

Practical No : 05

Practical Title: Setup your own cloud for Software as a Service (SaaS) over the existing LAN in your laboratory. In this assignment you have to write your own code for cloud controller using open-source technologies to implement with HDFS. Implement the basic operations may be like to divide the file in segments/blocks and upload/ download file on/from cloud in encrypted form.

Objectives:

- To set your own cloud for SaaS over existing LAN
- To implement the basic operations may be like to divide the file in segments/blocks

Hardware Requirements :

- Pentium IV with latest configuration

Software Requirements :

- Ubuntu 20.04, VMwareESXi cloud

Theory:

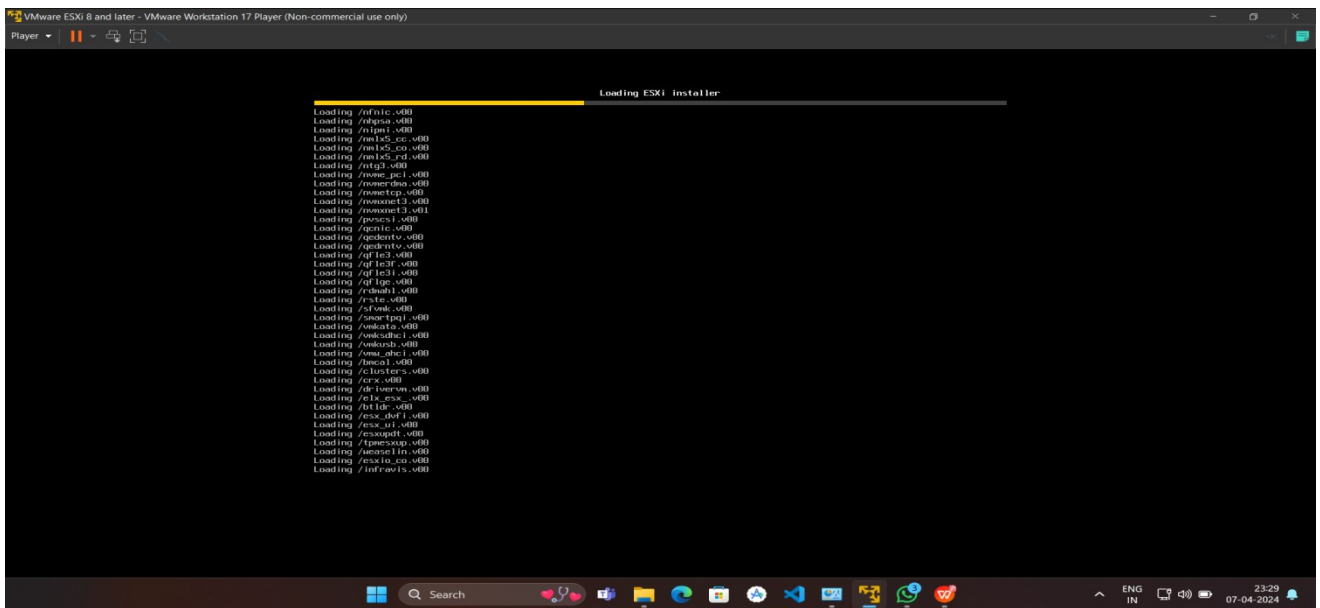
Here we are installing VMwareESXi cloud

Host/NodeESXi installation:-

ESXiHardwareRequirements:-

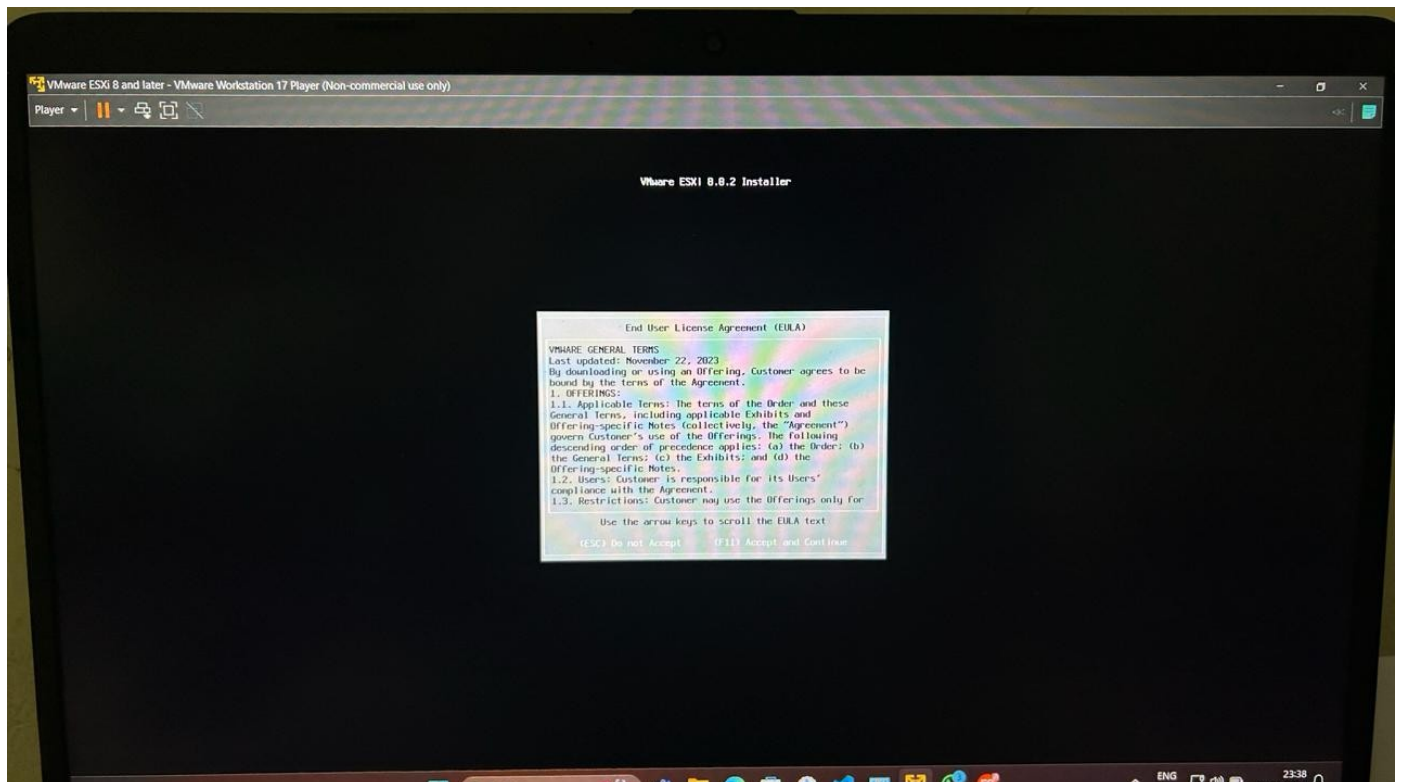
- ESXi6.7requiresahostmachinewithatleasttwoCPUcores.
- ESXi6.7supports64-bitx86processors
- ESXi6.7requirestheNX/XDbit to be enabled for the CPU in the BIOS.
- ESXi6.7requiresaminimumof4GBofphysicalRAM.Itisrecommended to provide atleast 8 GB of RAM to run virtual machines in typical productionenvironments.
- Tosupport64-bitvirtualmachines,support for hardware virtualization (IntelVT-xor AMDRVI) mustbeenabledonx64CPUs.
- One or more Gigabit or faster Ethernet controllers. For a list of supportednetwork adapter models.
- SCSI disk oralocal,non-network,RAIDLUN with unpartitioned space for the virtualmachines.

