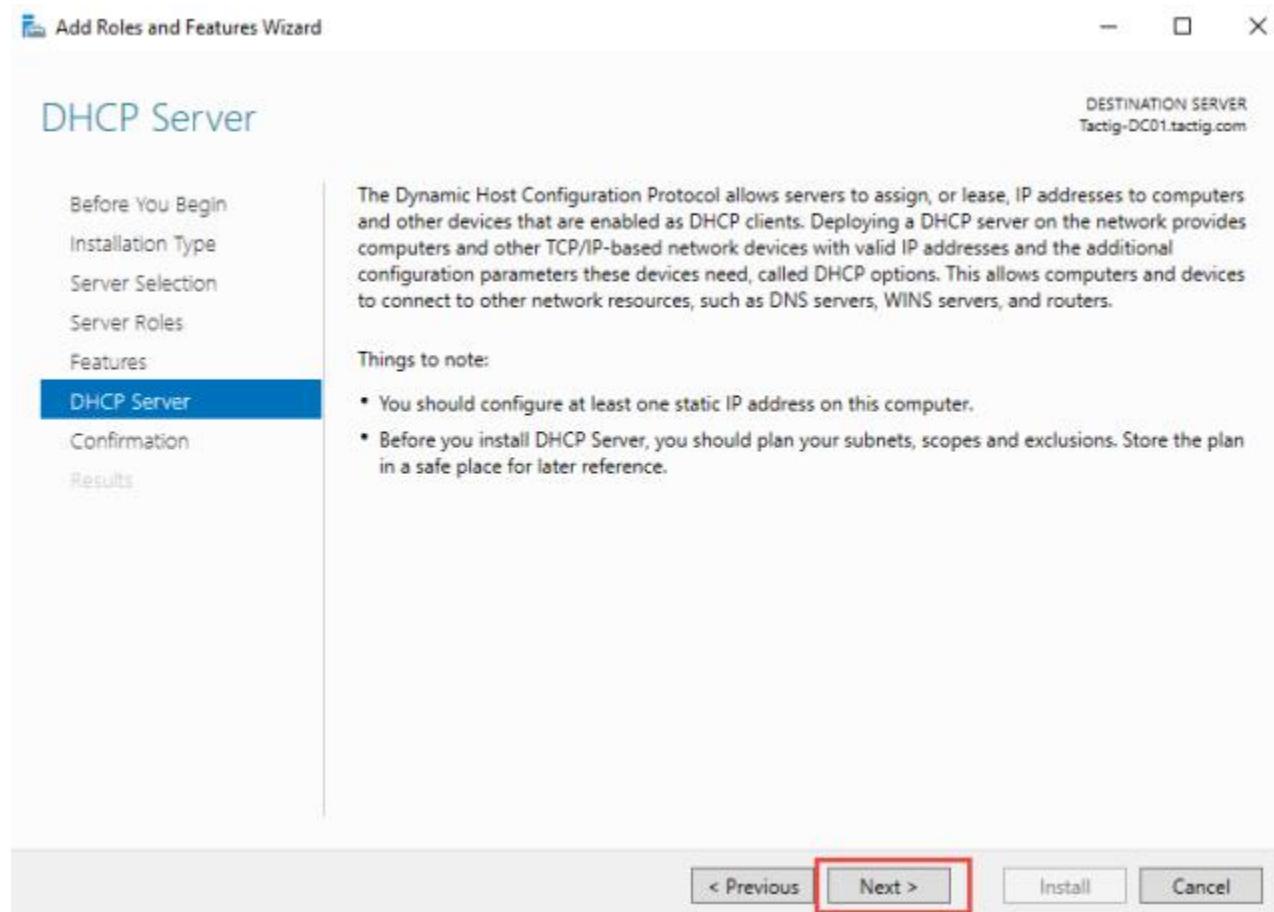
Select Destination Server

3. Select the **DHCP Server** role for installation. When a new window opens and asks you for permission to install more needed features, in order to work the DHCP server correctly, click on the **Add Features** button then click on the **next** button.



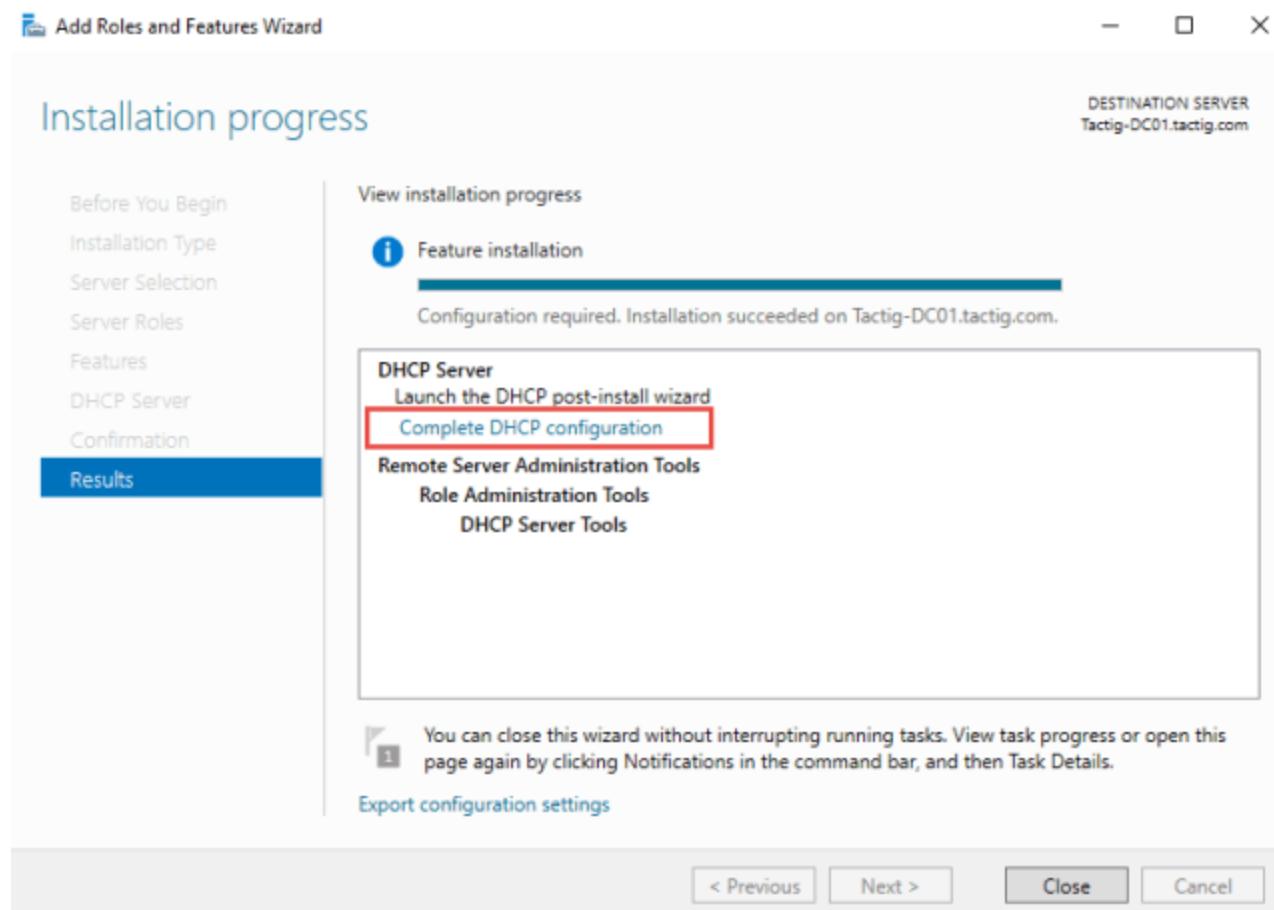
DHCP Server role

4. No additional feature is needed to be installed, click on the **Next** button. DHCP Server page gives you some critical information about DHCP server. Read the information and hit **Next**.



DHCP Server page

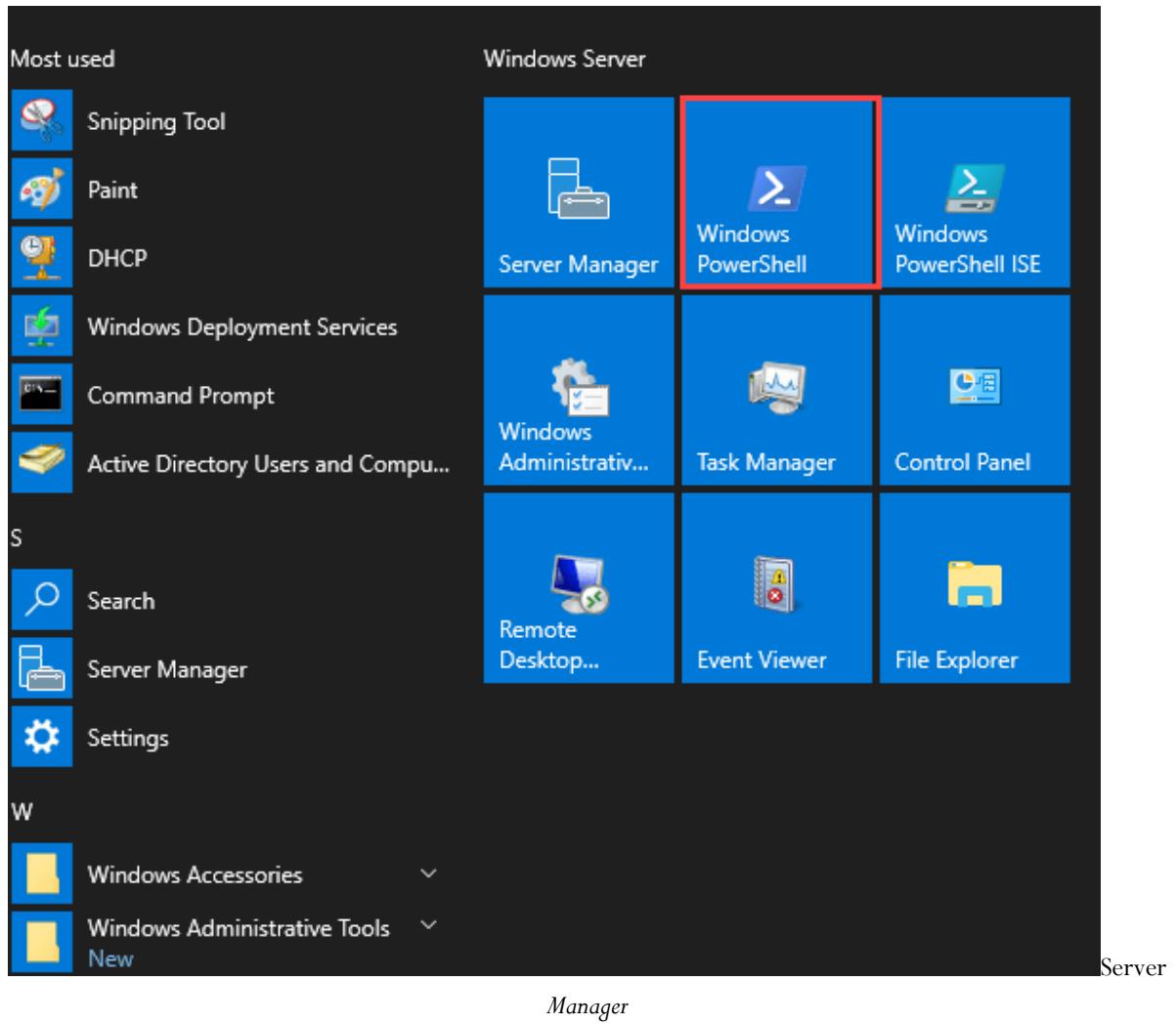
5. **Installation Confirmation** page gives you the option to install the role. Click on the **Install** button. It takes some time, the role to be installed on your server. When the installation finished, click on the **Complete DHCP Configuration** for DHCP configurations.



Complete DHCP Configuration option

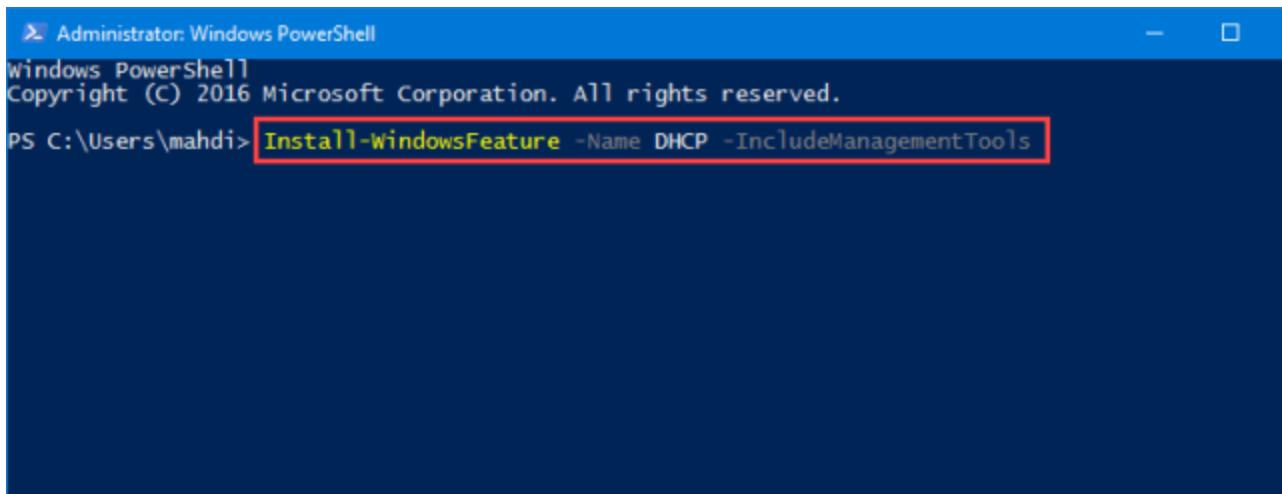
Install through PowerShell

1. Press window button. Right-click on Windows PowerShell. Click on Run as administrator.



2. Install-WindowsFeature is the cmdlet that used for installing roles and feature on Windows server. After that type -Name. You need to type name of what role or feature you want install the server. -IncludeManagementTools parameter for installing management tools. Install-WindowsFeature just installs the core services. Then press Enter button.

Be patient for a while. After a while DHCP server will be installed on the server.



The screenshot shows an 'Administrator: Windows PowerShell' window. The title bar says 'Administrator: Windows PowerShell'. The content area shows the Windows PowerShell logo and the text 'Copyright (C) 2016 Microsoft Corporation. All rights reserved.' Below that, the command 'PS C:\Users\mahdi> **Install-WindowsFeature -Name DHCP -IncludeManagementTools**' is typed into the command line. A red box highlights the command text.

PowerShell

Conclusion

The installing the DHCP server reaches to the end. Follow the steps, you surely can do that confidently. For questions, feel free and leave a comment below the article. As soon as possible I answer your questions.

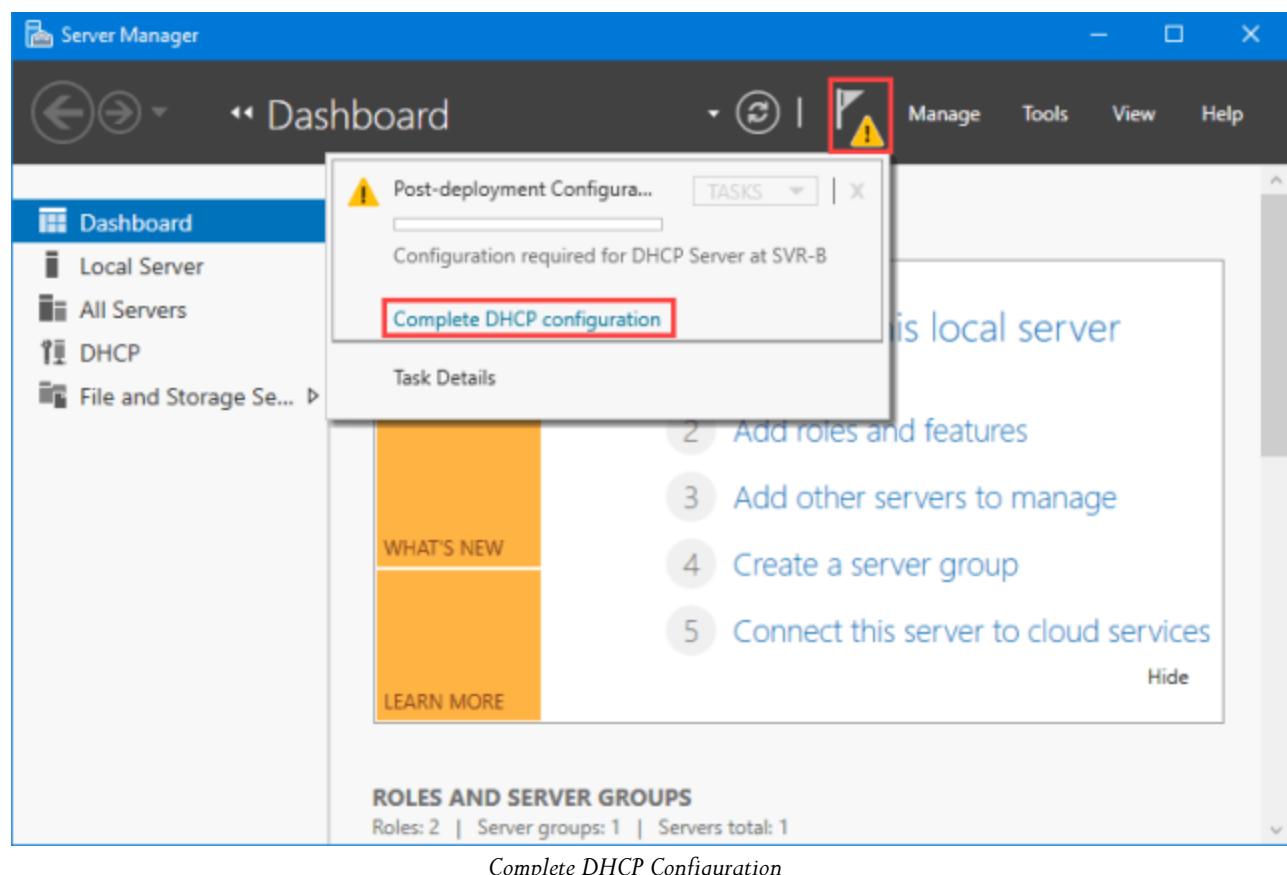
Refer to this article to learn how to configure DHCP server.

Dynamic Host Configuration Protocol (DHCP) Server is one of the critical parts of today's enterprise networks. When somebody request for IP (Internet Protocol), instead of a network administrator, a server distributes IP for the device. It is more effective and less expensive. Also, DHCP server provides more information to the clients such as default gateway, subnet mask. DHCP allows hosts to acquire necessary TCP/IP configuration information from a DHCP server and do more. In order to configure DHCP Server follow the steps.

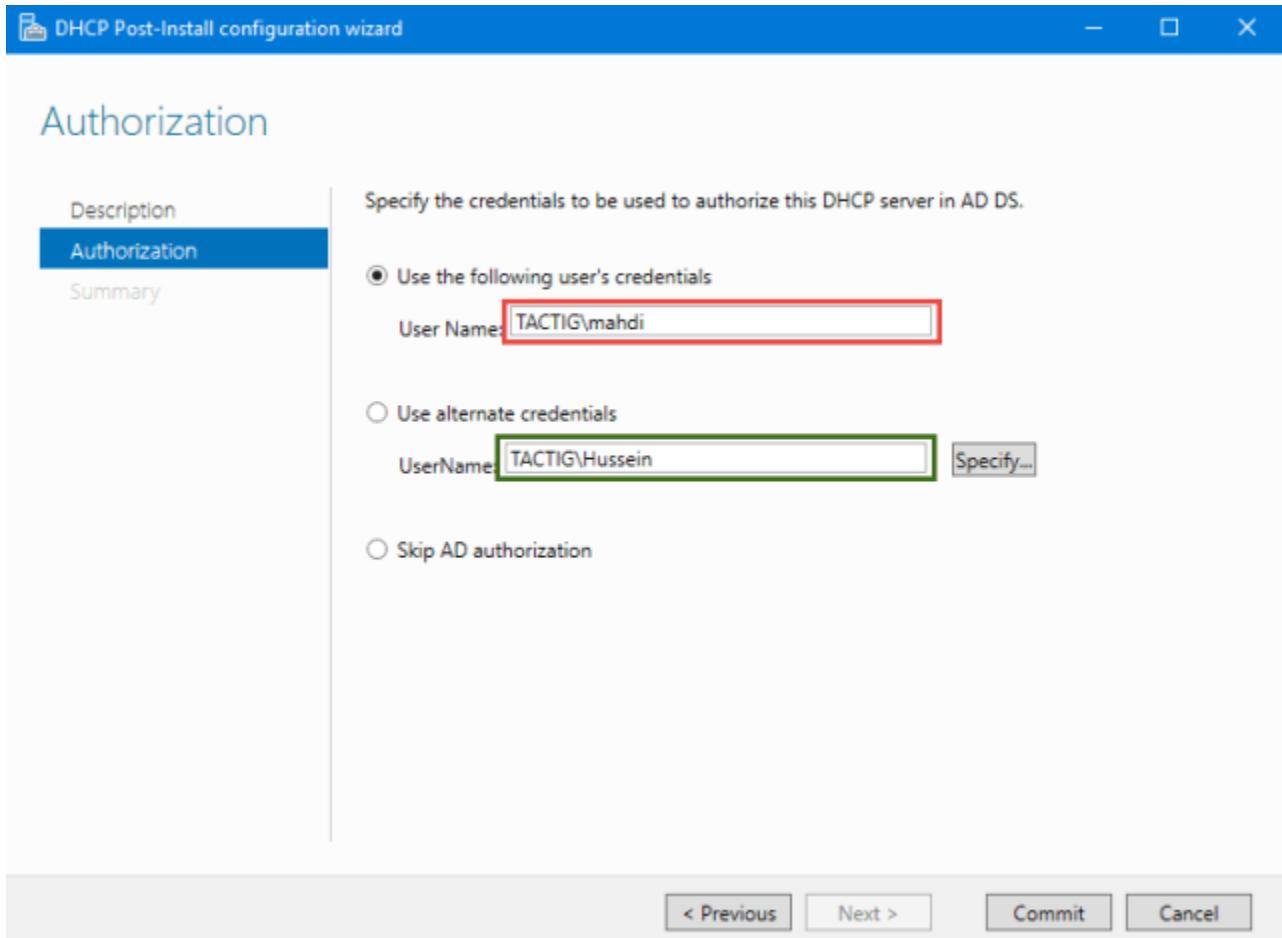
DHCP Server Post-installation configurations

After installing the DHCP role on Windows server, you need to configure DHCP server.

1. When the DHCP role installed, open Server Manager. Click on flag. Then click on Complete DHCP configuration hyperlink.

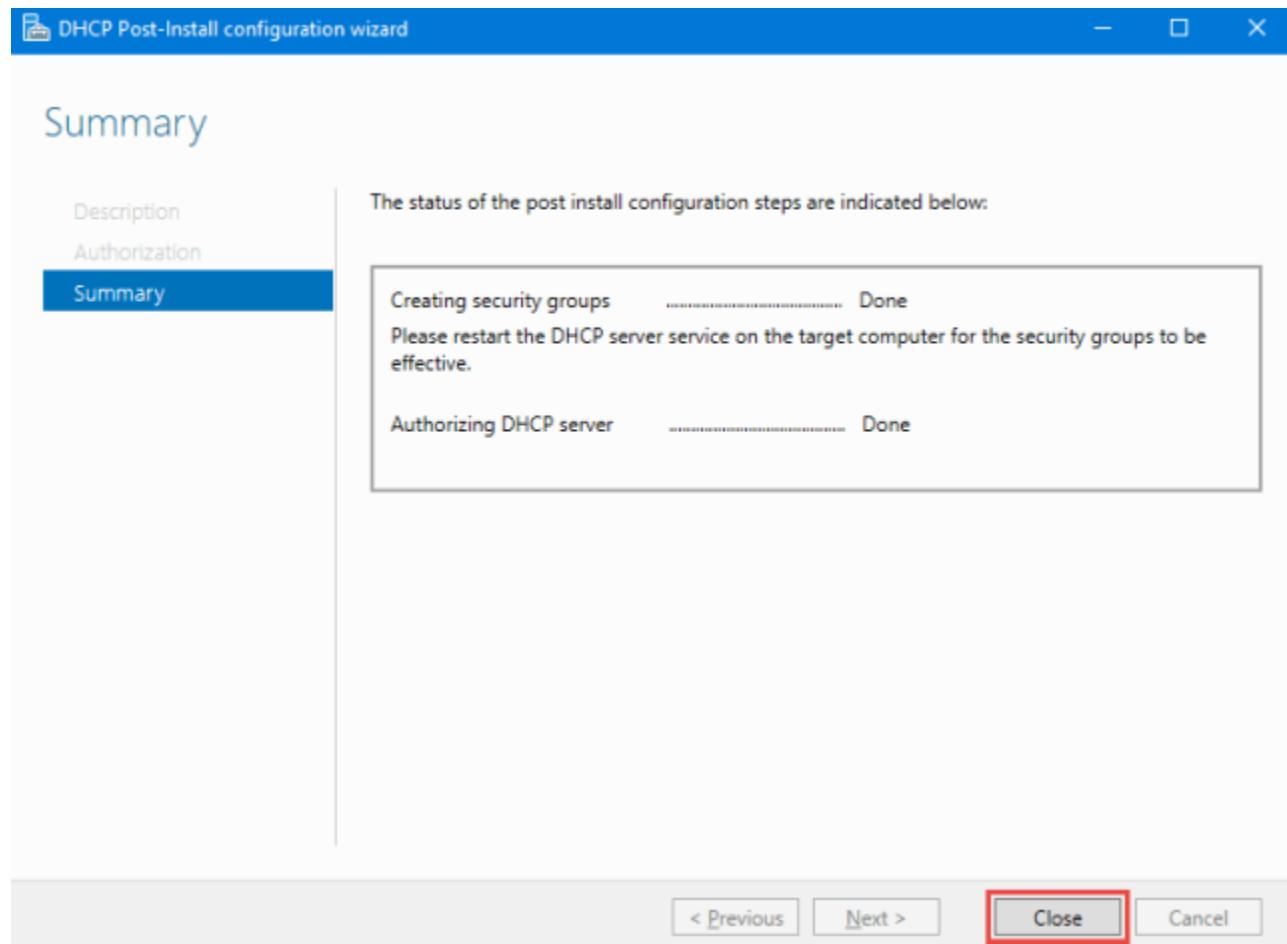


2. Skip the Description page by clicking on **Next** button. Now enter the credentials in both boxes, for entering the alternative credential click on **Specify** button and type the username and password. Make sure you use credentials that have permissions to perform these tasks. Then click on **Commit** button.



Authorization page

3. The Summary page show you the summary of post installation configurations. Click on the **Close** button.

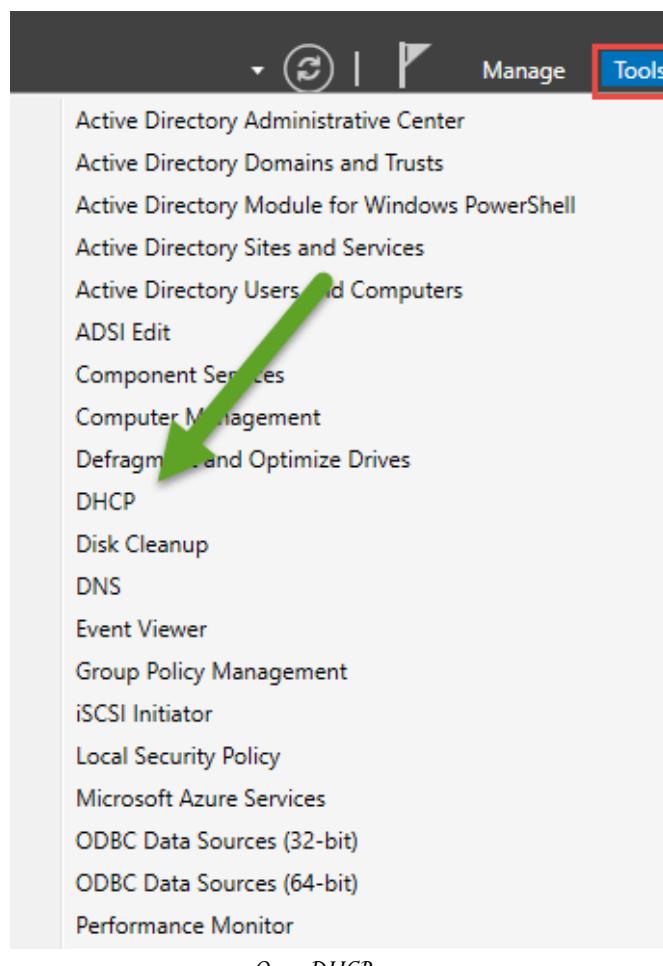


Summary page

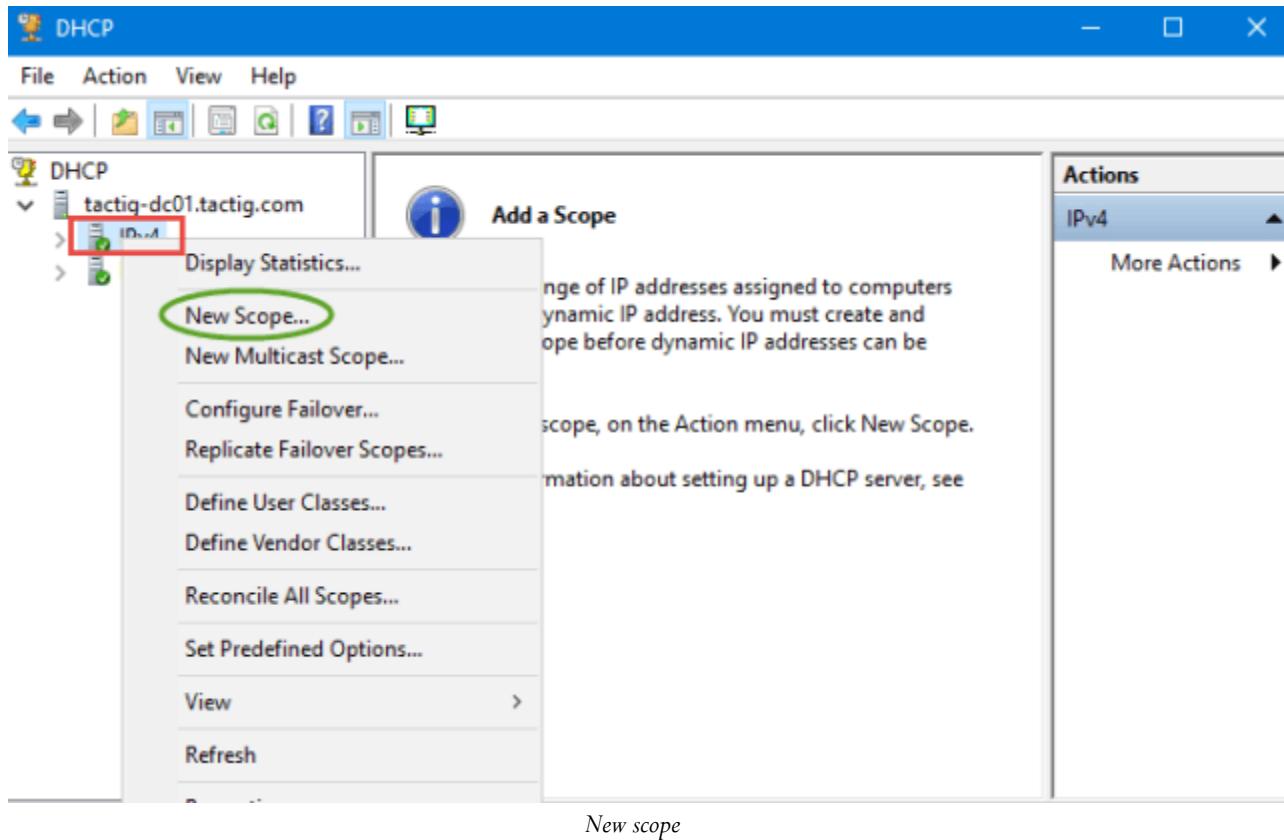
Create DHCP scope

You need to create a DHCP scope. DHCP scope is the range of possible IP addresses that can be assigned to clients. Every scope defines a physical subnet.

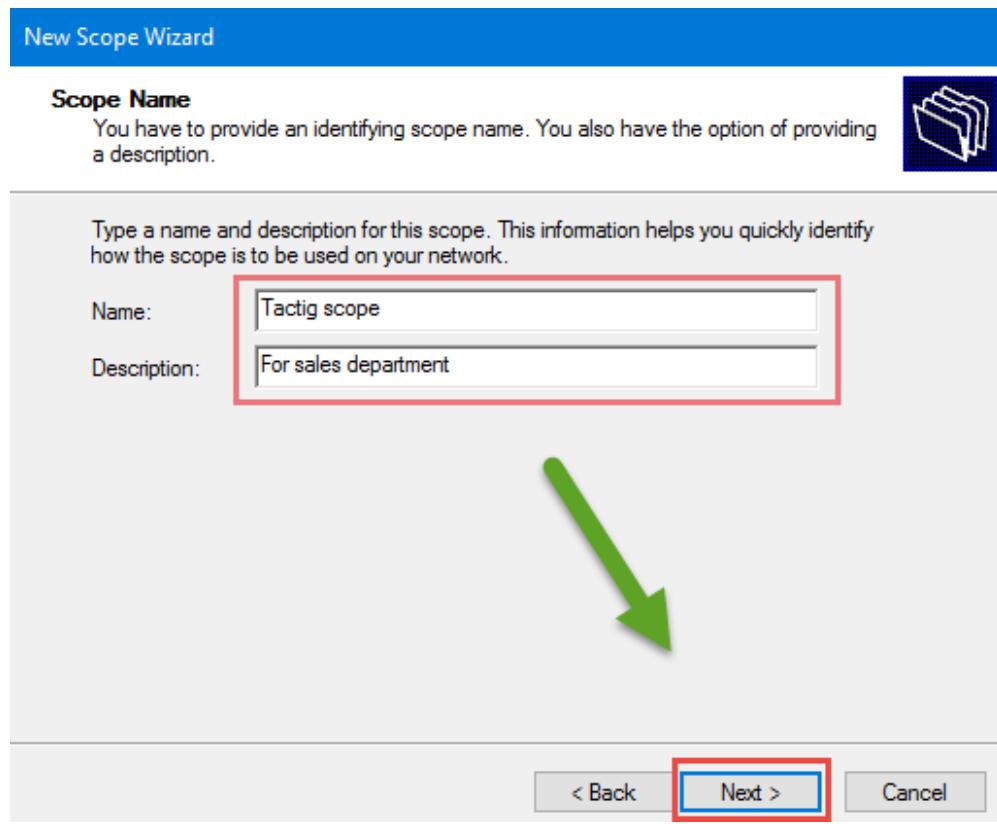
1. Now open **Server Manager** and click on **Tools** tab then click on the **DHCP** to open it.



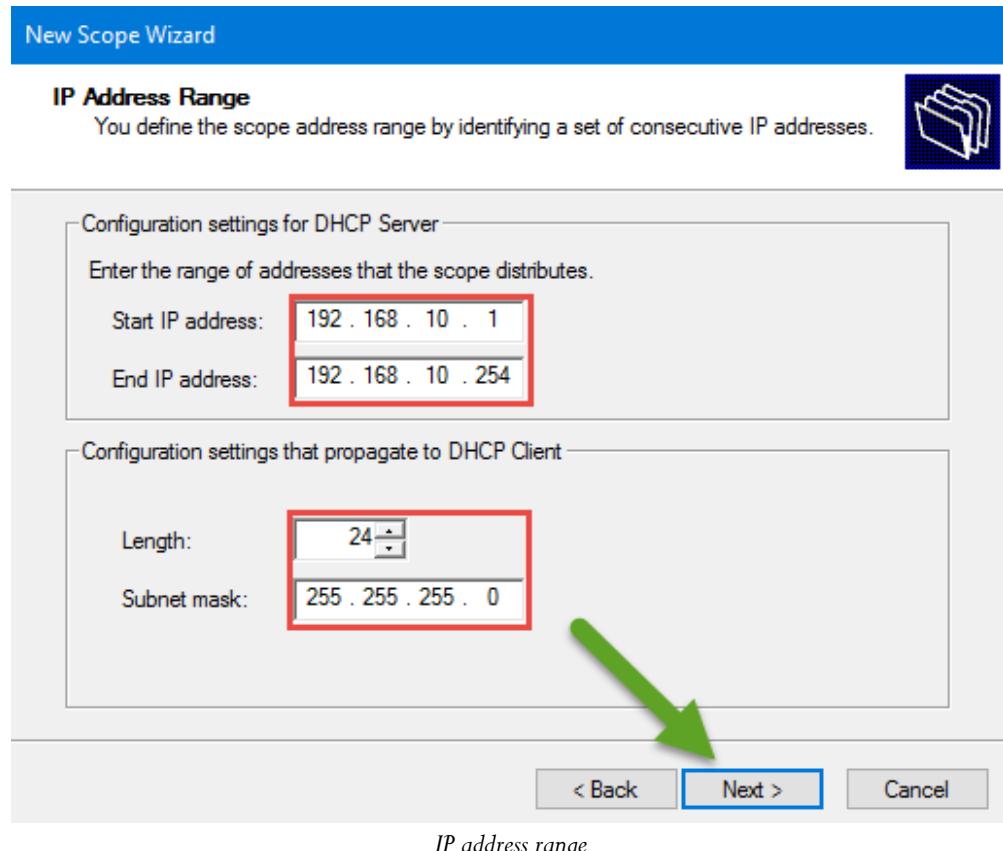
2. When the DHCP opened, expand DHCP server name and right-click on **IPv4** then click on the **New Scope** option to create an IP scope for distribution.



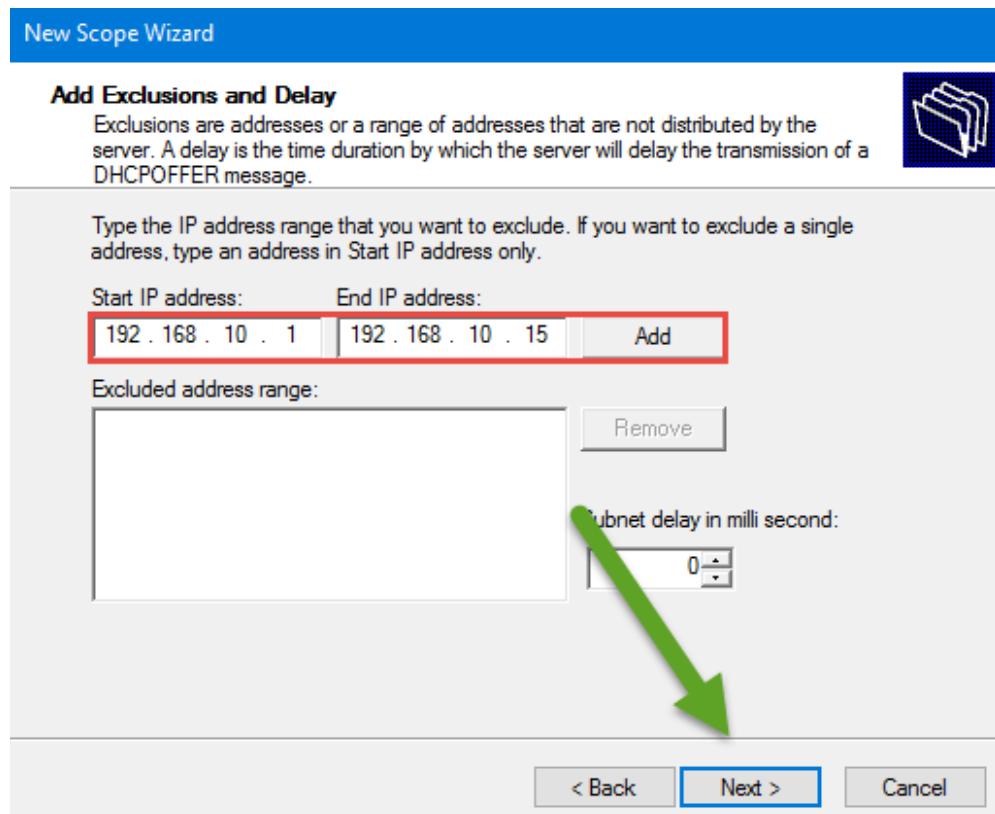
3. Type an scope name. Add a description for scope. Then click **Next** button.



4. Specify the IP Address Range by entering the **start IP Address** and **End IP address**. The length automatically assigns, based on you IP address class and the subnet mask assigns automatically. Then click on **Next** button.

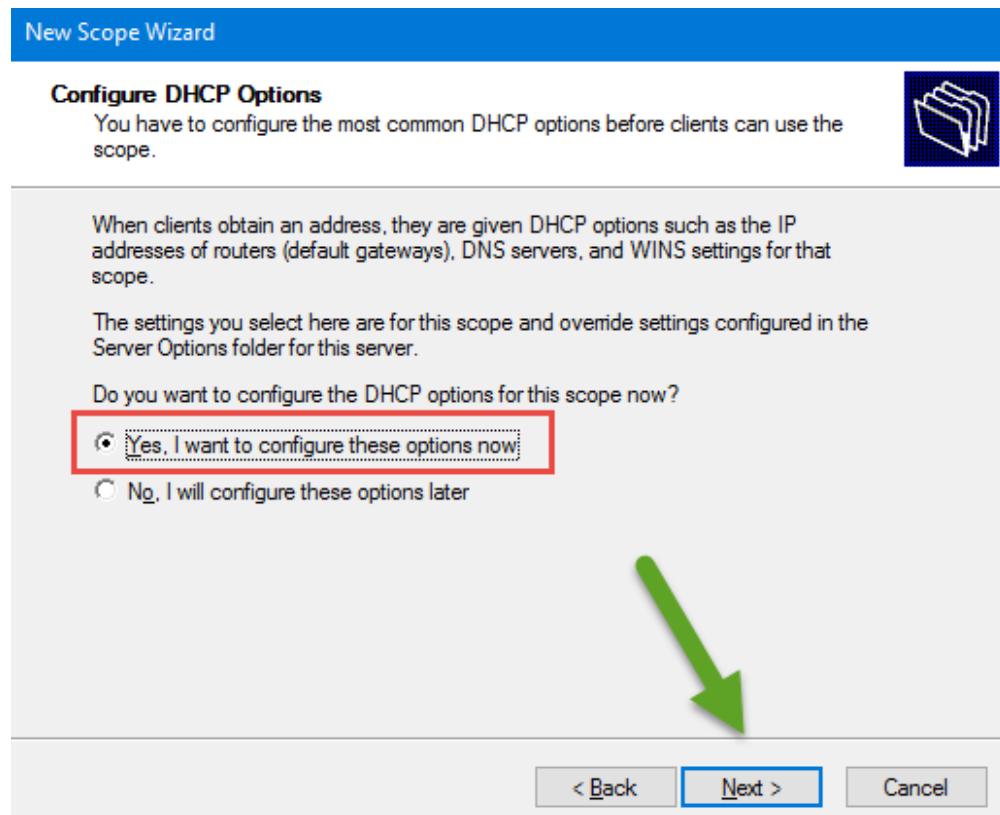


5. You can exclude some of the IP addresses for the servers or especial services. The IPs excluded will not be assigned automatically. IPs before and after the exclusion range are assigned. IPs excluded are assigned on servers manually. Specify the IP range you want to exclude, add the IP range and click on **Next** button.



