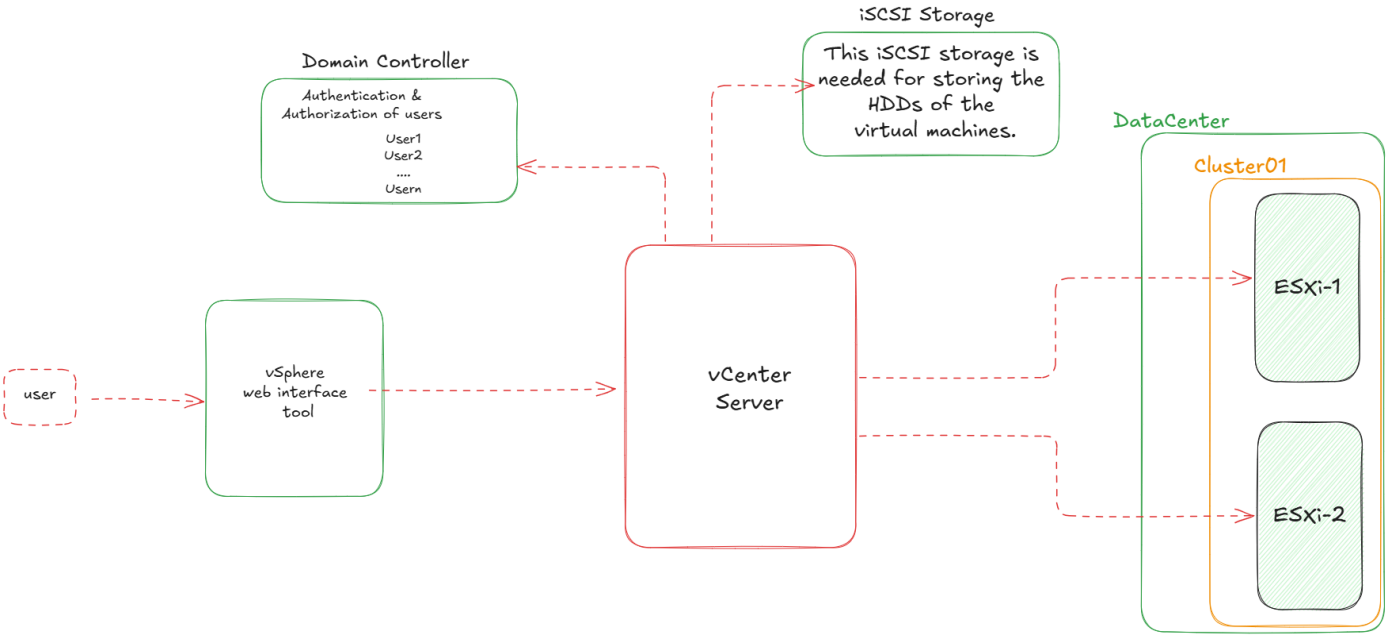
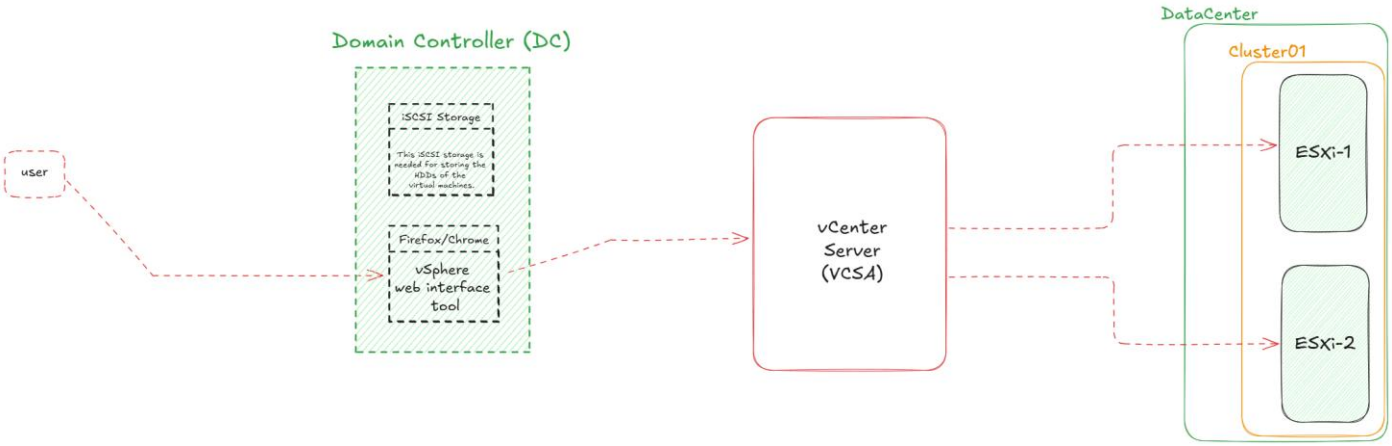
Architectural Diagram:



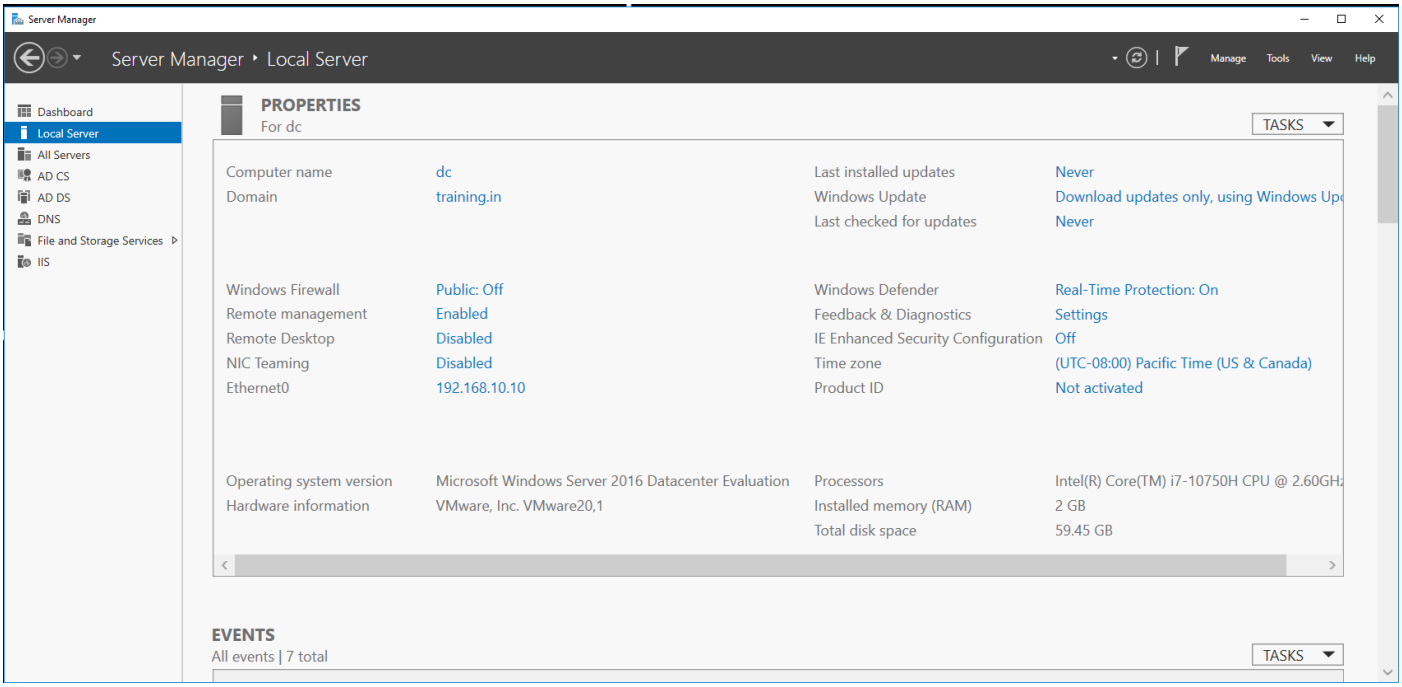
Lab setup:



Requirements of this lab setup:

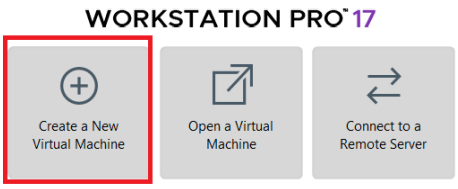
- ✓ Total machine required: 4 VM
  - 1 Domain controller
  - 1 vCenter Server Appliance (VCSA)
  - 2 ESXi hosts/servers
- ✓ iSCSI storage created on domain controller (DC) machine.
- ✓ Updated web browser on DC machine.
- ✓ Domain administrator privileges**.**

Domain Controller (DC):



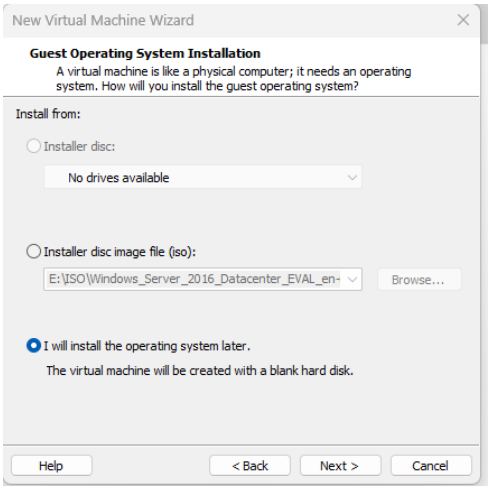
- ✓ Hostname: **DC**
- ✓ IP Address: **192.168.10.10/24 (IPv4 Static)**
- ✓ IP Range: **192.168.10.0/24**
- ✓ Domain Name: **Training.in**

Select “Create a New Virtual Machine”

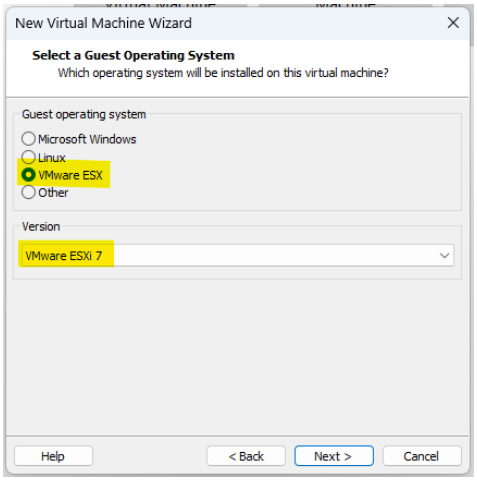


Select “Typical” and click “Next”

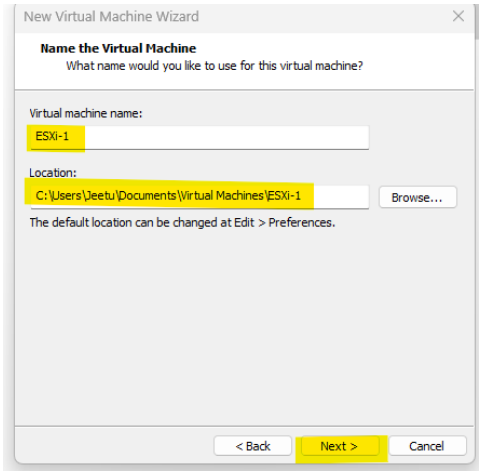
Select “I will install the Operating System later”:



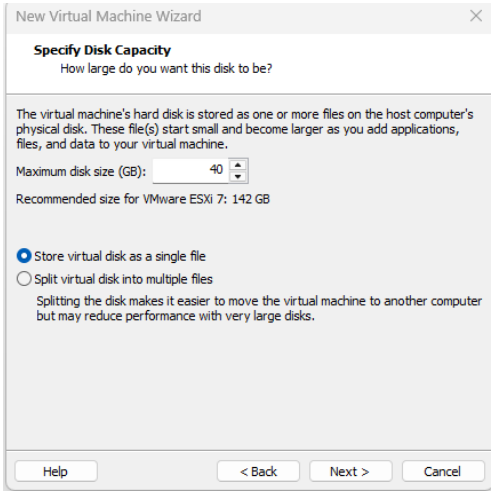
Select the appropriate VMWare ESX version:



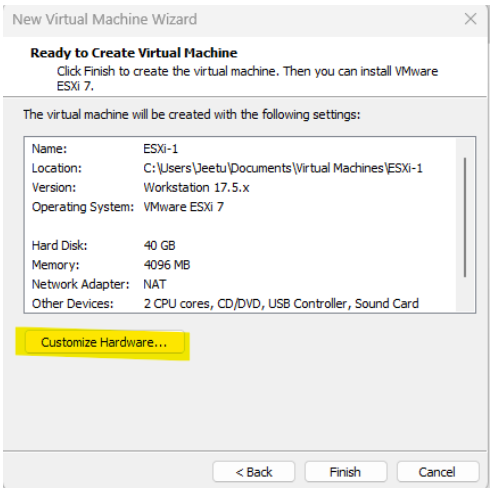
Provide a name for this ESXi server:



Specify disk capacity as 40GB (minimum disk requirement for ESXi):



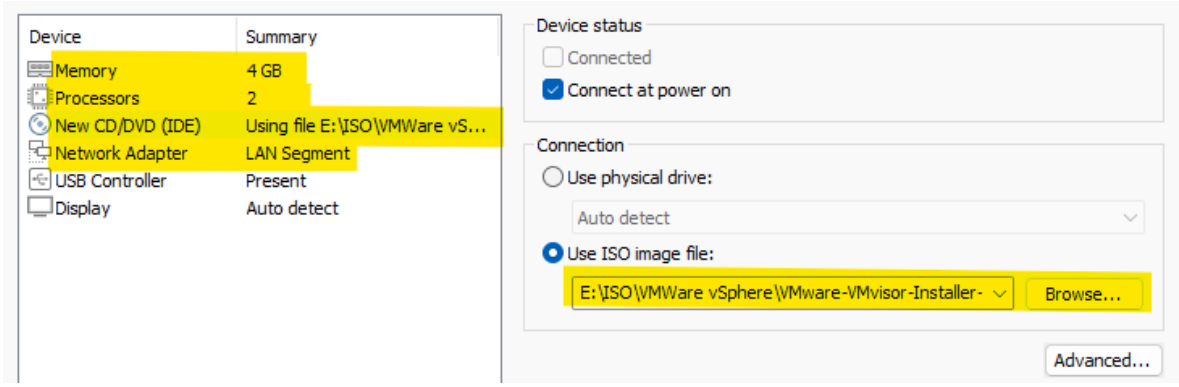
Select the “Customize Hardware”:



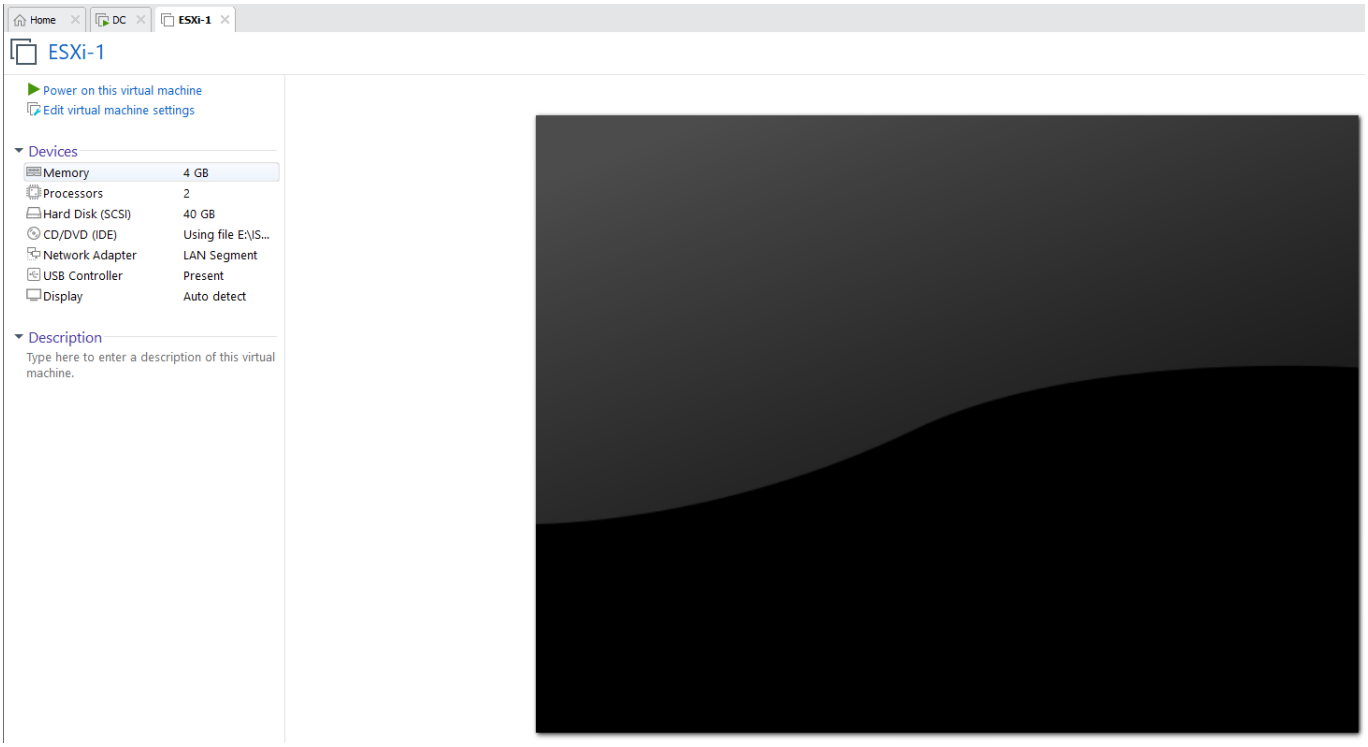
Provide the following details

- Memory**: 4GB** (later I will increase this to 6 GB or 8GB).
- Processor**: 2**
    - Number of processors: 1
    - Number of cores per processors: 2
- New CD/DVD (IDE): **<browse VMware-VMvisor-Installer-7.0U3n-21930508.x86_64.iso file>**
- Network Adapter**: <Lan Segment> (create one if it's not there)**

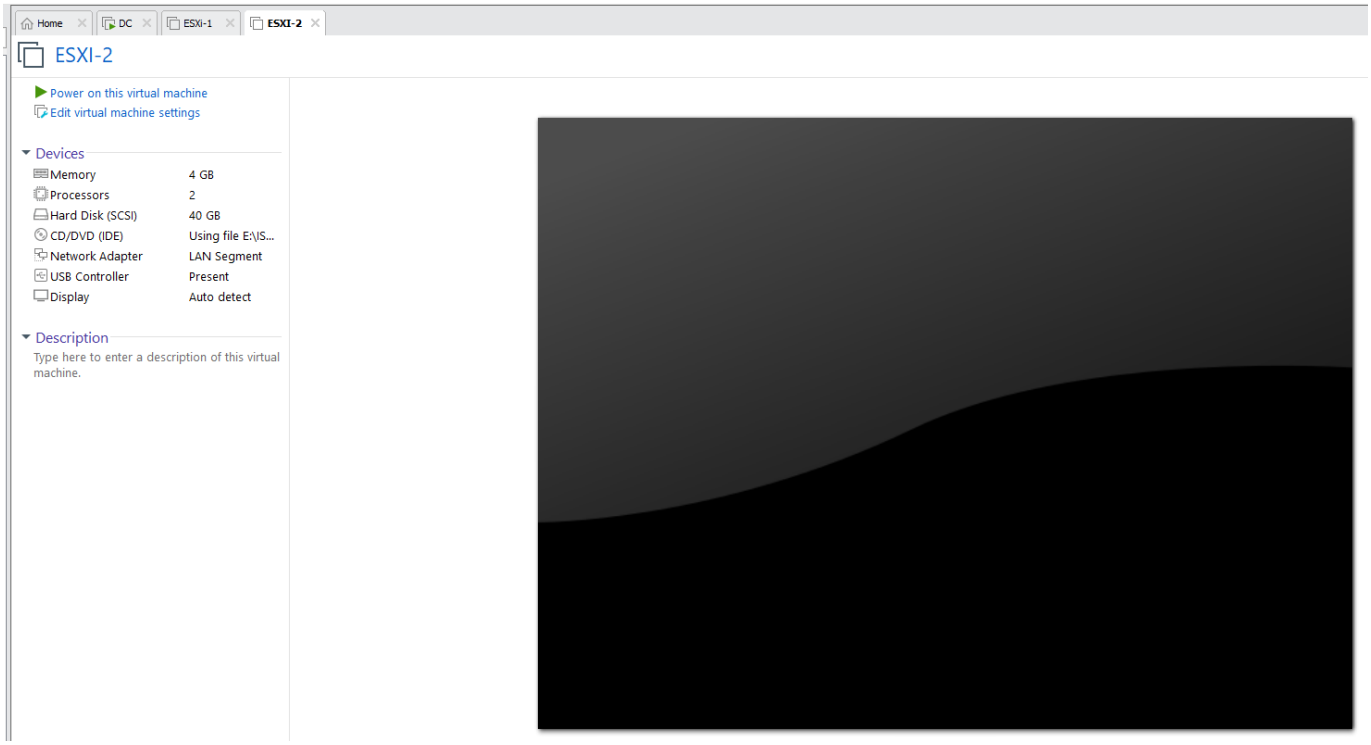
Then click on "Close"



✓ Then click on "Finish".

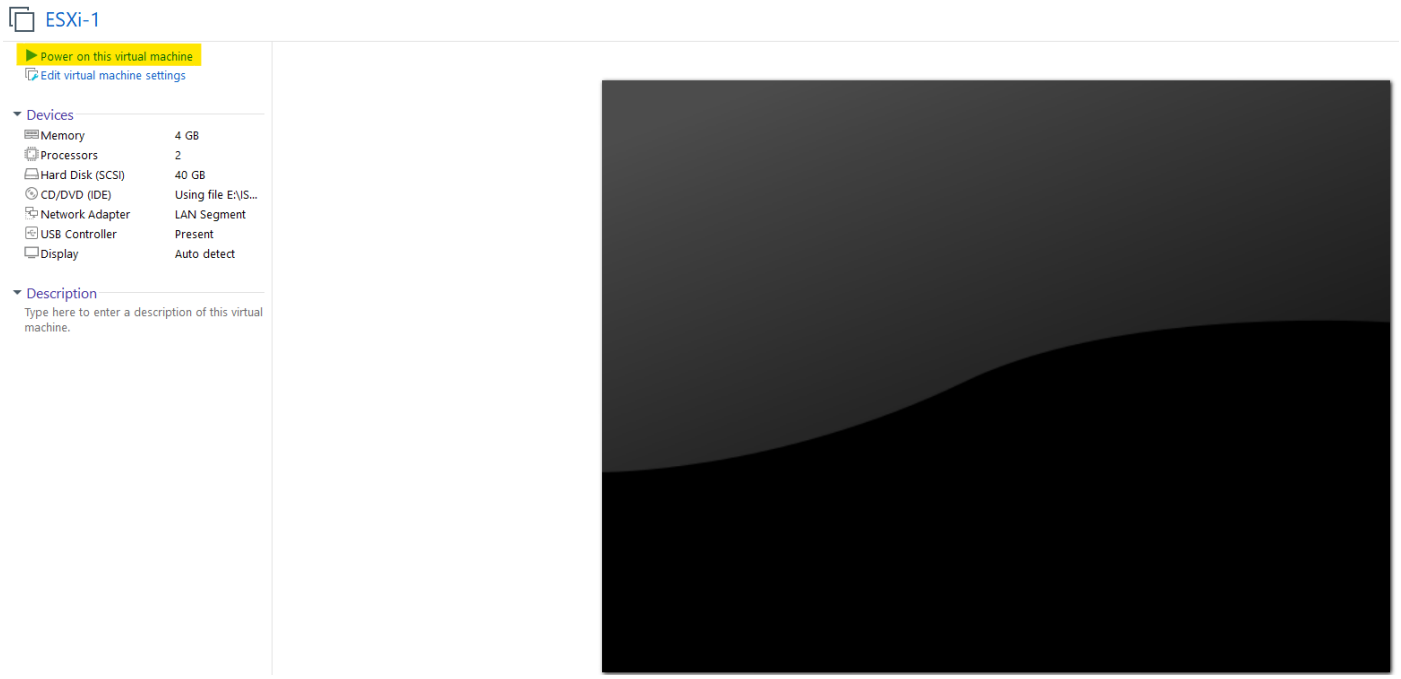


Similarly create another ESXi-2 configuration:



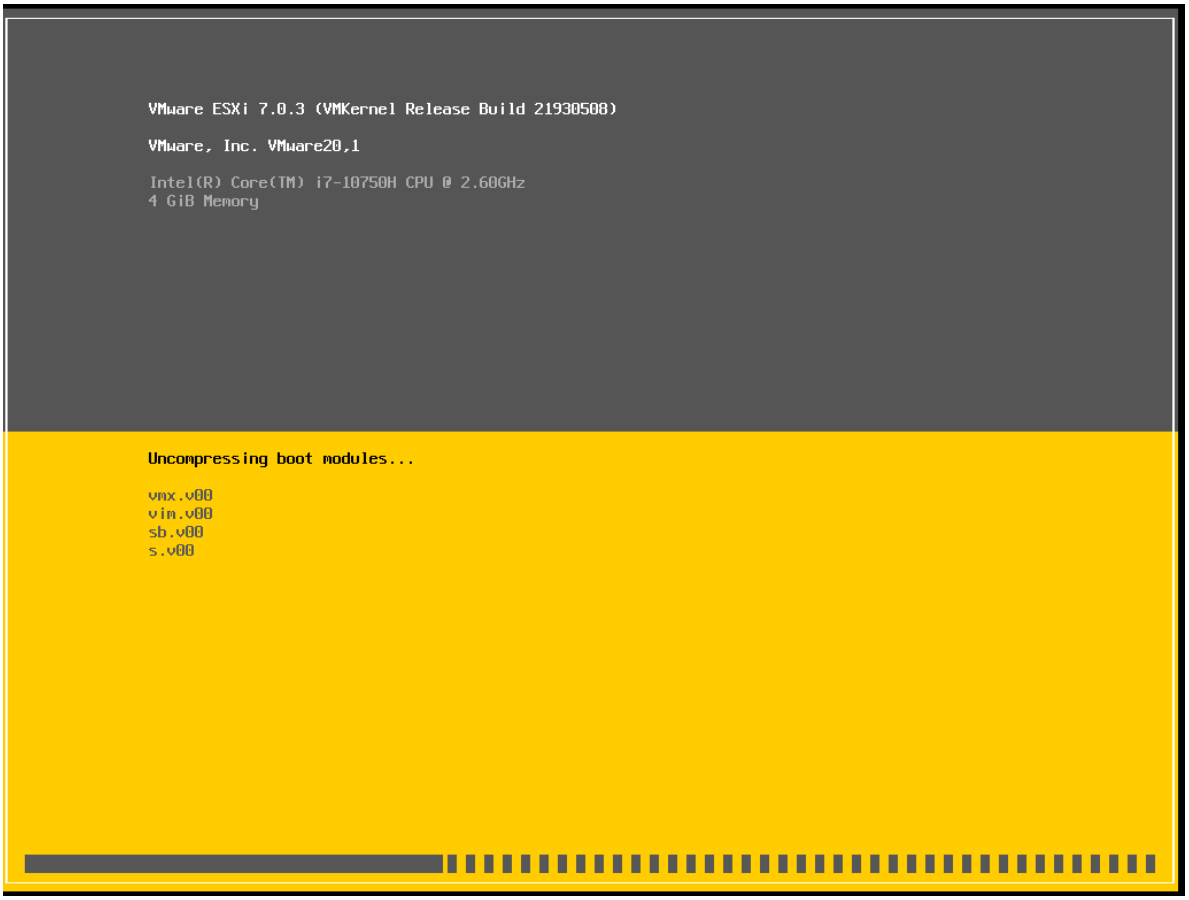
INSTALLING ESXI 7.0.3 SERVER

Power On this VM:

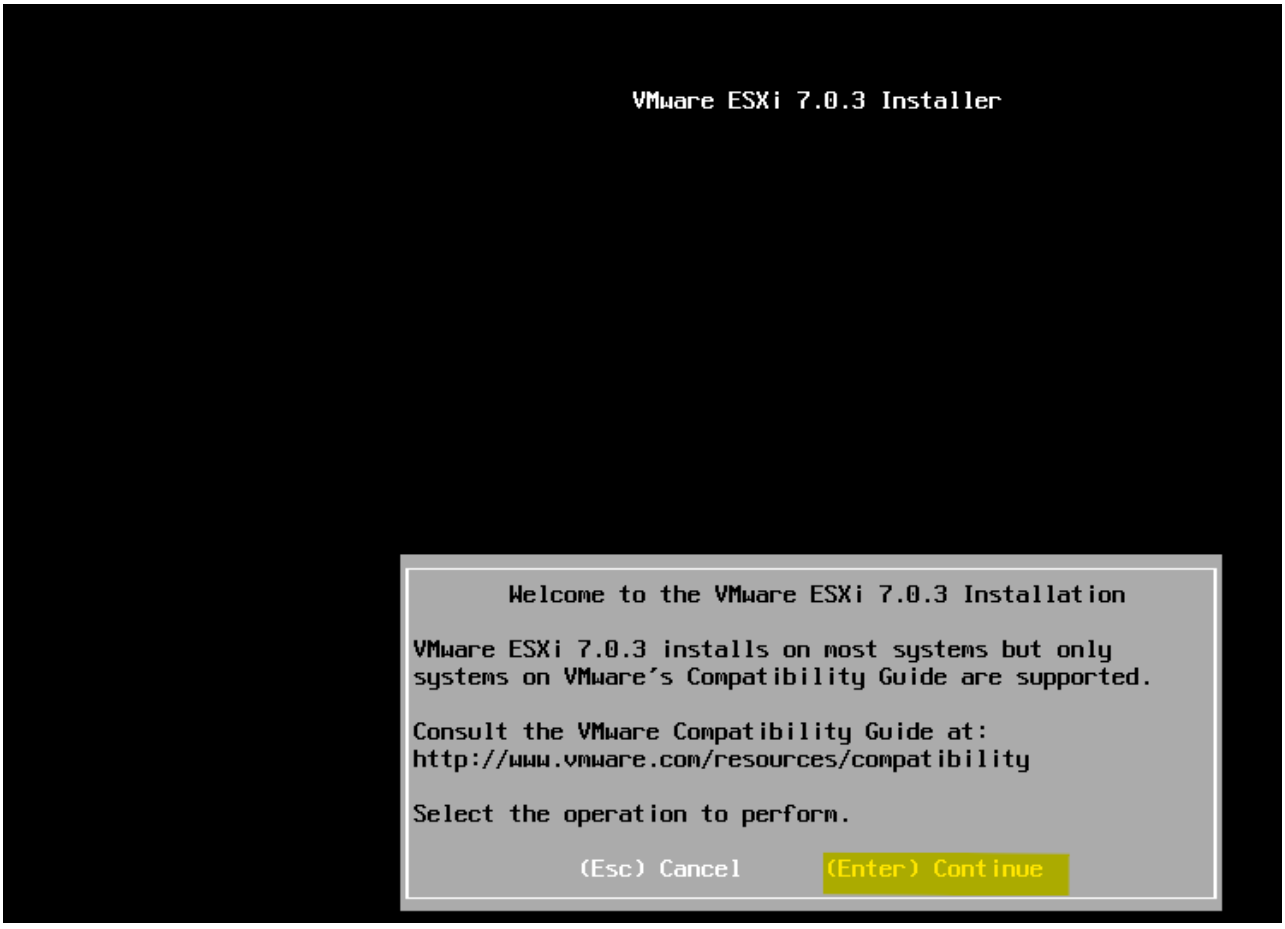


Wait for few seconds, until you get this screen:

After few seconds, you will have below screen:

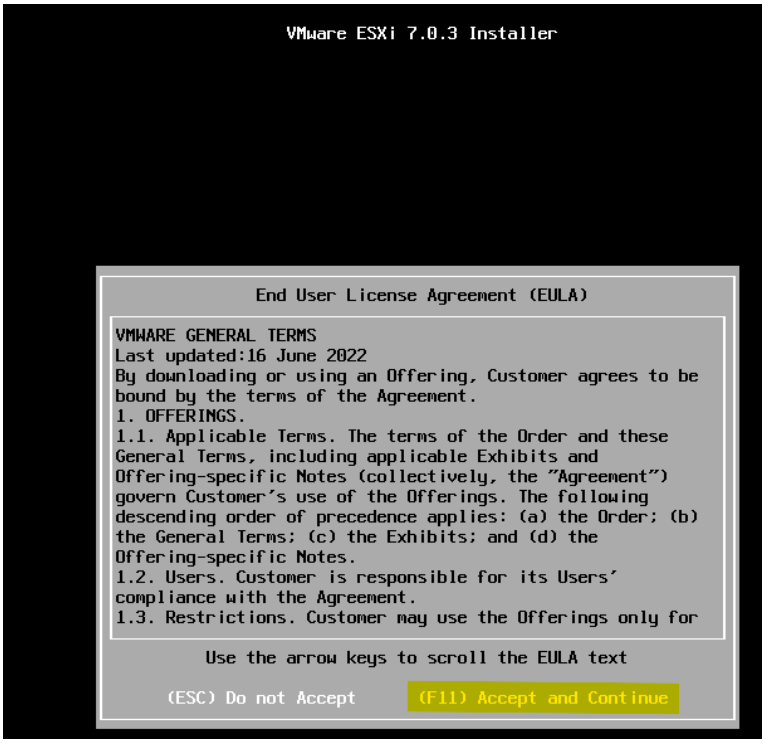


This might take some time. Then after that, you will get the installer page:

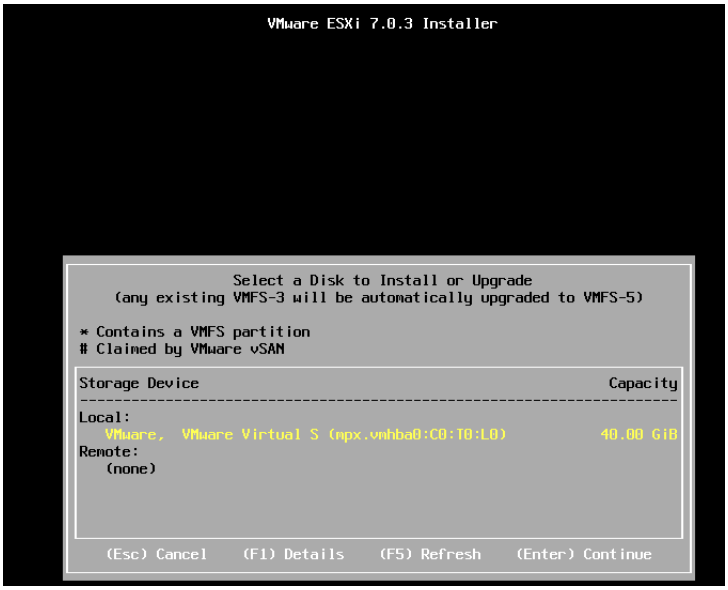


So, click “Enter” to start installation.

Accept the End User License Agreement (EULA) by pressing/clicking “F11”:



Select the required disk to install the OS and press “Enter”



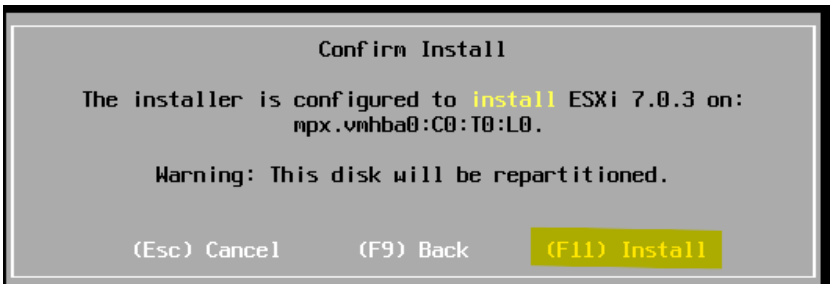
Select your language for keyboard (US Default in this case).

And press “Enter” to Continue.

Type Root’s password for this ESXi (as root is the 1st user that gets installed and give admin-level privileges)

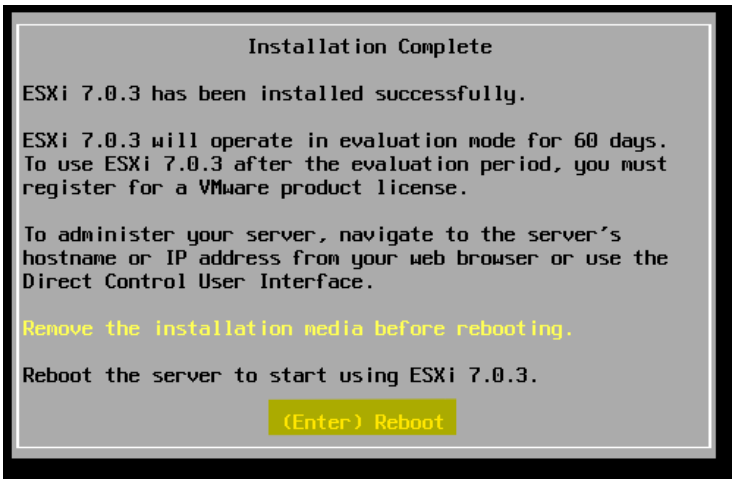
After typing complex password (at least 12 char long), press “Enter” to continue.

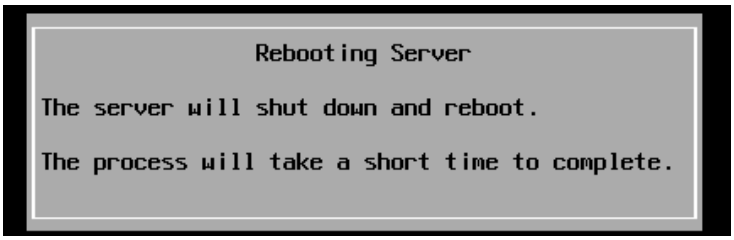
Final confirmation page, press F11 (FN+F11 in case of laptop) to start the installation of ESXi server.



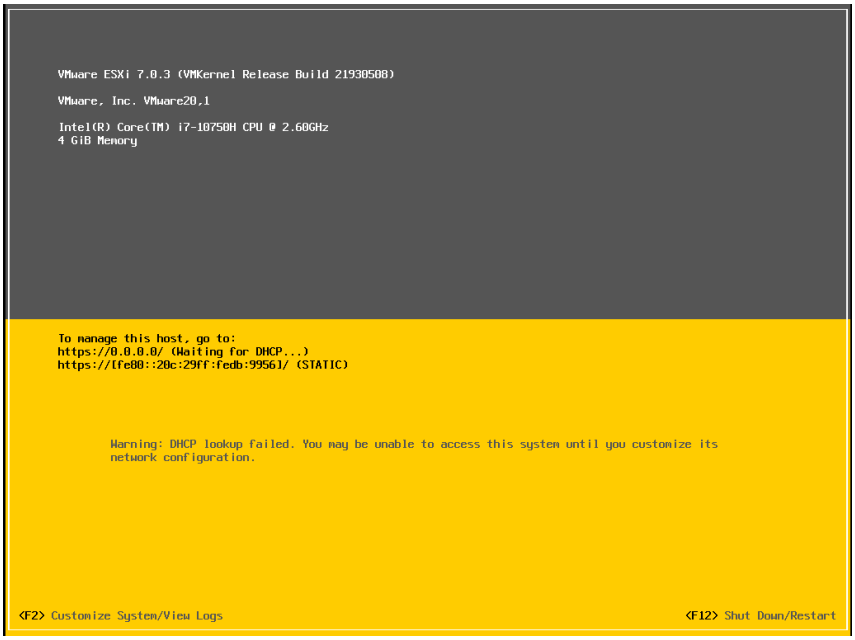
Wait for the installation to get over (it will be soon):

Press “Enter” to reboot:

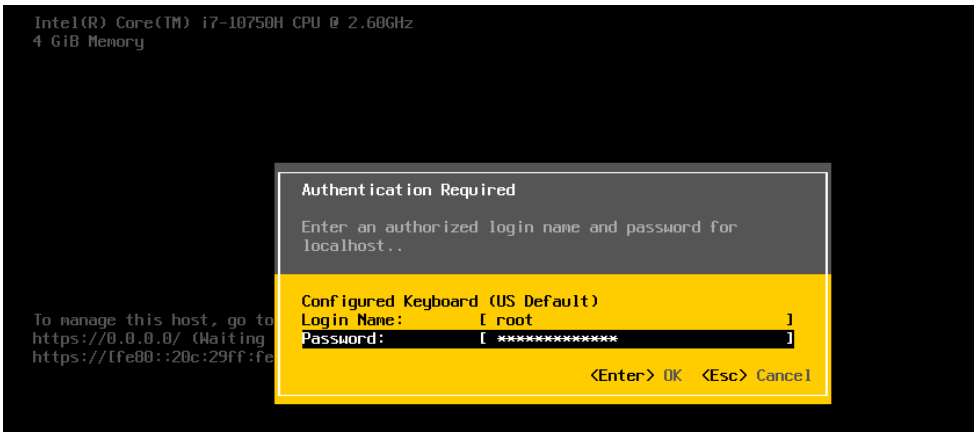




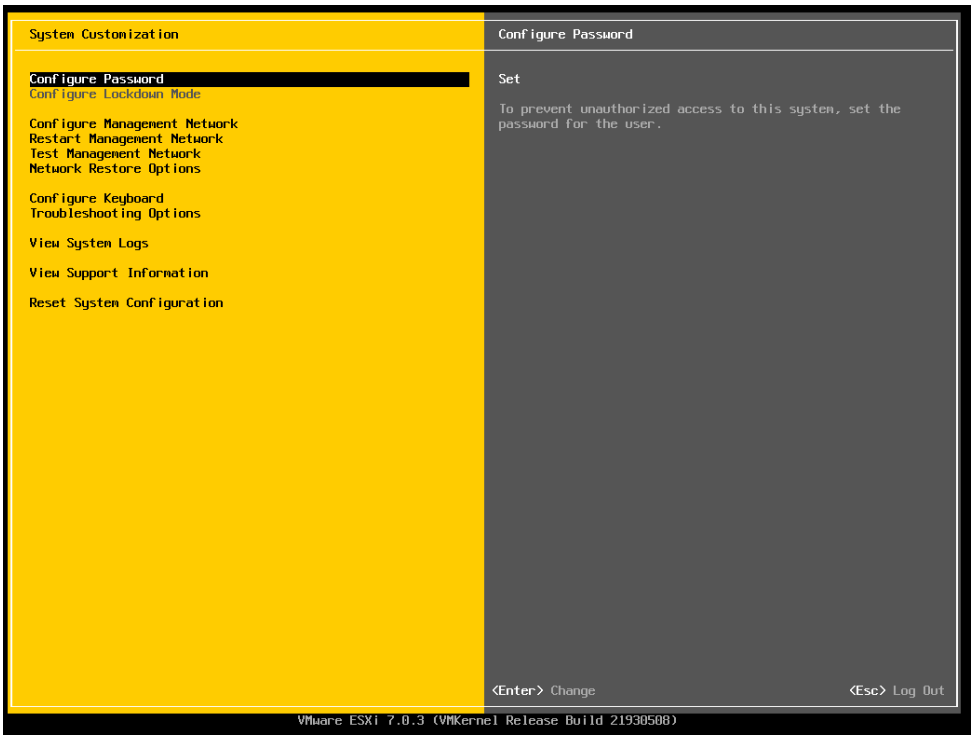
Press "FN+F2" to login:



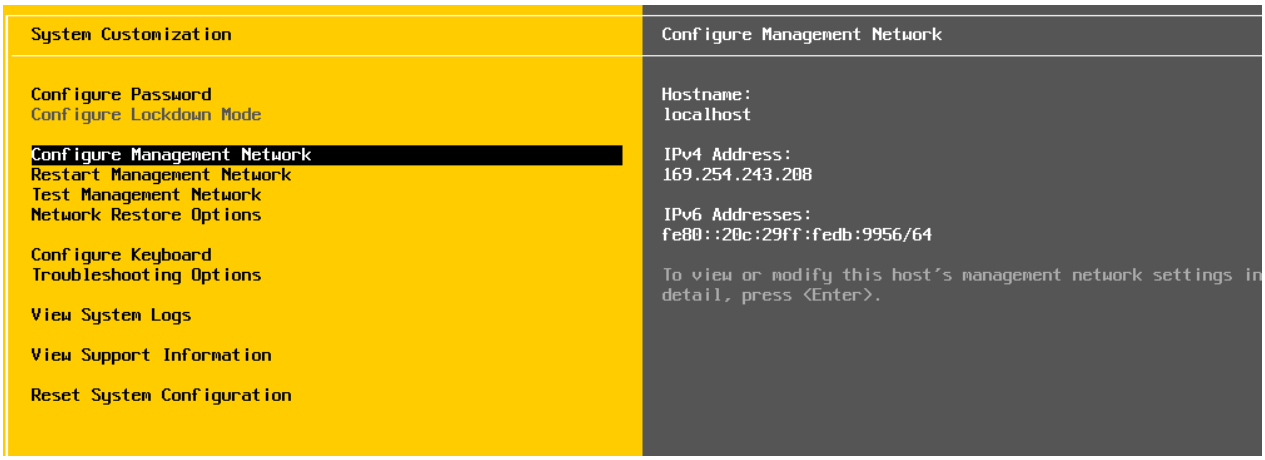
Login using root and password:



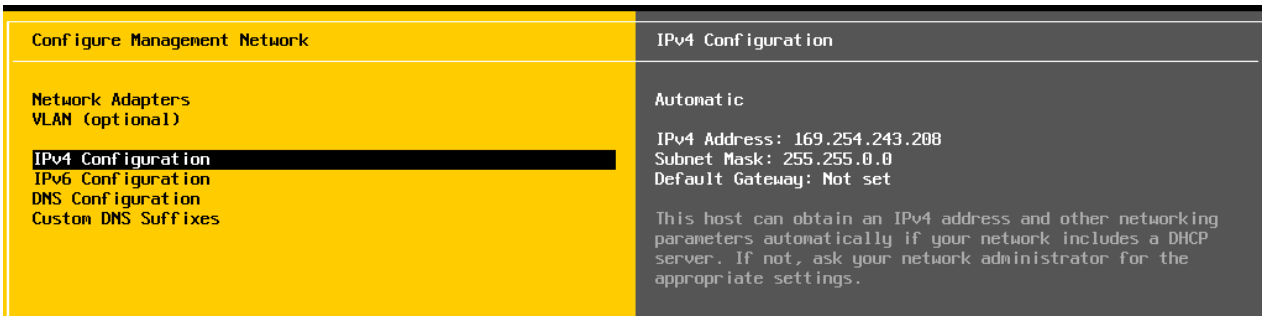
Edit IP address, subnet mask, hostname and DNS using DCUI console.



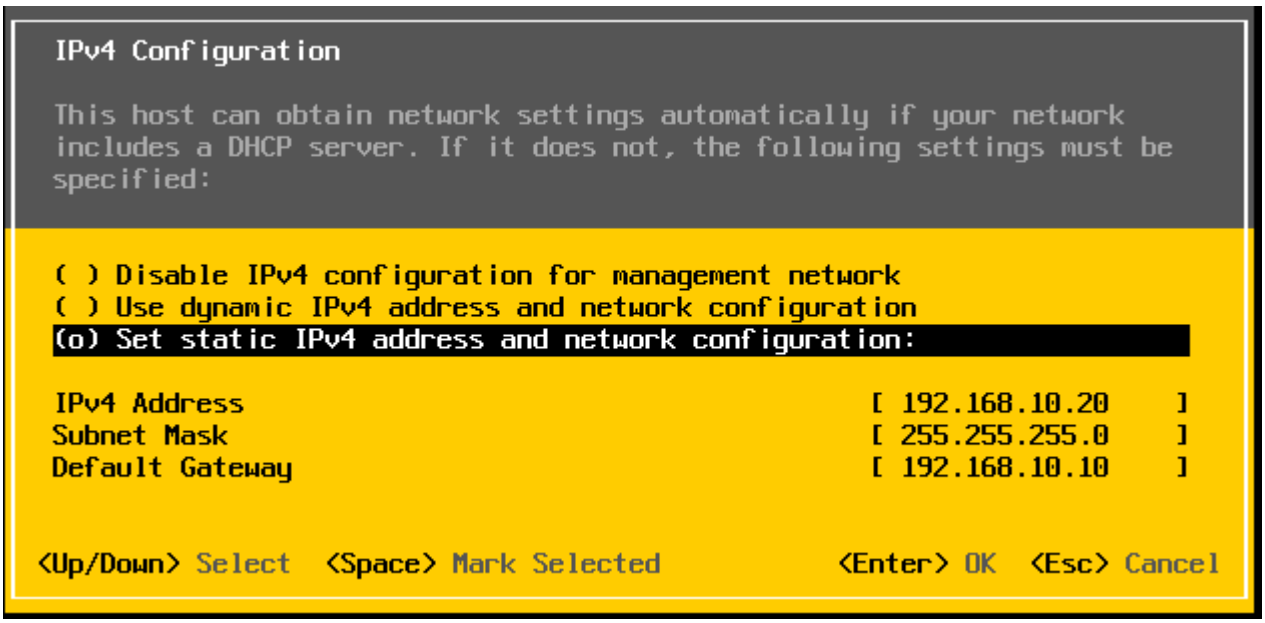
Select “Configure Management Network” and press ‘enter’ to change IP address:



Select IPv4 configuration and set IP address with subnet mask and default gateway:



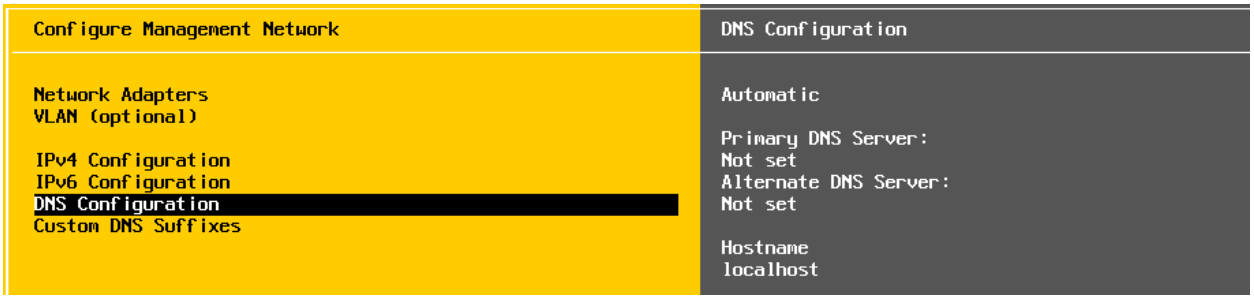
Select "Set static IPv4 address and network configuration"



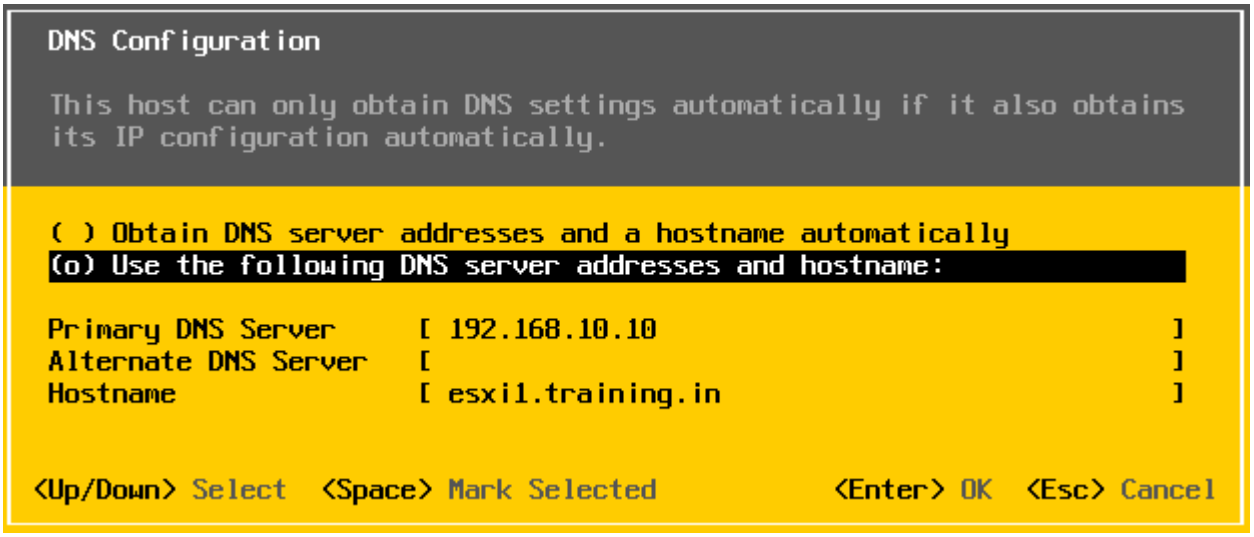
- ✓ IP Address: 192.168.10.20
- ✓ Subnet Mask: 255.255.255.0
- ✓ Default Gateway: 192.168.10.10 (IP address of DC)

And press "Enter"

Then, select “DNS Configuration” to set the Primary DNS Server and Hostname.

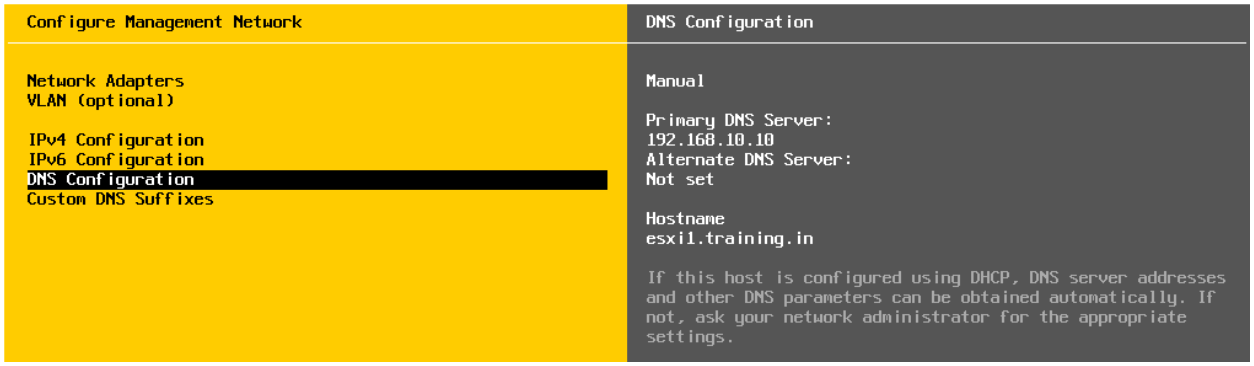


Select “Use the following DNS server addresses and hostname” and press “SPACE” button to enable the options and fill Primary DNS and Hostname (FQDN)

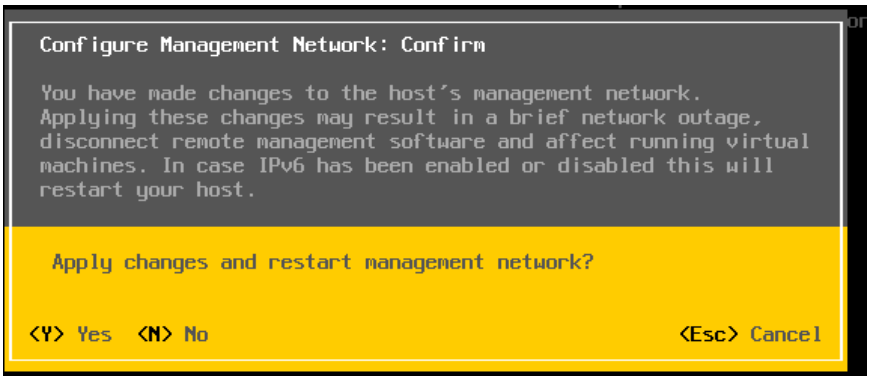


- ✓ Primary DNS: **192.168.10.10**
- ✓ Hostname: **esxi1.training.in**

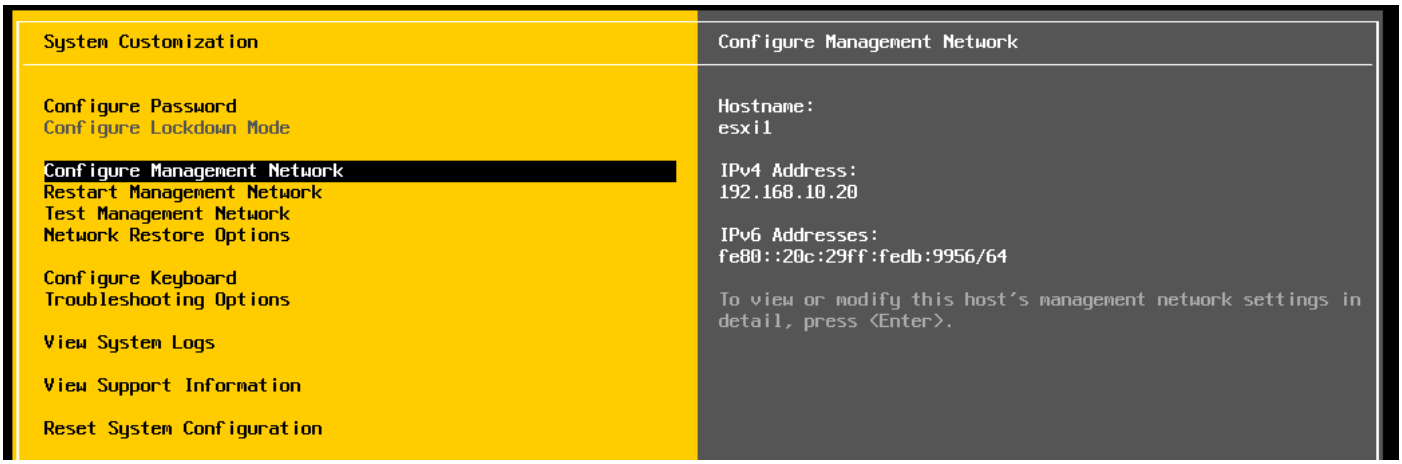
And verify:



Press “ESC button” to press “Y” to save and restart network management.