ForSerialATA(SATA), a disk connected through supported SAS controller or supported on board SATA controllers. SATA disks are considered remote not local. These disks are not used as a scratch partition by default because they are seen as remote.

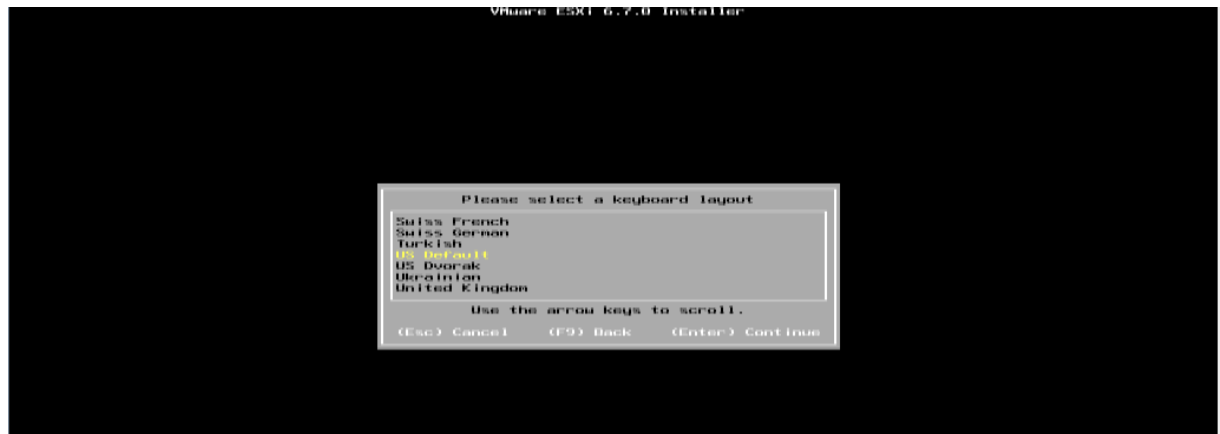


ESXiInstaller:

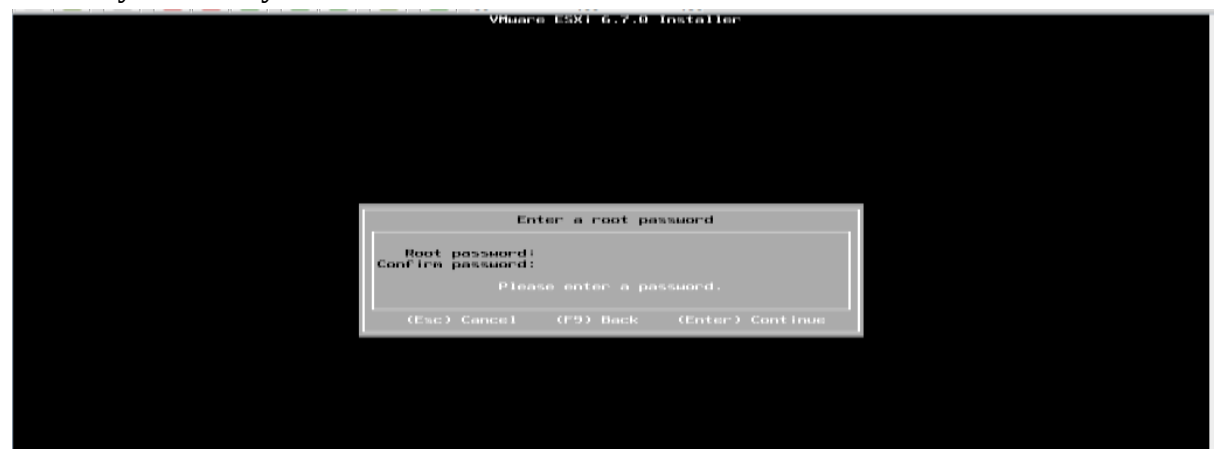
Accept Agreement:



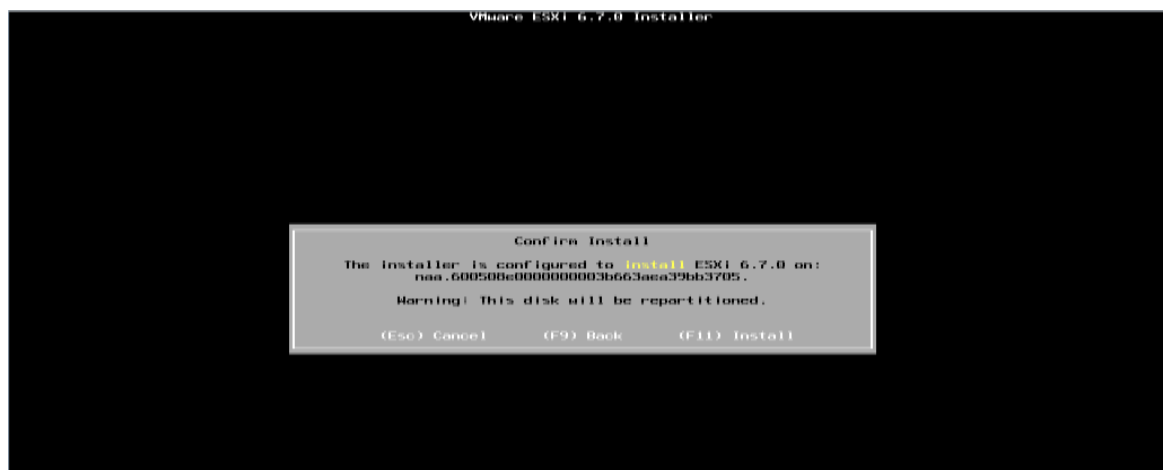
Select storage :



Select Keyboard Layout :



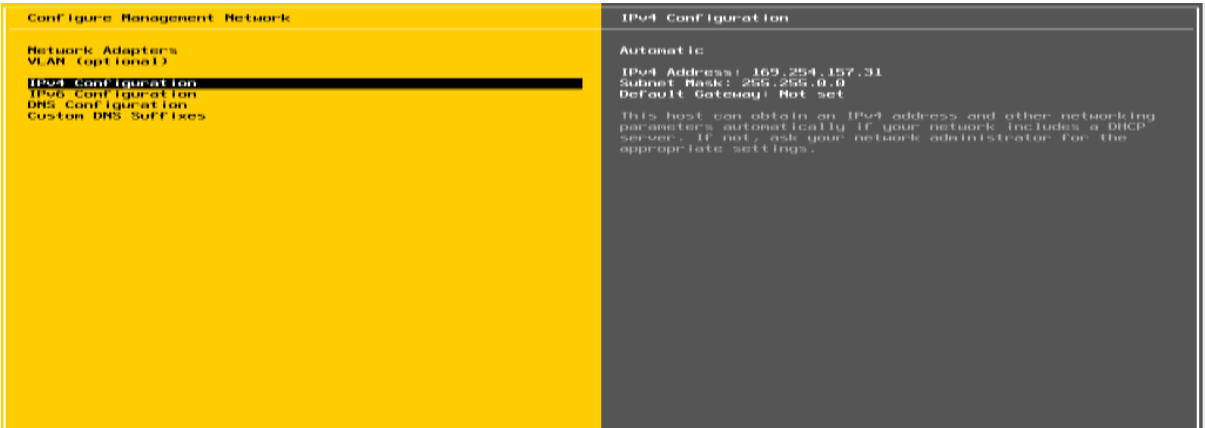
Set NodeESXi Root Password :



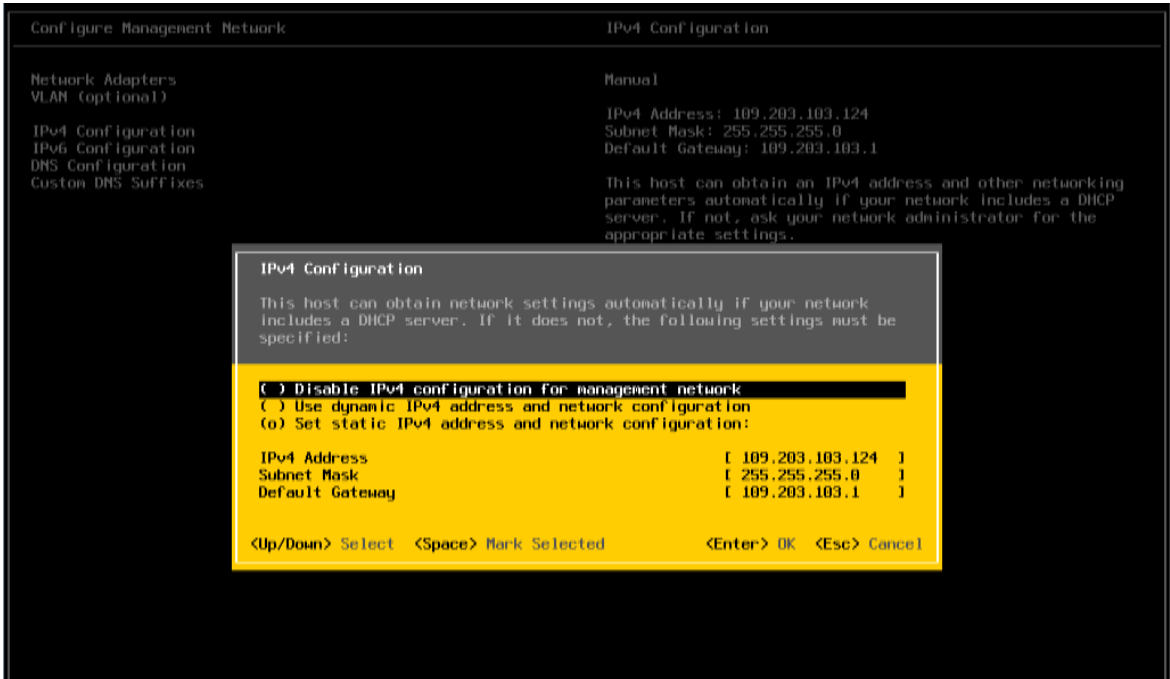
Installation complete (Reboot)CLII interface to configuration