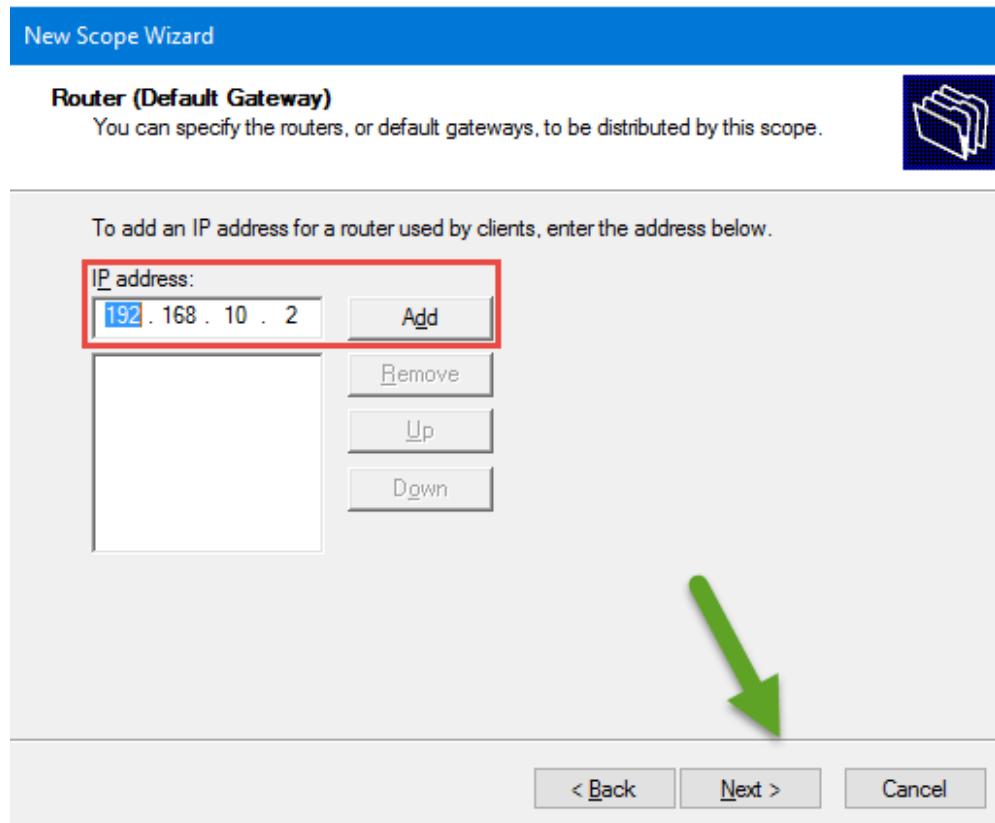
Exclusion and Delay

6. On the Configure DHCP option page, select this option: **Yes, I want to configure these options now.** Clicking on **Next** button.



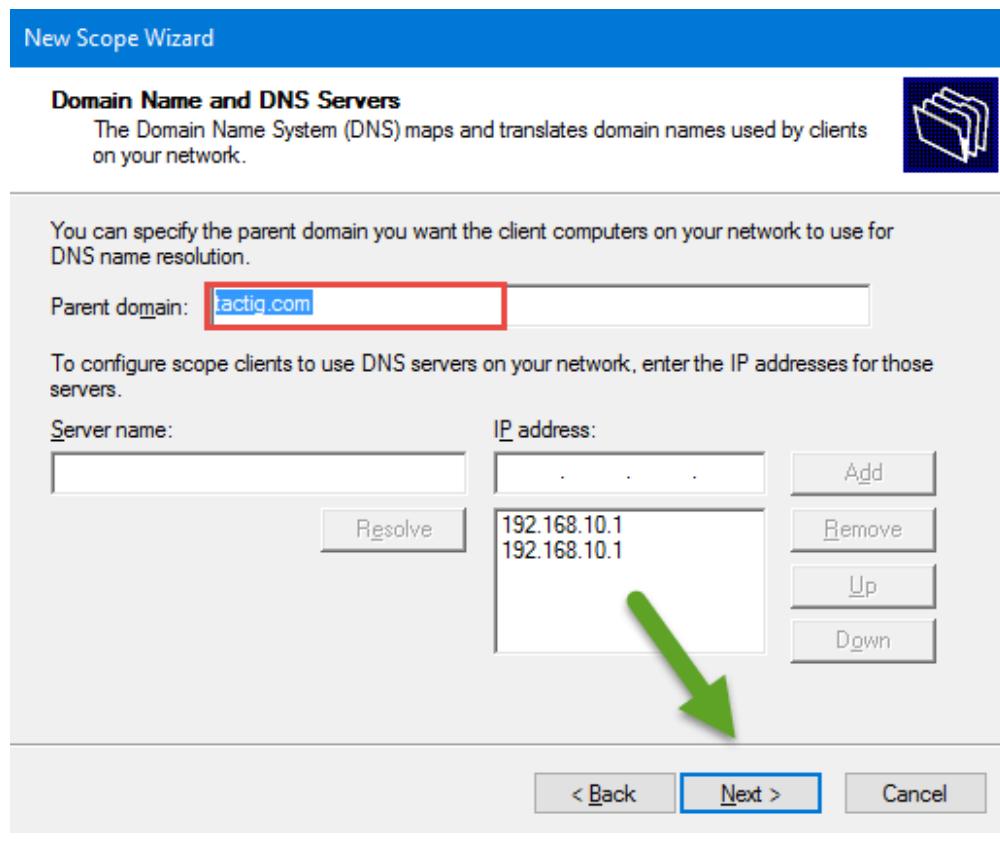
Configure DHCP Option

7. Enter your Router's IP address in the box and click on **add** button to add the IP address. Then click on **Next** button.

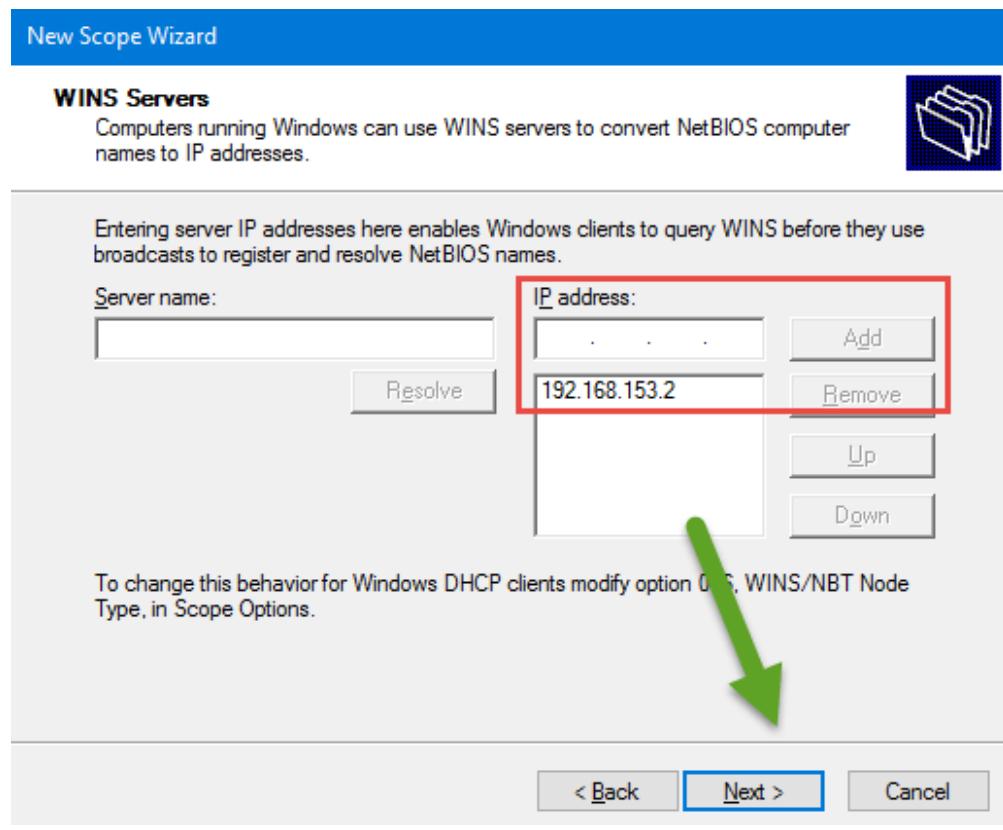


Router (Default Gateway)

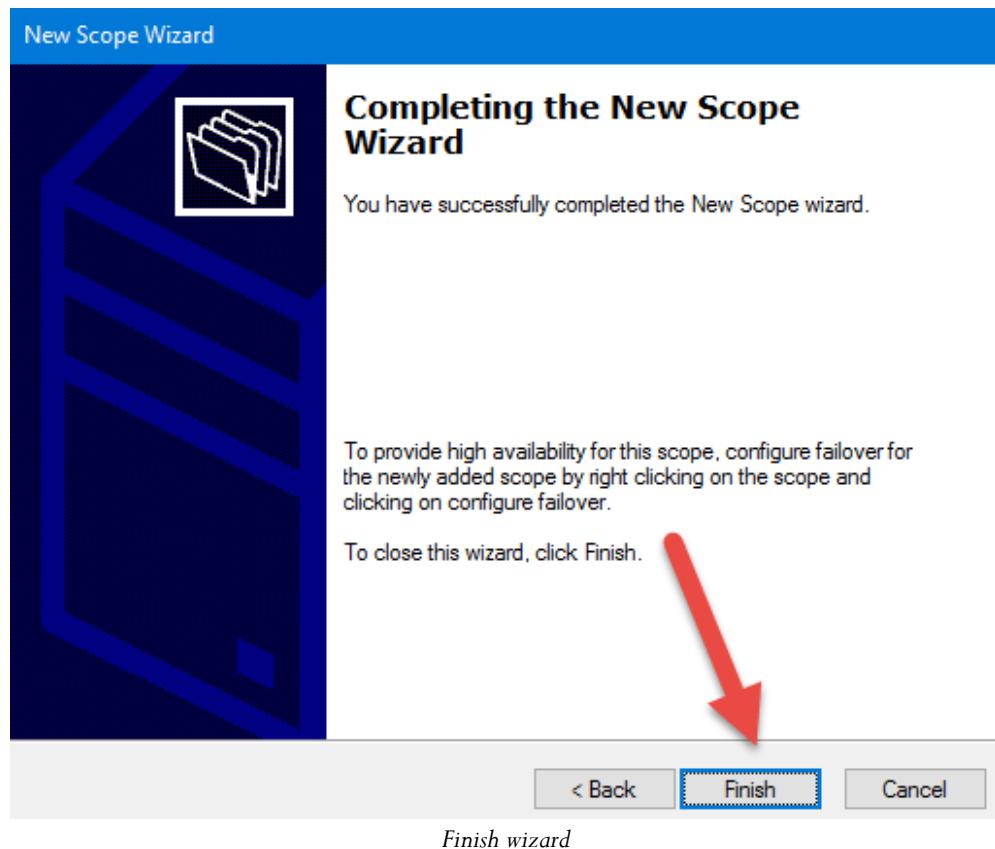
8. DNS (Domain Name System) server translates the name to IP address and IP address to name. Type the DNS server's name in the box. Then type IP address in the box below then click on Add button to add to the IP address. At the end click on **Next** button.



- 9.** WINS Server translates NetBIOS computer name to IP address. Type WINS server name in Server name box. Type the WINS server's IP address and click on Add button. Then click on **Next** button.



10. Finish the wizard clicking on **Finish** button.

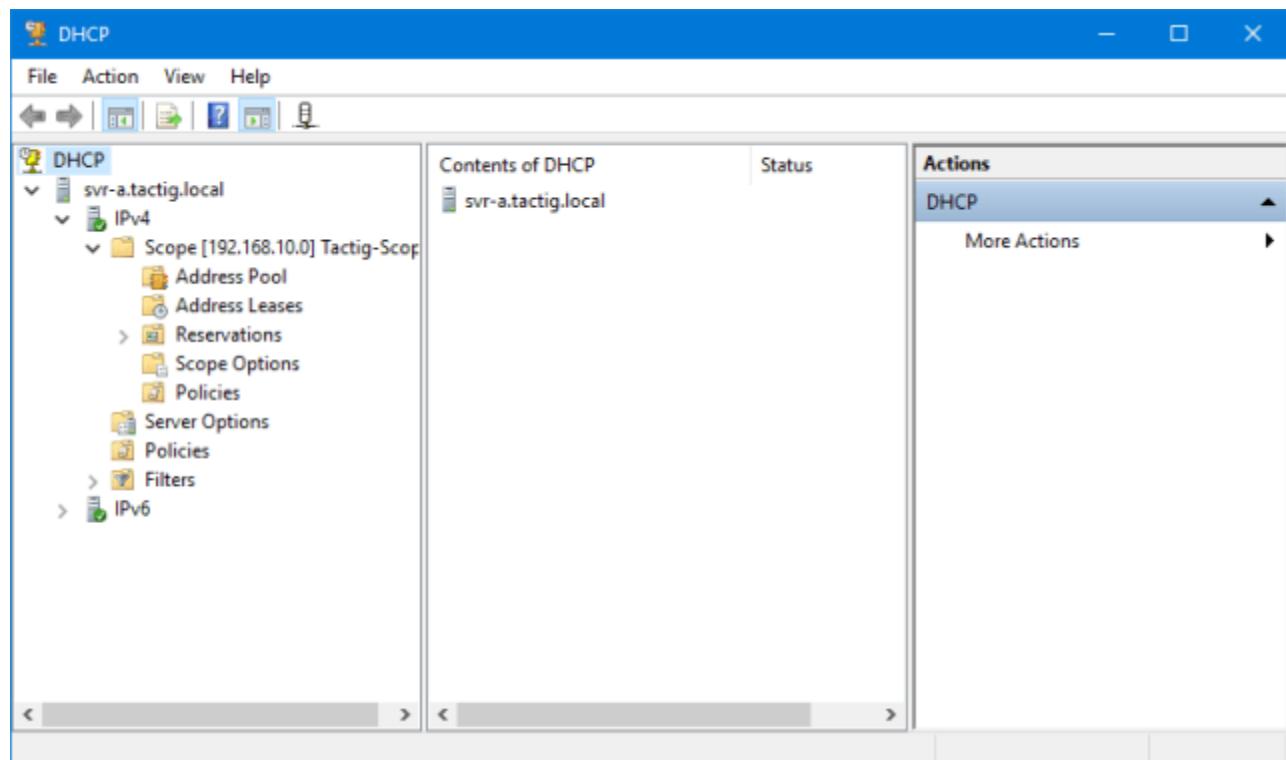


DHCP Server Console

We are done with the creation of new scope. It is the time to know more about DHCP server console. Below the DHCP server name, you see IPv4 and IPv6 options. It means that Windows server 2016 can support both IPv4 and IPv6 versions of IP address. Expand IPv4 to see the scope you have created. Also Server Options, Policies and Filters.

Expand the scope. Things you see are these:

- **Address Pool:** IP address range can be assigned to clients and exclusion range is listed here.
- **Address Leases:** IP address which have been assigned to clients dynamically are listed here. IP address which have been assigned manually won't be listed here.
- **Reservations:** Reserved IP range is listed here.
- **Scope Options:** Some options like Router, PXE client and etc.
- **Policies:** Policies created for DCHP server are listed here.



Conclusion

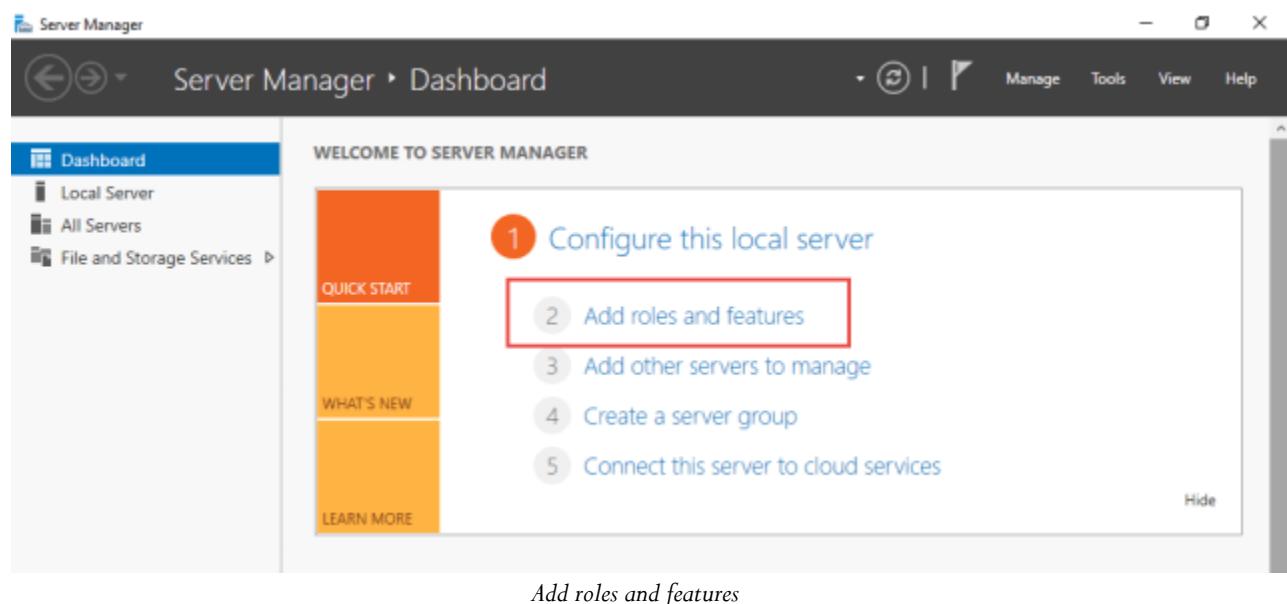
DHCP has been successfully configured and ready to be used. For any question, suggestion, feel free and leave a comment. I answer your question as soon as possible.

When you install windows server it is just a box, nothing is there like services, if you want to use the services you should install and configure them manually whether [DHCP](#) or DNS or other services. The **DNS** stands for **Dynamic Host Configuration Protocol** and when you create an account on a server or domain controller, your computer, and the server communicates with each other by their IP addresses and you can't remember a lot of IPs. Here the DNS comes to action means it changes the IP to the name and name to the IP. When you type a server name like tactig-dc01, it changes the name to IP:192.168.10.1. In this article, you'll learn how to install DNS server step by step

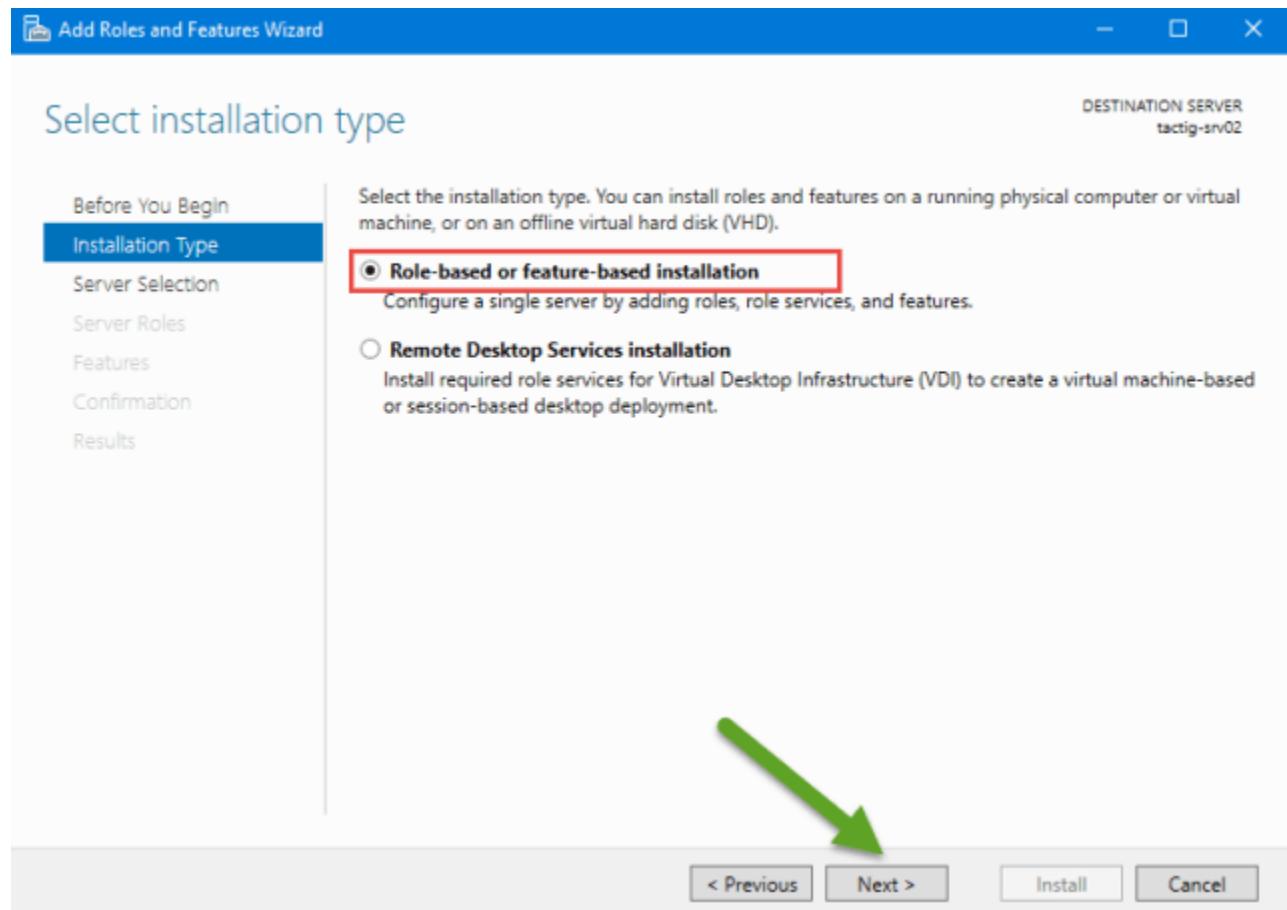
- [Install DHCP Server on Windows Server 2016?](#)
- [Configure DHCP Server fully on Windows Server 2016](#)

Install DNS Server on Windows Server 2016 Step by Step

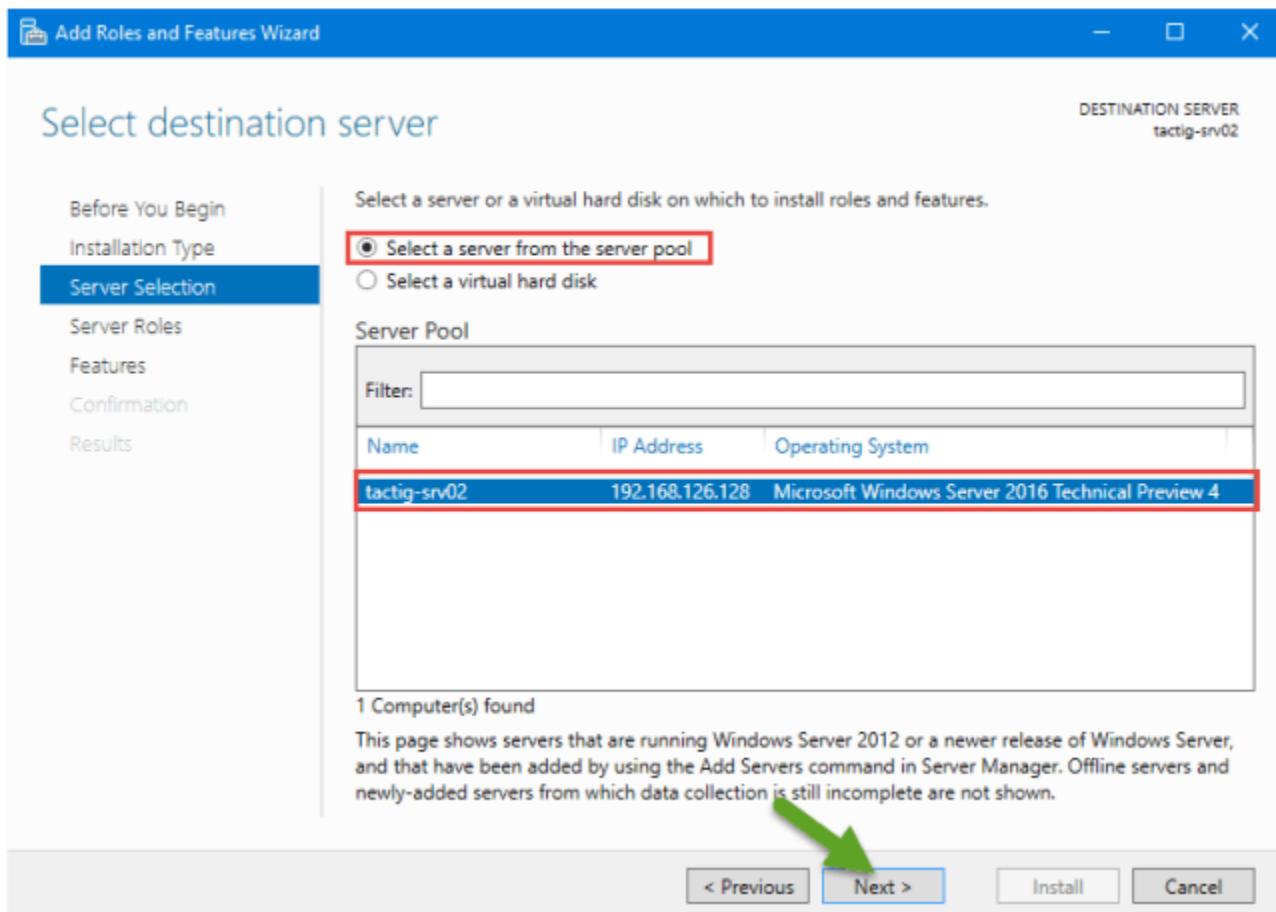
1. Every service and feature are installed from Server Manager, press the start menu button and click on the **Server Manager** icon.
2. When the Server Manager opened, click on the **Add roles and features** option.



3. Skip the **Before you begin** page and on the **Select installation type** page, just let it by default then click on **Next** button.

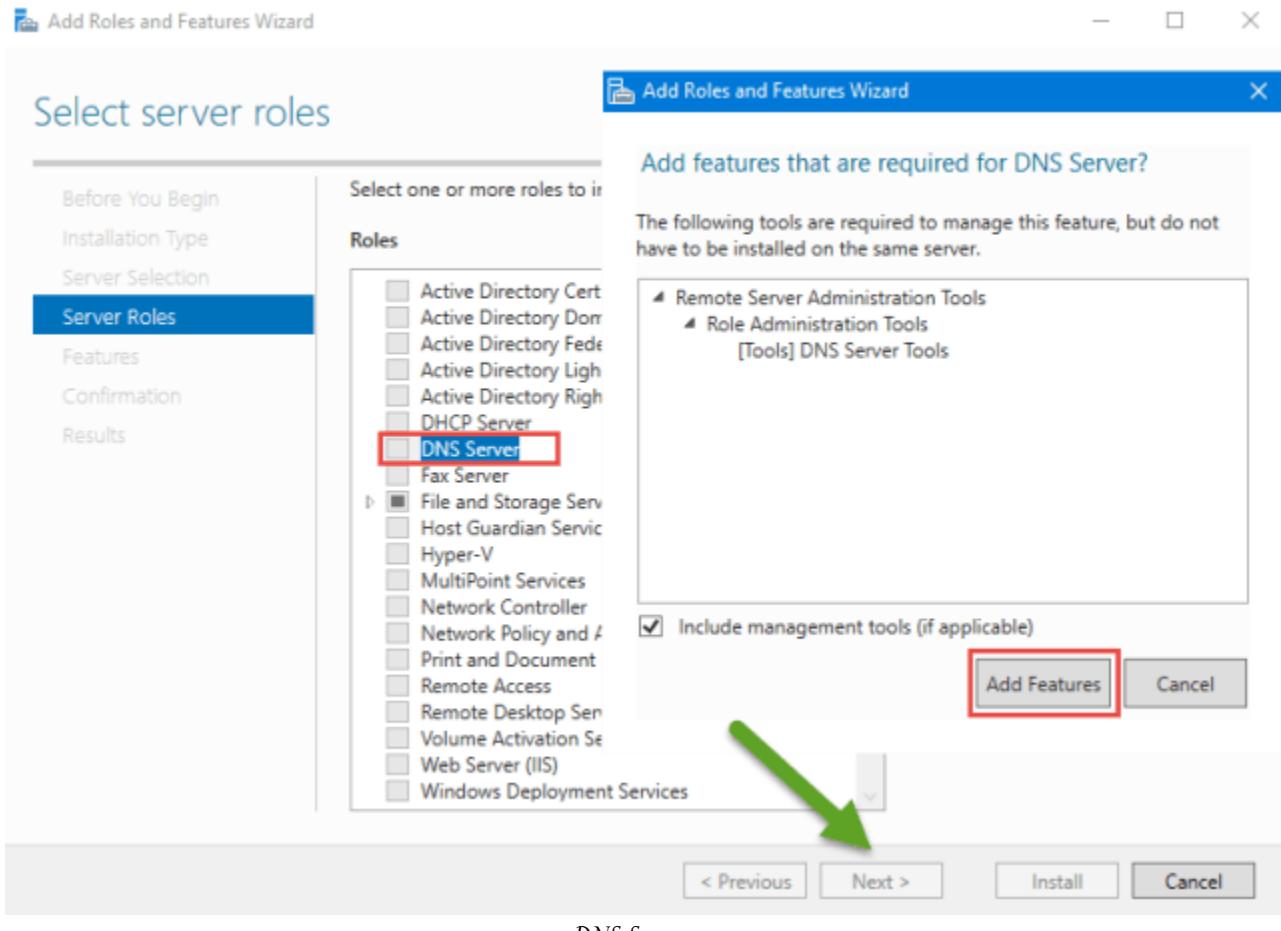


4. In the **Select server destination server** page, select the **Select the server from server pool** option and select the server from server pool that you want to install the DNS on and hit **Next**.

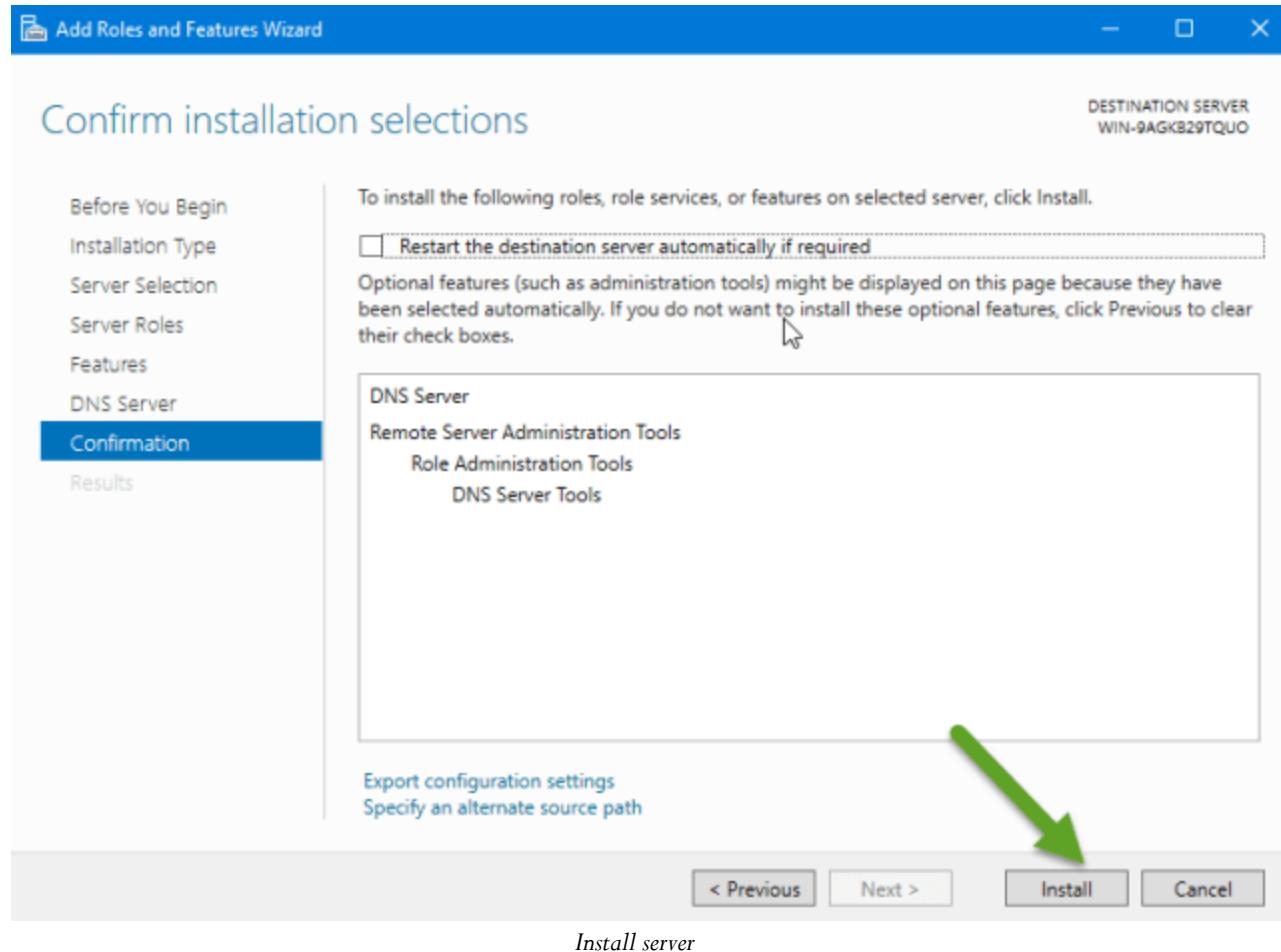


Select destination server

5. Select the **DNS Server** from roles and a page will open that wants you to give permission to install managing tools for DNS server proper work, click on **Add features** button then hit **Next**.



6. Here on the **Select feature page**, no feature is needed to be installed so just hit **Next**. On the **DNS Server** page you can read some important information about the DNS server and hit **Next** then here don't do anything just click on the **Install** button, it will take some time depending on your computer.



Conclusion: The DNS server is now installed and ready for configuration, no reboot is needed. To configure it check out the below article and read it out. For any question, feel free and leave a comment. I would answer your questions as soon as possible. As well as, don't forget to configure it to start and let it work otherwise you can't.

Don't Forget: [Configure DNS Server Fully on Windows Server 2016?](#)

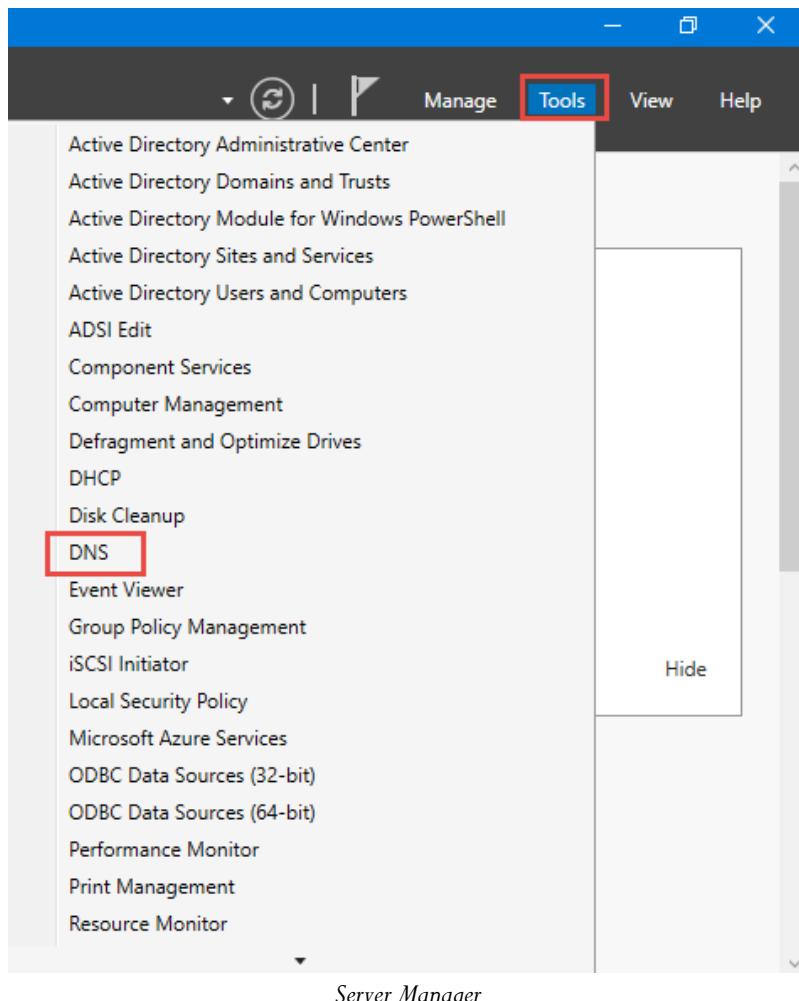
The best way to learn is practice. Don't forget to do it till the time that you feel you've completely learned it.

After installing DNS, of course, you need to configure DNS because it is an important task to make DNS work correctly. DNS stands for **Domain Naming System** and the goal of DNS is to change name to IP address and and IP address to name like when you open a server or a web page, you enter a name like www.tactig.com, here the DNS server changes the name to the IP and you can visit the web page or get access to server sources. In this article, I show you how to come along to configure DNS Server fully on [Windows Server](#).

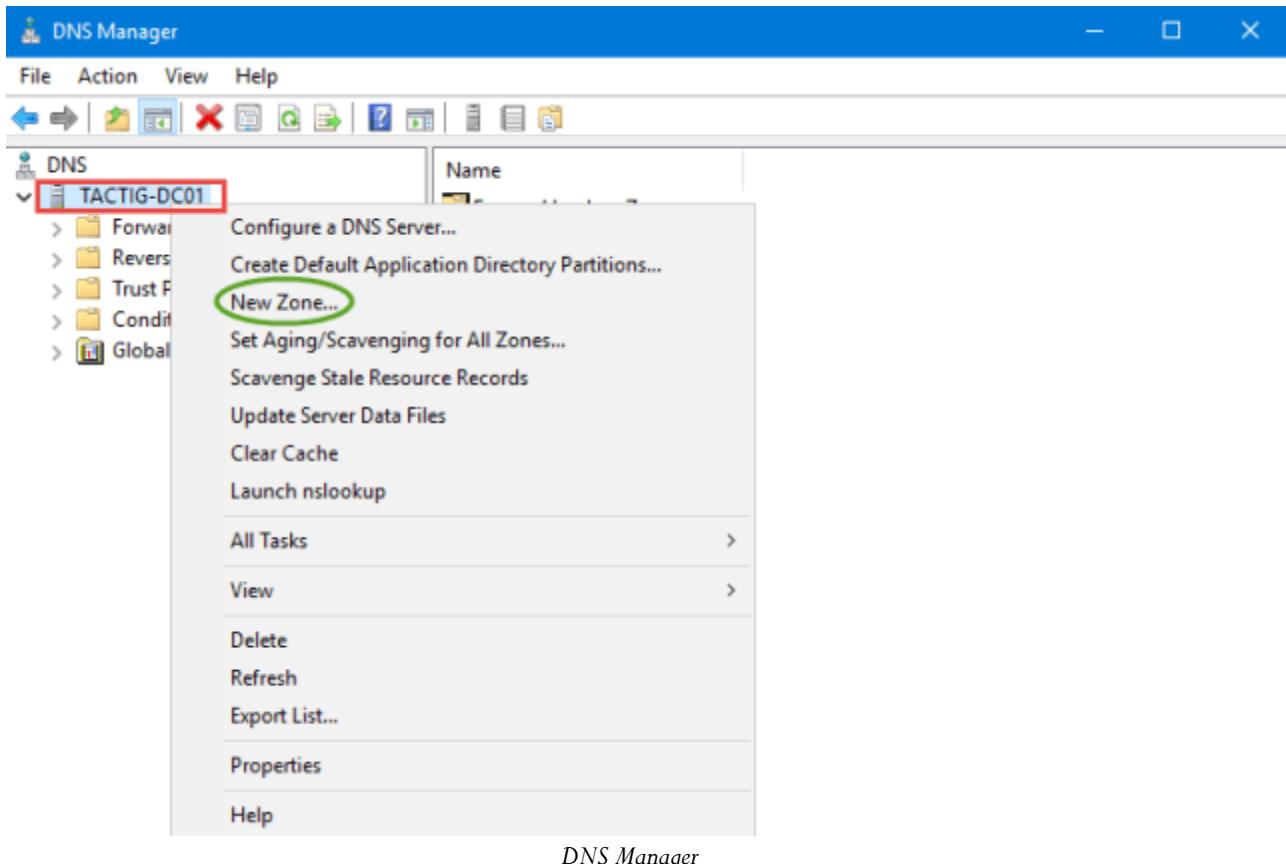
Configure DNS Server Fully Step by Step

The DNS configuration is somehow like installing it, means you don't need to worry or call any administrator to do it because you can do it along by this article, let's move towards it.

