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SLTMOBITEL
The Connection

How to Create a Virtual Machine in VMware ESXI

All the virtual machines are created on top of the VMware hypervisor. Therefore, first of all you have to log into VMware ESXI through the link shared via the email. Go to email and click on the link after ESXI. The browser may prompt “Your connection is not private”. Just ignore it and proceed with ‘Advanced’ and then ‘proceed to link(probably the IP address)’. In the email, along with that, there is another link for excel sheet. Open that excel sheet also.

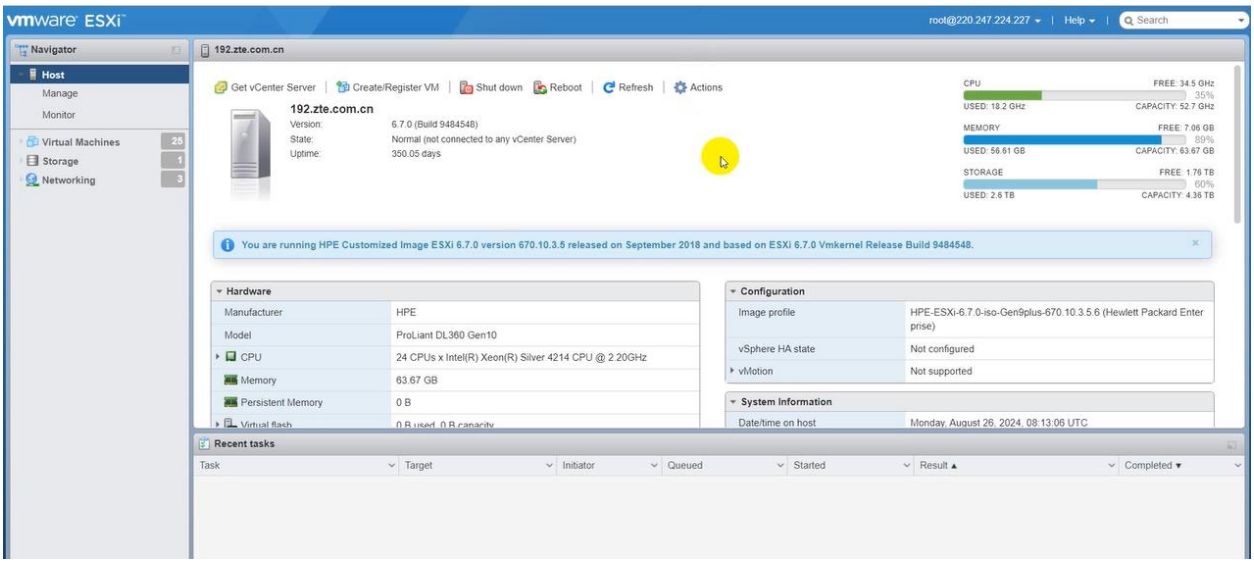
NOTE : Please note that you can log into VMware only via the specific router provided by the SLT or the router in the Digital Platform Office.

👉https://220.247.224.227/ui/#/login → (VMware ESXi)

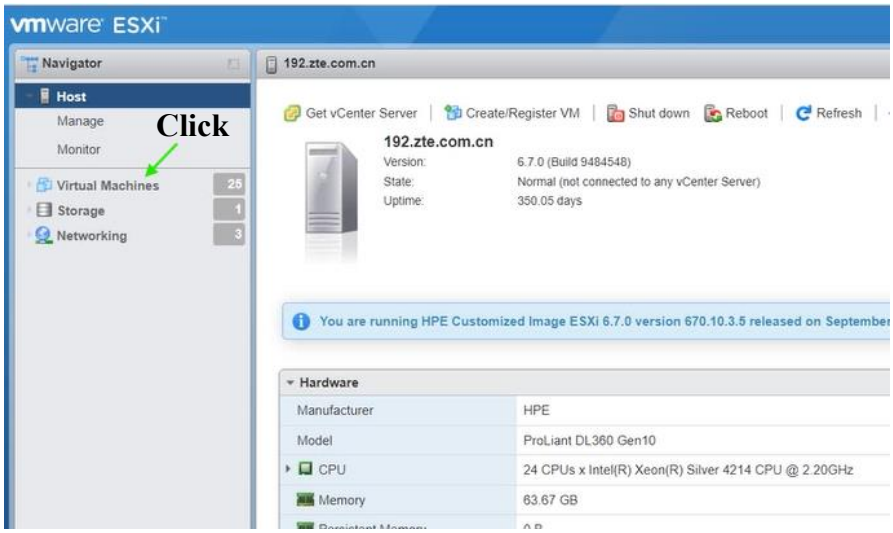
👉http://220.247.224.226:5005/index.php → (Pfsense)

To log into vmware, the username and password can be found in the excel sheet – configurations GUIs page.

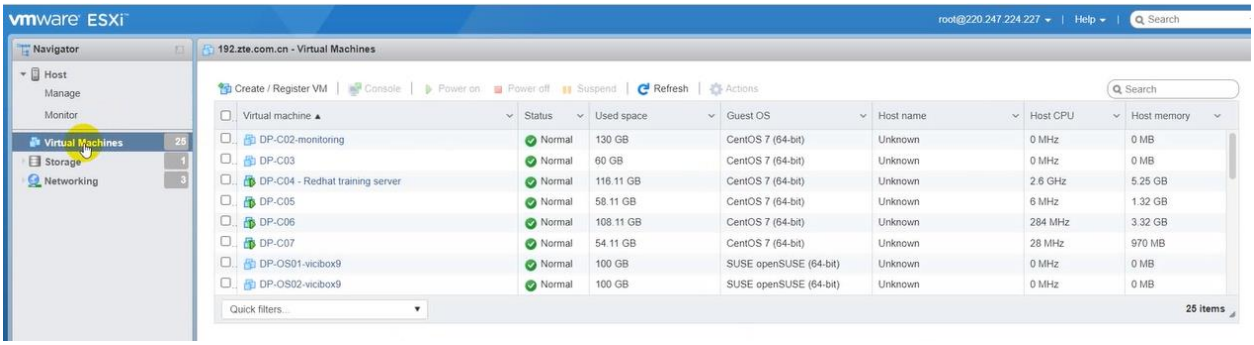
The interface of VMware will be as follows.



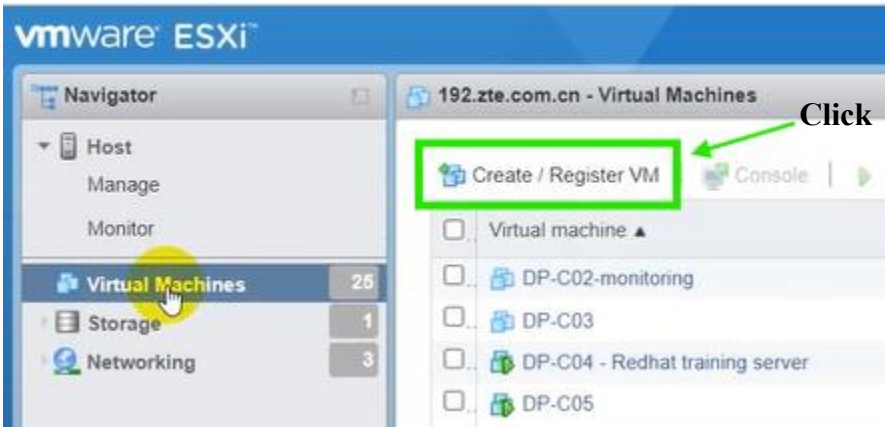
In the VMware, go to virtual machines. It will list all the existing virtual machines in the vmware.



