

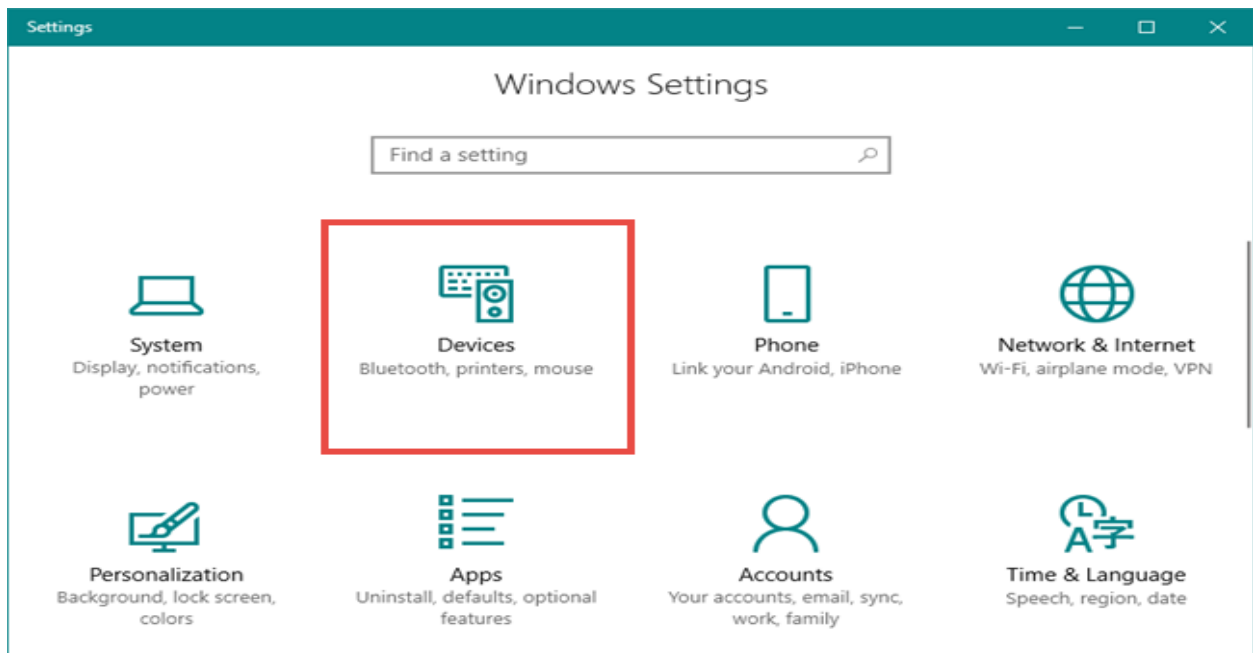
Practical-7

AIM: Setting up and configuring local printer device.

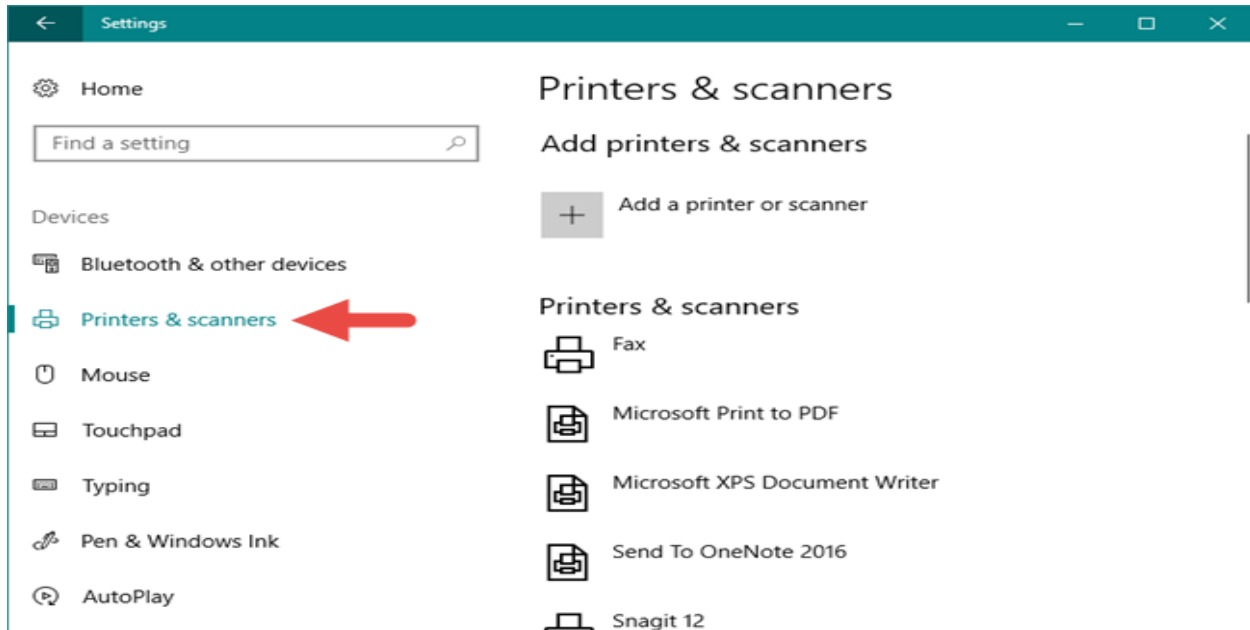
Step 1: In Windows 10, adding a local printer is, most times, as easy as connecting it to a USB port on your PC and then turning the printer on. To see whether it was installed correctly, or to install a local printer using a parallel port, [open the Settings app](#). A quick way to do that is to click or tap on the *Settings* icon from the *Start Menu*.



Step 2: In the *Settings* app, open the *Devices* section. You can notice that the subtitle says "*Bluetooth, printers, mouse.*" The printers are the part that interests us.



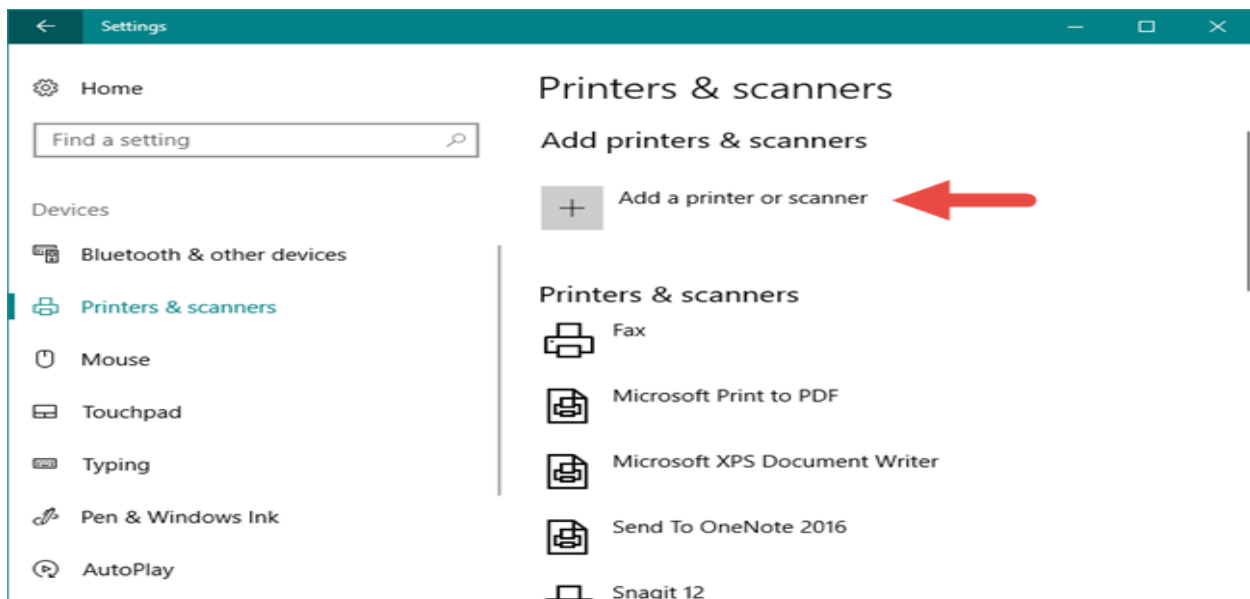
Step 3: Next, select *Printers & scanners* on the left side of the window and look at the section with the same name on the right. There you see the printers that are already installed by Windows 10. Some are virtual printers, like software converters to the PDF format, or screenshot capturing apps like Snagit.



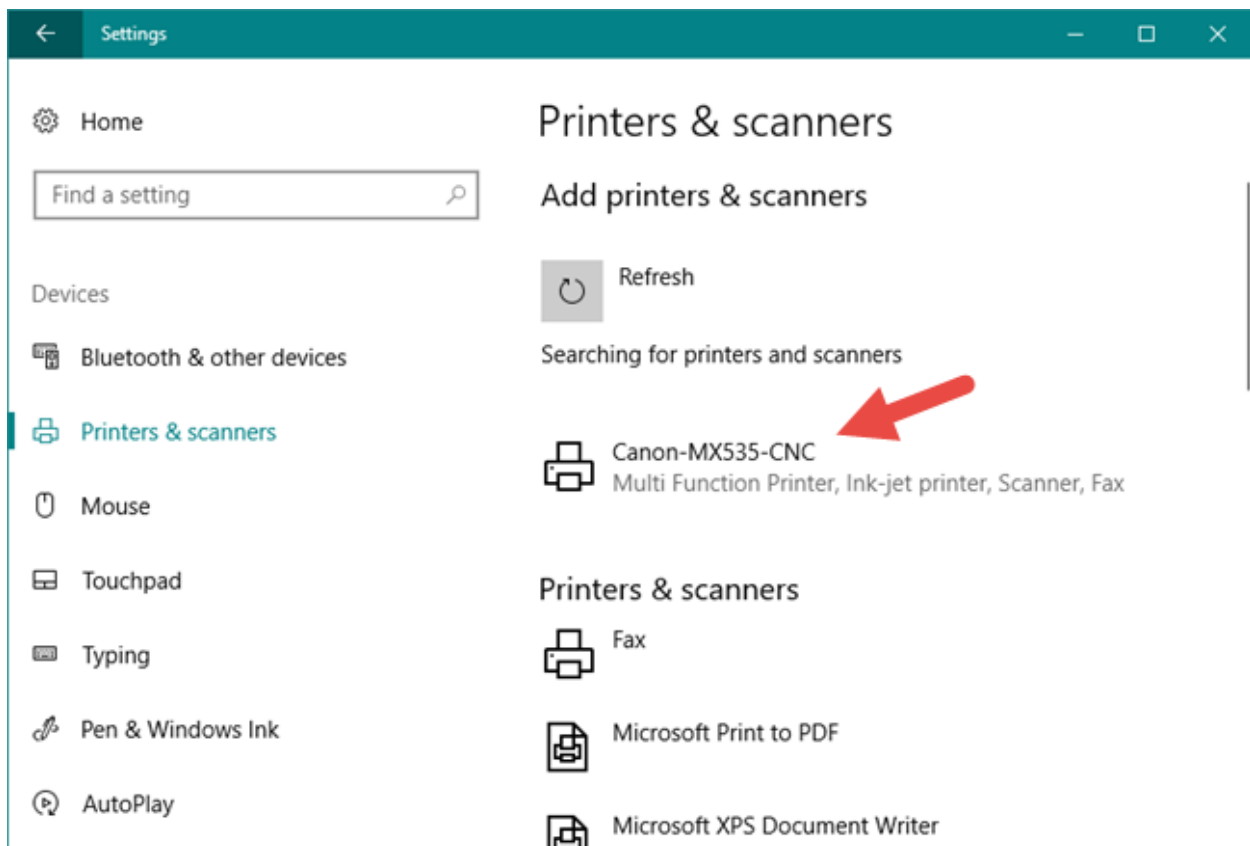
Step 4: Now there are two possibilities:

- The printer that you connected to the computer has already been installed by Windows 10, or
- The printer that you connected has not already been installed

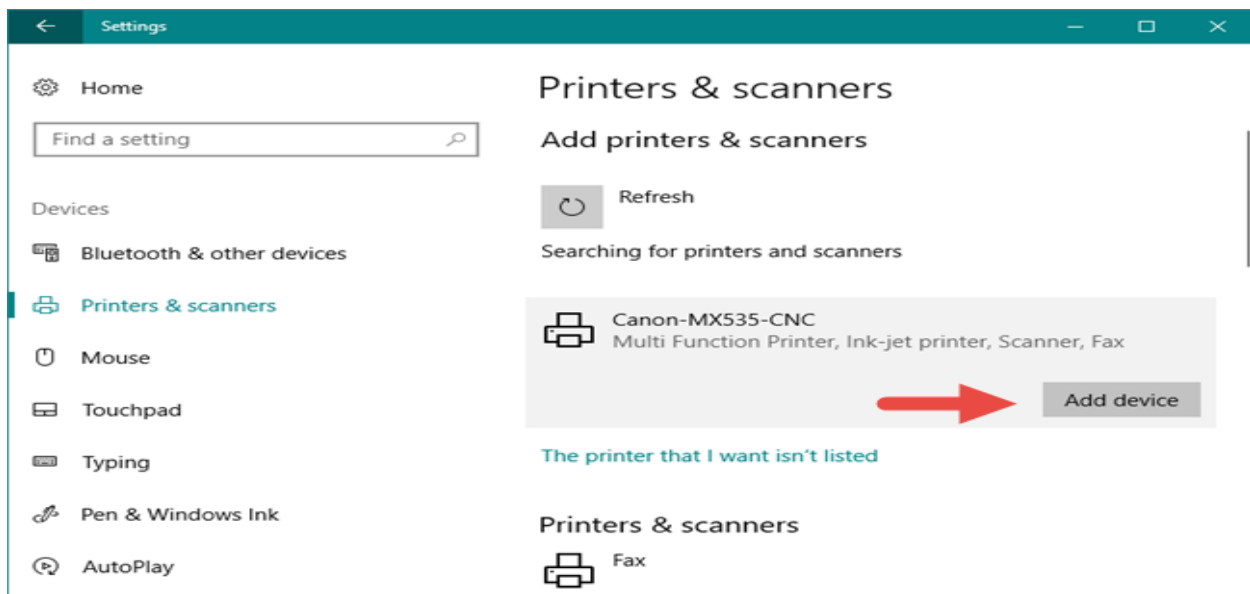
If you find yourself in the first situation, then you are done: go ahead and use your printer. If you find yourself in the second situation, you do not see your printer displayed. Turn on the printer, and then click or tap the *"Add a printer or scanner"* button.



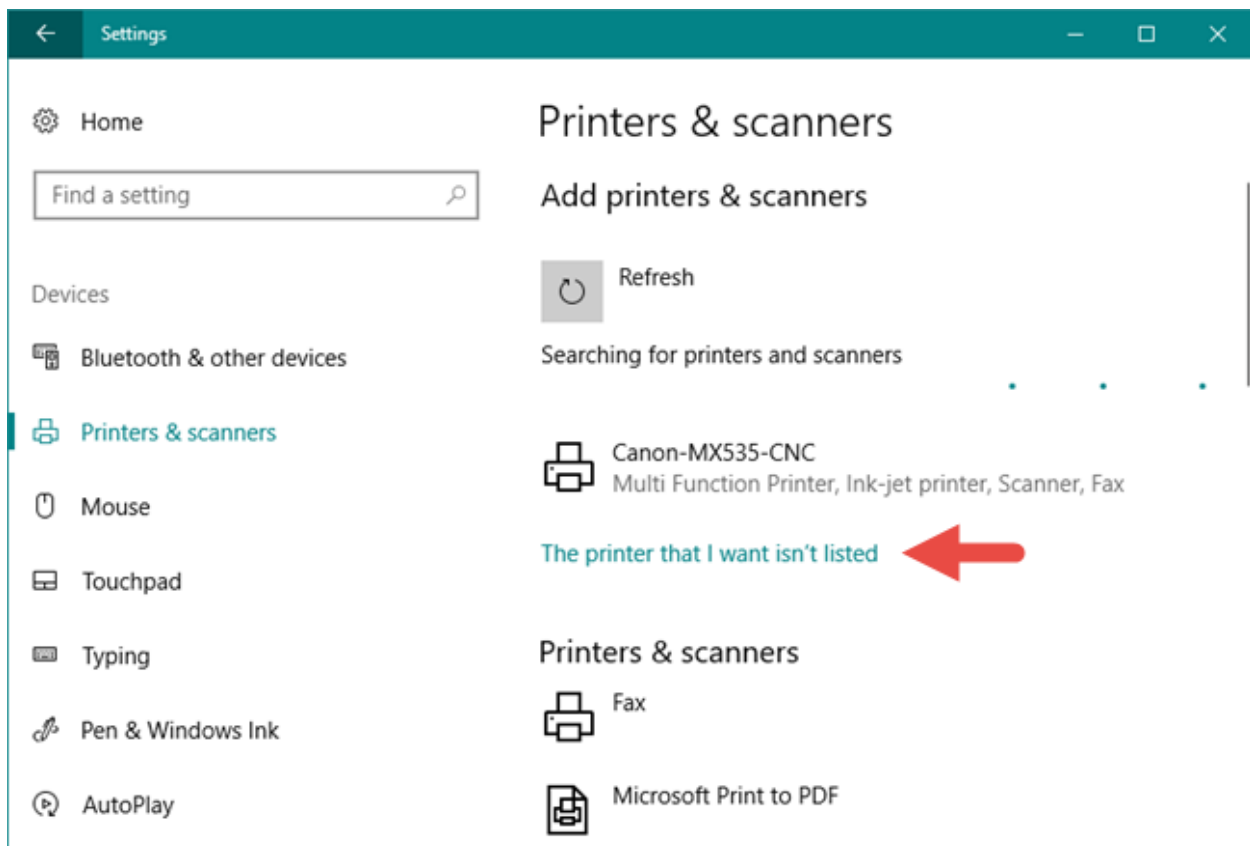
Step 5: Windows 10 begins *"searching for printers and scanners"* and displays everything it finds in a list below. If it finds your local printer, click or tap on it.



Step 6: Then, click or tap on the "Add device" button.



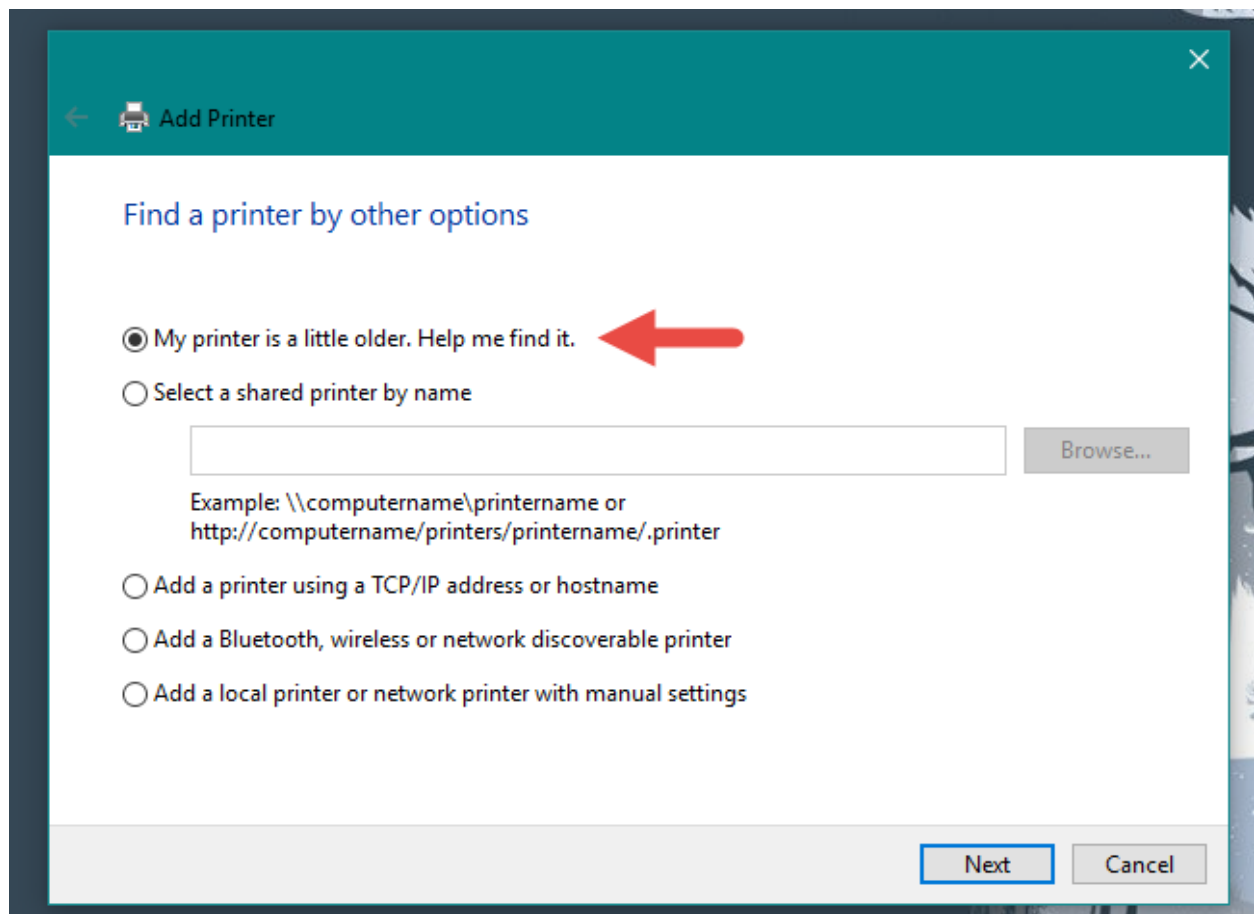
Step 7: If your Windows 10 computer does not detect the local printer, click or tap on the link that says "The printer that I want isn't listed".



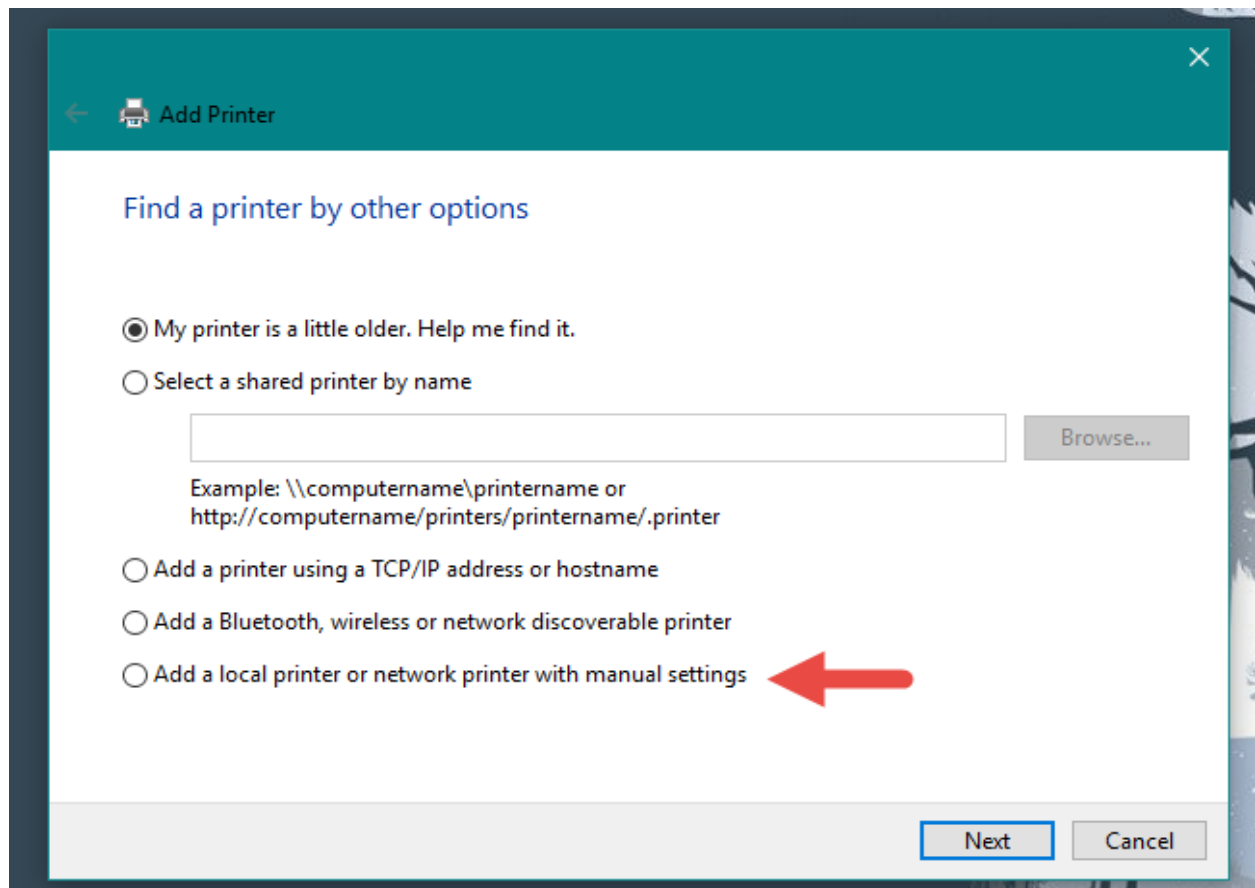
Step 8: Windows 10 opens a wizard called *"Add Printer"*. Here you have a few different options. They include options for adding network printers, as well as local printers. As you want to install a local printer, choose the option that says:

- *"My printer is a little older. Help me find it."*, or
- *"Add a local printer or network printer with manual settings"*

We recommend you choose the first one, and leave the wizard to search for your printer. Then, follow the wizard's instructions and the printer is configured.



Step 9: However, if your computer still does not detect the printer, you should also try the option that lets you choose manual settings. However, before doing that, make sure that you read the documentation for your printer, because you have to supply details about it.



Practical-8

AIM: Creating windows server Boot Disk.

The following steps guide you on how to make the USB drive bootable and get the contents onto the drive.

Step 1: Insert the USB drive.

Step2: Open a CMD prompt using the Run as Administrator option.

Step 3: Start the DISKPART tool by typing **Diskpart** and press ENTER.

Step 4: List all disks recognized by the system by typing **list disk** and pressing ENTER.

```
DISKPART> list disk

Disk ###  Status   Size      Free      Dyn  Gpt
-----  -
Disk 0    Online   119 GB    0 B
Disk 1    Online   465 GB    1024 KB
* Disk 2    Online   14 GB     0 B
```

Step 5: Select your USB drive from the list returned (Disk 2 in this example) by typing **Select Disk 2** and pressing ENTER.

```
DISKPART> select disk 2
Disk 2 is now the selected disk.
```

Step 6: Remove all data from the disk by typing **clean** and pressing ENTER.

```
DISKPART> clean
DiskPart succeeded in cleaning the disk.
```

Step 7: Create a primary partition by typing **create partition primary** and pressing ENTER.

```
DISKPART> create partition primary
DiskPart succeeded in creating the specified partition.
```

Step 8: Create a bootable partition by typing **active** and pressing ENTER.

```
DISKPART> active
DiskPart marked the current partition as active.
```

Step 9: List all volumes recognized by the system by typing **list volume** and pressing ENTER.

```
DISKPART> list volume

Volume ###  Ltr  Label          Fs      Type          Size      Status       Info
-----  -
Volume 0     D    Your Experi  CDFS     DVD-ROM       5984 KB    Healthy
Volume 1     C    Default      NTFS     Partition     119 GB    Healthy      System
Volume 2     G    WD_500GB     NTFS     Partition     465 GB    Healthy
* Volume 3     E                      RAW      Removable     14 GB    Healthy
```

Step 10: Select your volume from the list (Volume 3 in this example) by typing: **select volume 3** and pressing ENTER.

```
DISKPART> select volume 3
Volume 3 is the selected volume.
```

Step 11: Quick format the disk using Fat32 by typing **format fs=fat32 quick** and pressing ENTER.

```
DISKPART> format fs=fat32 quick
100 percent completed
DiskPart successfully formatted the volume.
```

Step 12: Insert your desired operating system media or mount your ISO.

Step 13: Copy the entire contents of the installation media from the installation media to your USB drive.

Step 14: In the root of the USB drive, open the `\efi\microsoft\boot` directory.