1. When the DNS Server role installed, open the **Server Manager** window, click on **Tools** tab that the dropdown menu appears and click on the **DNS** icon to open the **DNS**. Here I have named my server tactig-dc01.

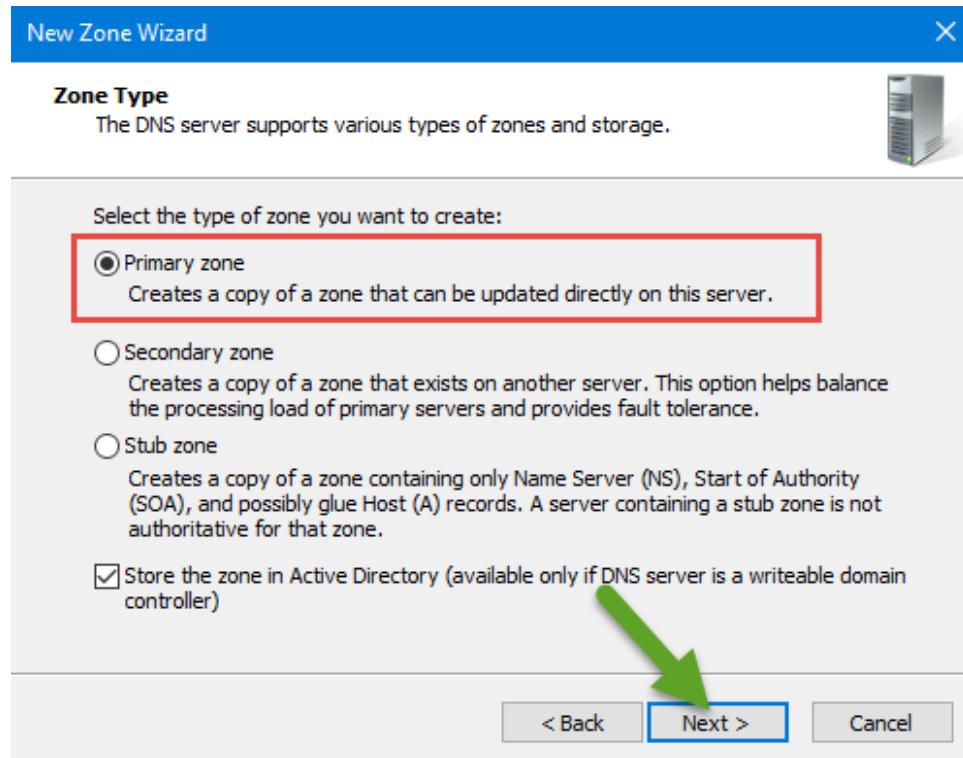


2. At the first, what we need to do is creating a zone, it is a part of a DNS that the records are restored, for that purpose right click on your computer DNS server name and click on the **New zone**.



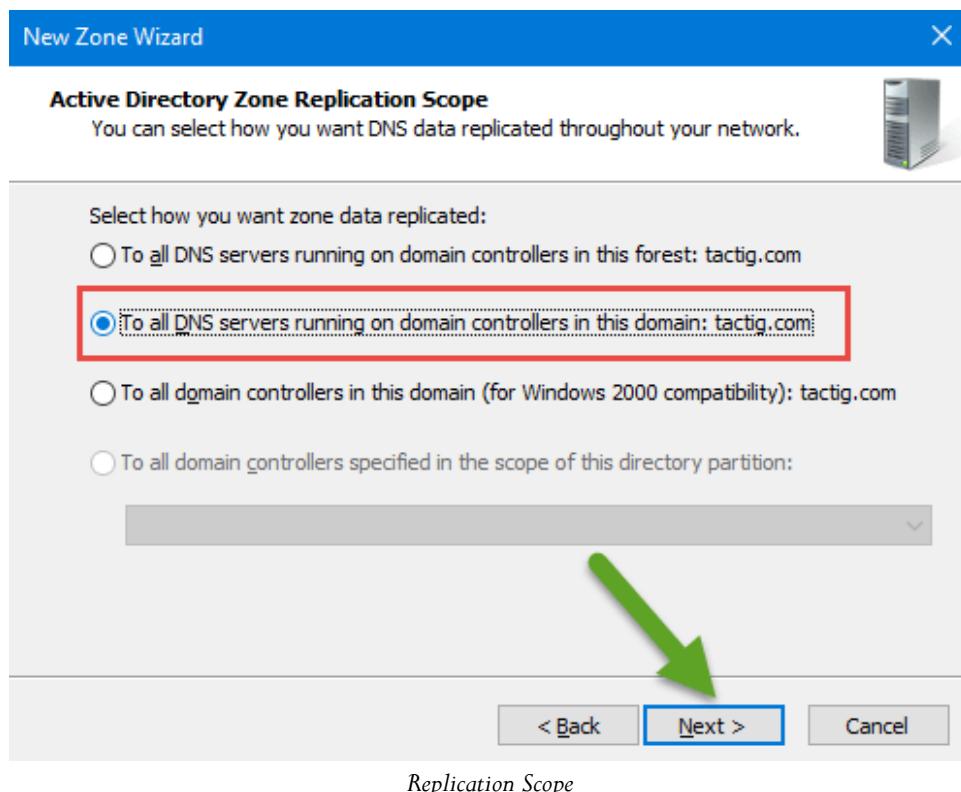
3. Skip the welcome page and on the next page, you'll see three kinds of zone available.

- **Primary zone:** is rewritten zone that is not copied from somewhere.
- **Secondary zone:** is the copy of another zone, when you create a secondary zone you should copy the records from another source.
- **Stub zone:** is providing information whatever server holds a special zone. We want to create a primary zone, then click on that then hit **Next**.

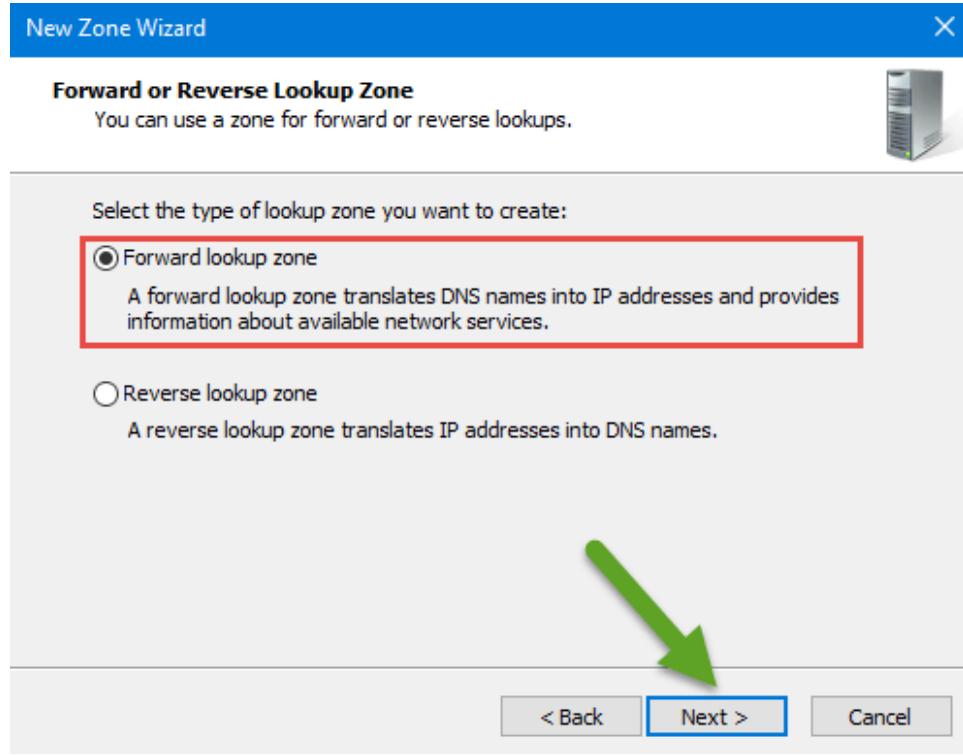


4. In the next page, you will be asked about replication method.

- The first option, (**To all DNS servers running on domain controller in this forest:** <domain name>) is used when you want to replicate with the domains and subdomains in the forest but that increases the network traffic.
- The second option, (**To all DNS servers running on domain controllers in the domain: <domain name>**) is used when you want your DNS server replicate with all DNS servers in your own domain.
- The third option, (**To all domain controllers in this domain (for Windows 2000 compatibility): <domain name>**) is used when you want your server replicate with only domain controllers in your own domain. Select the 2nd option. Hit **Next**.

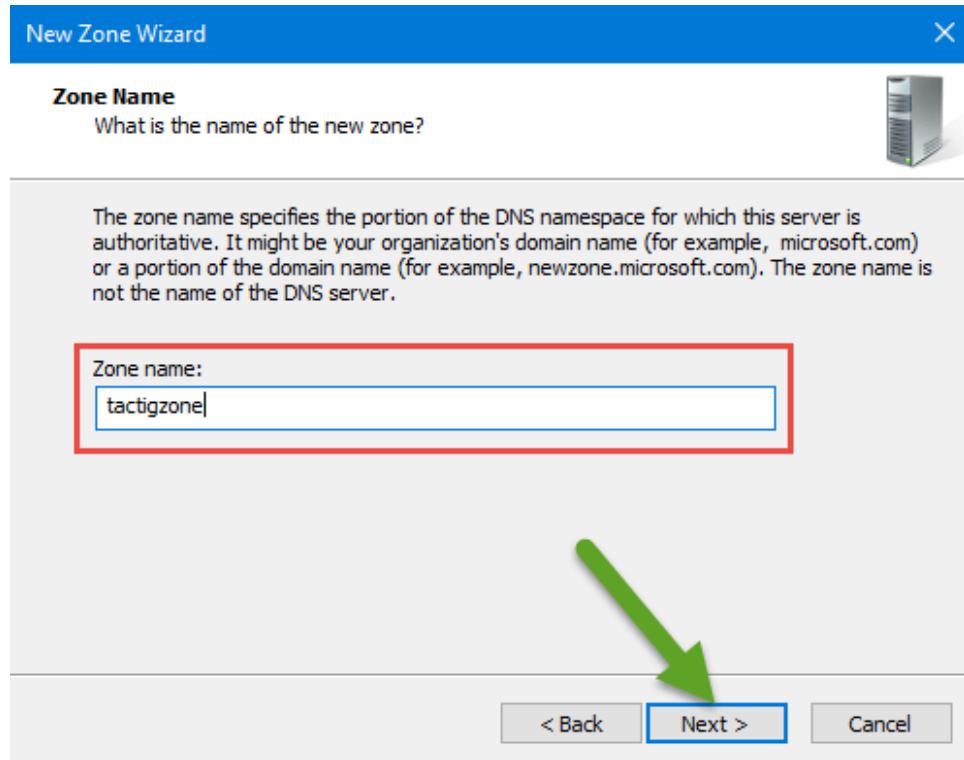


5. In the forward or reverse lookup zone page, select **Forward lookup zone**. The Forward lookup zone translates DNS name to IP address and the 2nd option, **Reverse lookup zone** translates IP to DNS name, just select **Forward lookup zone** then hit **Next**, we will configure the Reverse lookup zone later.



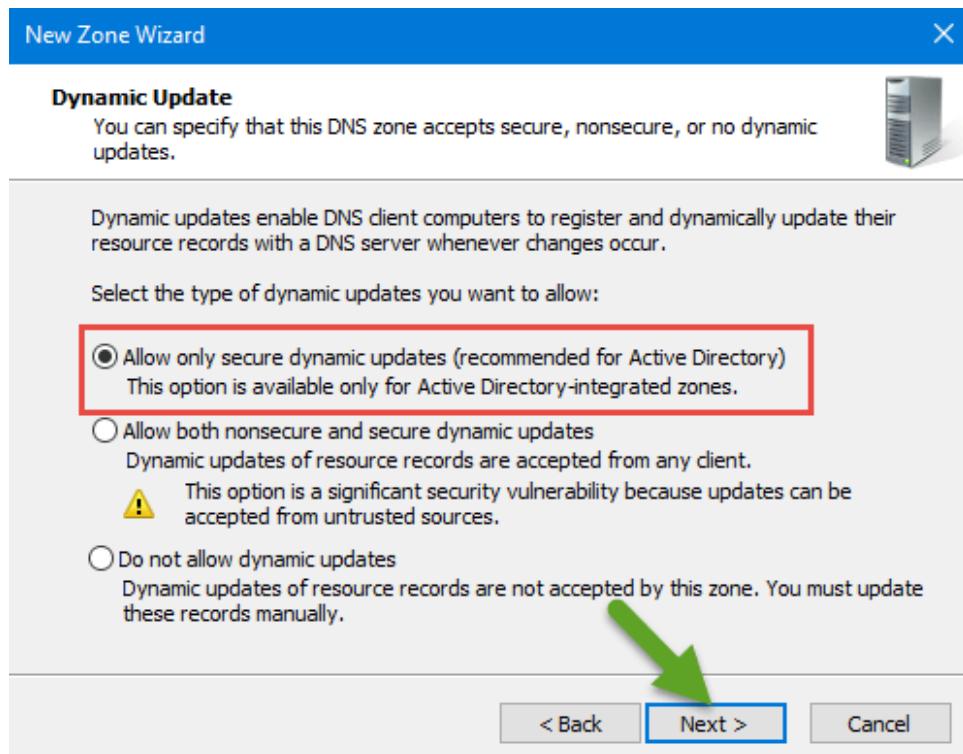
Forward lookup zone

6. Specify a name for the zone then click on the **Next** button.

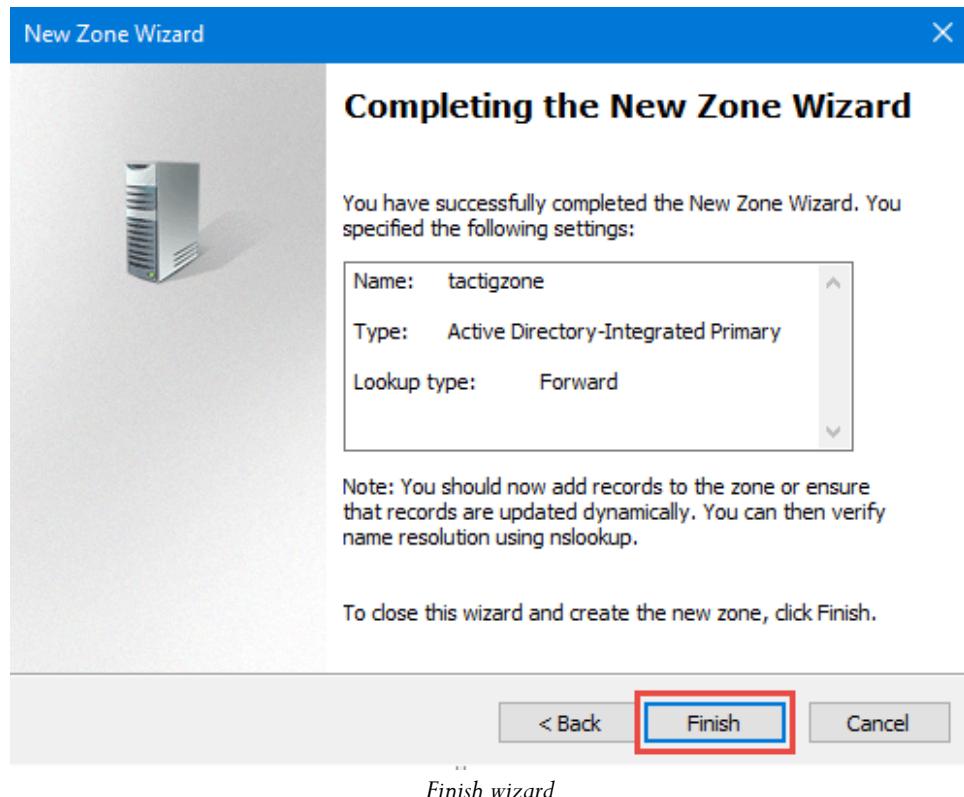


Zone name

7. How do you want your zone contents update mode? The recommended option is **Allow only secure updates**. This option helps you DNS server not to be affected by spywares and viruses, select the first option and hit **Next**.

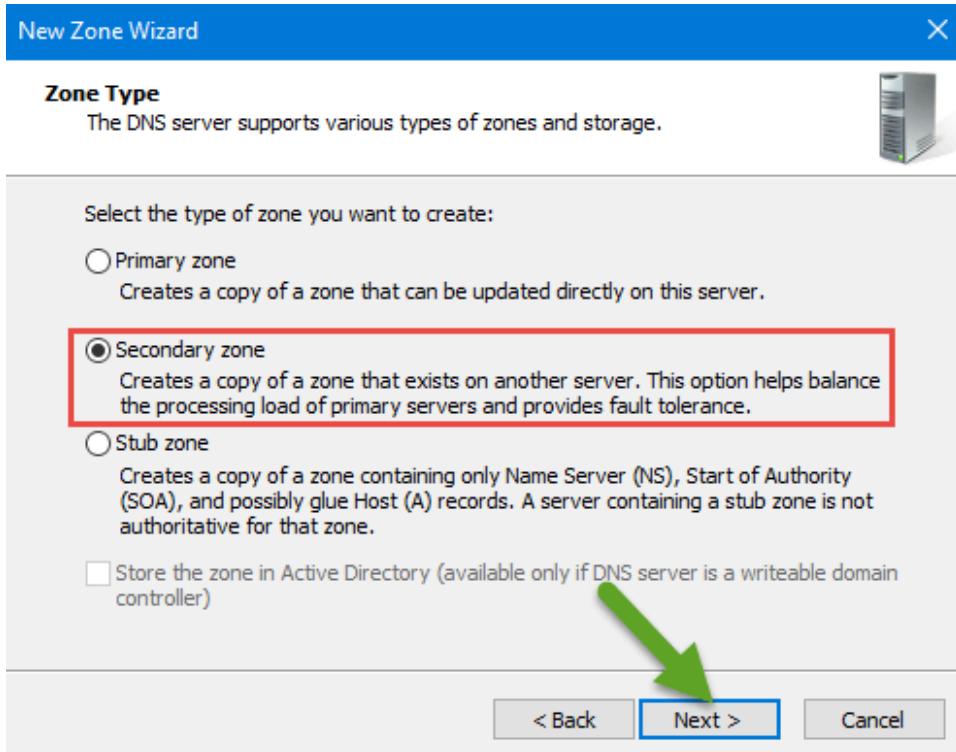


8. After continuing, your primary zone is created, just click on the **Finish** button to start working it.



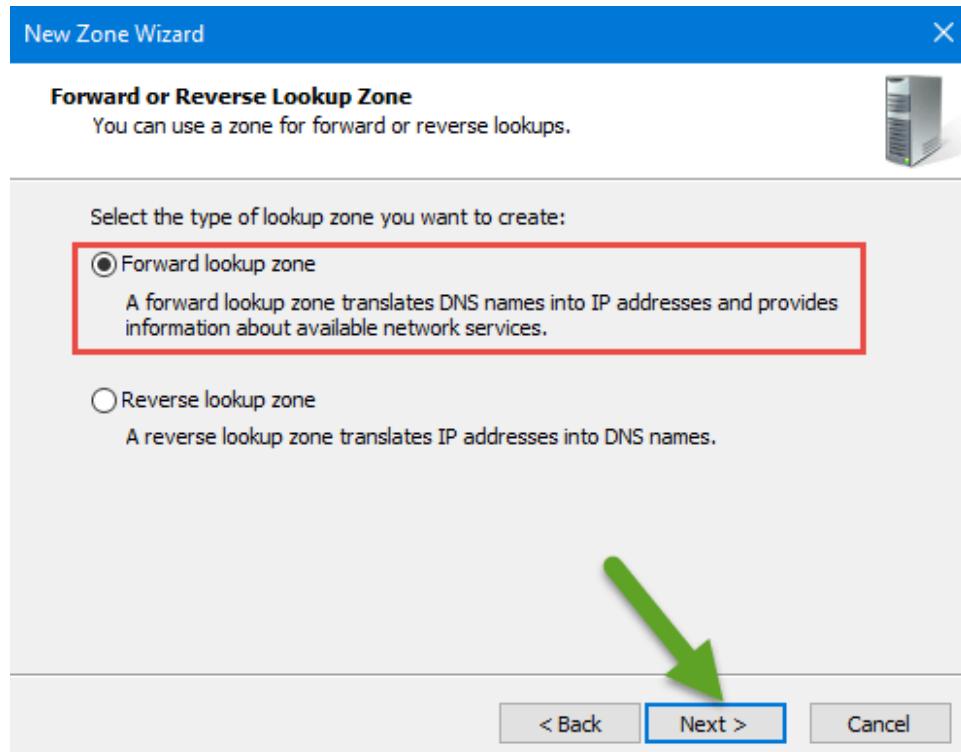
Now the zone has created successfully but the DNS configuration is not done fully yet and the secondary zone as mentioned before is copy of another zone. It means you should copy the contents from somewhere else. Now I want to show you how to create a secondary zone. You need one another server, DNS server installed on. I name the new DNS server: tactig-dns02. The new server that we try to use as a second DNS server should be member of the Active Directory Directory Services. You can do that. If not read the articles about in this website.

1. Now we'll work on **tactig-dns02** server, open the **DNS Manager** tool and right-click on the **Forward lookup zone**, click on the **New zone** then skip the welcome page by hitting **Next**. In the Zone Type page, select the **Secondary zone**.



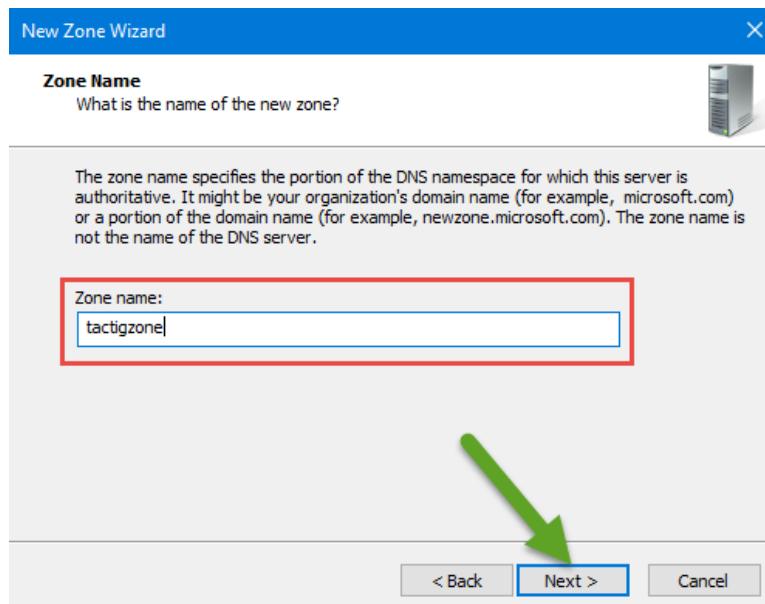
Secondary zone

2. In the forward or reverse lookup zone page, select the **Forward lookup zone** option. It changes the DNS names to IP address. Then click on **Next** button.



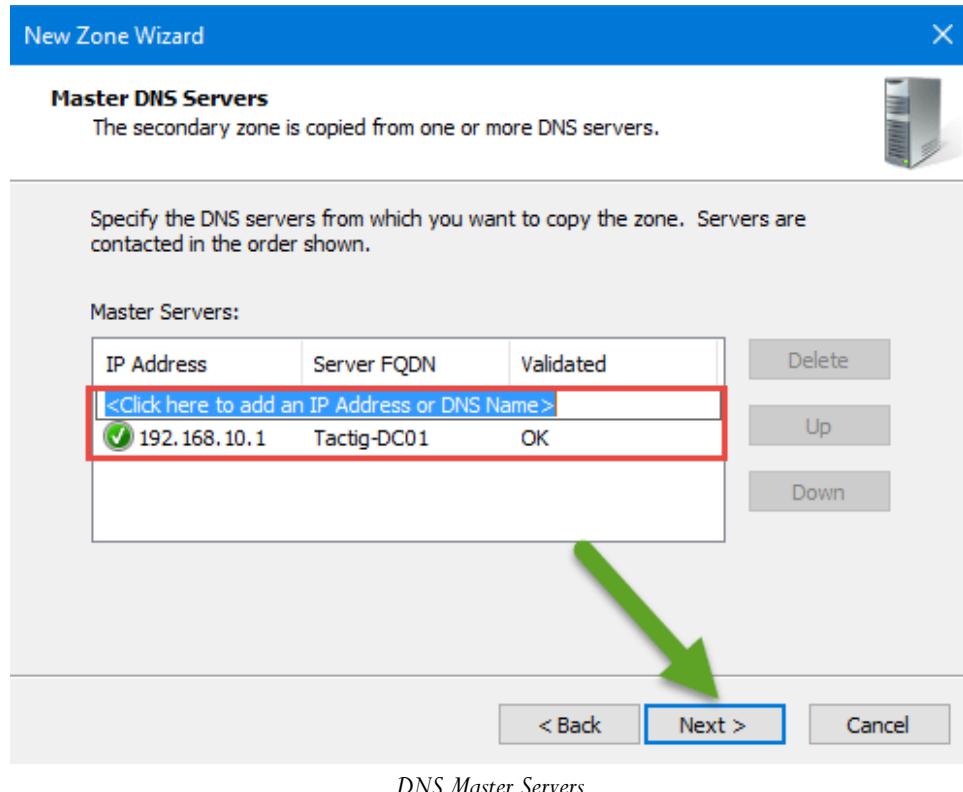
Forward lookup zone

3. Specify a name for the zone. Enter name of a zone that you've created before as a primary zone. Here you will have copy of the primary zone as a secondary zone.

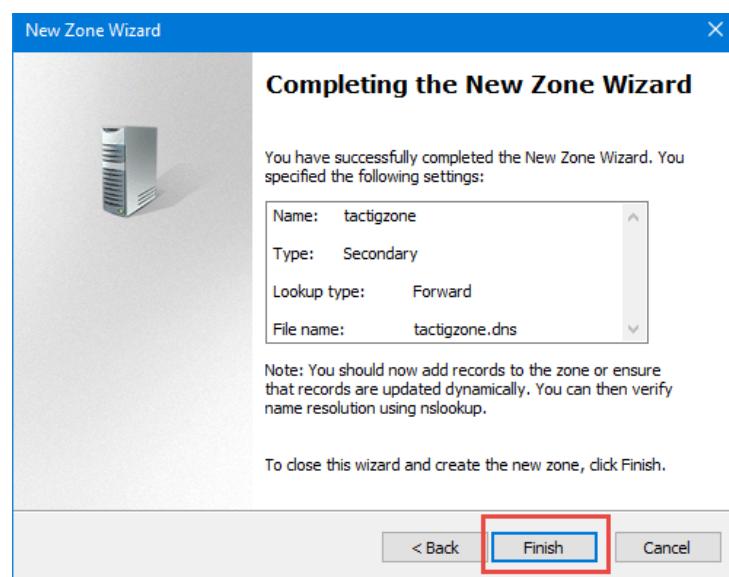


Zone name

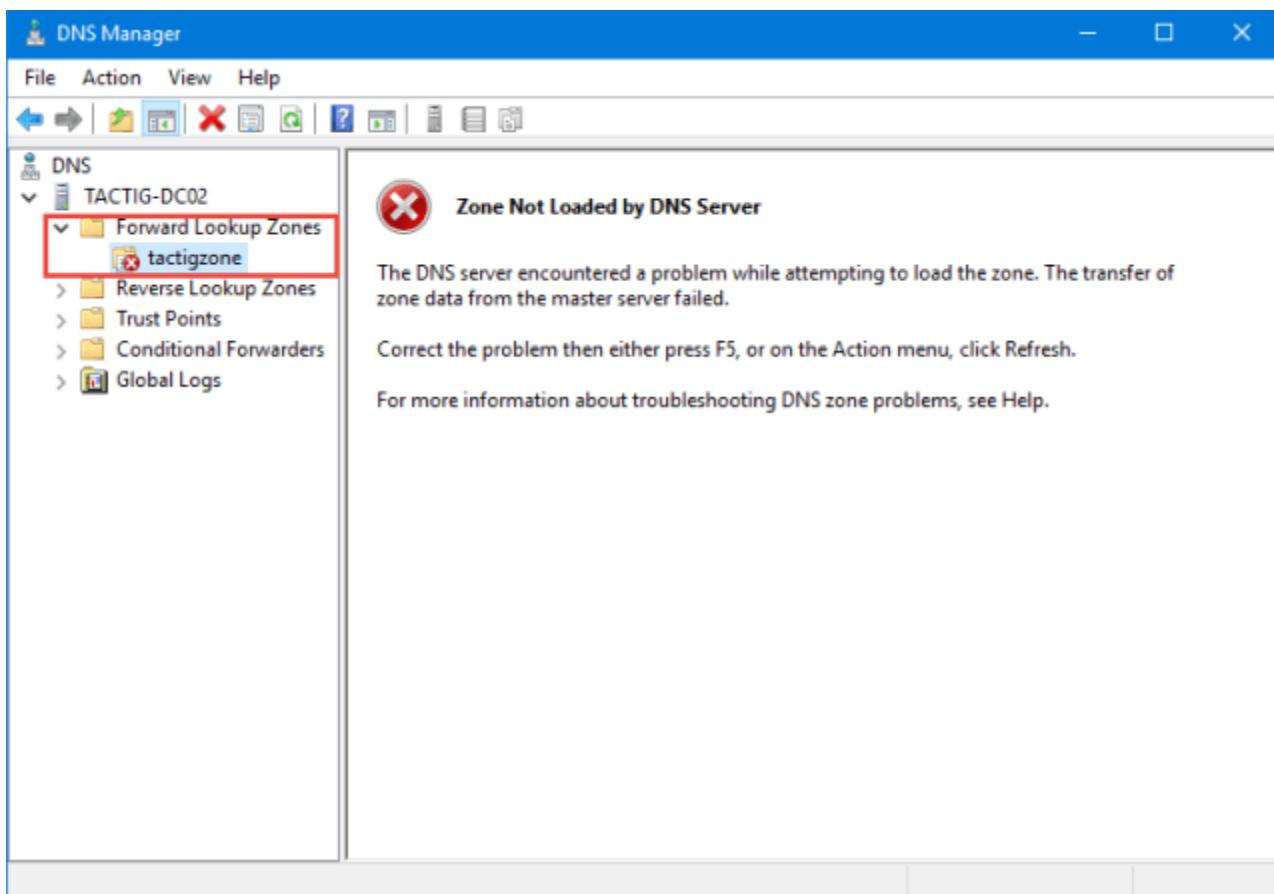
4. In the **Master DNS Servers** page, you need to specify the master server. The Master server is the server that you've a zone out there and you want to copy its contents in your new secondary zone. Enter the master server's **IP address** and the IP will be resolved. If the IP is correct, a green check mark will appear next to the IP address box then click on **Next** button.



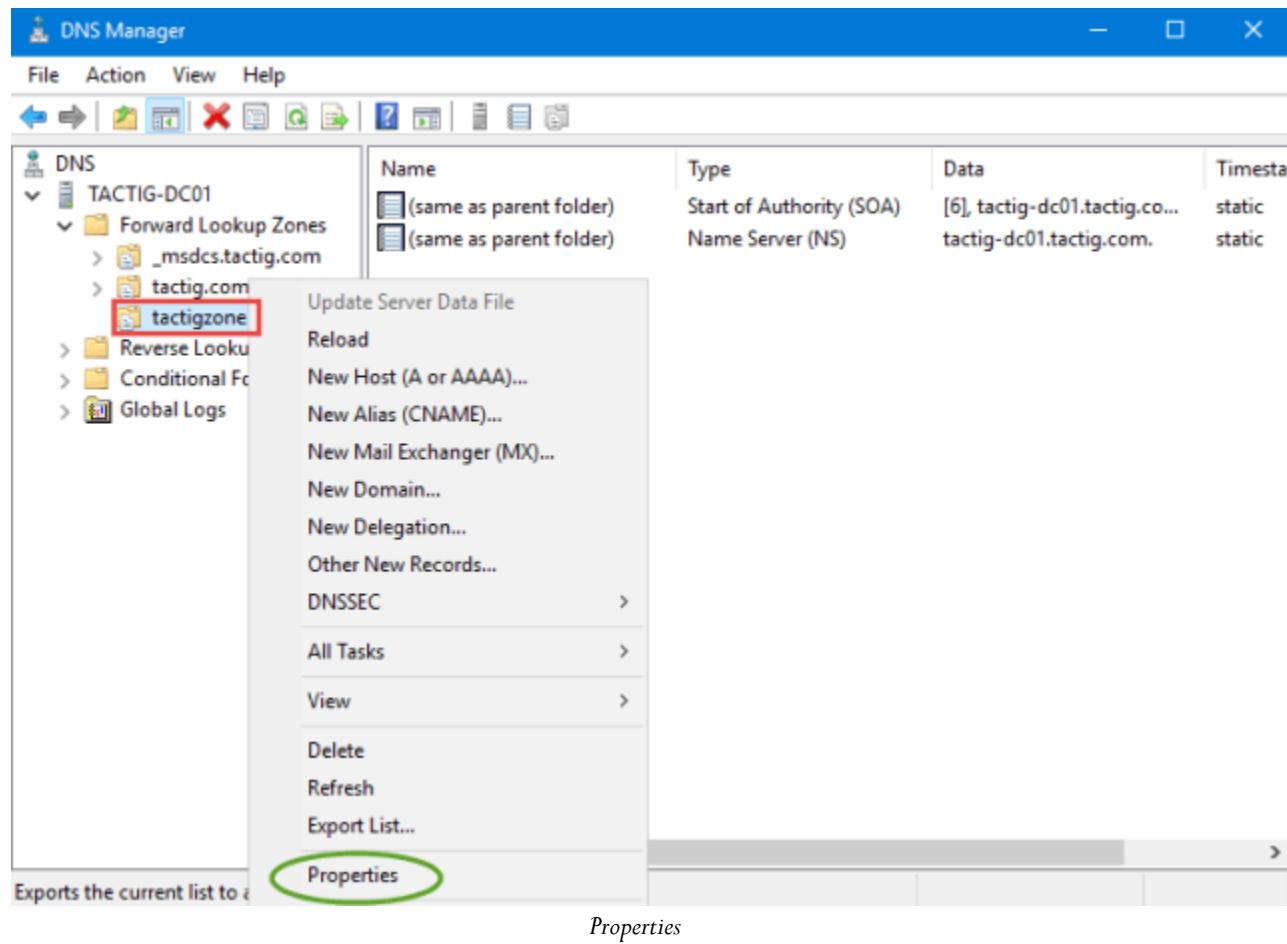
5. When the Secondary zone is created, just click on the **Finish** button.



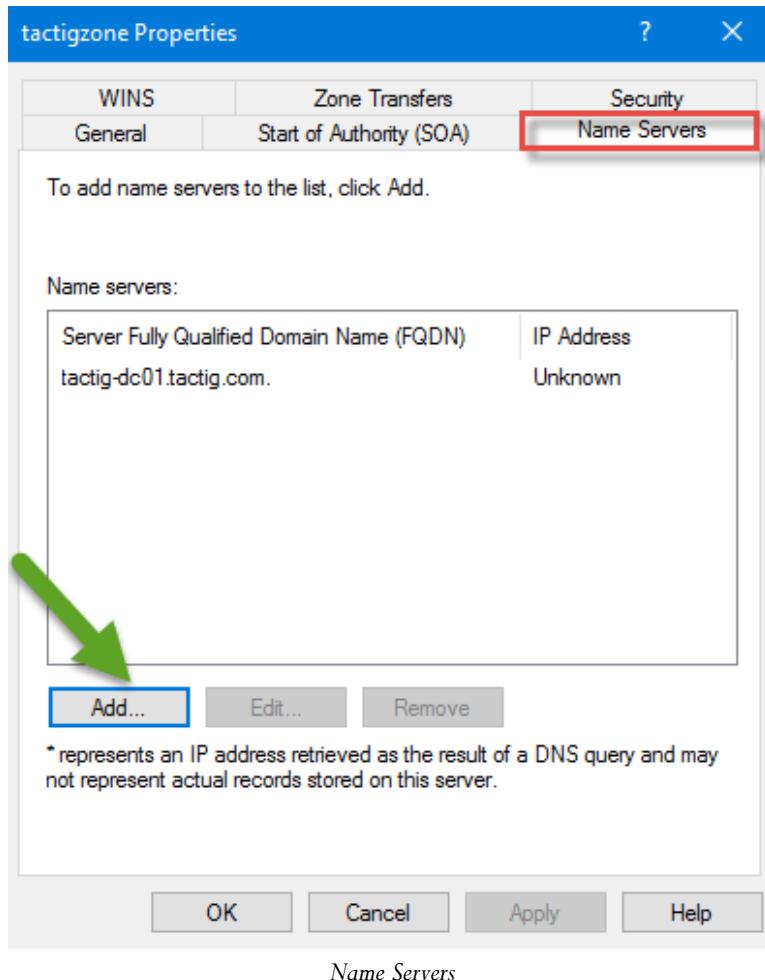
6. Now click on the new zone you just created, you'll see the **Red x** means no content is present and not working properly as mentioned before you should copy the contents from somewhere else.



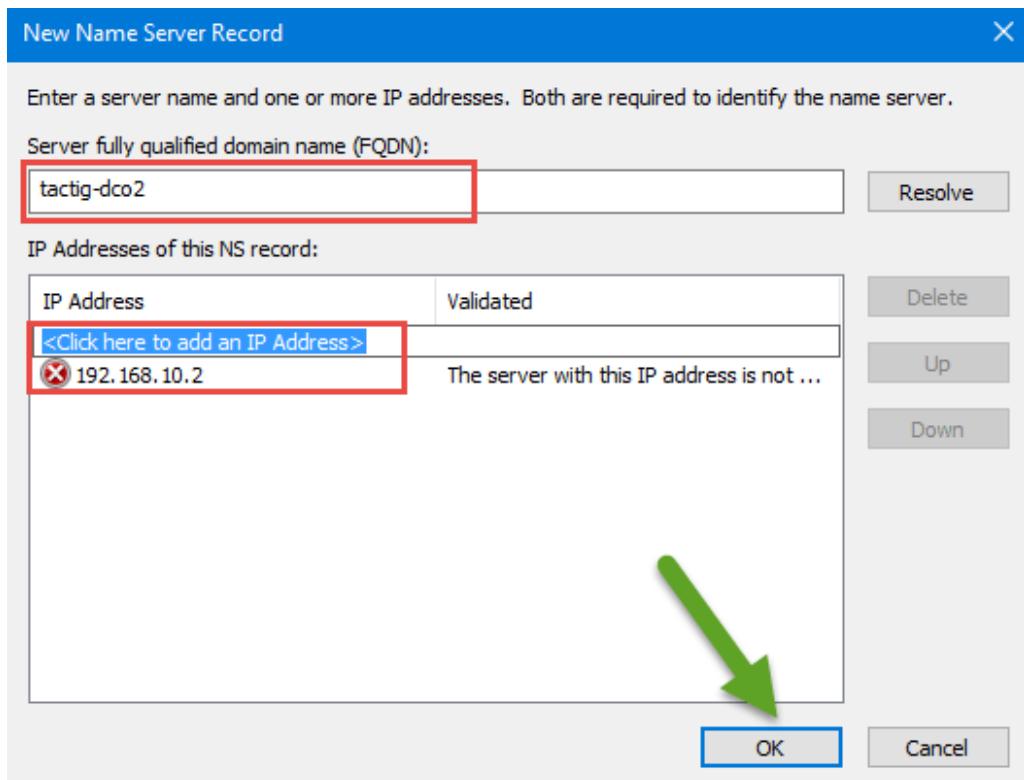
7. Go back to tactig-dns01 server, expand the Forward lookup zone mode and right-click on the zone that you want to get a copy from then select **Properties**.



8. Here select the **Name Servers** tab and add the server that you've installed the secondary zone on, here. When you add the name in the list you can copy the contents. For the purpose click on the **Add** button.

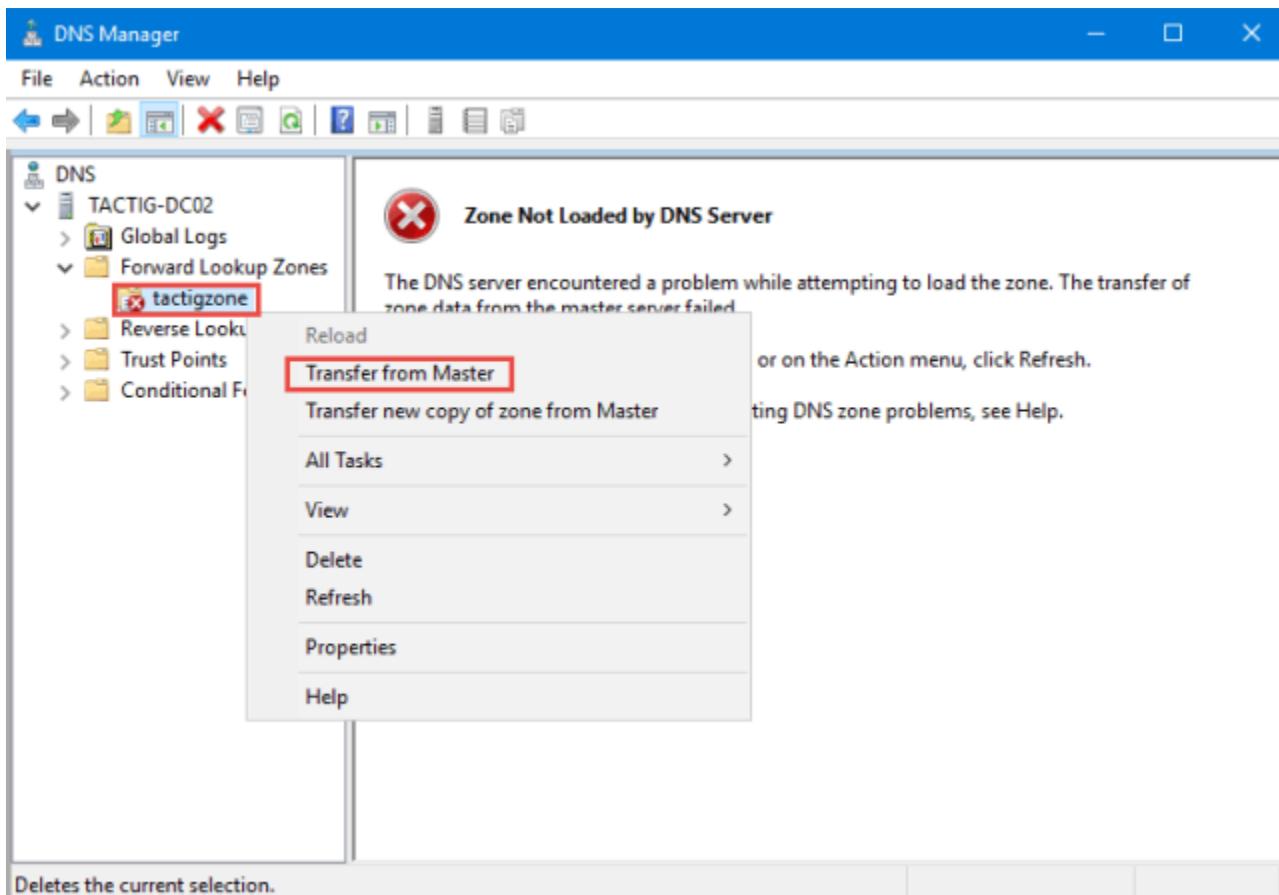


9. Type the server's fully qualified domain name (**FQDN**) in the box as shown and below that box, enter the server's IP address. When you resolve the server a message appears, don't be worried because the message tells you that your server is not authoritative for the zone that's what we know that. We just want to make a copy of the zone and click on **OK** button.