CLI Interface to Configuration:



Configure Management Network



Set IPV4

Configure Management Network	DNS Configuration
Network Adapters VLAN (optional)	Manual
IPv4 Configuration	Primary DNS Server: 8.8.8.8
IPv6 Configuration	Alternate DNS Server: 1.1.1.1
DNS Configuration	Hostname localhost
Custom DNS Suffixes	If this host is configured using DHCP, DNS server addresses are obtained automatically. If not, the appropriate settings must be entered manually.

DNS Configuration

This host can only obtain DNS settings automatically if it also obtains its IP configuration automatically.

☒ Obtain DNS server addresses and a hostname automatically

☐ Use the following DNS server addresses and hostname:

Primary DNS Server	[8.8.8.8]
Alternate DNS Server	[1.1.1.1]
Hostname	[localhost]

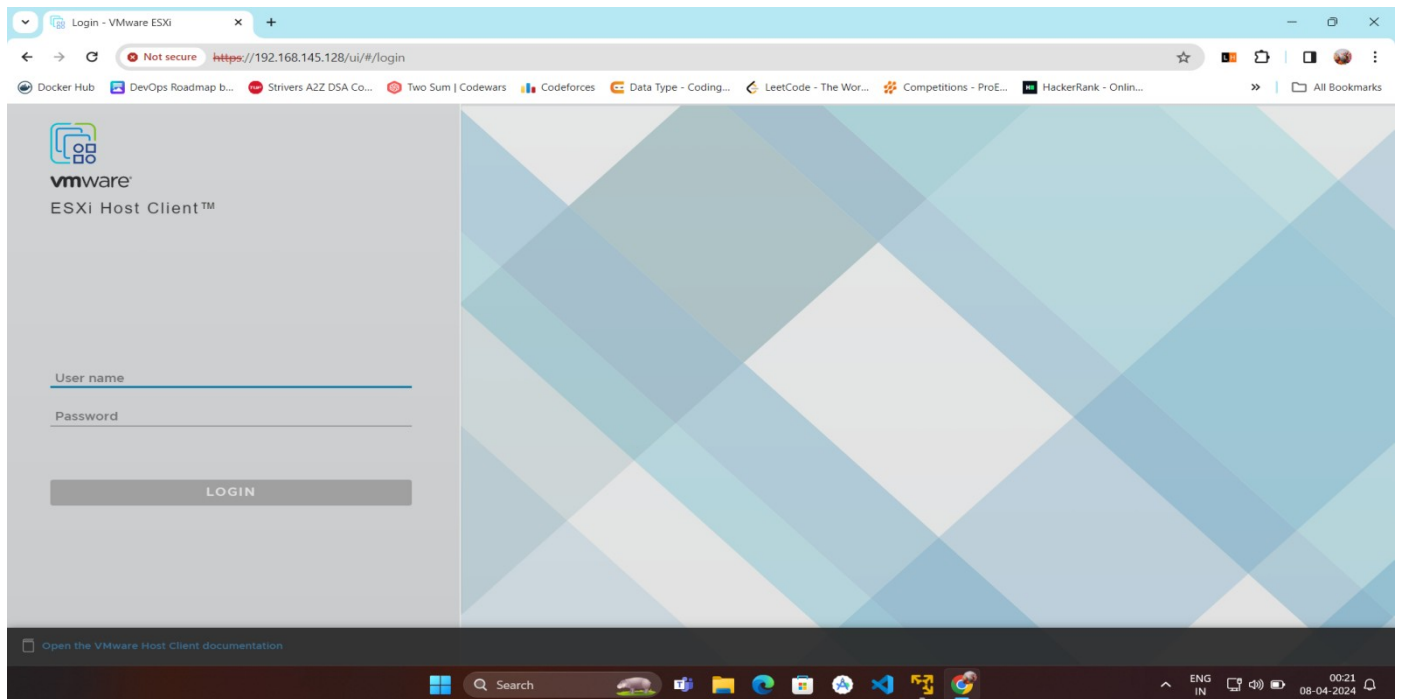
<Up/Down> Select <Space> Mark Selected <Enter> OK <Esc> Cancel

Set DNServer :

