Virtual Office Infrastructure with Remote Server and Printer Management

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PROJECT 1

EDUVOS MIDRAND CAMPUS

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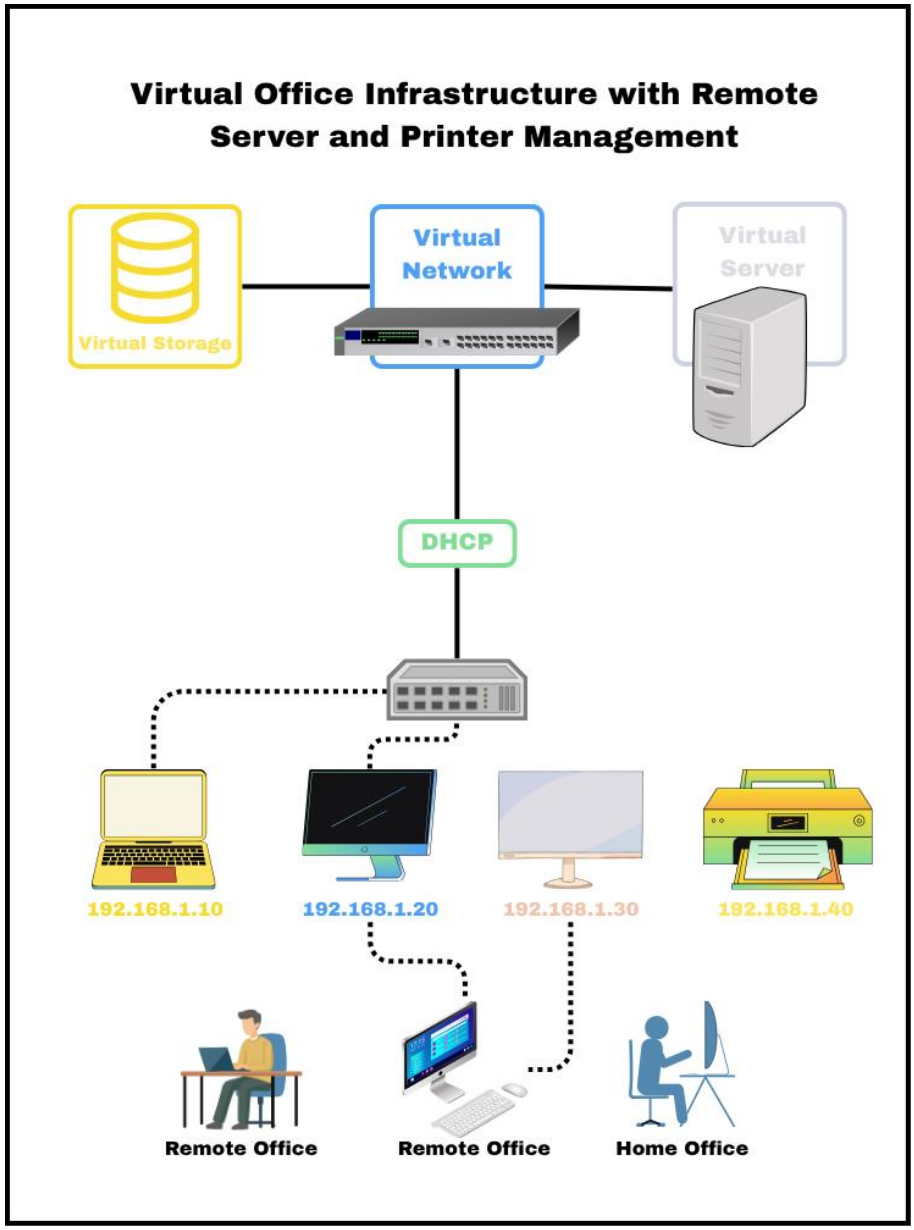
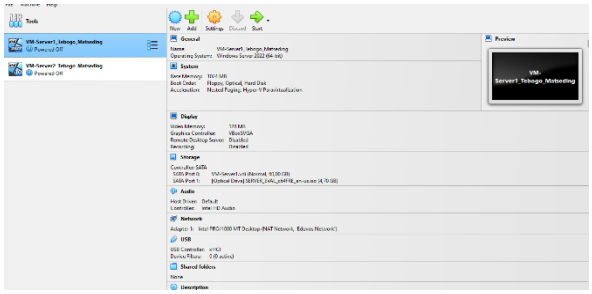
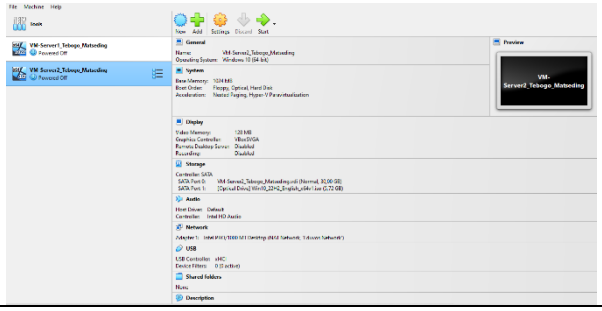
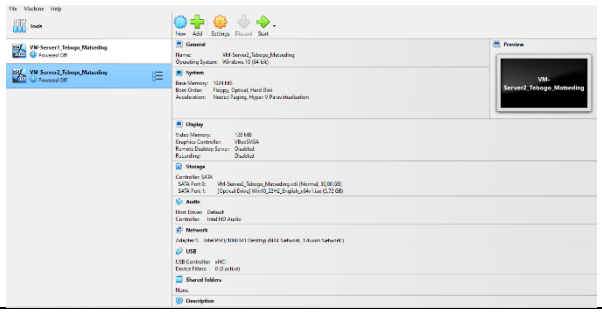
ITWIA0-B22