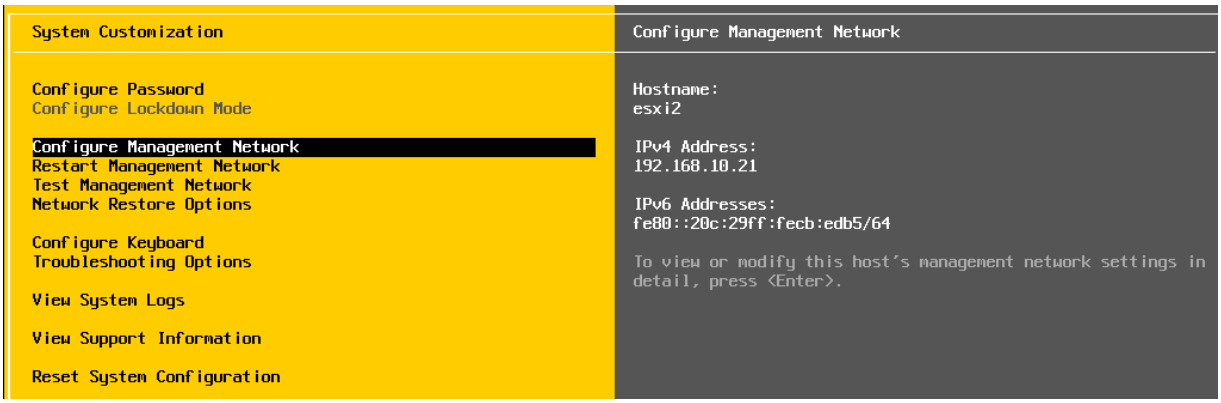


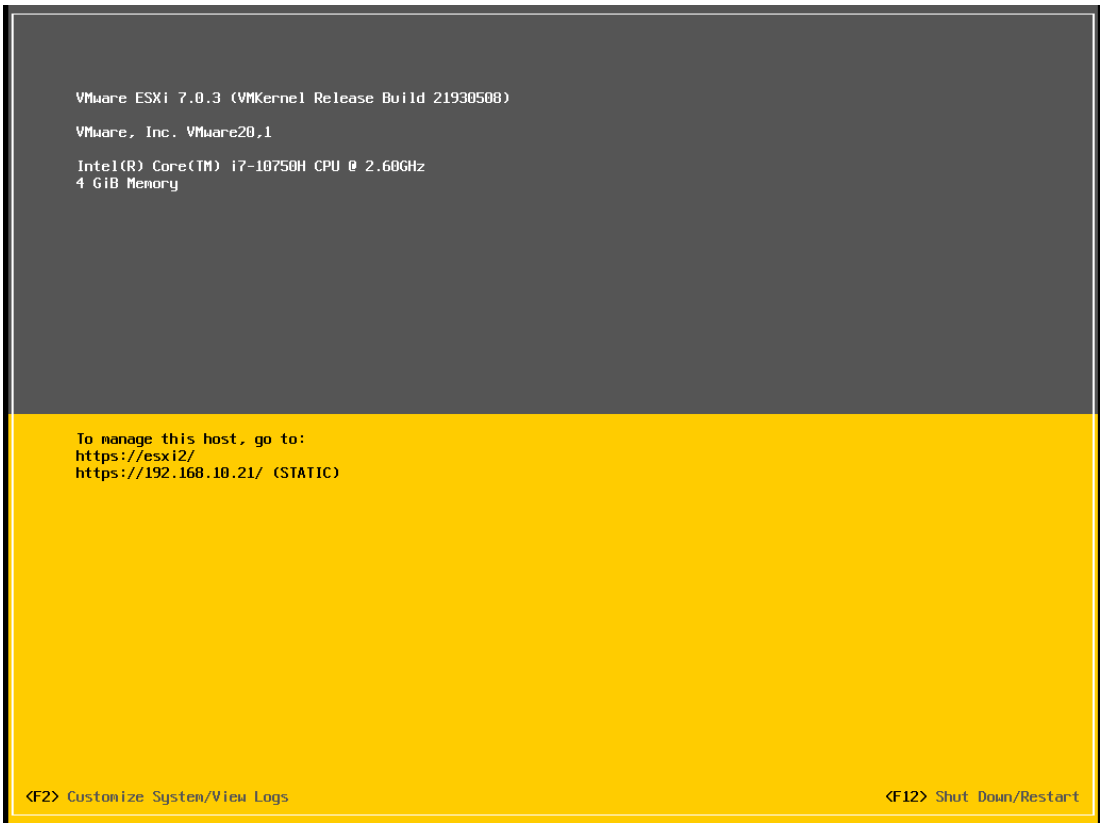
Verify:



Similarly, install 2nd ESXi host/server and set the IP address, subnet mask, default gateway and DNS.

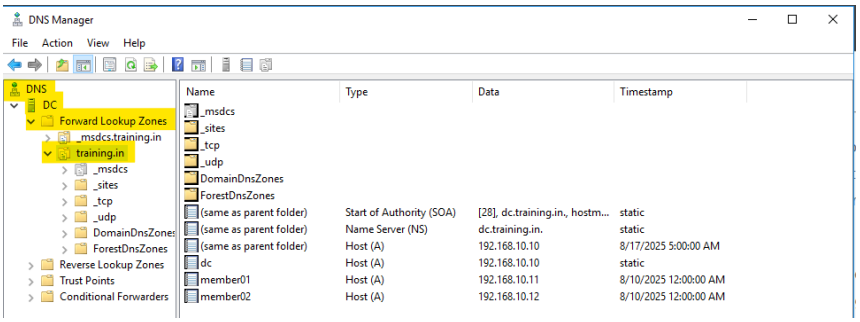
- ✓ Hostname: **esxi2.training.in**
- ✓ IP Address: **192.168.10.21**
- ✓ Subnet mask: **255.255.255.0**
- ✓ Default gateway: **192.168.10.10**
- ✓ Primary DNS Address: **192.168.10.10**



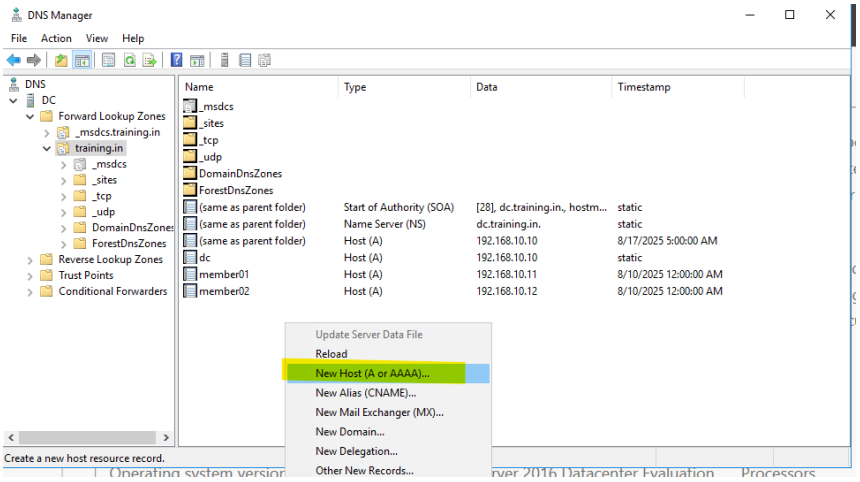


NOW ADDING ESXI1 AND ESXI2 RECORDS (A-RECORD) IN DC'S DNS SERVER.

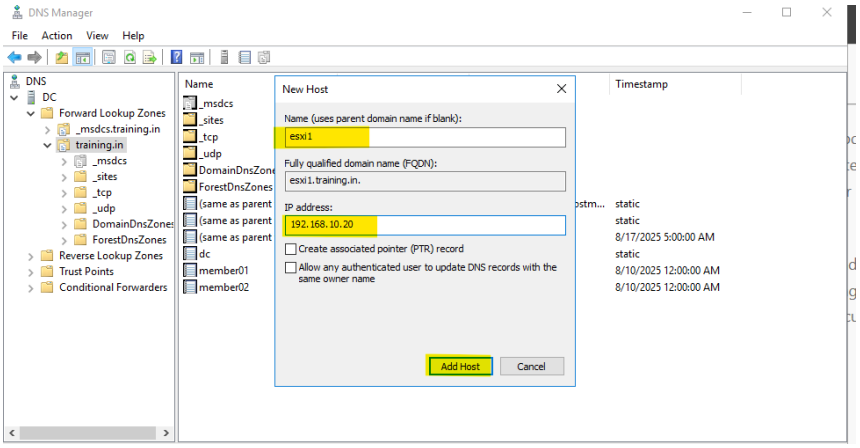
Go to Server Manager Dashboard page → Tools → DNS



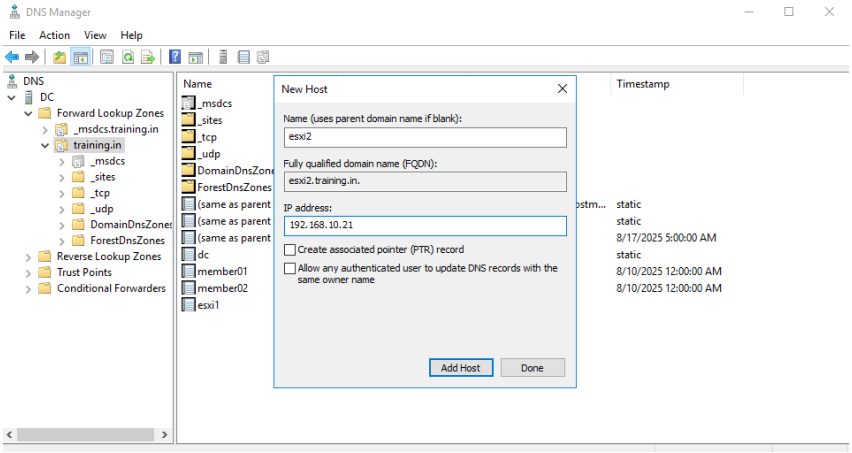
Adding A records for both ESXi servers.



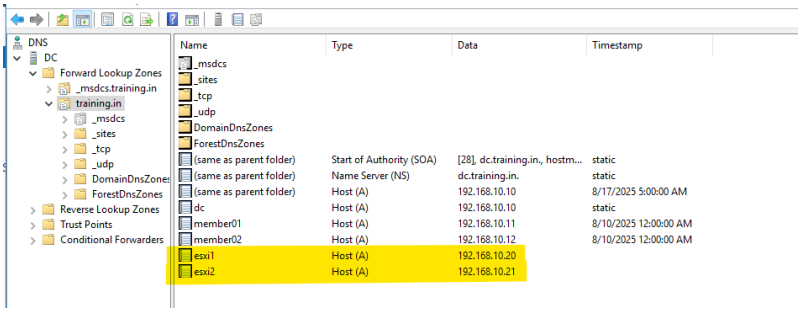
Adding 1st host:



Adding 2nd host:



Verify:

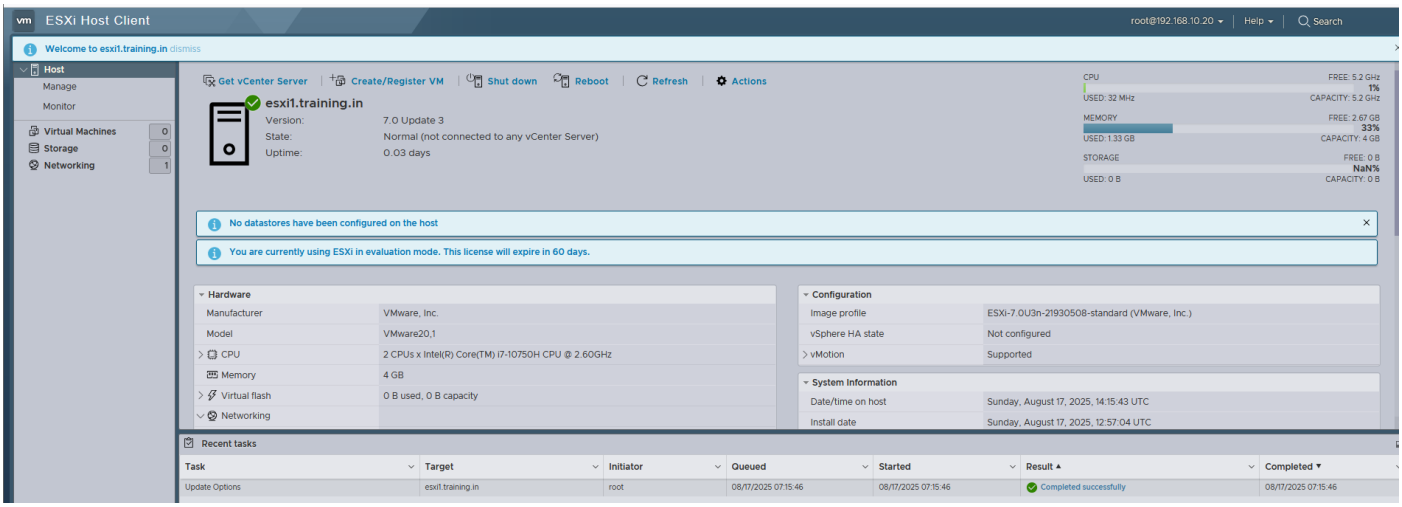


Ping both ESXi servers using name:

```
PS C:\Users\Administrator> ping esxi1

Pinging esxi1.training.in [192.168.10.20] with 32 bytes of data:
Reply from 192.168.10.20: bytes=32 time=1ms TTL=64
Reply from 192.168.10.20: bytes=32 time<1ms TTL=64
Reply from 192.168.10.20: bytes=32 time<1ms TTL=64
Reply from 192.168.10.20: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.10.20:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator> ping esxi2

Pinging esxi2.training.in [192.168.10.21] with 32 bytes of data:
Reply from 192.168.10.21: bytes=32 time=1ms TTL=64
Reply from 192.168.10.21: bytes=32 time<1ms TTL=64
Reply from 192.168.10.21: bytes=32 time<1ms TTL=64
Reply from 192.168.10.21: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.10.21:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
PS C:\Users\Administrator>
```

Accessing ESXi server using web browser (https://192.168.10.20) from DC:

Browse through the options:

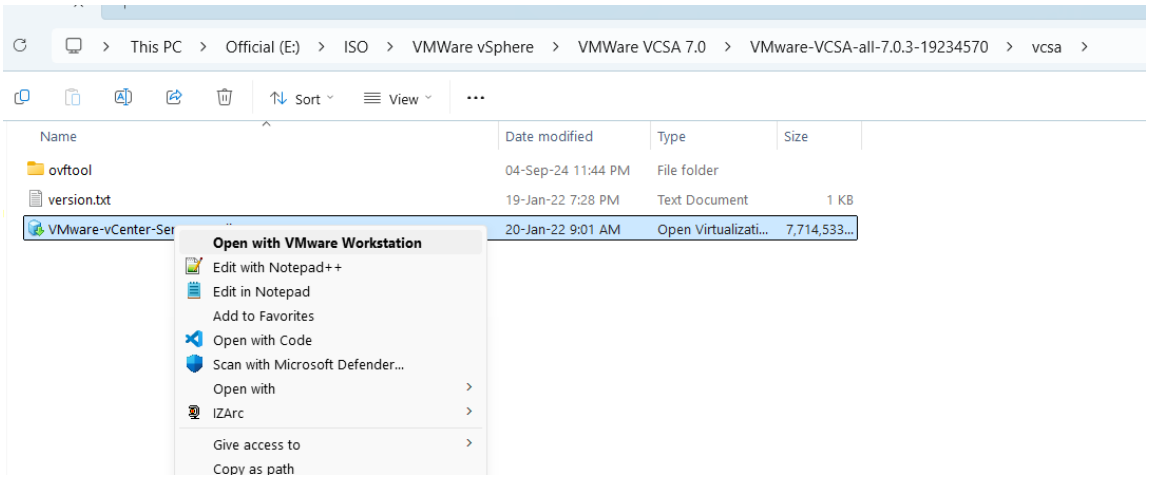


INSTALLING VMWARE VCENTER SERVER:

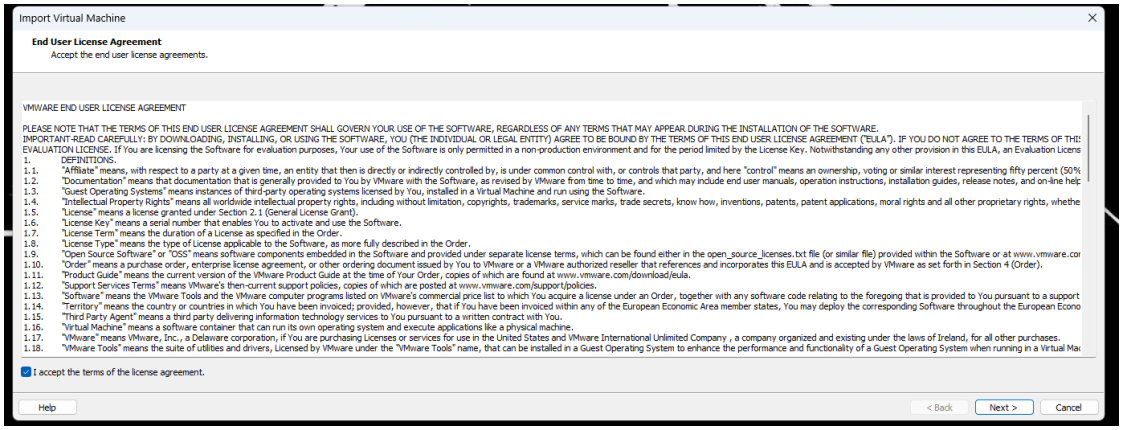
- ✓ For vCenter server installation, we will be using Appliance (VSCA), a linux-based vCenter server.
- ✓ There are 2 stages for installing center server.
  - Stage 1 – Deploy vCenter server
  - Stage 2 – Setting up vCenter server
- ✓ Follow this URL to follow detailed steps to install vCenter Server 8.0

Stage 1: Deploy vCenter server

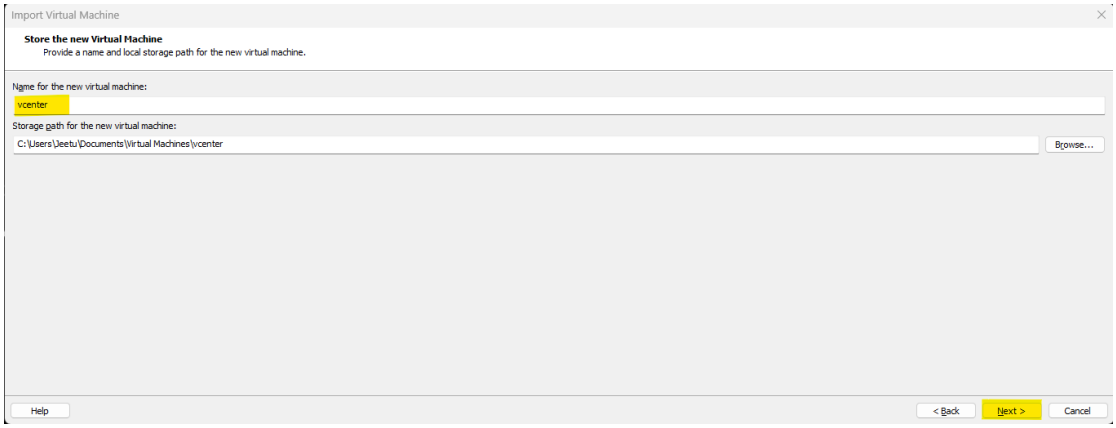
1. Import vCenter server using the installer ISO file.
   - Extract the ISO file and go to “VMWare VCSA 7.0\VMware-VCSA-all-7.0.3-19234570\vcsa” path. And right-click on it and open it in VMWare workstation.



2. Accept the EULA and click “Next”:

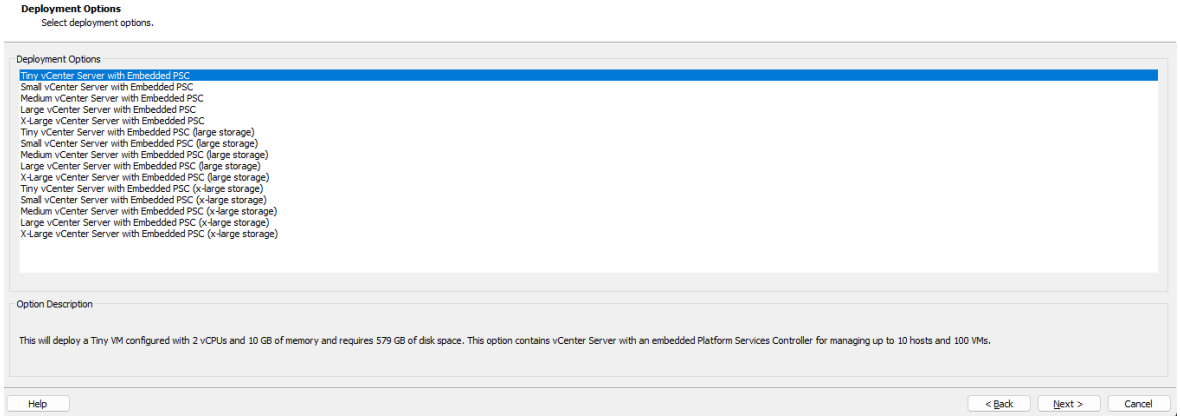


3. Provide a name for the vCenter VM:

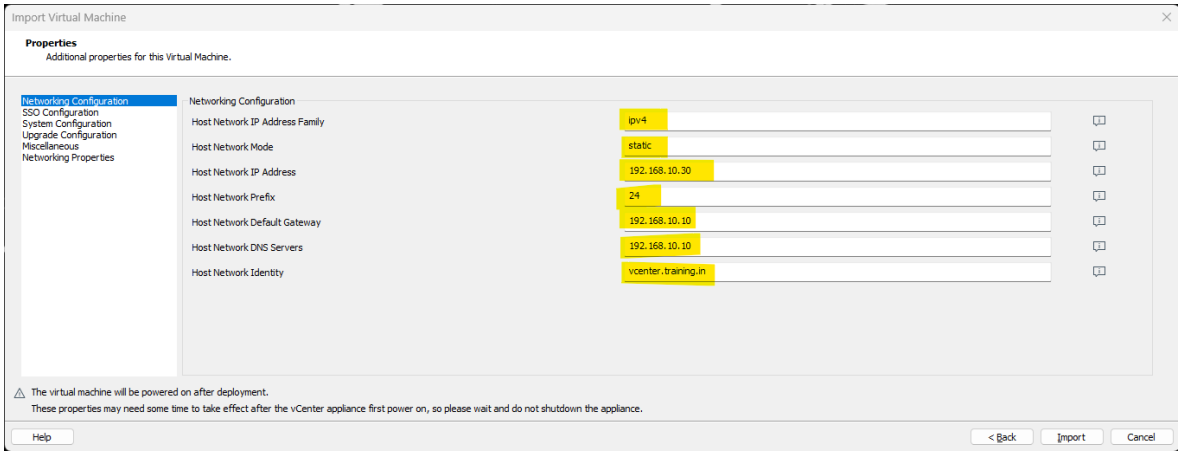


And then click “Next”.

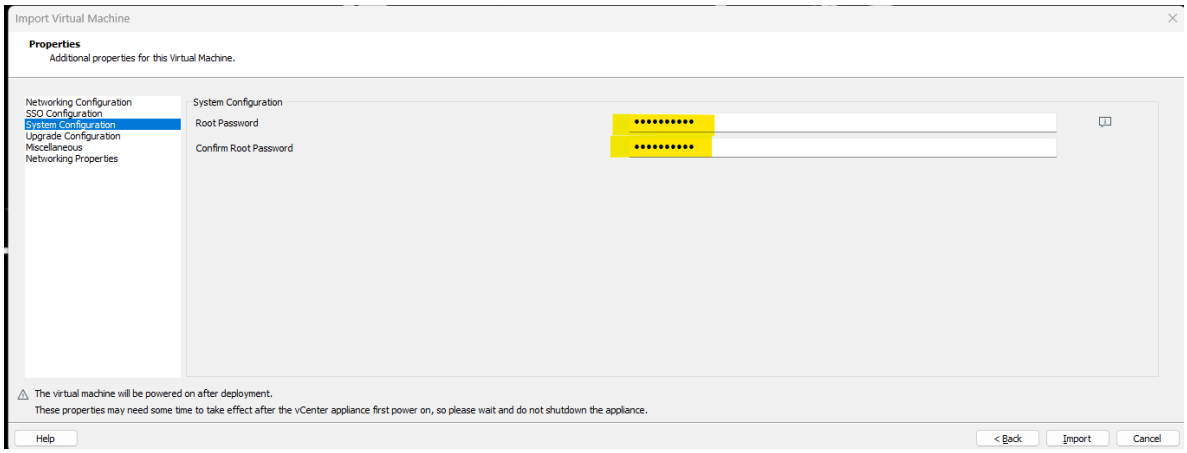
4. Select the deployment option as “Tiny vCenter Server”:



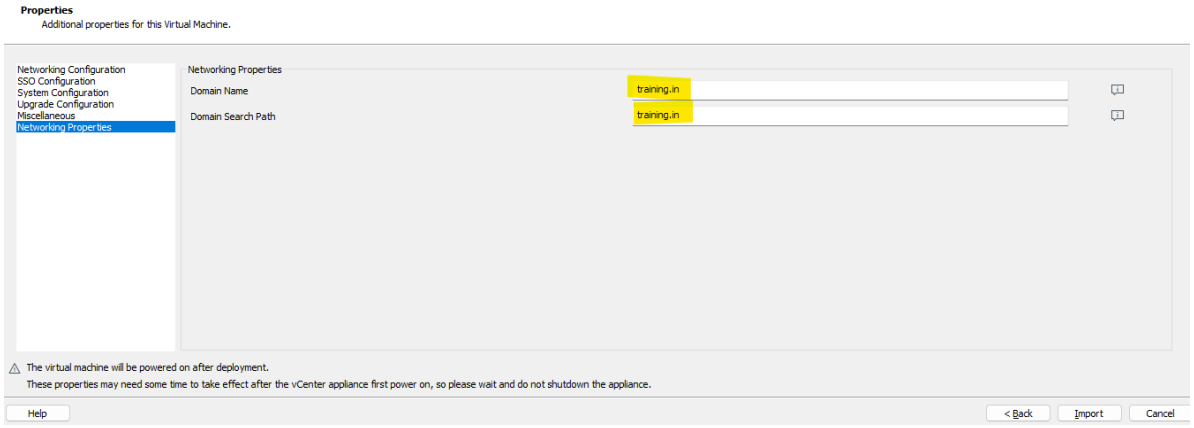
5. Fill the Networking configuration properties properly:



6. Now go to “System Configuration” properties and fill the password for vCenter server:



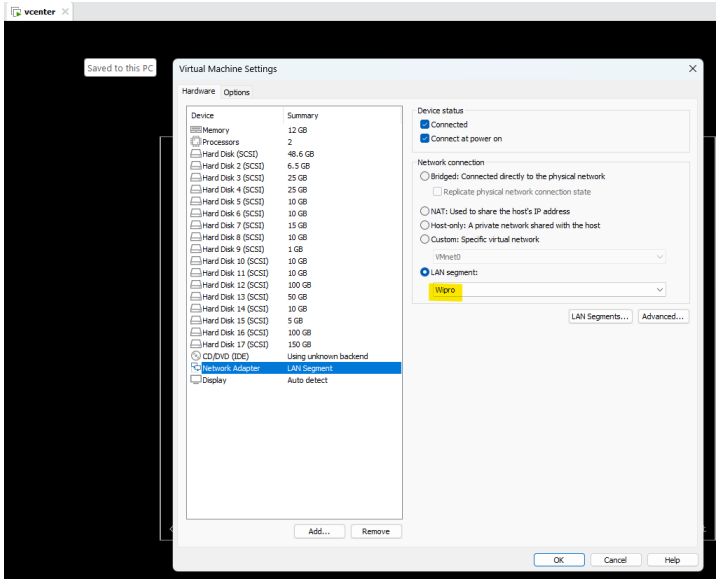
7. Now go to “Networking Properties” and type domain name:



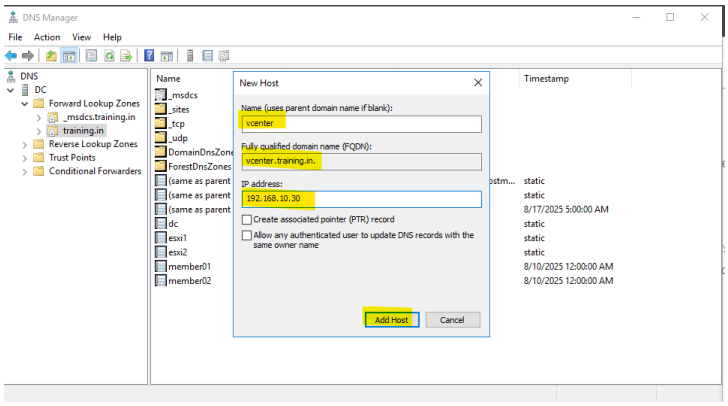
8. Then click on import and wait.

Note:

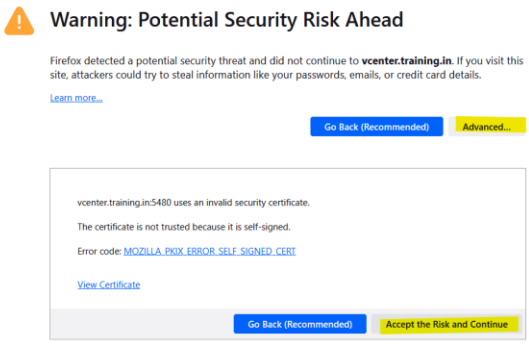
- ✓ Ensure that vCenter server is in the same Lan Segment as DC and ESXi.



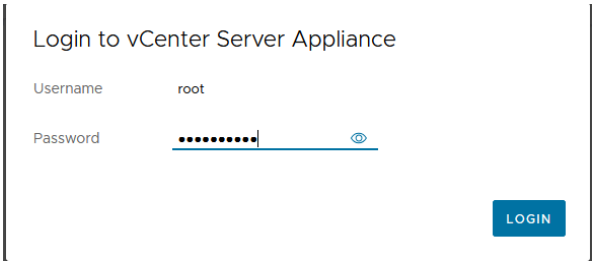
- ✓ Create a DNS record for vCenter server within DC.