Restart Management Network

System Customization	Restart Management Network
Configure Password	Restarting the management network interface may be required to restore networking or to renew a DHCP lease.
Configure Lockdown Mode	
Configure Management Network	Restarting the management network will result in a brief network outage that may temporarily affect running virtual machines.
Restart Management Network	Note: If a renewed DHCP lease results in a new network identity (e.g., IP address or hostname), remote management software will be disconnected.
Test Management Network	
Network Restore Options	
Configure Keyboard	
Troubleshooting Options	
View System Logs	
View Support Information	
Reset System Configuration	

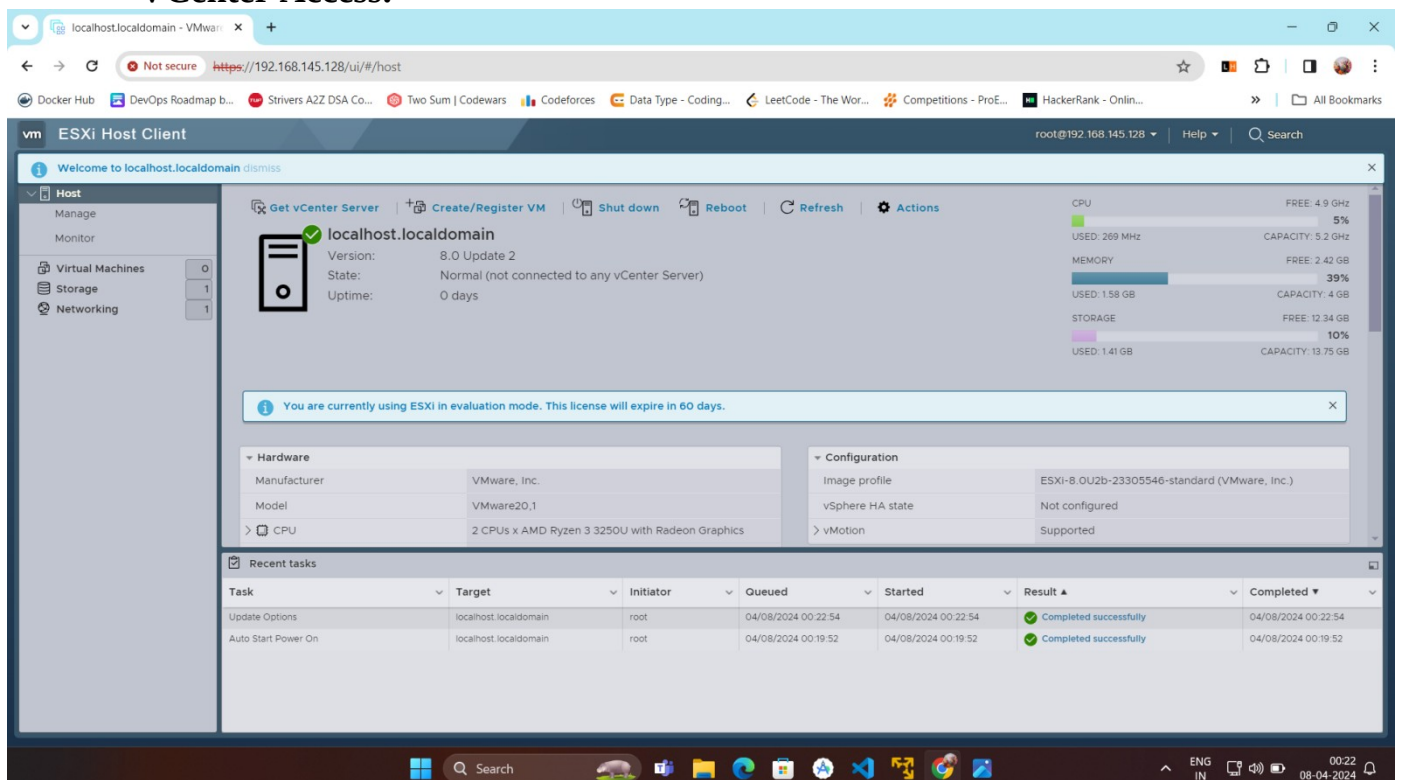
GUIAccess :