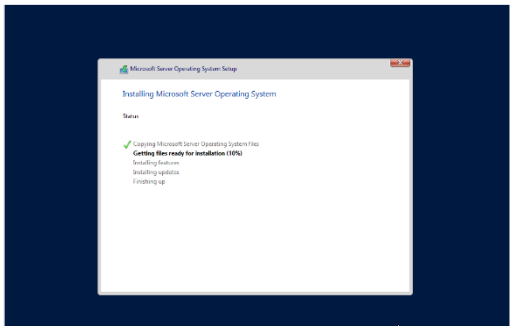
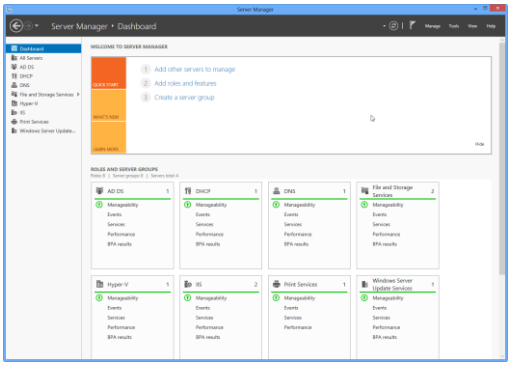
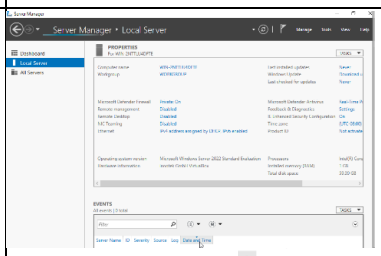
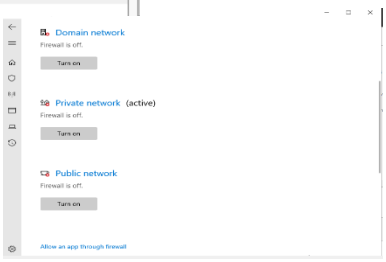
Virtual Office Infrastructure with Remote Server and Printer Management