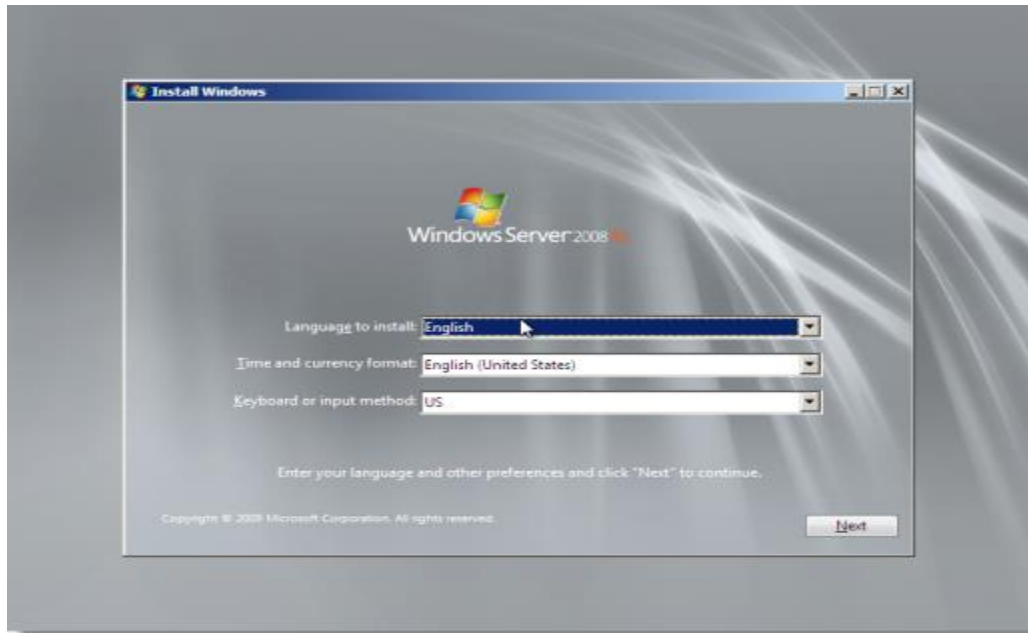
Step 15: Copy the directory contents up one level so the files also reside under `\efi\boot`.

Step 16: Copy the `bootmgfw.efi` file from the root directory of the ISO or disc to the `\efi\boot` directory, and rename it to `bootx64.efi`.

Practical-9

AIM: Installing Windows Server 2008.

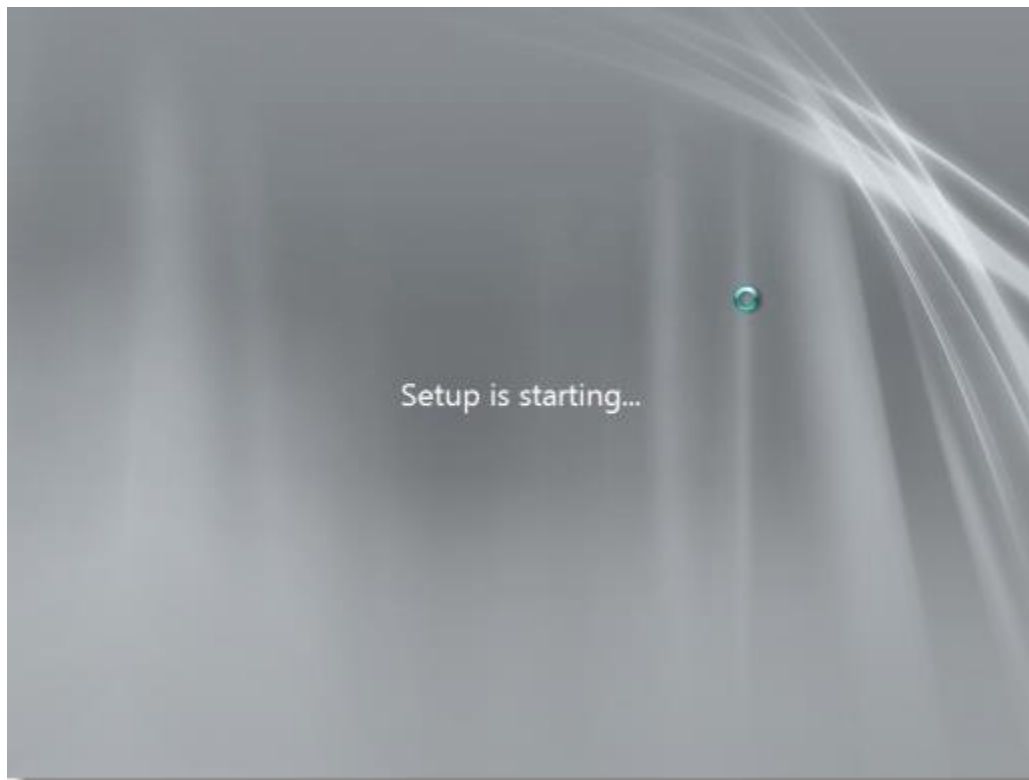
Step 1: Insert the installation media for Windows Server 2008 R2. After the installer runs, the Install Windows screen appears.



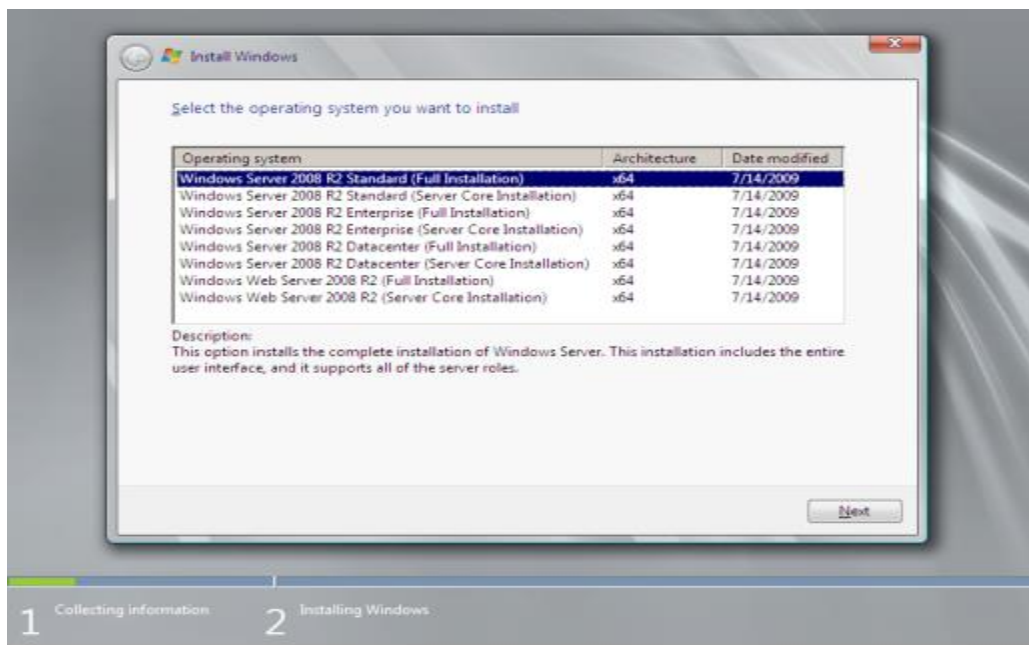
Step 2: Enter language and other preferences. Click **Next**.



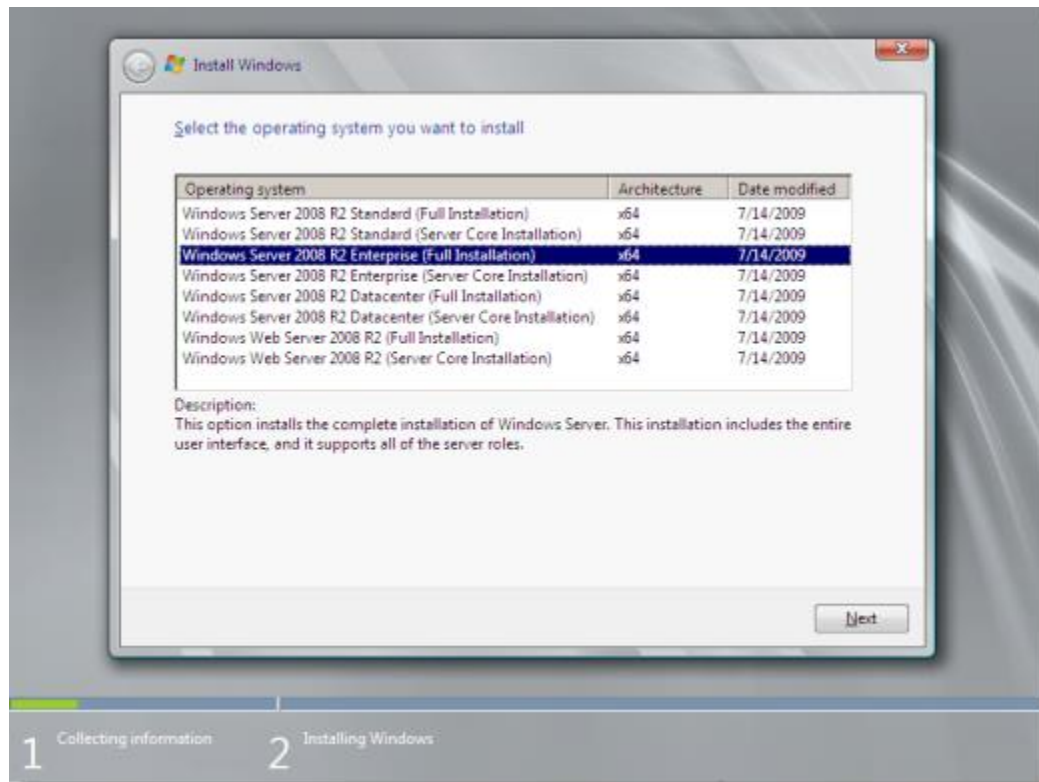
Step 3: Click **Install now**. The setup begins.



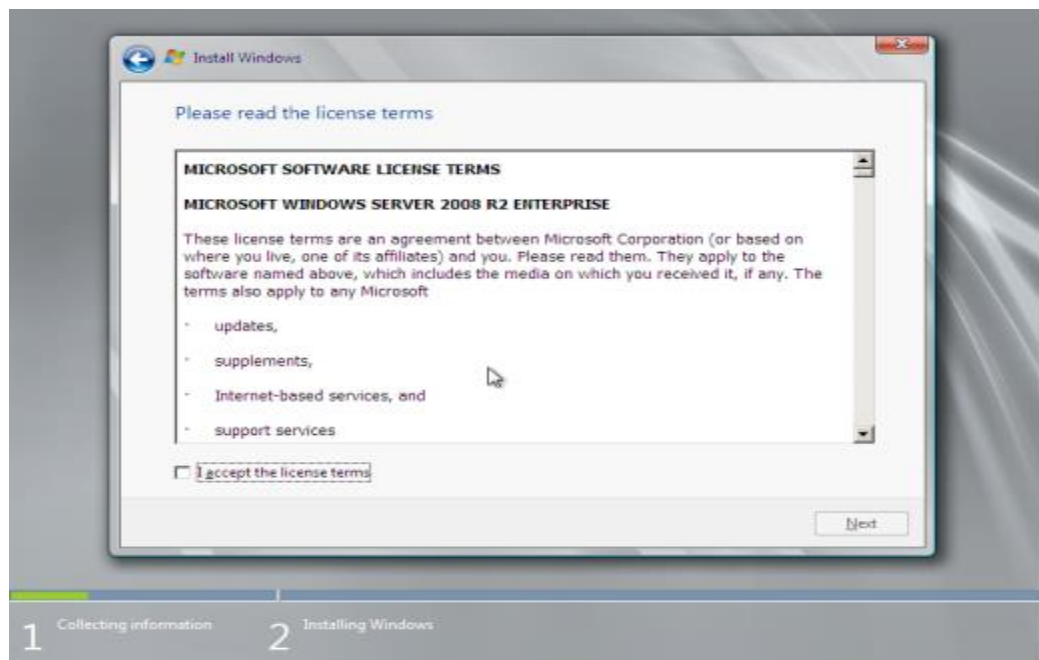
The installer prompts to select an operation system.



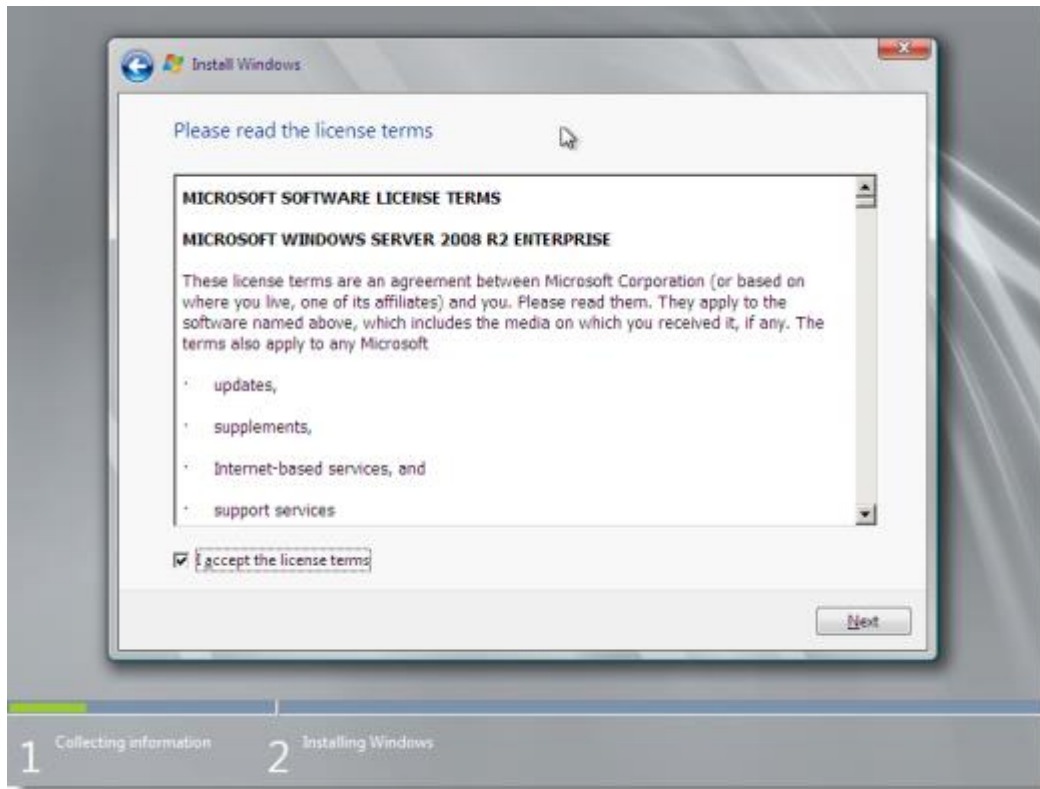
Step 4: Select **Windows Server 2008 R2 Enterprise (Full Installation)** and click **Next**.



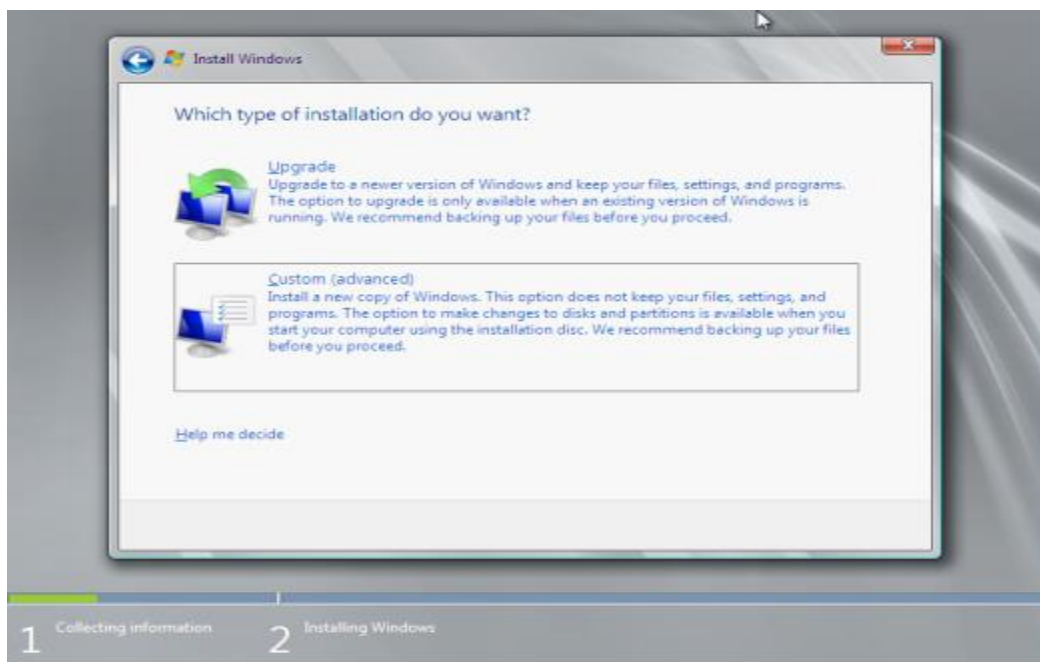
The installer prompts to read the license terms.



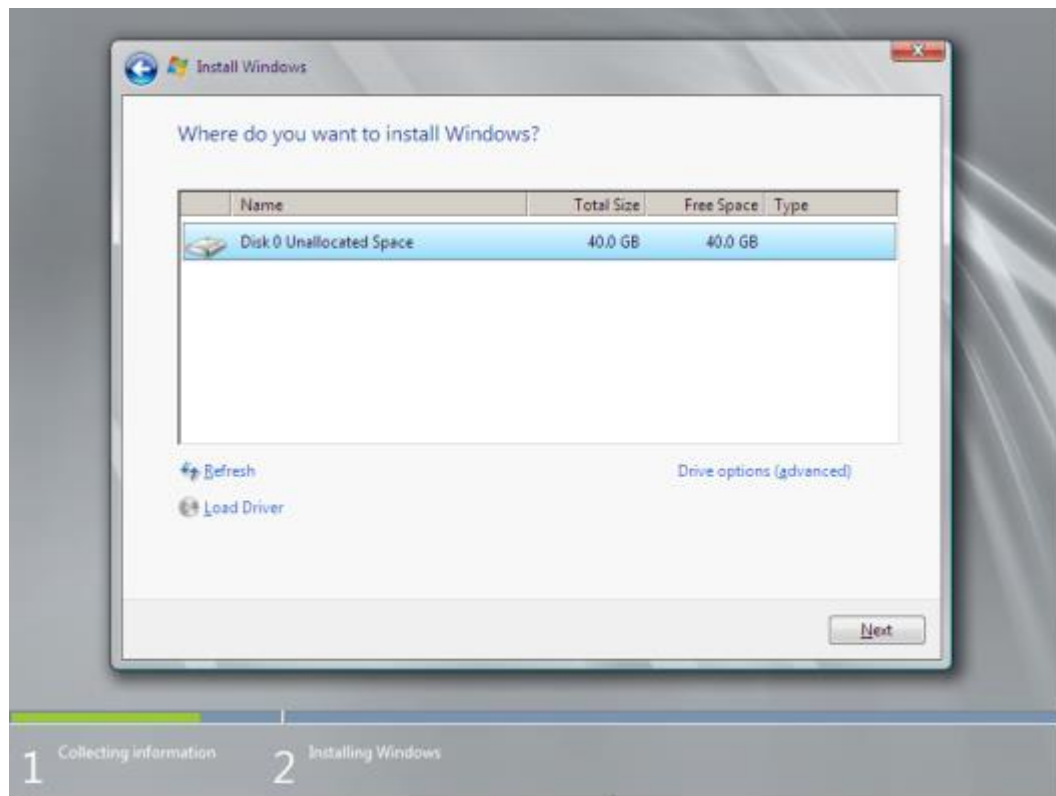
Step 5: Read the license terms. If you agree to the license terms, select **I accept the license terms** and click **Next**.



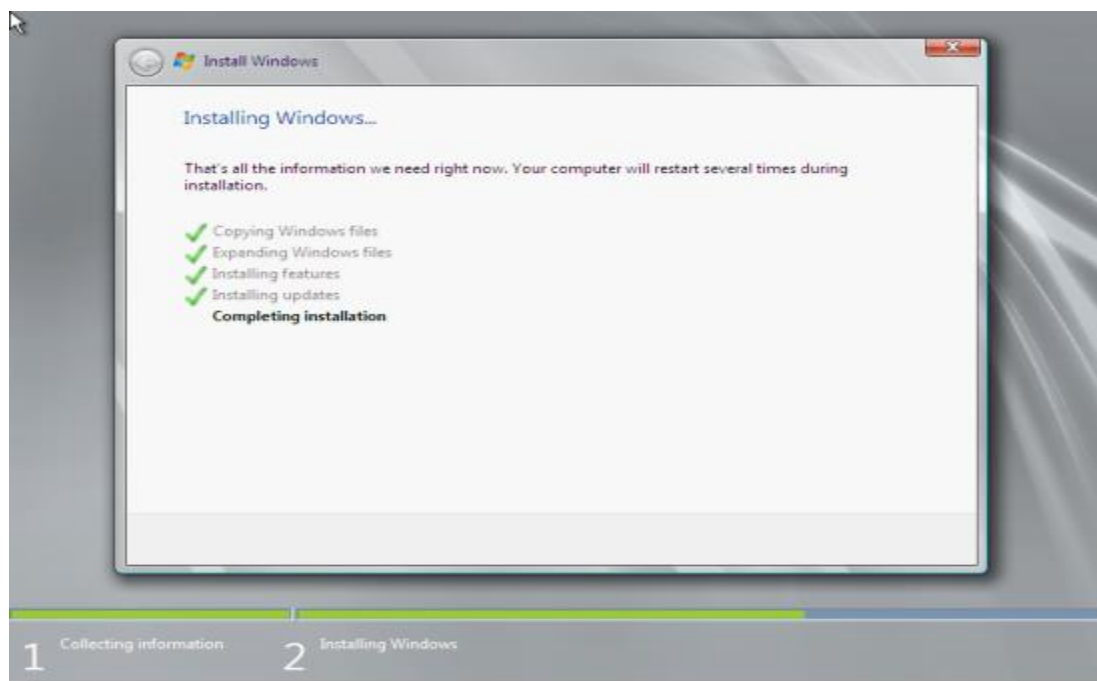
Step 6: The installer asks you which type of installation. For a new installation, click **Custom (advanced)**.



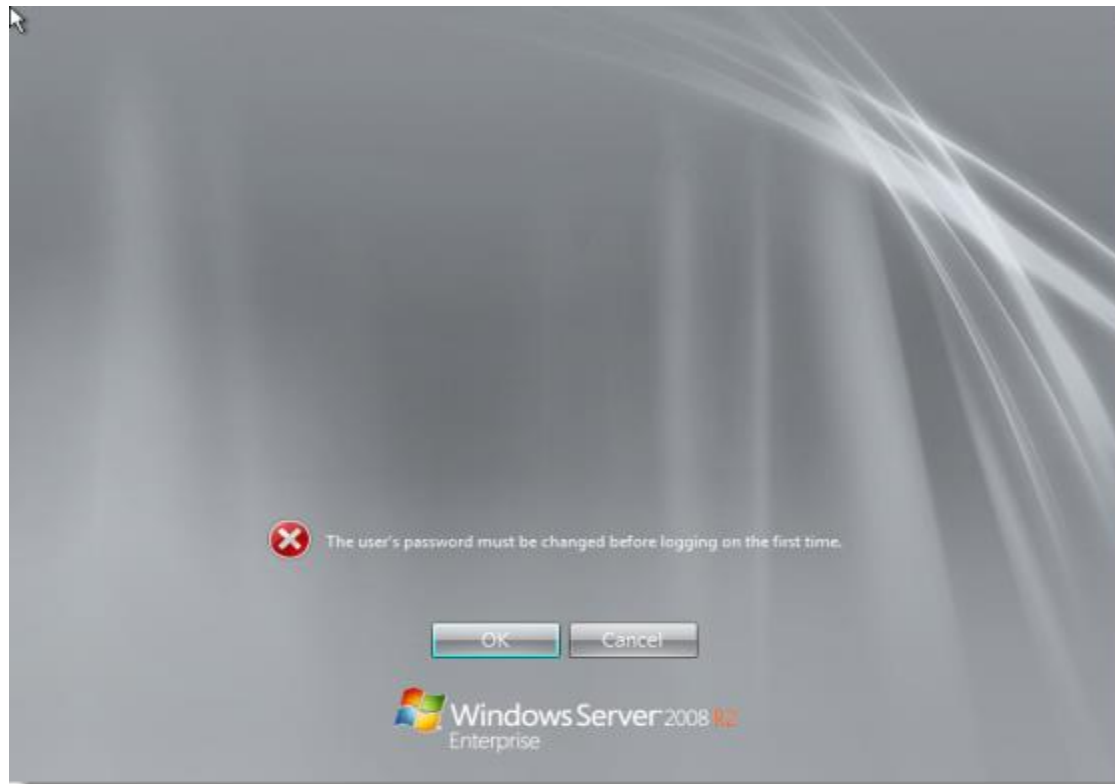
Step 7: The installer asks for disk location information. Make your selection and click **Next**.



Step 8: The installation begins.



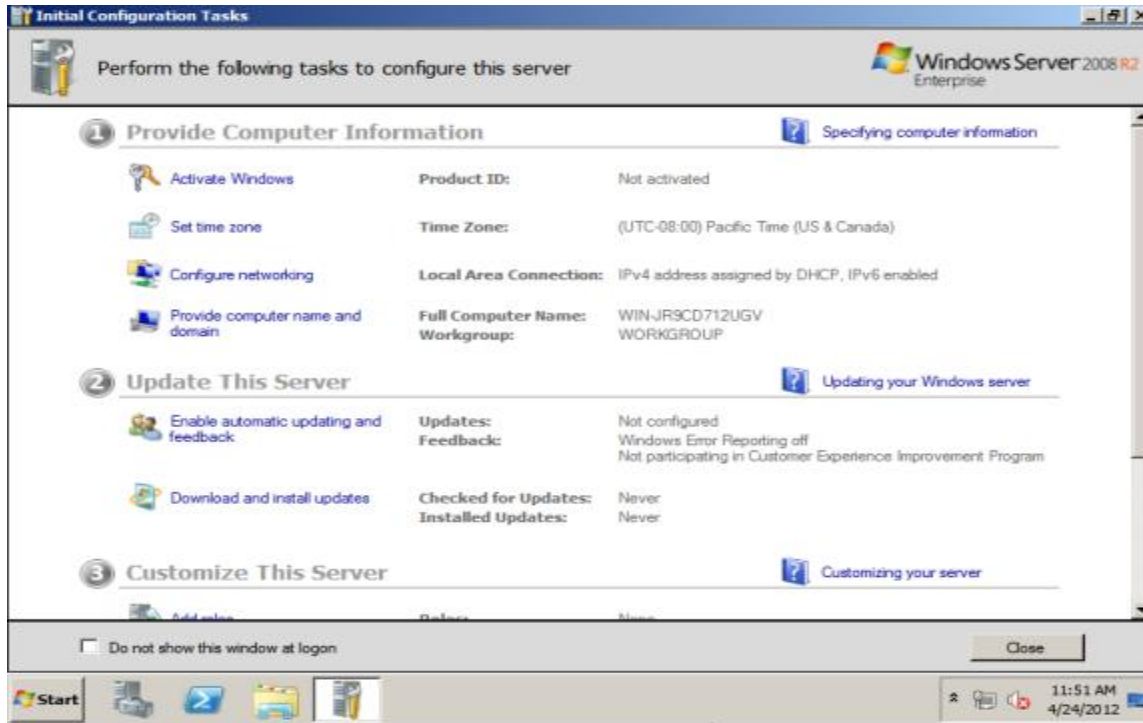
Step 9: The installer prompts to change the password. Click **OK**.