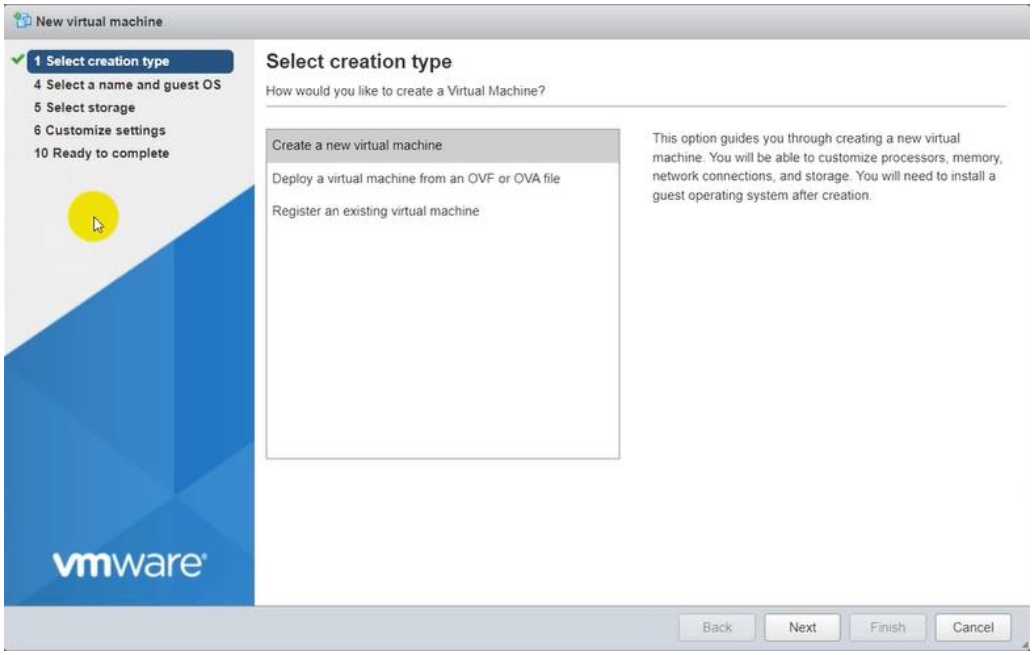
List of all the VMs will be displayed as below. You may see there is a green color play button on the most of the VM icons which implies those VMs are switched on and currently running.



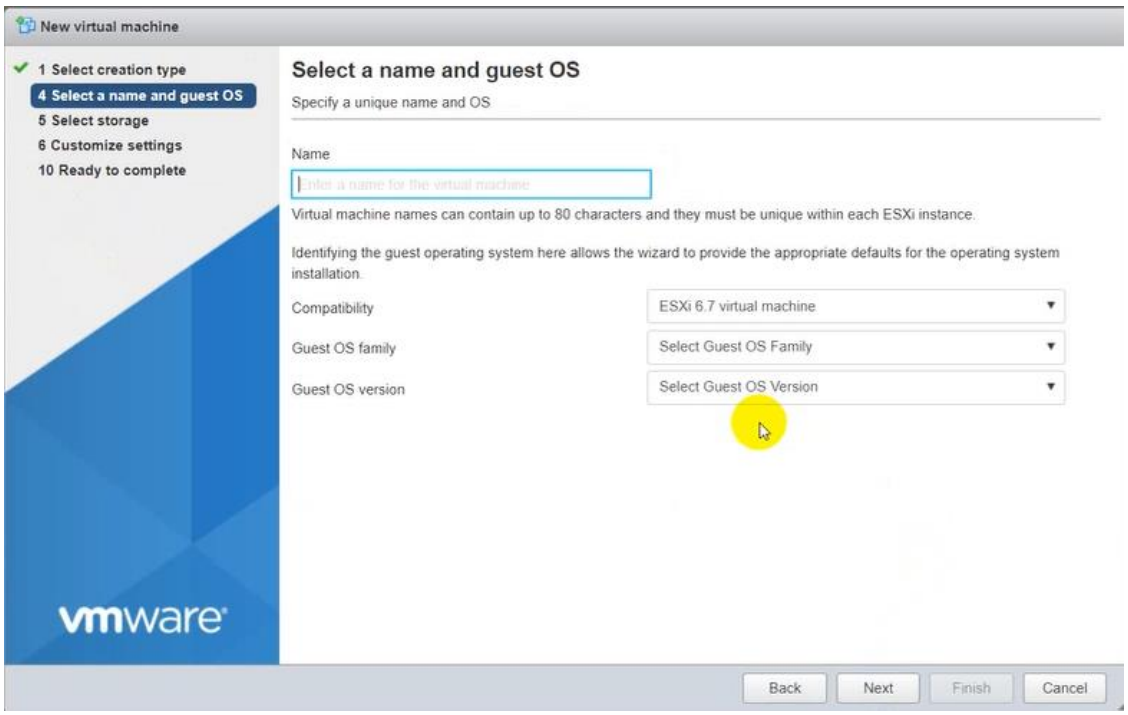
Then click on ‘Create/Register VM’ button.



Then a new window will appear as below.



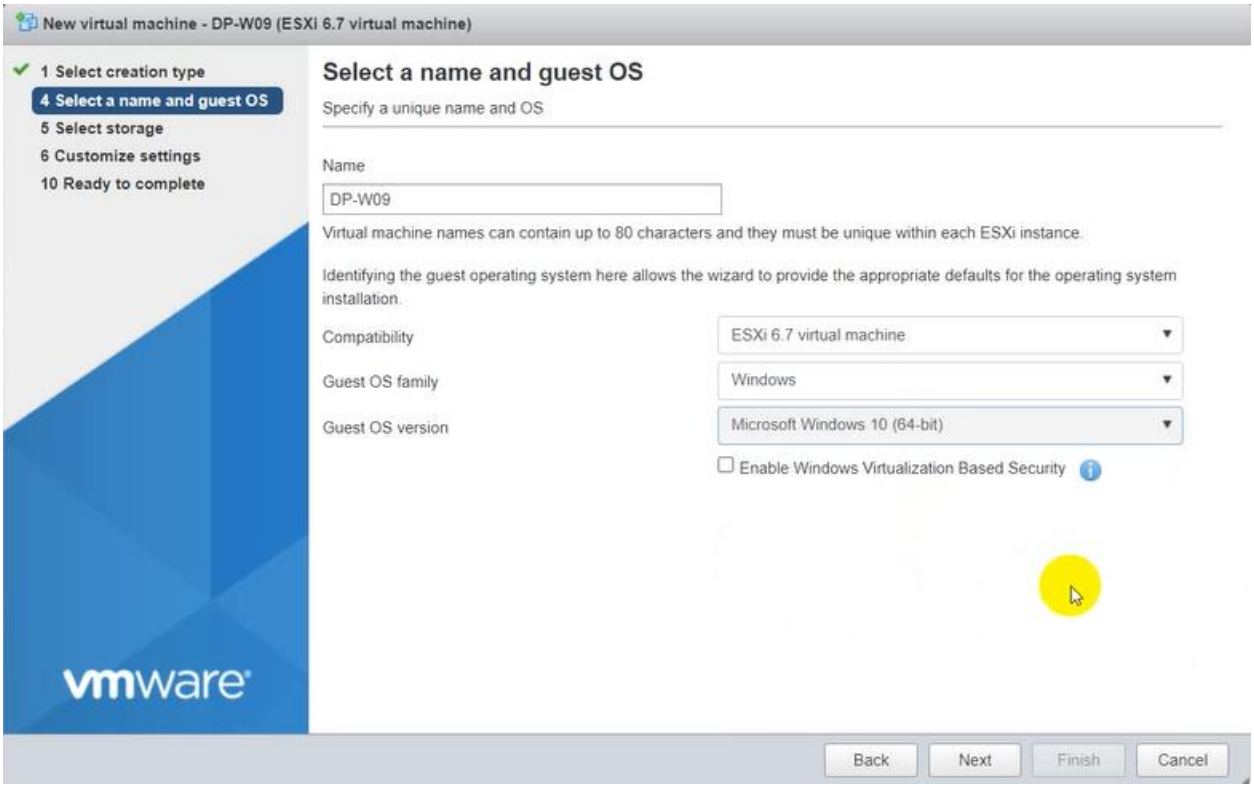
While it is selecting the Create new virtual machine, click next.



