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:

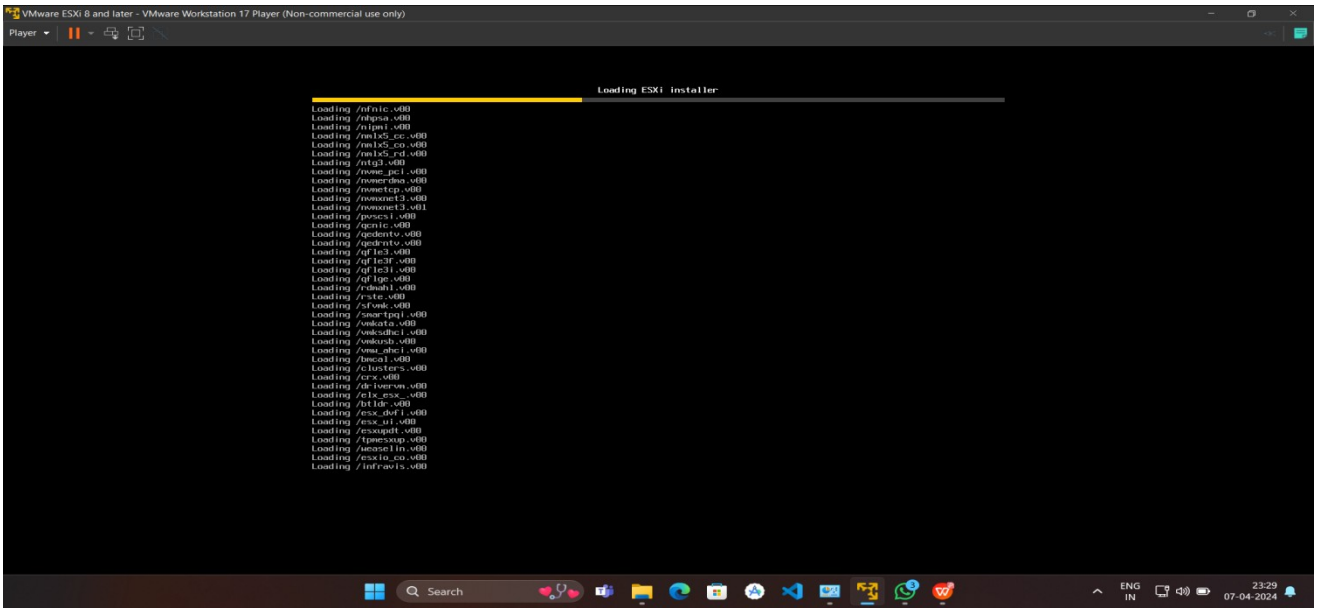
Here we are installing VMwareESXi cloud

Host/NodeESXi installation:-

ESXiHardwareRequirements:-

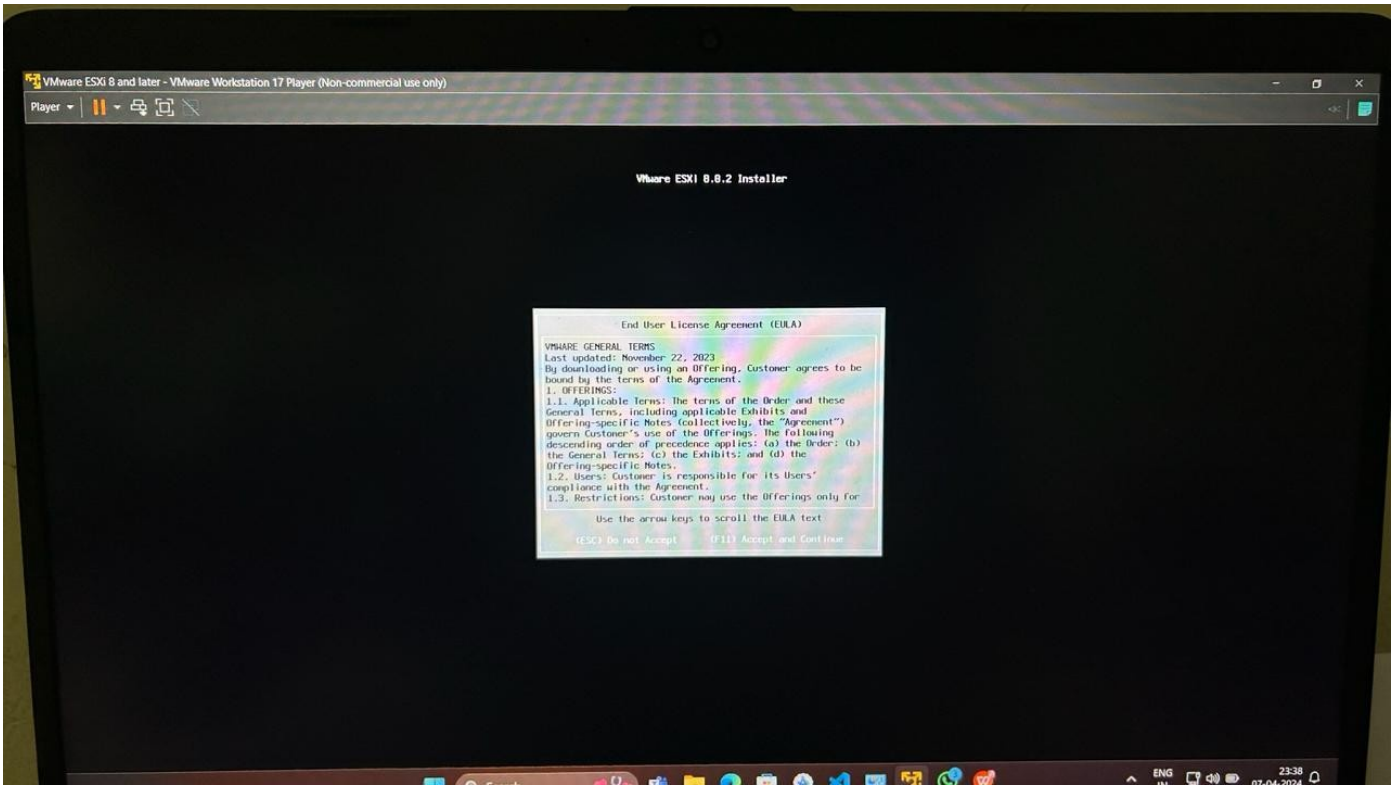
- ESXi6.7requiresahostmachinewithatleasttwoCPUcores.
- ESXi6.7supports64-bitx86processors
- ESXi6.7requirestheNX/XDbit to be enabled for the CPU in the BIOS.
- ESXi6.7requiresaminimumof4GBofphysicalRAM.Itisrecommended to provide atleast 8 GB of RAM to run virtual machines in typical productionenvironments.
- 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 be cause they are seen as remote.