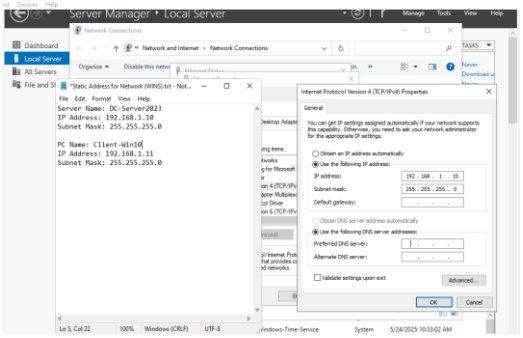
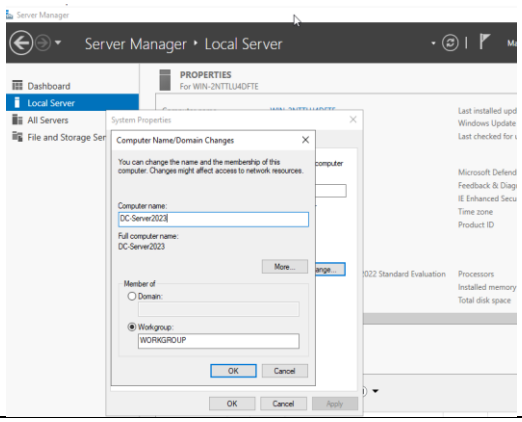
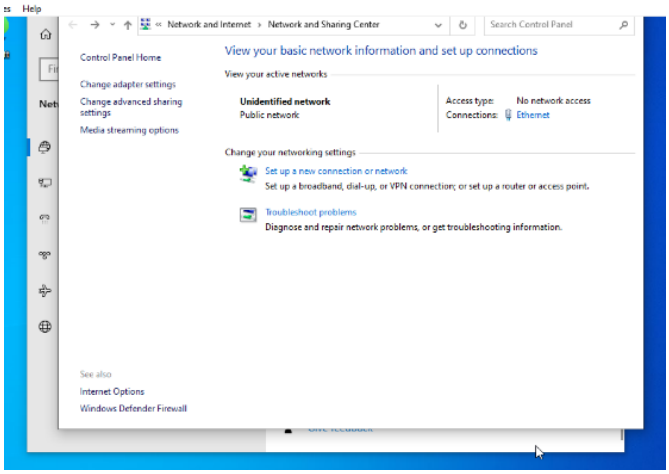
In this project we have been tasked to create a virtual environment that would simulate a real-world IT-infrastructure this will help us get a more hands on idea when it comes to working within a virtualized environment and how we should work around it the picture below give us a picture of the type of environment we will be creating.