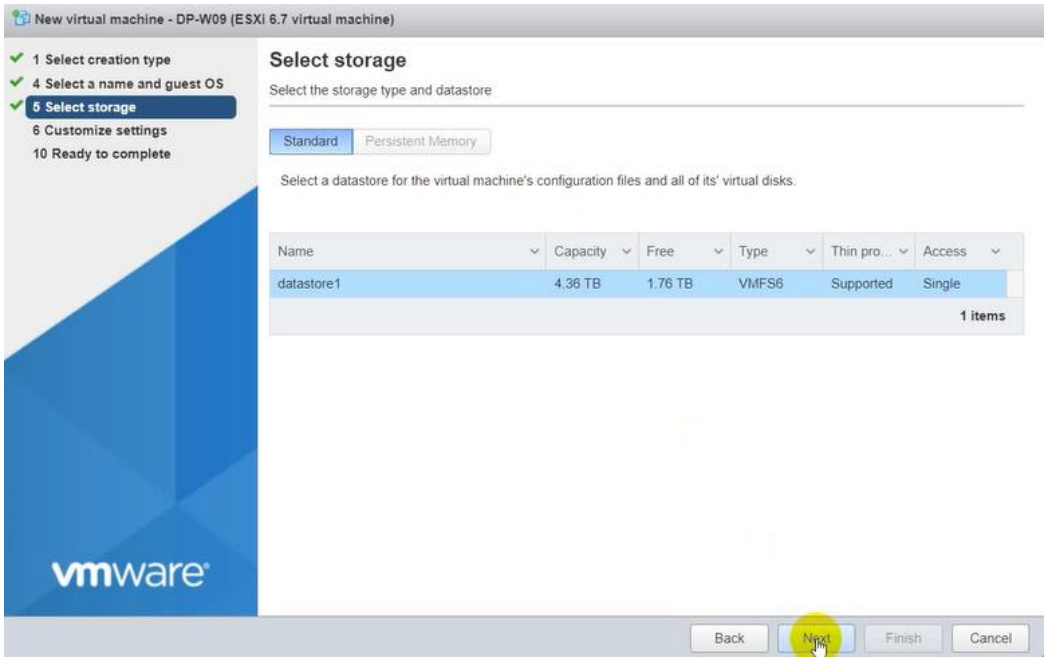
Now you have to provide a name for the virtual machine you are going to create. Remember, there is a naming convention for the virtual machines we create in these testing servers in digital platform. Since we are in digital platform section and these VMs are managed by digital platform, every VM name starts with ‘DP’. Then specify the OS type you are supposed to install on it followed by the VM number. VM number is determined by the referring to the excel sheet and search for the last VM created using the particular OS. For example, if you are creating a windows VM, the name might be DP-W10, if the last windows VM in the excel sheet you see is DP-W09. For an ubuntu VM, DP-U07 or something like that. CentOS is DP-C02.

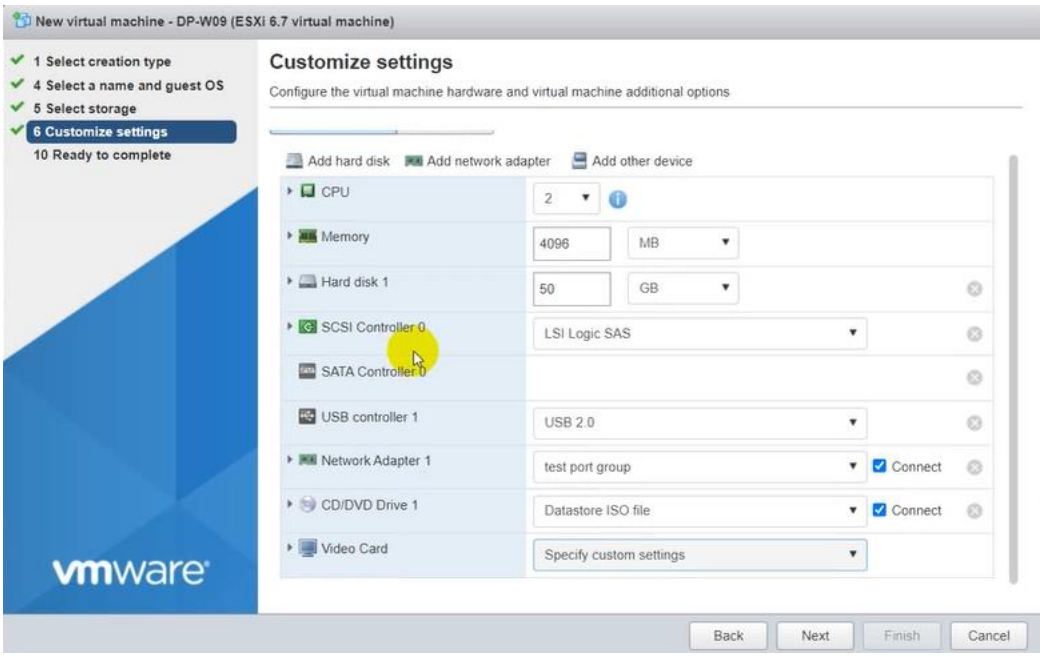
Please try to adhere to the naming convention. Otherwise, it’ll be hard for the auditing purposes.

If you are creating windows based VM, the settings will be as follows. For a ubuntu or CentOS machine, the Guest OS family is Linux. For a windows server machine, select the Guest OS version as Windows server 2016 or the latest version. It will not be a big trouble but a good practice to stick with the latest version.

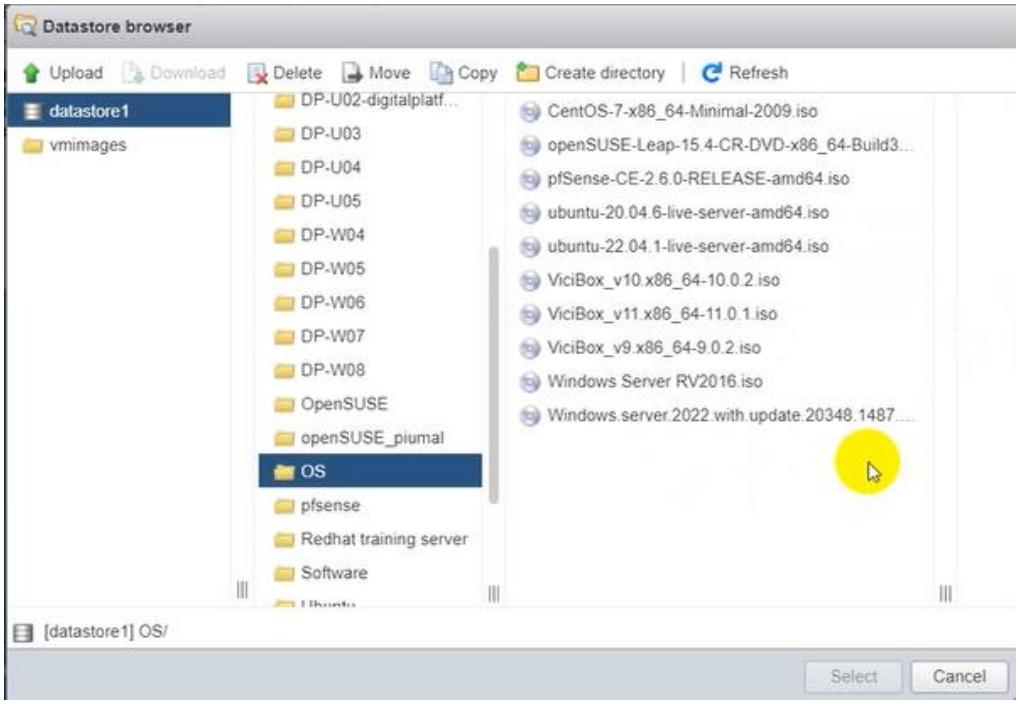


Then click next and following window will appear. There's nothing to do here. Click next.





As you can see in the figure 00, change the settings as above. Set the No. of CPUs, amount of RAM and Disk space as you needed. Select the Network Adapter to ‘test port group’ and the CD/DVD Drive to ‘Datastore ISO file’. Make sure you have tik the Connect to ensure they are properly connected. When you select the Datastore ISO file, a new window will appear. There you have to select the ISO file according to the operating system you suppose to install. There are some iso files already uploaded to the datastore. Go to OS folder. Then in the right-hand side, all the available iso files will appear. Select the preferred iso file and click ok.

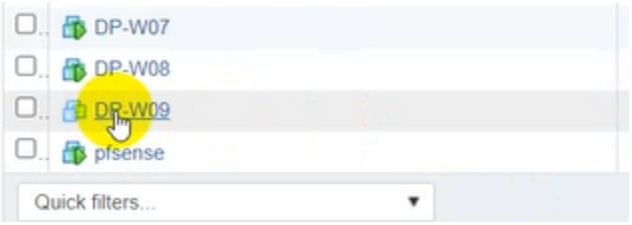


Click next. A summary of the configurations you made will appear. Review the summary and click Finish.

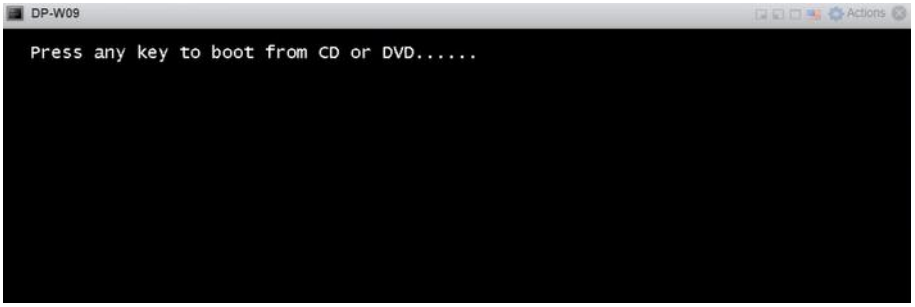
Now the VM is created will all the resource allocation. It is time to install the operating system and boot up the machine. The following steps vary depending on the operating system you are going to install.