Name Server Record

10. Now come back to tactig-dns02 server, right-click on the zone you created and select Transfer from Master.



11. Refresh the page clicking on the **Refresh** button and you'll see all the records you could see in tactig-dns01 server zone, now the secondary zone is created and configured properly.

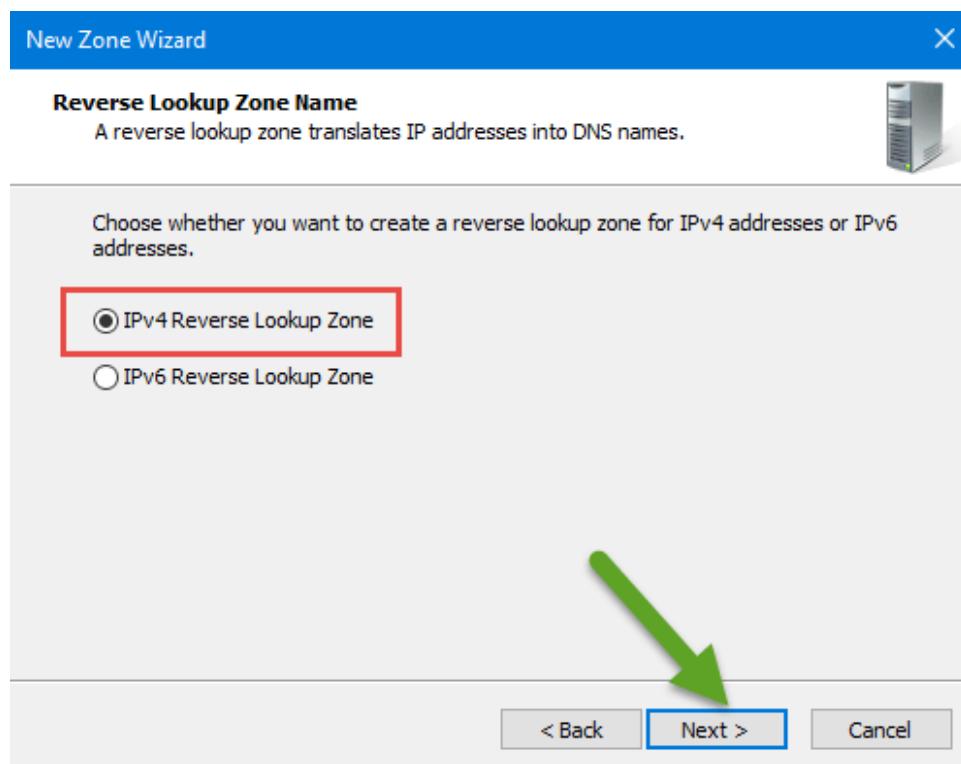
The screenshot shows the Windows Server 2016 DNS Manager interface. The left pane displays a tree view of DNS settings under the 'TACTIG-DC02' domain. The 'Forward Lookup Zones' node is expanded, showing a 'tactigzone' entry. The right pane lists the records for this zone:

Name	Type	Data	Timestamp
(same as parent folder)	Start of Authority (SOA)	[9], tactig-dc01.tactig.co...	static
(same as parent folder)	Name Server (NS)	tactig-dc02.	static
(same as parent folder)	Name Server (NS)	tactig-dc01.tactig.com.	static

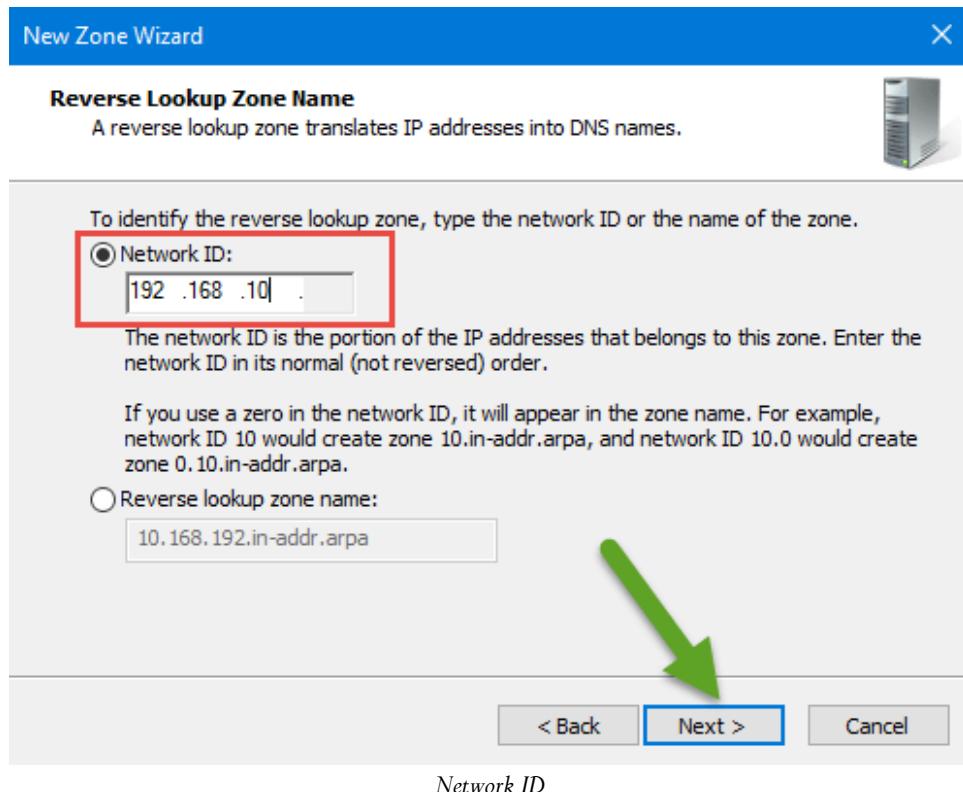
A red box highlights the refresh icon in the toolbar at the top of the window. A caption at the bottom of the right pane reads "Secondary zone records".

Another next important point for the DNS configuration is that you should learn what is Reverse Lookup Zone. The Reverse Lookup Zone do opposite to what Forward Lookup Zone does means **It change IP address to DNS name**, when you've or give an IP address, it gives you the DNS name. For doing this, we need just one DNS server and I'll use my root DNS server (**tactig-dns01**).

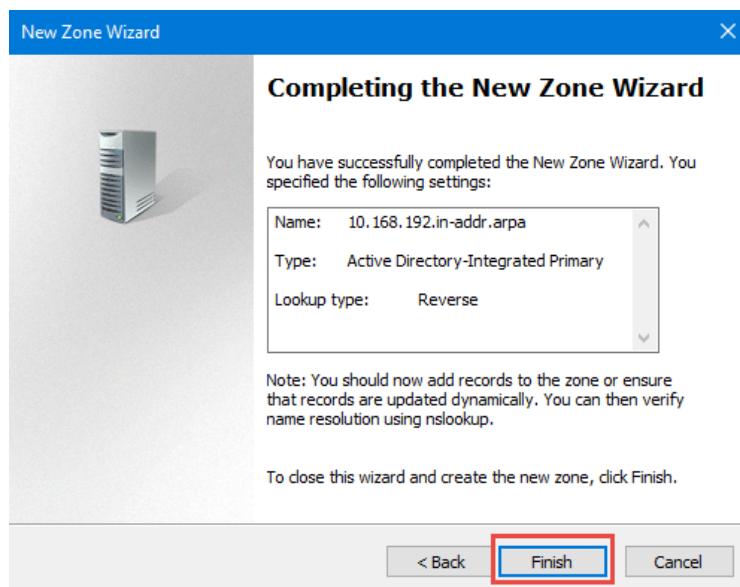
1. It is created the same as primary and secondary zones so expand the server name and right-click on the **Forward Lookup Zone** then select **New Zone**. When the page appears, skip the welcome page and select **Primary zone** then hit Next, leave the next step as default and hit **Next**. Here Select **IPv4 Reverse Lookup Zone** or **IPv6 reverse lookup zone** then hit **Next**, we use IPv4 version in our networks so you can choose the one you want to use.



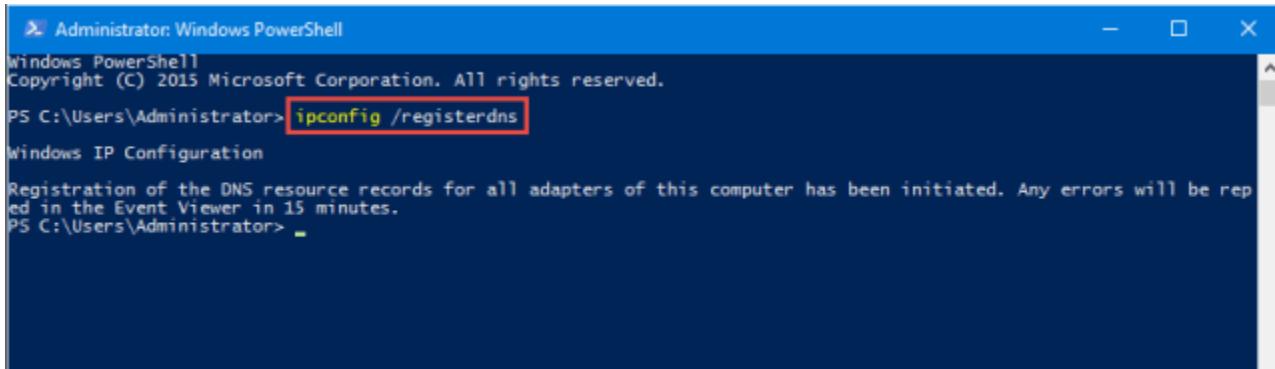
2. At this point, the **Network ID** is needed for the zone, specify the **Network ID** then hit **Next** (The Network ID is your network's IP address.



3. Select the **Allow only secure dynamic update** option and click on **Next** button then **finish** the wizard to completely finish the configuration.



4. Run **PowerShell as administrator**. Type this command: **ipconfig /registerdns**. Press **Enter** button.



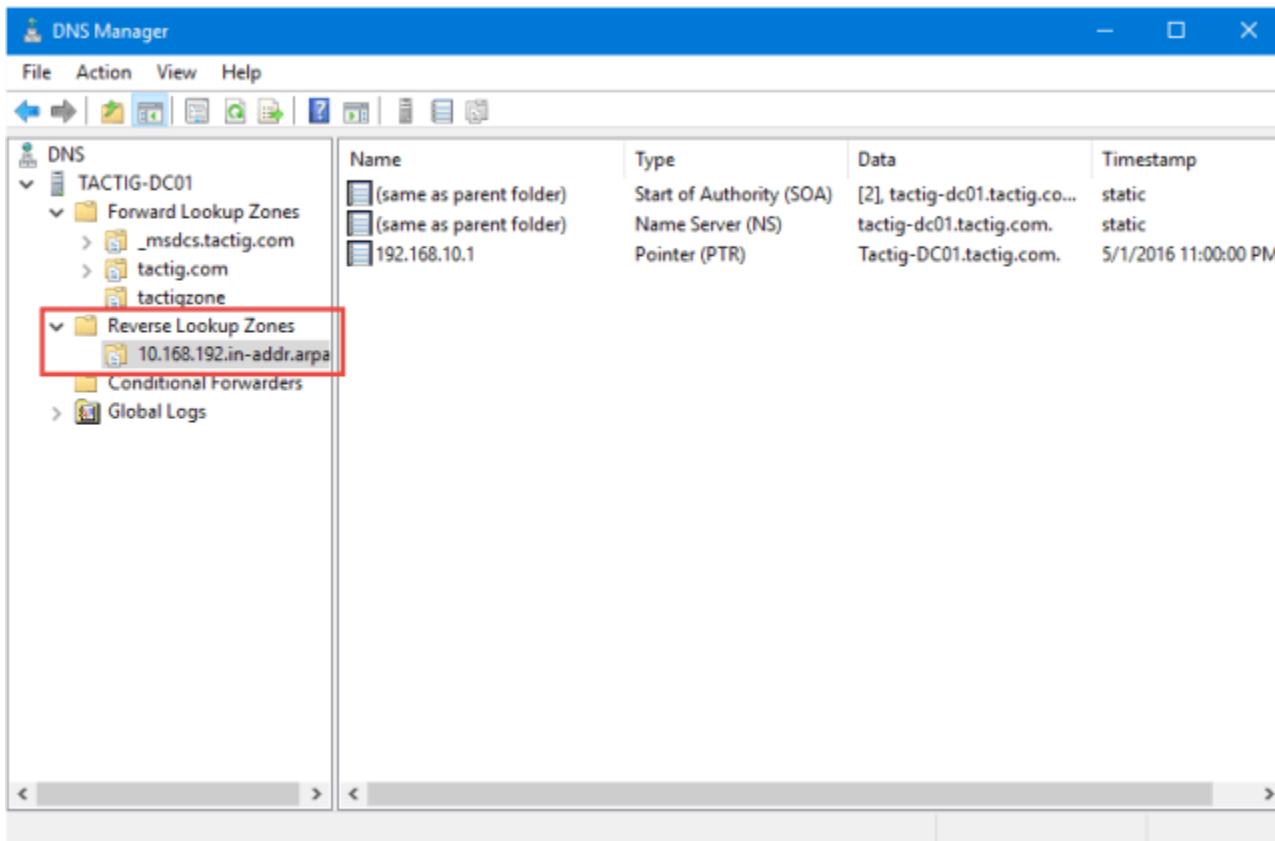
```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2015 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> ipconfig /registerdns
Windows IP Configuration

Registration of the DNS resource records for all adapters of this computer has been initiated. Any errors will be rep
ed in the Event Viewer in 15 minutes.
PS C:\Users\Administrator>
```

Register DNS

5. Refresh the **Forward Reverse Zone** node, you will see that an IP address is added there and you are done!



The screenshot shows the Windows DNS Manager interface. On the left, the navigation pane displays a tree structure under the 'DNS' node, with 'TACTIG-DC01' expanded. Under 'TACTIG-DC01', there are 'Forward Lookup Zones' containing '_msdcs.tactig.com', 'tactig.com', and 'tactiqzone'. Below these is a red box highlighting the 'Reverse Lookup Zones' folder, which contains '10.168.192.in-addr.arpa'. On the right, a table lists DNS records for the '10.168.192.in-addr.arpa' zone:

Name	Type	Data	Timestamp
(same as parent folder)	Start of Authority (SOA)	[2].tactig-dc01.tactig.co...	static
(same as parent folder)	Name Server (NS)	tactig-dc01.tactig.com.	static
192.168.10.1	Pointer (PTR)	Tactig-DC01.tactig.com.	5/1/2016 11:00:00 PM

Forward Reverse Zone

Conclusion: The DNS configuration is completely done. Yes, this was the basic configuration of DNS and the Advanced configuration of the DNS is more complicated, Practice till the time you feel you've already learned the configuration. For any further question leave a comment below.

AS you know, when the **Active Directory Domain Services** (AD DS) is installed on a server that is called **Domain Controller (DC)**. You can add dozens of domain controllers to an active directory for load balancing, fault tolerance, etc purposes. All the domain controllers should contain the same contents like user accounts, computer accounts, etc for working as a group, or simply they need to replicate with each other. When you add a new domain controller to existing domain, they automatically replicate with each other, if the new DC and the previous DC are on the same site. If the new DC is in a remote site, therefore automatic replication is not so practical. Because they are replicating through Wide Area Network (WAN) connection which costs much and takes a long time. That's why I've written the article in two parts, the part 1 is for Local Area Network (LAN) replication and in part 2 is for Wide Area Network(WAN), I take a snapshot of the DC and apply that to the new DC. In this article, we will learn how to add additional domain controller to existing domain in local area network(LAN), let's move on.

Check out: [Install Active Directory Domain Services on Windows Server](#)

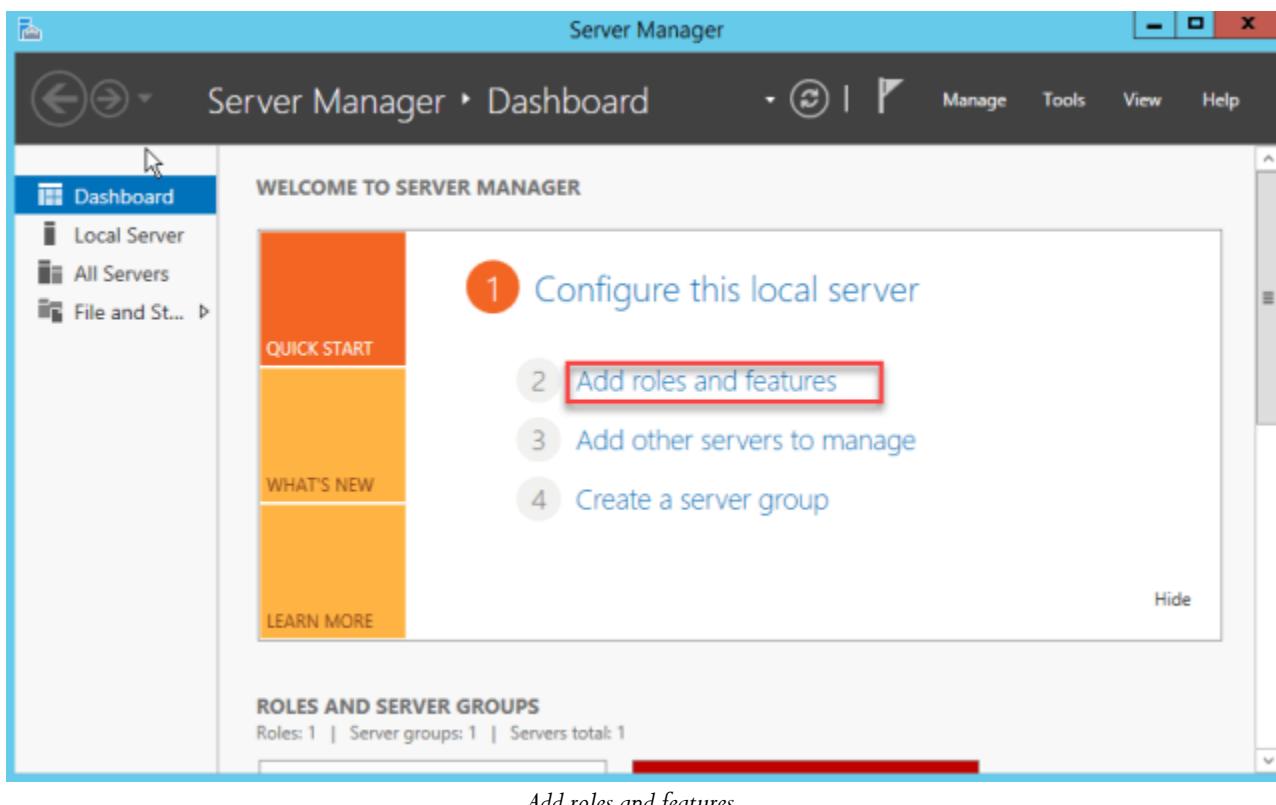
[Promote Windows Server to Domain Controller](#)

Add Additional Domain Controller to Existing Domain

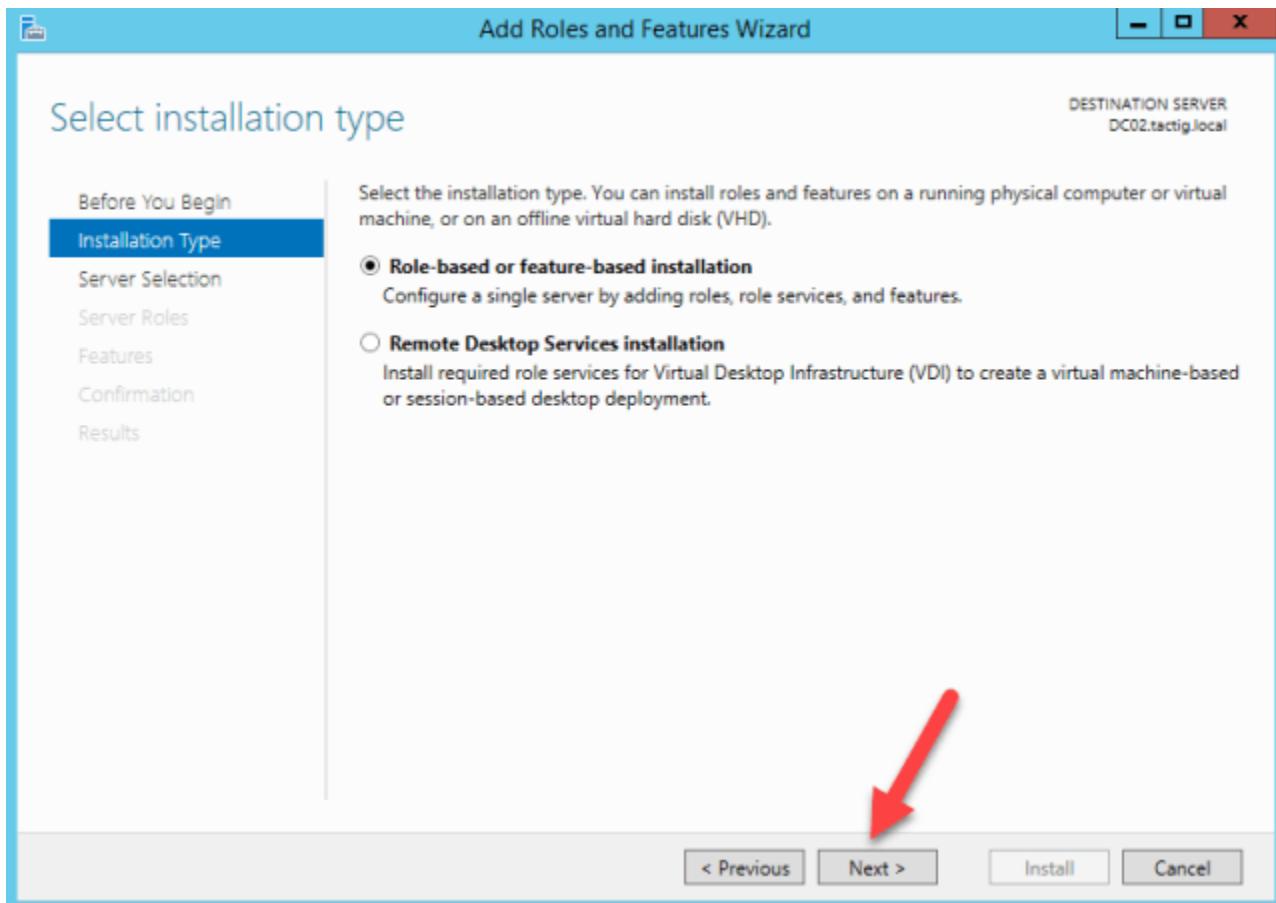
First of all, we need to install Active Directory Domain Services on the new DC, then promote that as DC.

#1: Role installation

1. First of all open **Server Manager**, click on **Add roles and features** to open roles and features installation console.

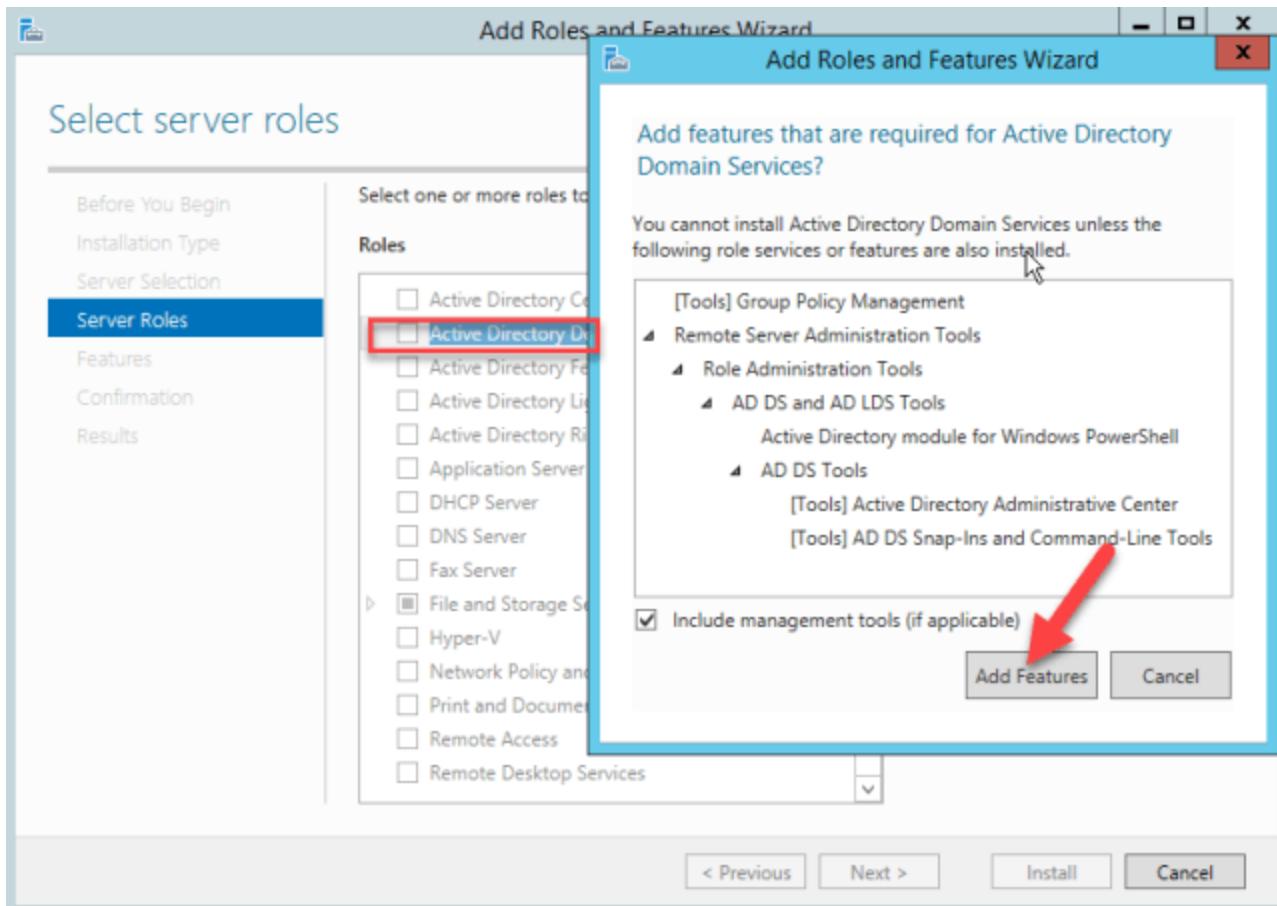


2. Skip the **Before you Begin** page, let the **role-based or featured-based installation** selected, click **Next**. In the **Server Selection** page, again click **Next**.



Select installation type

3. Select **Active Directory Domain Services** role, a window pops up, click on **Add Features** button to add active directory management tools.

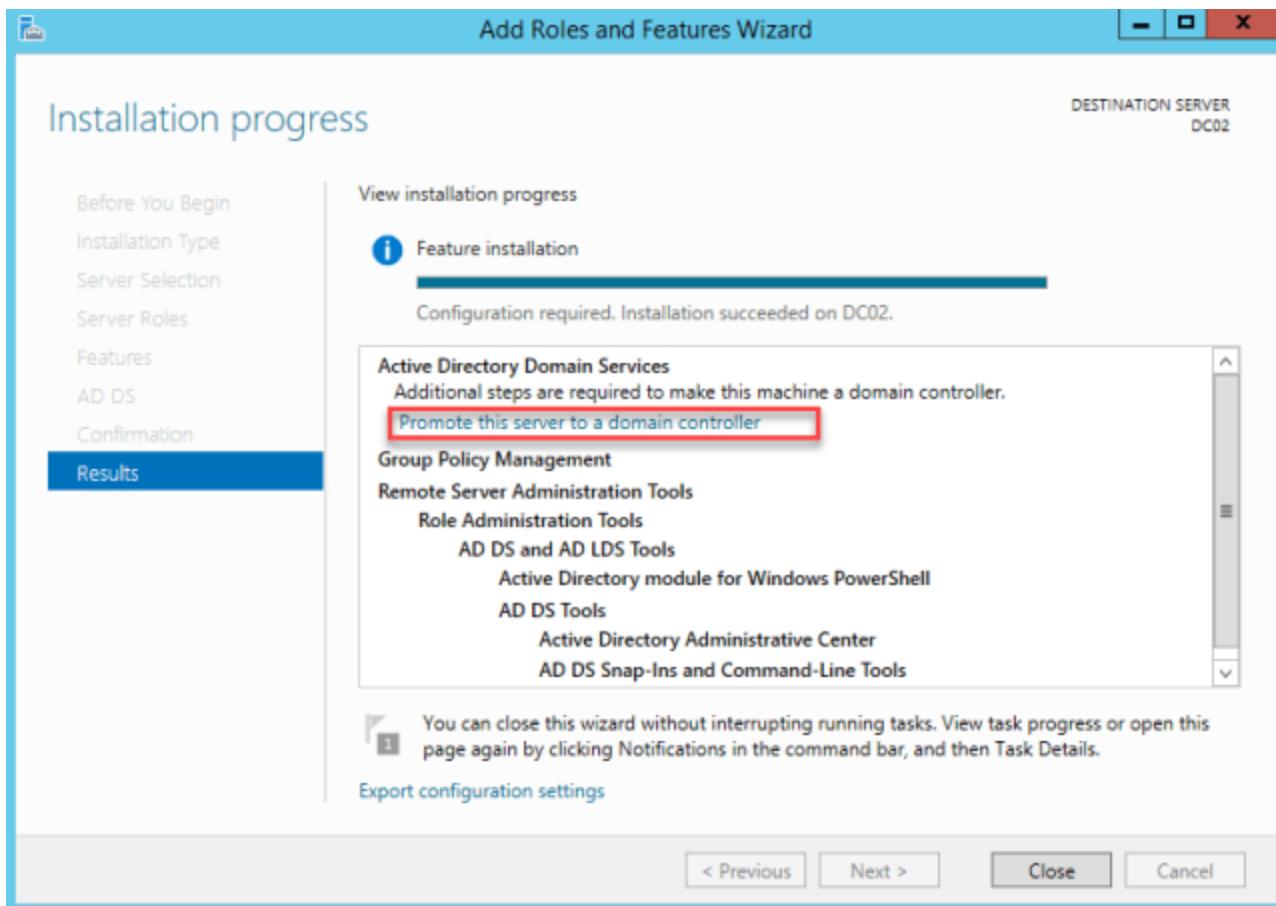


Active Directory role

When installation process is completed, reboot the server, log in as an administrator and furthermore follow the following steps.

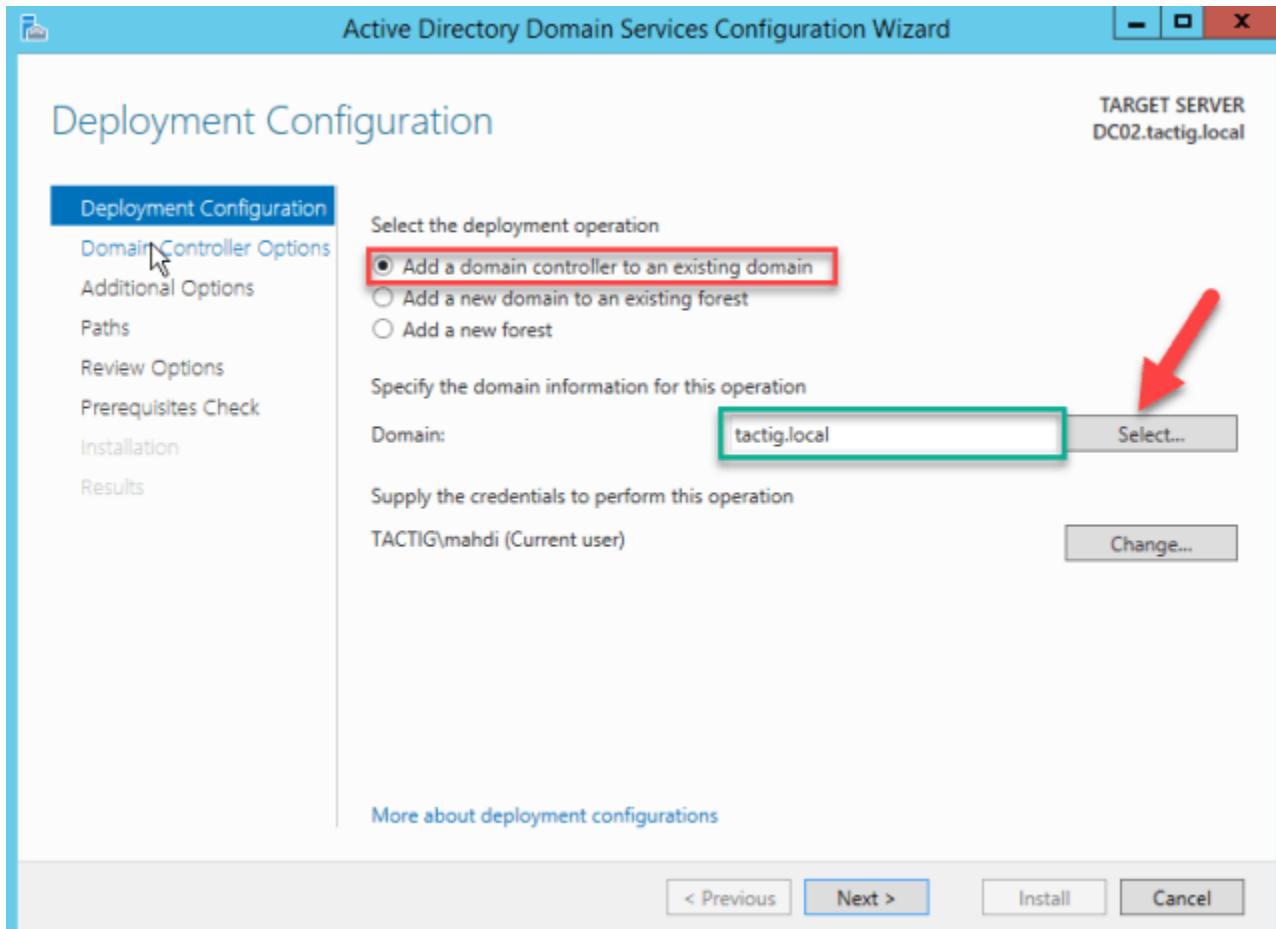
#2: Promote to domain controller

1. When logged in as an administrator, click on **Promote this server to a domain controller** hyperlink to promote the server to domain controller.



Promote to domain controller

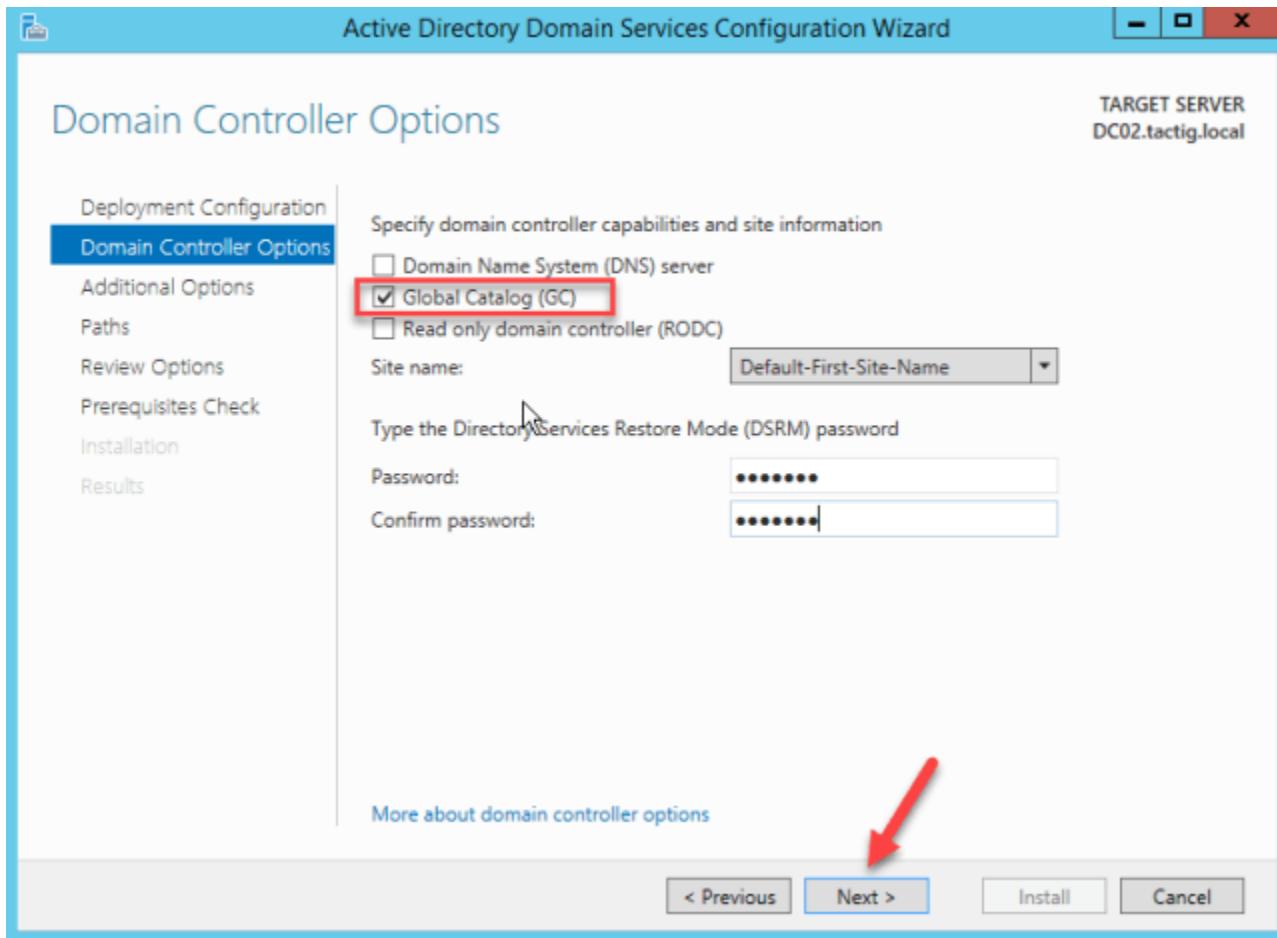
2. Select the **Add a domain controller to an existing domain** option, below the **specify the domain information for this operation**, type your domain name. If you are logged as a standard user, you can change the credential below that. Click on **Select** button, a new window opens, select your domain name then hit on **Ok** then **Next** button.



Add a domain controller to existing domain

3. In the **Domain Controller Options** page, leave unchecked the DNS server if you don't want to install that on your DC. Let the **Global Catalog** checked. Type a password and confirm it then click **Next**.

