Pandit Deendayal Energy University (PDEU)

Cloud Computing Lab (20CP322P)

B.Tech-Computer Science & Engineering (Sem-VI)

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19BCP138

DIVISION – 2 (G4)

Experiment – 1

XenServer & XenCenter

❖ **Aim:** Hands on virtualization using **XenServer**.

❖ **Introduction:**

Citrix Hypervisor is an industry-leading, open-source platform for cost-effective application, desktop, cloud, and server virtual infrastructures. Citrix Hypervisor enables organizations of any size or type to consolidate and transform compute resources into virtual workloads for today's data center requirements while ensuring a seamless pathway for moving workloads to the cloud. This platform is used by virtualization administrators to deploy, host and manage VMs. It's also used to distribute hardware resources – CPU, memory, networking, storage to VMs.

❖ Theory:

➢ XenServer:

The main architectural components of Citrix XenServer are the 64- bit hypervisor platform, XenCenter integrated management, and XenMotion live migration. Key features of Citrix XenServer aim to ease virtualization infrastructure management. VM templates are a significant aspect of this. For example, you can create VM templates from snapshots. Another key feature of this platform is XenMotion, which allows you to live to migrate VMs between hosts. With the Enterprise version of XenServer 7.1, you can also live patch hosts with no downtime. Centralized support for Open vSwitch is another important feature of the XenServer platform.

The XenServer management console, which is a Windows-based client, sets this platform apart from other Xen stacks because it gives you the ability to manage VMs running on multiple hosts in a resource pool. Critics of XenServer argue that its ecosystem isn't as established as those of its major competitors, but the fact that there is a 3 3 Cloud Computing Lab open-source version of this hypervisor makes it a good choice for smaller IT shops. Another drawback of Citrix XenServer is that it lacks built-in automation capabilities. To automate tasks, you have to use Power Shell scripts. In addition, compared to its competitors, XenServer doesn't have the same level of integration or available certifications.

➢ XenCenter:

XenCenter is the management GUI for XenServer that runs on Windows. This is the front end that lets users configure new virtual machines and enables full virtual machine installation, configuration, administration, and lifecycle management. Using this tool, we configure the remote storage and manage networks, including VLANs and internal networks, and bonded and dedicated NICs. XenCenter displays the VMs' performance stats and lets us take snapshots of guest machines and provide access to the virtual machines' consoles. These are just some basic functions of XenCenter.

❖ Procedure:

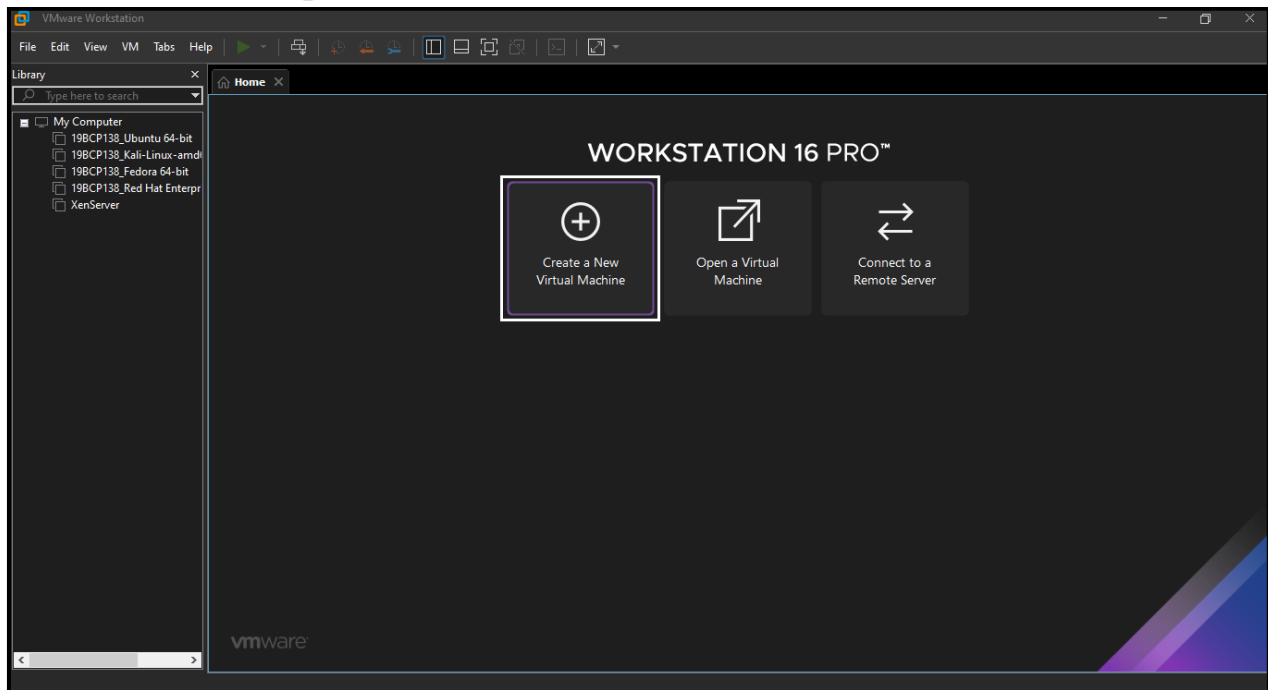Install XenCenter & XenServer on the Virtual Machine and operate it from XenCenter.