Windows Server Machine.

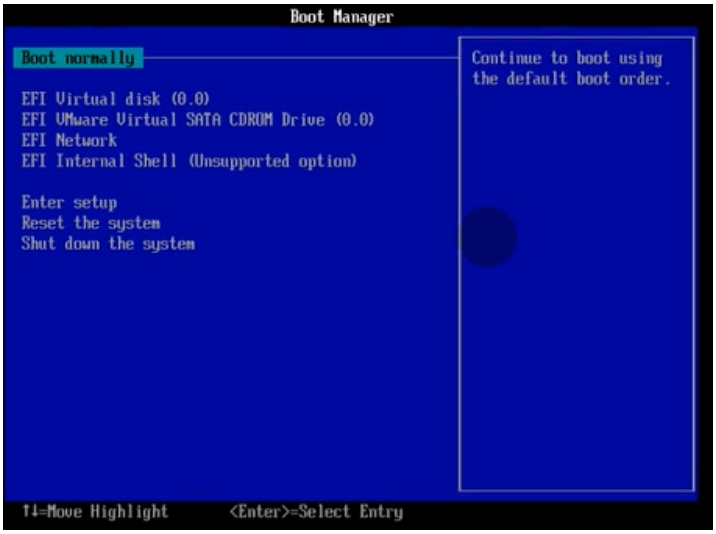
- Go to machine you just created and power on.



- When the machine is power on, click the rectangle window that shows the preview of the machine to view the machine.
- Then it'll ask you to press any key to boot from CD/DVD as typical windows installation step.

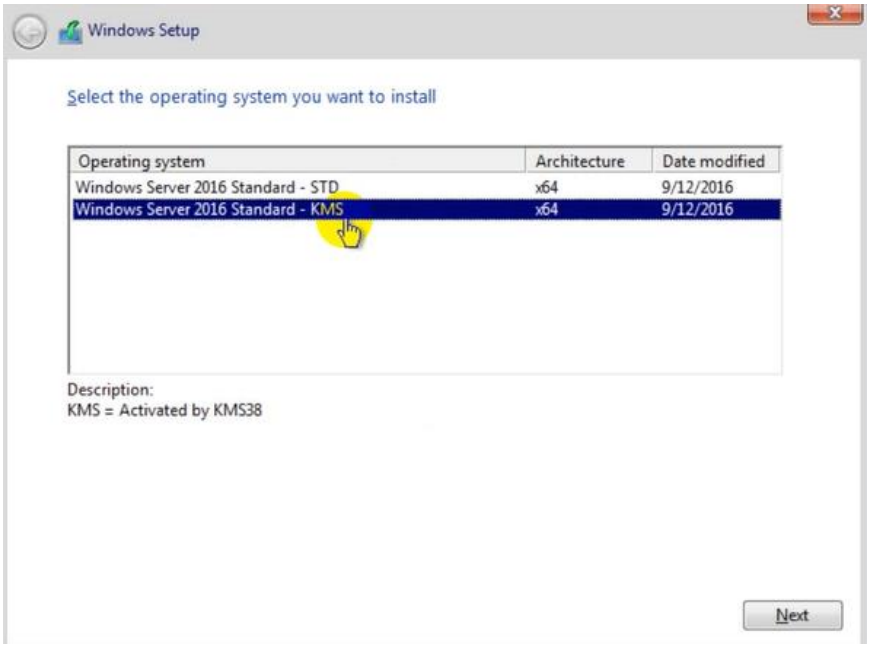


- Then you'll see windows boot manager. Press Enter while selected Boot Normally.



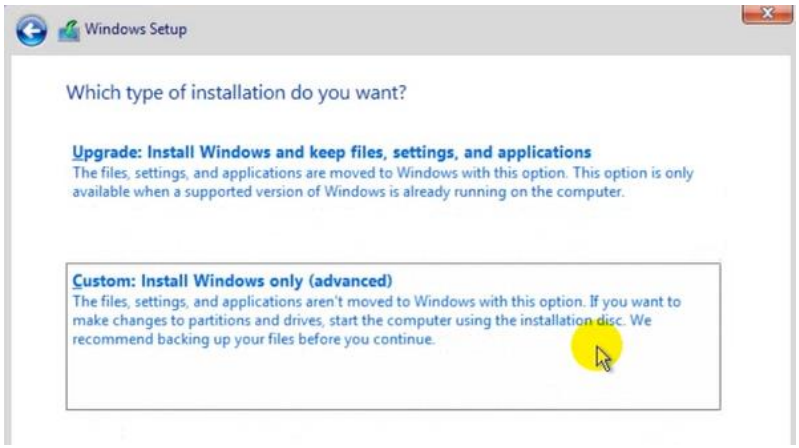
NOTE : Sometimes, although you pressed the keys (Enter or any other key, it will not work. In that case click the window using mouse and then press Enter.)

- Click next. Then click Install Now.

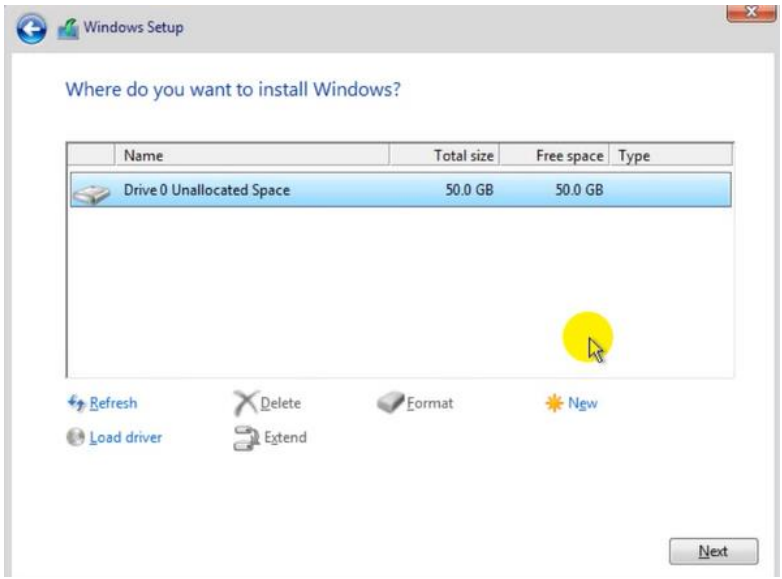


- Select KMS version and click next.

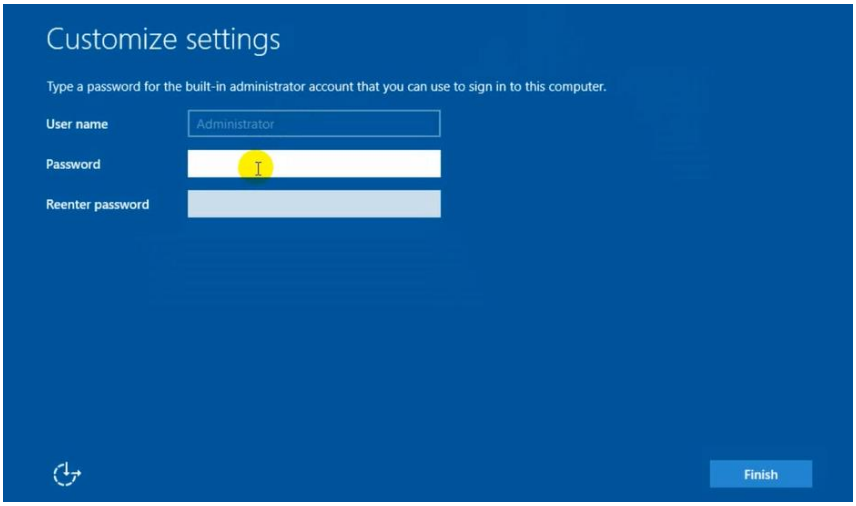
- Accept the license agreement and click next.
- Choose custom installation as below.