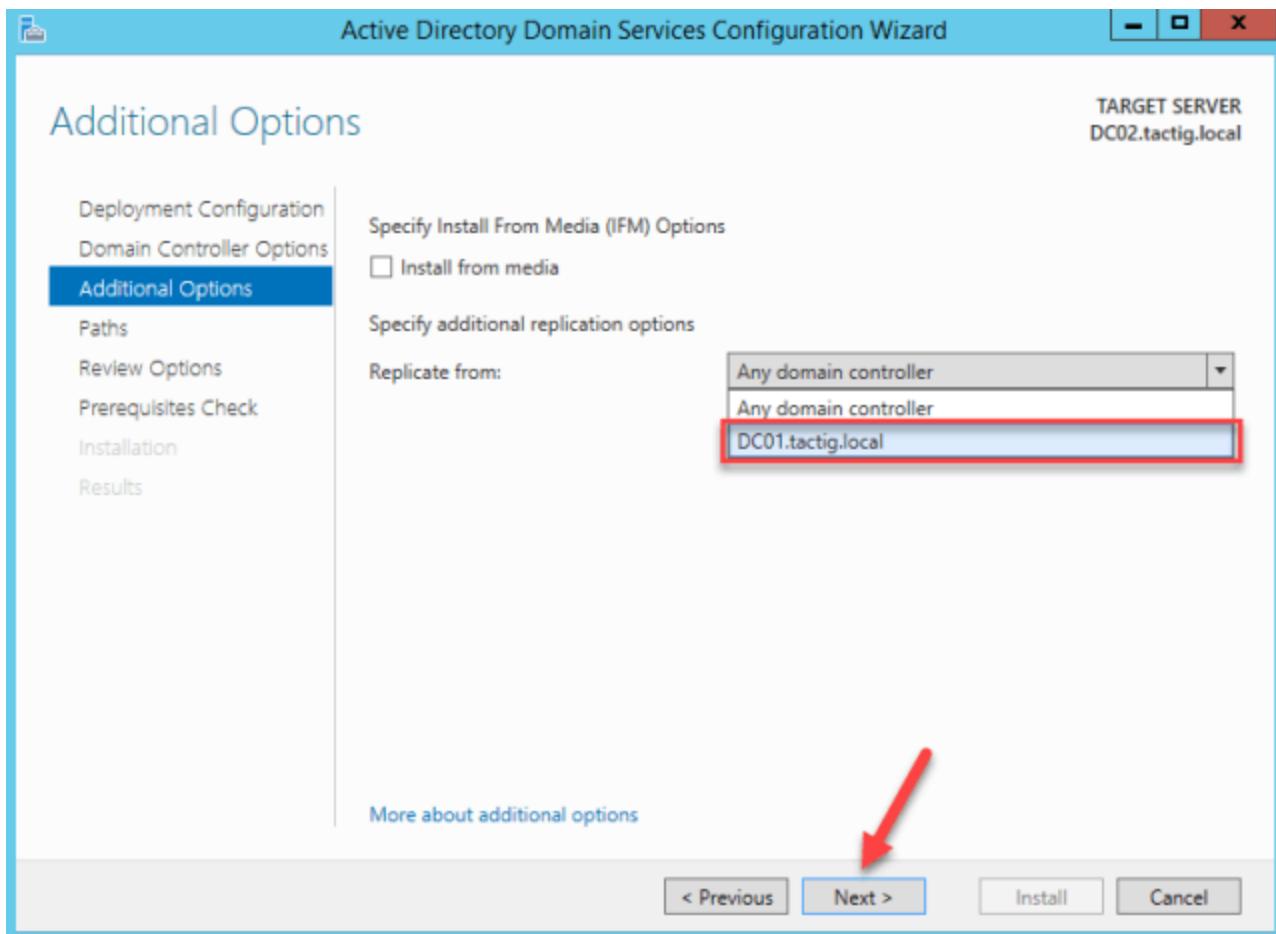
Check out: [How to Install DNS Server on Windows Server 2016?](#)



Domain Controller Options

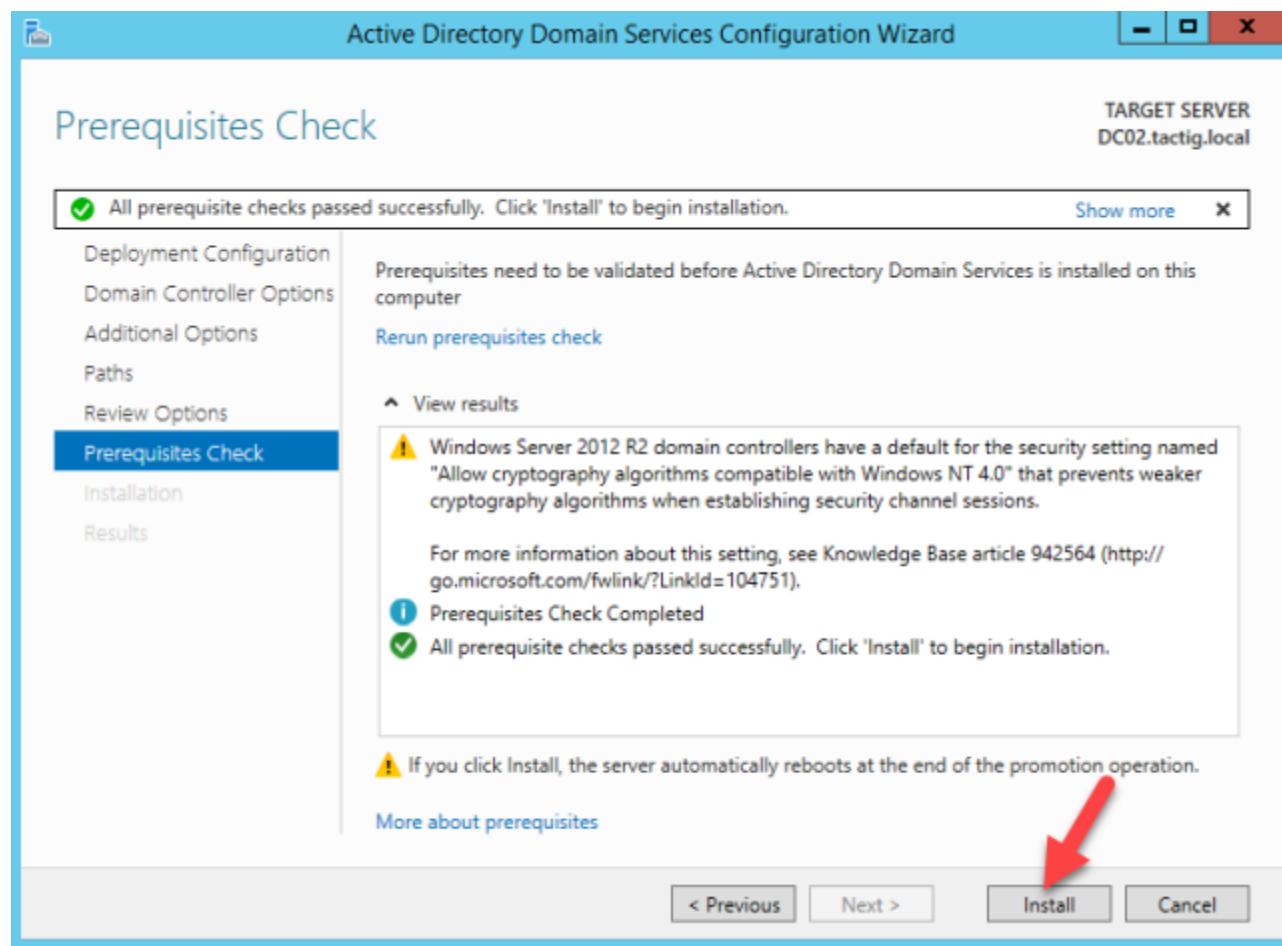
4. In the **Additional options** page, Specify the server that you want replicate with and copy all information from that domain controller to new domain controller. You can take a snapshot from AD DS and apply the image on the new machine. The new machine will have the exact copy. You can read about the Install From Media (IFM) here:

Check out: [Create & Deploy Active Directory Snapshot in Windows Server 2016](#)



Replication option

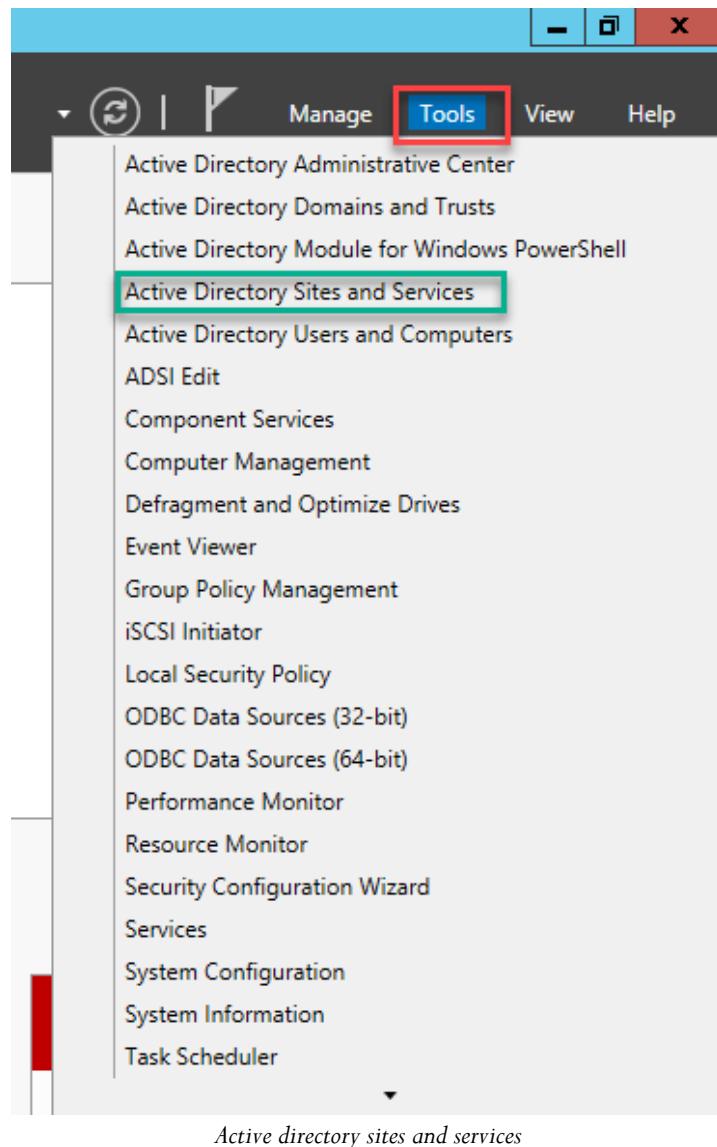
5. In the **Paths and Review options** pages almost we have nothing to do, skip them by clicking on **Next** button. In the prerequisite page if any error you see, check that then click on **Install** button.



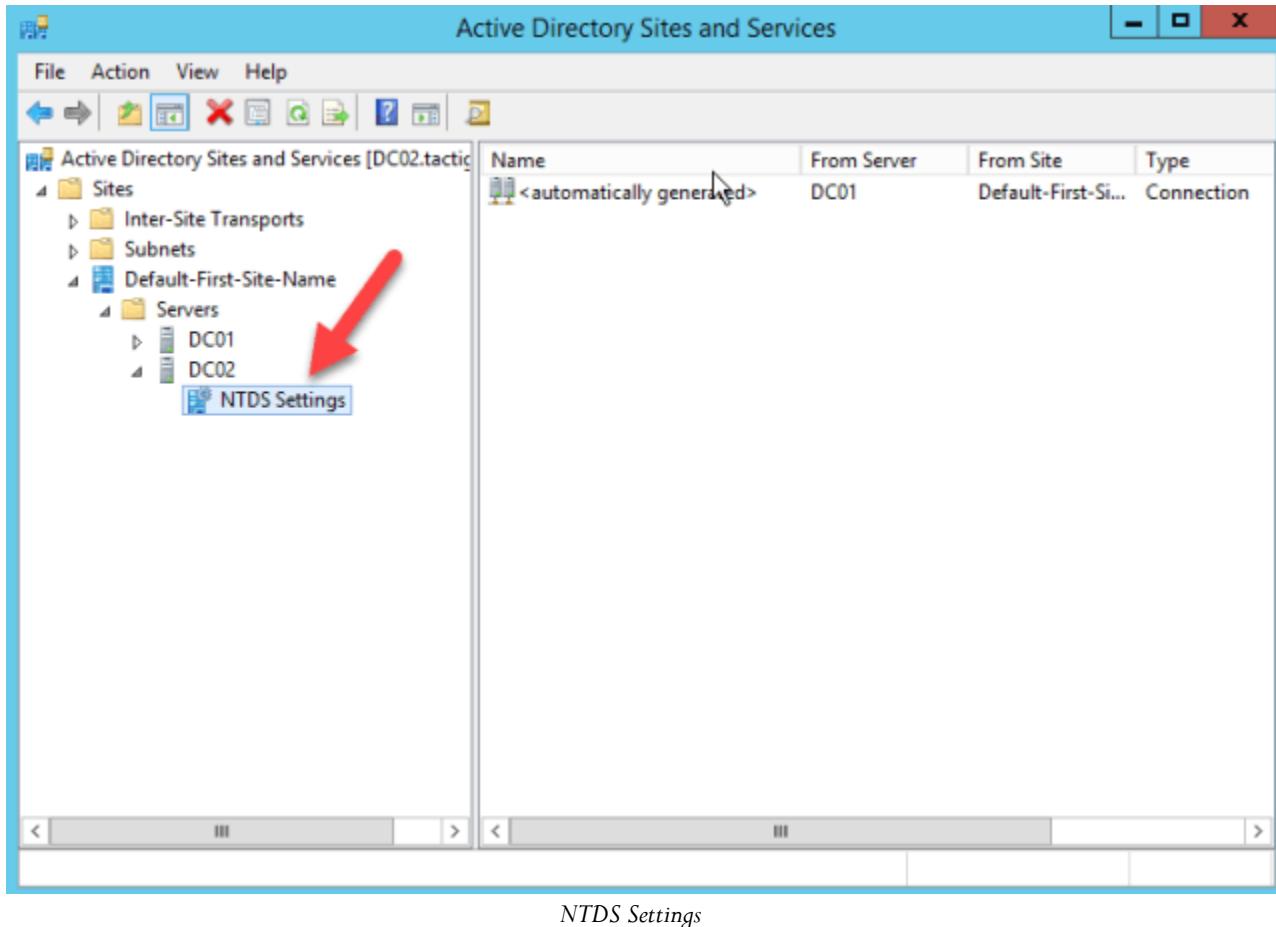
#3: Root DC and New DC Replication

We are almost done, just use the DCs to replicate between the root DC(DC01.tactig) and the new DC(DC02.tactig). While replicating between these two DCs, the Active Directory files will be copied from the DC01.tactig to DC02.tactig. then check out, you will see all files exactly the same to the root domain controller in the current domain controller.

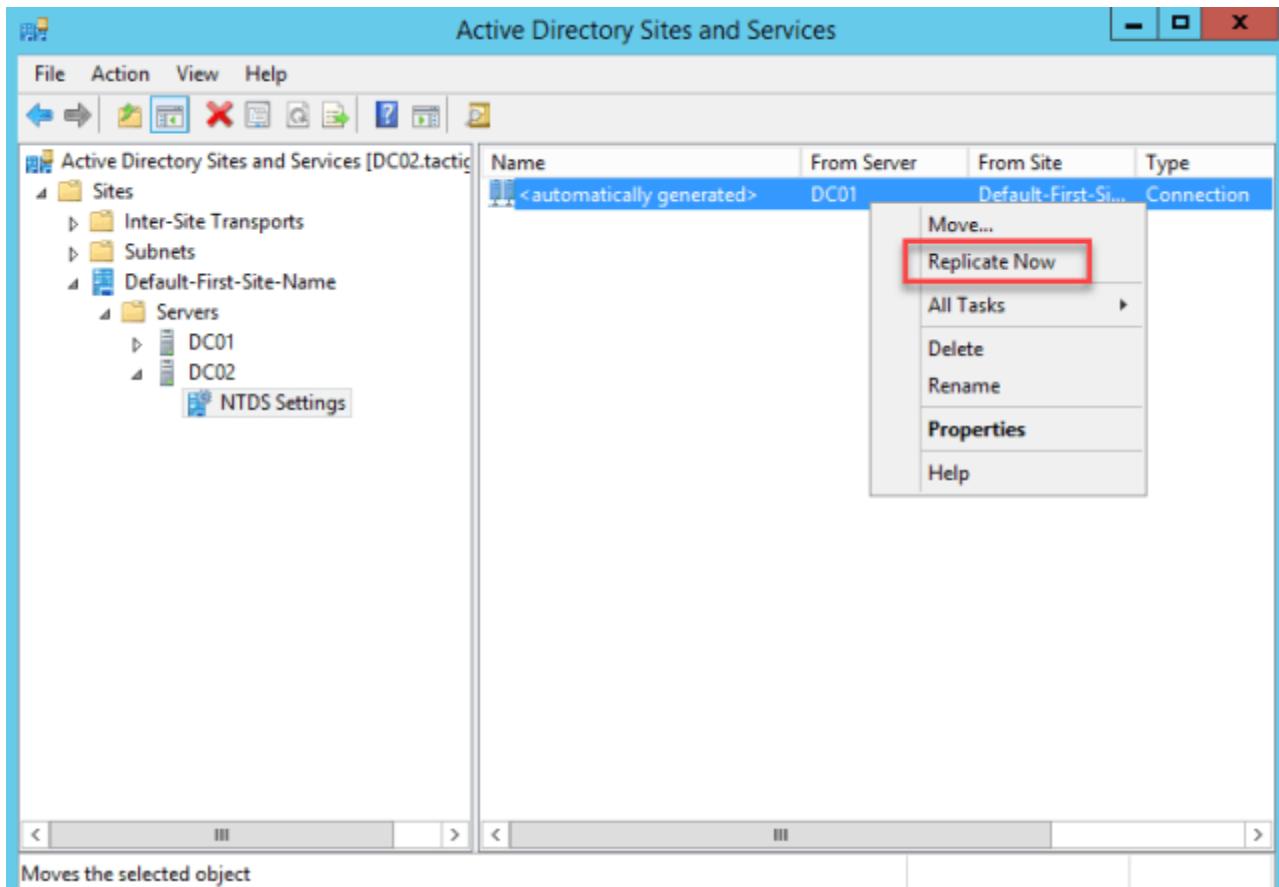
6. In the **Server Manager**, click on **Tools** and select Active directory sites and services option.



7. In the left pane expand the **Sites>Default-First-Site-Name> Servers**, then the name of the current server that you are now working on, then click on **NTDS Settings**. In my case DC01 is root doamin controller and I am logged in currently in DC02 which is additional domain controller.

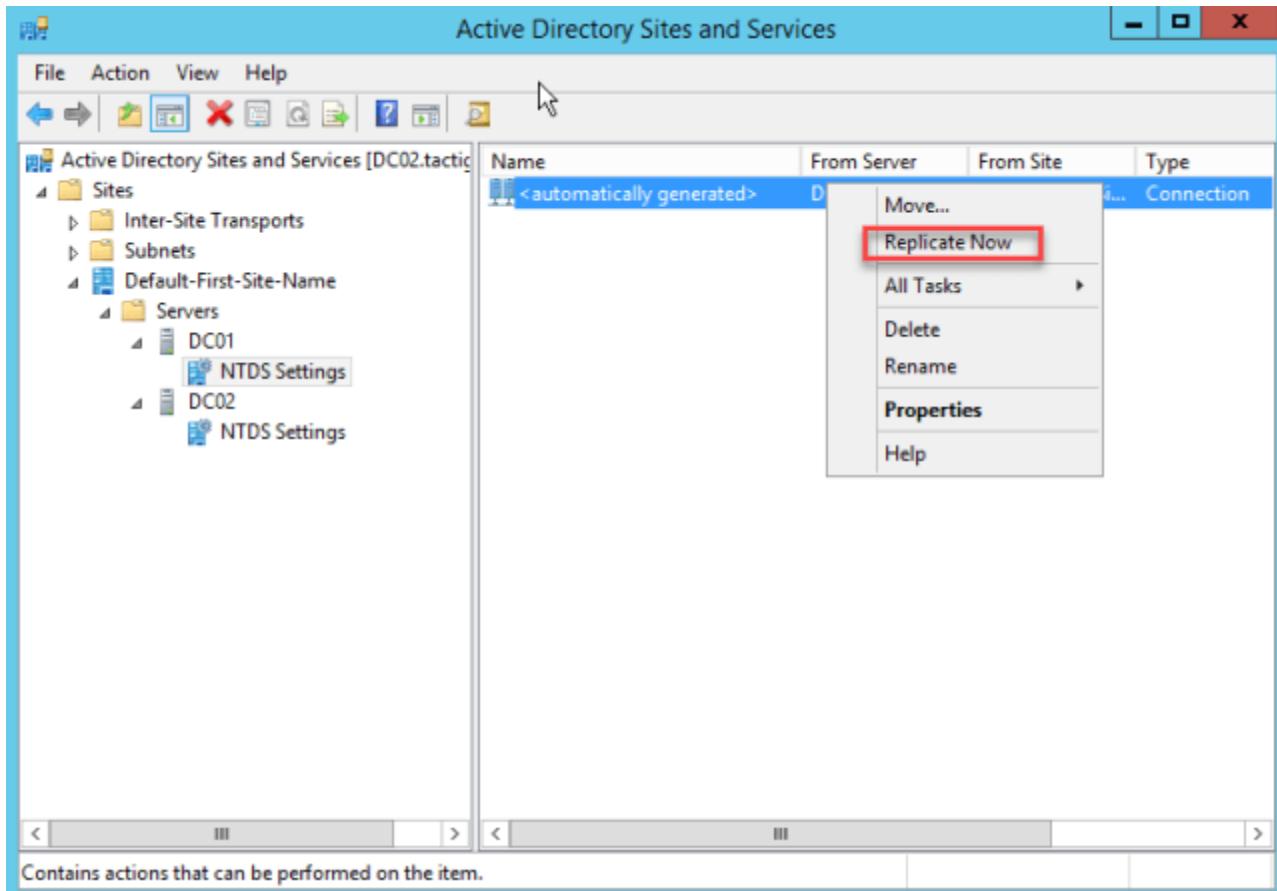


8. Right-click on **automatically generated** node, Click on **Replicate now**, an alert informs you that replication between root domain controller and new domain controller occurred.



Replicate now

9. Do the same thing for DC01 in the same server. Expand DC01 node and click on **NTDS Settings**. Right-click on **automatically generated** then click on **Replicate now** option. Both server replicate with each other and all the contents of DC01 will be copied in DC02.



Conclusion: Finally we're done! After all, you've completed replication between two DCs successfully, but remember if the DCs are in different sites, then you can do it using our next article that will be the second part in addition of this.
Like, share, and comment is appreciated!

A Snapshot is the exact copy of the original contents and configurations that is the easiest and cheapest way to create and deploy it on the additional domain controller. Like you can take a snapshot of [Active Directory Domain Services](#) (AD DS) and you use the snapshot for occasional usages like deploying on an additional domain controller, not like often tasks like backup. In this article, I will take a snapshot of my root domain controller (DC), which is the first domain controller of my active directory. Then, I will deploy the snapshot on the additional (DC). Snapshot is used for adding additional DC in remote sites, not in Local Area Networks (LAN). When you create a snapshot from active directory and save the files to a DVD or flash memory, then deploy it on the remote site on the new domain controller then you'll have the exact contents and configurations on the new DC. So here first we will create then deploy Active Directory snapshots in Windows Server 2016.

Remember: This is the second part of

adding an additional domain controller to existing domain, if you haven't read that article, you ought to read that first. Click on the link below for reading the previous part, then continue reading this article.

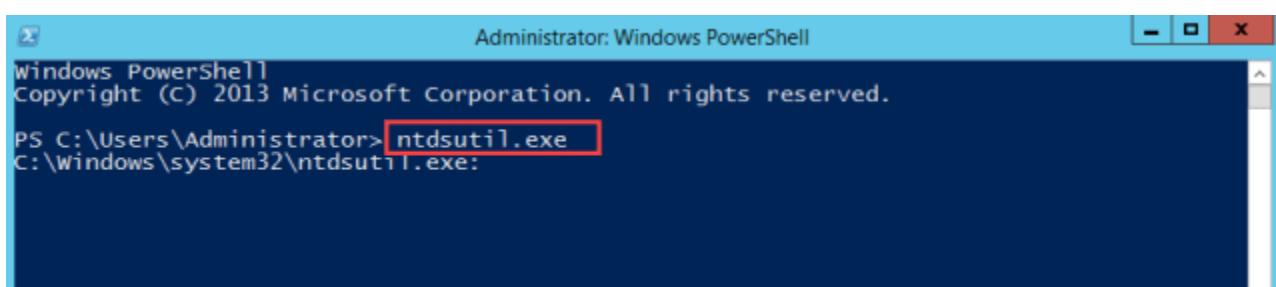
Watch out: [**How to Add Additional Domain Controller to Existing Domain**](#)

Create Active Directory Snapshot on Current DC

Before getting started, make sure both, the current DC and additional DC needs to be the member of the same domain and both of them should be active or approached by you. So that you can take a snapshot from current DC and deploy it on the new DC.

Take Snapshot through PowerShell

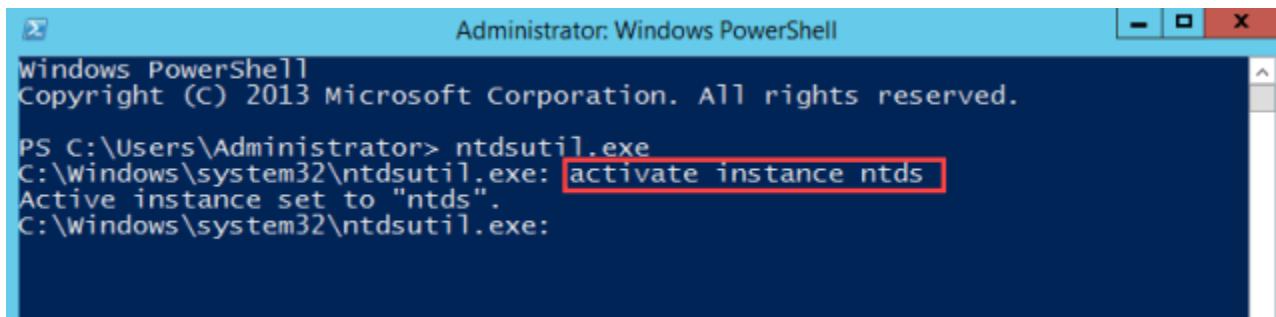
1. Right-click on **PowerShell** icon and choose **Run as administrator** option due to run the PowerShell with administrative privileges.
2. Launch PowerShell as administrator and create the **IFM** (Install From Media) media. This media is a snapshot of AD DS. Now Run the ntdsutil.exe cmdlet to run the program, therefore, type **ntdsutil.exe** and press **Enter** key.



The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The title bar also displays "Windows PowerShell" and "Copyright (C) 2013 Microsoft Corporation. All rights reserved.". The command prompt shows "PS C:\Users\Administrator> ntdsutil.exe" with the "ntdsutil.exe" part highlighted in red. Below the command prompt, the text "C:\Windows\system32\ntdsutil.exe:" is visible. The background of the window is dark blue.

Ntdsutil.exe cmdlet

3. Type **activate instance ntds**, because it focuses the program on the installed AD DS instance.

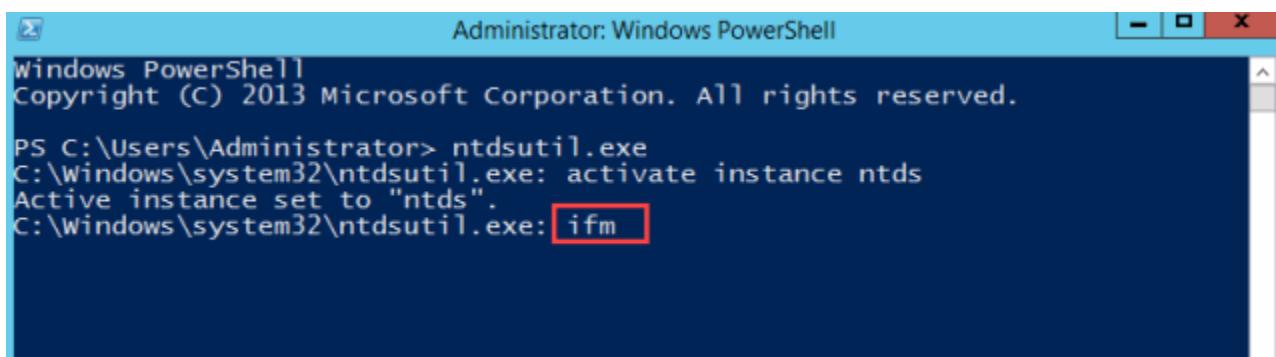


```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> ntdsutil.exe
C:\Windows\system32\ntdsutil.exe: activate instance ntds
Active instance set to "ntds".
C:\Windows\system32\ntdsutil.exe:
```

Activate instance NTDS cmdlet

4. Type **ifm** to create the IFM (Install From Image) media.

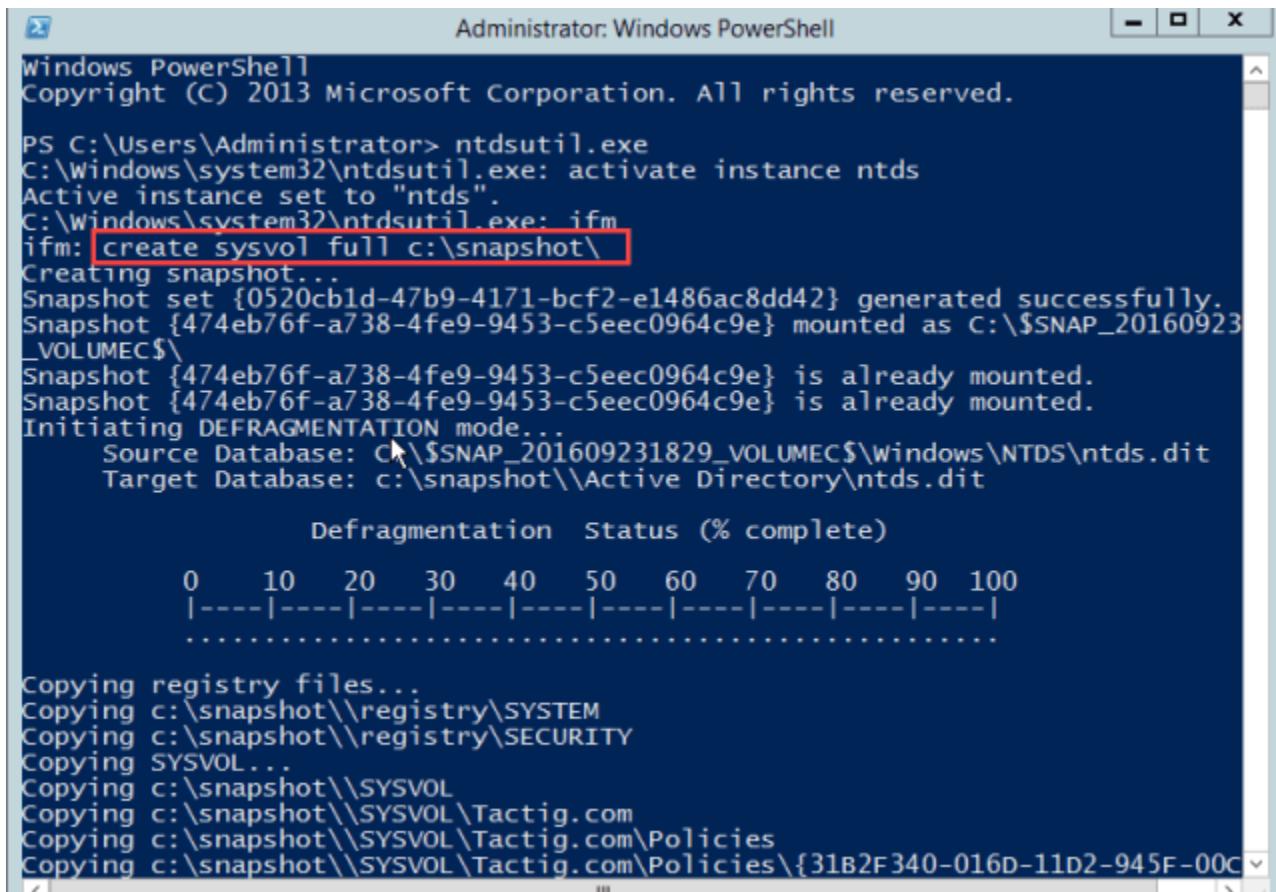


```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> ntdsutil.exe
C:\Windows\system32\ntdsutil.exe: activate instance ntds
Active instance set to "ntds".
C:\Windows\system32\ntdsutil.exe: ifm
```

Ifm cmdlet

5. Now you should decide you want full snapshot or not, to create a full snapshot type: **create sysvol full c:\snapshot**. The C:\snapshot is the path where I save the files, the program creates a folder by the name snapshot in the C:\ drive. When snapshot process completed, close the PowerShell window.



The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The command entered is "ntdsutil.exe create sysvol full c:\snapshot". The output indicates that the snapshot was generated successfully and mounted at C:\\$SNAP_201609231829_VOLUMEC\$\Windows\NTDS\ntds.dit. It also shows the defragmentation process starting, with a progress bar from 0% to 100%. Finally, it lists the copying of registry files and SYSVOL contents to the snapshot directory.

```
Administrator: Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> ntdsutil.exe
C:\Windows\system32\ntdsutil.exe: activate instance ntds
Active instance set to "ntds".
C:\Windows\system32\ntdsutil.exe: ifm
ifm: create sysvol full c:\snapshot\
Creating snapshot...
Snapshot set {0520cb1d-47b9-4171-bcf2-e1486ac8dd42} generated successfully.
Snapshot {474eb76f-a738-4fe9-9453-c5eec0964c9e} mounted as C:\$SNAP_201609231829_VOLUMEC$\.
Snapshot {474eb76f-a738-4fe9-9453-c5eec0964c9e} is already mounted.
Snapshot {474eb76f-a738-4fe9-9453-c5eec0964c9e} is already mounted.
Initiating DEFRAGMENTATION mode...
Source Database: C\$\$SNAP_201609231829_VOLUMEC$\Windows\NTDS\ntds.dit
Target Database: c:\snapshot\\Active Directory\ntds.dit

Defragmentation Status (% complete)
0   10   20   30   40   50   60   70   80   90   100
[----|----|----|----|----|----|----|----|----|----|
.....
```

```
Copying registry files...
Copying c:\snapshot\registry\SYSTEM
Copying c:\snapshot\registry\SECURITY
Copying SYSVOL...
Copying c:\snapshot\SYSVOL
Copying c:\snapshot\SYSVOL\Tactig.com
Copying c:\snapshot\SYSVOL\Tactig.com\Policies
Copying c:\snapshot\SYSVOL\Tactig.com\Policies\{31B2F340-016D-11D2-945F-00C04FD9E0A2}
```

create sysvol full

Finally the snapshot is ready to be deployed on the next domain controller. So, we will move to the new server and continue our deploying there. I've copied the files in a flash memory due to making the deployment easy then paste the files on the new DC's desktop to use later.

Deploy Active Directory Snapshot on Additional DC

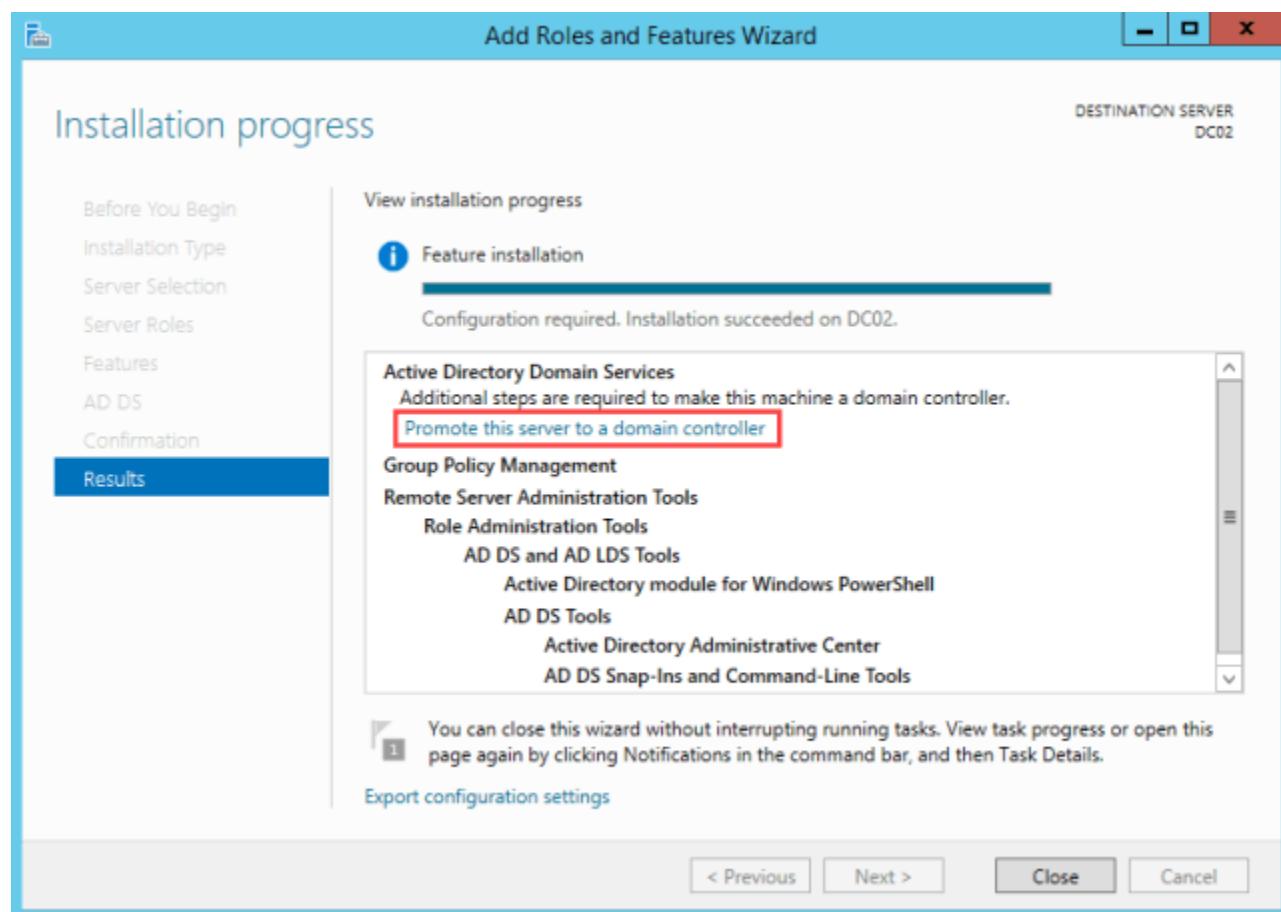
Snapshot Deployment

It is the time to turn on the new machine and get it ready to be promoted to new domain controller.

1. Install Active Directory Domain Services from **Server Manager**. If you don't know how to do that, please refer to this link:

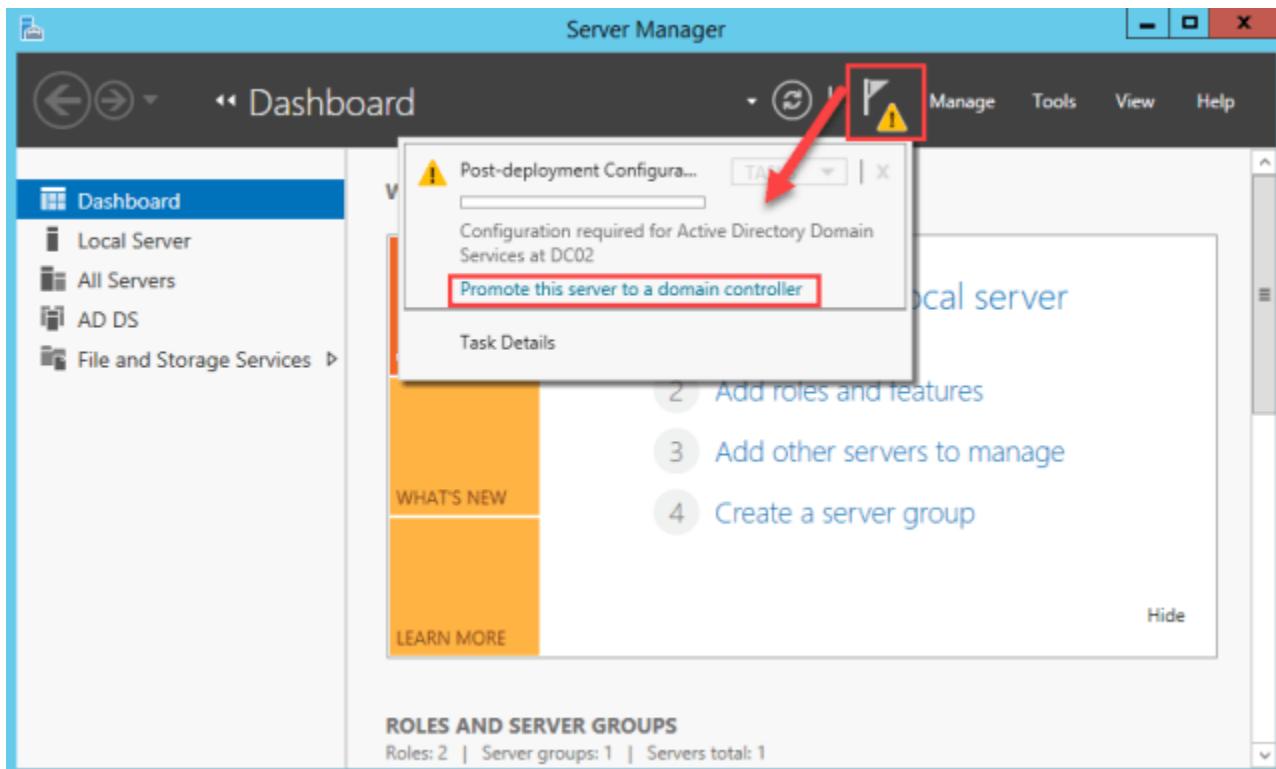
See this: [Install Active Directory Domain Services on Windows Server](#)

2. When the installation finished, click on **Promote this server to a domain controller** hyperlink.



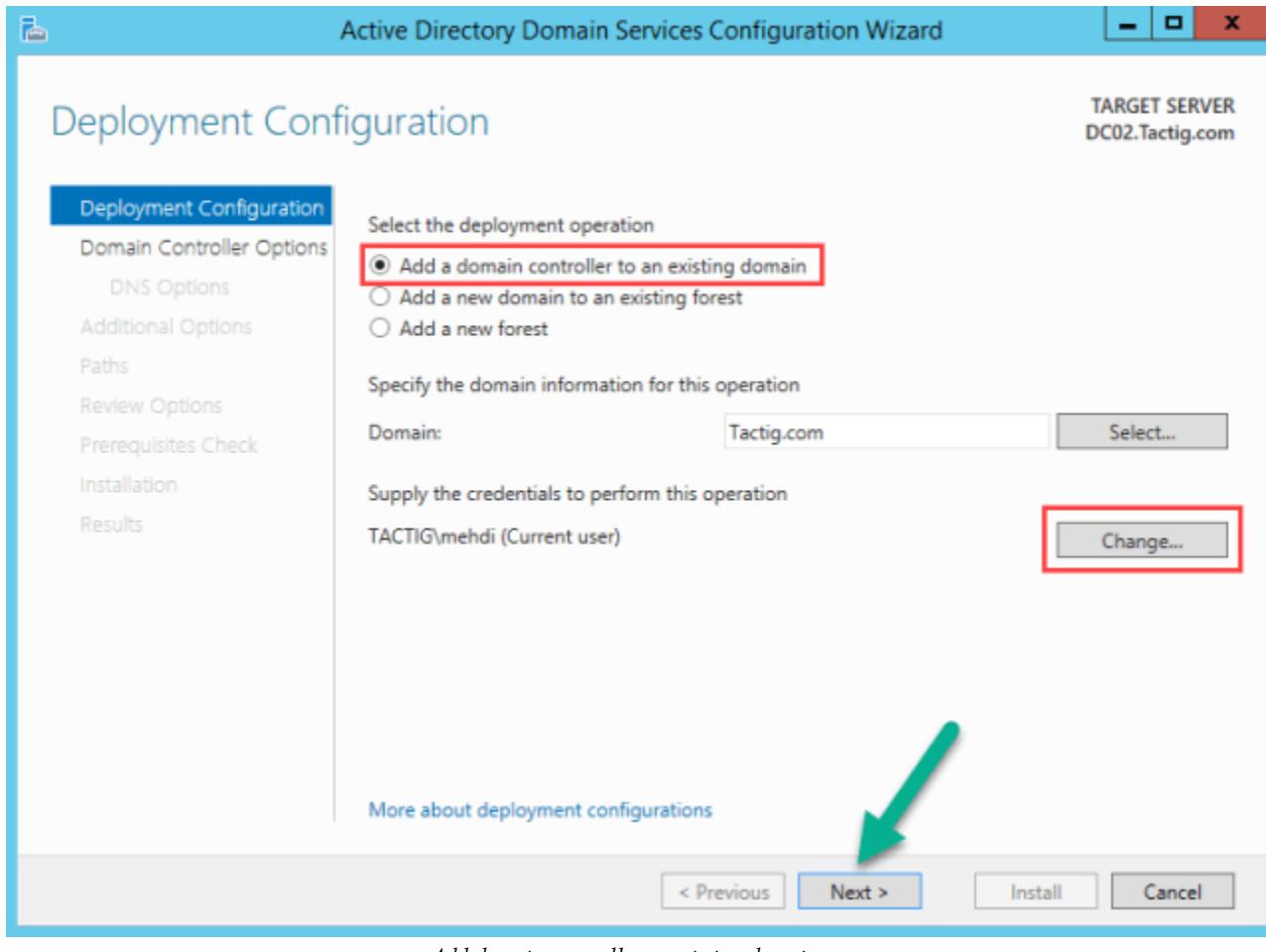
Promote this server to a domain controller hyperlink

Or maybe you've closed the window and you don't see the window containing hyperlink, don't worry. Click on the flag on the top of the window, you can see the hyperlink.