❖ Instructions:

➢ Installing XenServer:

Step-1: Go to the official website of Citrix (https://www.citrix.com/en-in/downloads/citrixhypervisor/product-software/hypervisor-80-express-edition.html) for downloading the XenServer and Sign In with your credentials. Click on the Dialog box and select Citrix Hypervisor 8.0.0 Base Installation ISO – Express Edition. It will lead to the file we want to download. Agree to the terms and condition and download the file.

Step-2: Open VMware and Create New Virtual Machine using the ISO File you downloaded in Step 1.
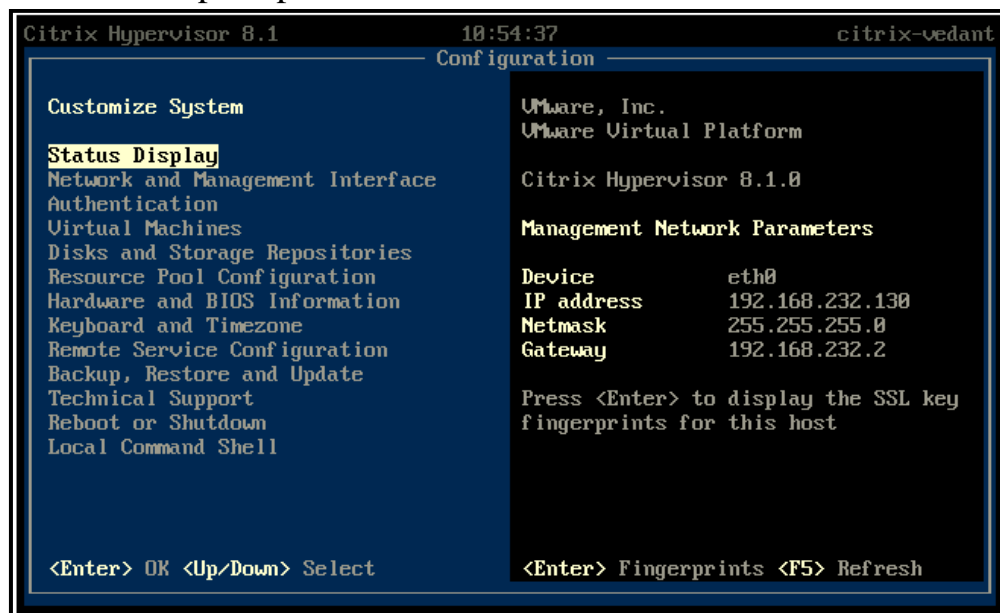