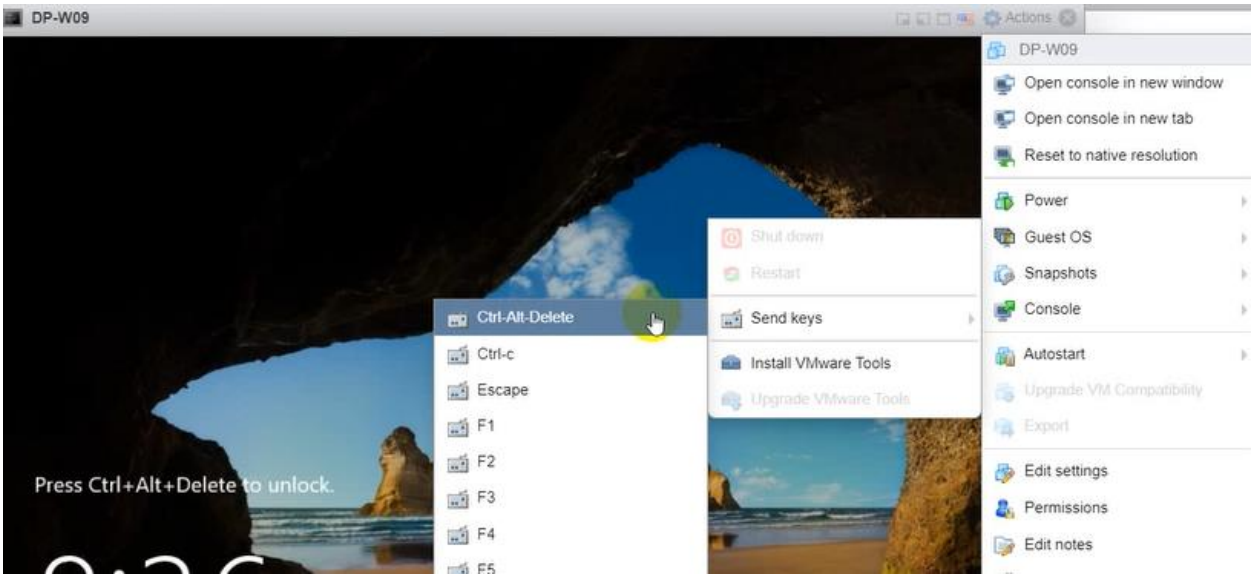
- The disk will appear. You have to create a new disk for windows to install.



- Click new and then apply to use entire disk as a single partition. Then click ok. Go to next and windows will now install.
- When windows installed and rebooted, enter a new administrative password and click finish.



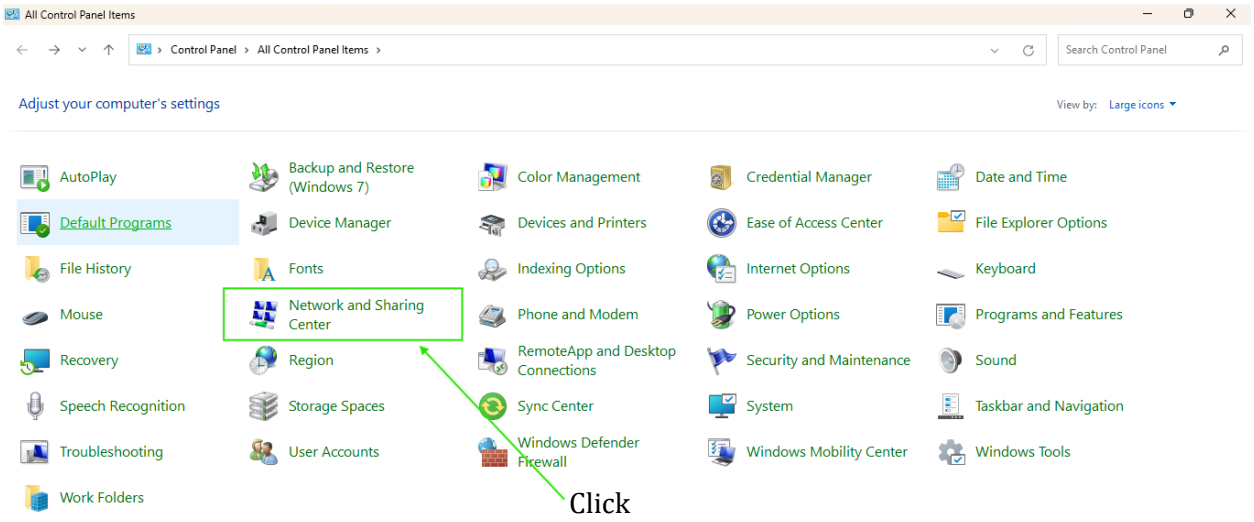
- Then the windows come to welcome screen, the default lock screen and ask you to enter Ctrl + Alt + Delete. Give the command as follows.
- Go to the action button, and then Guest OS and send keys. Then select Ctrs+Alt+Delete.



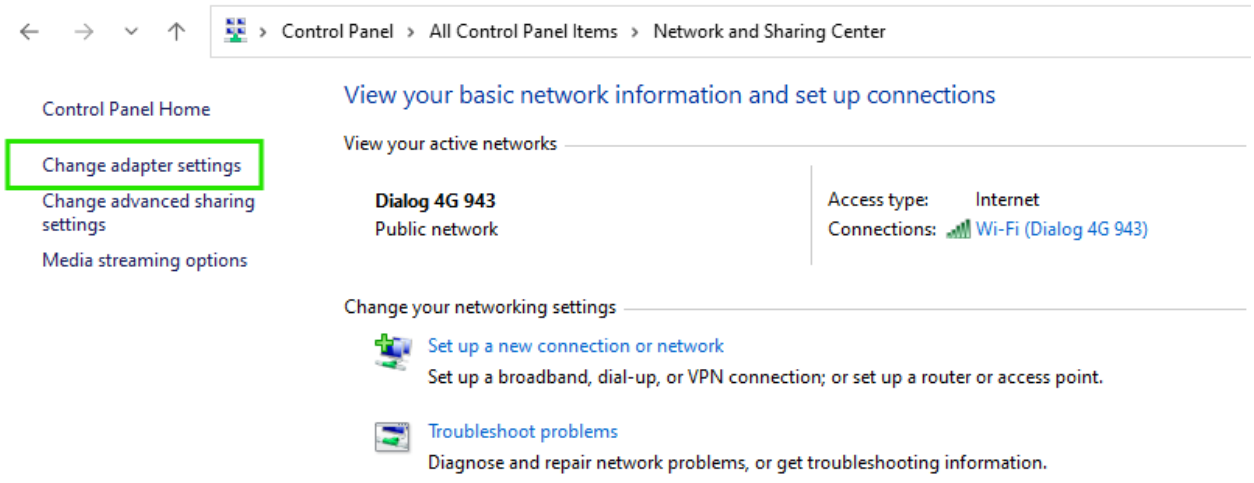
Now you have created and install the operating system to the virtual machine. But still there are some configurations to do. You still don't have internet connection to the VM. Also the VM is not configured for Remote Desktop connection. (RDP)

Assigning the static IP address

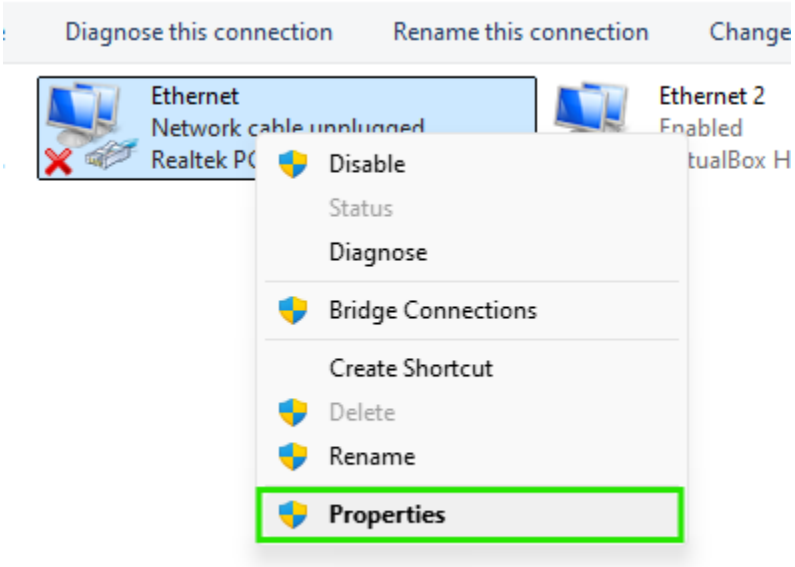
Go to Control Panel → Network and Sharing Center