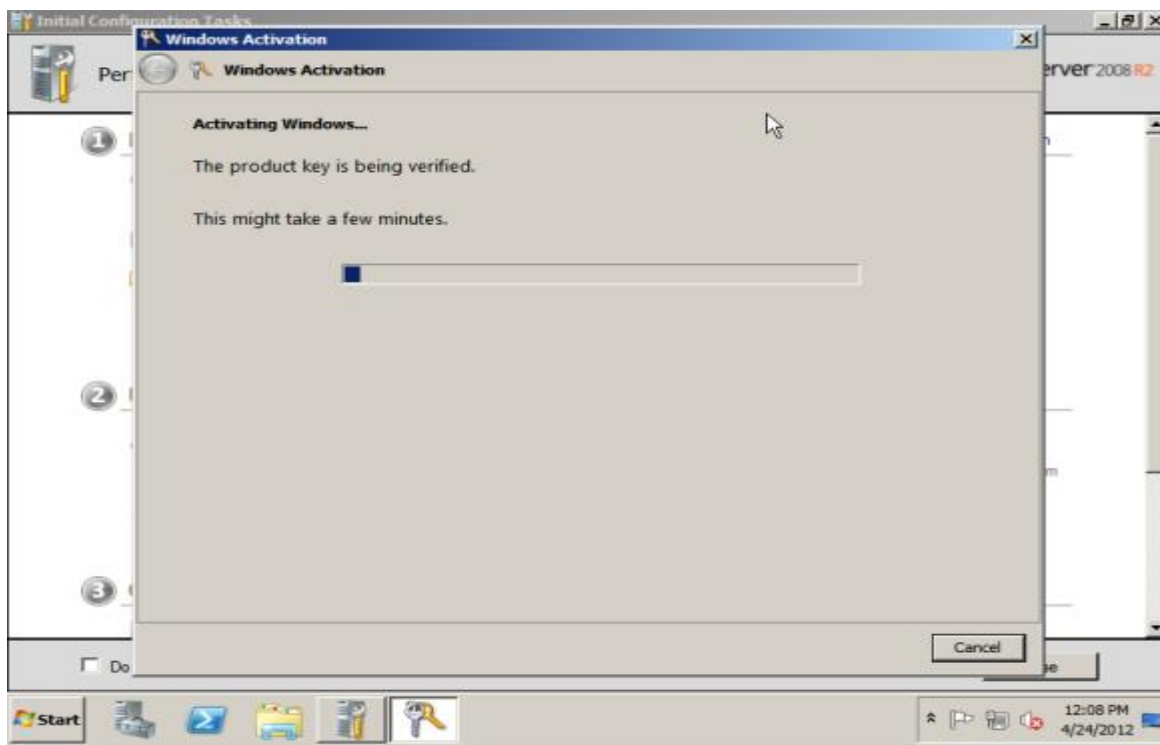
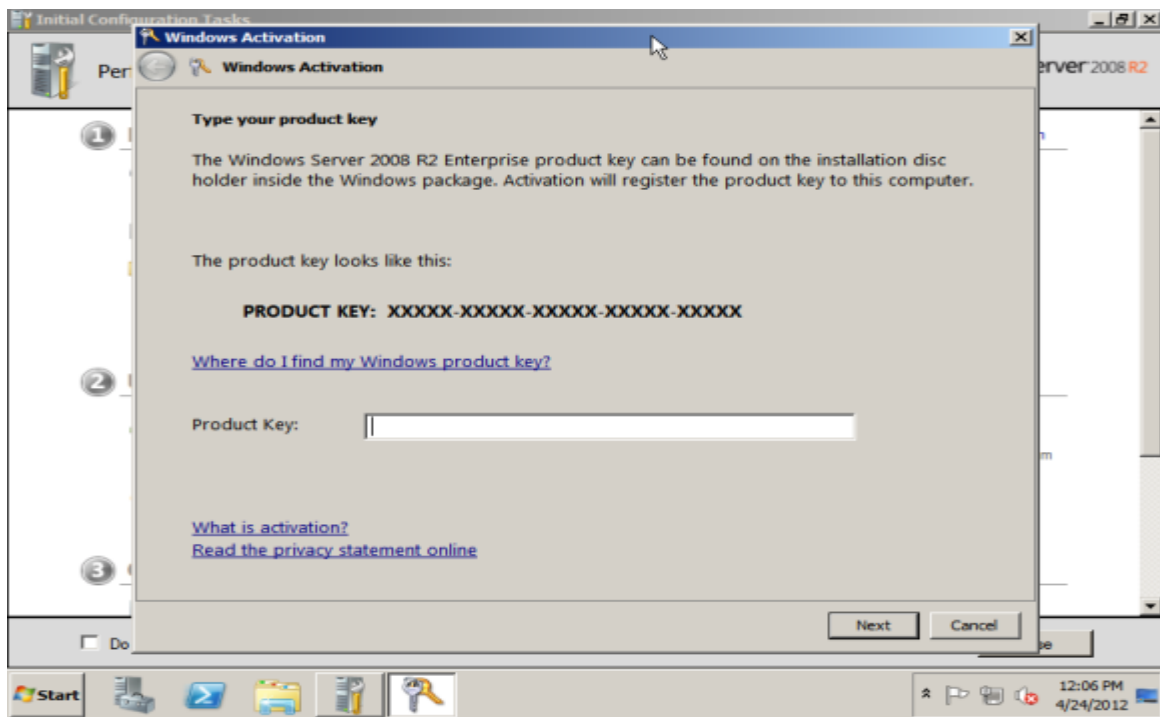
Step 10: Enter a new password, re-enter the password to confirm it, and click the right-arrow.

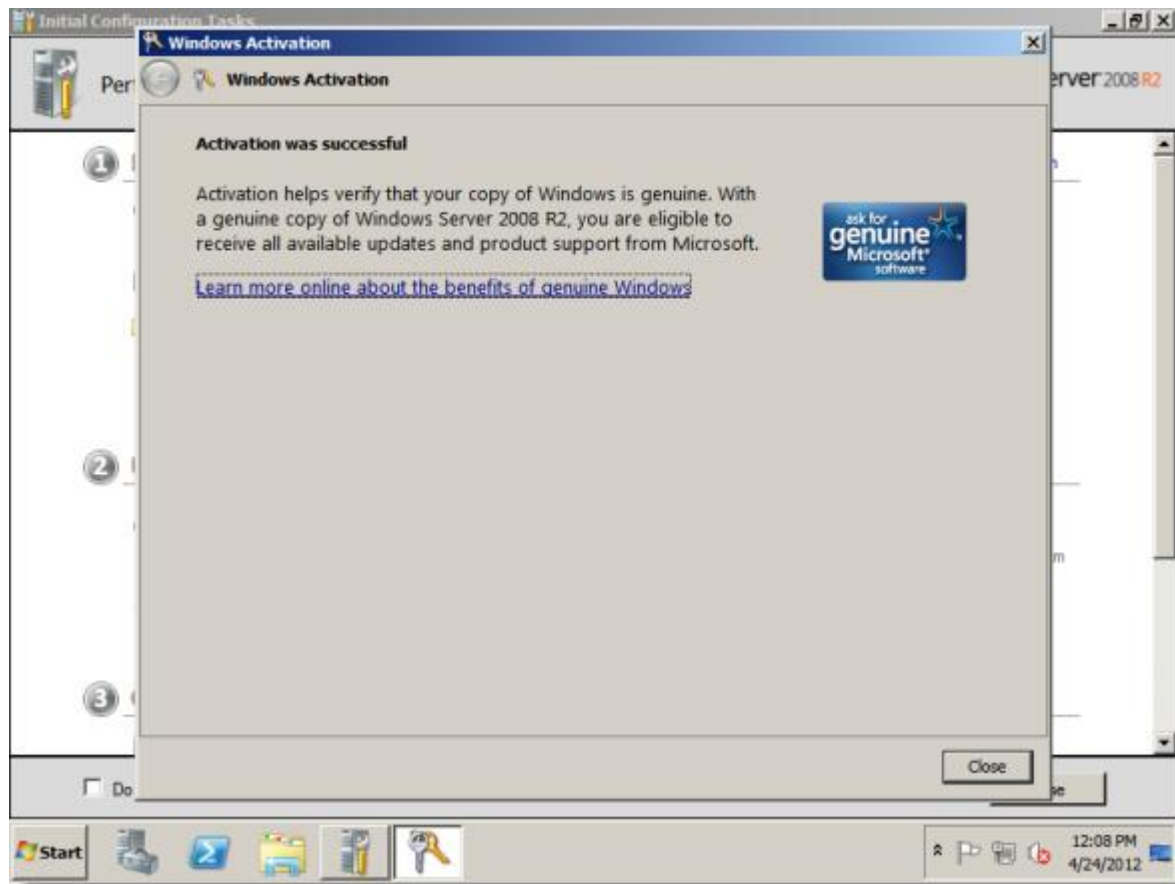


Step 11: After you click **OK** on the confirmation screen, the operating system prepares your desktop.



Step 12: The Initial Configuration Tasks window appears by default. Windows Server is now installed. Windows Server prompts for activation information. Enter the Product Key and click **Next**.



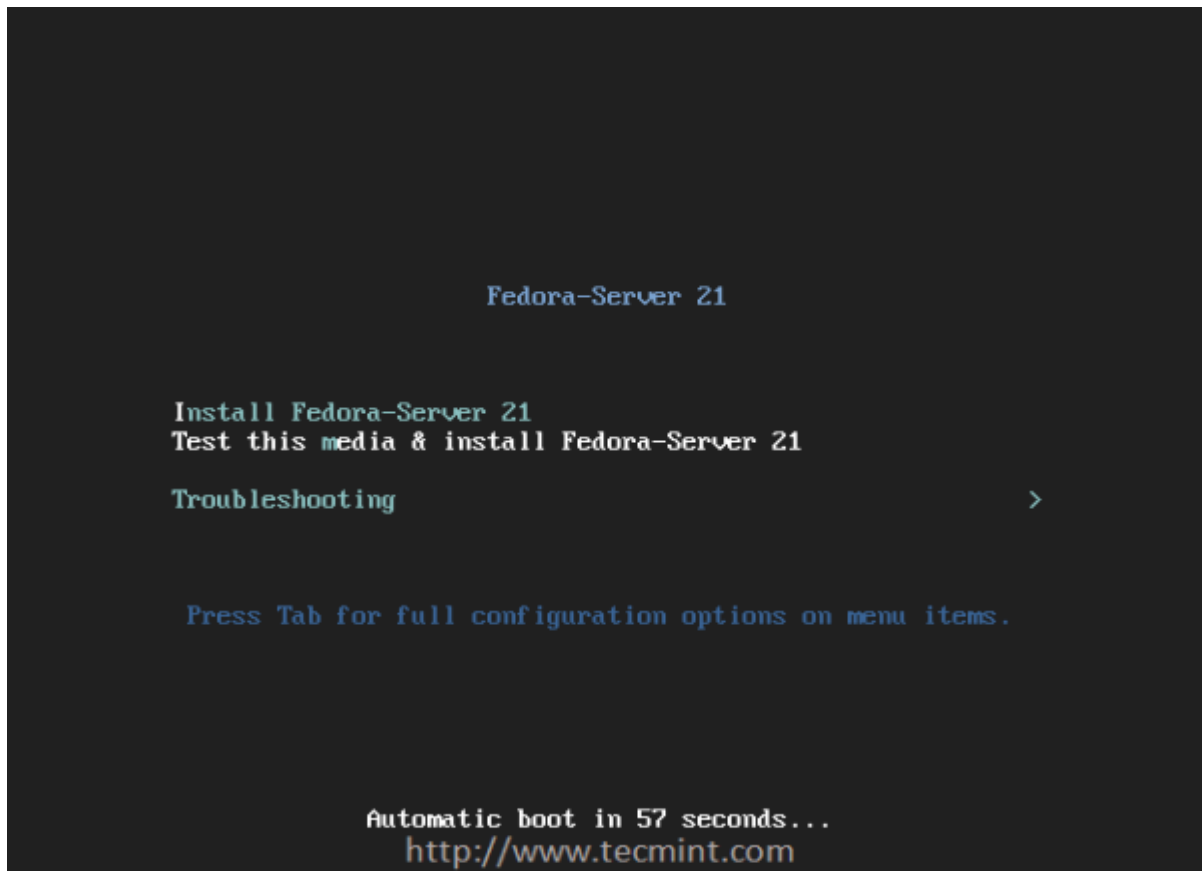


Practical-10

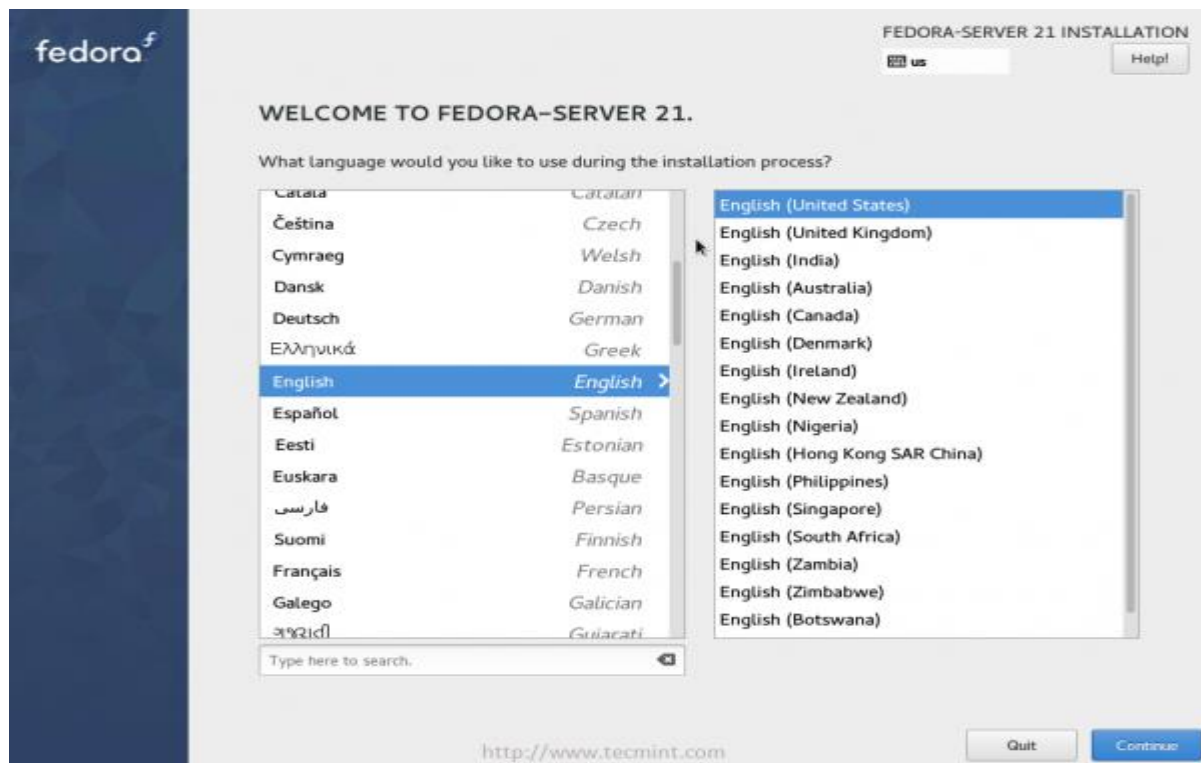
AIM: Installing Fedora Linux Server.

Step 1: After downloading Fedora 21 Server Image, burn it on a DVD using “Brasero” tool or if you want to burn it on a USB stick use “Unetbootin” software, for more instructions on how to burn and make a bootable USB device, read our article at: [Install Linux from USB Device](#).

Step 2: After making bootable CD/DVD or USB drive, restart your computer in order to boot from the chosen drive and select “Install Fedora-Server 21” to continue.



Step 3: You'll get to the installer directly.. Choose the Language you want.



Step 4: Once you select your Language, you'll see the installation Summary.



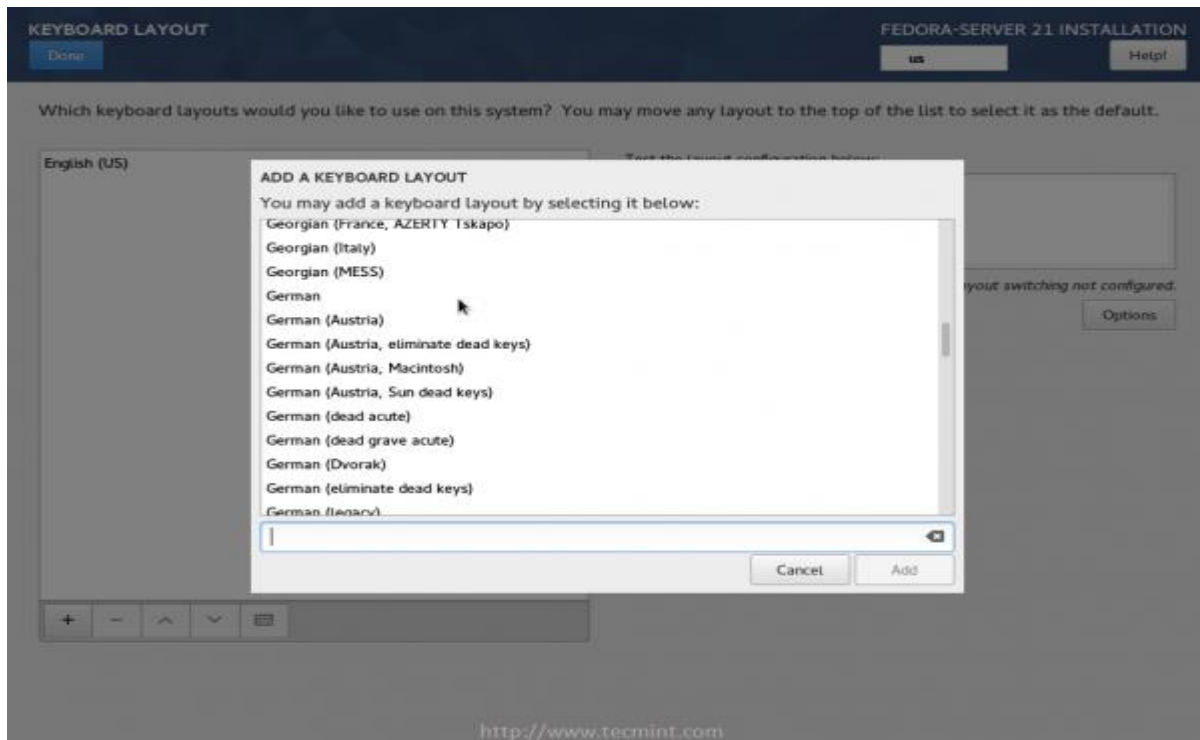
Step 5: Click on “Date & Time” and choose your Time-zone.

The screenshot shows the 'DATE & TIME' configuration window in the Fedora-Server 21 installation process. At the top, there's a header with 'DATE & TIME' and a 'Done' button. To the right, it says 'FEDORA-SERVER 21 INSTALLATION' with a 'us' dropdown and a 'Help!' button. Below the header, there are two dropdown menus: 'Region: Europe' and 'City: Istanbul'. To the right of these is a 'Network Time' toggle set to 'ON'. The main area features a world map with a green vertical band highlighting the time zone for Istanbul. At the bottom left, there's a digital clock showing '17:21 PM' with '24-hour' and 'AM/PM' options. To the right of the clock are three dropdown menus for '12', '23', and '2014'. A URL 'http://www.tecmint.com' is visible at the bottom center.

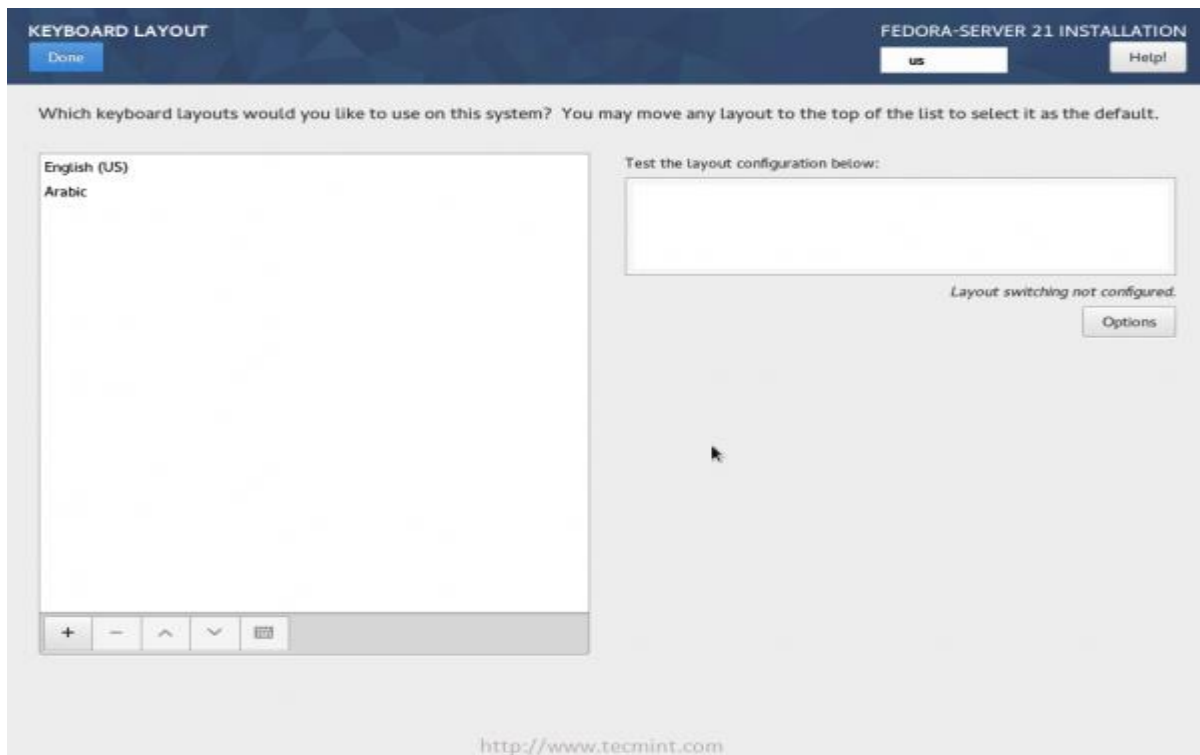
Step 6: Go back to the installation summary, and click on “Keyboard” to configure the keyboard layouts.

The screenshot shows the 'KEYBOARD LAYOUT' configuration window in the Fedora-Server 21 installation process. At the top, there's a header with 'KEYBOARD LAYOUT' and a 'Done' button. To the right, it says 'FEDORA-SERVER 21 INSTALLATION' with a 'us' dropdown and a 'Help!' button. Below the header, there's a text prompt: 'Which keyboard layouts would you like to use on this system? You may move any layout to the top of the list to select it as the default.' The main area is divided into two sections. On the left, there's a list box containing 'English (US)'. On the right, there's a text input field labeled 'Test the layout configuration below:'. Below the input field, it says 'Layout switching not configured.' and there's an 'Options' button. At the bottom left of the list box, there are several small icons: a plus sign, a minus sign, an up arrow, a down arrow, and a keyboard icon. A URL 'http://www.tecmint.com' is visible at the bottom center.

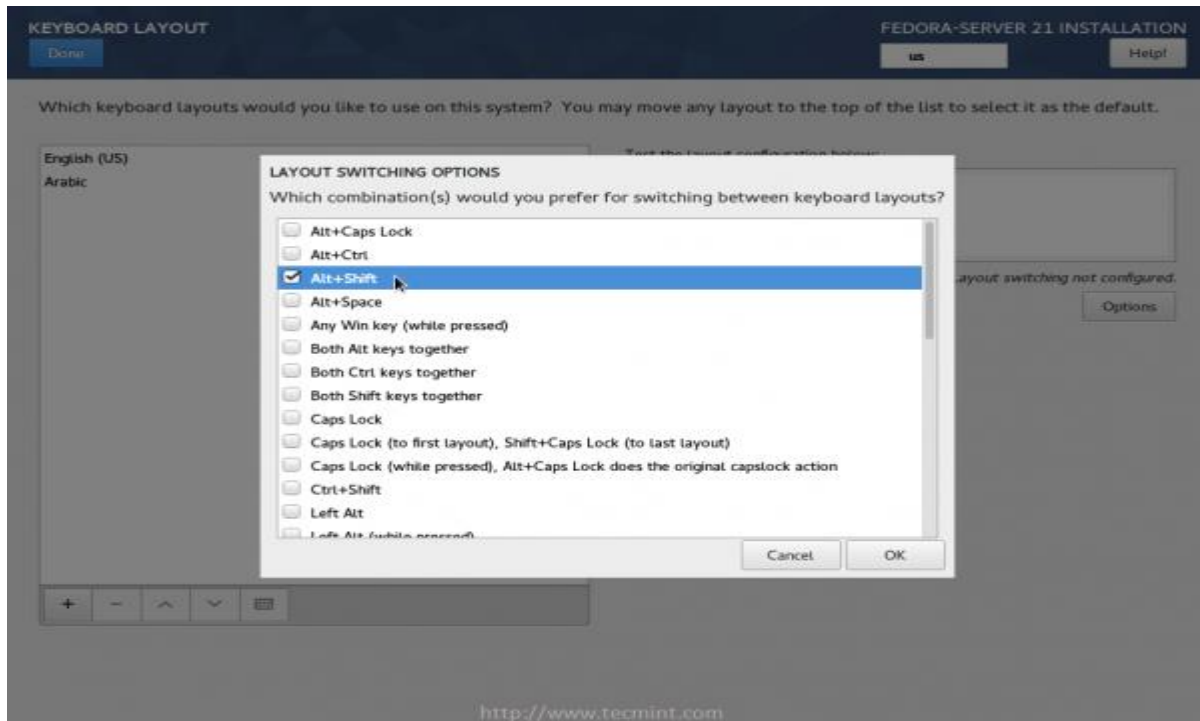
Step 7: Click on the “+” to add a new keyboard layout.



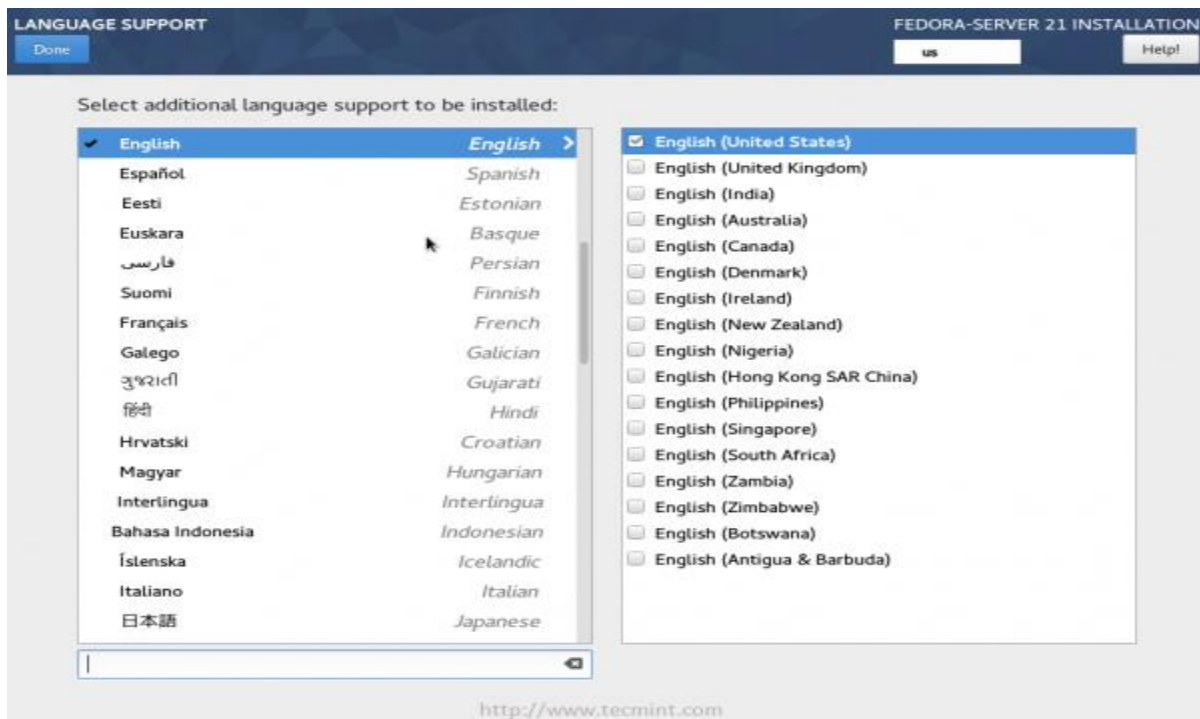
Step 8: And you'll notice that the layouts that you chose were added.