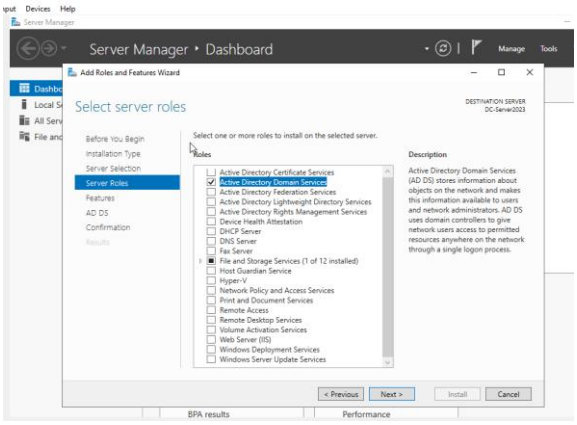
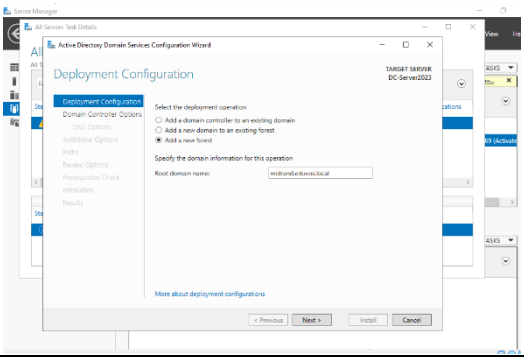
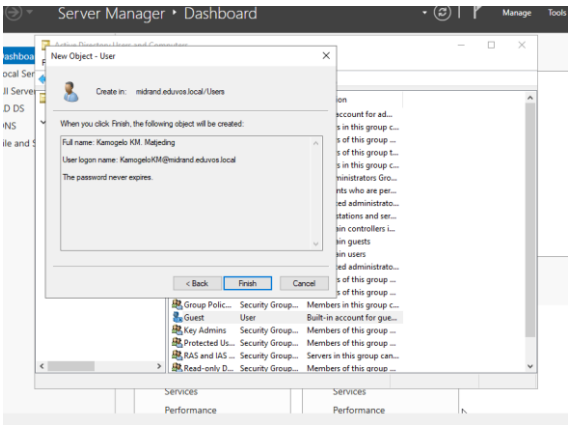
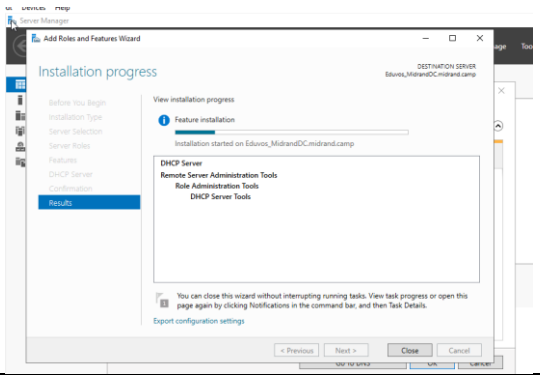


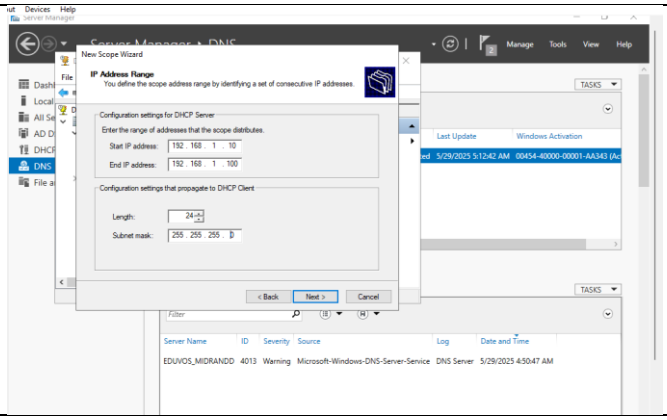
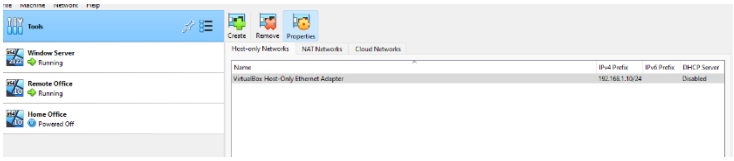
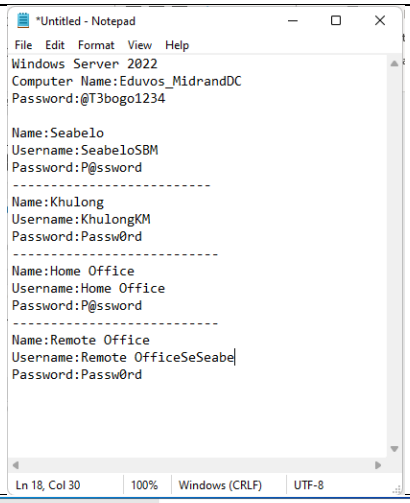
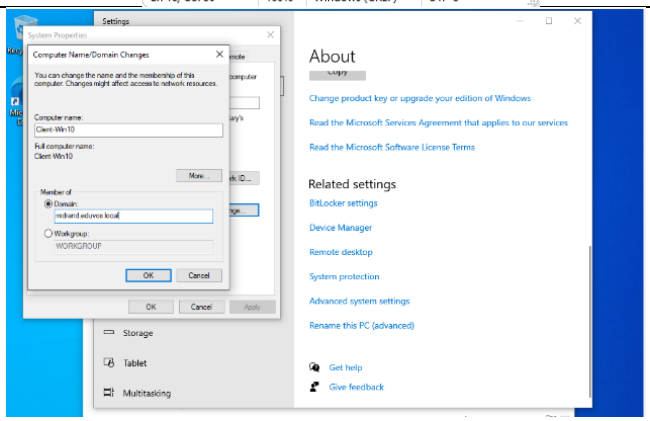
START