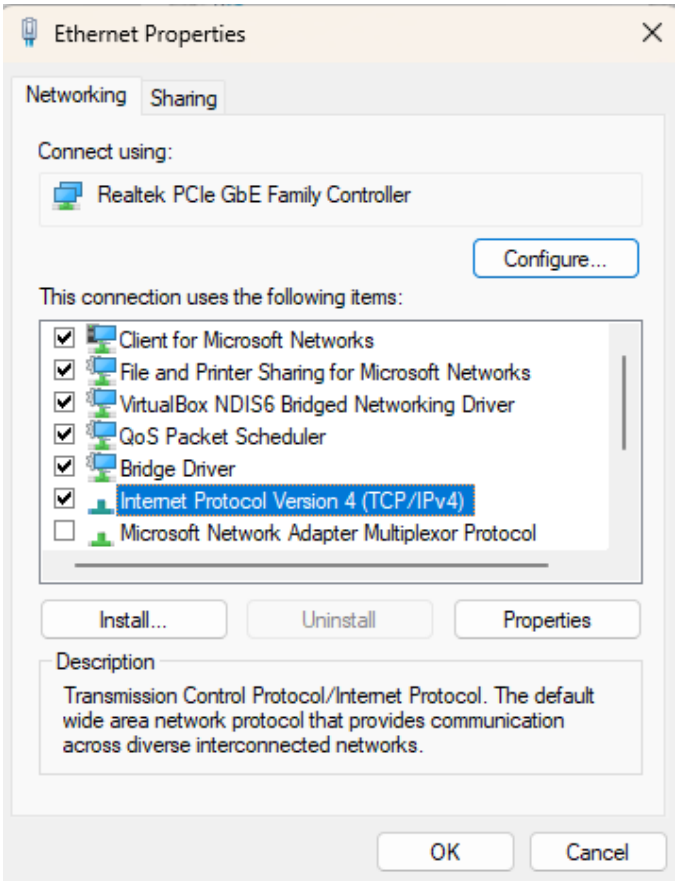
Click on 'Change adapter settings'



Right click on Ethernet adapter and then properties.

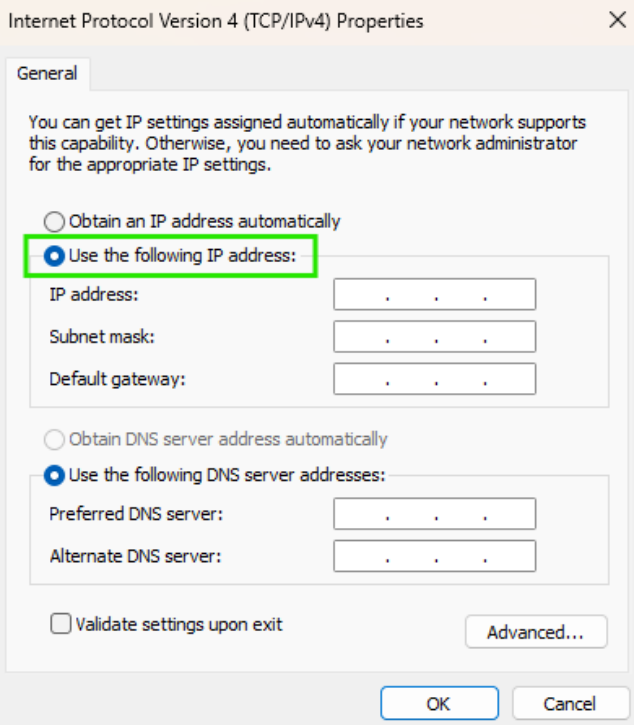


Select Internet Protocol version 4. (TCP/IPv4)



Then click properties.

Select ‘Use the following IP address’



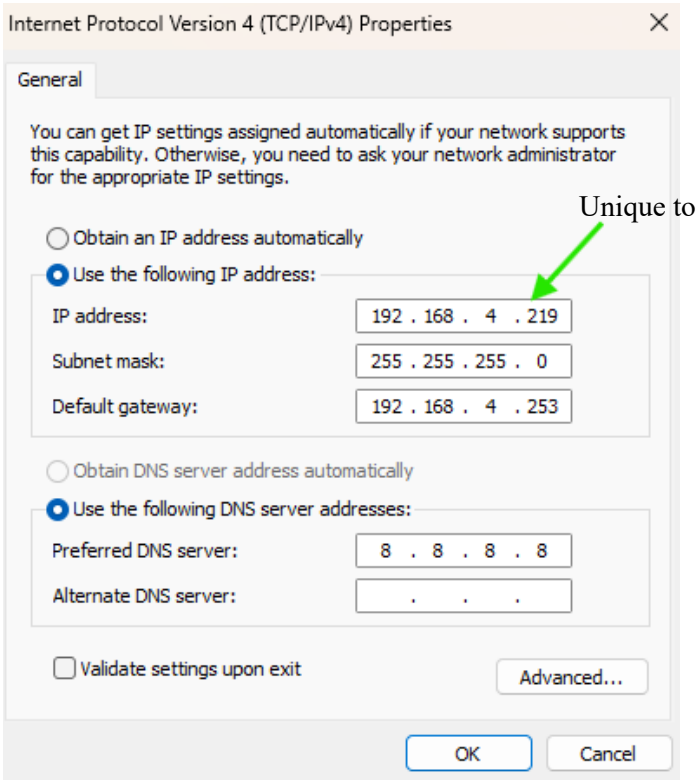
Set the values as follows.

IP address : The unique IP address you selected for the new machine. (Ex : 192.168.4.219)