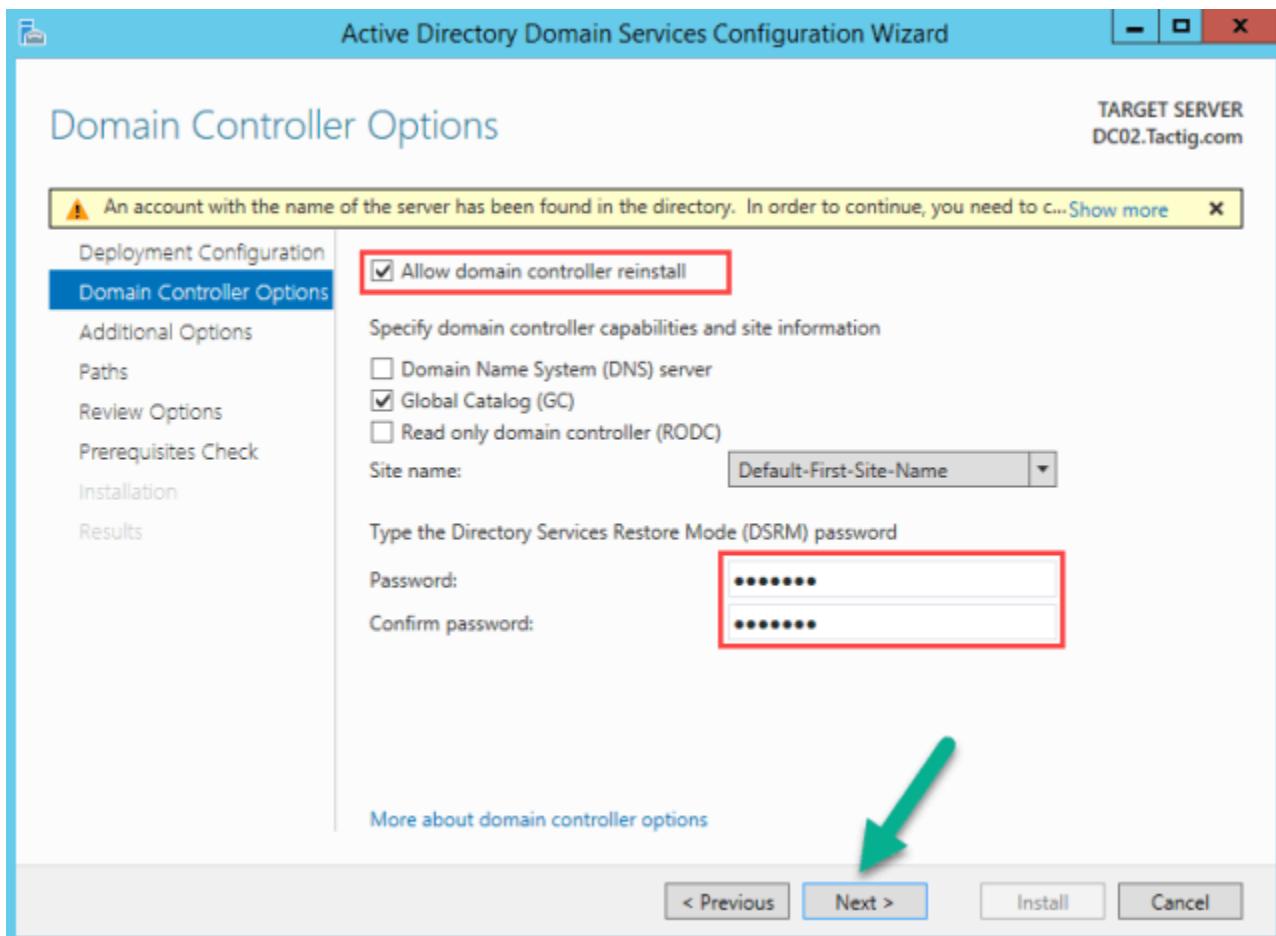


Promote this server to domain controller hyperlink

3. Select **Add domain controller to existing domain** option. This option means that we have a domain and we just want to add an additional domain controller in the domain. Be sure that you've logged on by a user name who have the right to do these tasks then hit **Next**.

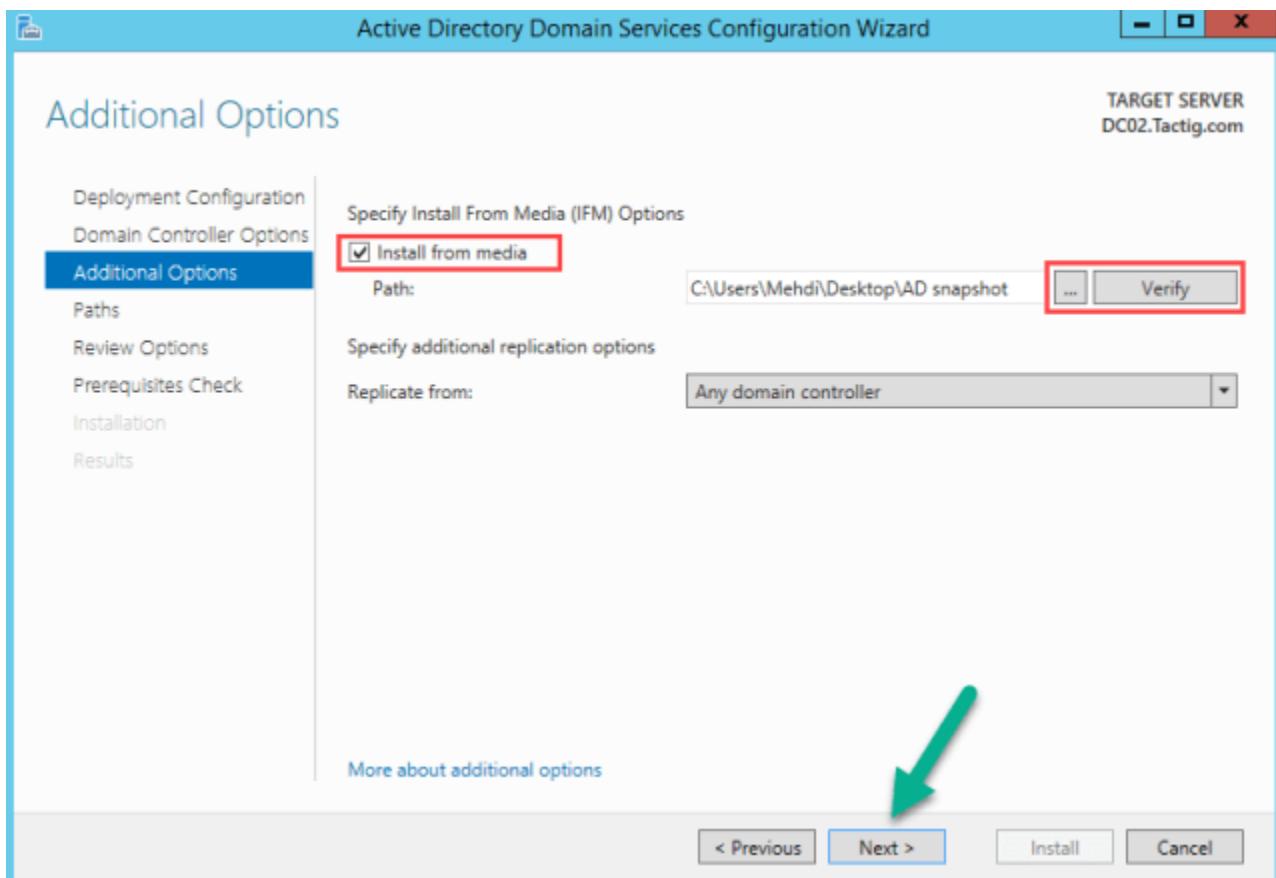


5. All options are disabled yet. Click on **Allow domain controller reinstall** to permit the domain controller, to be reinstalled on the new machine. Then enter a DSRM password then hit **Next**.



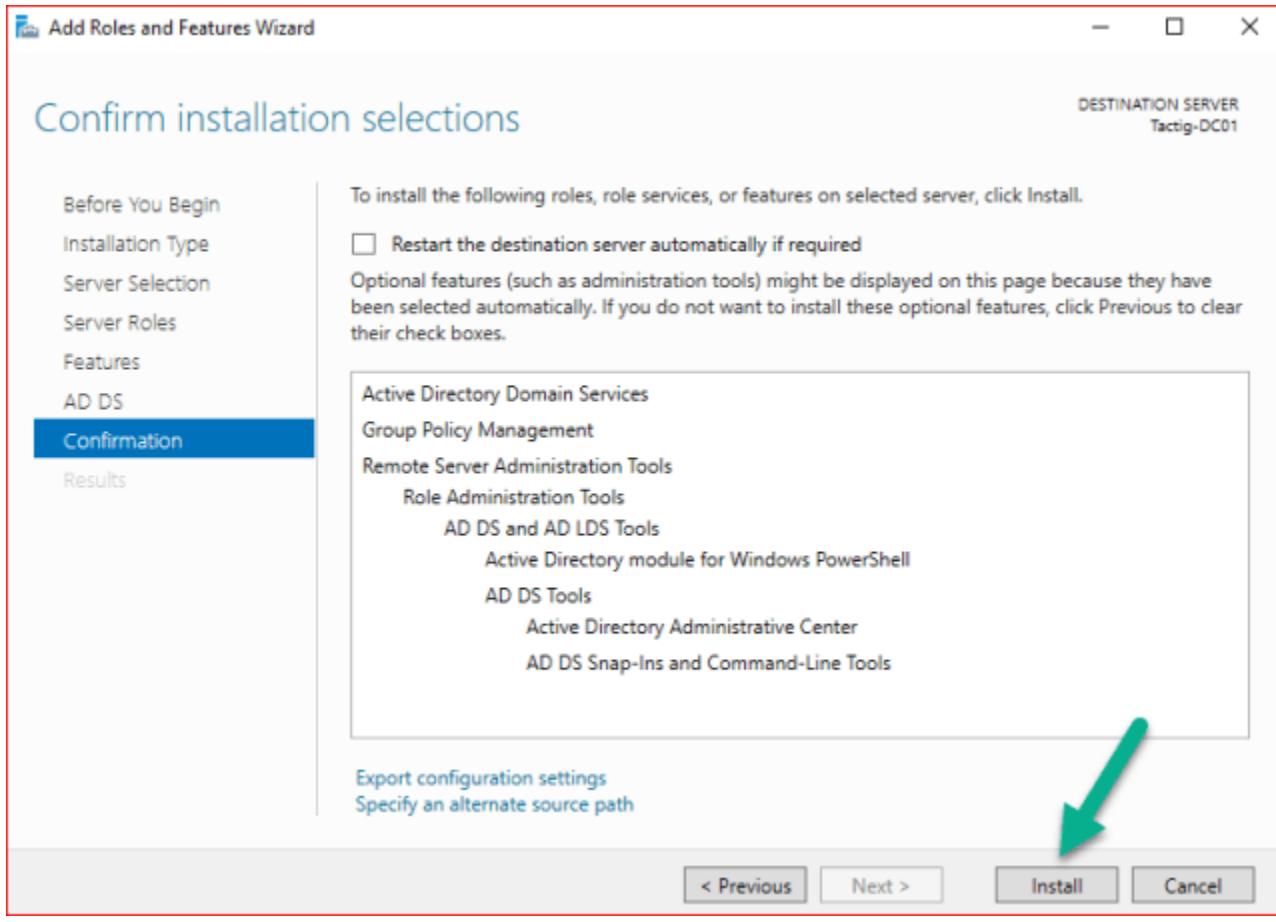
Allow domain controller reinstall

6. Select **Install from media** option to be enabled to use your AD DS snapshot. Then click on **three dotted** button, find the media path that you've the snapshot inside. Verify the IFM media by clicking on **Verify** button then hit **Next**.



Install from media (IFM)

7. In the **Paths** and **Review options** pages we have nothing to do, so just click on **Next** button. In the **Prerequisites Check** page click on **Install** button to install the domain controller. When domain controller installed, the machine will be restarted or restart manually if the server didn't restart automatically.



Install Active Directory

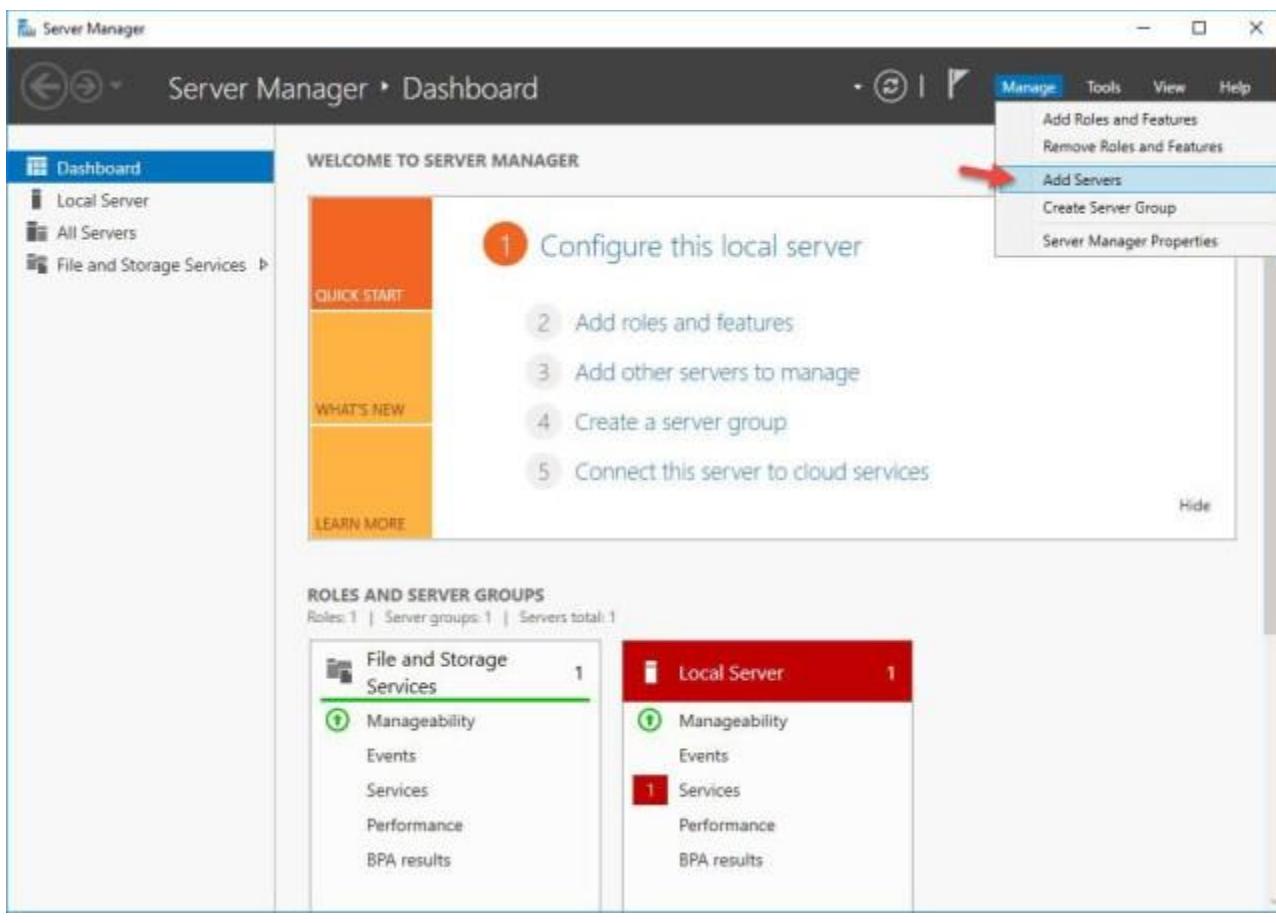
Conclusion

Consequently the new machine is domain controller in your domain. So log in to new domain controller, you'll see the same contents as the previous domain controller. Active Directory snapshot is an easy and quick way than WAN link. If you used WAN link like internet, replication between two servers took long time. For any sort of question feel free and leave a comment. We will respond you as soon as possible.

While managing your server and configuring it, you can add multiple servers to Server Manager in [Windows server](#) 2008, 2012 or 2016. When added you can receive online or offline status and create group based on their functions, location or any other organizational paradigm. Therefore, you can configure them fully from Server Manager like: [adding roles and features to them](#) or do [other configurations](#). No matter whether you're using Windows Server 2008, 2012, 2016, this is the first step to In this article, we will discuss on add multiple servers to server manager in windows server and create groups on their functions. So let's get started.

Add Multiple Servers to Server Manager

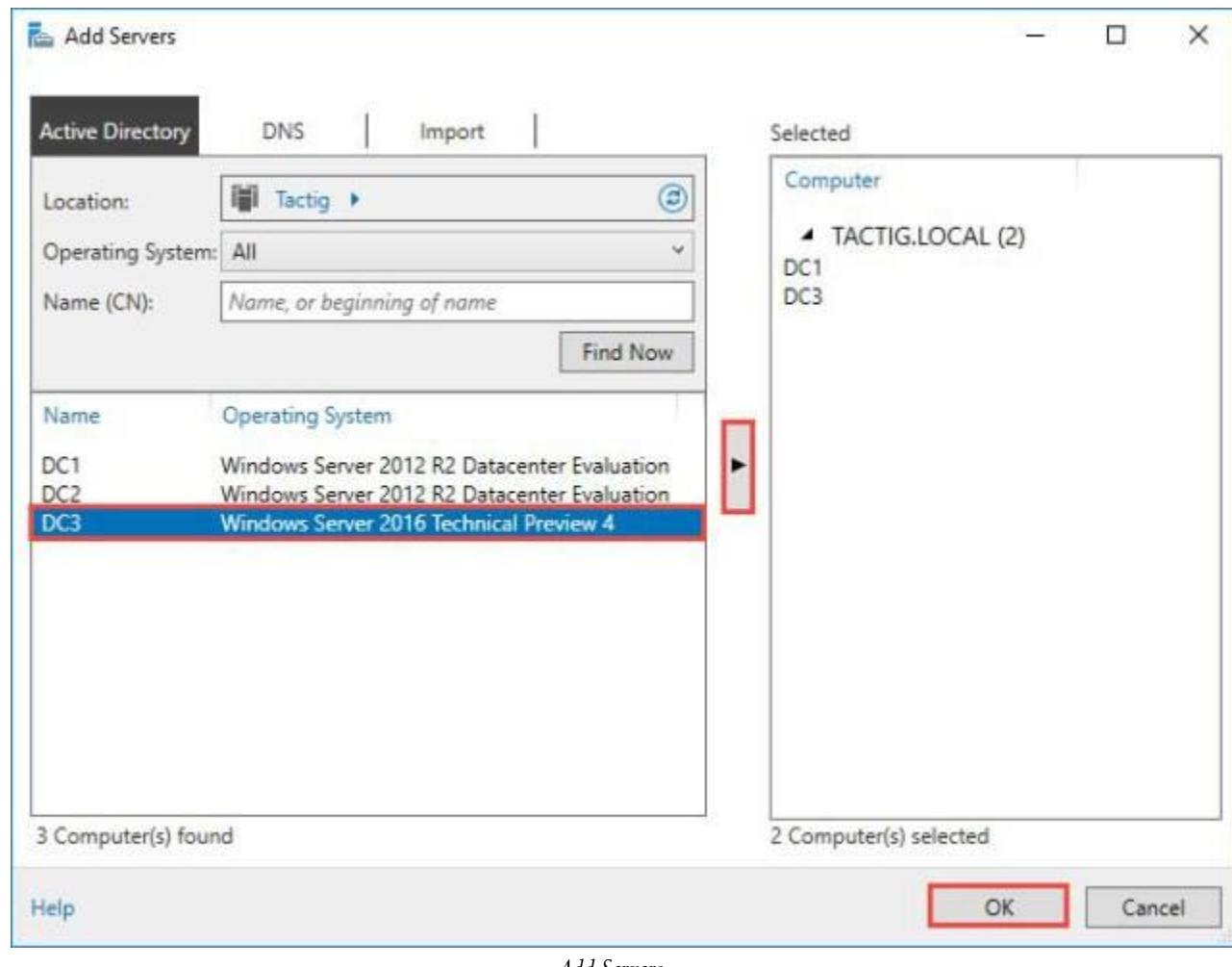
1. Open **Server Manager**, click on **Manage** then click **Add Servers**.



2. When the Add Servers page opened, now choose one of the following methods to add servers.

- **Active Directory:** Enables you to search for computers running specific operating systems in specific locations in an [Active Directory Domain Services](#) domain.
- **DNS:** Enables you to search for servers in your currently configured Domain Name System (DNS) server.
- **Import:** Enables you to supply a text file containing the names of the servers you want to add.

To add servers by active directory just click on **Find Now** and the computers will be found.



When the servers found, just select the server you want to add and click on right arrow button to add them to the list and click **Ok**.

Now click on **All Servers** and you will see the servers you've added like the shot.

The screenshot shows the Windows Server Manager interface. The left sidebar has a navigation menu with items: Dashboard, Local Server, All Servers (which is selected and highlighted in blue), and File and Storage Services. The main content area is divided into two sections: SERVERS and EVENTS.

SERVERS: This section displays a table of three servers. The columns are: Server Name, IPv4 Address, Manageability, Last Update, and Windows Activation.

Server Name	IPv4 Address	Manageability	Last Update	Windows Activation
DC1	-	Kerberos authentication error	2/21/2016 11:20:18 AM	-
DC2	-	Kerberos authentication error	2/21/2016 11:20:18 AM	-
DC3	192.168.10.12	Online - Performance counters not started	2/21/2016 11:20:22 AM	00133-32500-02427-AA420 [Activated]

EVENTS: This section displays a table of events. The columns are: Server Name, ID, Severity, Source, Log, and Date and Time.

Server Name	ID	Severity	Source	Log	Date and Time
DC3	7023	Error	Microsoft-Windows-Service Control Manager	System	2/21/2016 11:18:59 AM
DC3	2006	Error	Microsoft-Windows-PerfNet	Application	2/21/2016 11:17:51 AM
DC3	2006	Error	Microsoft-Windows-PerfNet	Application	2/21/2016 11:13:51 AM
DC3	2006	Error	Microsoft-Windows-PerfNet	Application	2/21/2016 11:11:52 AM
DC3	2006	Error	Microsoft-Windows-PerfNet	Application	2/21/2016 11:11:51 AM
DC3	16387	Warning	Microsoft-Windows-Security-SPP	Application	2/21/2016 11:11:08 AM
DC3	2006	Error	Microsoft-Windows-PerfNet	Application	2/21/2016 11:09:43 AM

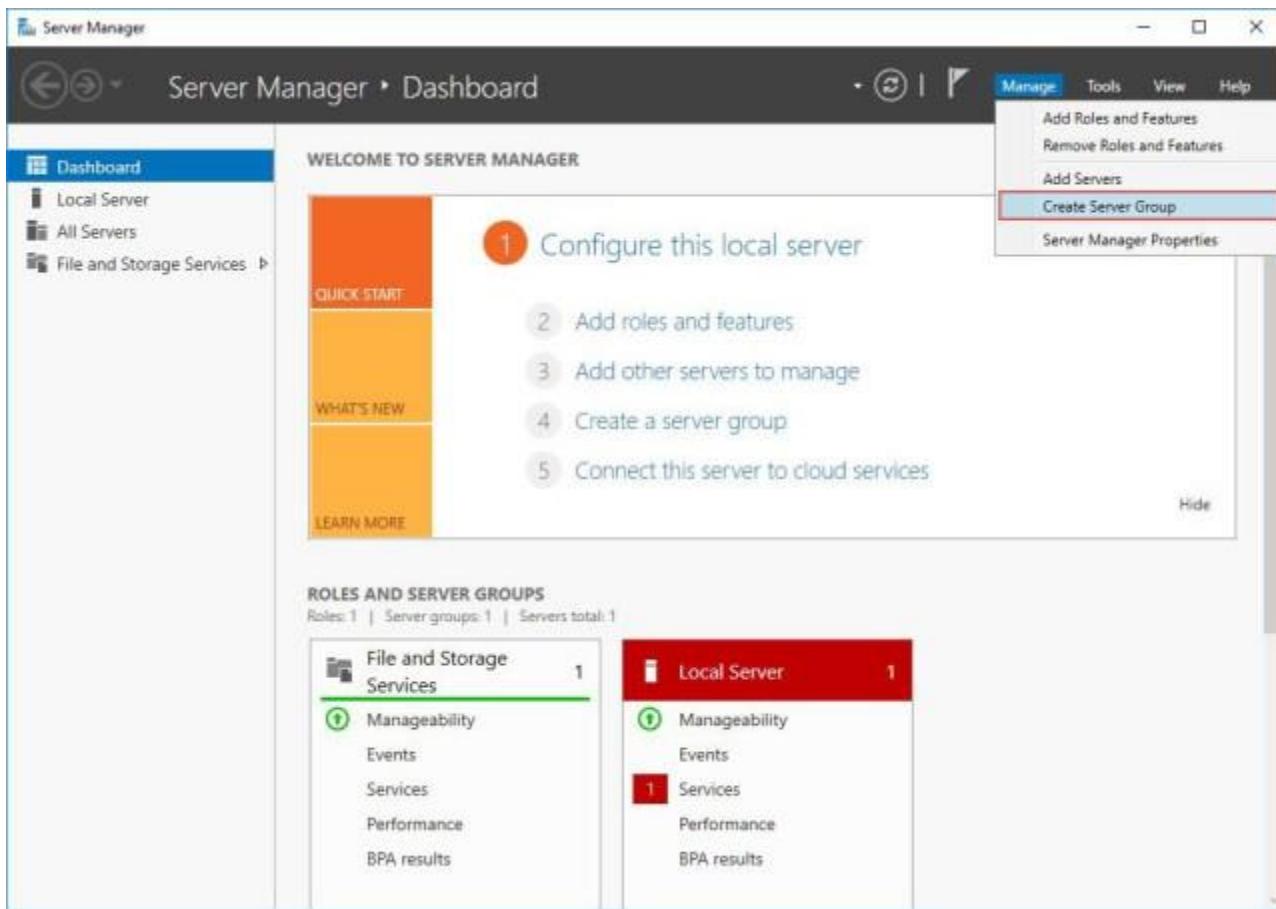
All Servers

Ok, now here you can manage servers or do any other configurations.

Create Server Group to Manage Servers

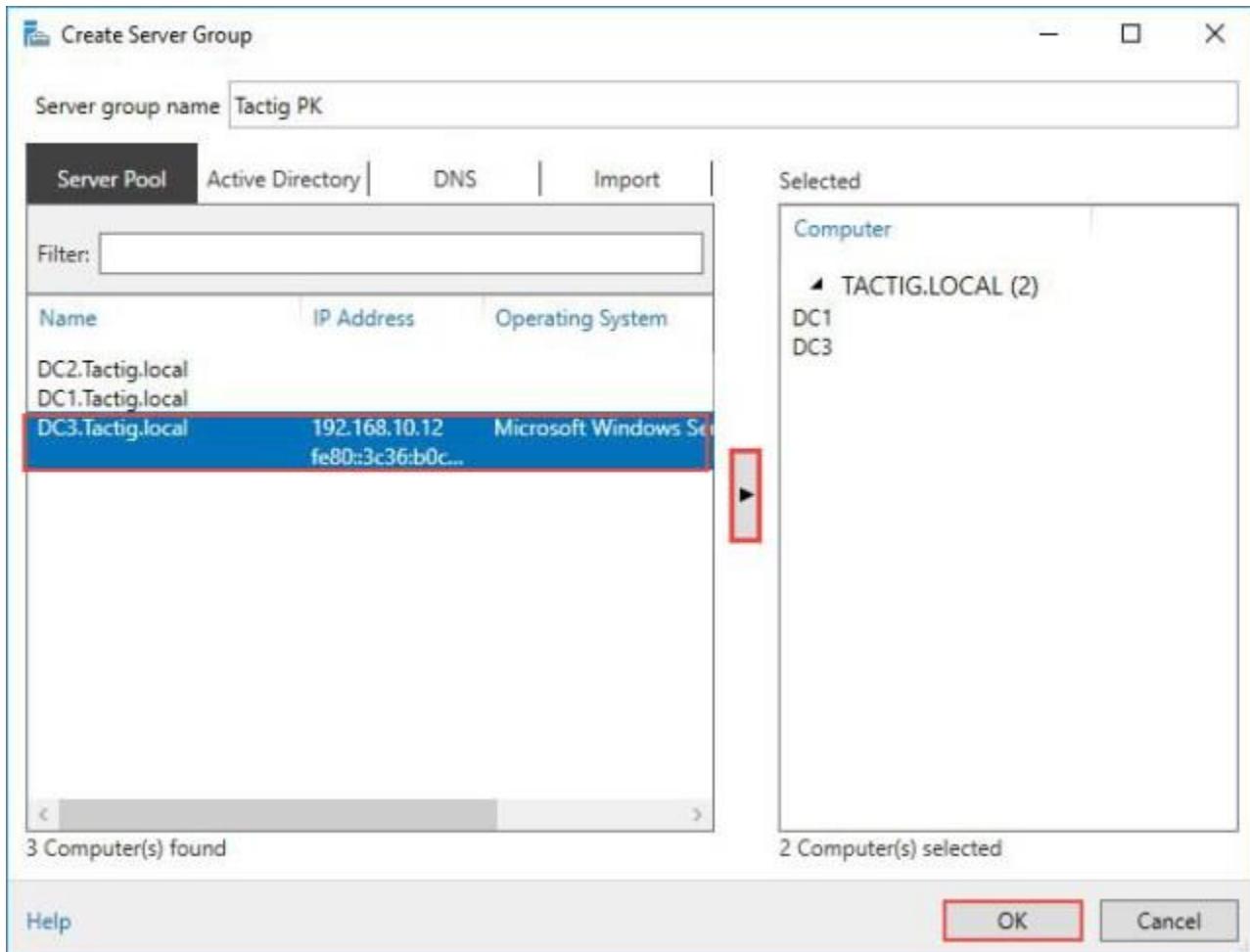
Once you've added servers to your server, exactly you need to configure or work with them so to avoid long scrolling list of servers you can create server group based on their functions, location or any other organization paradigm.

1. Open **Server Manager**, click on **Manage** and select **Create Server Group**.

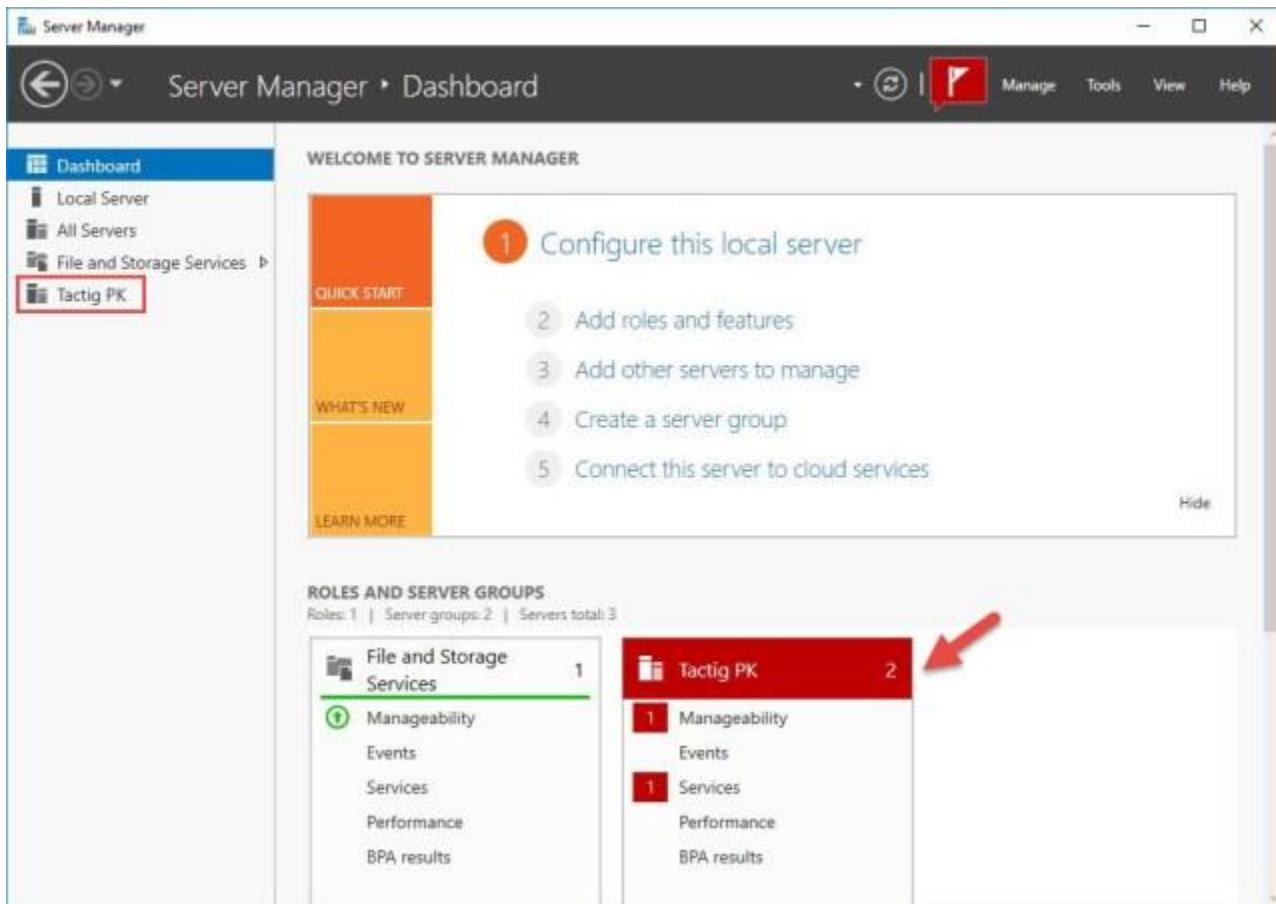


Server Manager

2. Now select the servers you want to be in group, if you couldn't find the server by server pool, select another method to find the servers) and click on right arrow key to add them to the list and click **Ok**.



After you click **ok**, the group will be created and shown in the left navigation pane like the shot below.



Finally, the servers have been successfully added with created group. If you have any questions, suggestion or idea we are ready to accept it.

The Windows Deployment Services(WDS) is the key of deploying automated-based installations of standard or custom images to servers in a network. The WDS server store the installation files and help you to manage the boot and operating system files used in the network installations. Like capturing image first, then deploying them on client computers. Install all drivers and applications. Update operating system, drivers and applications then take an image of the template computer. The computer you take capture image from is called template computer. Sysprep is the tool that you can image through from a template computer and store the image on WDS server to deploy on WDS clients.

- **DVD:** You can go to computers one by one with a shiny disk in hand and install operating system on. For an enterprise you need lots of disks and it takes a long time. This method can be implemented on
- **Bootable Flash memory:** You can install operating system using bootable flash memory. When the flash memory is bootable, you copy all operating system files and plug the flash to computers. For the process you many lots of flash memories.

Topics covered in this post:

- WDS Advantages
- WDS Images
- Hardware Requirements
- Prerequisites
- Install Graphically
- Installation through PowerShell
- WDS Basic Configuration
- Add Install Image
- Add Boot Image
- Conclusion

WDS Advantages:

- Install Windows 7, 8, 8.1 or 10 remotely.
- You can install Windows with needed softwares and drivers simultaneously.
- Install Windows on number of computers at one time.

WDS Images

Wds uses four image: Install image, Boot image, Discover image and Capture image. The minimum of requirement is boot and install images.

- **Install Image:** It is the actual operating system. It is found in the operating system media\sources\install.wim.
- **Boot Image:** It is Windows PE image. You can find it the operating system media\sources\boot.wim.
- **Discover Image:** This image is used by WDS clients which don't support PXE boot. You create the image using boot.wim image from media file and Windows Assessment Tool Kit (ADK) to create a discover image.
- **Capture Image:** This image is custom install image. You capture the image from a template computer using Sysprep.

Hardware Requirements

- **RAM:** minimum of 2GB
- **Processor:** 64-bit processor
- **Hard Drive Space:** At least 6GB

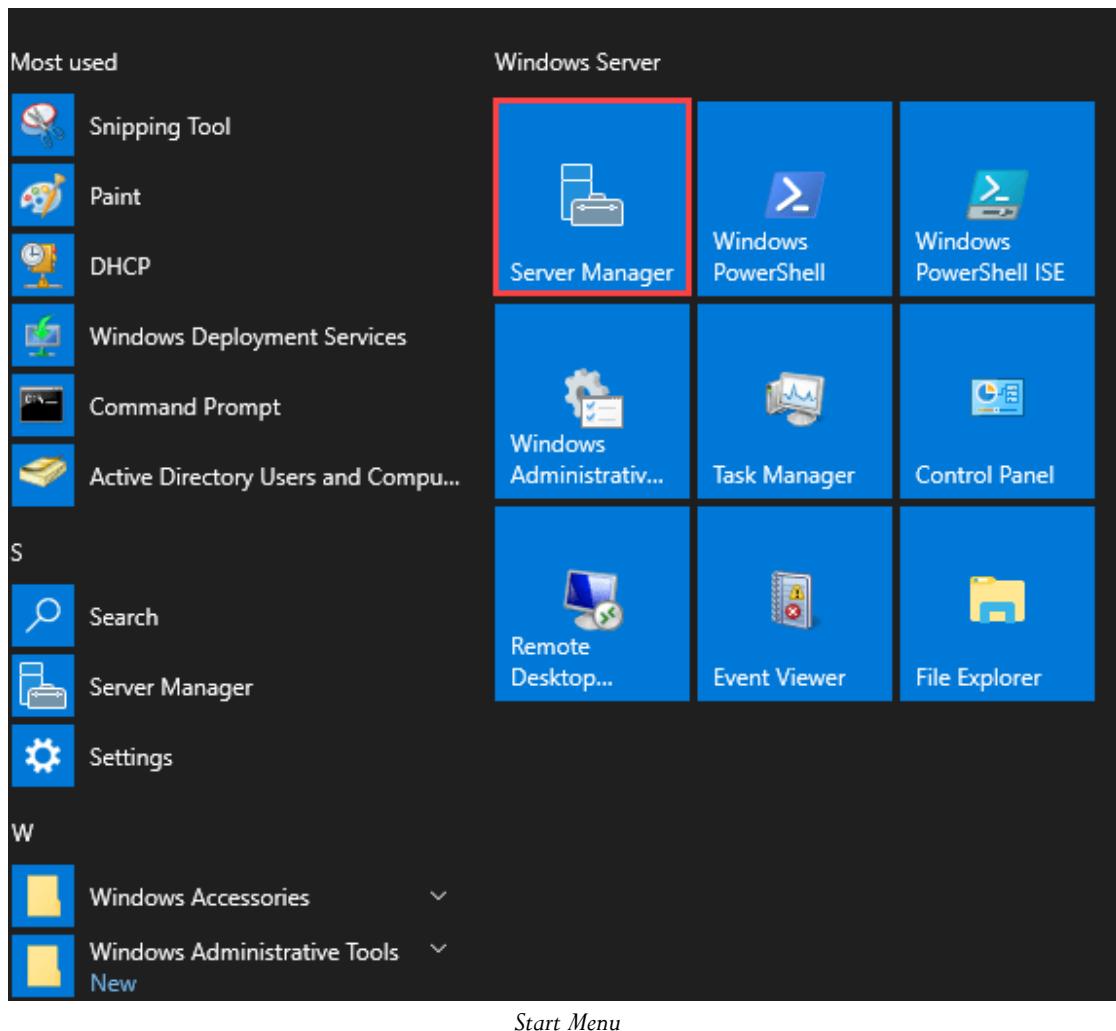
Prerequisites

- **AD DS:** The deployment server must be either member server (joined to a domain) or a domain controller. If you want to install (AD DS), read this article: [Install Active Directory Domain Services \(AD DS\) on Windows Server 2016](#)
- **DNS:** An active DNS (Domain Name Services) is required for Preboot eXecution Environment (PXE).
- **DHCP:** It is needed for supporting PXE boot.
- **NTFS volume:** The volume which contains images must be NTFS format.
- **Credentials:** Make sure that you have logged on with an account that have permissions to do this tasks.