Step 9: In order to enable switching between layouts, click on the “Options” button on the right and choose “Alt + Shift”.



Step 10: Go back again to the Summary.. and choose “Language Support” and mark the languages pack that you want to install.



Step 11: Head to the summary page again.. and enter “Installation Source”.

INSTALLATION SOURCE FEDORA-SERVER 21 INSTALLATION

Done us Help!

Which installation source would you like to use?

☒ Auto-detected installation media:

Device: sr0
Label: Fedora-5-21-i386 Verify

☐ ISO file:

Device: ATA VBOX HARDISK /dev/sda1 (500 MiB MB) ext4
347f5d94-6e50-41a7-af7a-ec1d5b13beed Choose an ISO Verify

☐ On the network:

Closest mirror Proxy setup...

Updates

☒ Don't install the latest available software updates. Install the default versions provided by the installation source above.

Additional repositories

Enabled	Name
<input type="checkbox"/>	

+ -

Name: http://
☐ This URL refers to a mirror list.

Proxy URL:
Username:
Password:

http://www.tecmint.com

There's nothing important to do here.. But if you want, you can verify the installation media by click on the “Verify” button.

INSTALLATION SOURCE FEDORA-SERVER 21 INSTALLATION

Done us Help!

Which installation source would you like to use?

☒ Auto-detected installation media:

Device: sr0
Label: Fedora-5-21-i386 Verify

☐ ISO file:

Device: ATA VBOX HARDISK /dev/sda1 (500 MiB MB) ext4
347f5d94-6e50-41a7-af7a-ec1d5b13beed Choose an ISO Verify

☐ On the network:

Closest mirror Proxy setup...

Updates

☒ Don't install the latest available software updates. Install the default versions provided by the installation source above.

Additional repositories

Enabled	Name
<input type="checkbox"/>	

+ -

Name: http://
☐ This URL refers to a mirror list.

Proxy URL:
Username:
Password:

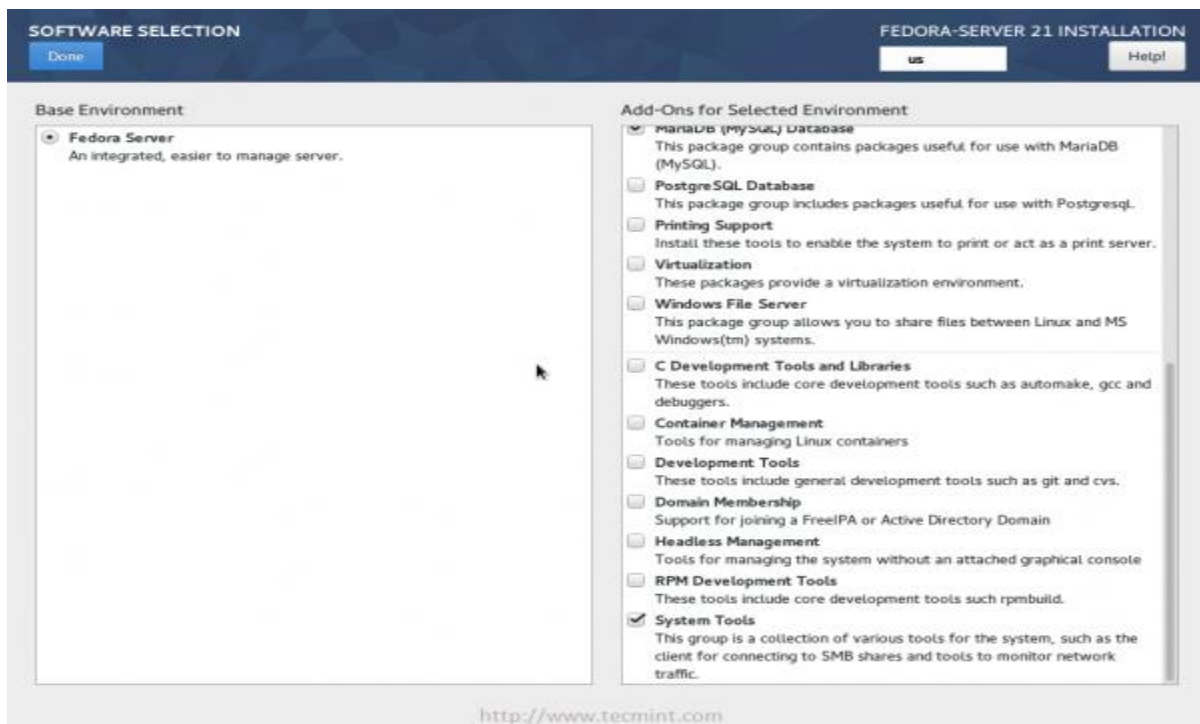
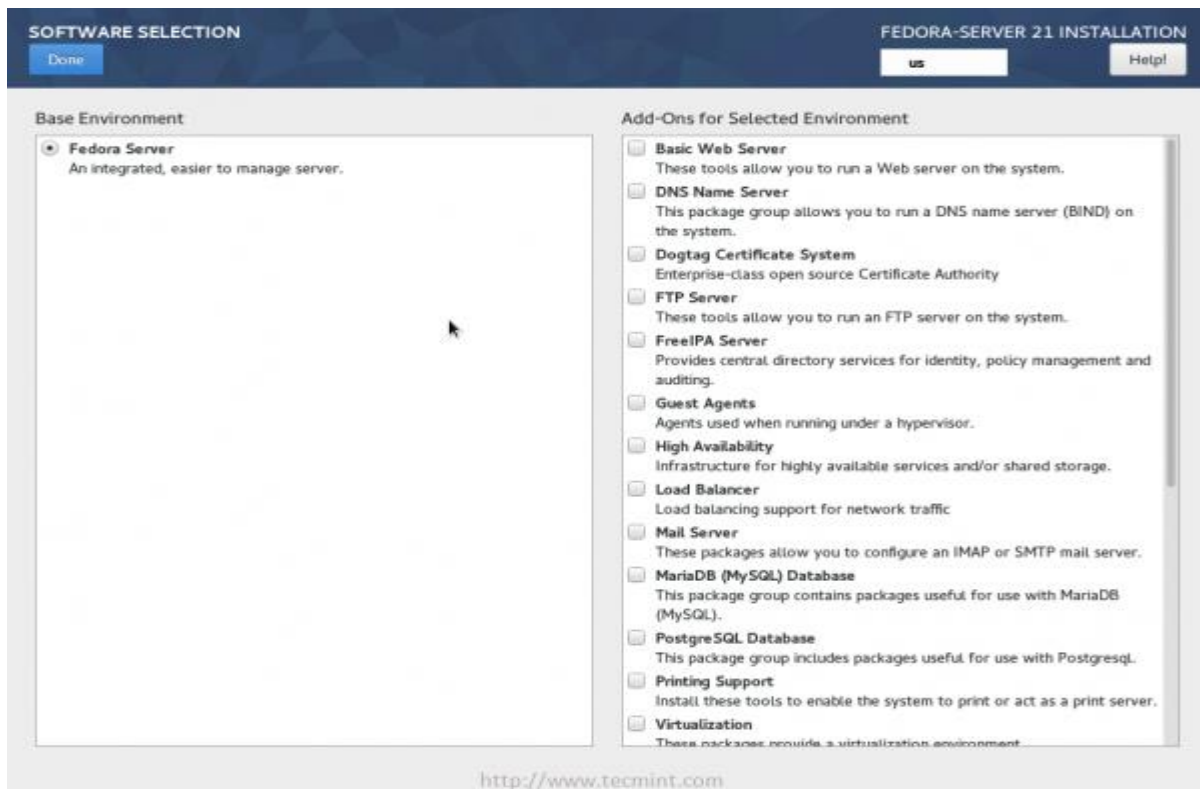
MEDIA VERIFICATION

Verifying media, please wait...

Done

http://www.tecmint.com

Step 12: Choose “Software Selection”, in this dialog, you can choose the software that you want to be installed from the DVD or USB, choose anything you want depending on your needs.



Step 13: When you finish selecting packages.. Go back and click on “Installation Destination”.

The screenshot shows the 'INSTALLATION DESTINATION' window for 'FEDORA-SERVER 21 INSTALLATION'. It features a 'Done' button and a 'Help!' button. The 'Device Selection' section instructs the user to select the device(s) for installation. Under 'Local Standard Disks', a single disk is listed: 'ATA VBOX HARDISK' with a capacity of 8748.73 MiB and 1744.5 KiB free. Below this, the 'Specialized & Network Disks' section has an 'Add a disk...' button. The 'Other Storage Options' section includes 'Partitioning' (with 'Automatically configure partitioning.' selected) and 'Encryption' (with 'Encrypt my data.' unchecked). At the bottom, a status bar indicates '1 disk selected; 8748.73 MiB capacity; 1744.5 KiB free' and provides a link to 'Full disk summary and bootloder...'. The URL 'http://www.tecmint.com' is also visible.

Step 14: Now as you can see.. I have Fedora 21 Workstation installed on my hard drive, I'll have to remove its partitions completely in order to install Fedora 21 Server on them.

The screenshot shows the 'MANUAL PARTITIONING' window for 'FEDORA-SERVER 21 INSTALLATION'. It features a 'Done' button and a 'Help!' button. On the left, a tree view shows 'New Fedora-Server 21 Installation' and 'Fedora Linux 21 for i686'. The main area is for configuring a partition named 'sda1'. Fields include 'Mount Point' (set to '/boot'), 'Desired Capacity' (500 MB), 'Device(s)' (ATA VBOX HARDISK (sda)), 'Device Type' (Standard Partition), 'File System' (ext4), 'Label', and 'Name' (sda1). There are checkboxes for 'Encrypt' and 'Reformat'. An 'Update Settings' button is at the bottom right. A note states: 'Note: The settings you make on this screen will not be applied until you click on the main menu's 'Begin Installation' button.' At the bottom, a status bar shows '1 storage device selected' and a 'Reset All' button. An orange error bar at the very bottom says 'Please enter a valid mountpoint.' The URL 'http://www.tecmint.com' is also visible.

Choose the partitions you want to remove.

MANUAL PARTITIONING FEDORA-SERVER 21 INSTALLATION

Done US Help!

New Fedora-Server 21 Installation

Fedora Linux 21 for i686

SYSTEM

/boot 500 MiB >

/ 7161 MiB

fedora-root

swap 876 MiB

fedora-swap

+ - ↻

AVAILABLE SPACE 1744.5 KiB

TOTAL SPACE 8748.73 MiB

1 storage device selected

Please enter a valid mountpoint.

http://www.tecmint.com

sda1

Mount Point: /boot

Device(s): ATA VBOX HARDISK (sda)

Desired Capacity: 500 MB

Device Type: Standard Partition ☐ Encrypt

File System: ext4 ☐ Reformat

Label:

Name: sda1

Update Settings

Note: The settings you make on this screen will not be applied until you click on the main menu's 'Begin Installation' button.

Reset All

Next, click on the “-” button, and check the “Delete all other filesystems in the Fedora Linux..” checkbox (Note: that it will delete everything on those partitions, so be careful).

MANUAL PARTITIONING FEDORA-SERVER 21 INSTALLATION

Done US Help!

New Fedora-Server 21 Installation

Fedora Linux 21 for i686

SYSTEM

/boot 500 MiB >

/ 7161 MiB

fedora-root

swap 876 MiB

fedora-swap

+ - ↻

AVAILABLE SPACE 1744.5 KiB

TOTAL SPACE 8748.73 MiB

1 storage device selected

Please enter a valid mountpoint.

http://www.tecmint.com

sda1

Mount Point: /boot

Device(s): ATA VBOX HARDISK (sda)

Desired Capacity: 500 MB

Device Type: Standard Partition ☐ Encrypt

File System: ext4 ☐ Reformat

Label:

Name: sda1

Update Settings

Note: The settings you make on this screen will not be applied until you click on the main menu's 'Begin Installation' button.

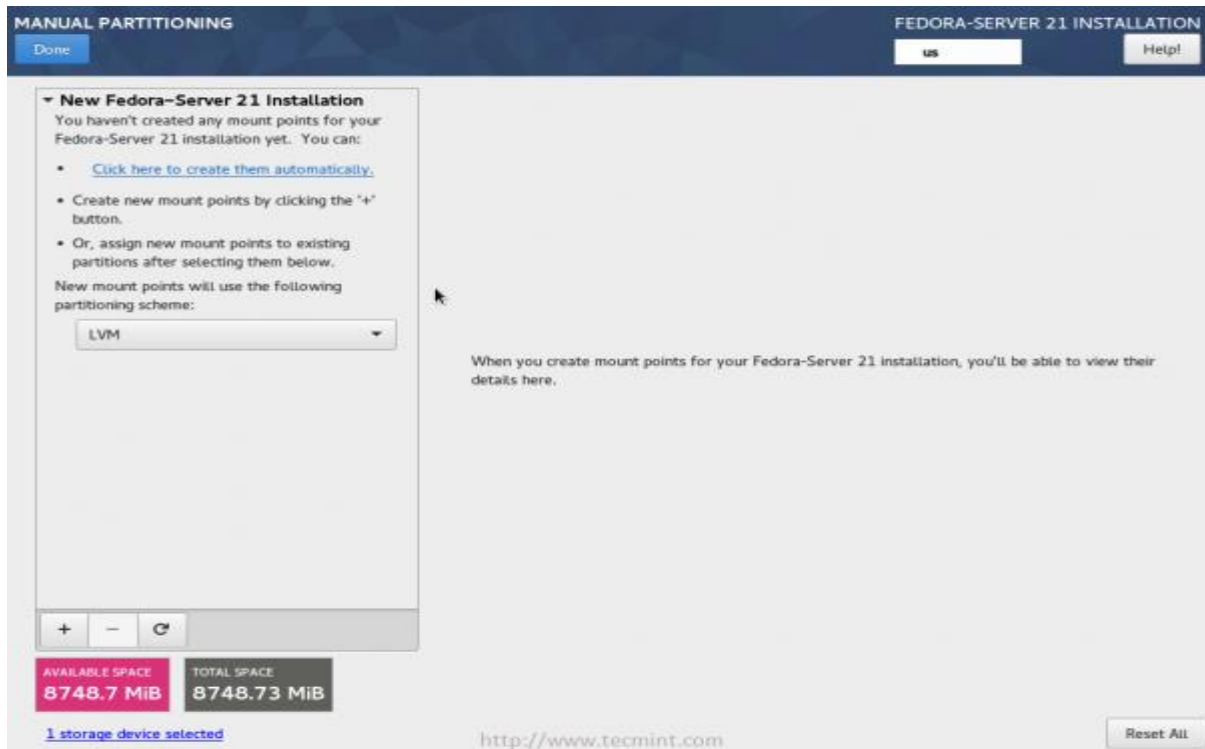
Reset All

Are you sure you want to delete all of the data on /boot (sda1)?

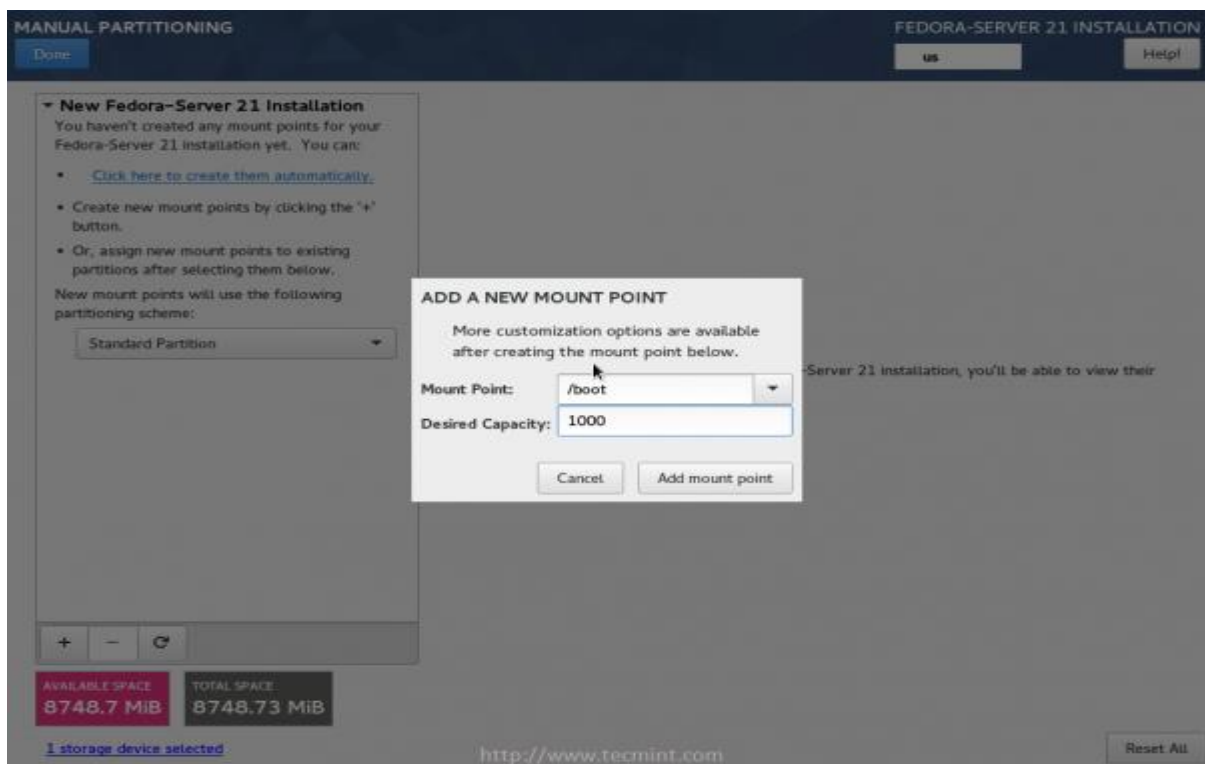
☒ Delete all other filesystems in the Fedora Linux 21 for i686 root as well.

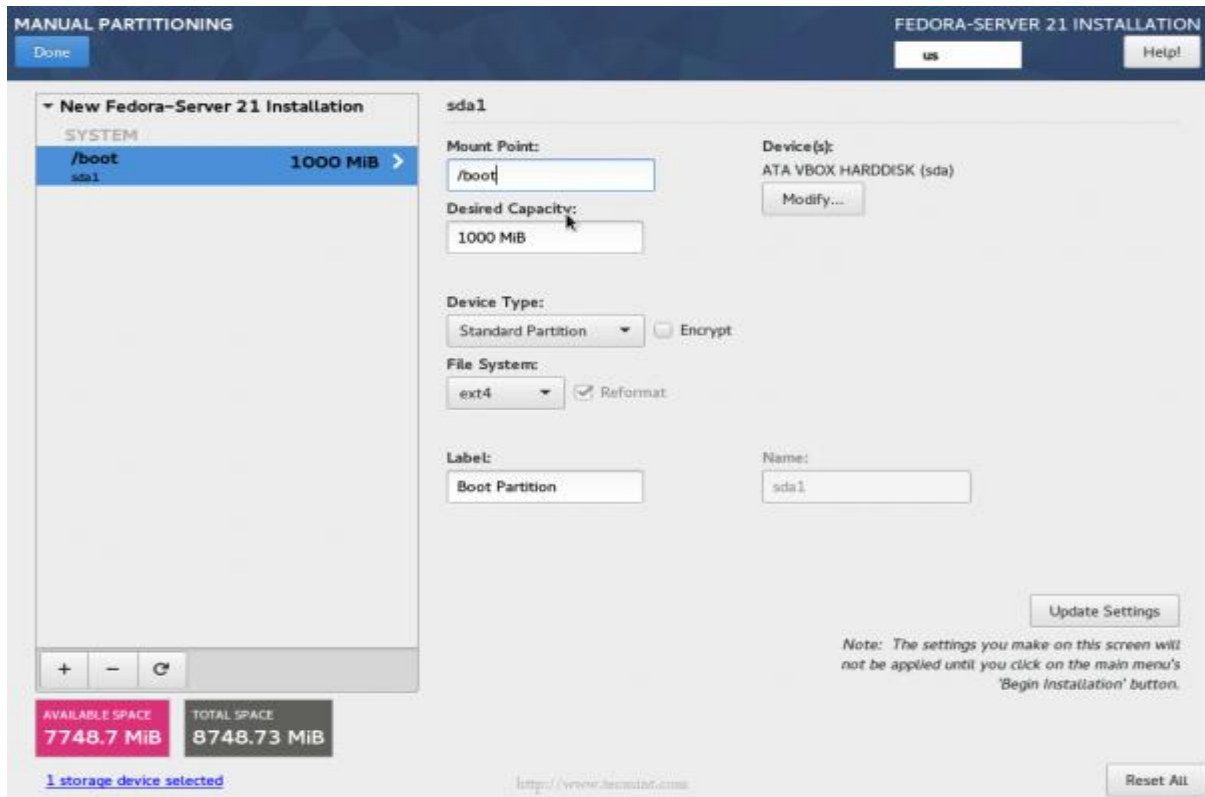
Cancel Delete It

Step 15: Now that you have free space on your hard drive, we'll create 4 partitions, one for root, one for home, one for boot and a swap partition.

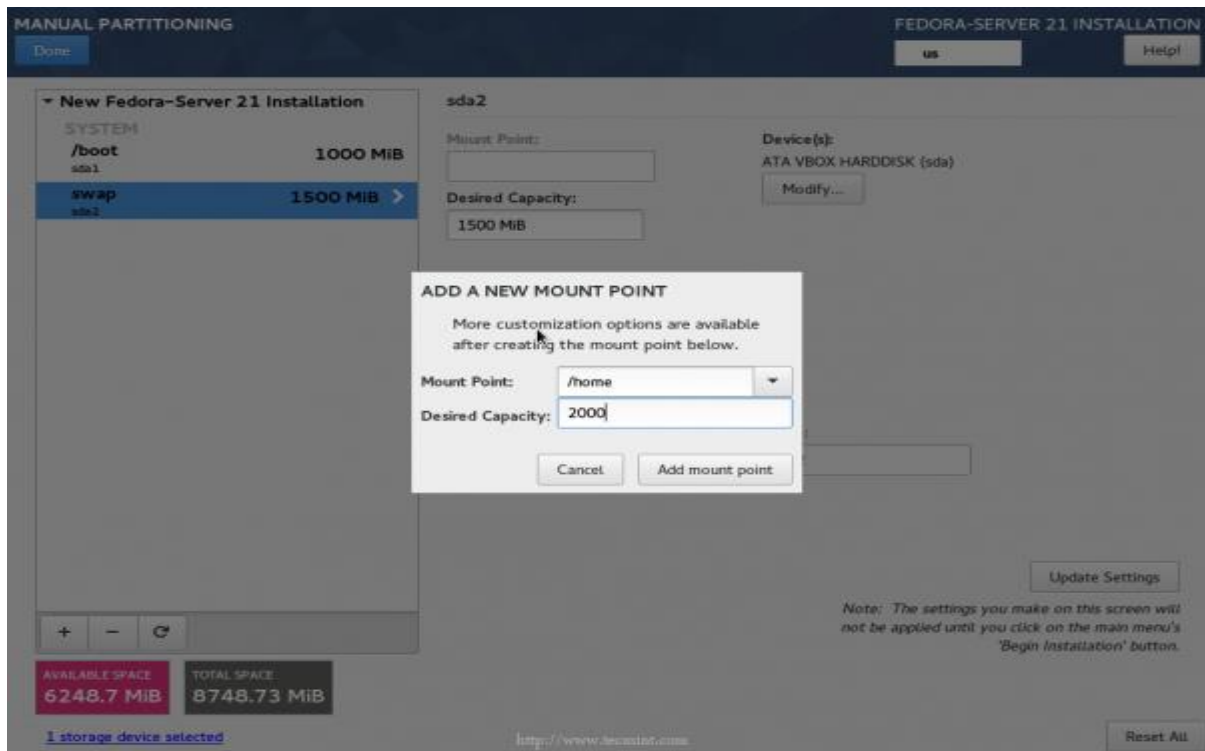


Click on the “+” button and add a boot partition, enter the size you want for it.





Step 16: Click on the “+” button again, and add a /home partition.



MANUAL PARTITIONING

FEDORA-SERVER 21 INSTALLATION

Done

us

Help!

New Fedora-Server 21 Installation

DATA

/home

sda3

2000 MiB

>

SYSTEM

/boot

sda1

1000 MiB

swap

sda2

1500 MiB

+

-

↺

AVAILABLE SPACE

4248.7 MiB

TOTAL SPACE

8748.73 MiB

[1 storage device selected](#)

sda3

Mount Point:

/home

Device(s):

ATA VBOX HARDISK (sda)

Modify...

Desired Capacity:

2000 MiB

Device Type:

Standard Partition

Encrypt

File System:

ext4

Reformat

Label:

Home Partition

Name:

sda3

Update Settings

Note: The settings you make on this screen will not be applied until you click on the main menu's 'Begin Installation' button.

Reset All

<http://www.fedoraproject.org>

Step 17: Do the same thing again.. and add a new root (/) partition.

MANUAL PARTITIONING

FEDORA-SERVER 21 INSTALLATION

Done

us

Help!

New Fedora-Server 21 Installation

DATA

/home

sda2

2000 MiB

>

SYSTEM

/boot

sda1

1000 MiB

swap

sda3

1500 MiB

+

-

↺

AVAILABLE SPACE

4248.7 MiB

TOTAL SPACE

8748.73 MiB

[1 storage device selected](#)

sda2

Mount Point:

/home

Device(s):

ATA VBOX HARDISK (sda)

Modify...

Desired Capacity:

2000 MiB

Device Type:

Standard Partition

Encrypt

File System:

ext4

Reformat

Label:

Home Partition

Name:

sda2

Update Settings

Note: The settings you make on this screen will not be applied until you click on the main menu's 'Begin Installation' button.

Reset All

<http://www.fedoraproject.org>

ADD A NEW MOUNT POINT

More customization options are available after creating the mount point below.

