

## 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, VMware ESXi cloud

### Theory:

Here we are installing VMware ESXi cloud

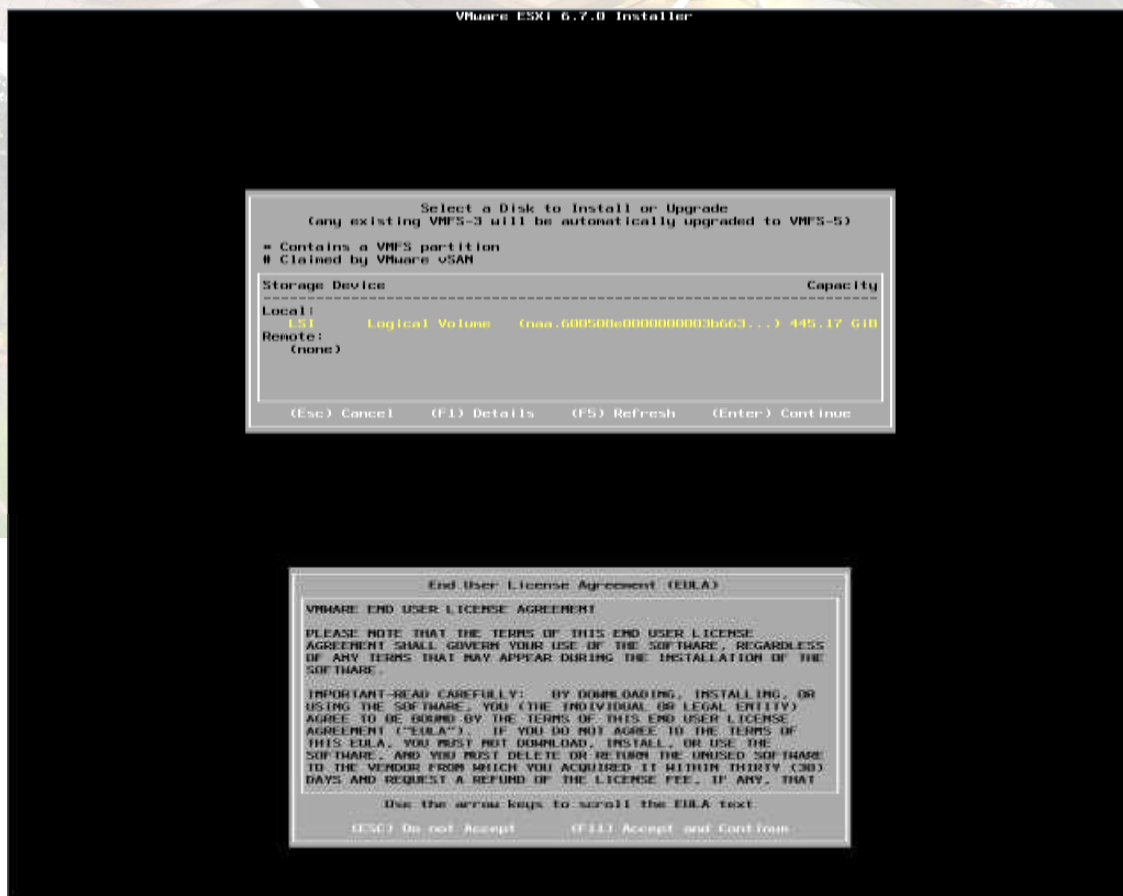
- Host/Node ESXi installation:-
- **ESXi Hardware Requirements:-**
  - ESXi 6.7 requires a host machine with at least two CPU cores.
  - ESXi 6.7 supports 64-bit x86 processors
  - ESXi 6.7 requires the NX/XD bit to be enabled for the CPU in the BIOS.
  - ESXi 6.7 requires a minimum of 4 GB of physical RAM. It is recommended to provide at least 8 GB of RAM to run virtual machines in typical production environments.
  - To support 64-bit virtual machines, support for hardware virtualization (Intel VT-x or AMD RVI) must be enabled on x64 CPUs.
  - One or more Gigabit or faster Ethernet controllers. For a list of supported network adapter models.
  - SCSI disk or local, non-network, RAID LUN with unpartitioned space for the virtual machines.

For Serial ATA (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.