Guest Operating System should be kept other and Version as other too. You can choose any location to install it and also specify the disk size (Preferred is 4GB) and disk split type.
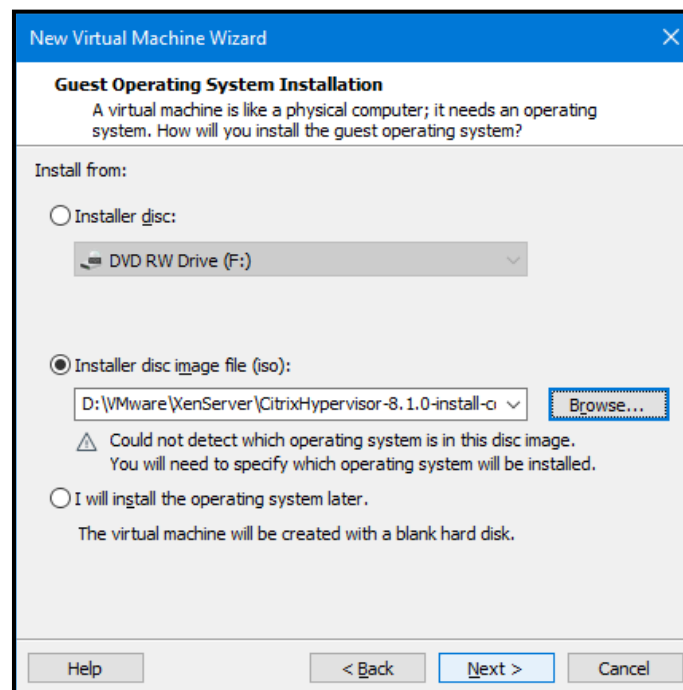
In the last step click on customize hardware and specify the main memory to be minimum 2048 MB. Then Click on finish and Run the VM.
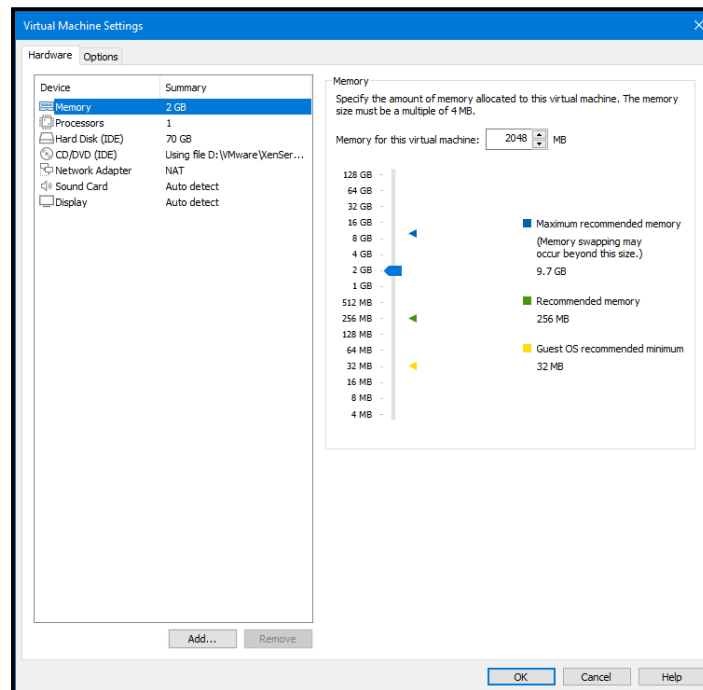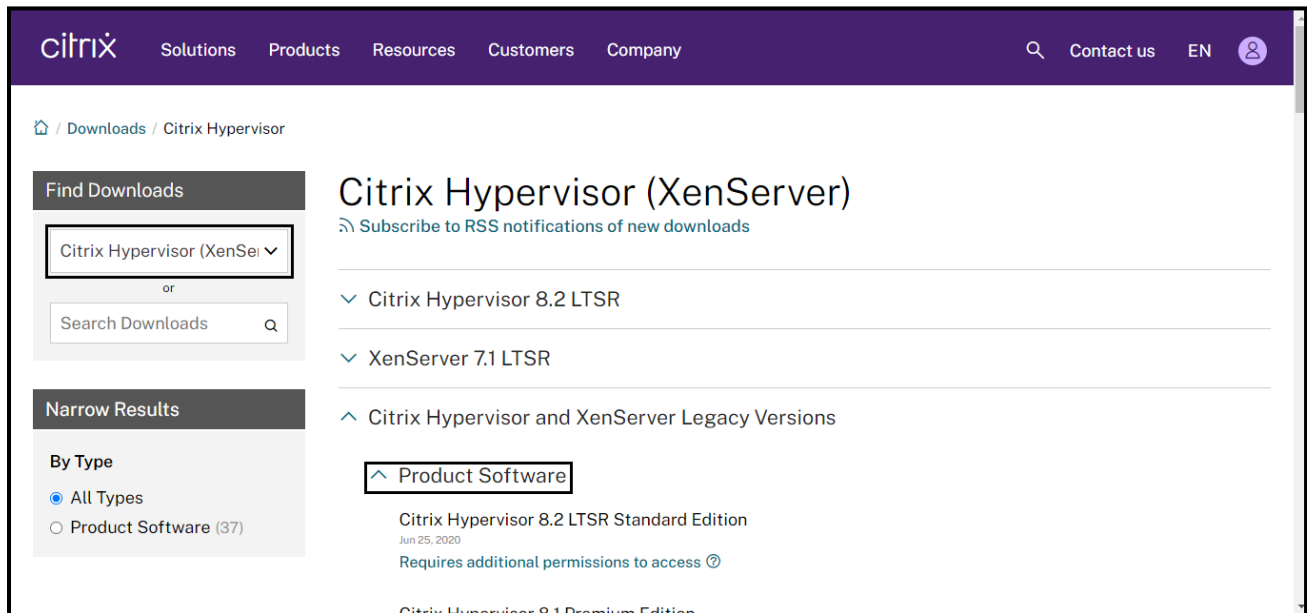