Mount Point:

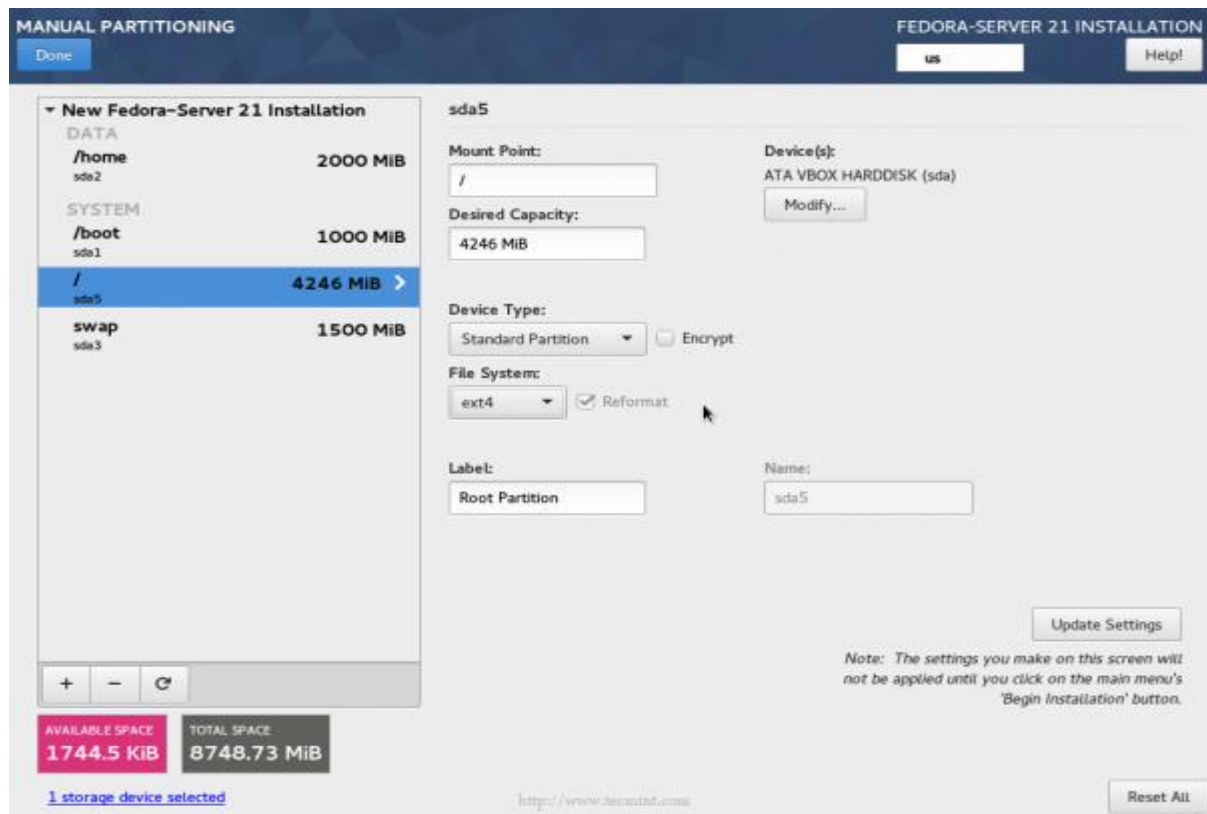
/

Desired Capacity:

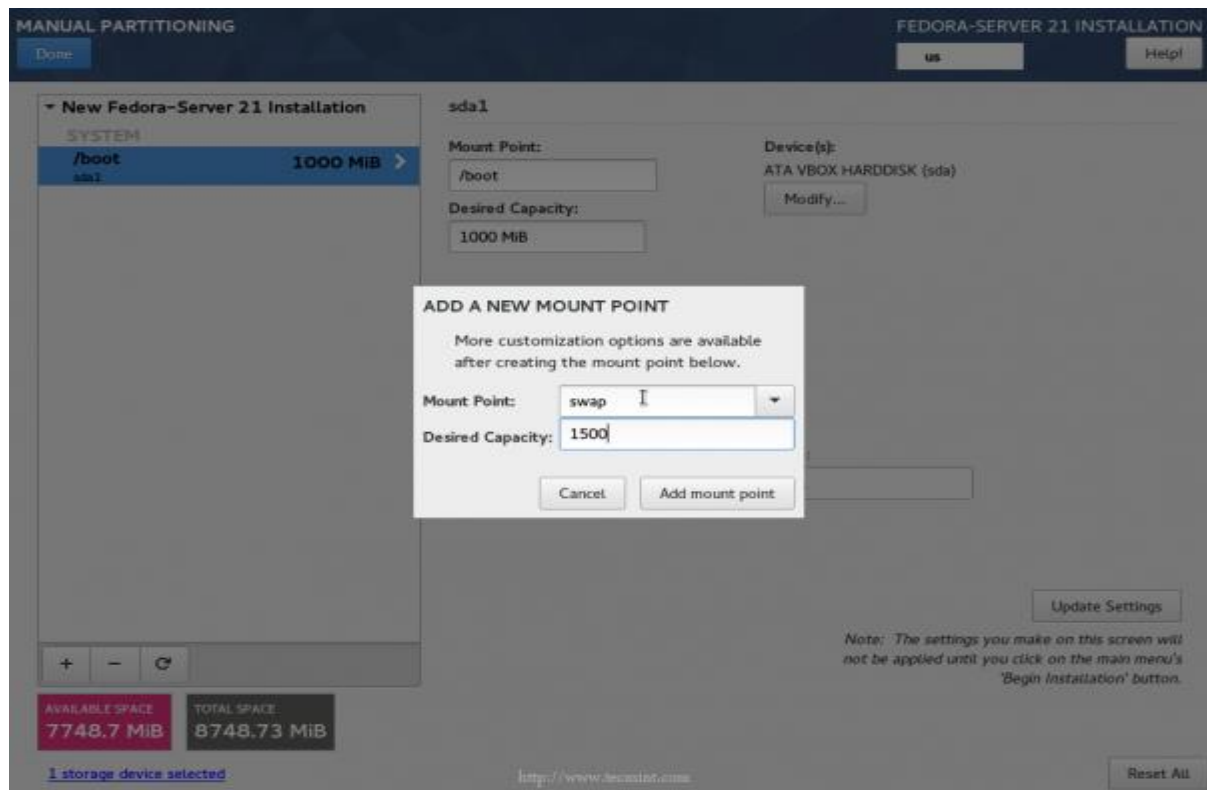
4248.7

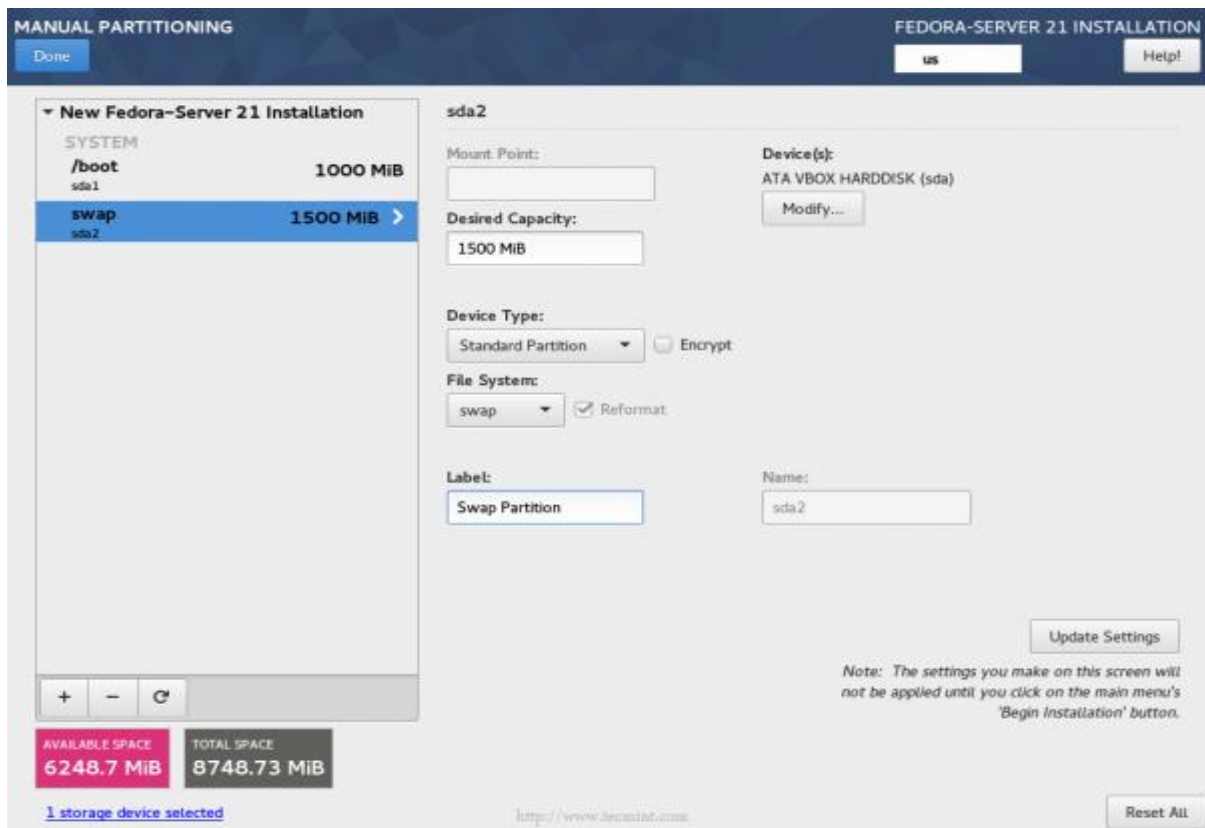
Cancel

Add mount point

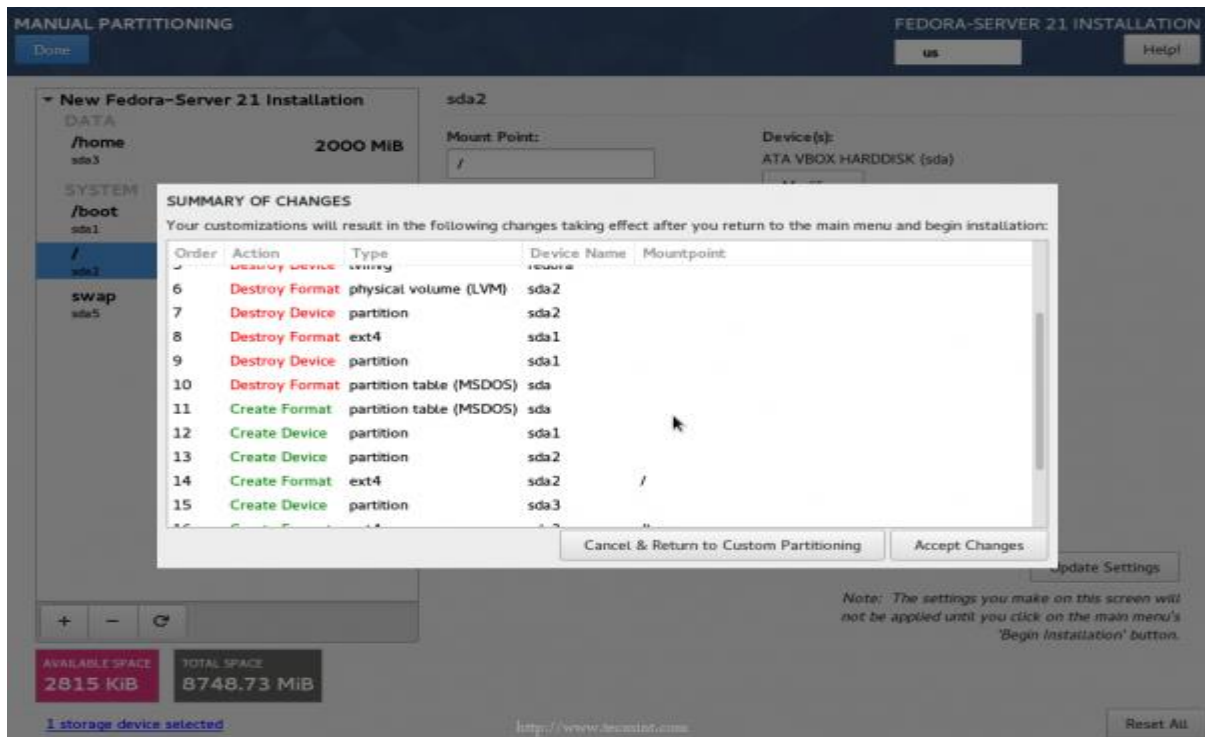


Step 18: Finally, create a Swap partition (its size must be the double of your RAM size).

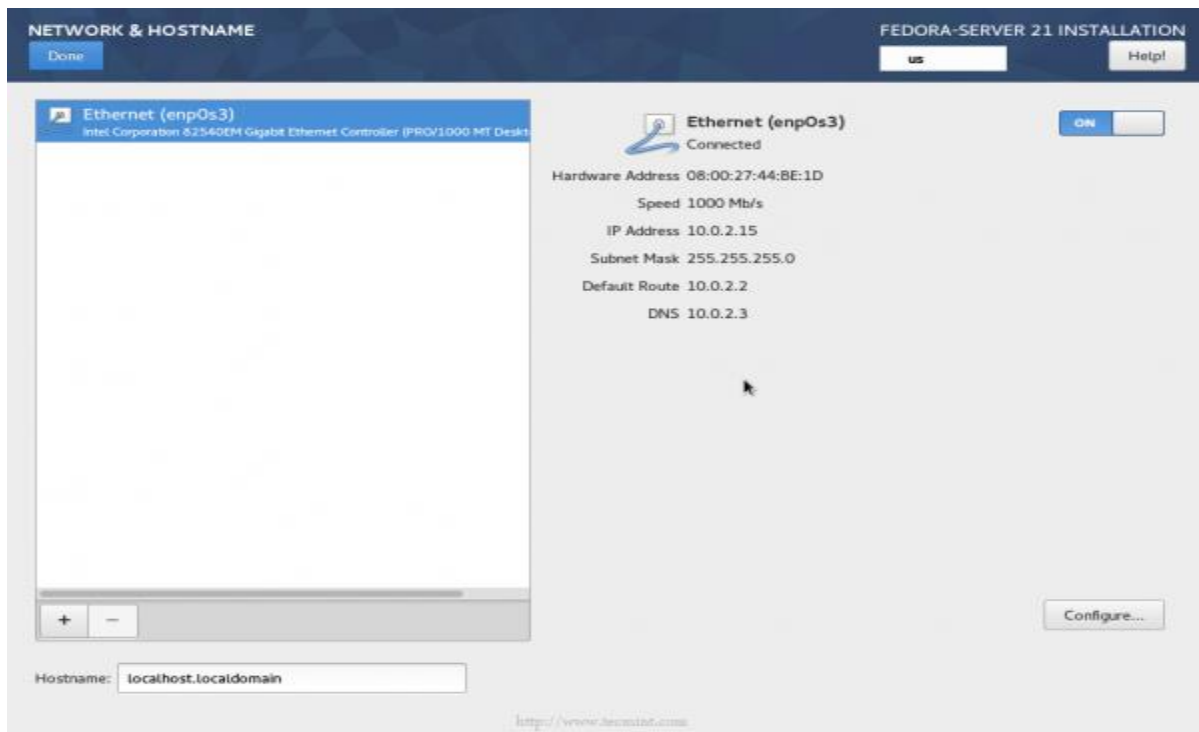




Step 19: After creating all above partitions, click on the “Done” button and confirm.



Step 20: Go back to the Summary page and choose “Network & Hostname”, you can configure the network interfaces from here if you want, though you won’t need it right now.

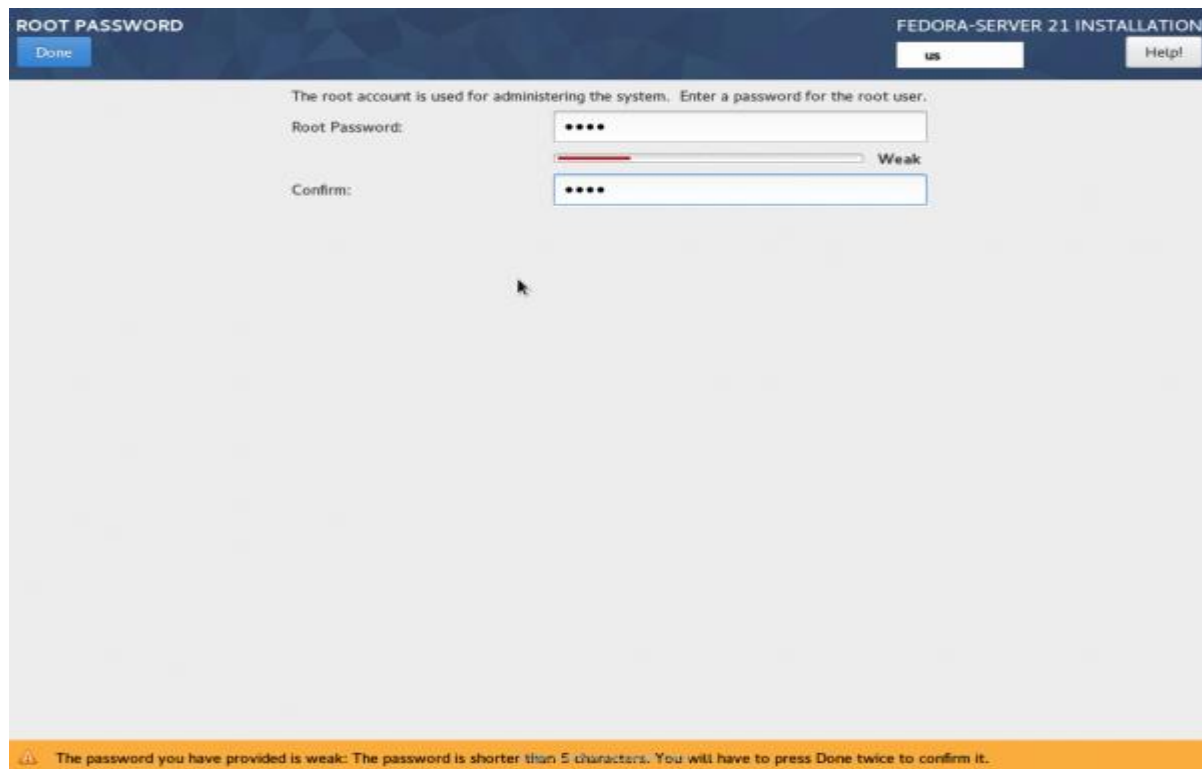


Step 21: Now click on the “Begin installation” button on the right bottom corner.





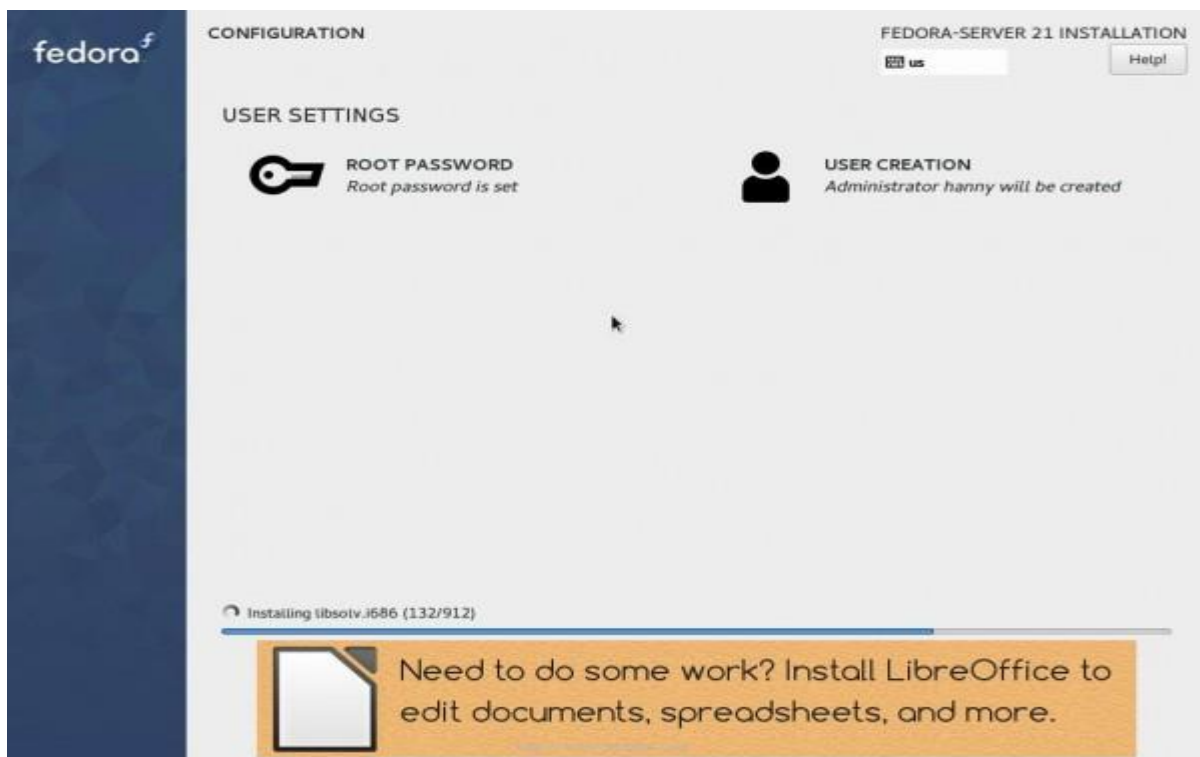
Step 22: You must create a root password, click on the “Root Password” button in order to do so.



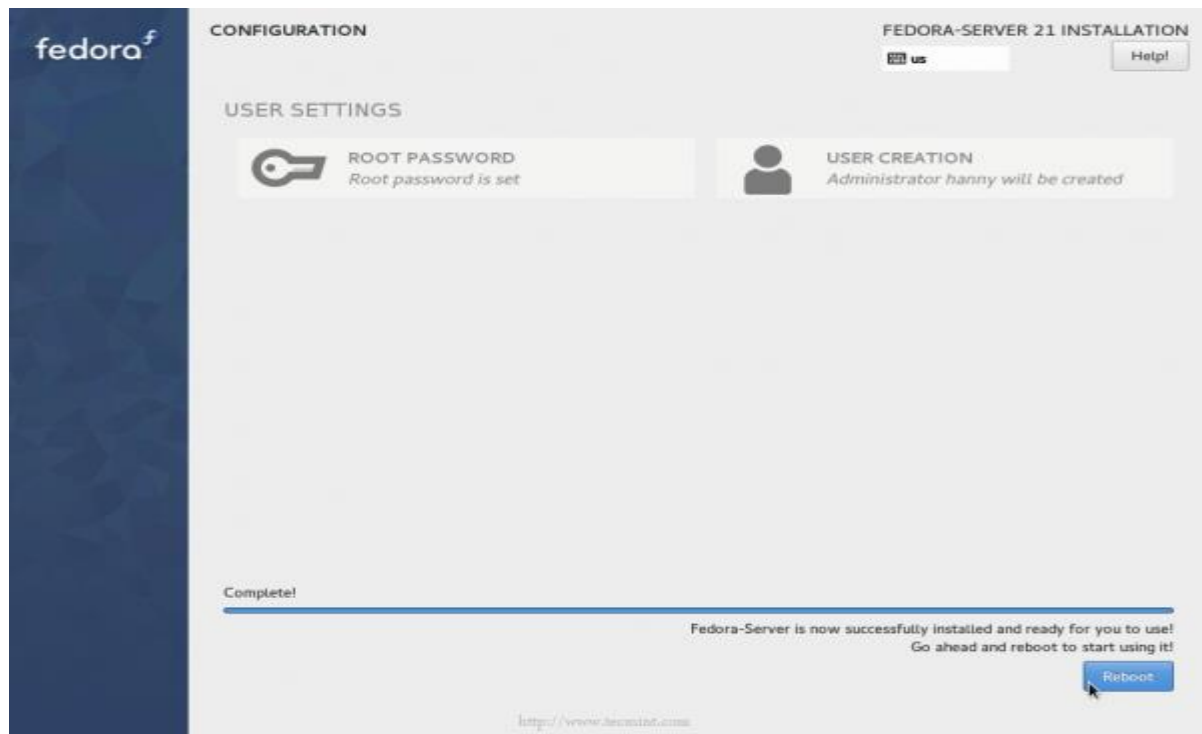
Step 23: Go back and click on “User Creation” to create a normal user for the system, enter a user name and a password and click on “Done”.

The screenshot shows the 'CREATE USER' window in the 'FEDORA-SERVER 21 INSTALLATION' environment. The window has a dark blue header with 'CREATE USER' on the left and 'FEDORA-SERVER 21 INSTALLATION' on the right, including a 'Done' button and a 'Help!' button. The main area contains form fields for 'Full name' (filled with 'TecMint.com'), 'Username' (filled with 'tecmint.com'), 'Password' (filled with '*****'), and 'Confirm password' (filled with '*****'). There are checkboxes for 'Make this user administrator' and 'Require a password to use this account', both of which are checked. A tip states: 'Tip: Keep your username shorter than 32 characters and do not use spaces.' Below the password fields is a strength indicator showing a red bar and the word 'Weak'. An 'Advanced...' button is at the bottom. An orange banner at the bottom of the window reads: 'The password you have provided is weak: The password fails the dictionary check - it does not contain enough DIFFERENT characters. You will have to press Done twice to confirm it.'

Step 24: That's it for now.. Wait the installation process to be completed.



Step 25: When the it's completed, you can now reboot the system in order to start using the new system.



That's it! Don't forget to unplug the installation media from the computer, so that you don't boot it again.

```
Fedora release 21 (Twenty One)
Kernel 3.17.4-301.fc21.i686+PAE on an i686 (tty1)

localhost login: hanny
Password:
Last login: Tue Dec 23 19:08:50 on tty1
[hanny@localhost ~]$ _
```

<http://www.tecmint.com>

Practical-11

AIM: Installing Active Directory & Creating AD.

- **Install Active Directory**

Use the following steps to install Active Directory on the server:

Step 1: Open the **Server Manager** from the task bar.

Step 2: From the **Server Manager** dashboard, select **Add roles and features**.

The Roles and Features Wizard launches. This wizard enables you to make modifications to the Windows Server 2012 instance.

Step 3: On the **Installation Type** screen, select **Role-based or features-based** and click **Next**.

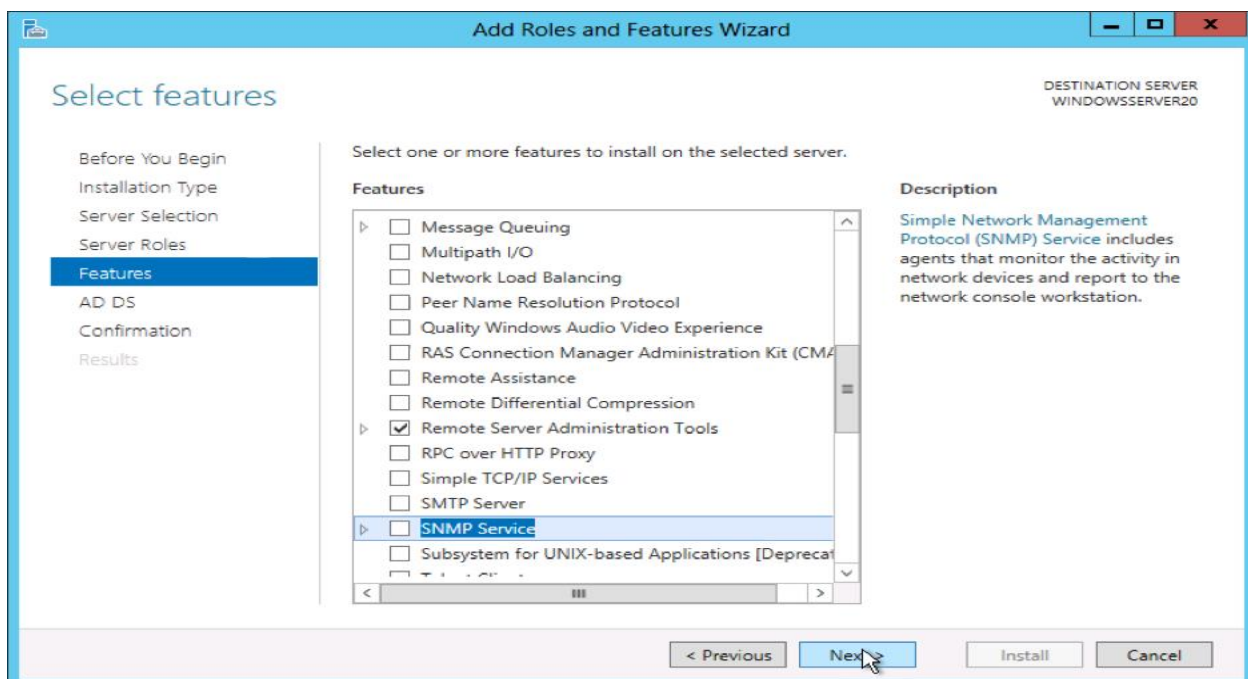
Step 4: By default, the current server is selected. Click **Next**.

Step 5: On the **Server Roles** screen, select the check box next to **Active Directory Domain Services**.

A notice displays that explains that you must also install additional roles, services, or features in order to install Domain Services. These additional capabilities include certificate services, federation services, lightweight directory services, and rights management.

To select additional capabilities, click **Add Features**.

Step 6: On the **Select features** screen, select the check boxes next to the features that you want to install during the AD DS installation process and click **Next**.



Step 7: Review the information on the **AD DS** tab, then click **Next**.