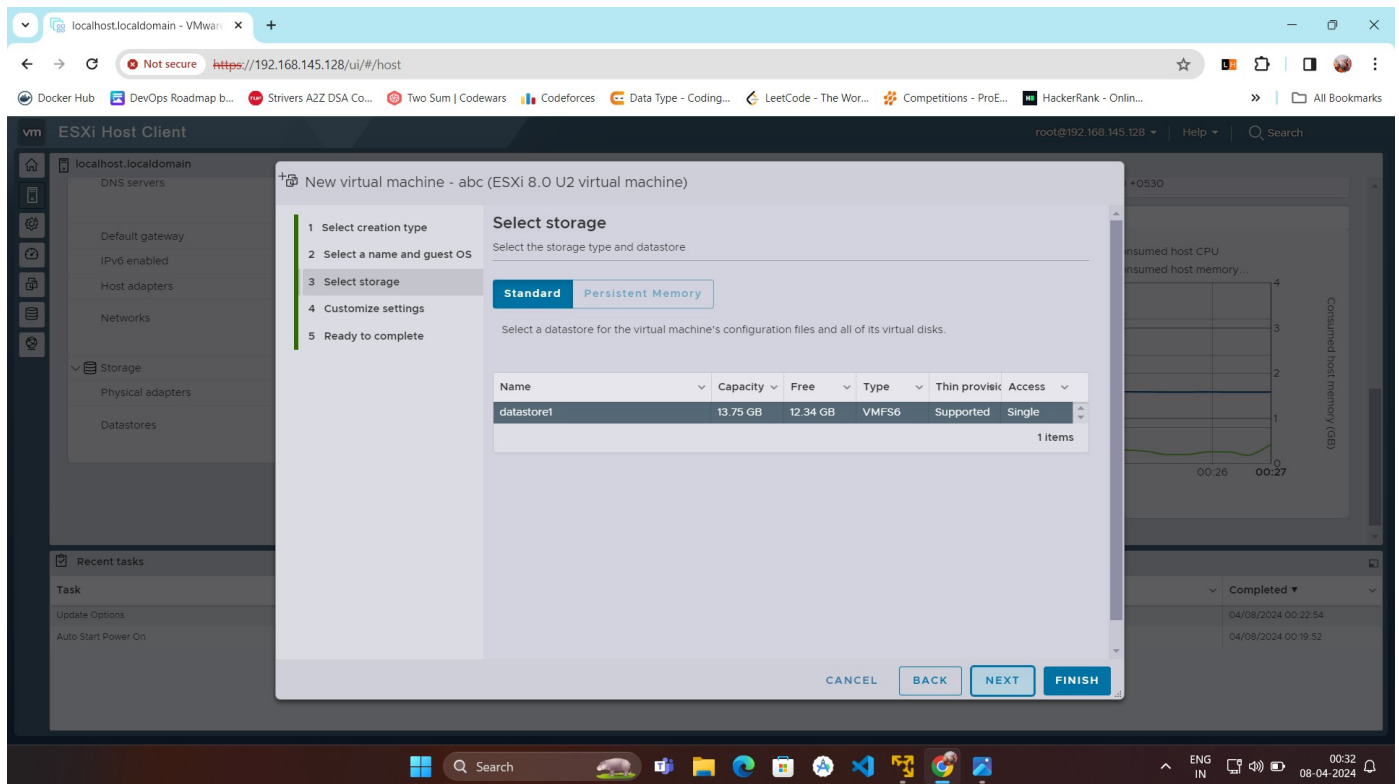
ClusterSetup

- **CreatingDatacenter**
- **CreatingCluster**
- **Adding Hosts incluster**
- **Resourcesafteraddingcluster.**
- **DRS**
- **Failover**

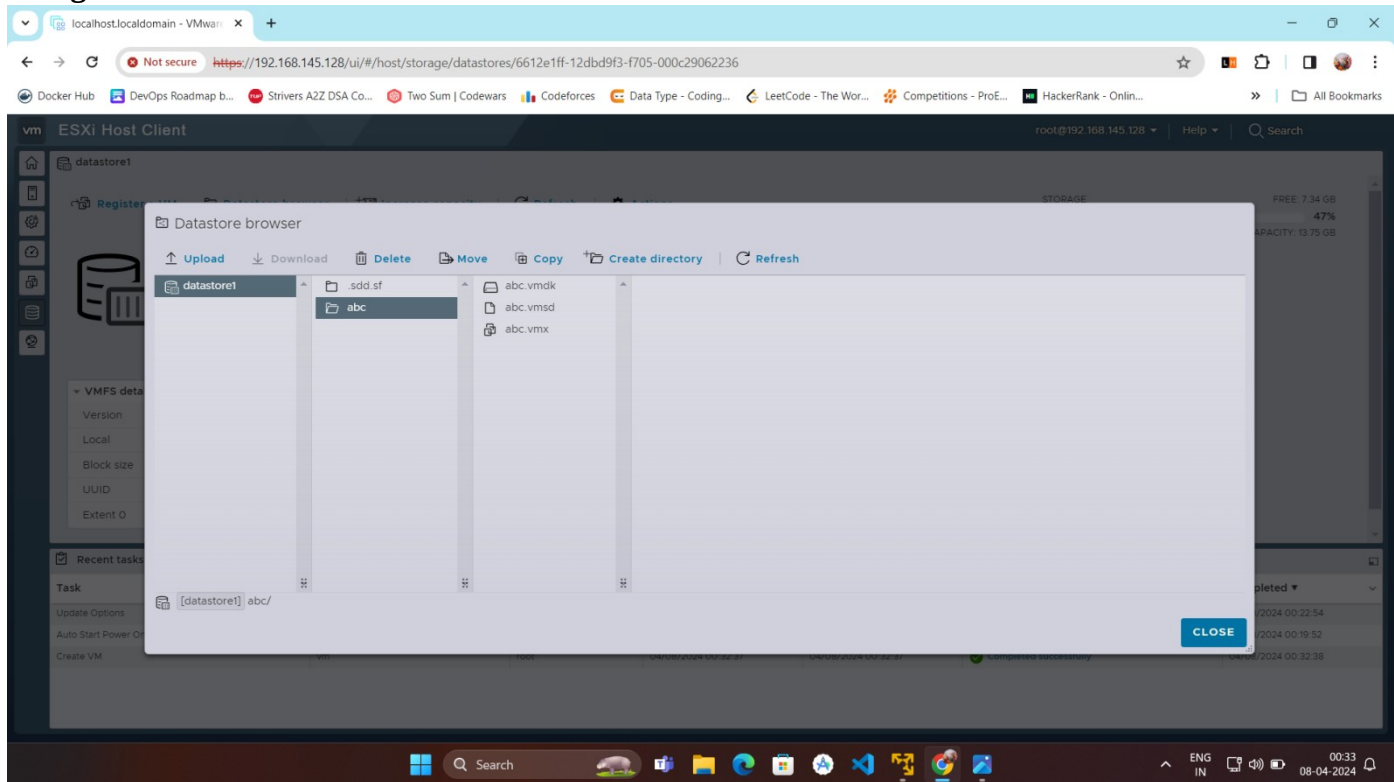
VCenter Access:



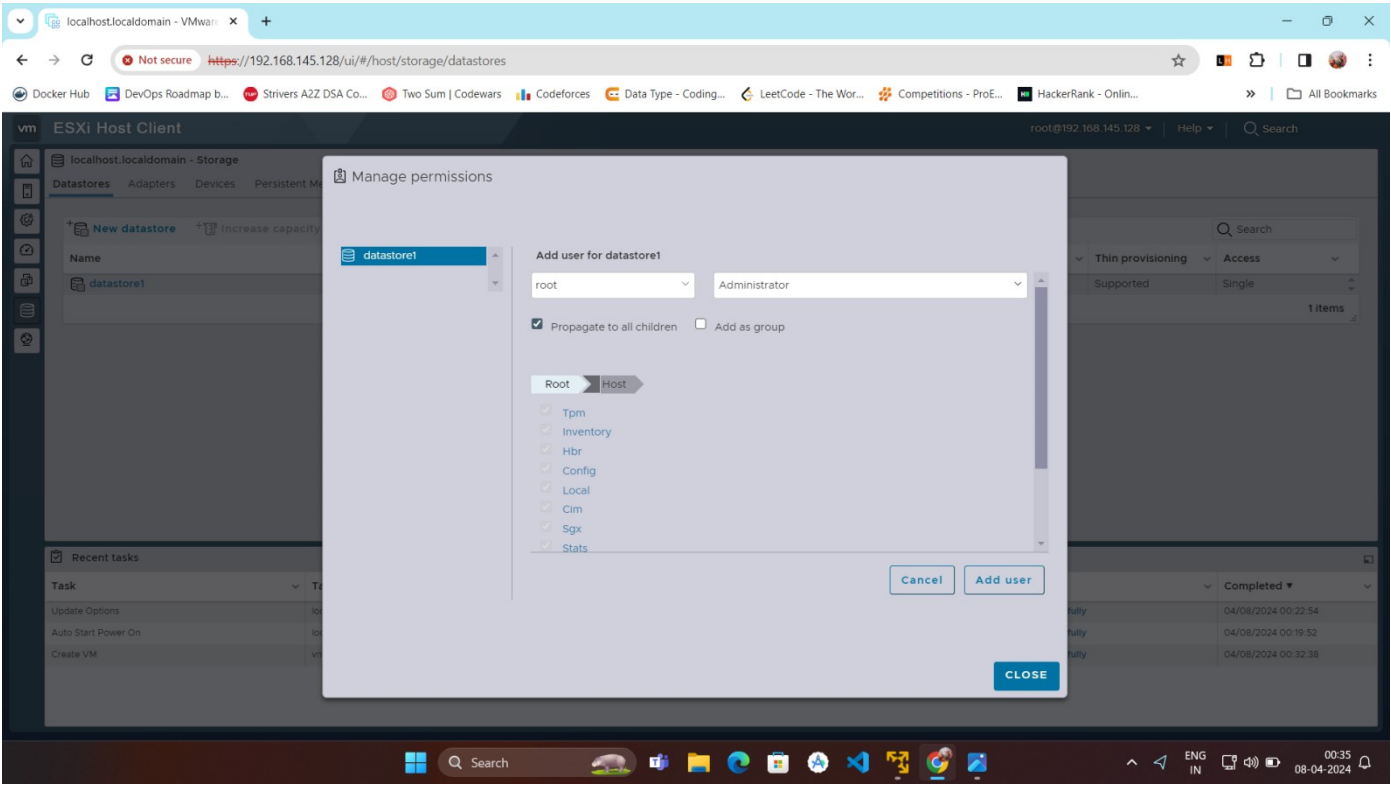
Create DataCenter:



Assign Cluster Name:

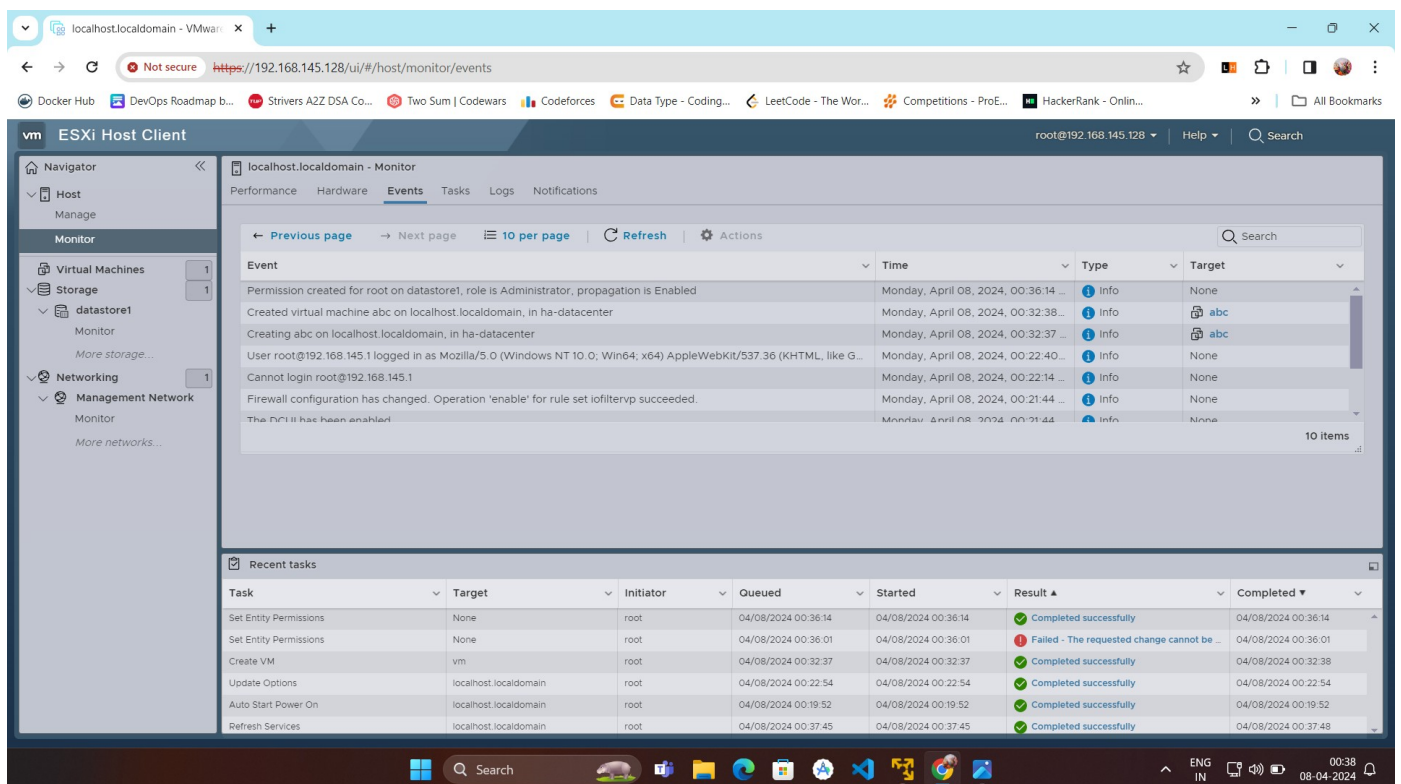
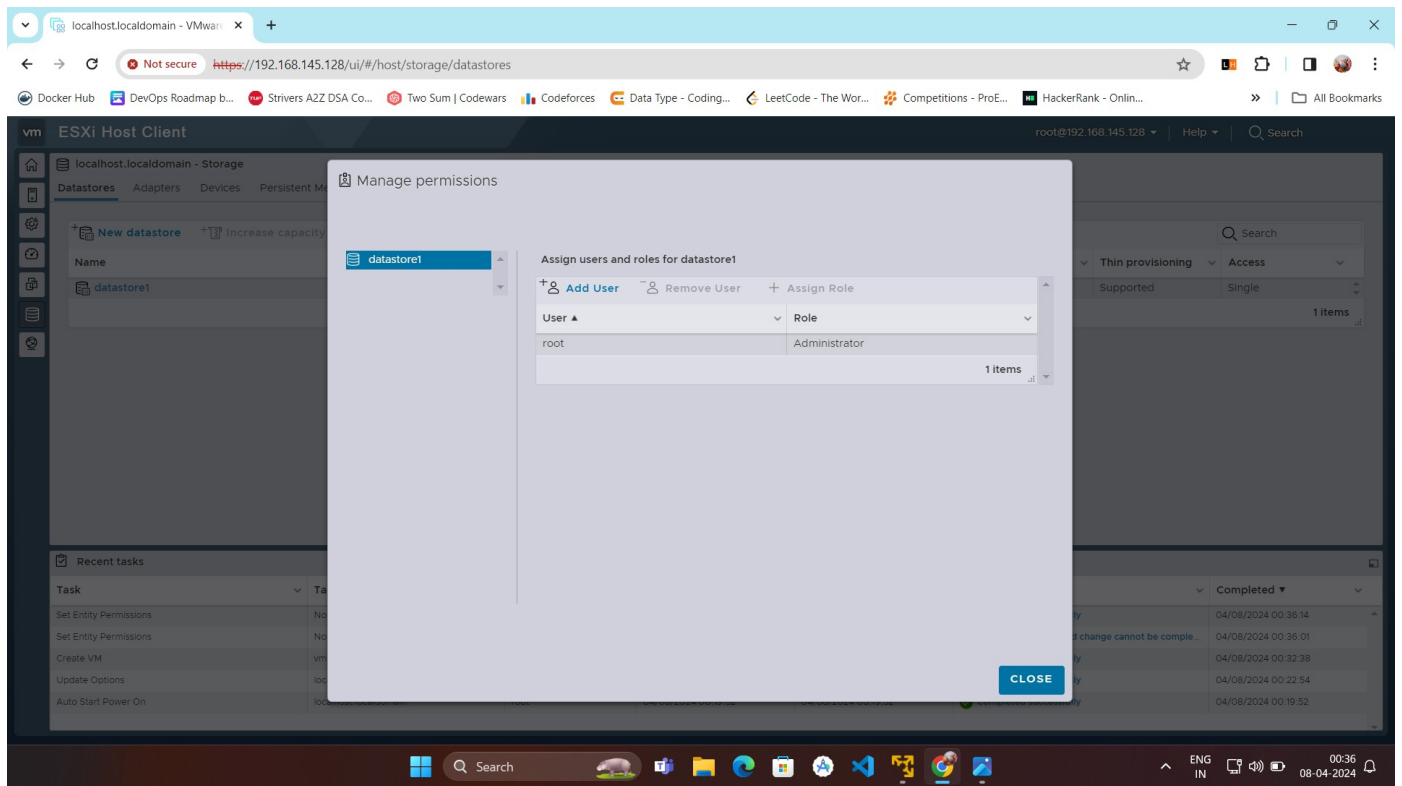


Add Host:



Host View and View Config:

Cluster View and Configuration:



Conclusion: Like this we have configure VSphere Private Cloud