Step-3: You will be prompted for creation of Login Credentials. Do it. When installation part is completed, you will see following success prompt. Click OK and restart the machine. After Restarting machine, it will install some more files and can take time to finish the process. After the completion, you will see below screen as a success prompt.
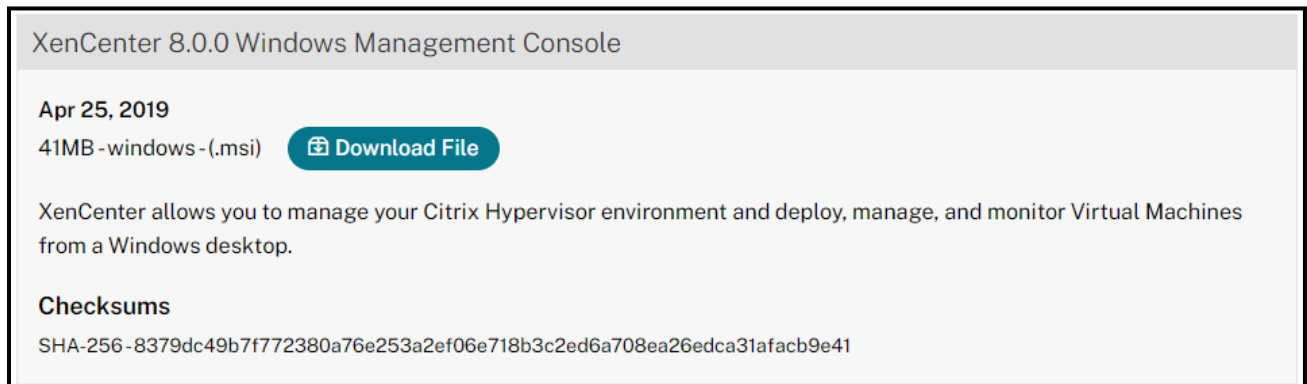
➢ Installing XenCenter:

Step-1: Go to the official website of Citrix (https://www.citrix.com/en-in/downloads/citrixhypervisor/product-software/hypervisor-80-express-edition.html) for downloading the XenCenter and Sign In with your credentials. Click on the Dialog box and select Hypervisor 8.0.0 Windows Management Console. It will lead to the file we want to download. Agree to the terms and condition and download the file.