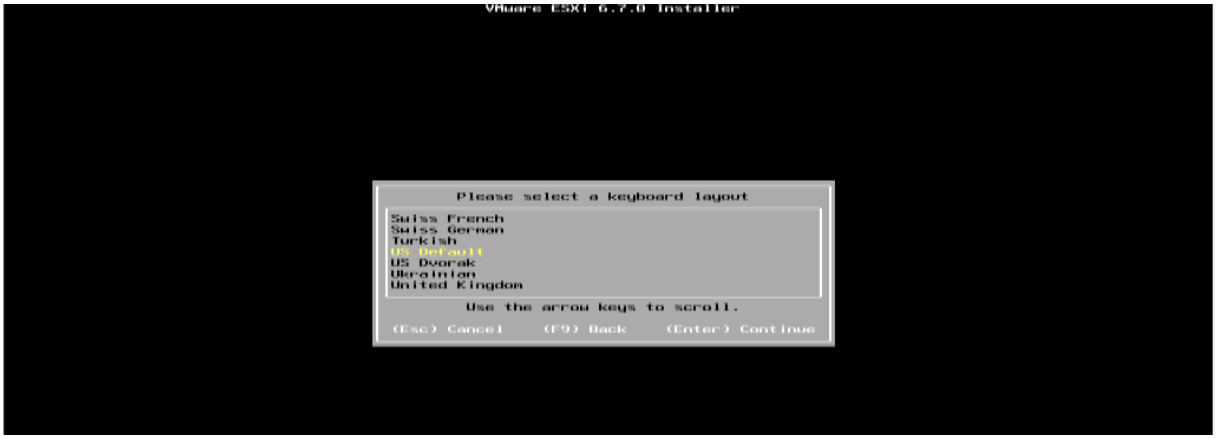


ESXiInstaller:

Accept Agreement:

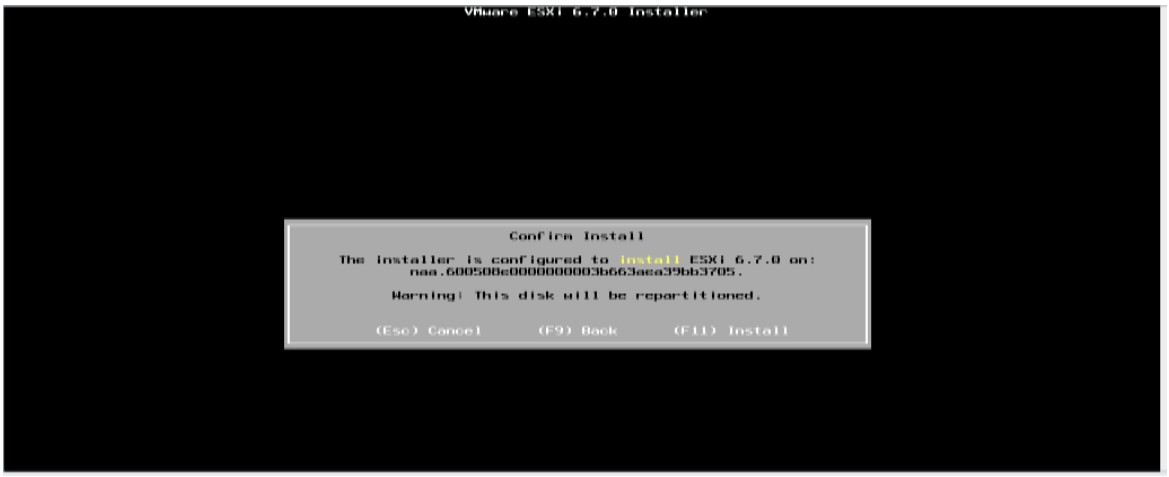


Select storage :