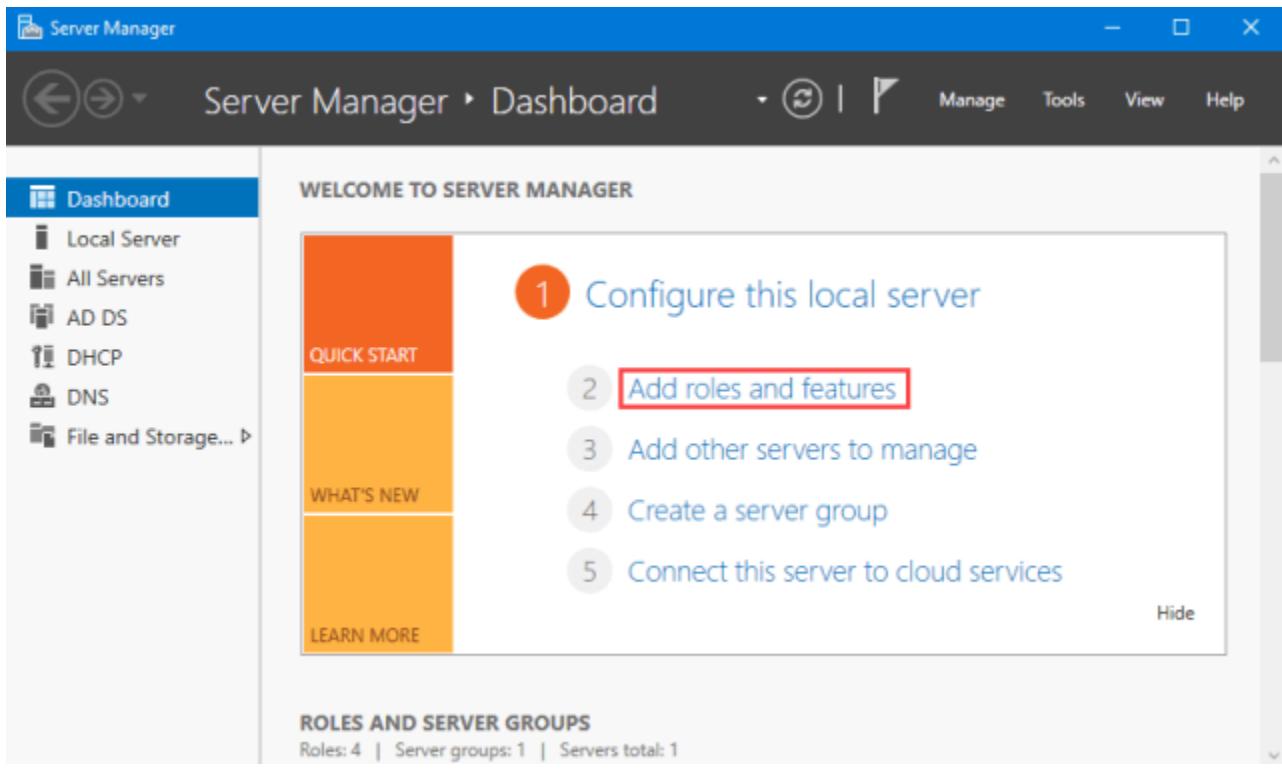
Install Graphically

Undoubtedly the easiest way to install a role is installing through graphical interface.

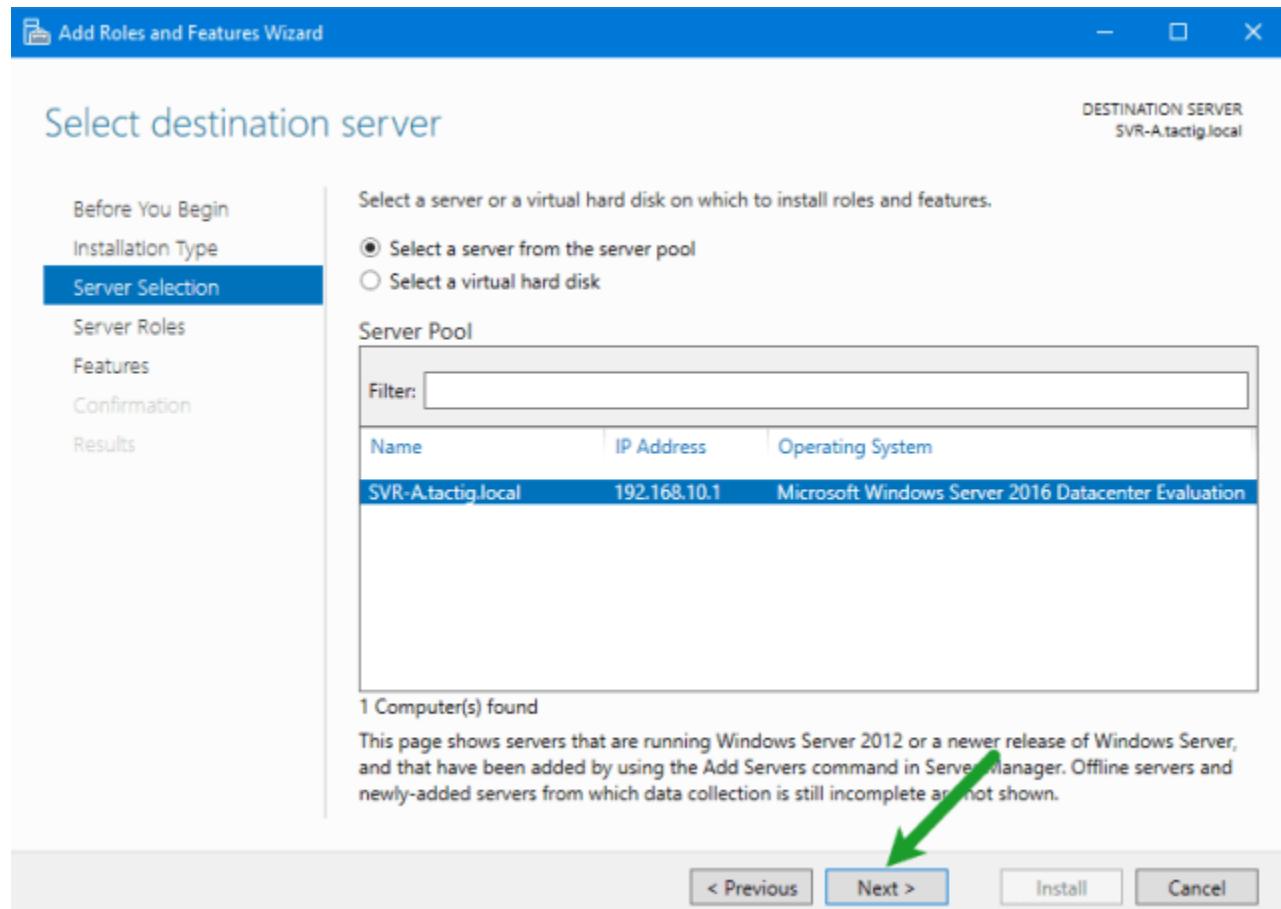
1. First of all press the Windows button. Then select the Server Manager .



2. Click on Add roles and features for installing WDS role.

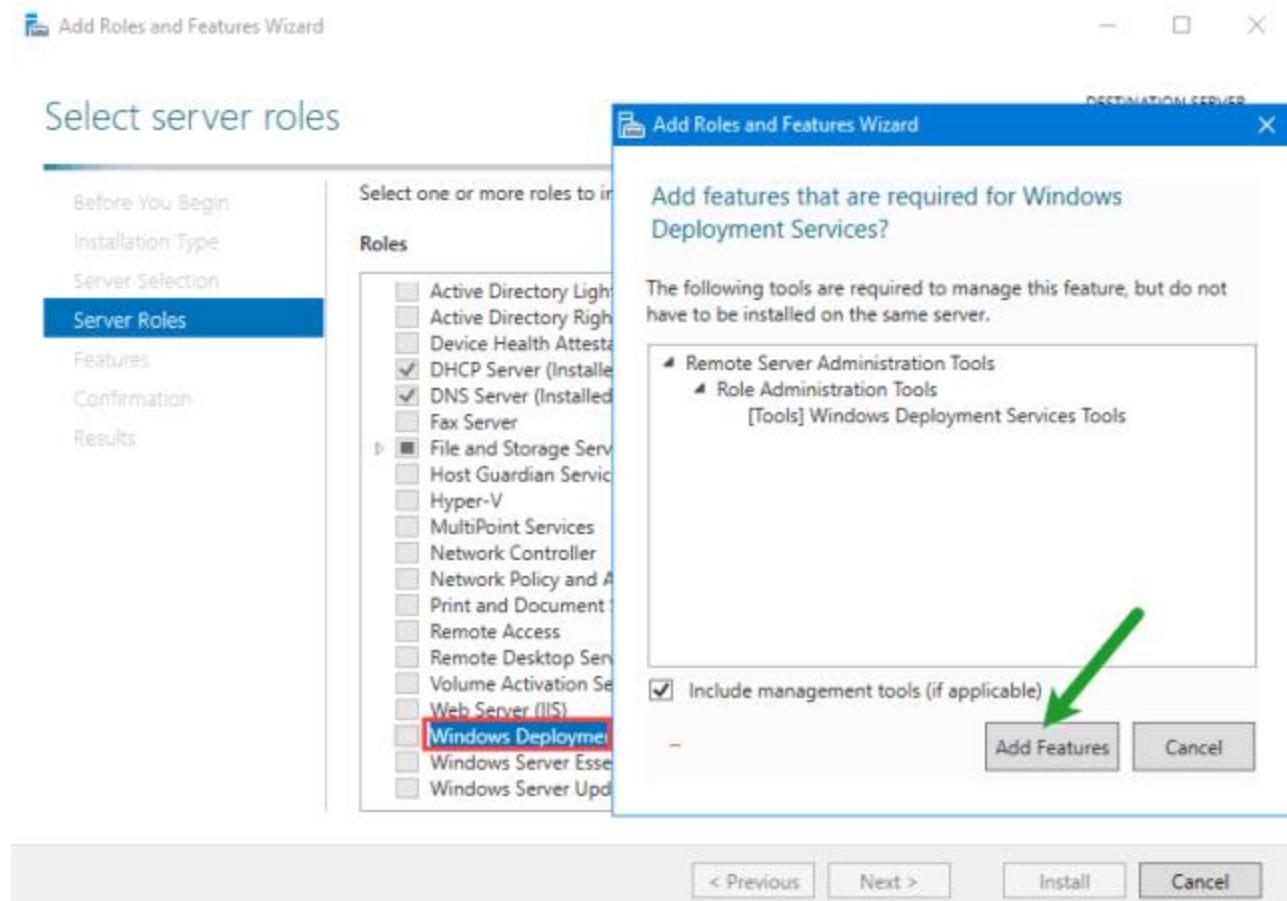


2. Skip the Before you begin page. Leave the Select a server from the server pool checked. From Server Pool select the server which you want to install the role on. Click on Next button.



Select Destination Server

3. In the Select server roles page, select Windows Deployment Services. A windows pops up and asks you to add some feature for the role management. Then click on Next button.

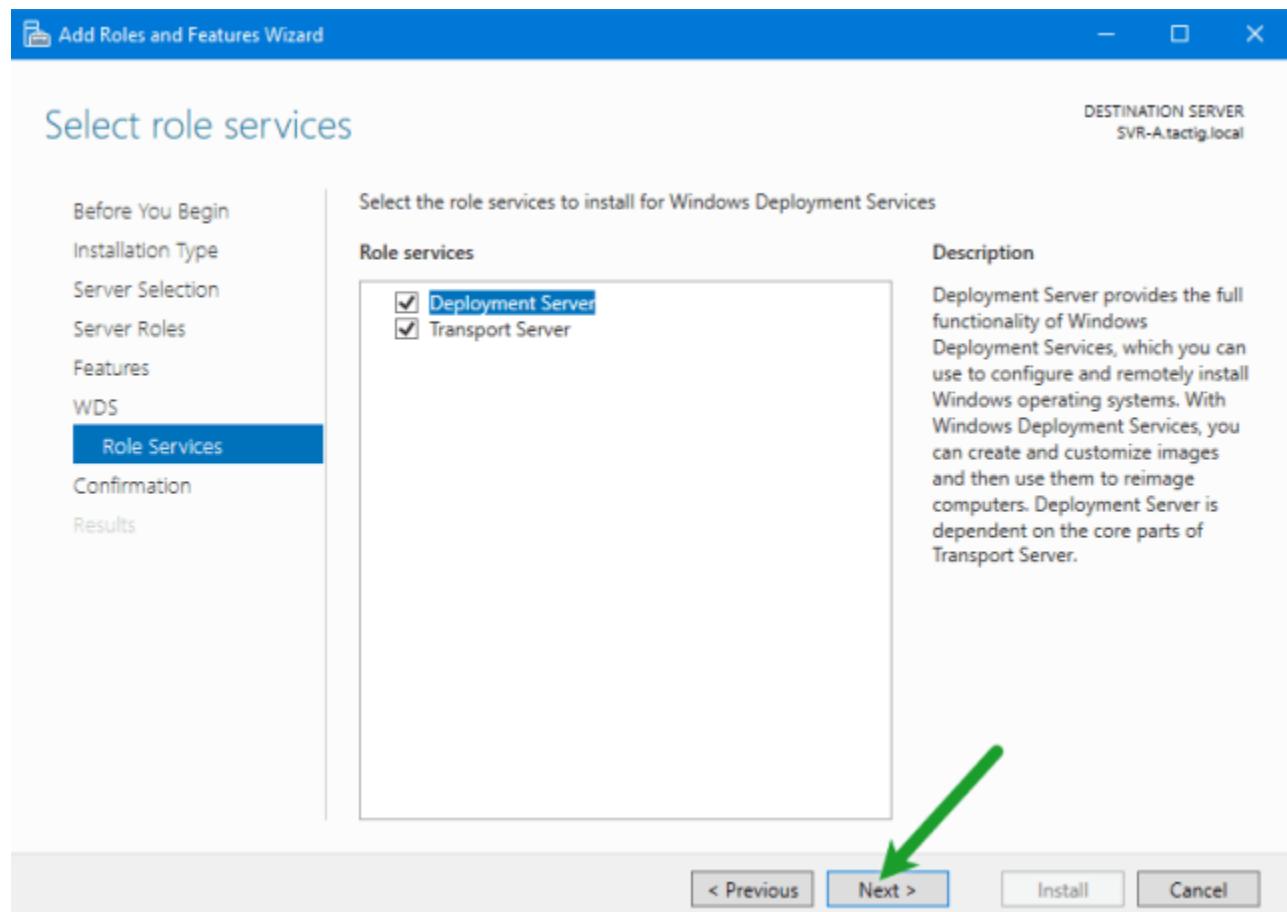


WDS Role

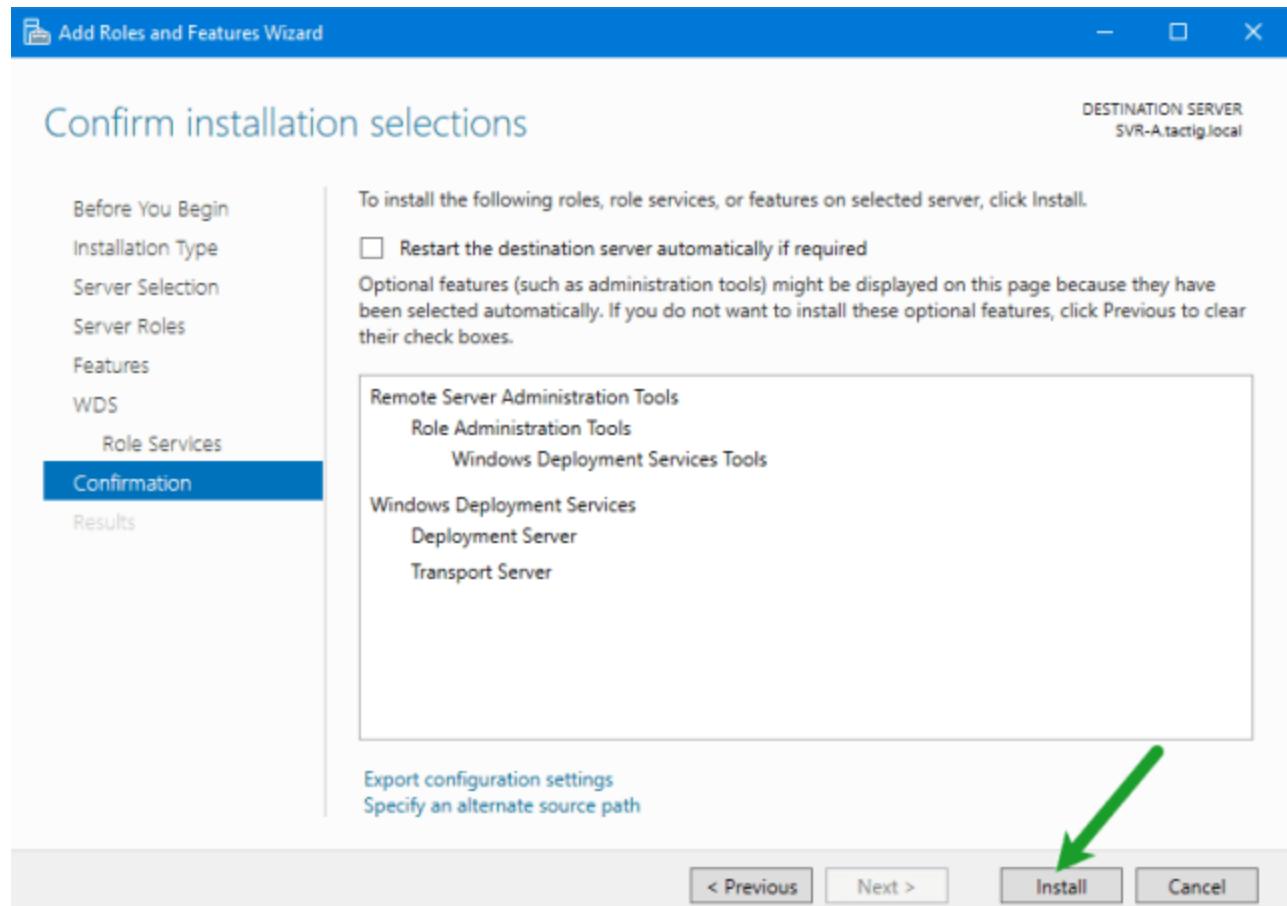
4. You have got nothing to do in Features page. In the WDS page, some essential data is present. In Role Services page you got two options:

- Deployment Server: It is the deployment server with management tools.
- Transport Server: It is WDS core service, but doesn't include management tools. You need to use scripts for every task that you want to do. Therefor you need to select both of them.

Click on **Next** button.



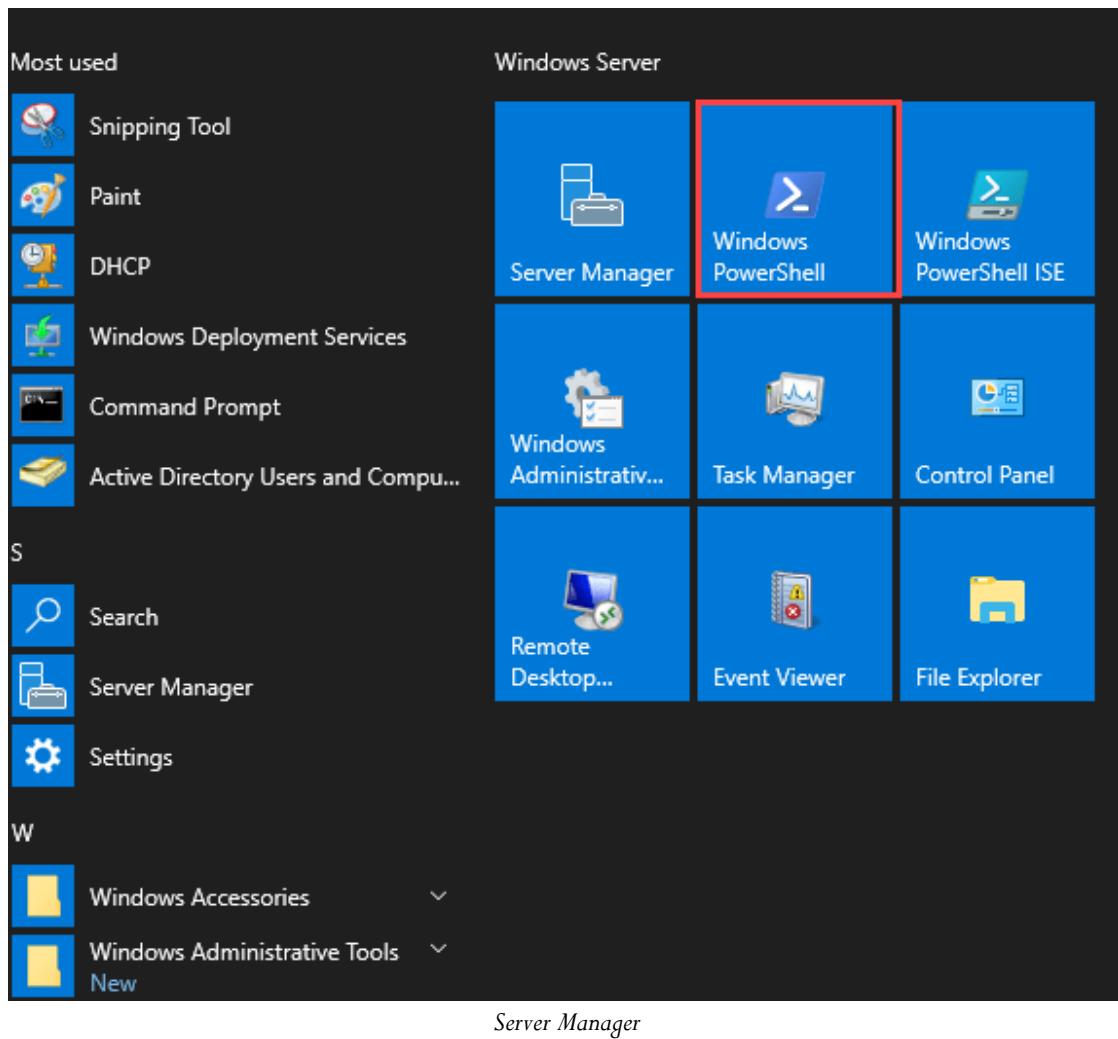
5. In the Confirm installation selections page, click on Install button. No reboot is needed after the installation.



Installation through PowerShell

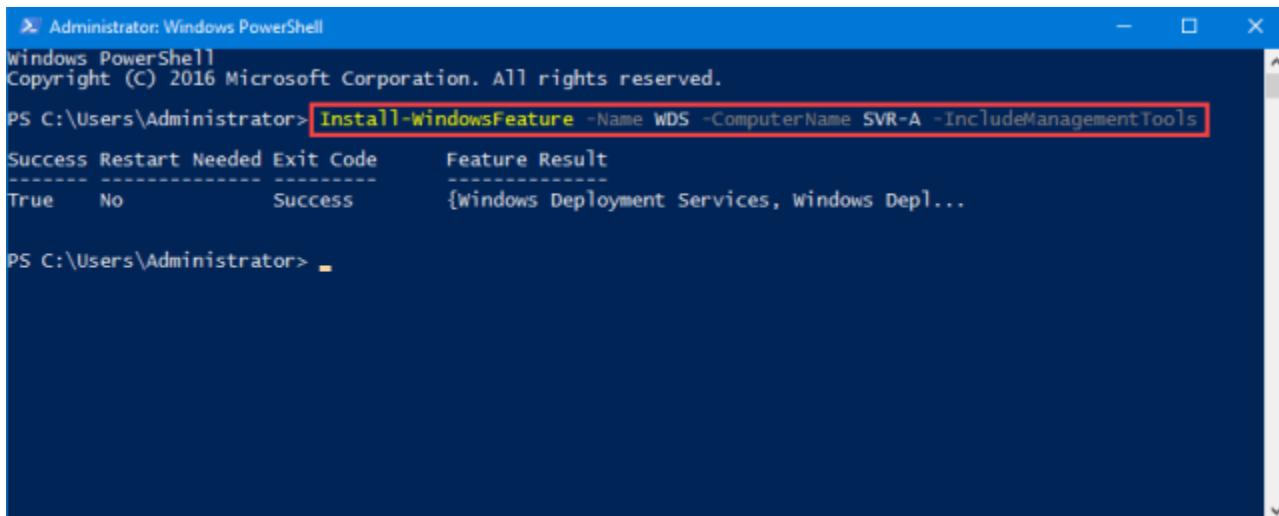
PowerShell is a powerful tool in Windows Server 2016. You need to know how to use it.

1. Press Windows button and select Windows PowerShell. Make sure you run PowerShell as an administrator. Also you can run PowerShell as an administrator with command. Open PowerShell as standard user and type this command to run it as an administrator: **Start-Processs PowerShell.exe -Verb RunAS**. Then press the **Enter** button.



2. `Install-WindowsFeature` is a command for installing roles on server. You need to run this command: `Install-WindowsFeature -Name WDS -ComputerName <Server_Name> -IncludeManagementTools`

After `-ComputerName` parameter type your server's name. In my case it is `SVR-A`. Then press the Enter button. While WDS installed successfully on your server, the summary would be shown to you. Saying that role installed successfully and no reboot is needed.



The screenshot shows a Windows PowerShell window titled "Administrator: Windows PowerShell". The command `Install-WindowsFeature -Name WDS -ComputerName SVR-A -IncludeManagementTools` is highlighted with a red box. The output shows a table with columns: Success, Restart Needed, Exit Code, and Feature Result. There is one row where Success is True, Restart Needed is No, Exit Code is Success, and Feature Result is {Windows Deployment Services, Windows Dep...}. The PowerShell prompt PS C:\Users\Administrator> is visible at the bottom.

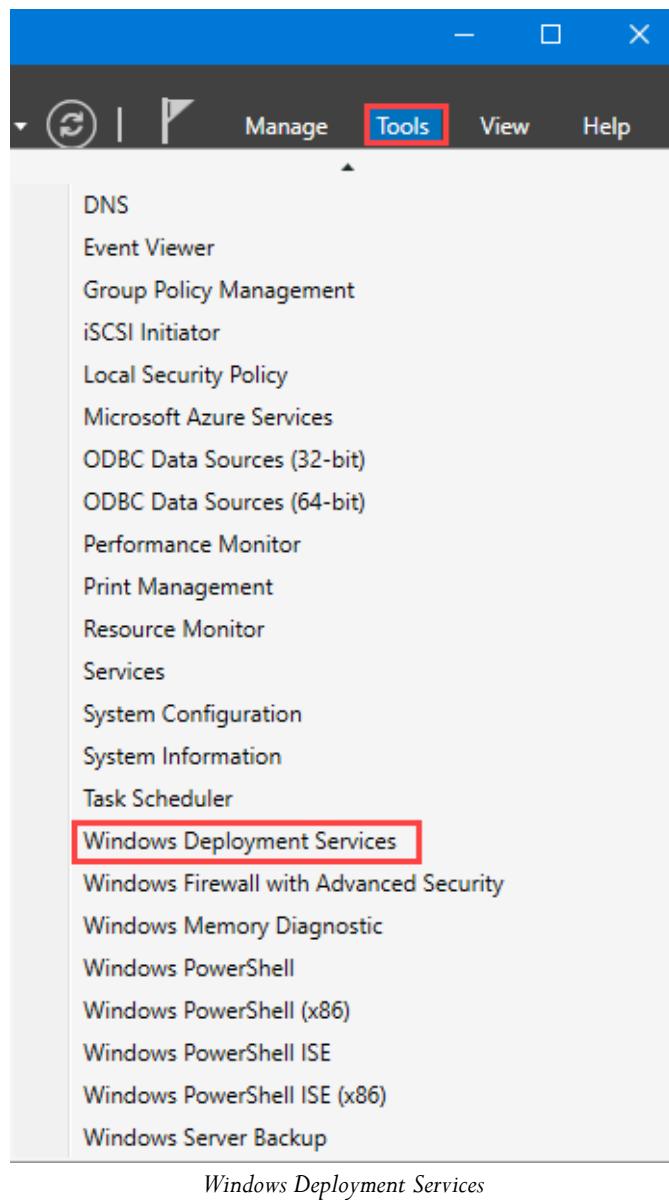
Success	Restart Needed	Exit Code	Feature Result
True	No	Success	{Windows Deployment Services, Windows Dep...

Install WDS Role

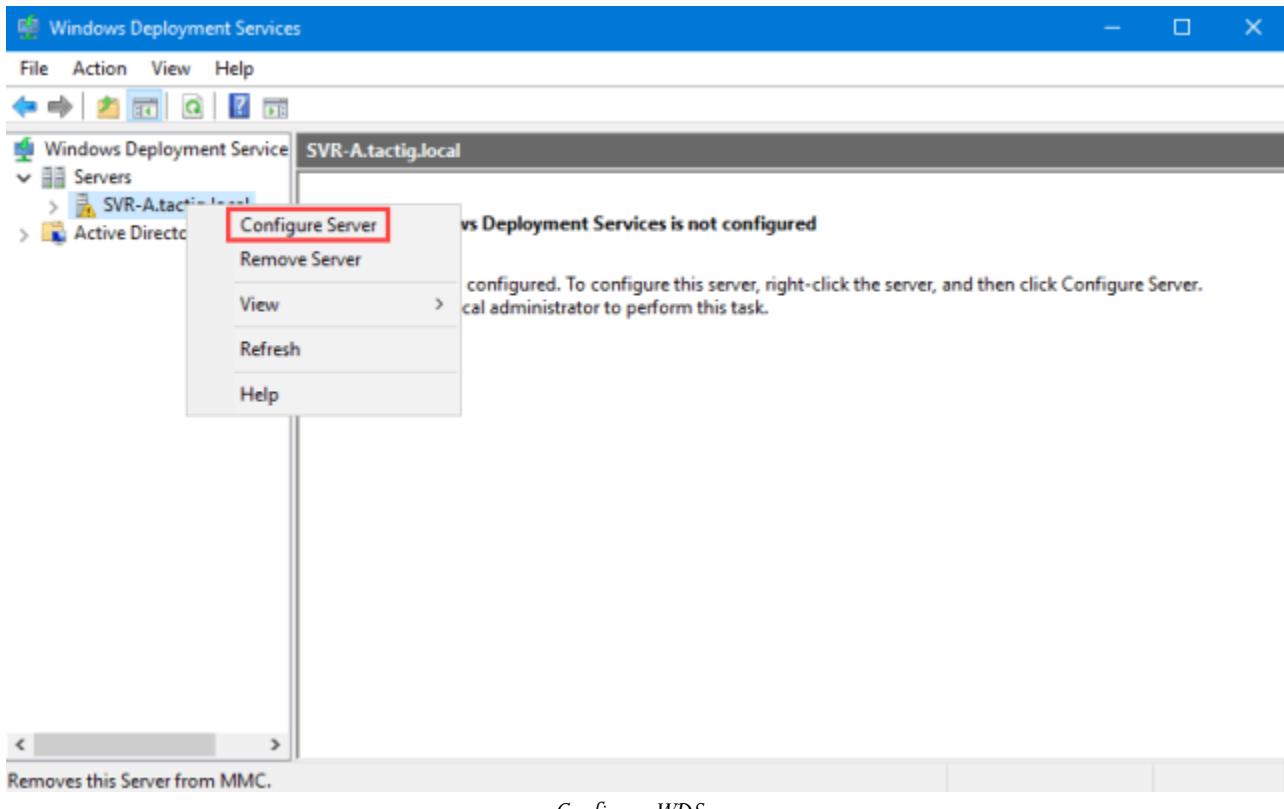
WDS Basic Configuration

Finally role was installed. We need to configure WDS server and use it across the network.

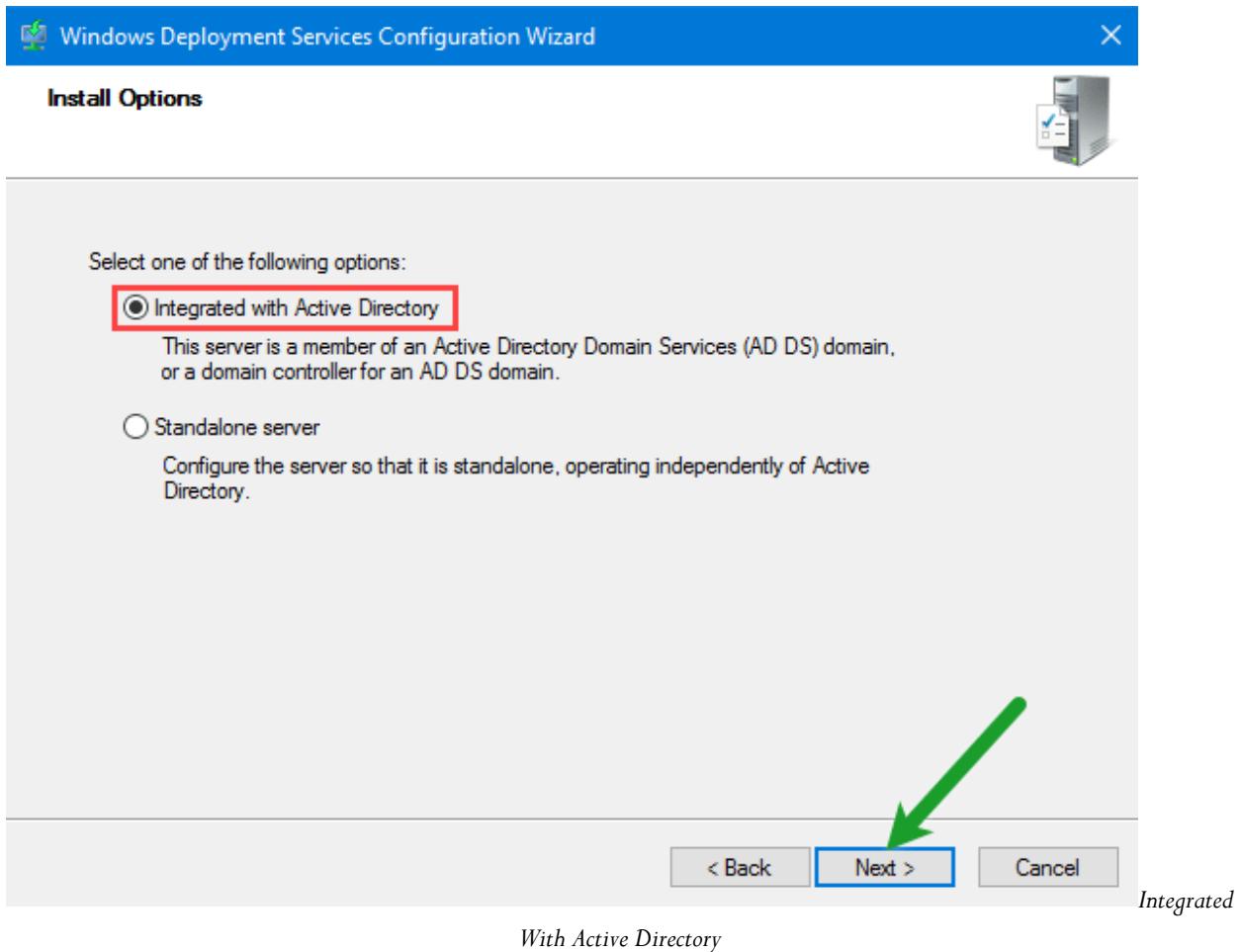
1. In Server Manager console, in the menubar, click on the Tools. Then click on Windows Deployment Service.



2. Windows Deployment Services console is opened. But the WDS server is not configured yet. For the purpose, right-click on name of WDS server below the Servers. Select **Configure Server**.

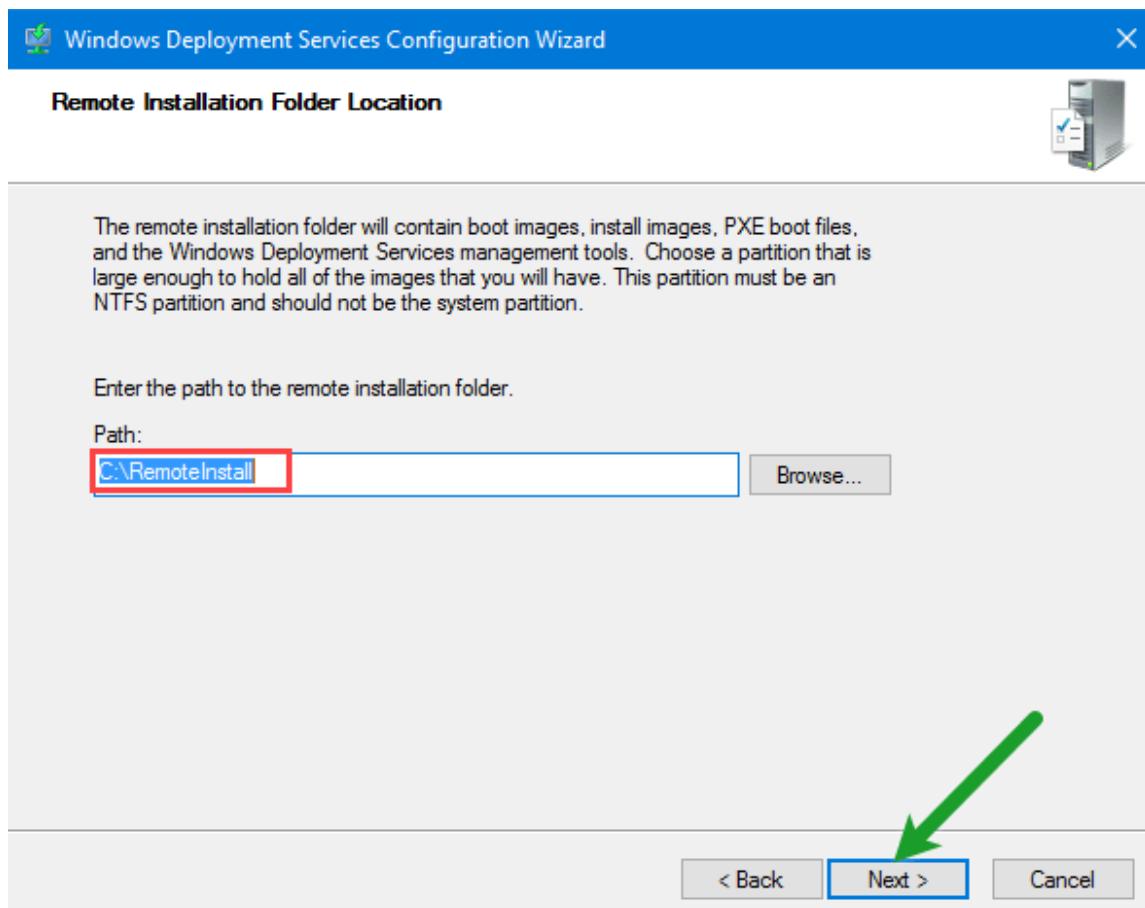


3. In Install Options page two options are visible. Select the Integrated with Active Directory option if your WDS server is a member of domain. If it is standalone server, select the Standalone server option. Click on Next button.



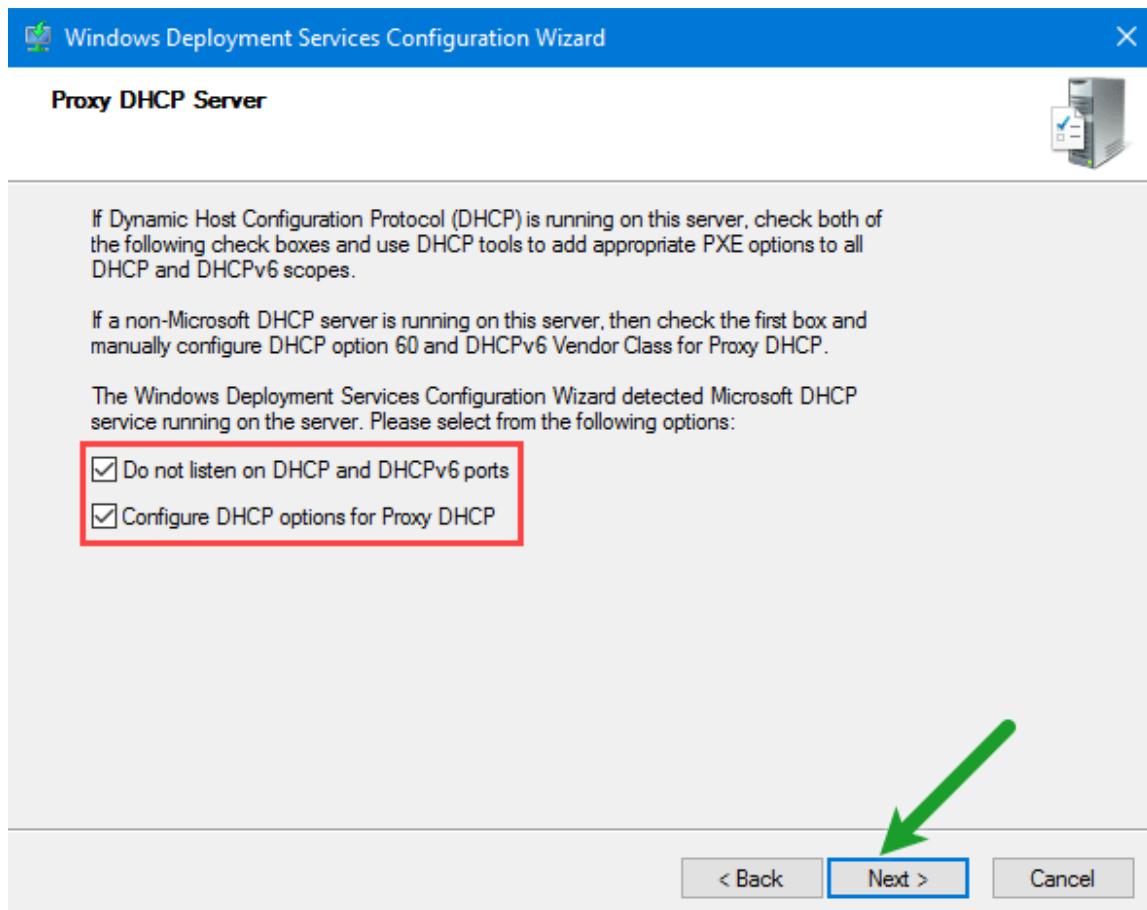
With Active Directory

4. Select the folder in which you want to store WDS server files, like images and drivers. Click on Browse button and specify the path. Click on Next button.