Subnet mask : 255.255.255.0

Default gateway : 192.168.4.253

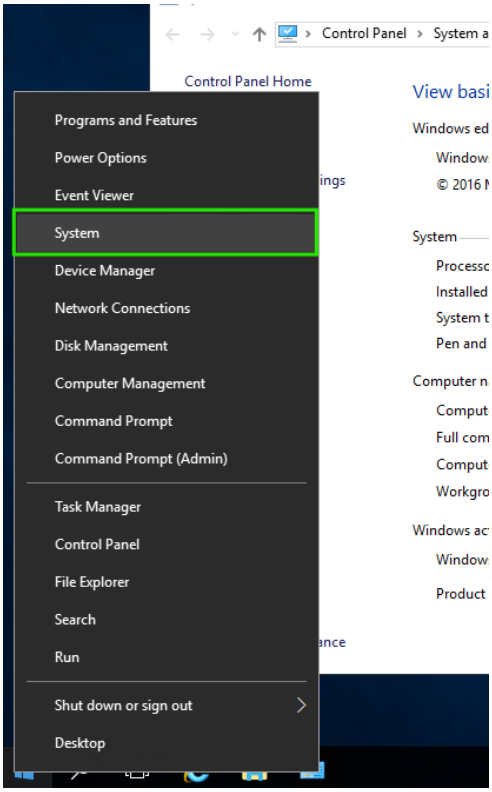
Preferred DNS server : 8.8.8.8



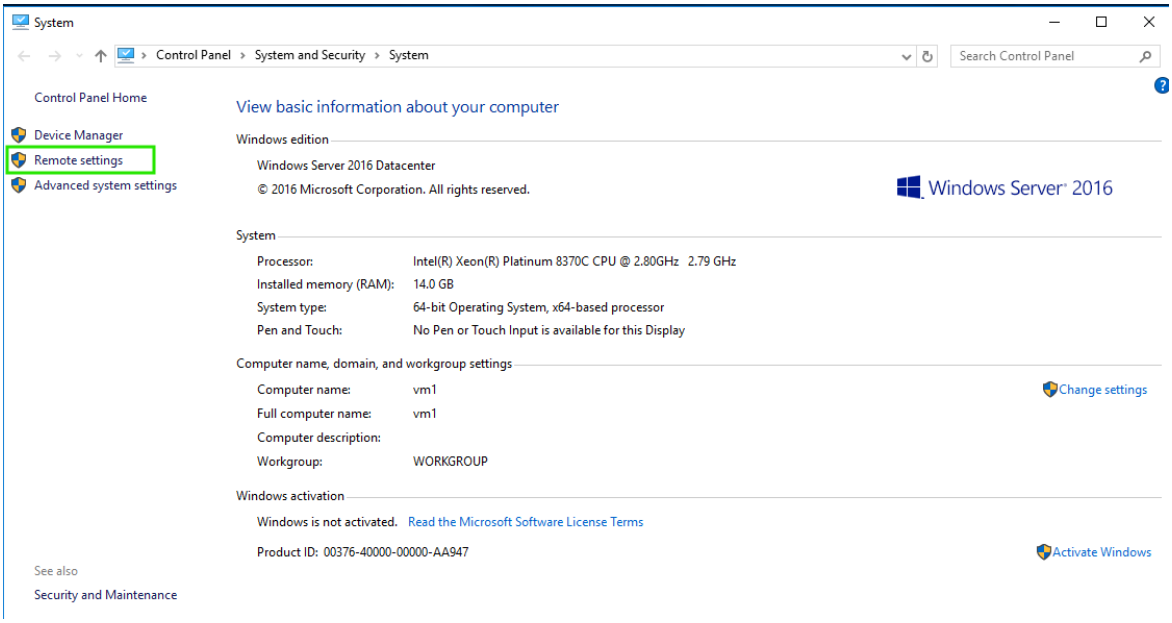
Unique to the machine

Allow RDP connection through firewall

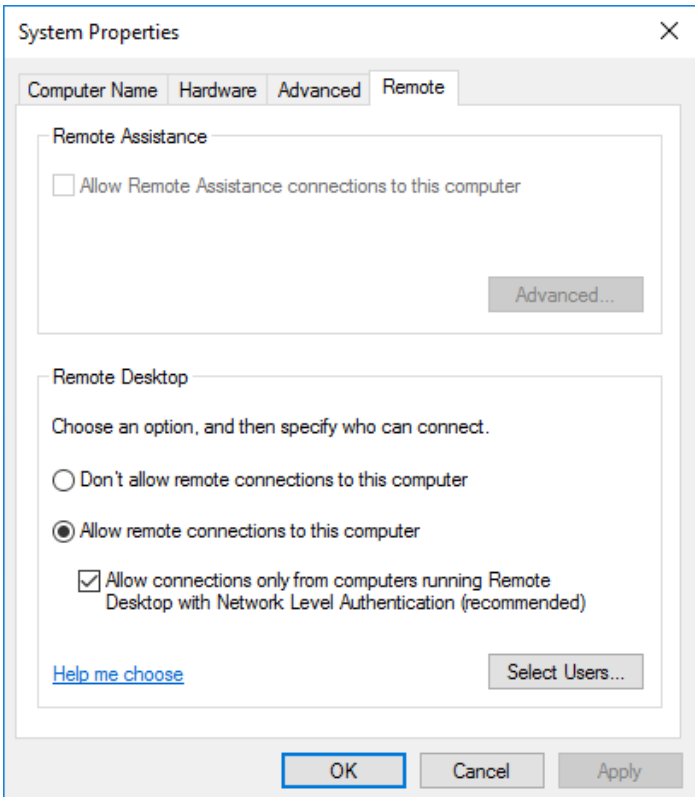
Right click on windows button and select system.



Then select Remote settings



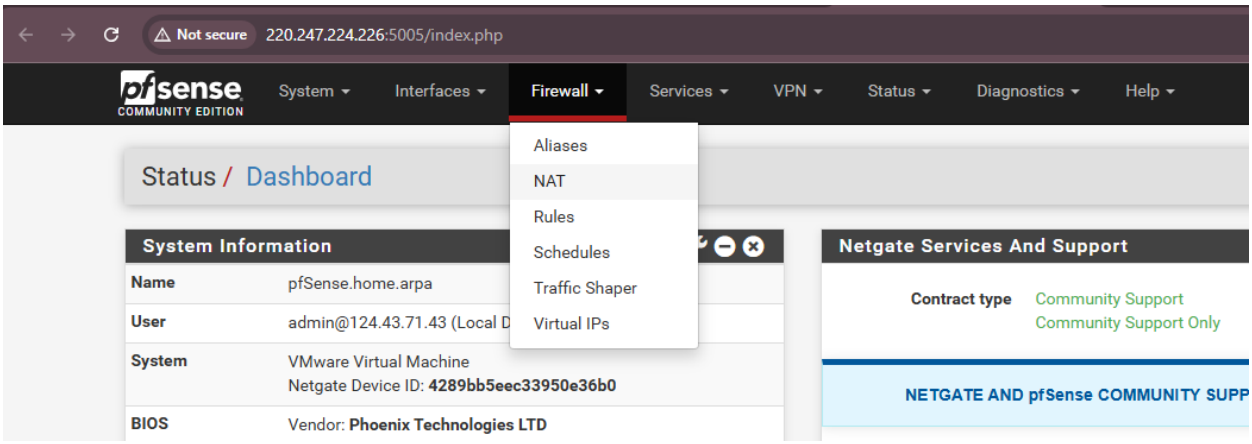
Change the settings to Allow remote connections to this computer. Then click OK.



Add a NAT rule to allow Remote connections through pfsense

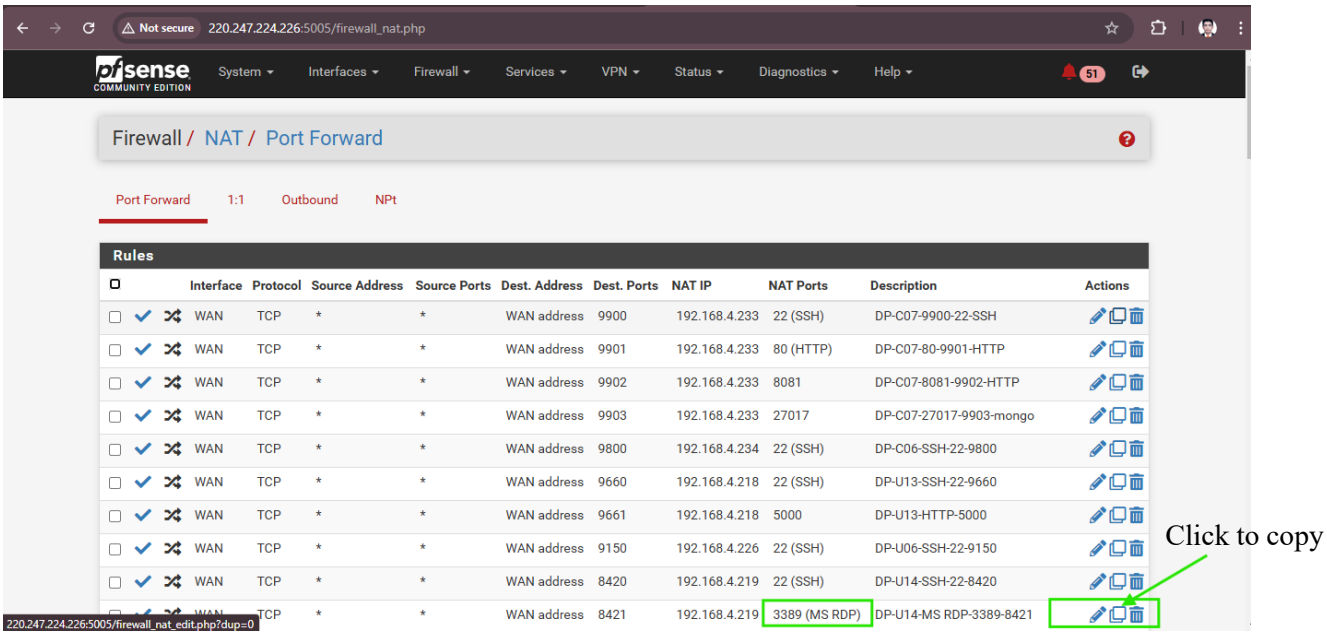
Log into pfsense using the link provided in the server credentials document.

Go to Firewall → NAT



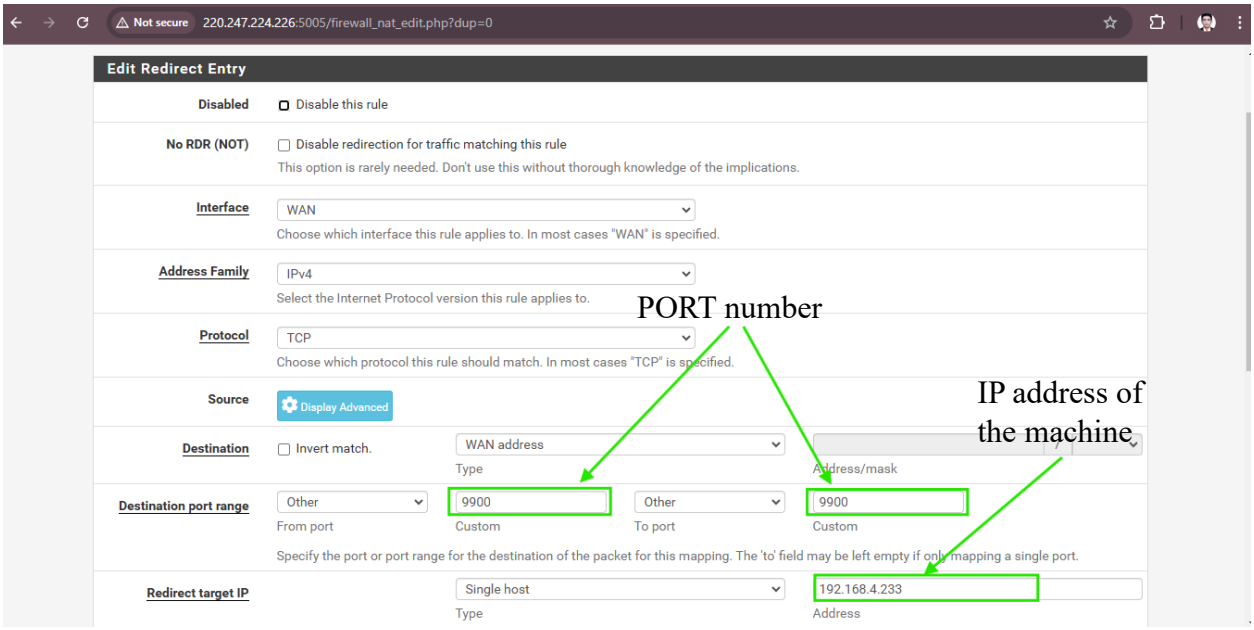
Then all the NAT rules will be appeared.