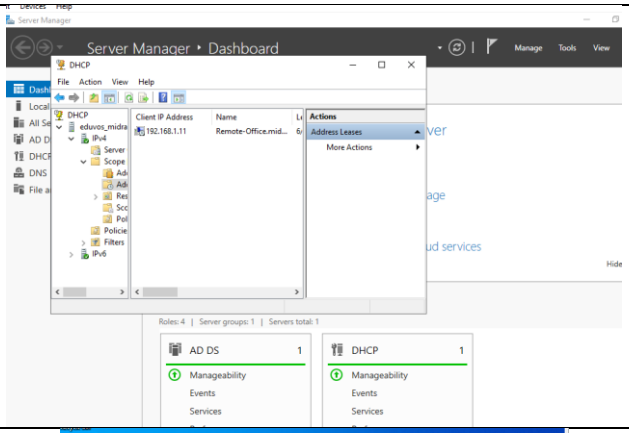
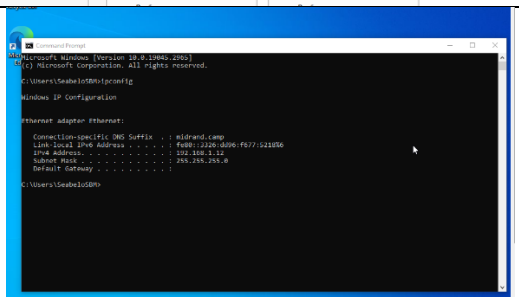
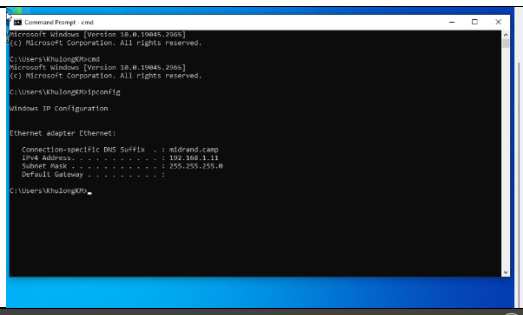
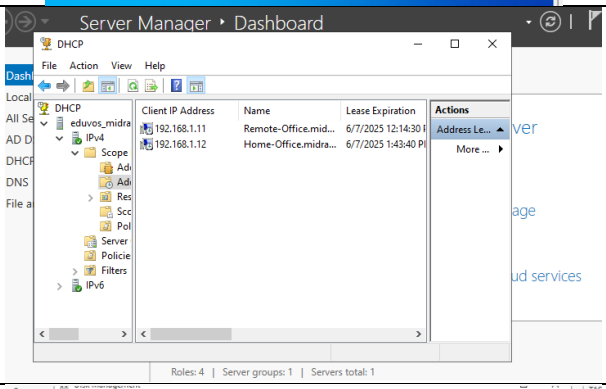
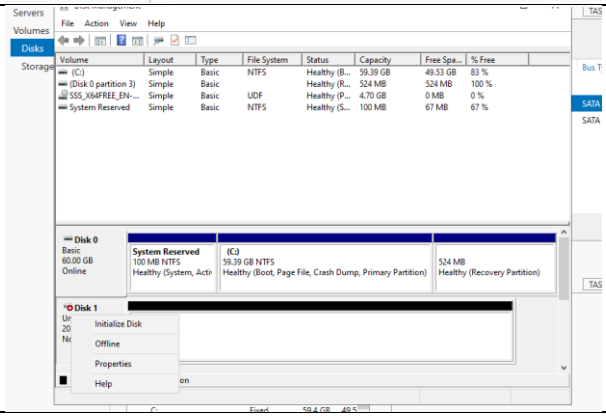
We are going to skip over the installation of Oracle virtual box, Windows server IOS and Windows 10 IOS I will be inserting a link of how to download each of them as they will be crucial to completing this project.	• Oracle Virtual Box • Windows Server ISO • Windows 10 ISO
Once you've completed the installation of Oracle virtual box, Windows server and Windows 10 the next thing step is configuring our virtual machines with the recommended RAM and Storage Memory, both the server and client computer will have different configurations	 VM1 – Domain Controller (Windows Server 2022)
VM2 – Remote Office (Window 10 ISO)	
VM3 – Home Office (Window 10 ISO)	