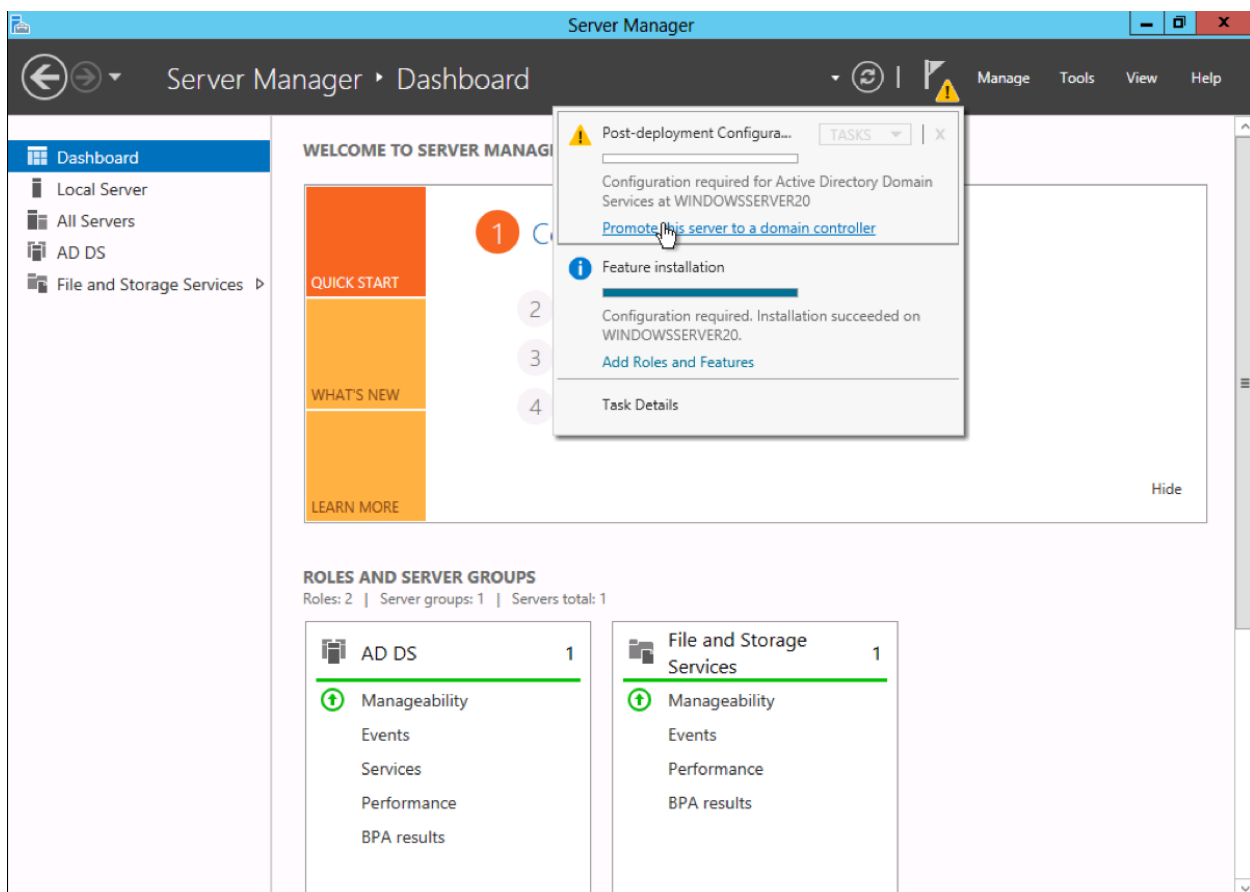
Step 8: Review the information on the **Confirm installation selections** screen, then click **Install**.

- **Configure Active Directory**

After you have installed the AD DS role, you must configure the server for your domain by using the following steps:

1. From the task bar, click **Open the Server Manager**.
2. Select the yellow notifications icon in the top navigation bar of the Server Manager window.

The Notifications Pane opens and displays a **Post-deployment Configuration** notification. Click the **Promote this server to a domain controller** link that appears in the notification.



Step 3: From the **Deployment Configuration** tab, select **Radial options > Add a new forest**. Enter your root domain name in the **Root domain name** field and click **Next**.

Step 4: Select a **Domain** and a **Forest functional level**.

Enter a password for Directory Services Restore Mode (DSRM) in the **Password** field.

Step 5: Review the warning on the **DNS Options** tab and select **Next**.

Step 6: Confirm or enter a **NetBIOS name** and click **Next**.

Step 7: Specify the locations of the **Database**, **Log files**, and **SYSVOL folders**, then click **Next**.

Step 8: Review the configuration options and click **Next**.

Step 9: The system checks if all of the necessary prerequisites are installed on the system. If the system passes these checks, click **Install**.

Step 10: After the server reboots, reconnect to it by using Microsoft Remote Desktop Protocol (RDP).

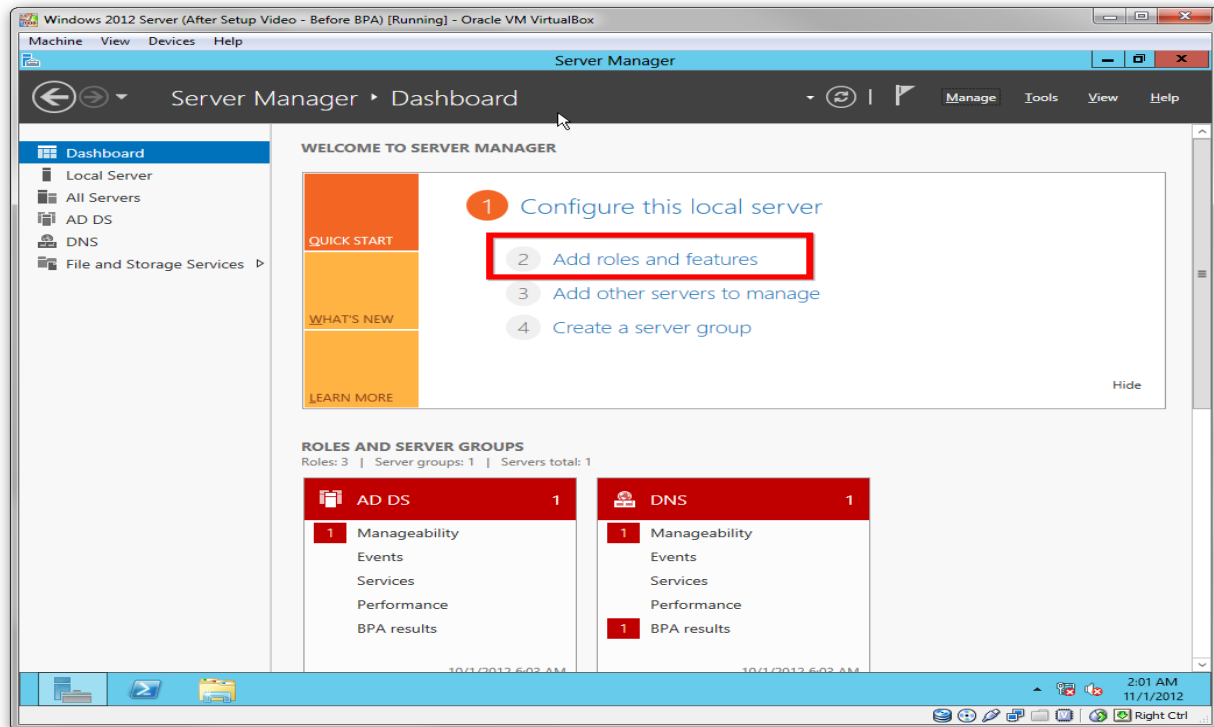
Exercise:-

1) Define Active Directory.

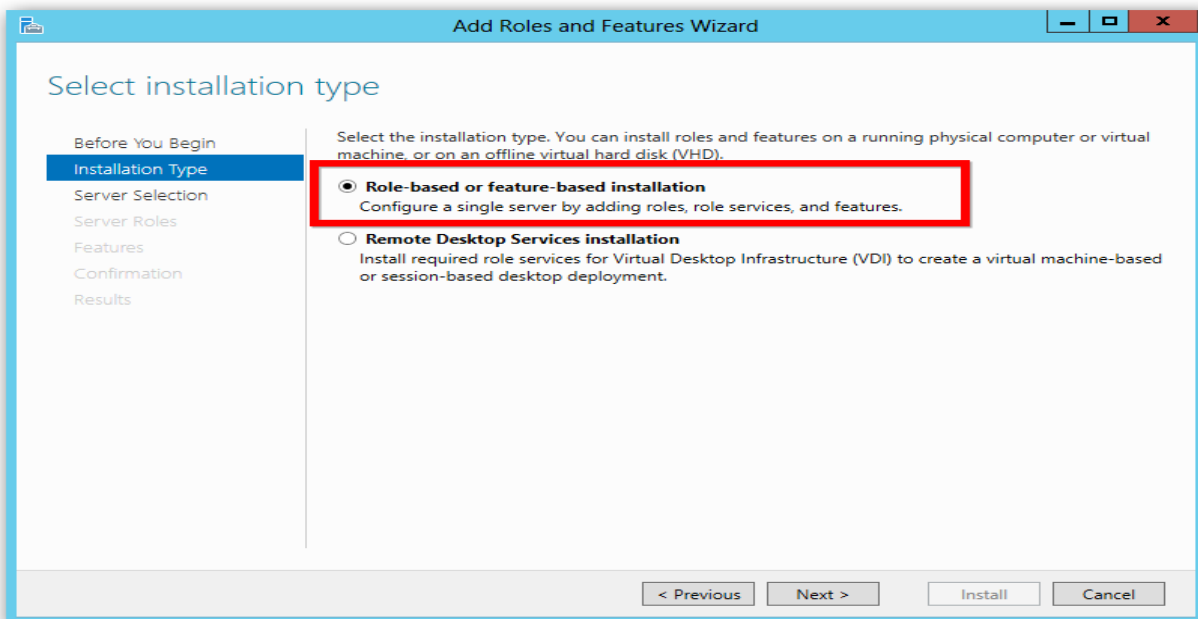
Practical-12

AIM: Create Domain Controller.

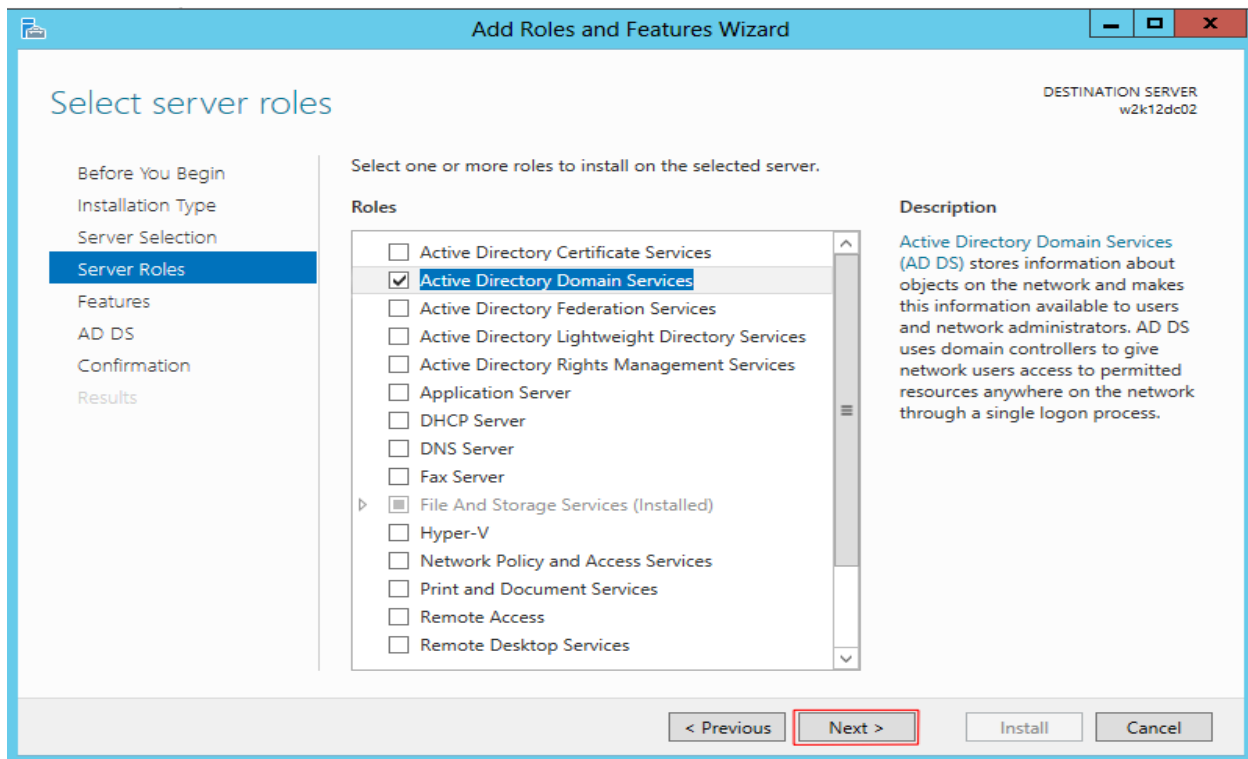
Step 1: Open the **Server Manager** console and click on **Add roles and features**.



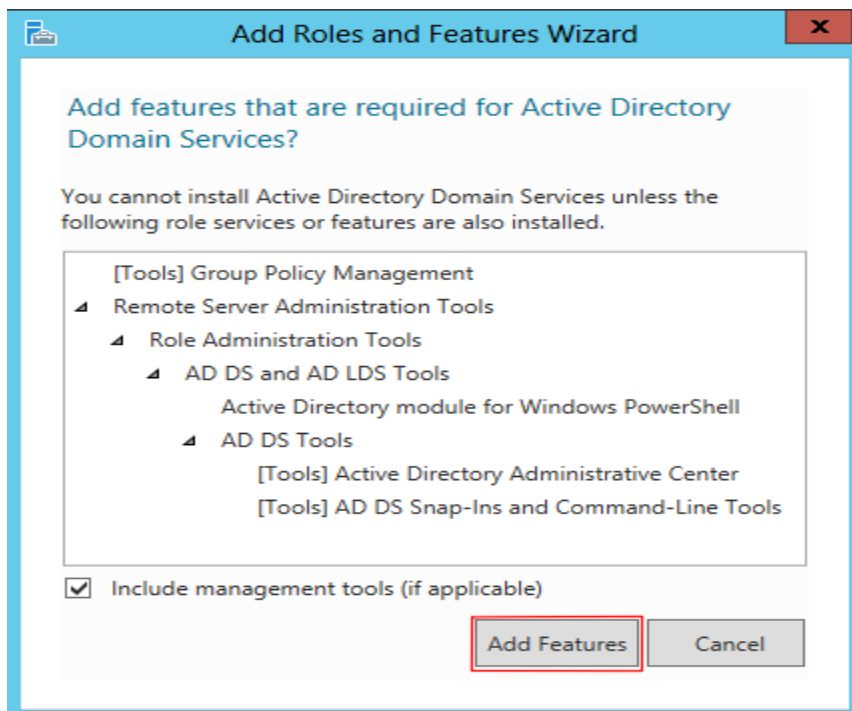
Step 2: Select **Role-based of featured-based installation** and select **Next**.



Step 3: Select the **Active Directory Directory Services** role.

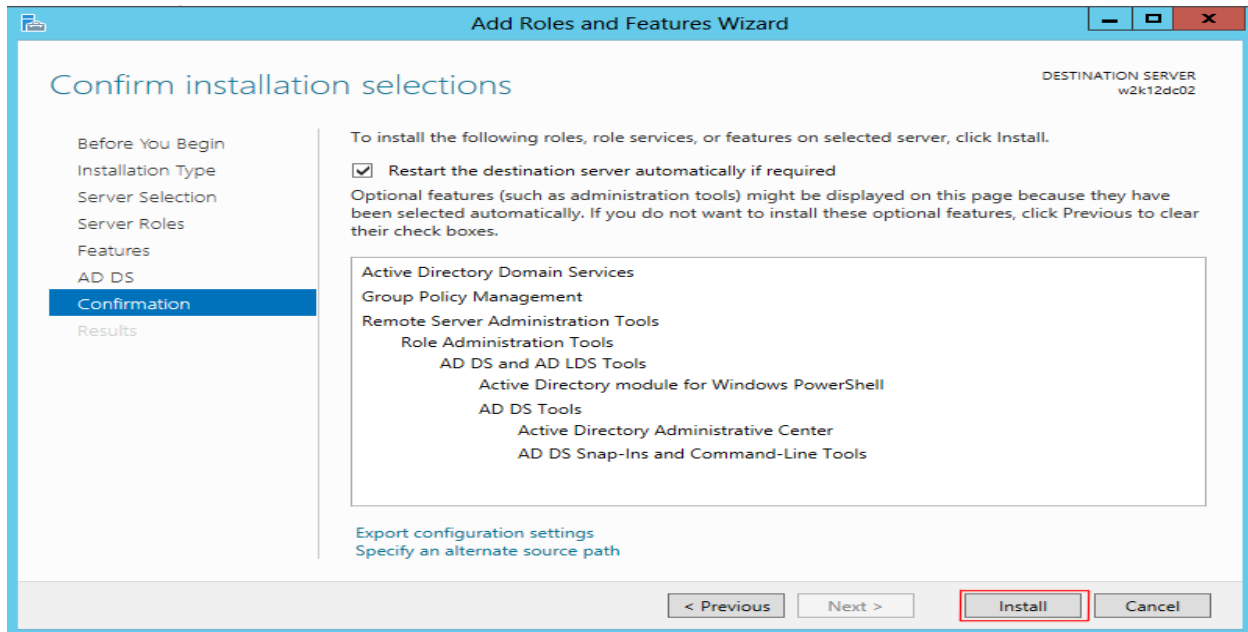


Step 4: Accept the default features required by clicking the **Add Features** button.

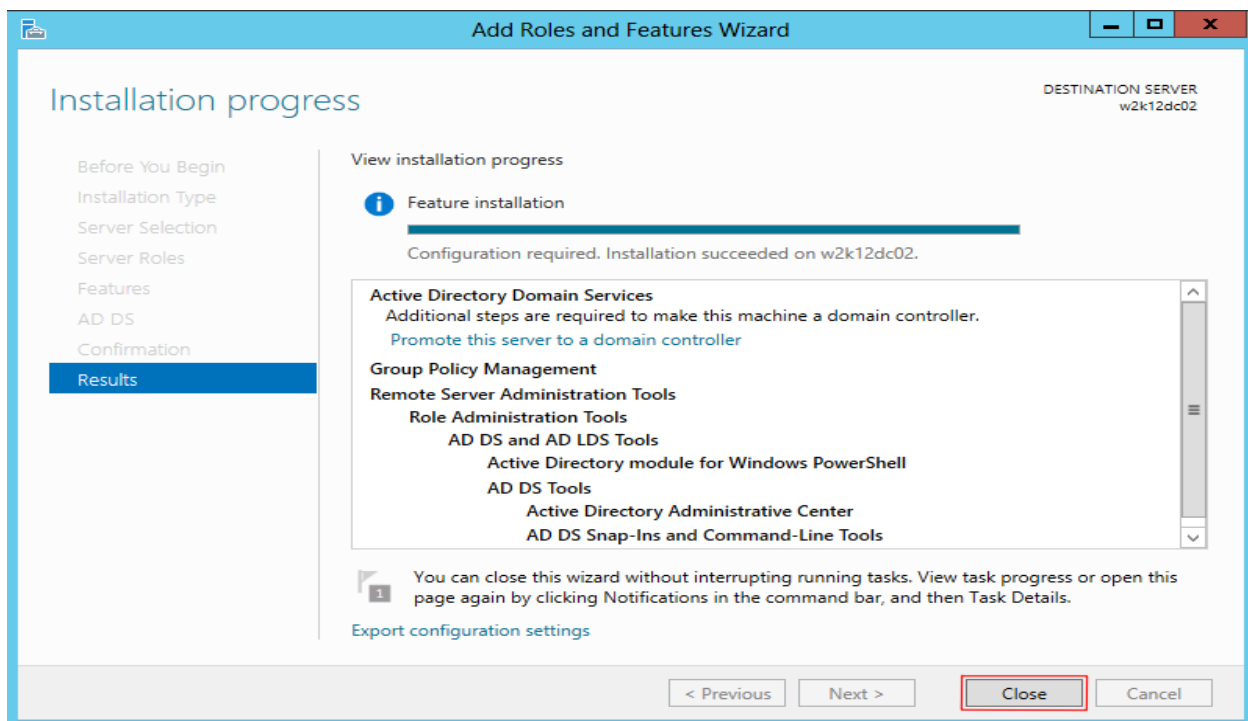


Step 5: On the **Features** screen click the **Next** button.

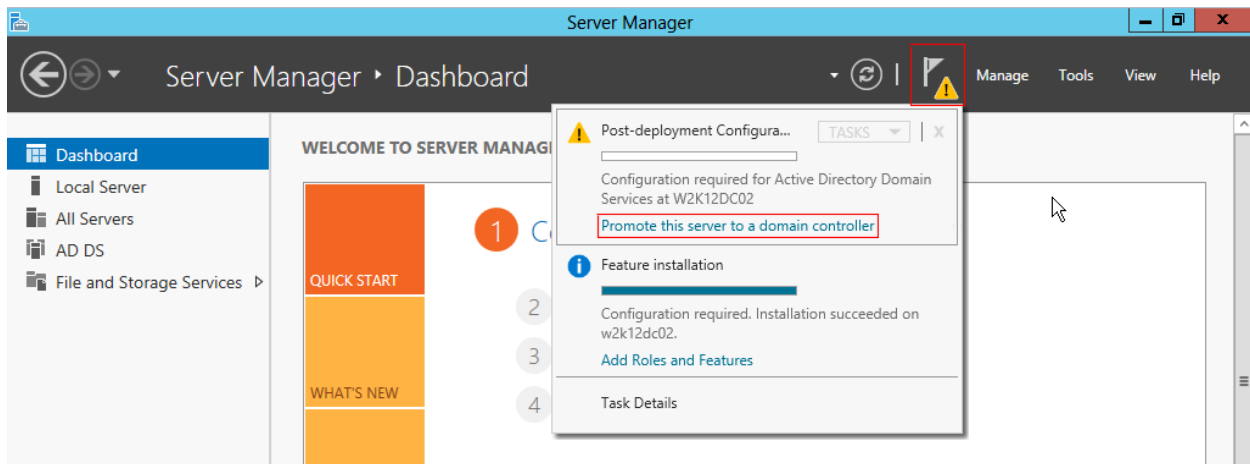
Step 6: On the **Confirm installation selections** screen click the **Install** button. **NOTE:** Check off the **Restart the destination server automatically if required** box to expedite the install should you be able to reset the target server automatically.



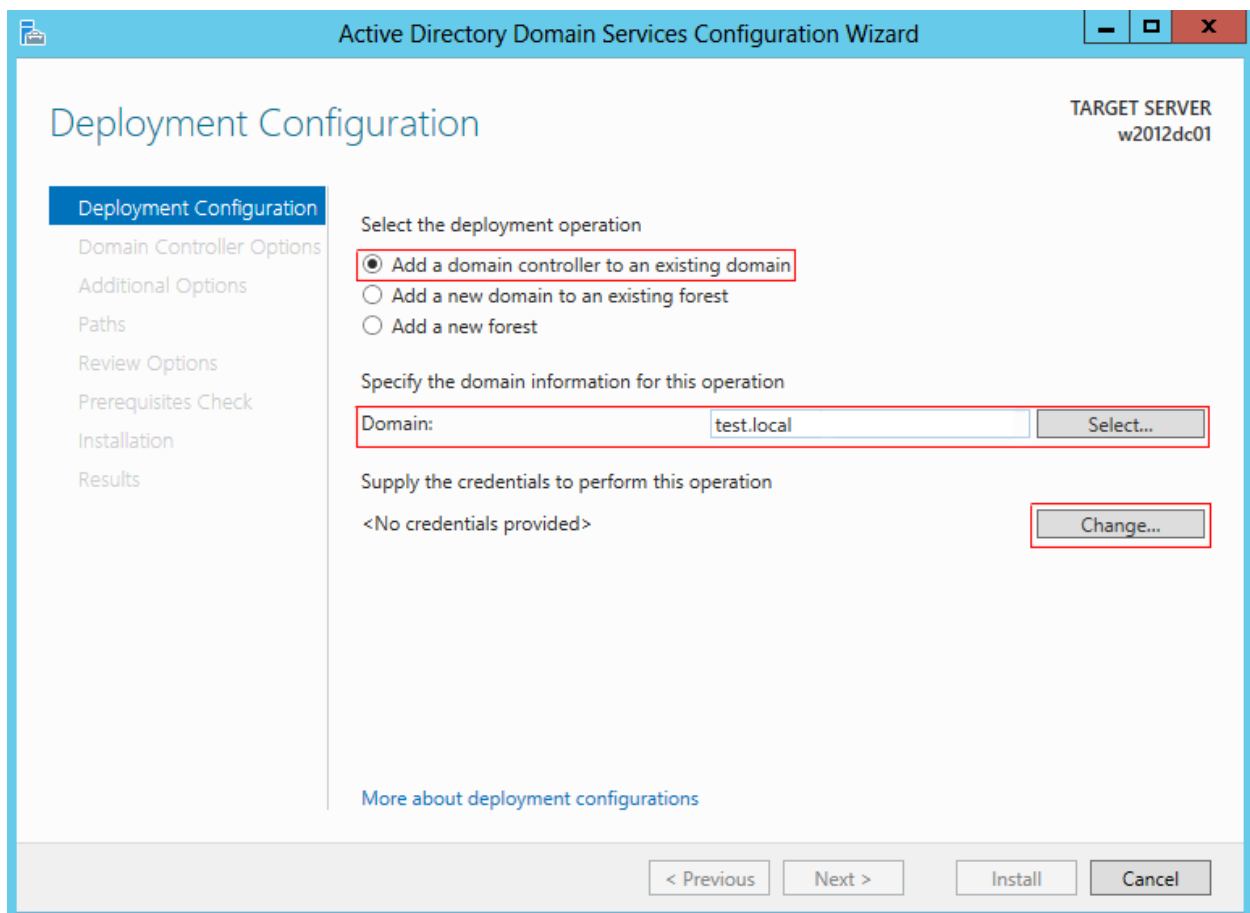
Step 7: Click the **Close** button once the installation has been complete.



Step 8: Once completed, notification is made available on the dashboard highlighted by an exclamation mark. Select it and amidst the drop down menu select **Promote this server to a domain controller**.



Step 9: Select **add a Domain Controller into existing domain**.



Step 10: Ensure the target domain is specified. If it is not, please either **Select** the proper domain or enter the proper domain in the field provided.

Step 11: Click **Change**, provide the required Enterprise Administrator credentials and click the Next button.

Step 12: Define if server should be a **Domain Name System DNS server** and **Global Catalog (GC)**. Select the Site to which this DC belongs to and define **Directory Services Restoration Mode (DSRM)** password for this DC.

The screenshot shows the 'Active Directory Domain Services Configuration Wizard' window. The title bar includes standard Windows window controls. The main window has a light blue header with the title 'Active Directory Domain Services Configuration Wizard'. Below the header, the window is divided into two main sections. On the left is a navigation pane with a blue header 'Domain Controller Options' and several sub-items: 'Deployment Configuration', 'DNS Options', 'Additional Options', 'Paths', 'Review Options', 'Prerequisites Check', 'Installation', and 'Results'. The 'Domain Controller Options' item is currently selected. The main content area on the right is titled 'Domain Controller Options' and contains two sections. The first section, 'Specify domain controller capabilities and site information', is enclosed in a red rectangular box. It contains three checkboxes: 'Domain Name System (DNS) server' (checked), 'Global Catalog (GC)' (checked), and 'Read only domain controller (RODC)' (unchecked). Below these is a 'Site name:' label followed by a dropdown menu showing 'Default-First-Site-Name'. The second section, 'Type the Directory Services Restore Mode (DSRM) password', is also enclosed in a red rectangular box. It contains two password fields: 'Password:' and 'Confirm password:', both with masked characters (dots). At the bottom of the window, there is a navigation bar with four buttons: '< Previous', 'Next >', 'Install', and 'Cancel'. The 'Next >' button is highlighted with a red rectangular box.