Step-2: Run the MSI file you just downloaded. (You need to follow normal Windows Installation Procedure).
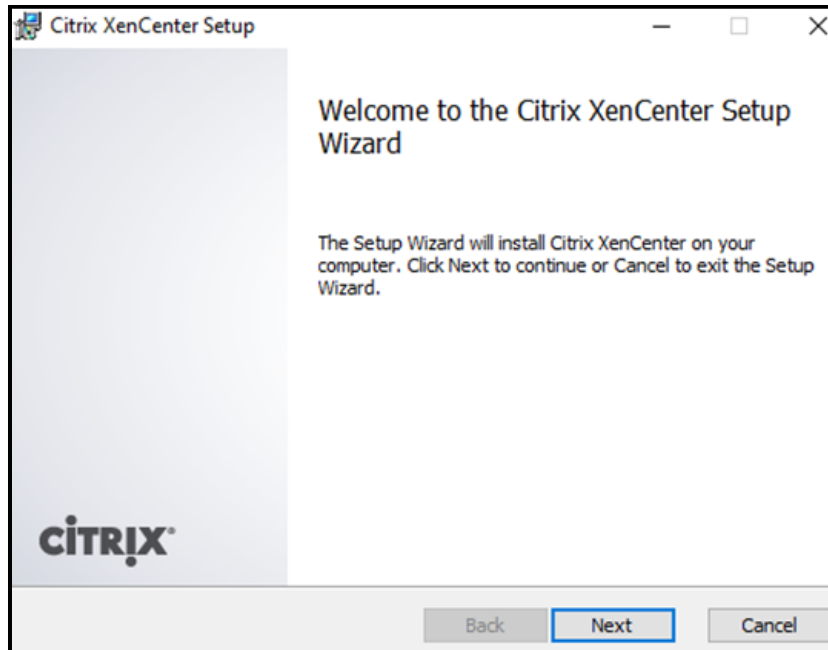
Step-3: Run the installed XenCenter. Click on Add Server and give the credential you have used while installing XenServer and you will get server after running XenServer. First Start the XenServer from VMware.
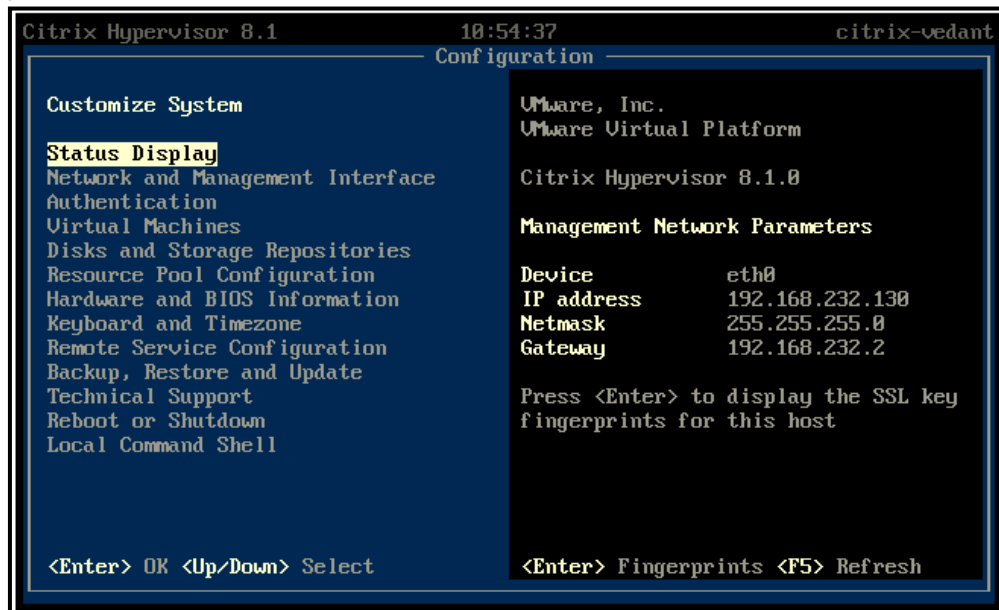
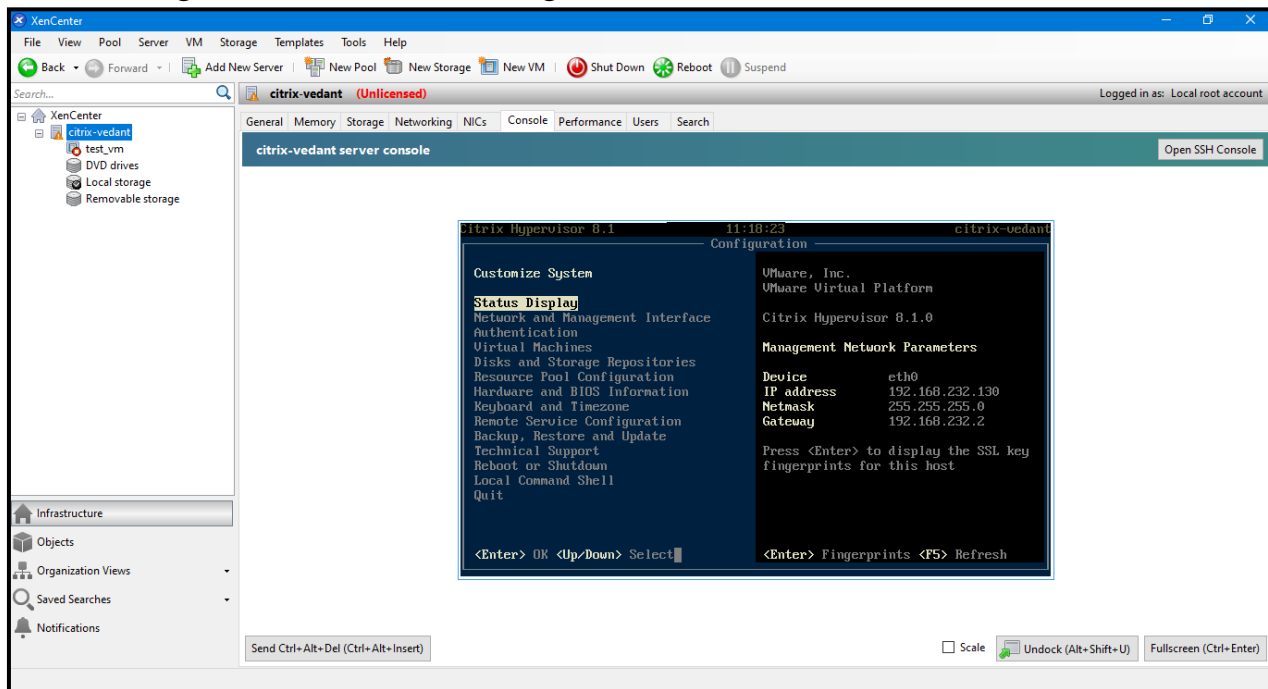Then Add Server in XenCenter by writing the IP address, Username and Password.
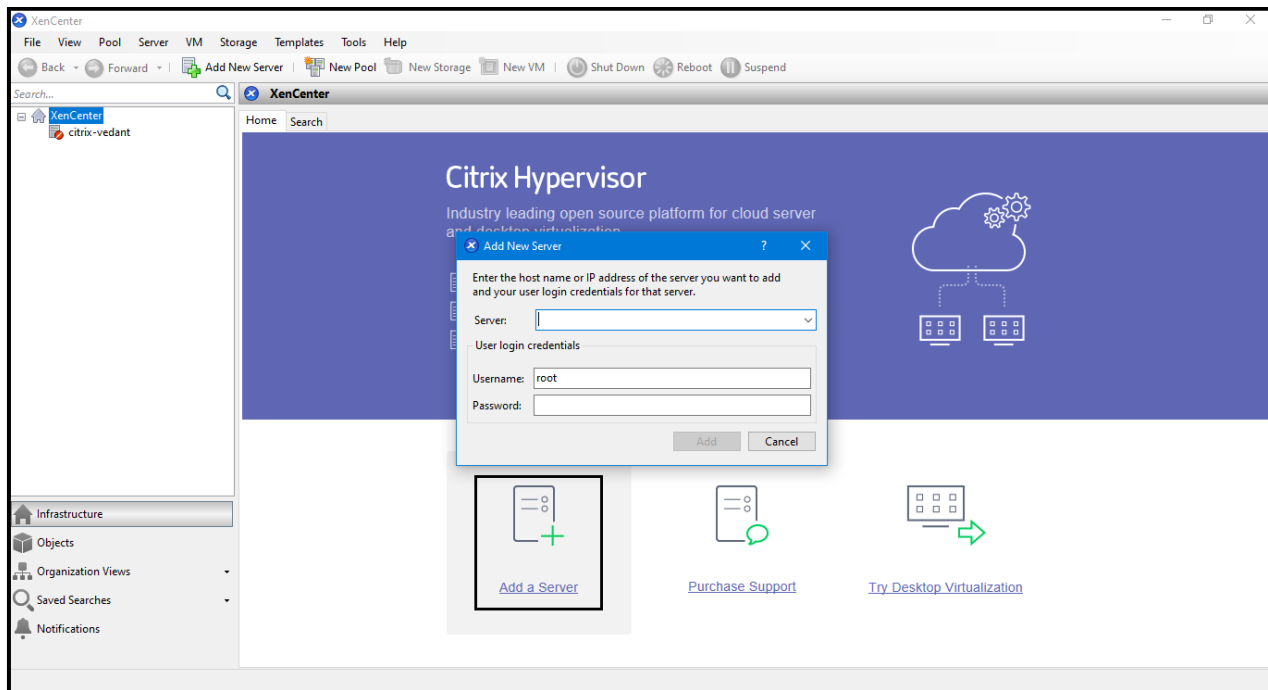
Step-4: After adding the server you can see the details of the server and can manage the XenServer from XenCenter and can take a look over to the server.