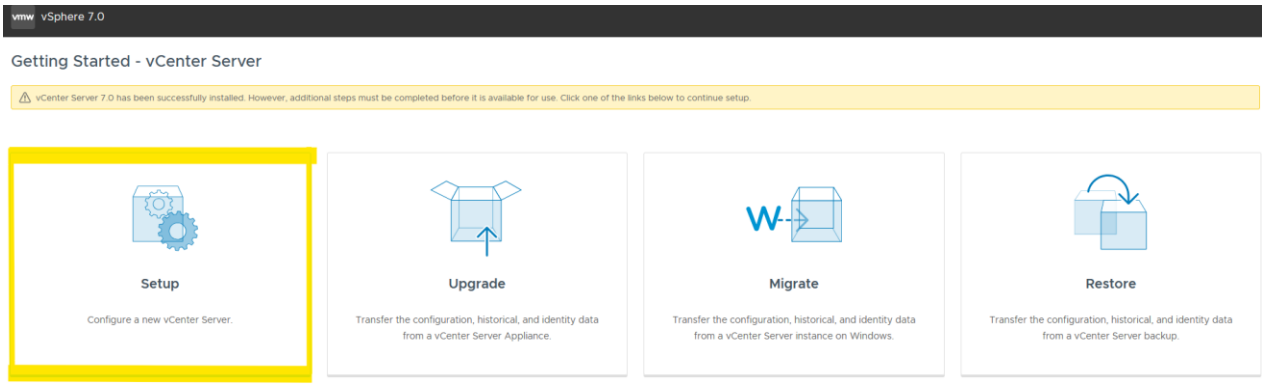
- ✓ Now access the vCenter server using the management port (https://vcenter.training.in:5480) for stage 2



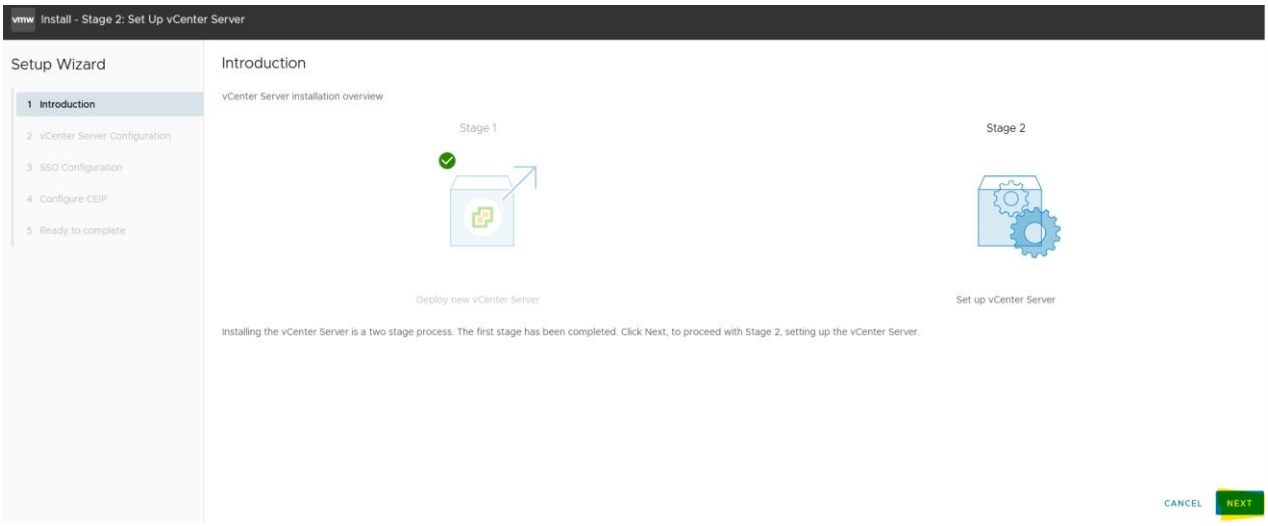
Type the password give during the installation:



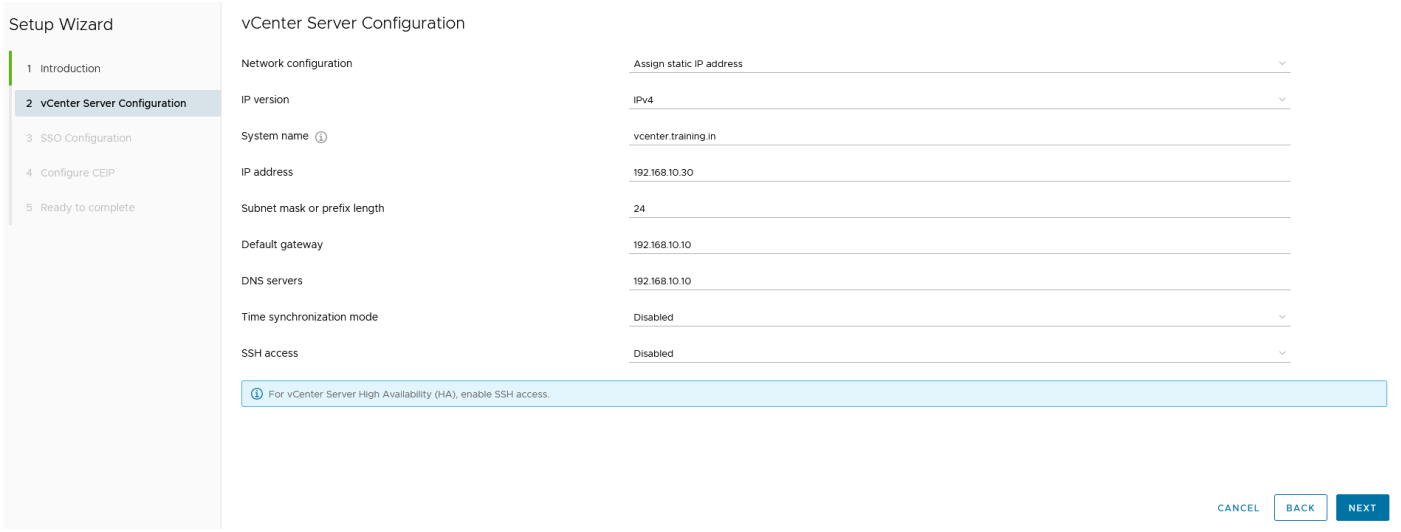
Now, to install/setup vCenter server select “Setup”:



Click “Next” to start stage 2:

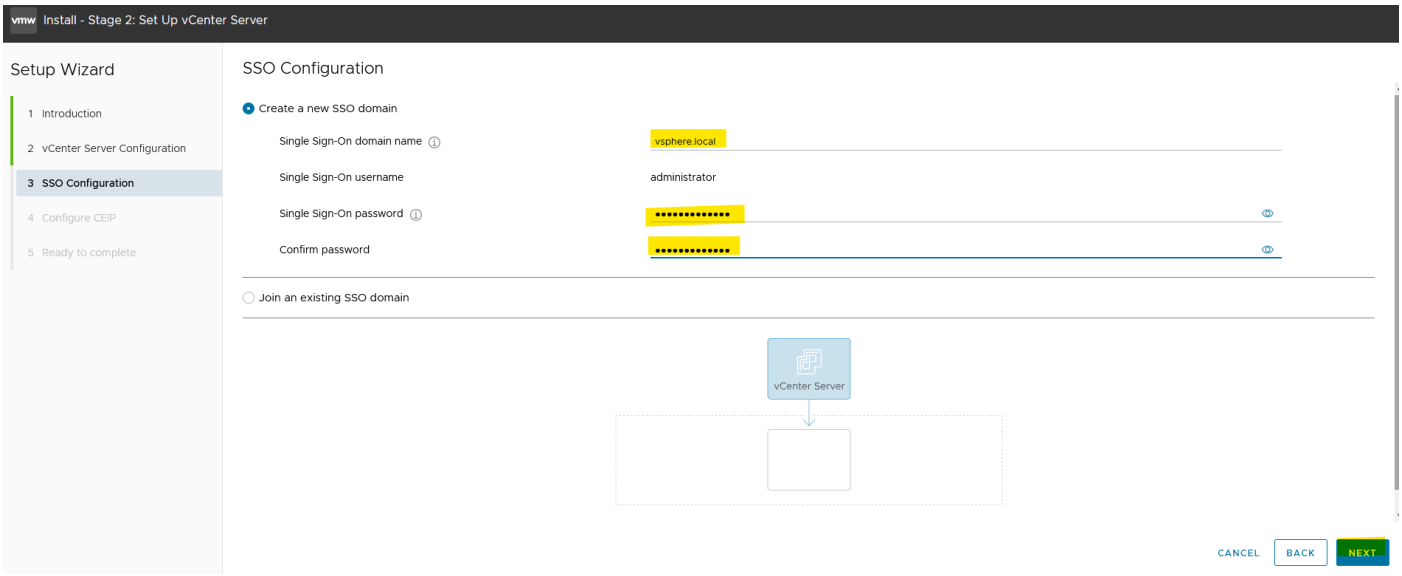


Verify all details and click Next:



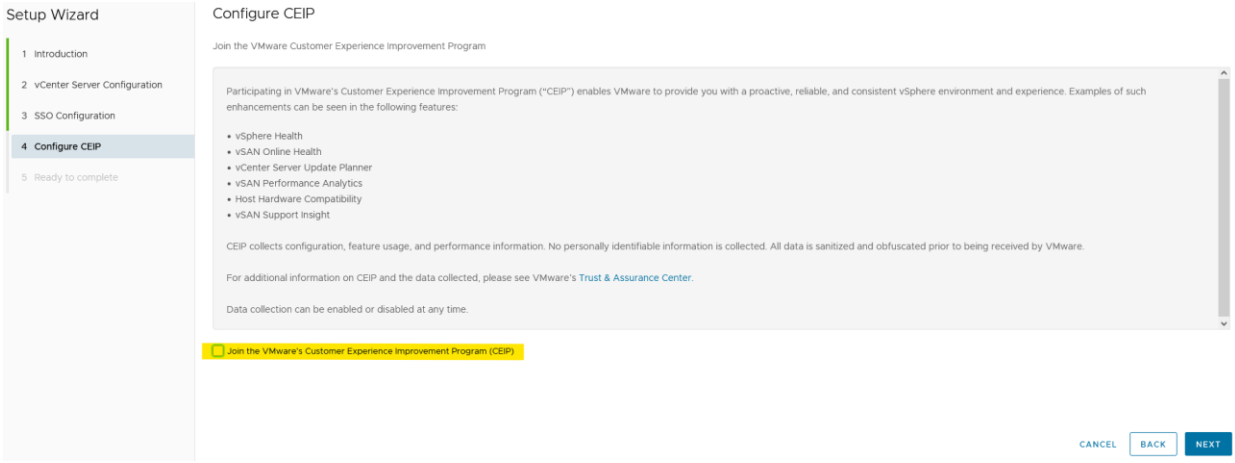
To configure SSO, provide a SSO domain name and a strong password.

Select “Create a new SSO domain”:

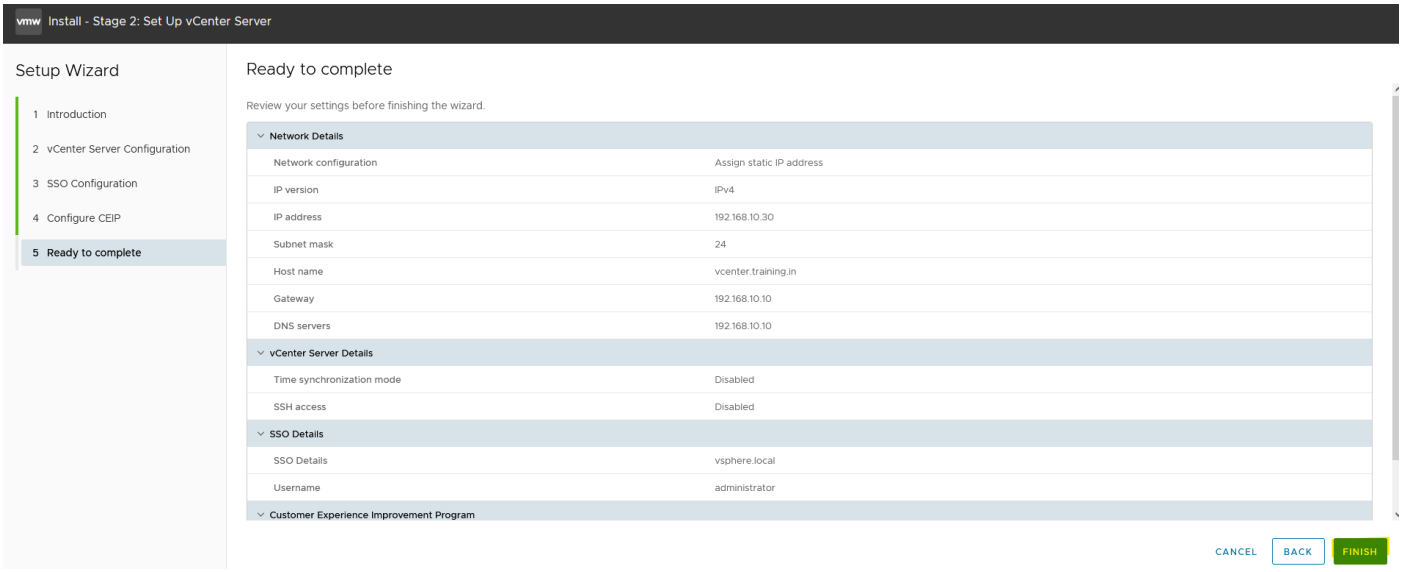


- ✓ SSO domain name**: vsphere.local** (default domain)
- ✓ User name: **Administrator** (default)
- ✓ Password: **Pa##w0rd12345** (type ant pwd of your choice)

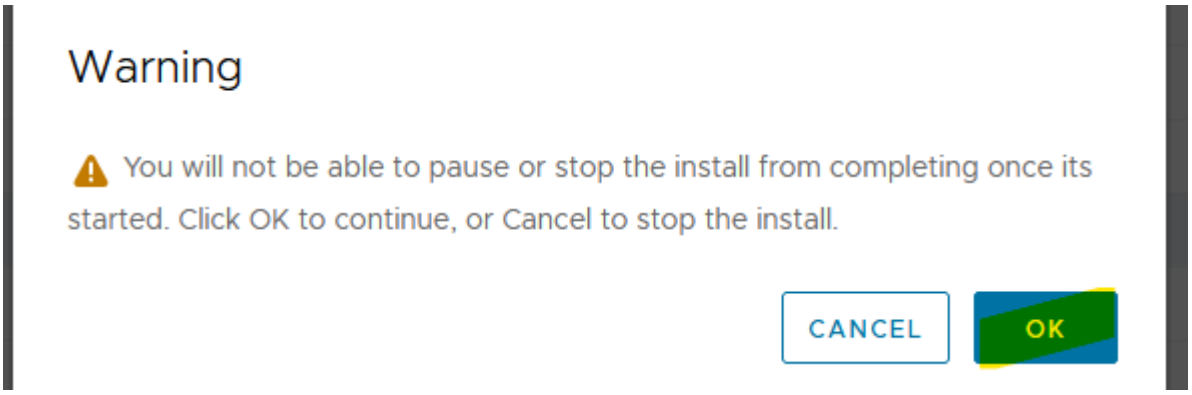
Untick “Join CEIP program” (optional) and click Next:



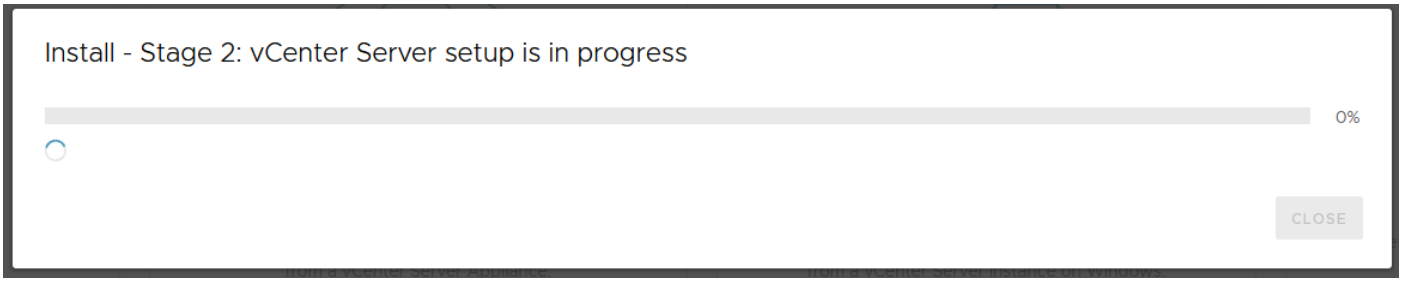
Verify all the details and click “Finish”

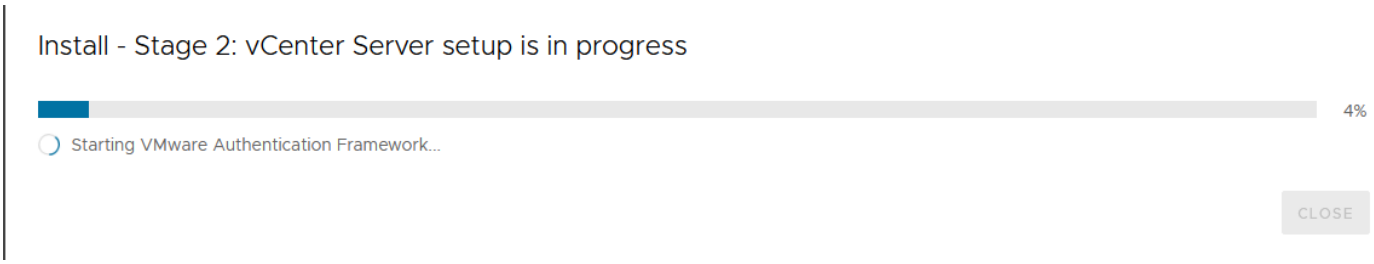


Click “OK”:



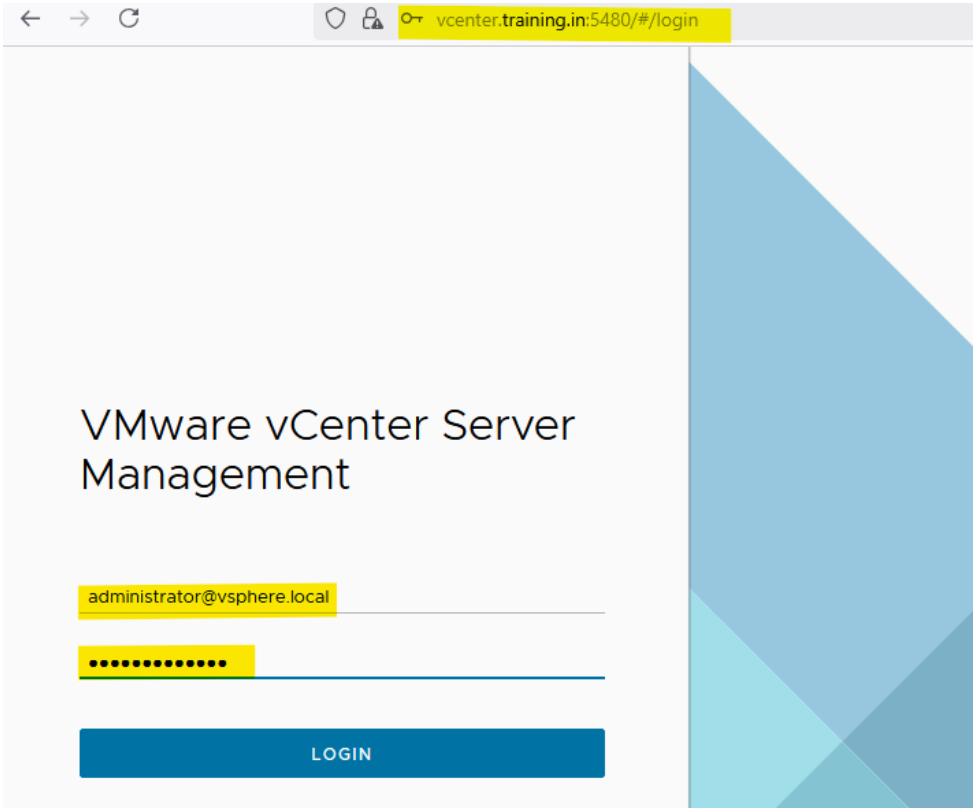
Installation starts (wait until its done):



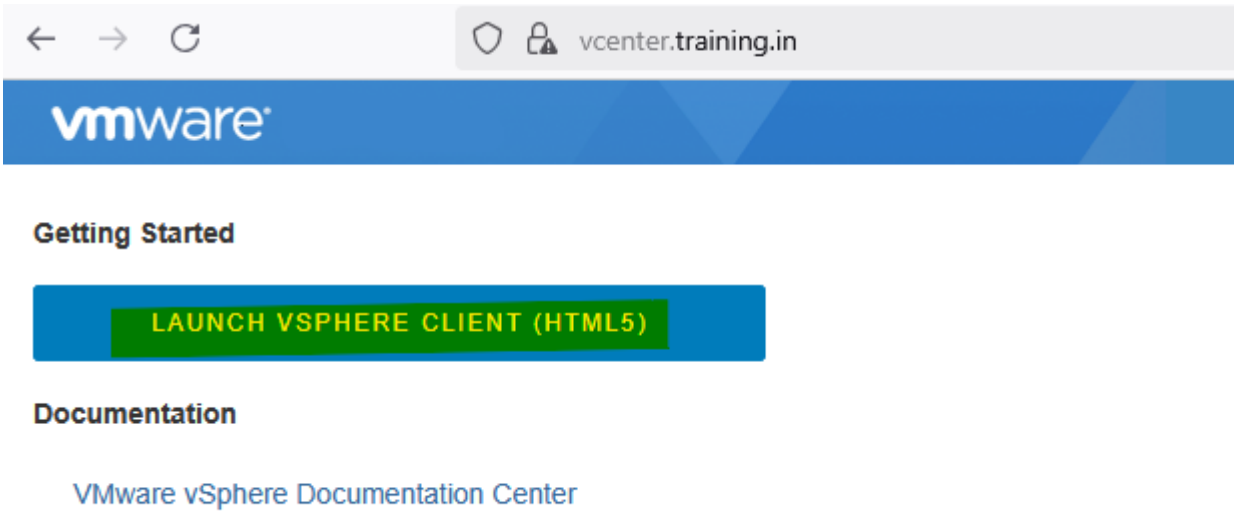


Note: if it fails at any stage, complete stage 1 and 2 are to repeat again.

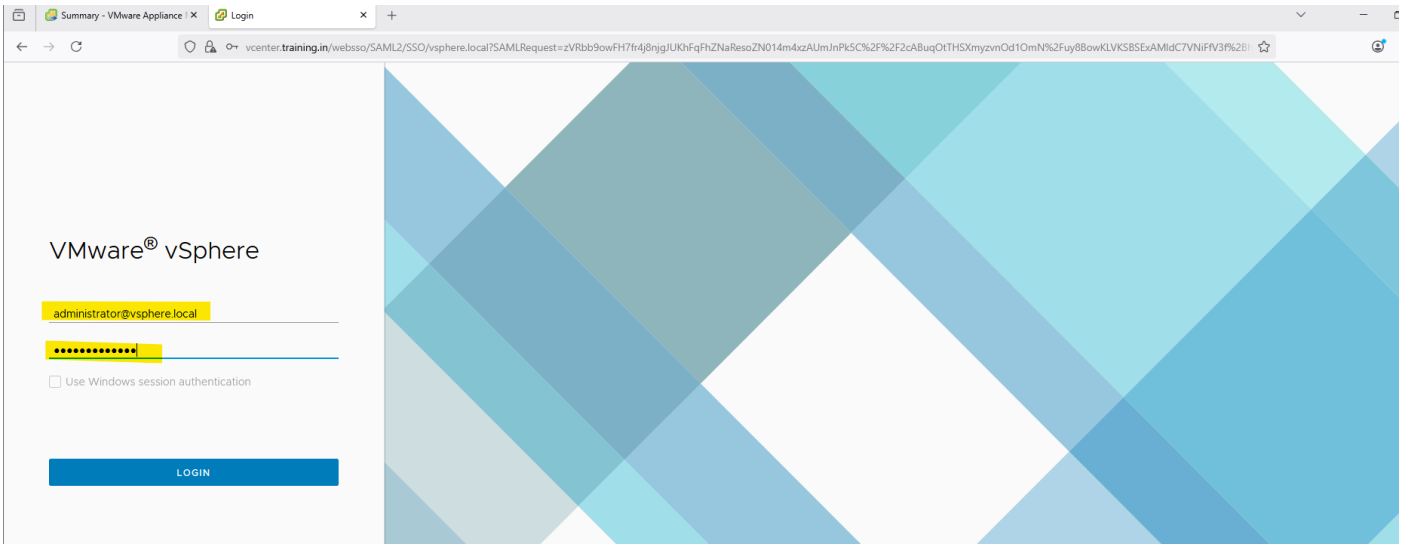
After successful installation, login with SSO username and password.



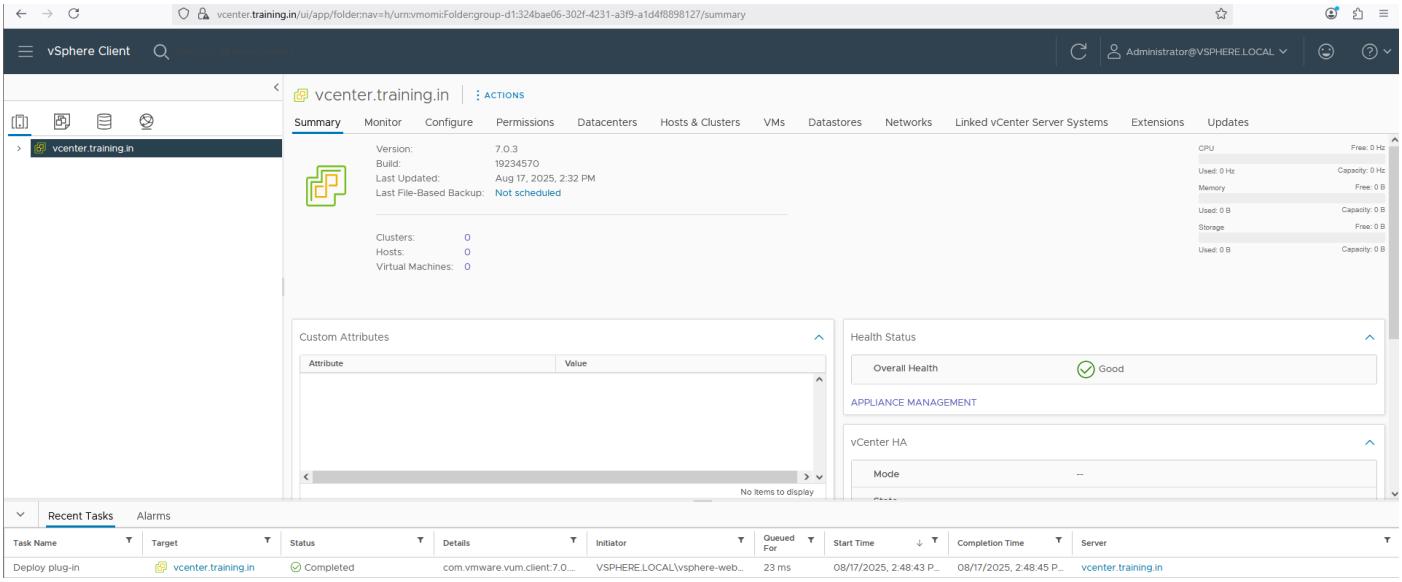
Now login to https://vcenter.training.in:443 to manage the vCenter environment.



Login with same credentials:


Summary - VMware Appliance
Login
vcenter.training.in/websso/SAML2/SSO/vsphere.local?SAMLRequest=zVRbb9owFH7fr4j8njgJUKhFqFhZNaResoZN014m4xzAUmJnPk5C%2F%2F2cABuqOtTHSXmyzvnOd1OmN%2Fuy8BowKLVKSBSExAMIdC7VNiFfV3f%2B
VMware® vSphere
administrator@vsphere.local
Use Windows session authentication
LOGIN

Dashboard:


vcenter.training.in/ui/app/folder;nav=h/urn:vmomi:Folder:group-d1:324bae06-302f-4231-a3f9-a1d4f8898127/summary
vSphere Client
Administrator@VSPHERE.LOCAL
vcenter.training.in
ACTIONS
Summary
Monitor
Configure
Permissions
Datacenters
Hosts & Clusters
VMs
Datastores
Networks
Linked vCenter Server Systems
Extensions
Updates
Version: 7.0.3
Build: 19234570
Last Updated: Aug 17, 2025, 2:32 PM
Last File-Based Backup: Not scheduled
Clusters: 0
Hosts: 0
Virtual Machines: 0
Custom Attributes
Attribute
Value
No items to display
Health Status
Overall Health
Good
APPLIANCE MANAGEMENT
vCenter HA
Mode
Recent Tasks
Alarms
Task Name
Target
Status
Details
Initiator
Queued For
Start Time
Completion Time
Server
Deploy plug-in
vcenter.training.in
Completed
com.vmware.vum.client:7.0....
VSPHERE.LOCAL\vsphere-web...
23 ms
08/17/2025, 2:48:43 P...
08/17/2025, 2:48:45 P...
vcenter.training.in