Active Directory Domain Services Configuration Wizard

Domain Controller Options

TARGET SERVER
w2012dc01

Deployment Configuration
Domain Controller Options
DNS Options
Additional Options
Paths
Review Options
Prerequisites Check
Installation
Results

Specify domain controller capabilities and site information

☒ Domain Name System (DNS) server
☒ Global Catalog (GC)
☐ Read only domain controller (RODC)

Site name: Default-First-Site-Name

Type the Directory Services Restore Mode (DSRM) password

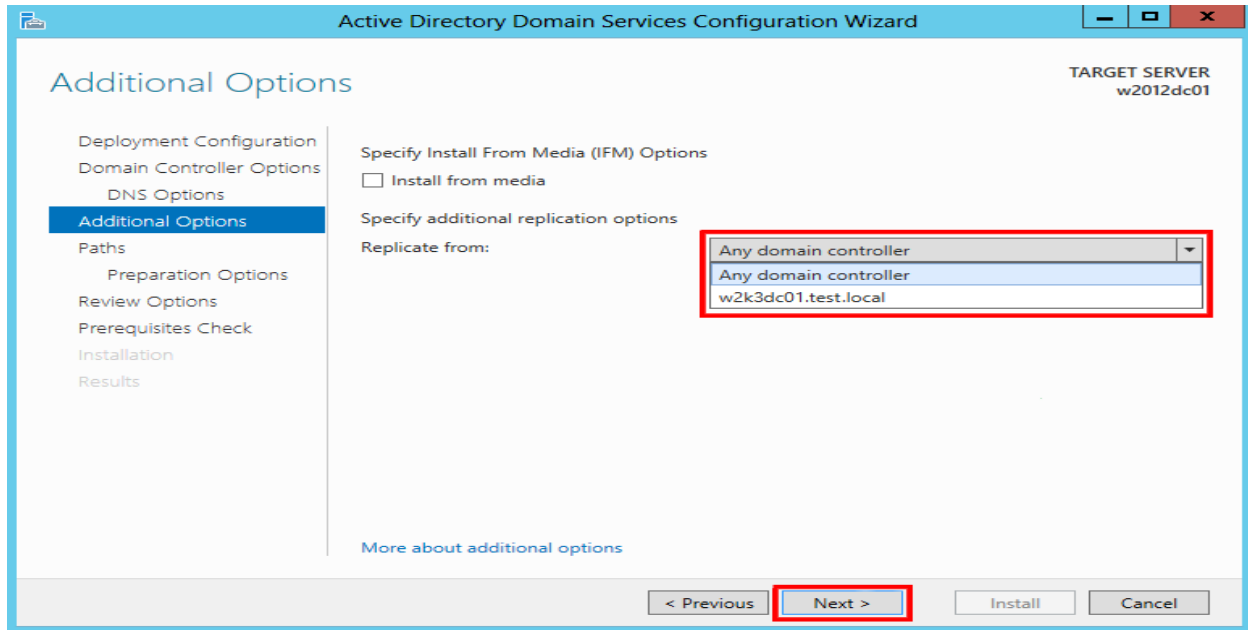
Password:
Confirm password:

More about domain controller options

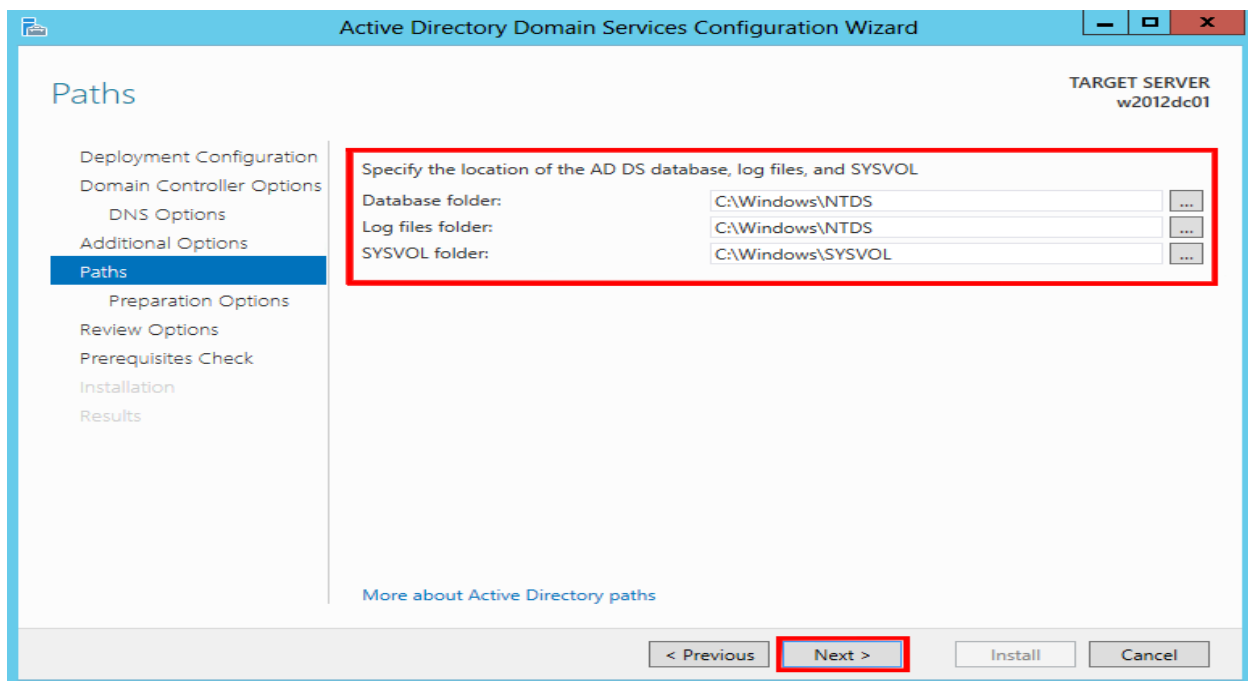
< Previous Next > Install Cancel

Step 13: Click the **Next** button on the DNS options screen.

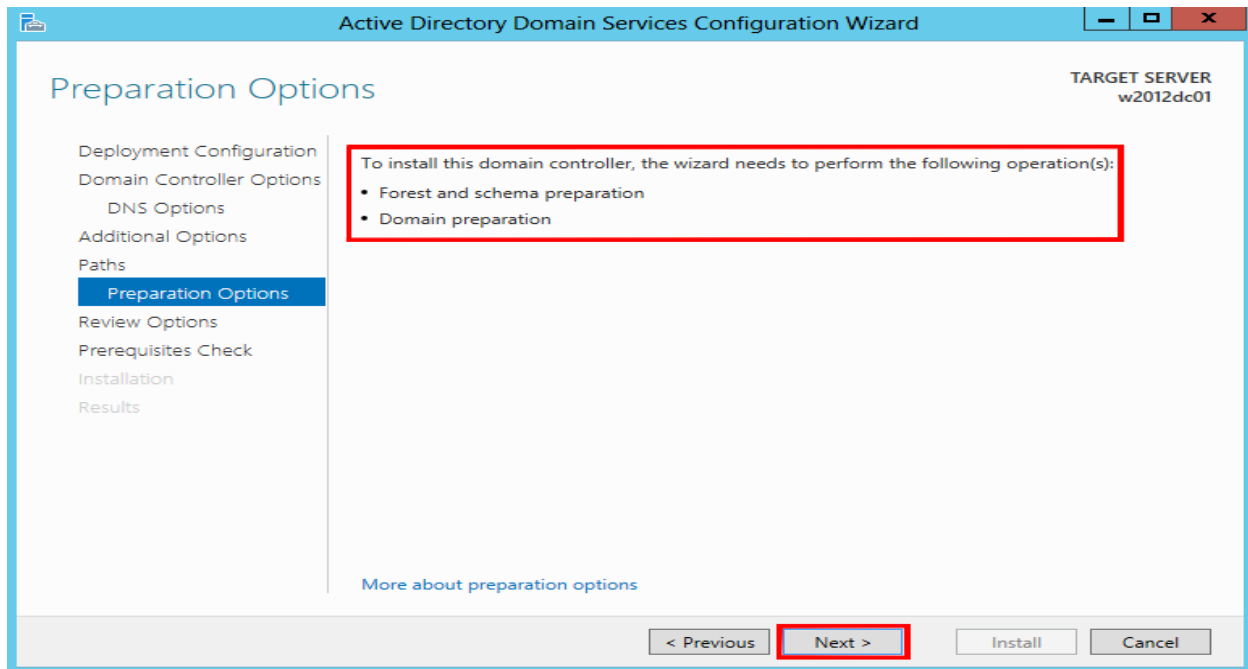
Step 14: In the **Additional Options** screen you are provided with the option to install the Domain Controller from **Install From Media (IFM)**. Additionally you are provided the option to select the point from which DC replication should be completed. The server will choose the best location for AD database replication if not specified. Click the **Next** button once completed.



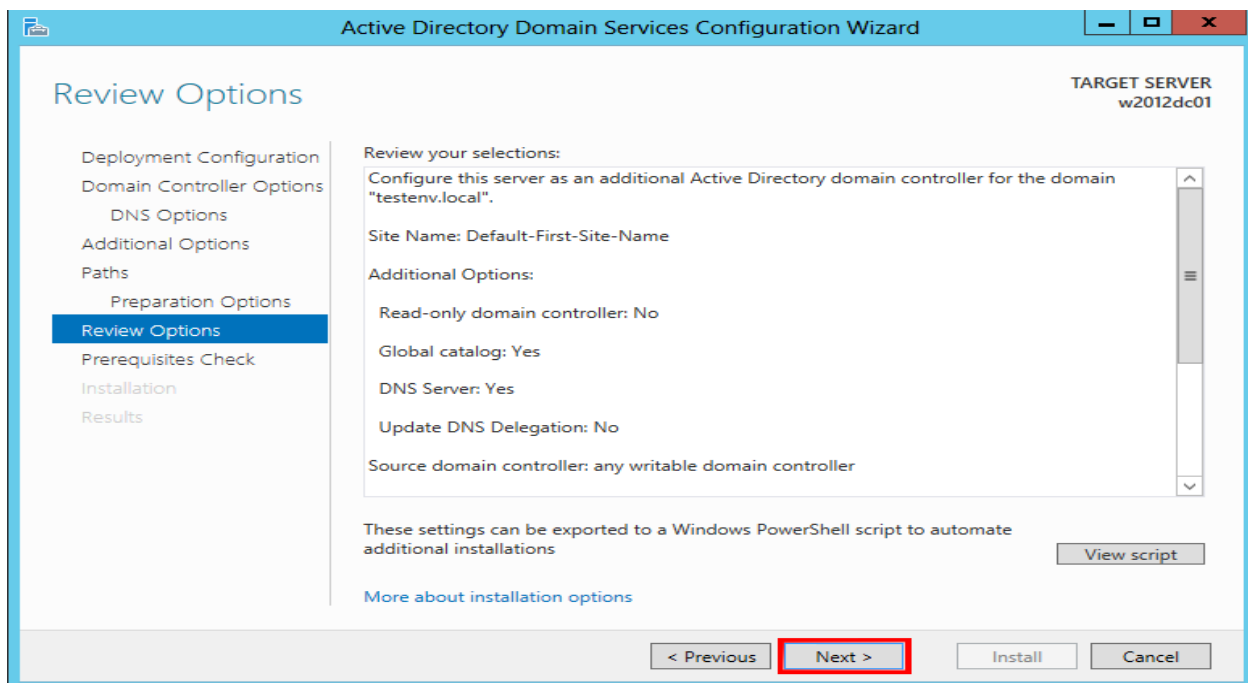
Step 15: Specify location for AD database and SYSVOL and Click the **Next** button.



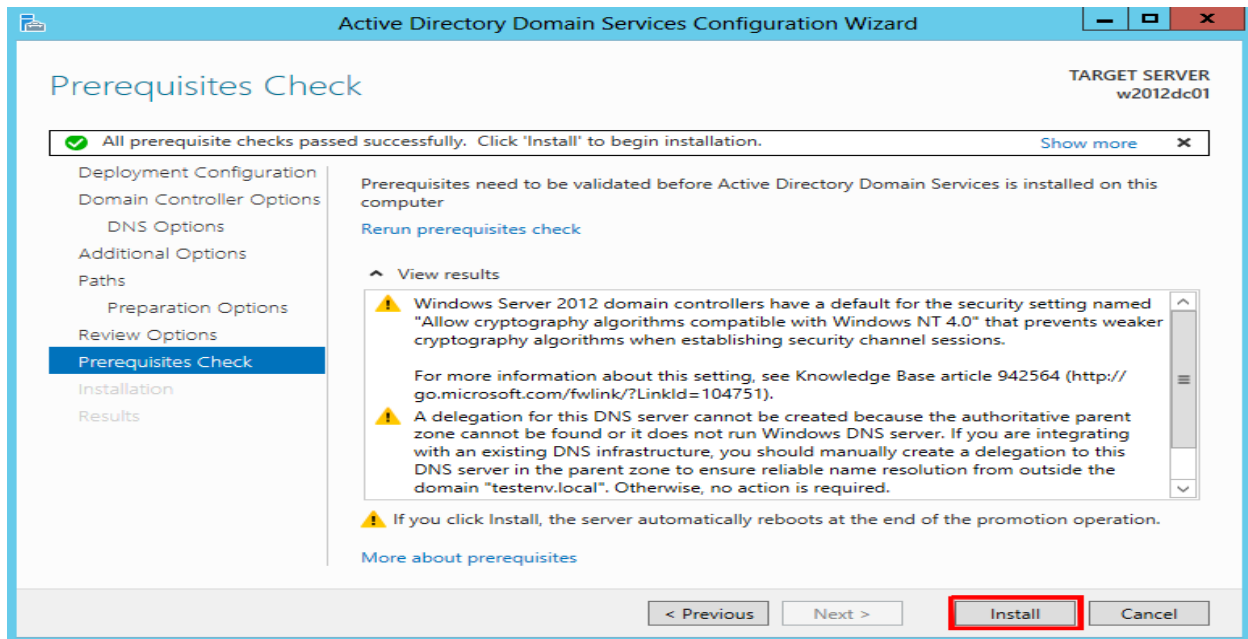
Step 16: Next up is the Schema and Domain preparation. Alternately, one could run [Adprep](#) prior to commencing these steps, Regardless, if Adprep is not detected, it will automatically be completed on your behalf.



Step 17: Finally, the **Review Options** screen provides a summary of all of the selected options for server promotion. As an added bonus, when clicking **View Script** button you are provided with the PowerShell script to automate future installations. To click the **Next** button to continue.

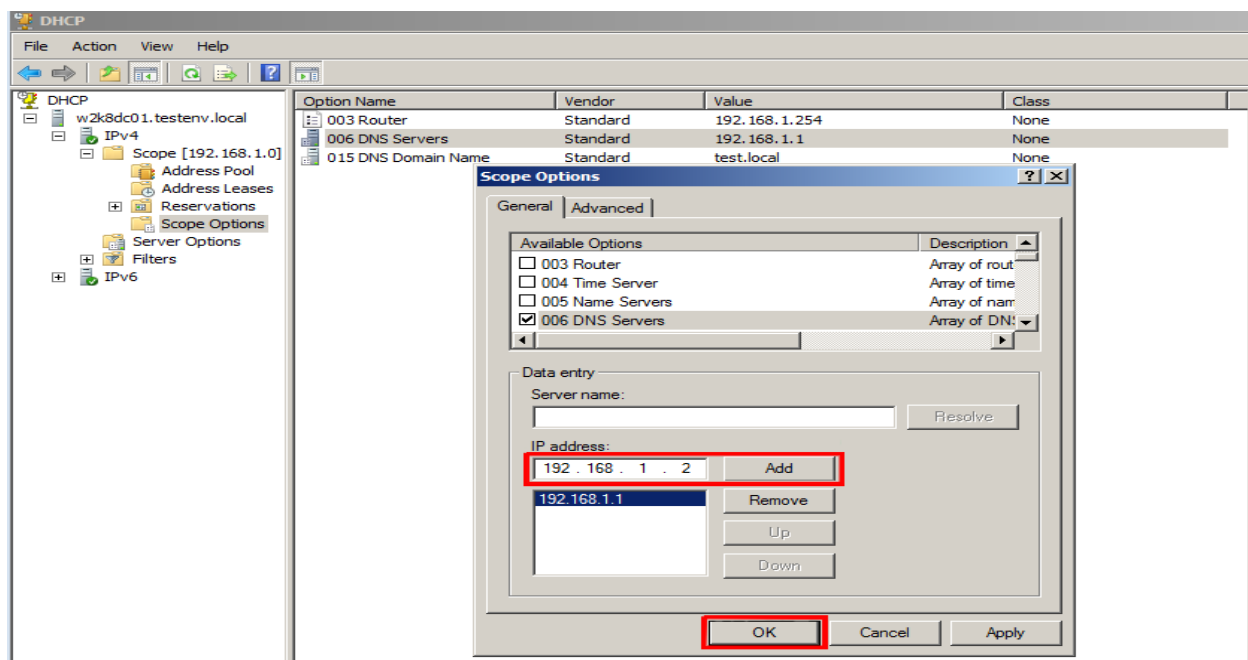


Step 18: Should all the prerequisites pass, click the **Install** button to start the installation.



Step 19: After it completes the required tasks and the server restarts, the new Windows Server 2012 Domain Controller setup is completed.

Step 20: Lastly, on each server/workstation within the target domain require a NIC properties configuration update to point to the new Domain Controller. Open the **DHCP management** console, select **Option no. 006** and under server/scope options and add the IP address of your new Domain Controller as DNS server.



Exercise:-

1) Explain Domain Controller.

[illegible]

Practical-13

AIM: Practice IOS Management and IOS Commands.

Exercise:-

1) Explain IOS Management.

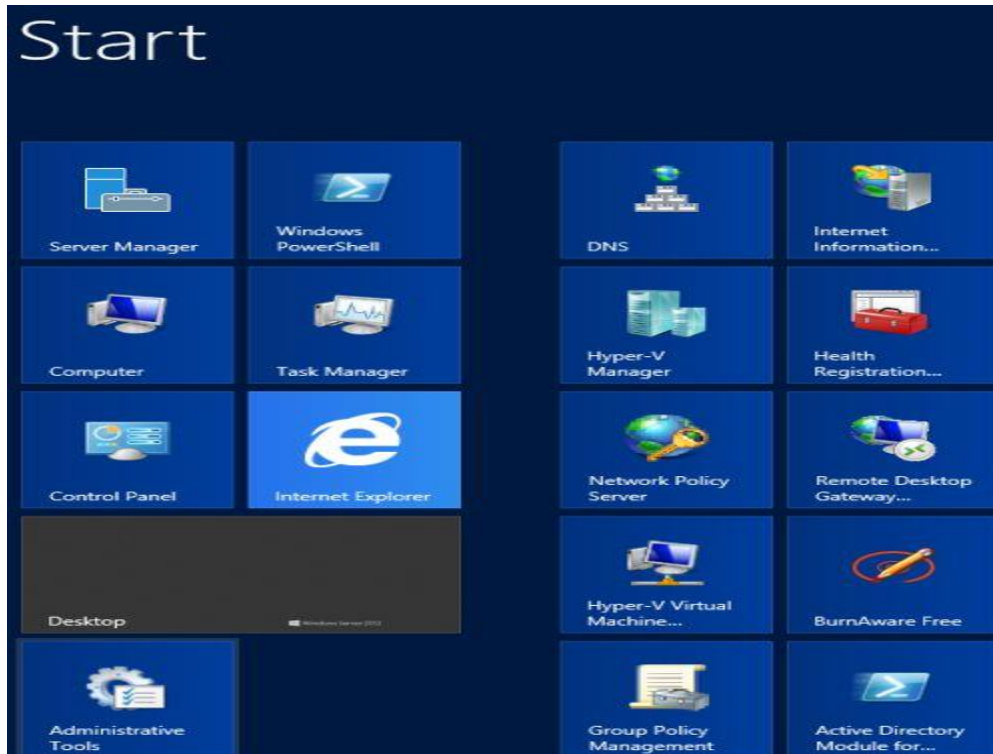
2) Explain IOS Commands.

[illegible]

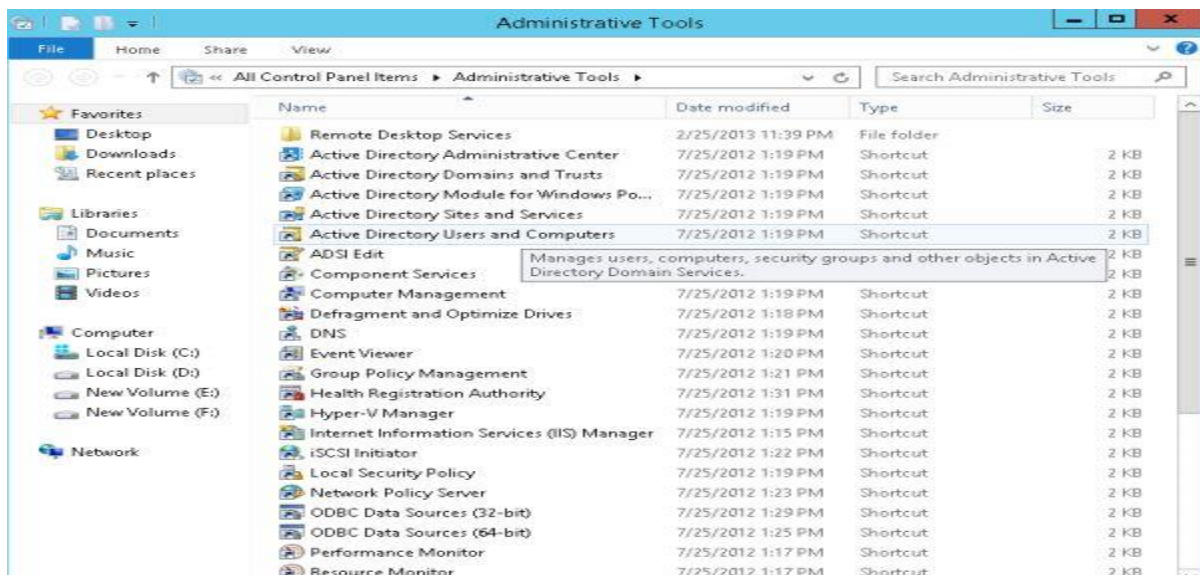
Practical-14

AIM: Create new User & assign.

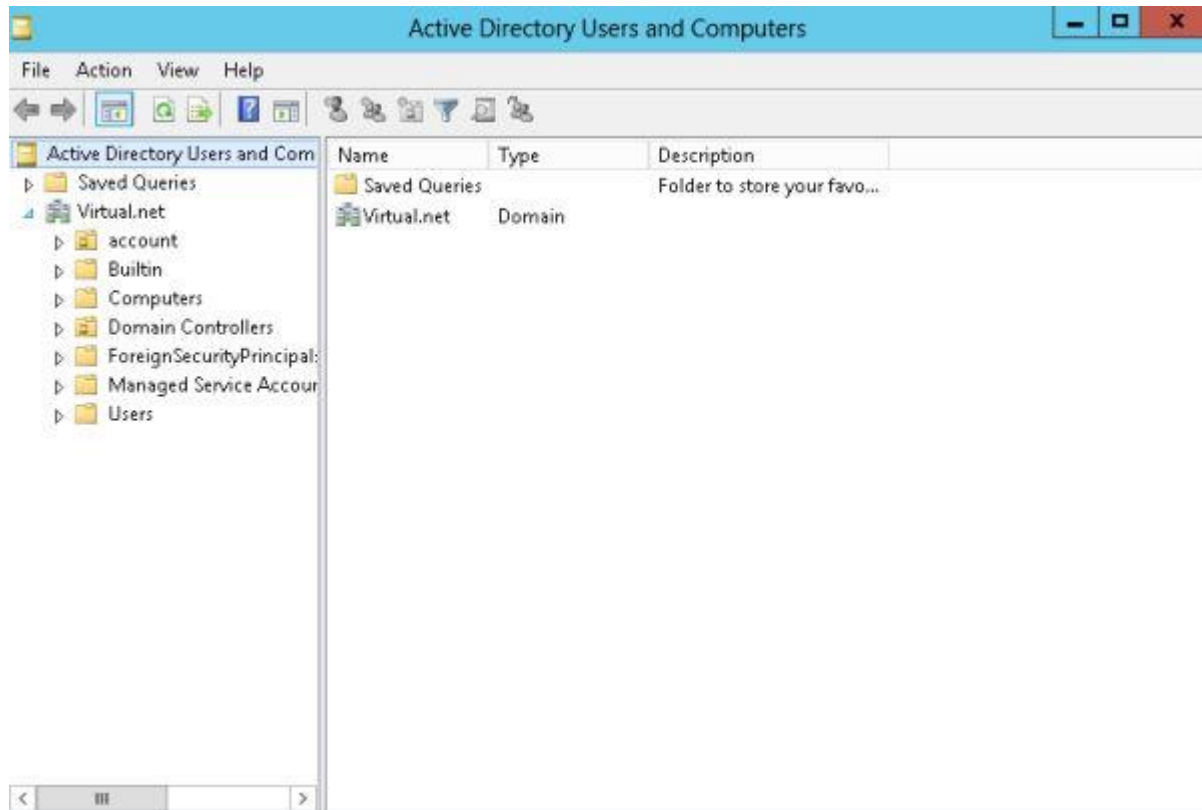
Step 1: First of all logon to your Windows Server 2012. After login, open your Start Menu and click on "Administrative Tools".



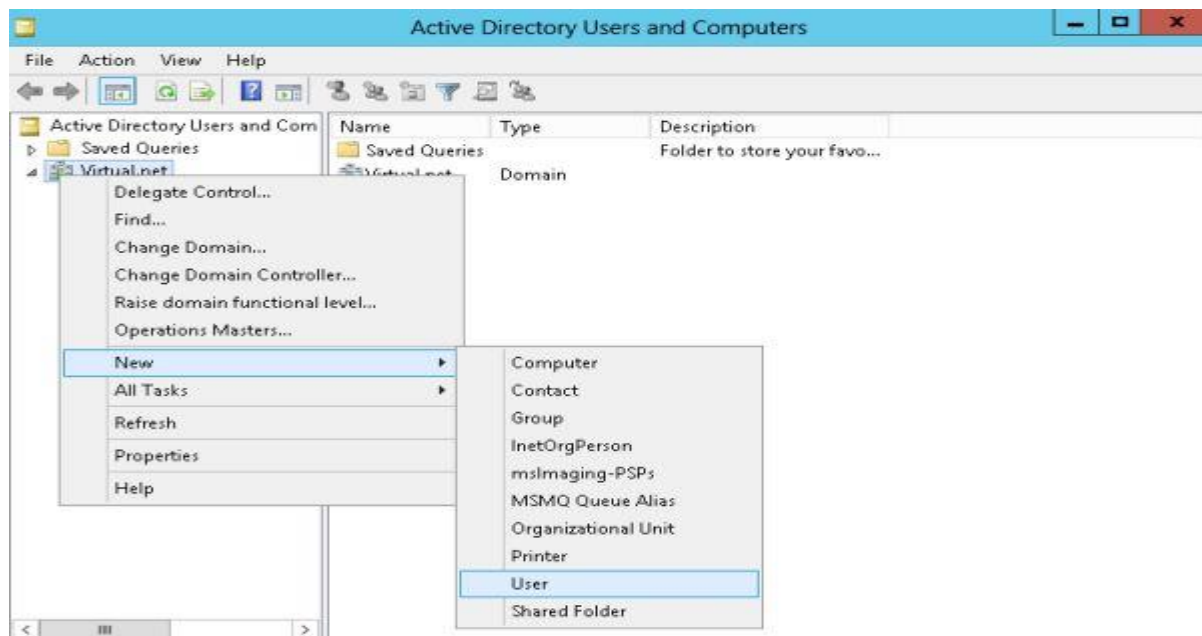
Step 2: Now a list of items will appear in front of you from which you must select "Active Directory Users and Computers".