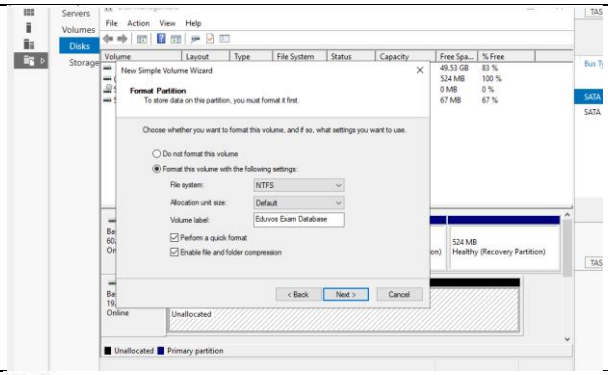
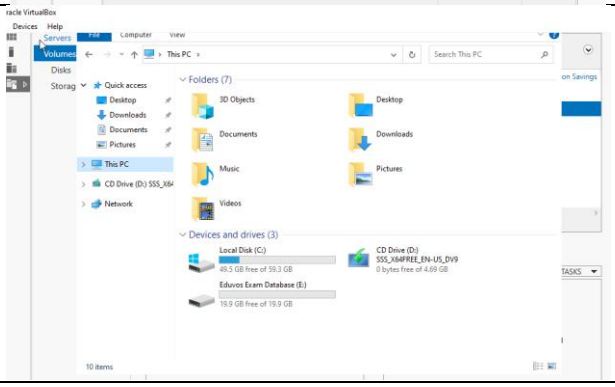
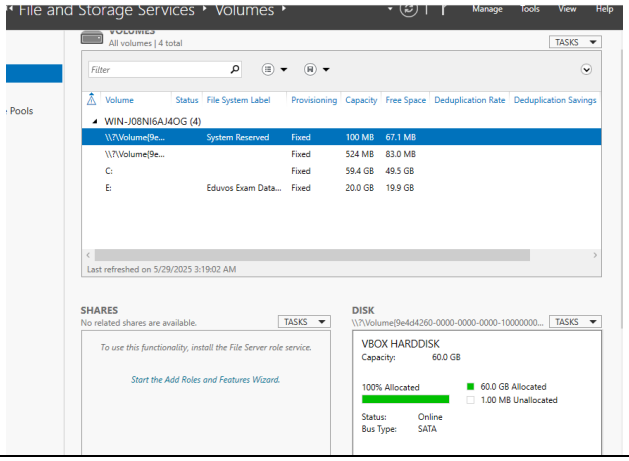
Now it is time to switch on our VMs, for our server firstly you will select the correct language for you Administrator, you will then proceed to select the Windows Server 2022 Standard Evaluation (Desktop Experience), and finally you will allocate that 60Gb space to the server. On your Windows 10 ISO, we also select the appropriate language for the client computer, you will skip the license key, then you will select Windows 10 Pro Edition and finally allocate the 30Gb of space to the computer ***(Note this process will take a while)**	
Once the installation is done you will then be prompted to give your server a password, after assigning it a password and logging in the server will then open up the Server Manager Application. This action will happen every time you switch on the server, our current goal right now is to ensure firstly, that our server and client machine are able to see each other on the network and secondly to assign our server as the domain controller.	
Since our server and computer are 2 different machines although they are working from the same laptop, virtualisations make it so that (….) Now that we understand what virtualisation does, we need a plan to allow our machines to see each other and the first step in doing that is by taking down our server's firewalls, this will allow for your server to be seen on the public network	  ***(Note switch off the IE Enhanced Security Configurations as well)**