Since we have created a windows VM, we should add a rule to access via Remote Desktop Protocol. (RDP) We can take a copy from the previously configured rule.

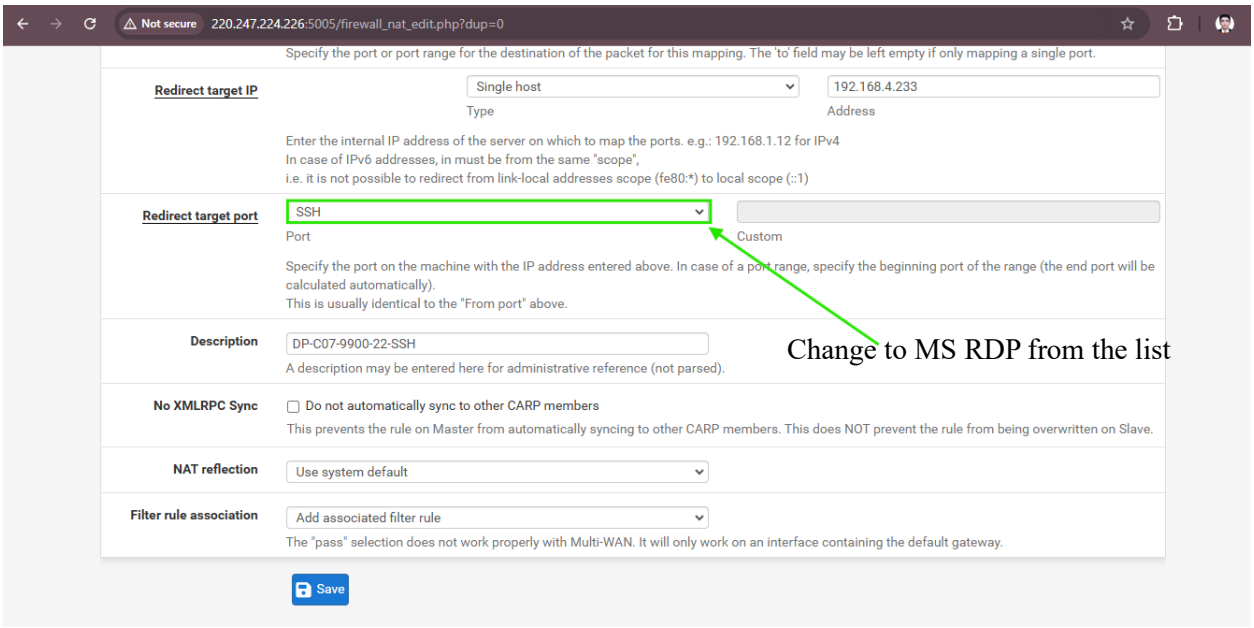


Now you should assign a port number to access the VM via the pfsense firewall. Carefully select an appropriate port number that has not been used before. (Ex : 9900)

Then set that port number and IP address of your newly created VM to relevant fields in the rule as follows.

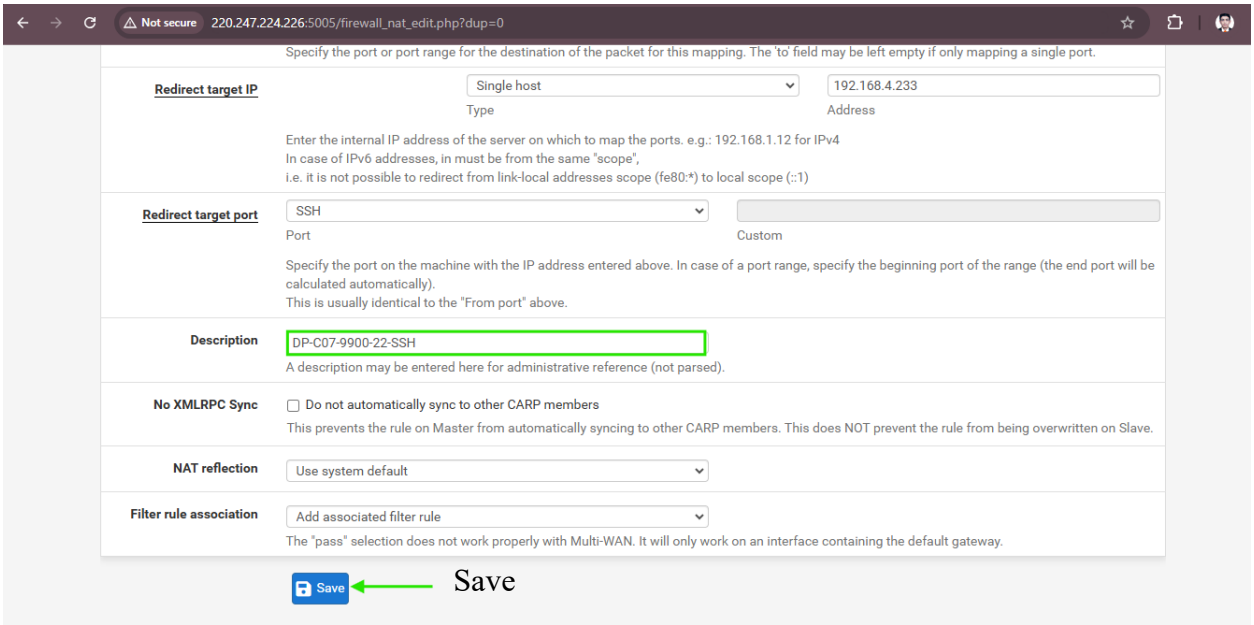


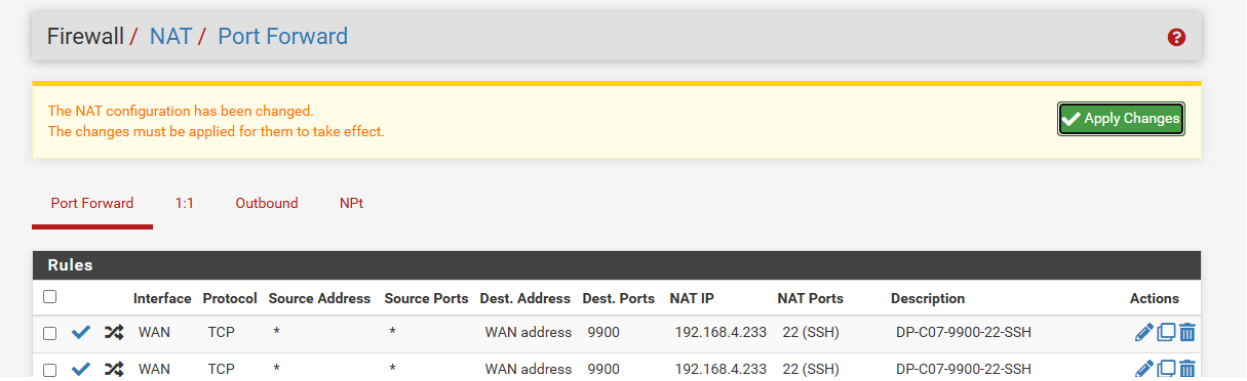
Then select the Redirect target port to ‘MS RDP’. If you are adding a rule to Linux VM, then this should be SSH.



Then change the description appropriately. Since you have created and added a RDP rule to a windows machine, set the description like DP-W01-3389-MS RDP.

Then click save and Apply changes.





Now you have successfully created a windows VM and configured a rule to access via RDP.