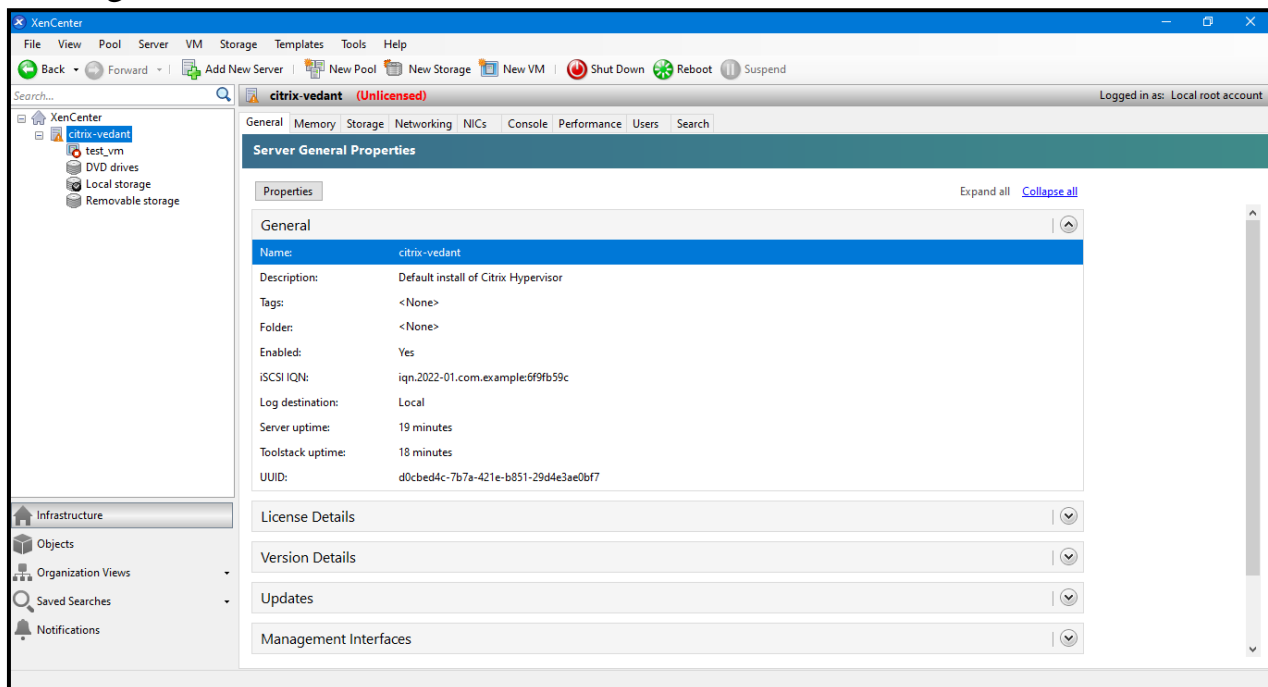
Can manage the XenServer running in VMware from XenCenter.

❖ Observation and Learning:

XenServer is pretty sleek and detail-oriented software and is also used in the world's largest could services and enterprises. It was easy to install in a few basic steps. It's found that this platform (XenServer) is used by virtualization administrators to deploy, host and manage VMs. It's also used to distribute hardware resources – CPU, memory, networking, storage to VMs. Likewise; XenCenter is the management GUI for XenServers that run on Windows. This is the front end that lets users configure new virtual machines and enables full virtual machine installation, configuration, administration, and lifecycle management. It displays VMware's performance stats, lets us take snapshots of guest machines, and provides access to the virtual machines' consoles.

❖ Conclusion:

We learned to download, install and operate XenServer in the VMware. We also learned to download, install and operate XenCenter software and to manage the XenServers from the XenCenter.

❖ Reference:

Website to Download the XenServer .iso file and XenCenter .msi file:
- Citrix Hypervisor 8.0 Express Edition - Citrix India

Theory on XenServer and XenCenter:
- Install XenServer and use XenCenter for configuration (techtarget.com)

Installation Process and Theory:
PDEU Cloud Computing Lab Lectures