Select Keyboard Layout :

Set NodeESXi Root Password :



Installation complete (Reboot)CLII interface to configuration

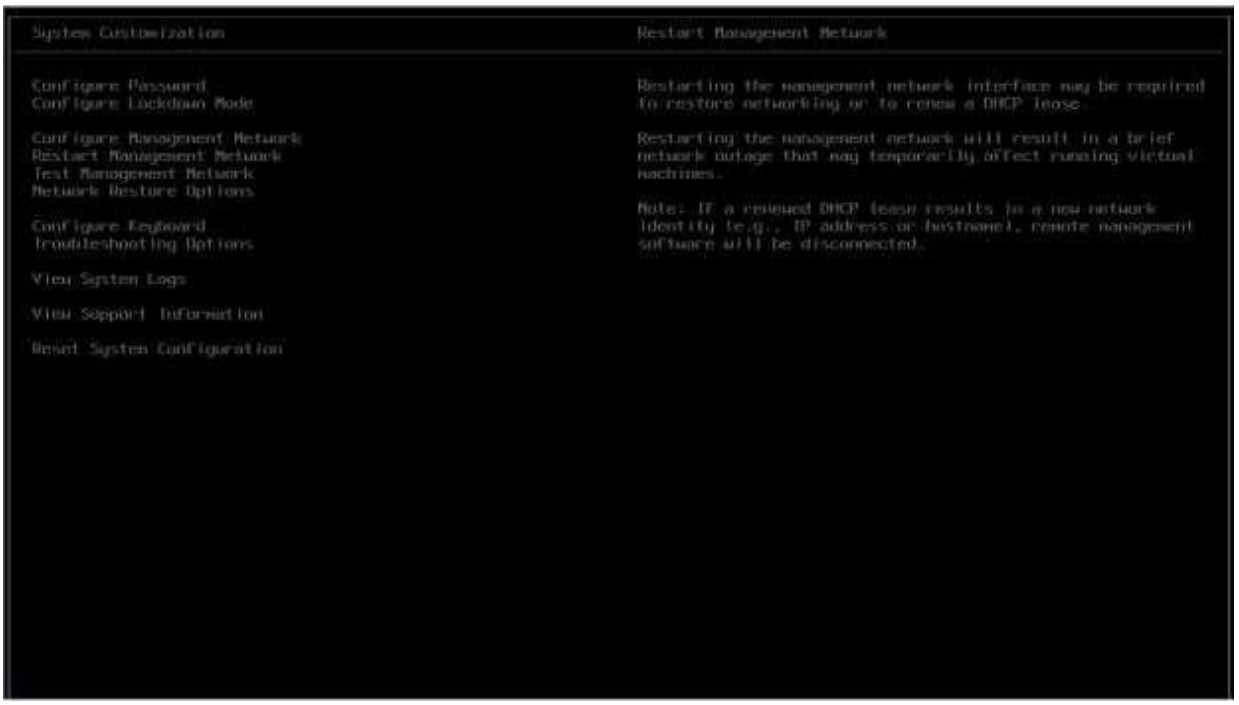
CLI Interface to Configuration:

Configure Management Network

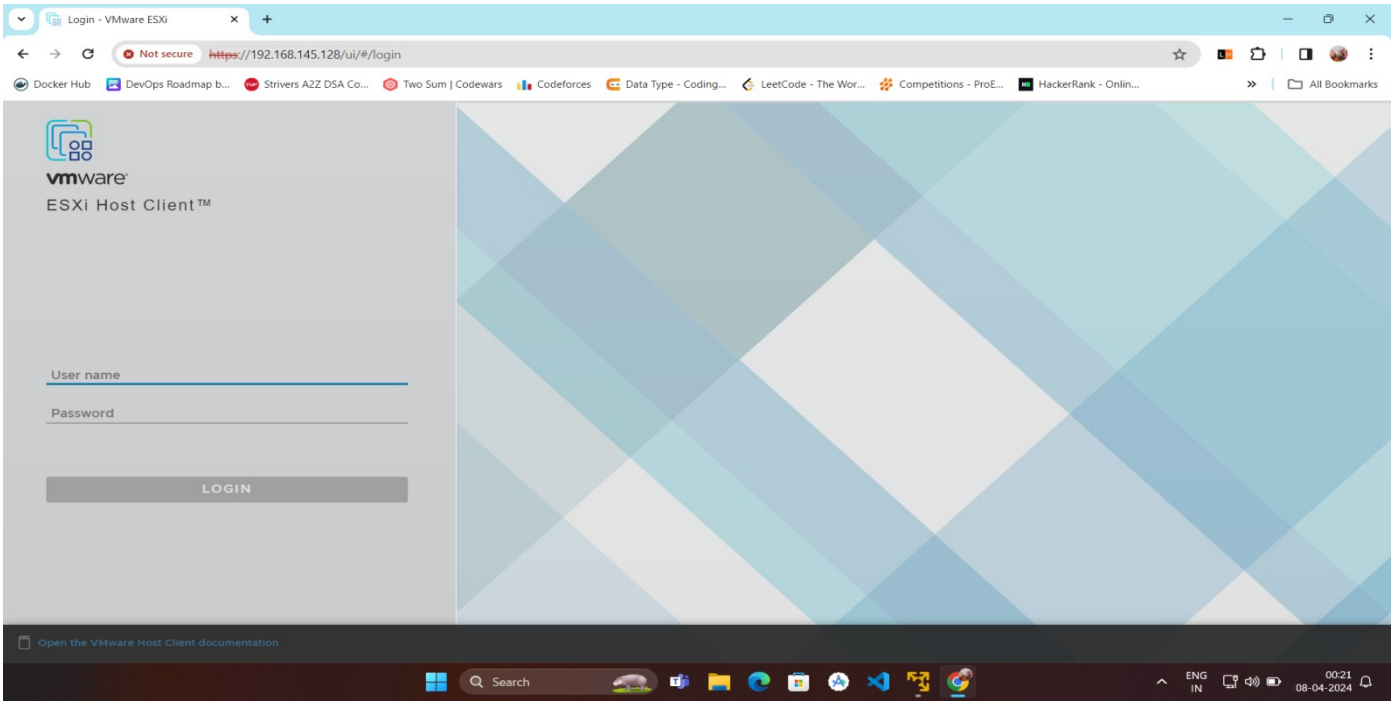
Set IPV4

Set DNServer :

Restart Management Network



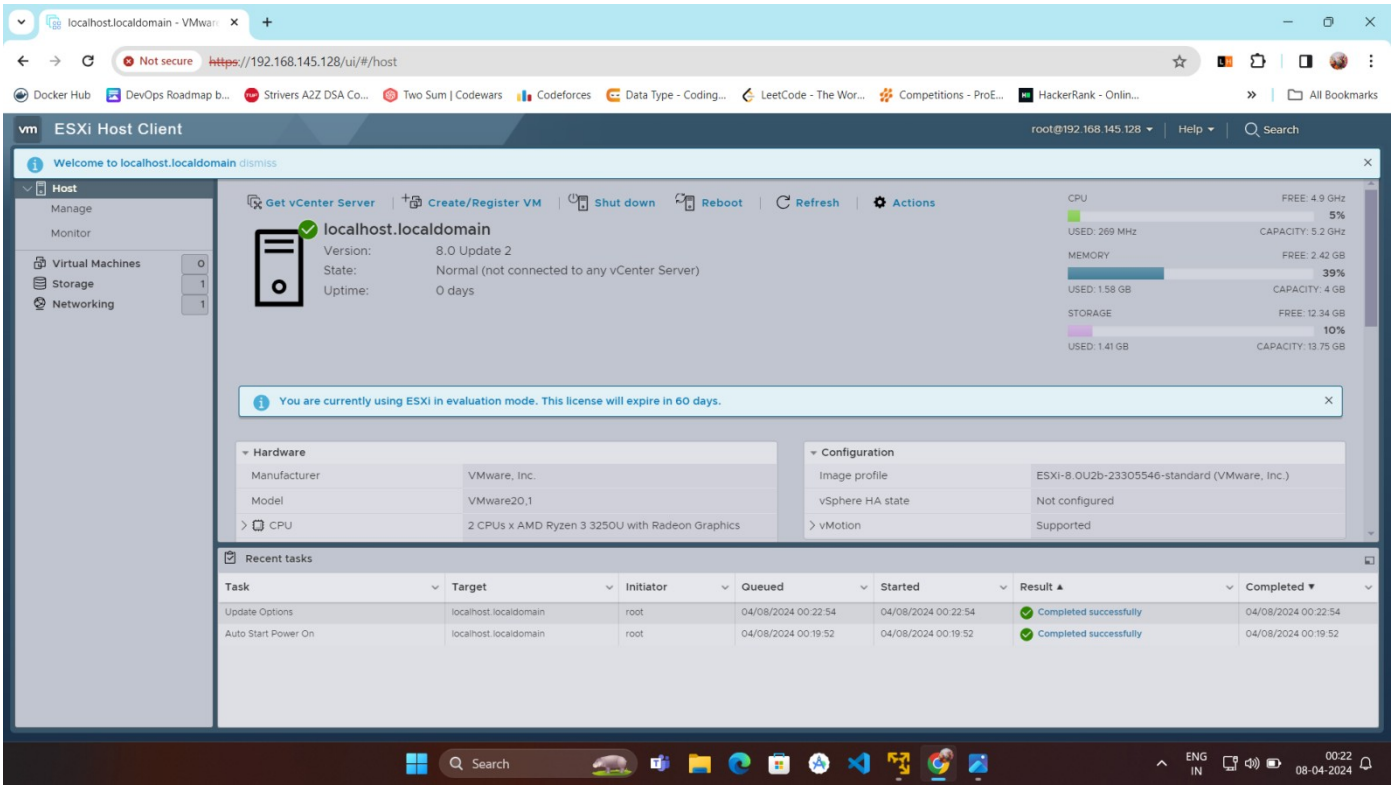
GUIAccess :