Since our server can be accessed from the public network, we need to assign it a static address this will ensure that we are only people who know what the IP address and it will help our client to connect to it once our server has been made the domain controller. For this we will need to select the ethernet option on the local server tab, this tab will redirect us to the network connections window you will then click on the ethernet adapter option, then click on properties, then click on IPv4 change the settings from DHCP to Static by selecting the box then give your server a new IP address	
Now that have assigned our server a static IP address we can change the name of the server, this will help us identifying it from other servers that we might make in the future ***(Note this action will require for you to restart the server for it to take full effect)**	
While you wait for the server to restart, we can work on our Win-10 computer, the sign-in procedure is lengthy and is focused on personalization so I will leave that up to you. From the desktop is where we will take it off from on the search bar, we will search for control panel, once the control panel has opened up select on “network and internet”, then on select “network and sharing centre” we are going switch on the sharing options in the settings of this tab son your left there should be a “change advanced sharing options”	

Once you've configured all that it is time to go back to your server and complete the steps of making assigning the AD, DNS and DHCP servers. Log back onto your server and navigate to the add roles and features link on the server manger dashboard. Go through all the pre-installation tabs and on the "server role" tab select the "Active Directory Domain Services" check box then install the features and wait for it to complete	
The server now needs you to install a DNS this server translates human-readable domain names (like "google.com") into numerical IP addresses that computers use to communicate	
Now that we have a domain, we can assign users so that the employees at Eduvos Midrand can have a unique sign in to their accounts on the domain	
Lastly, we will install the DHCP server this will help in automatically assigning IP address to the computes that are connected to our domain	

Now that we have our DHCP it is important that we give it a scope it helps manage and allocate IP addresses to devices on a network, ensuring they receive the necessary network configuration settings automatically.	
Before we assign our server as the domain controller we need to connect before of our servers to one network so that everything happens privately on the network and information is shared efficiently This is going to be done on the Oracle Virtual Box Application we are going to create a Host Only Network and connect our 3 machines to that network	
Now we have assigned users to the AD it is time to use those credentials to connect to our domain	
Once you have done that it is time to change your computers name, open up your file explorer then, right click your “This PC” option, then properties. On the related links click on advance system settings, then click on the Computer Name tab then click on Change and change your name and in the same place change your domain to the domain of our server	 ***(Note this action will require for you to restart the computer for it to take full effect)**

While we wait for the Windows 10 computer to restart, we can go to our Windows Server and check to see if the DHCP is working properly in assigning addresses within our scope/range	
Another test we could run and get the same results is if we ping the server with the computer on the cmd VM3 – Home Office (Window 10 ISO)	
VM2 – Remote Office (Window 10 ISO)	
Addresses being assigned to the computers	
Now that all the configurations of our machines are complete let's add extra storage to the server We will need to type in our search bar for "create and format hard disk" once the disk management window opens, we will need to initialize our extra storage	

Configure the hard disk	
Once you've done all that you need to check if the storage is available on the machine	
On server manger