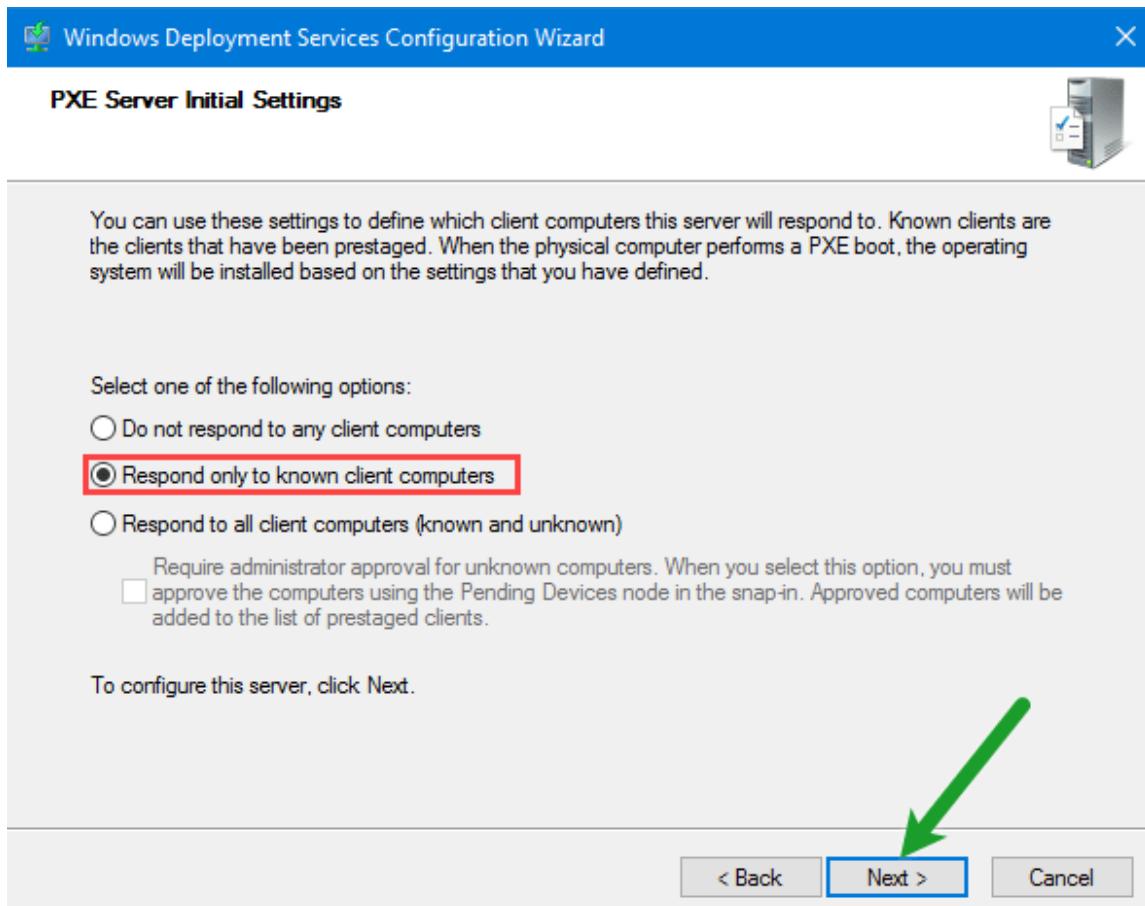


Remote Installation Folder Location

5. In the Proxy DHCP Server page, let both **Do not listen on DHCP and IPv6 ports** and **Configure DHCP options for Proxy DHCP** options selected. Click on Next button.

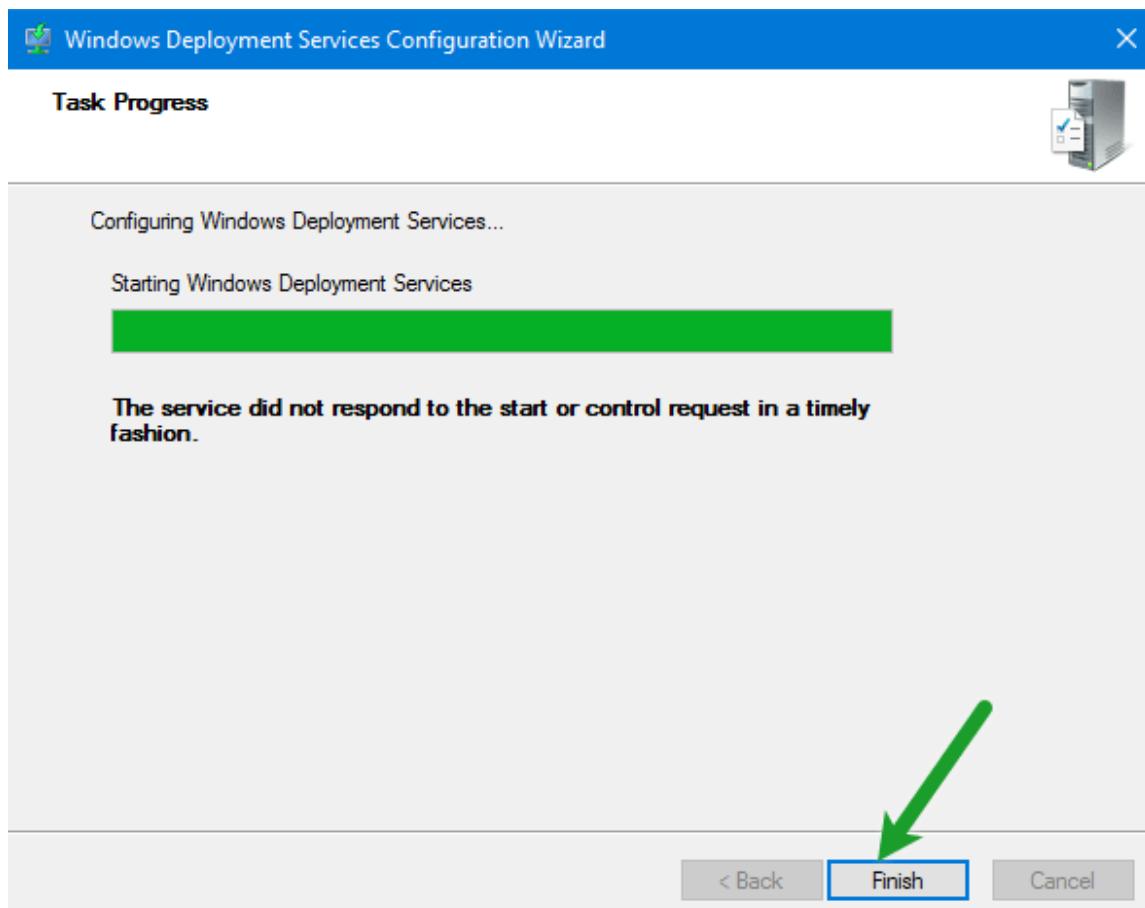


6. In PXE Server Initial Settings page, select Respond to known-client computers. This option is secure. Click on Next button.

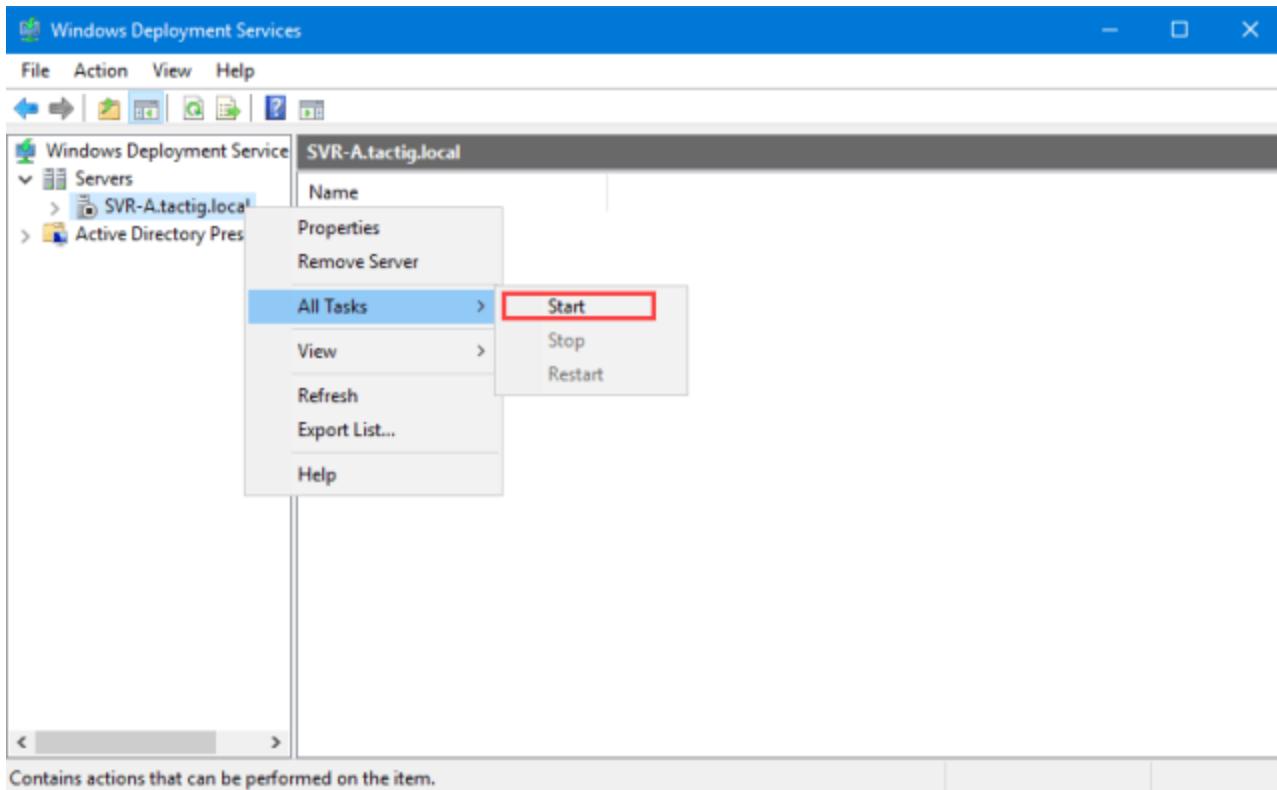


PXE Server

7. Finally we are done. Below the green line we got a message which says that this serve still can't respond WDS clients. Finish the wizard.



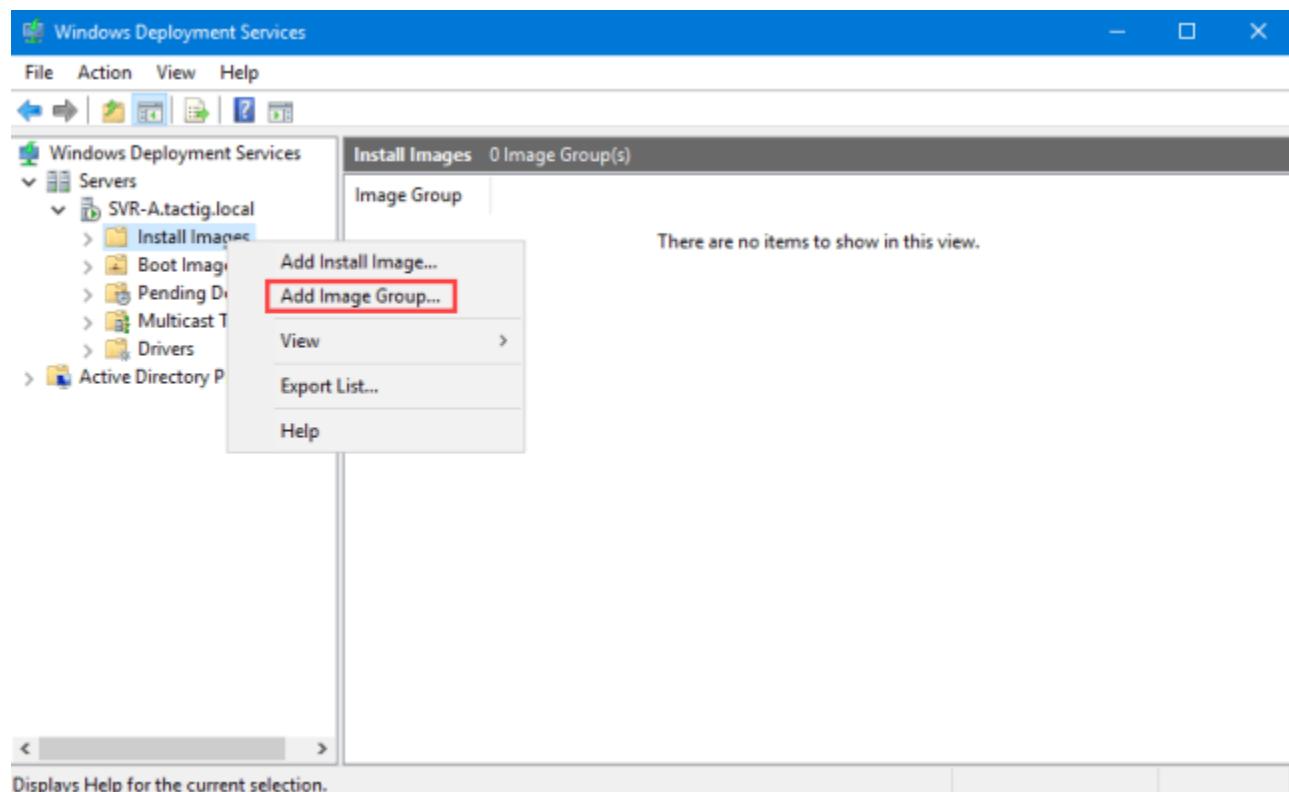
8. At the very end we can start the WDS server. WDS server is just configured not started. Right-click on WDS server which in my case is SVR-A, hover your mouse point on All Tasks, then click on Start. Soon after the WDS server would be started.



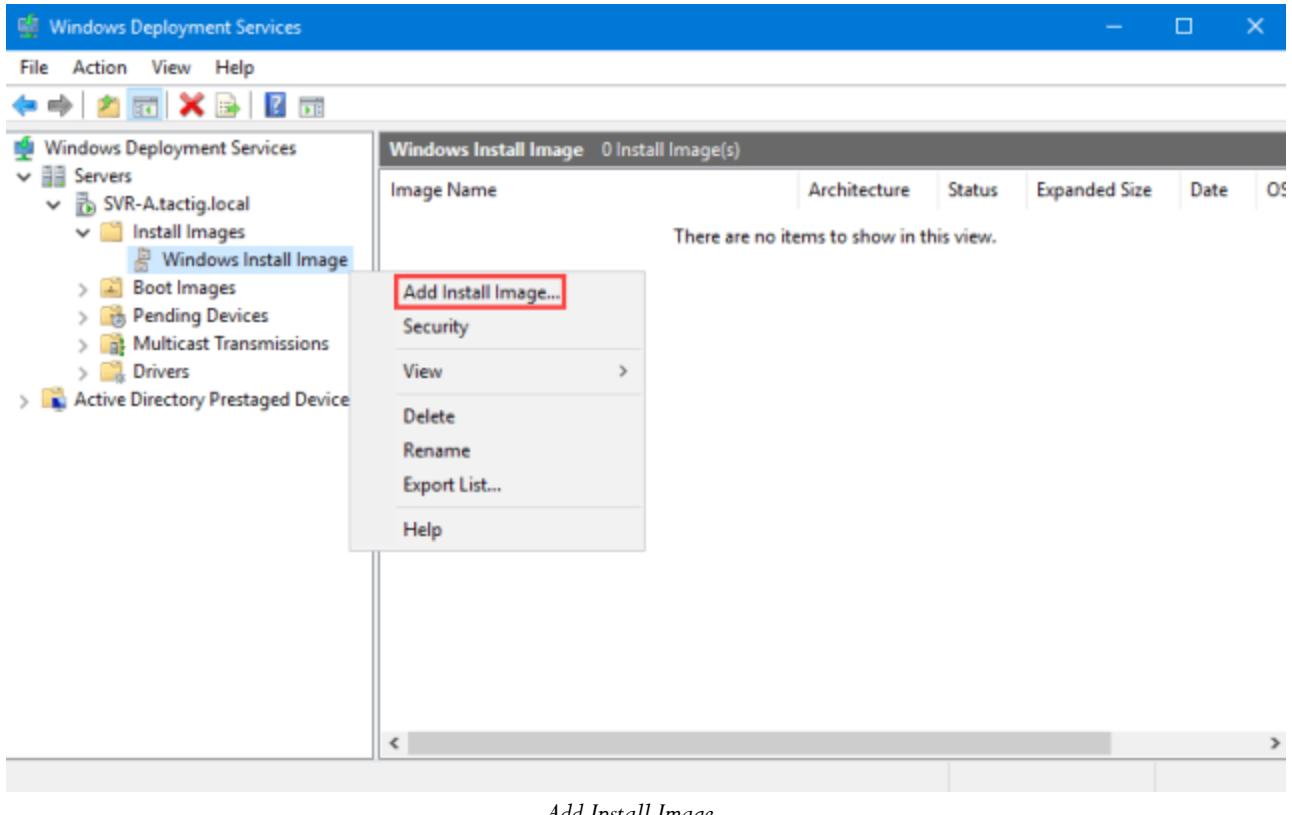
Note: (WDS console image; started pic)

Add Install Image

1. Before you add install image, create some groups for different operating system install images. Right-click on Install image. Click on Add Image group. A small windows opens, type name of the group inside and click on Okbutton.



2. Now which groups are created, right-click on the name of the group in which you want to add install image to. Select Add Install Image option.



Add Install Image

3. Specify the path. The path is simple: Whatever is your file media letter:\sources\install.wim. In my case is E:\sources\install.wim. Click on Next button.

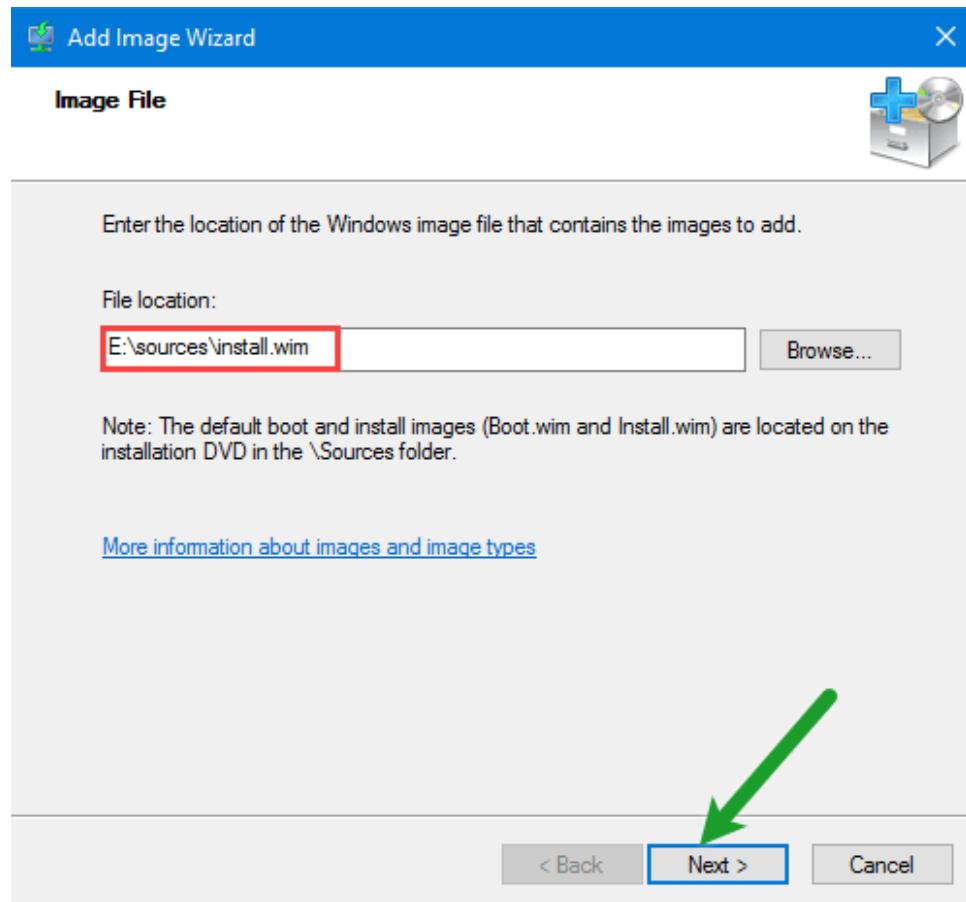
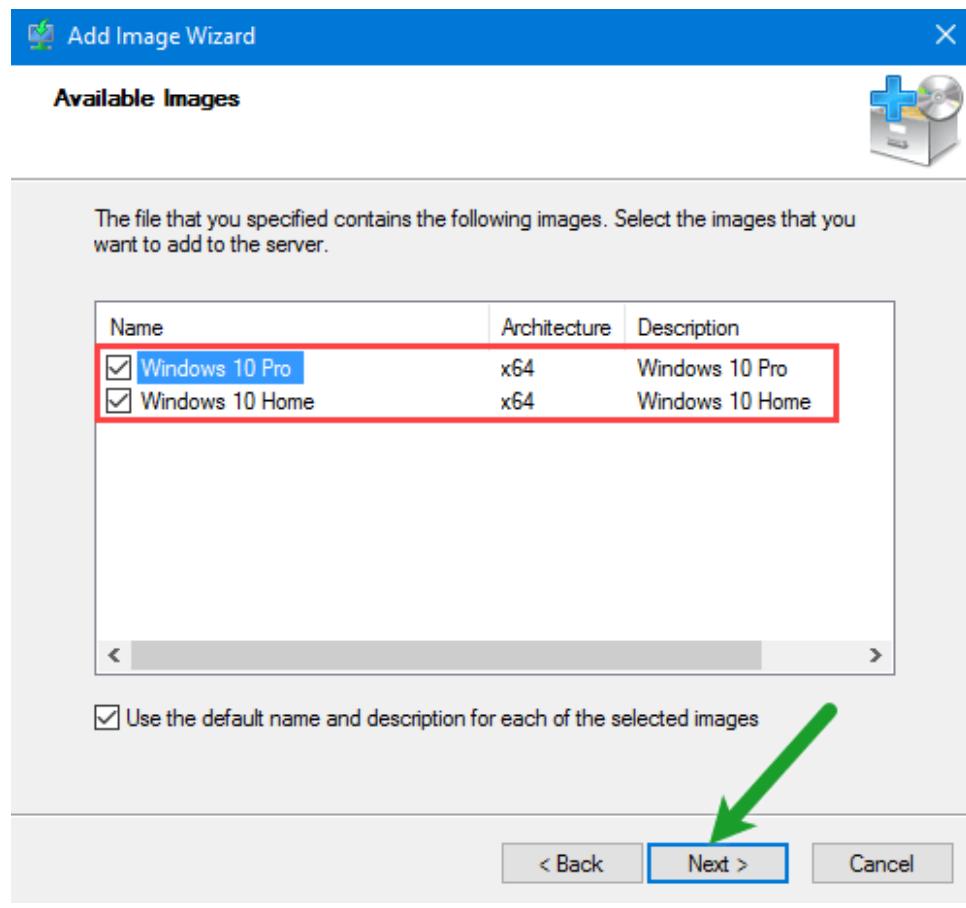
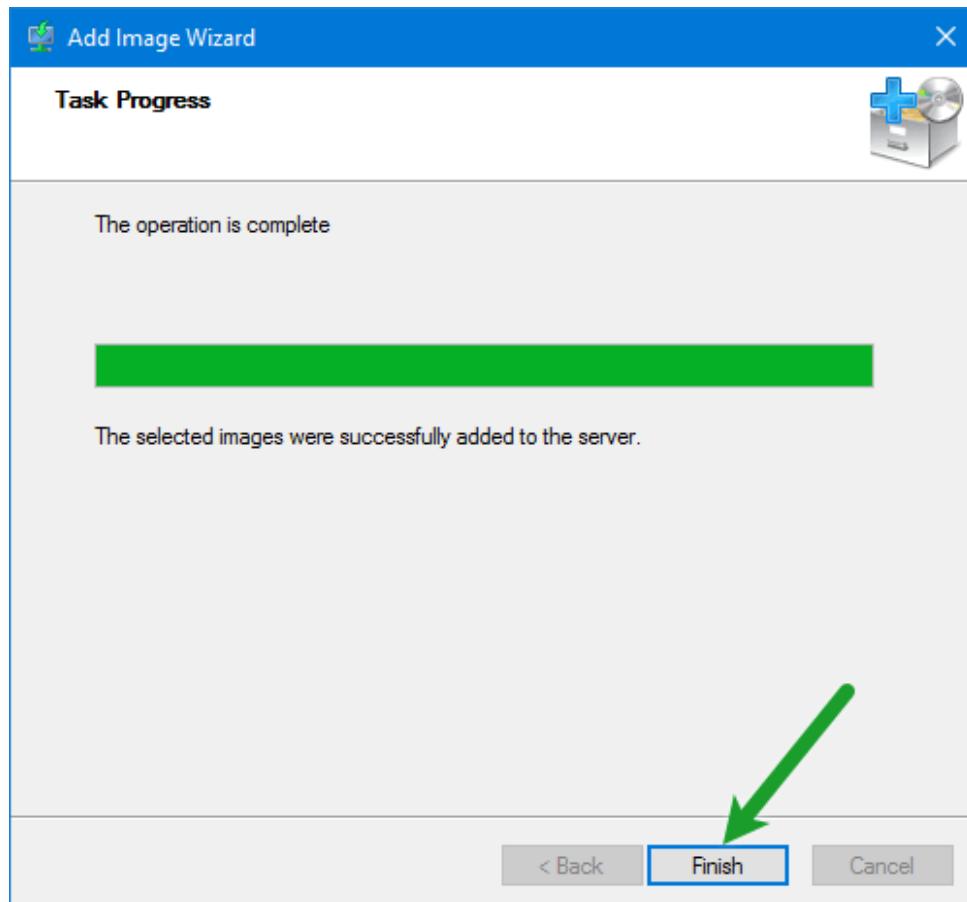


Image File Location

4. In the Available page of the wizard, select the install images that you need for your network. While done, click on Next button.



5. It takes a while, when WDS server copies install.wim image from media file. At last click on Next Finish button to close th wizard.



Finish Install Image Wizard

Install image was added.

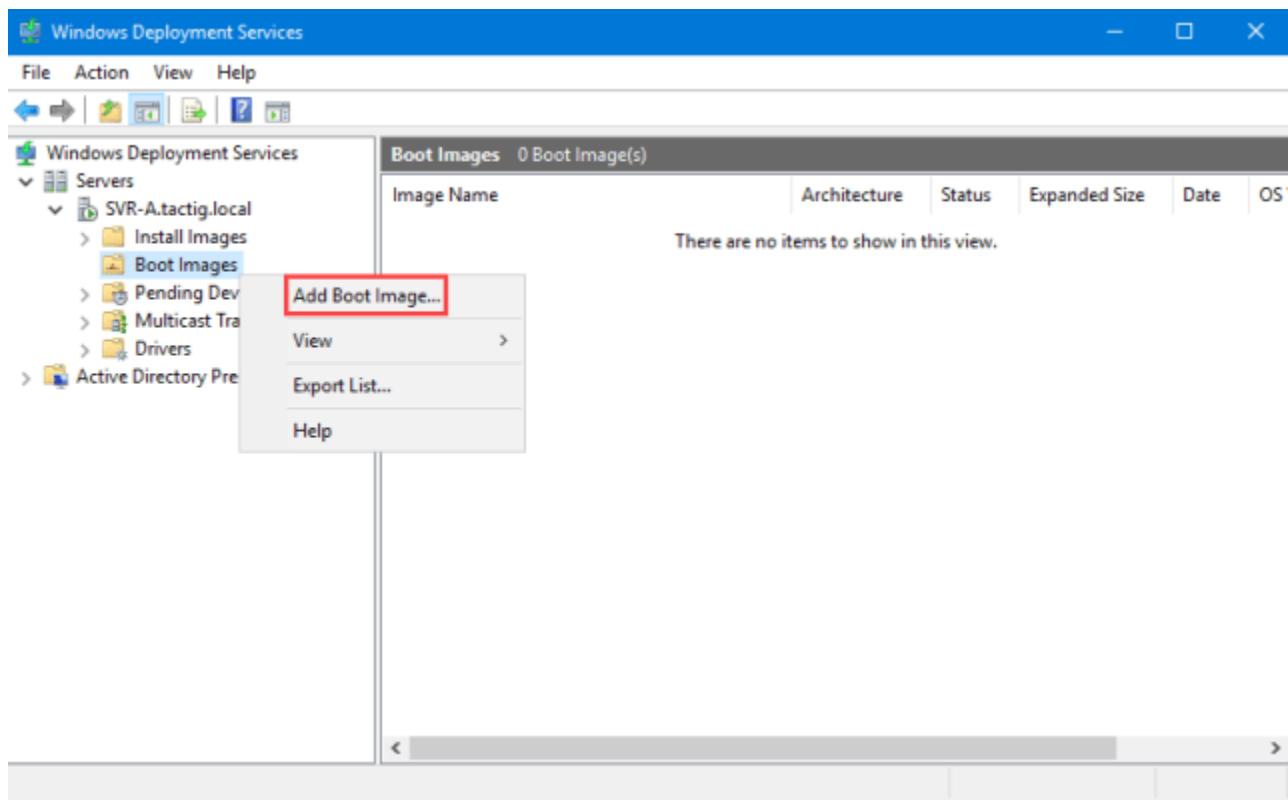
The screenshot shows the Windows Deployment Services console. On the left, the navigation pane displays the hierarchy: Windows Deployment Services > Servers > SVR-A.tactig.local > Install Images > Windows Install Image. The 'Windows Install Image' node is selected and highlighted with a red box. On the right, a table titled 'Windows Install Image 1 Install Image(s)' lists one item:

Image Name	Architecture	Status	Expanded Size	Date	OS Version	Priority
Windows 10 Pro	x64	Online	13100 MB	11/9/...	10.0.10240	500000 ...

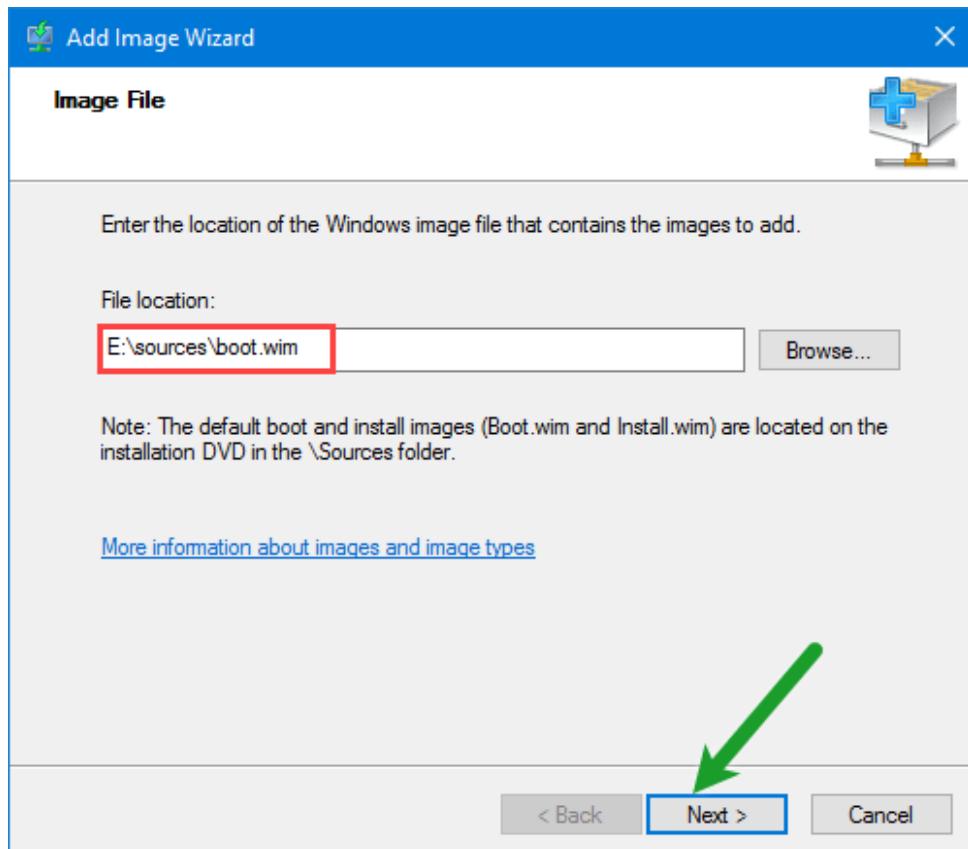
Below the table, the text 'Install Image' is centered.

Add Boot Image

1. Right-click on Boot Images and click on Add Boot Image.

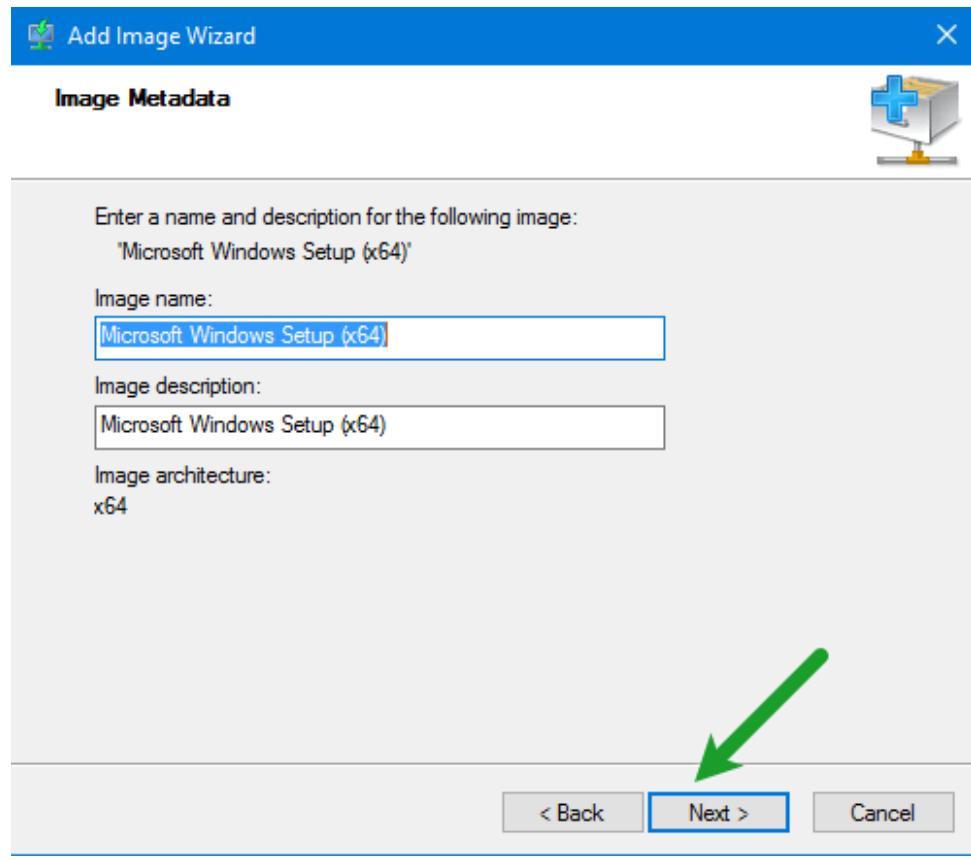


2. Specify path of the file which contains the image. Install and boot images located in the same folder. Boot image path: media file:\sources\boot.wim

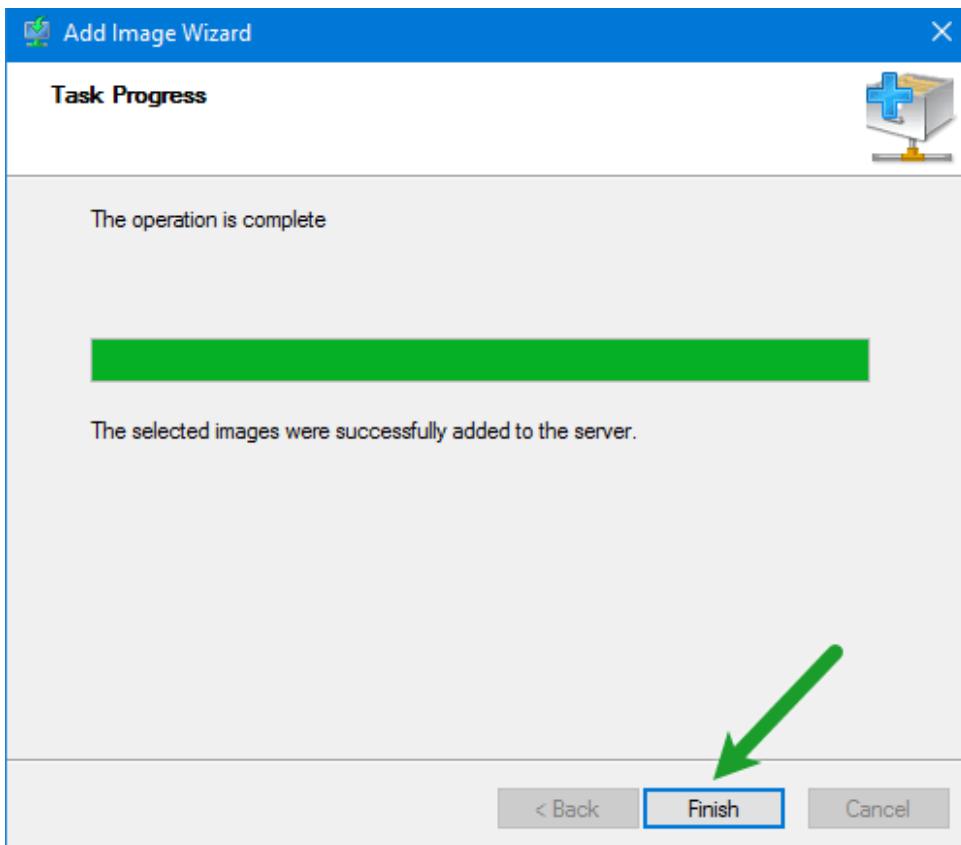


Boot Image Folder Location

3. Name th image. Select a friendly name for the image you can understand. Click on Next button.

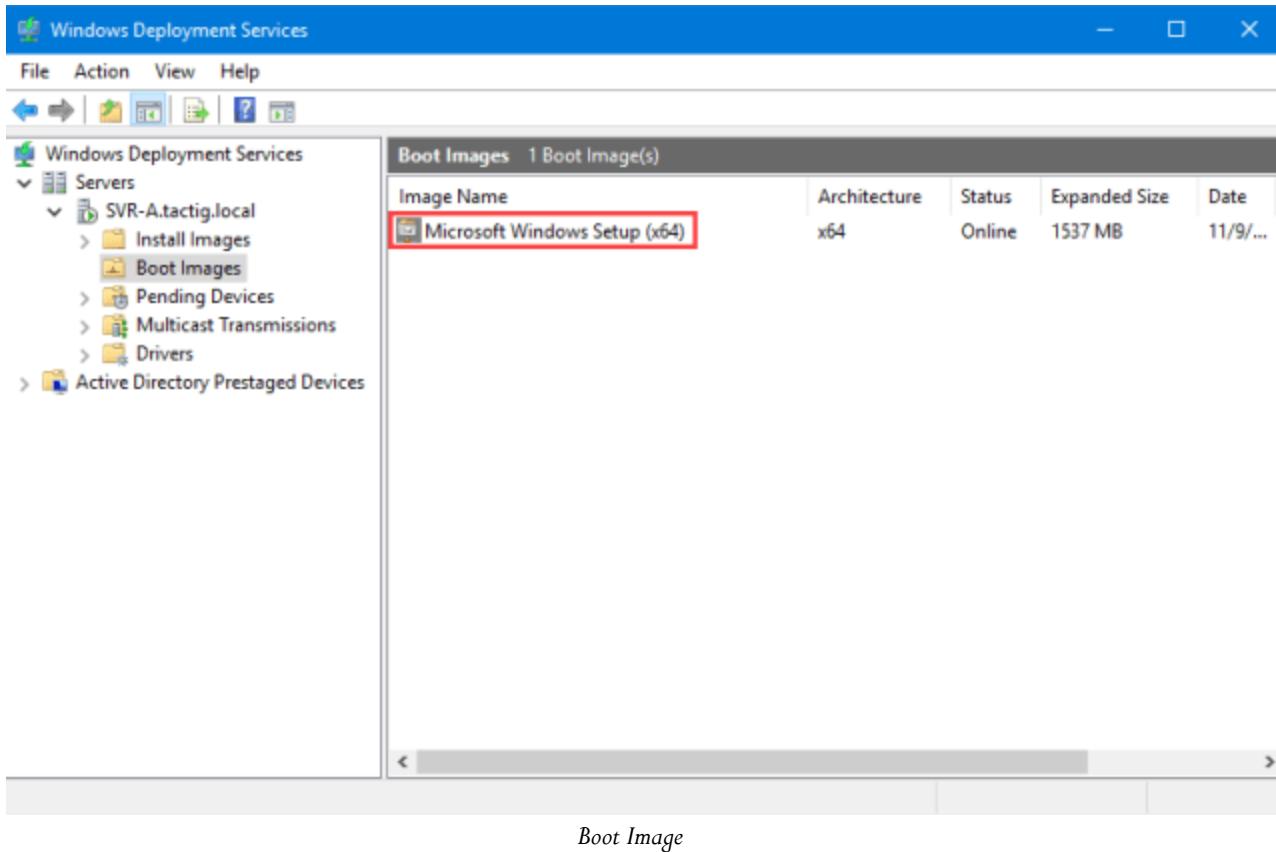


4. Image was added to the server. Finish the wizard by clicking on Finish button.



Finish Boot Image Wizard

Boot Image was added.



Conclusion

Finally we are done with WDS basic configuration. In the coming post I am going to show you how to install Windows 10 Pro through WDS. For any kind of question feel free end leave a comment below. Thank you for reading the post.