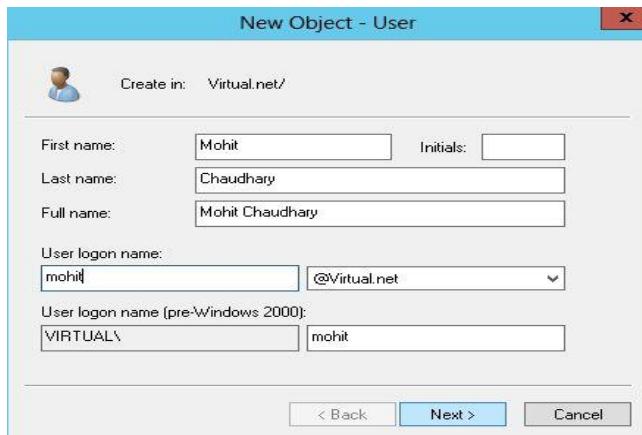
Step 3: Now you will see that your domain exists, in this Tool and many options are available beneath it like Account, Bulletin, Computers, Users etc.



Step 4: Right-click on your domain and go to "New". In New go to the "Users" to add a "New User".



Step 5: Now a form will be available in front of you that you must fill in to provide all necessary details of a new user. After that click on the "Next" button.



New Object - User

Create in: Virtual.net/

First name: Mohit Initials:

Last name: Chaudhary

Full name: Mohit Chaudhary

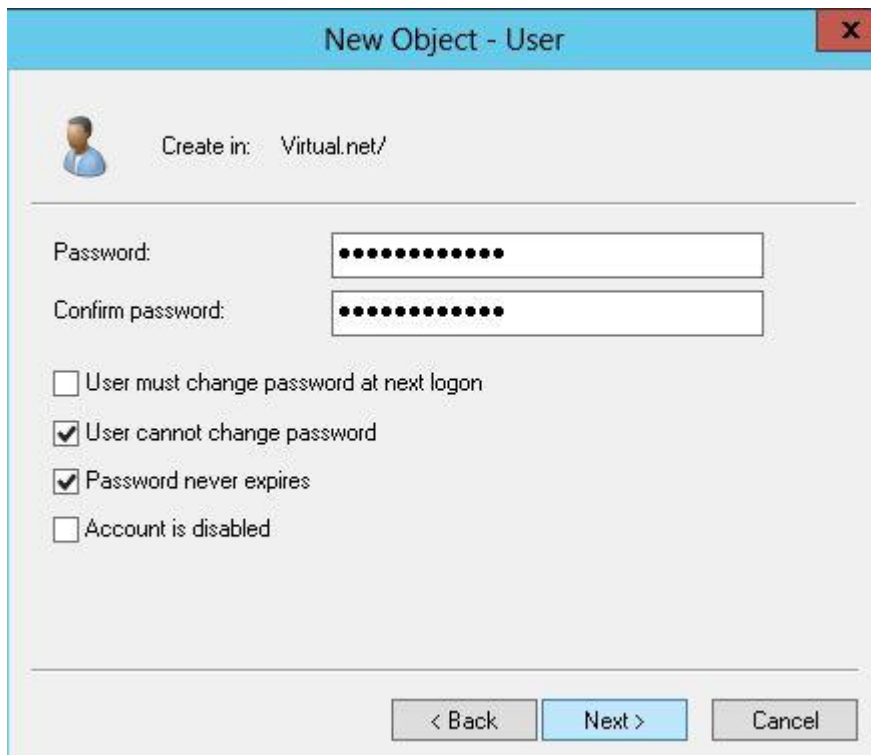
User logon name: mohit @Virtual.net

User logon name (pre-Windows 2000): VIRTUAL\ mohit

< Back Next > Cancel

Step 6: On clicking the Next button a New Form will be opened in which you need to provide the Password for the new user. Your server will ask you to re-enter the password so that if by mistake you provide the wrong password then you can correct it.

There are four other options also from which you can select whether you want to provide permission to the user to change the password on its next logon or you want to restrict him so that he can't change the password. You can also check the "Password never expires" option or you can also disable the account of the user.



New Object - User

Create in: Virtual.net/

Password:

Confirm password:

☐ User must change password at next logon

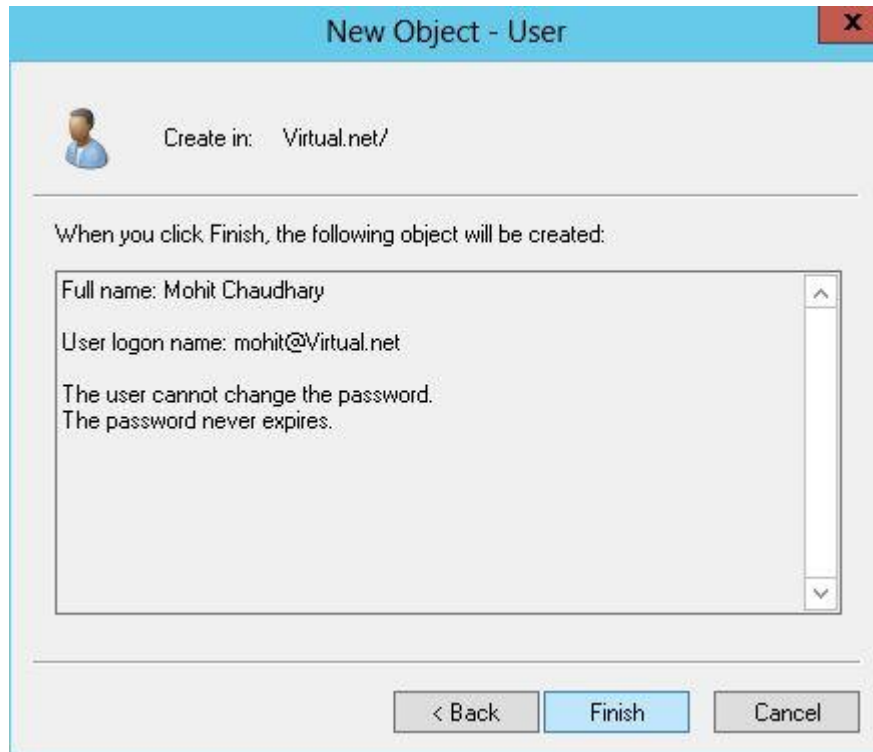
☒ User cannot change password

☒ Password never expires

☐ Account is disabled

< Back Next > Cancel

Step 7: Now all the provided values will be shown to you and you will be asked to click on the "Finish" button to finish the work or you can go back to make any changes as required.



New Object - User

Create in: Virtual.net/

When you click Finish, the following object will be created:

Full name: Mohit Chaudhary

User logon name: mohit@Virtual.net

The user cannot change the password.

The password never expires.

< Back Finish Cancel

Practical-15

AIM: Modify/Delete/Deactivate Users and groups.

- After you create a user account in Windows Server 2016, you can set additional properties for the network user by right-clicking the new user and choosing Properties from the contextual menu. This command brings up the User Properties dialog box, which has about a million tabs that you can use to set various properties for the user. The General tab lists basic information about the user, such as the user's name, office location, and phone number.

The screenshot shows the 'John Falstaff Properties' dialog box with the 'General' tab selected. The dialog box has a title bar with a question mark and a close button. Below the title bar is a tabbed interface with tabs for 'General', 'Address', 'Account', 'Profile', 'Telephones', and 'Organization'. The 'General' tab is active, showing a user profile for 'John Falstaff' with a small icon. The fields are as follows: 'First name' is 'John', 'Last name' is 'Falstaff', 'Display name' is 'John Falstaff', 'Description' is empty, 'Office' is empty, 'Telephone number' is empty with an 'Other...' button, 'Email' is empty, and 'Web page' is empty with an 'Other...' button. At the bottom are 'OK', 'Cancel', 'Apply', and 'Help' buttons.

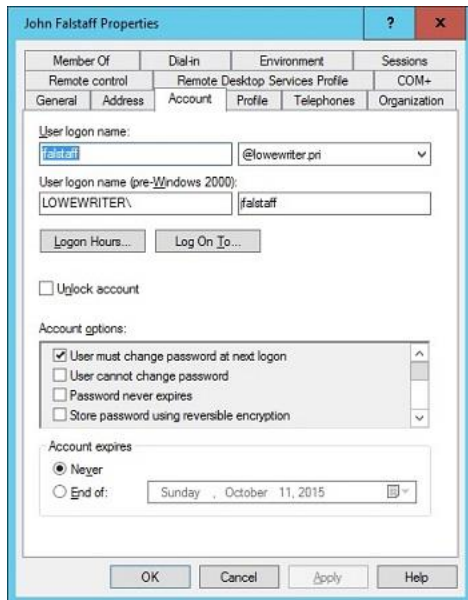
➤ CHANGING THE USER'S CONTACT INFORMATION

Several tabs of the User Properties dialog box contain contact information for the user, such as

- **Address:** Change the user's street address, post office box, city, state, zip code, and so on.
- **Telephones:** Specify the user's phone numbers.
- **Organization:** Record the user's job title and the name of his boss.

➤ SETTING ACCOUNT OPTIONS

- The Account tab of the User Properties dialog box features a variety of interesting options that you can set for the user. You can change the user's logon name, change the password options that you set when you created the account, and set an expiration date for the account.



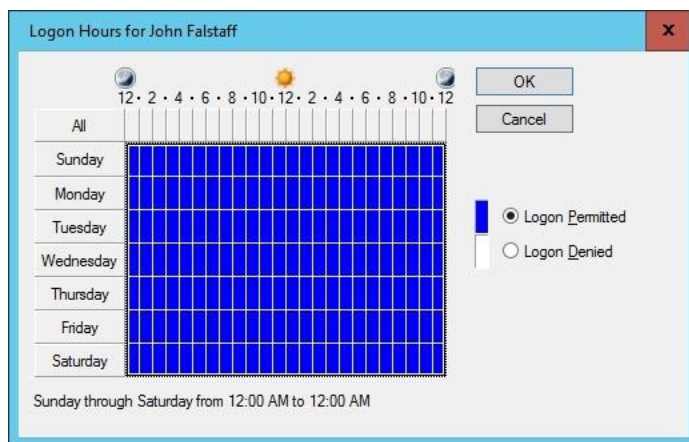
The following account options are available in the Account Options list box:

- **User Must Change Password at Next Logon:** This default option allows you to create a one-time-only password that can get the user started with the network. The first time the user logs on to the network, he is asked to change the password.
- **User Cannot Change Password:** Use this option if you don't want to allow users to change their passwords. (Obviously, you can't use this option and the preceding one at the same time.)
- **Password Never Expires:** Use this option to bypass the password-expiration policy for this user so that the user will never have to change her password.
- **Store Password Using Reversible Encryption:** This option stores passwords by using an encryption scheme that hackers can easily break, so you should avoid it like the plague.
- **Account Is Disabled:** This option allows you to create an account that you don't yet need. As long as the account remains disabled, the user won't be able to log on.
- **Smart Card Is Required for Interactive Logon:** If the user's computer has a smart card reader to read security cards automatically, select this option to require the user to use it.
- **Account Is Trusted for Delegation:** This option indicates that the account is trustworthy and can set up delegations. This advanced feature usually is reserved for Administrator accounts.
- **Account Is Sensitive and Cannot Be Delegated:** This option prevents other users from impersonating this account.

- **Use DES Encryption Types for This Account:** This option beefs up the encryption for applications that require extra security.
- **Do Not Require Kerberos Preauthentication:** *Kerberos* refers to a common security protocol used to authenticate users. Select this option only if you are using a different type of security.

➤ SPECIFYING LOGON HOURS

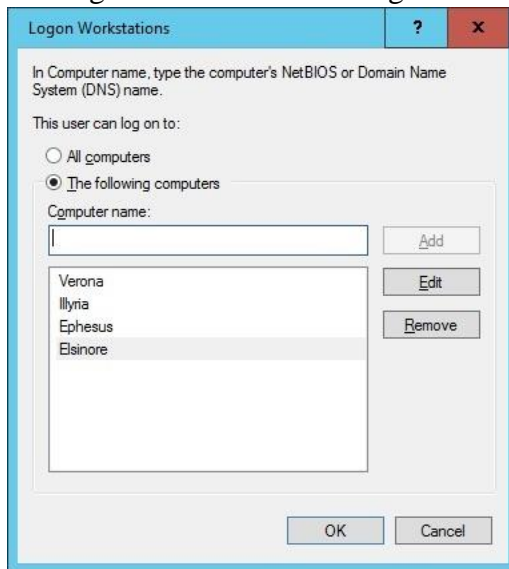
- You can restrict the hours during which the user is allowed to log on to the system. Click the Logon Hours button on the Account tab of the User Properties dialog box to open the Logon Hours for [User] dialog box.



Initially, the Logon Hours dialog box is set to allow the user to log on at any time of day or night. To change the hours that you want the user to have access, click a day and time or a range of days and times, select Logon Permitted or Logon Denied, and then click OK.

➤ RESTRICTING ACCESS TO CERTAIN COMPUTERS

- Typically, a user can use his user account to log on to any computer that's part of the user's domain. You can restrict a user to certain computers, however, by clicking the Log On To button on the Account tab of the User Properties dialog box. This button brings up the Logon Workstations dialog box.



- To restrict the user to certain computers, select the The Following Computers radio button. Then, for each computer you want to allow the user to log on from, enter the computer's name in the text box and click Add.

➤ SETTING THE USER'S PROFILE INFORMATION

From the Profile tab, you can configure three bits of information about the user's profile information:

- **Profile Path:** This field specifies the location of the user's roaming profile..
- **Logon Script:** This field is the name of the user's logon script. A *logon script* is a batch file that's run whenever the user logs on. The main purpose of the logon script is to map the network shares that the user requires access to. Logon scripts are carryovers from early versions of Windows NT Server. In Windows Server 2012, profiles are the preferred way to configure the user's computer when the user logs on, including setting up network shares. Many administrators still like the simplicity of logon scripts, however.
- **Home Folder:** This section is where you specify the default storage location for the user.

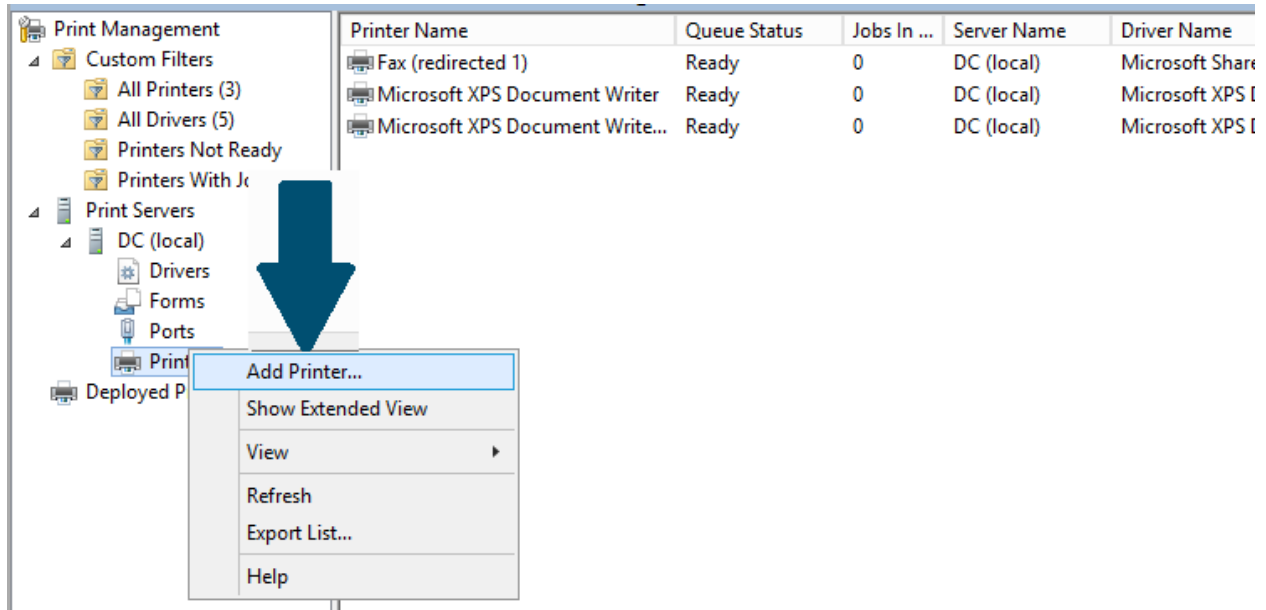
Exercise:-

1) How to delete or disabling a User on User account?

Practical-16

AIM: Configure print Server and backup server.

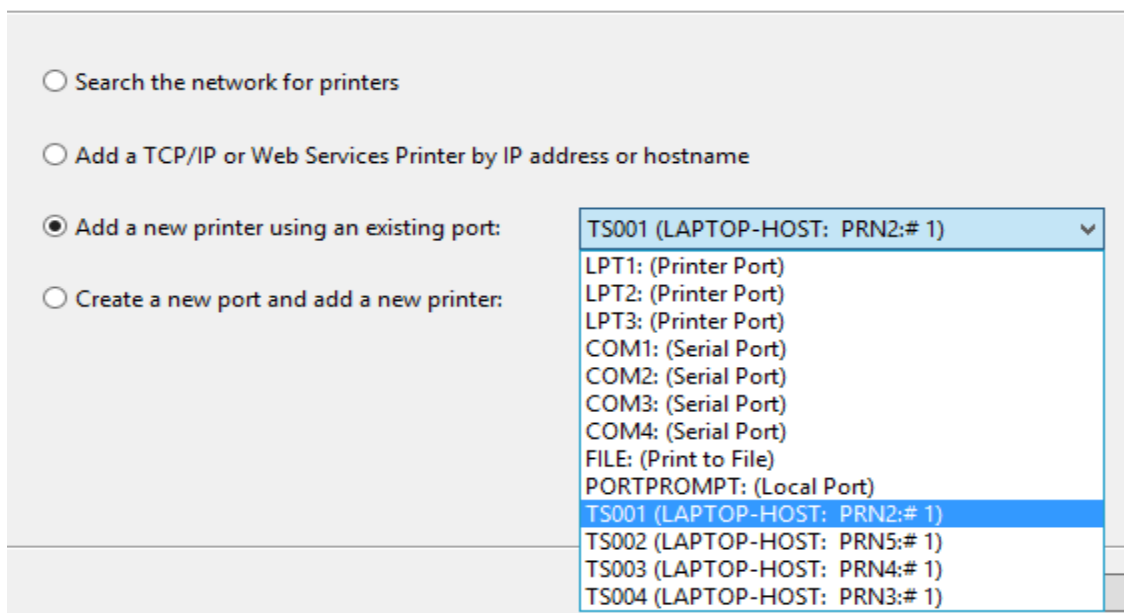
Step 1: Open the print server management console. Right-click on Printers located under your print server machine and click Add Printer.



Step 2: Attach the printer to your computer. Choose the right port where your printer is connected.

Printer Installation

Pick an installation method.



Step 3: Choose "Use an existing printer driver on the computer" if you have an existing printer drivers otherwise choose "Install a new driver" and follow the wizard. Click Next.

Printer Driver

Pick a driver for the new printer.

☐ Use the printer driver that the wizard selected

Compatible driver cannot be found.

☒ Use an existing printer driver on the computer

HP Deskjet 1010 Series Class Driver

☐ Install a new driver

< Back Next > Cancel

Step 4: Give a friendly name to your printer and share it with other users on network. Click Next.

Printer Name and Sharing Settings

You can give the printer a friendly name and specify whether other people can use the printer.

Printer Name: HP Deskjet 1010 Series Class Driver

☒ Share this printer

Share Name: HP Deskjet 1010 Series Class Driver

Location:

Comment:


< Back Next > Cancel

Step 5: Click Next to finish the printer installation.

Printer Found

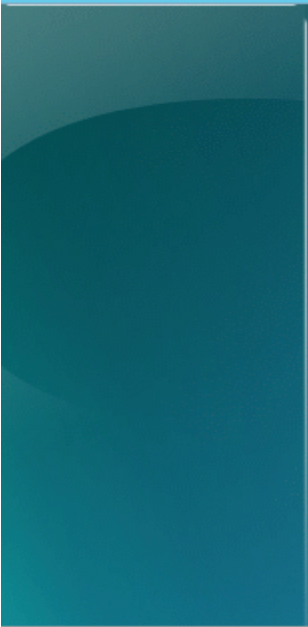
The printer is ready to be installed. Please review the printer settings below, and then click Next to install the printer.

Name:	HP Deskjet 1010 Series Class Driver
Share Name:	HP Deskjet 1010 Series Class Driver
Model:	HP Deskjet 1010 Series Class Driver
Port Type:	LAPTOP-HOST: PRN2:# 1
Port Name:	TS001
Location:	
Publish:	No
Comment:	



< Back Next > Cancel

Step 6: Click Finish.



Completing the Network Printer Installation Wizard

Status:


Printer installation succeeded.

Your printer has been installed successfully.

To test the printer, select Print test page, and then click Finish.

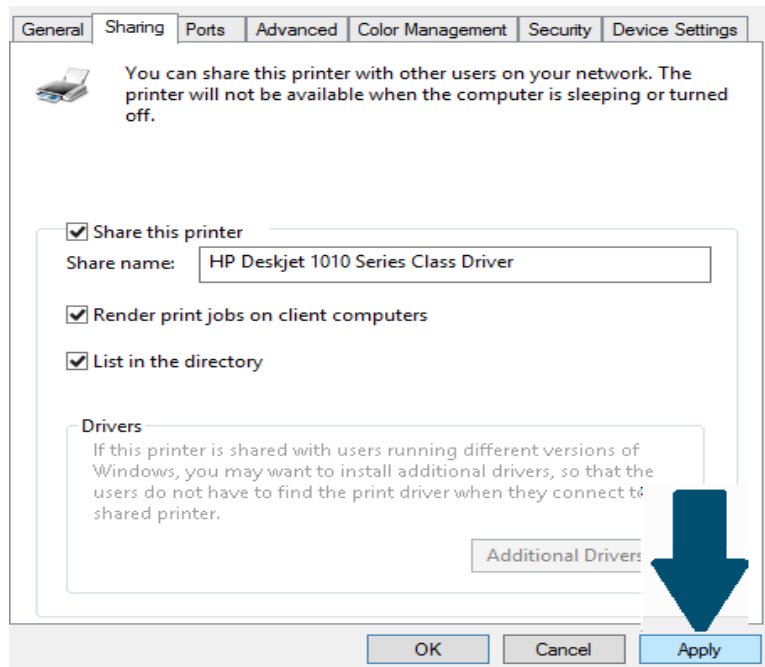
To install another printer, select Add another printer, and then click finish.

☐ Print test page
☐ Add another printer



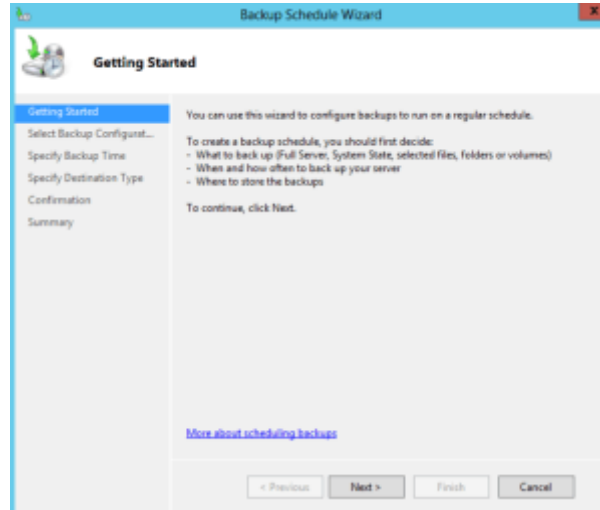
< Back Finish Cancel

Step 7: Again, go to printer management console and right click on the printer icon. Click Manage Sharing. Go to sharing tab and check mark both options as shown in figure. Click Apply and then OK.

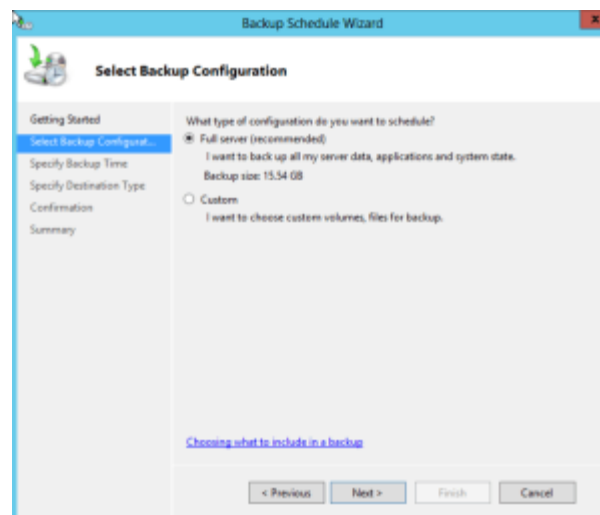


➤ Backup server

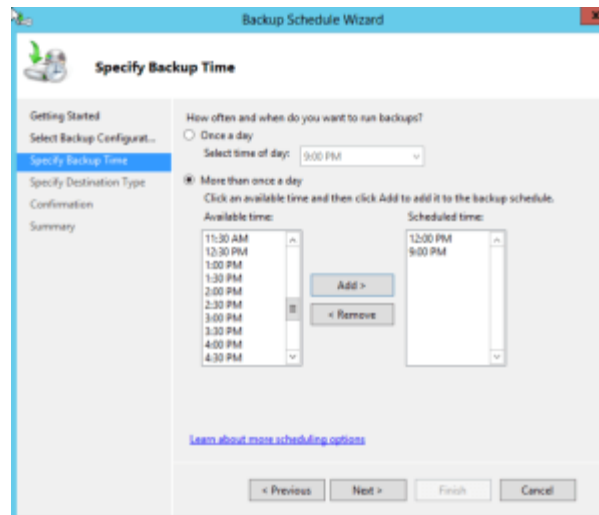
1. In the backup GUI, click on Backup Schedule...at the right panel to open the Backup Schedule Wizard.



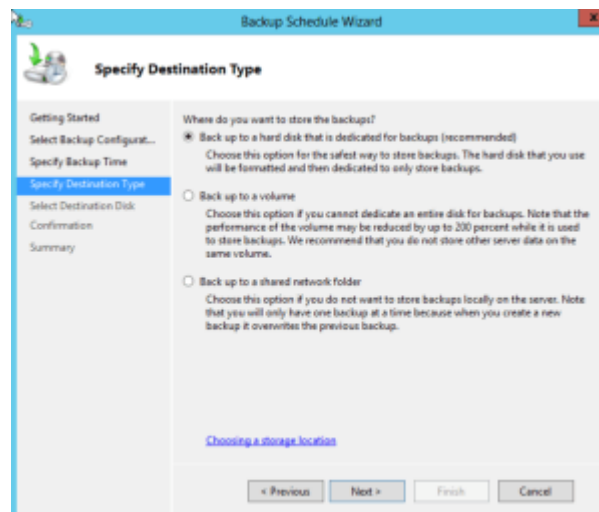
2. At the next screen, choose what to include in the backup as the wizard suggests.



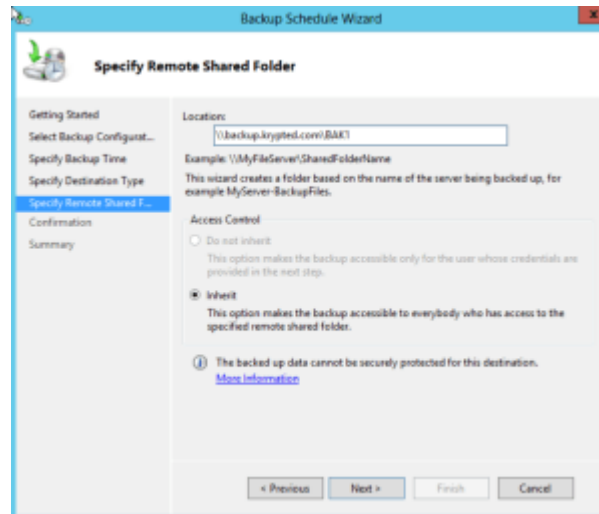
3. Then specify when you want the backup to run by choosing one or more times of the day.



4. At the Specify Destination Type screen, choose “Backup to shared network folder”, and click “Next” to write a path to the network folder.



5. When all is set, confirm the backup task and click “Finish” to exit the Backup Schedule Wizard.



Exercise:-

1) Explain Print Server.

[illegible]

Practical-17

AIM: Identify segment network faults and troubleshooting.

Exercise:-

1) Explain Segmenting the Problem.

[illegible]

2) Define Troubleshooting.