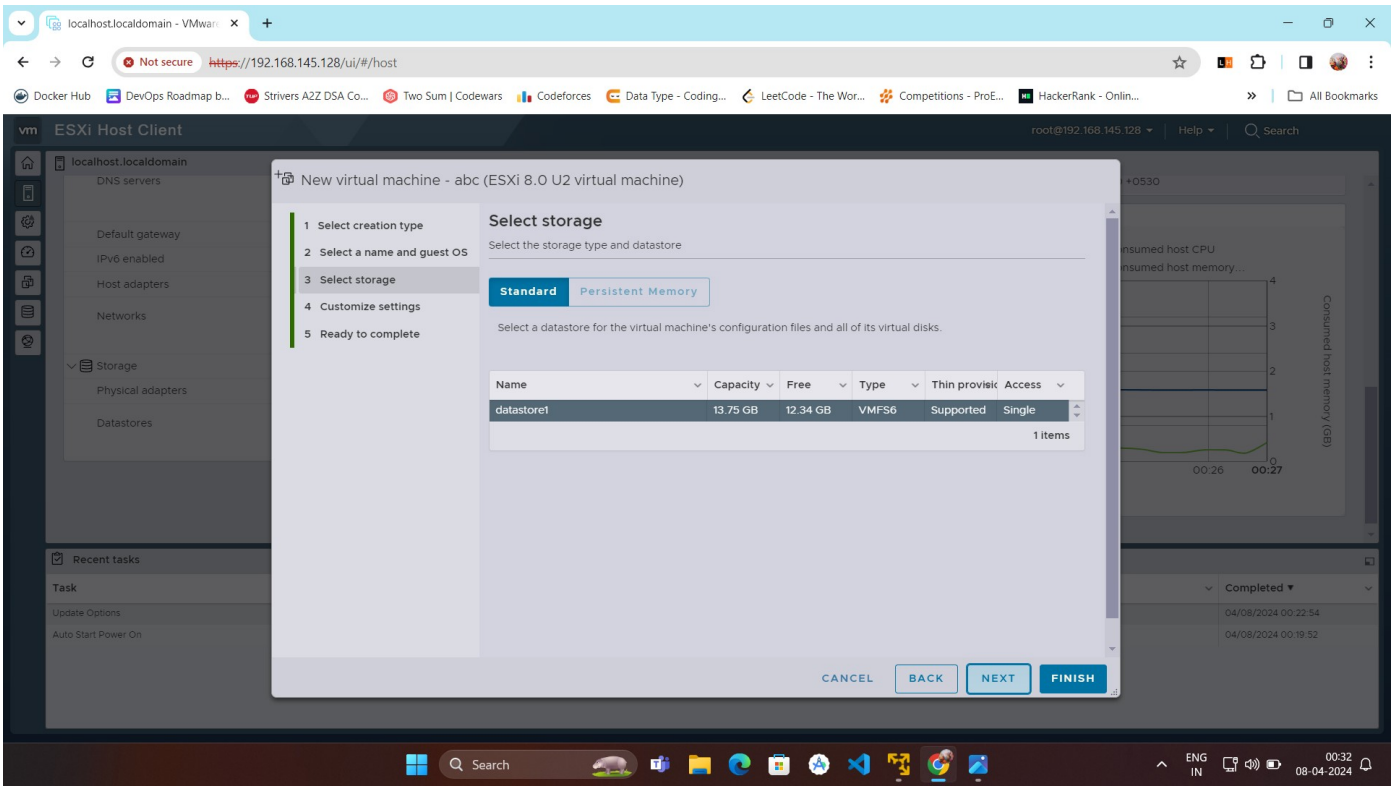
ClusterSetup

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

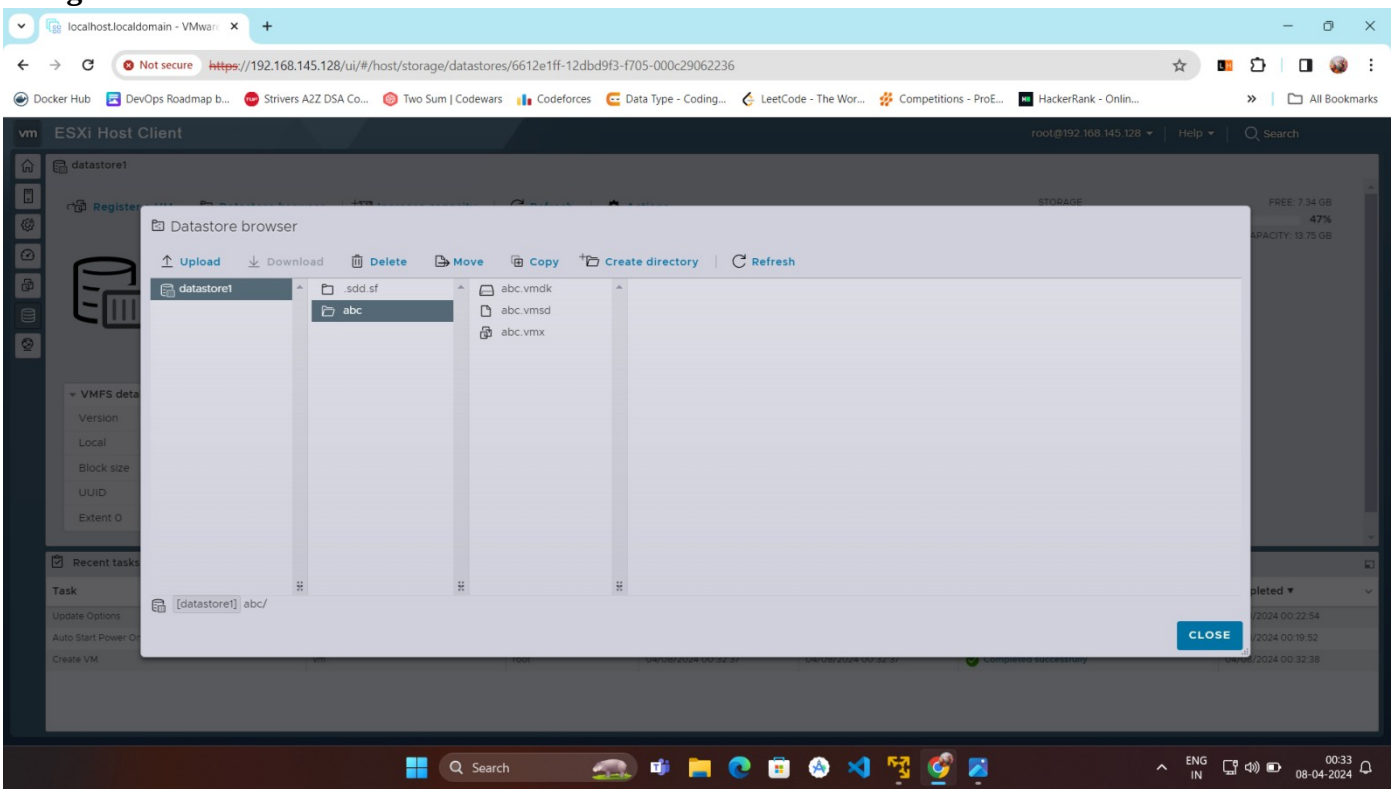
VCenter Access:



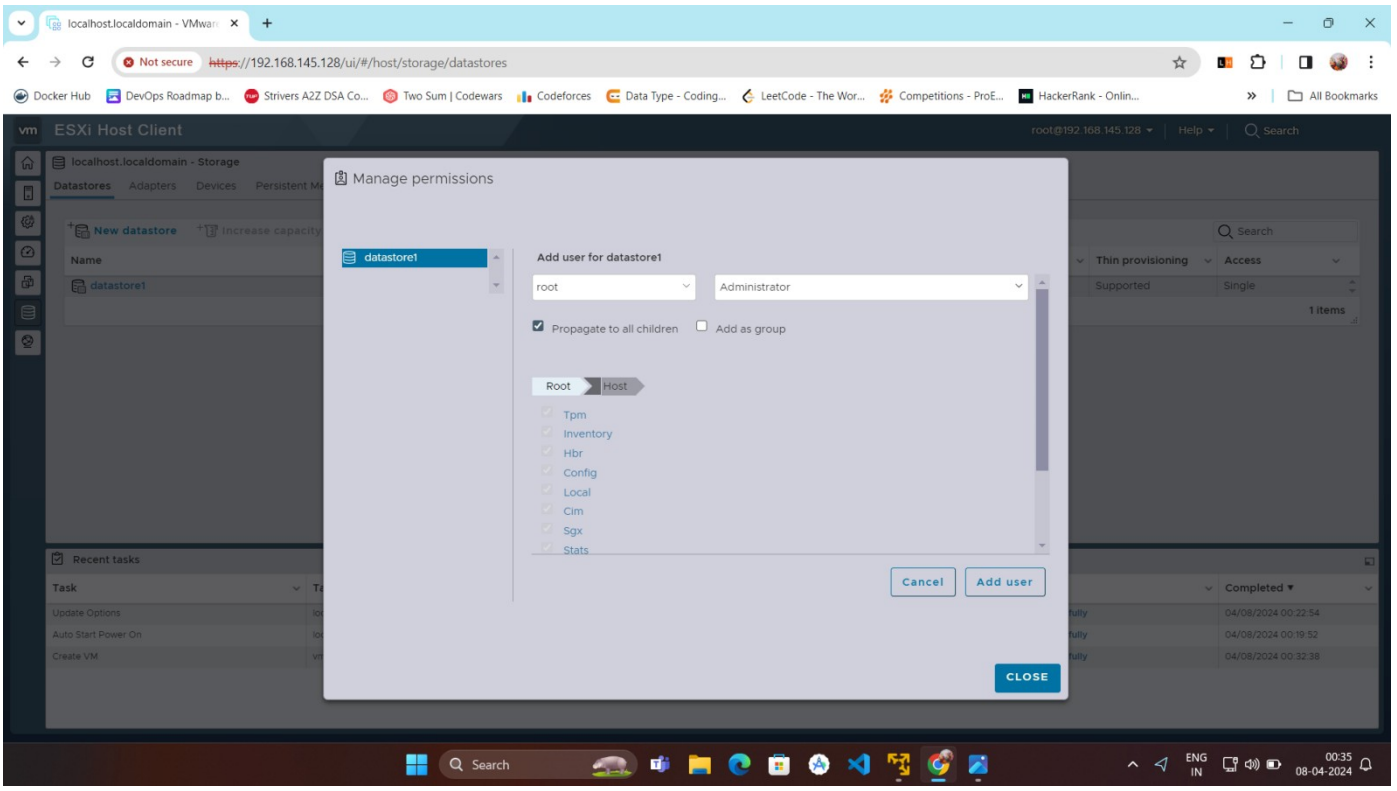
Create DataCenter:



Assign Cluster Name:

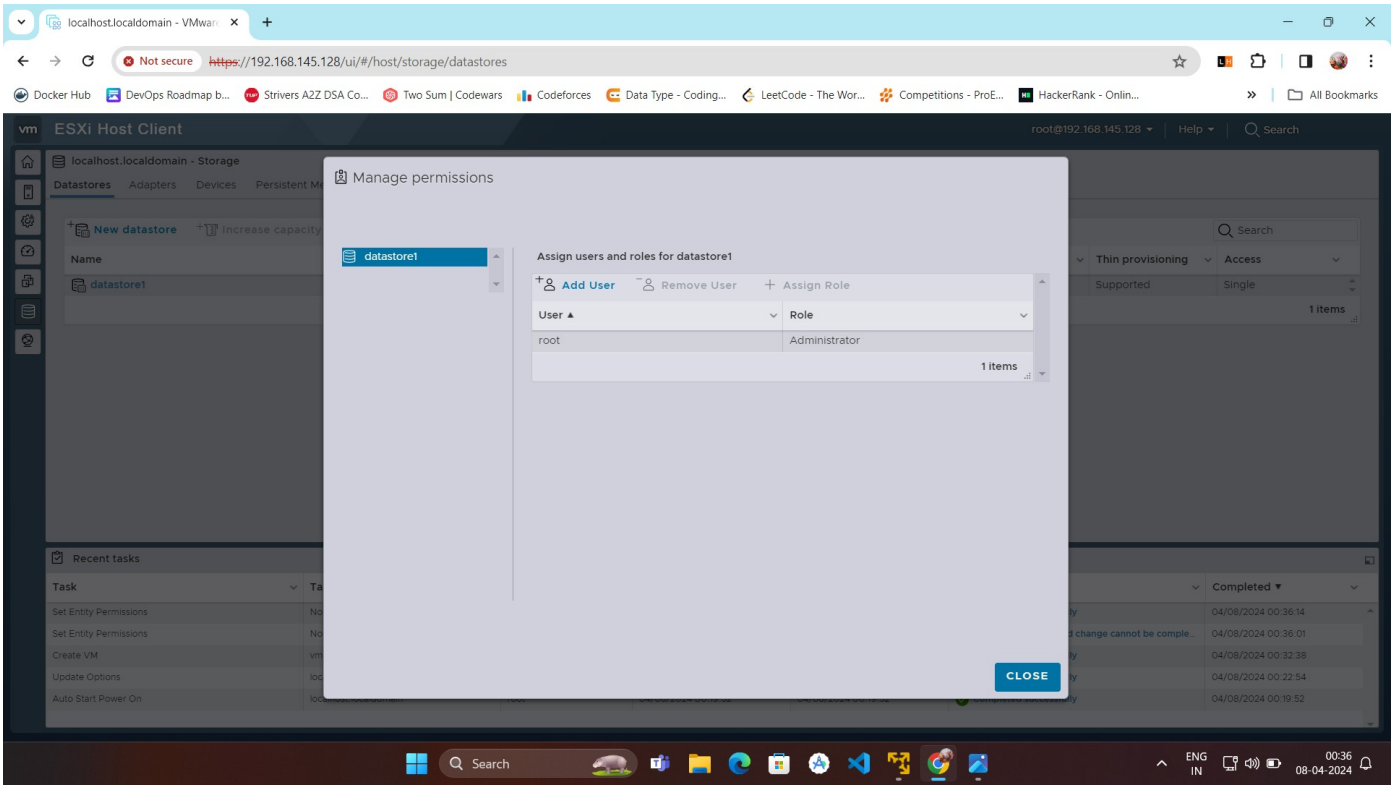


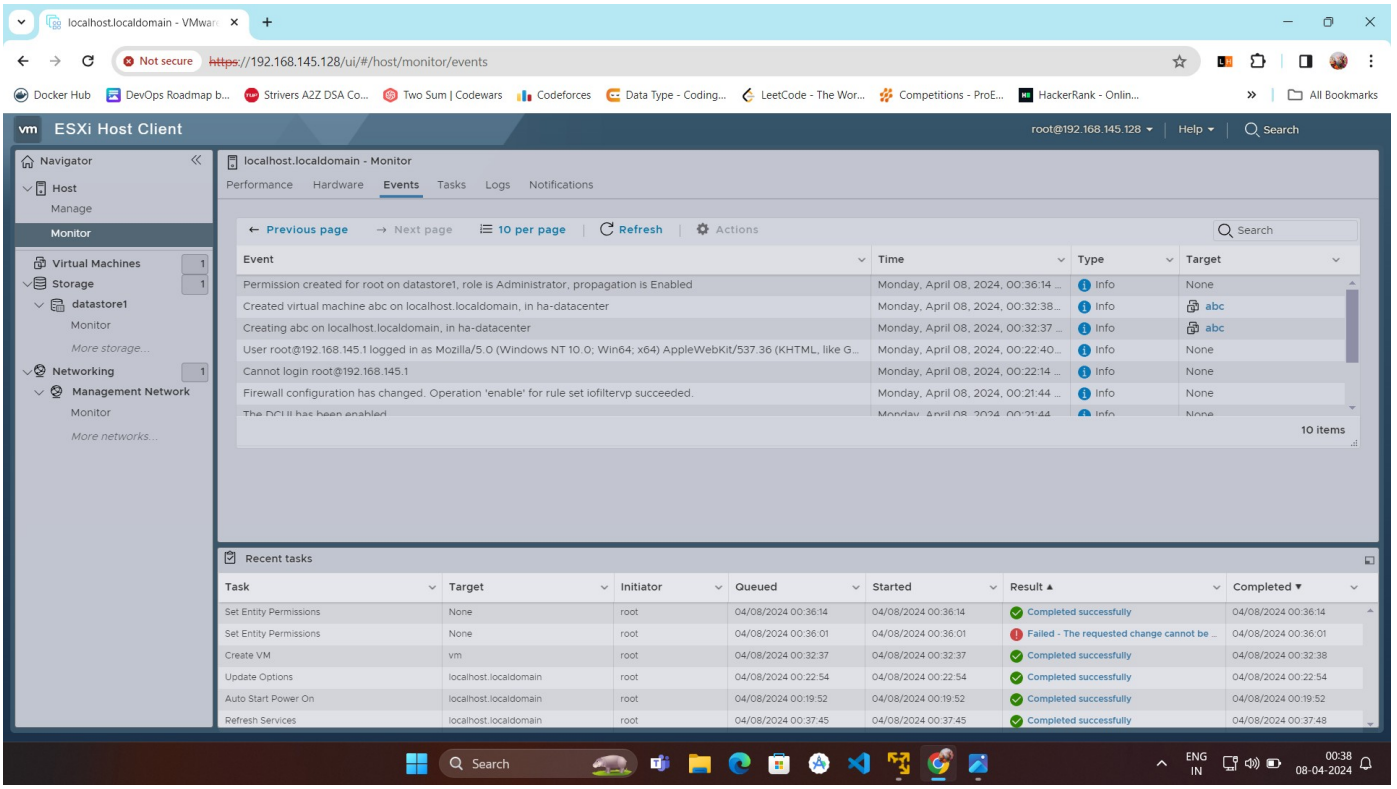
Add Host:


localhost.localdomain - VMware
Not secure
https://192.168.145.128/ui/#/host/storage/datastores
ESXi Host Client
localhost.localdomain - Storage
Datastores
Adapters
Devices
New datastore
Increase capacity
Name
datastore1
Manage permissions
datastore1
Add user for datastore1
root
Administrator
Propagate to all children
Add as group
Root
Host
Tpm
Inventory
Hbr
Config
Local
Cim
Sgx
Stats
Cancel
Add user
CLOSE
Recent tasks
Task
Completed
Update Options
Auto Start Power On
Create VM
Thin provisioning
Access
Supported
Single
1 items
Search
ENG
IN
00:35
08-04-2024

Host View and View Config:

Cluster View and Configuration:





Conclusion: Like this we have configure VSphere Private Cloud