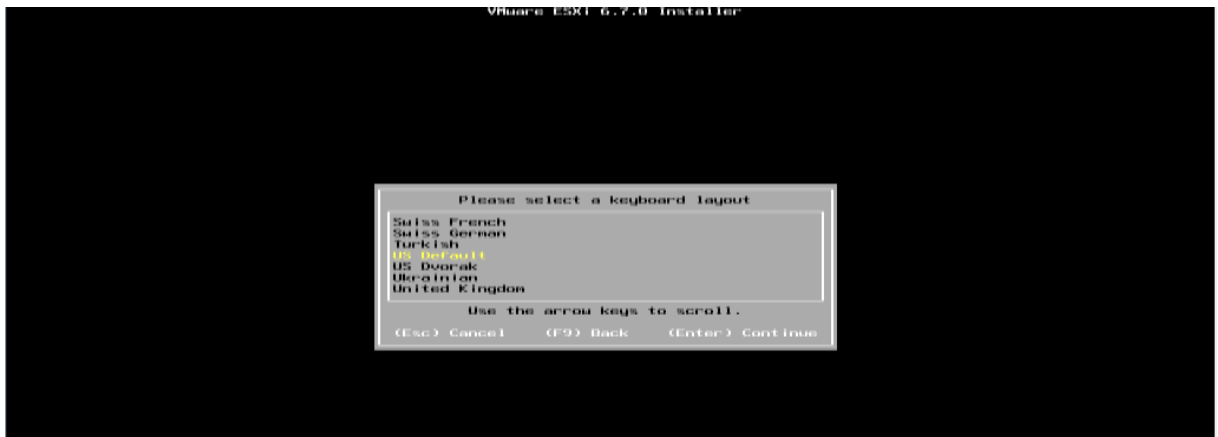


**ESXiInstaller:**

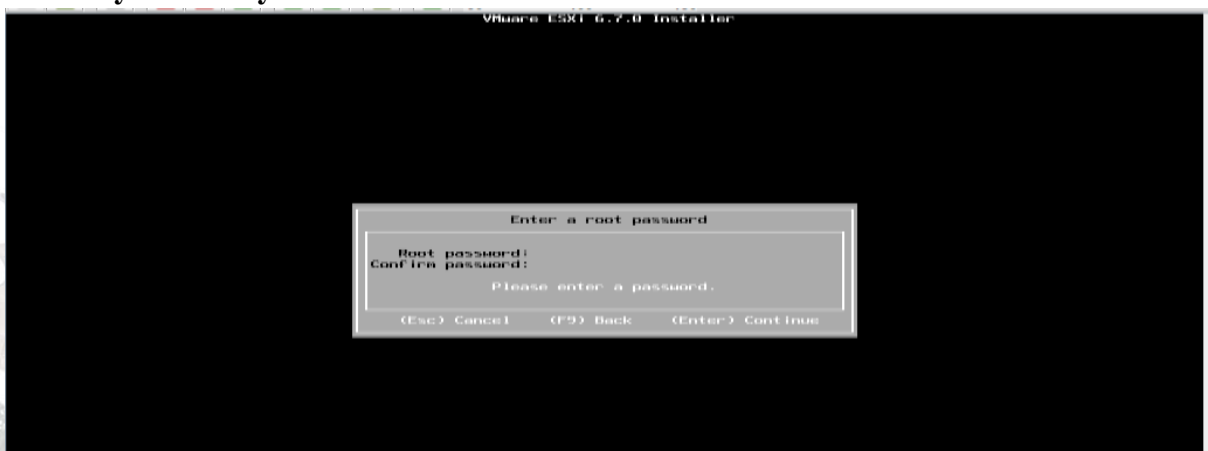
**Accept Agreement:**



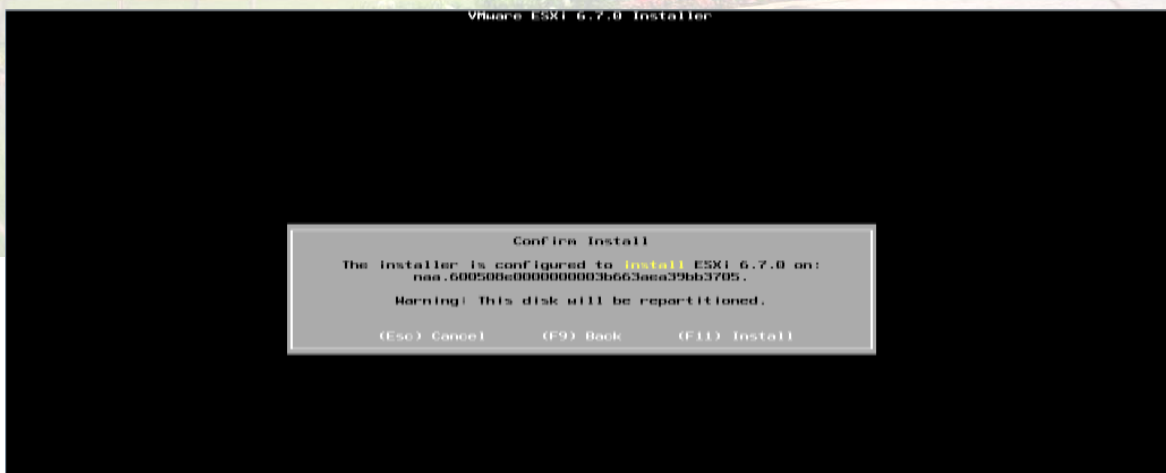
Select storage :



Select Keyboard Layout :



Set NodeESXi Root Password :



### Installation complete (Reboot)CLI interface to configuration



### CLI Interface to Configuration:



### Configure Management Network

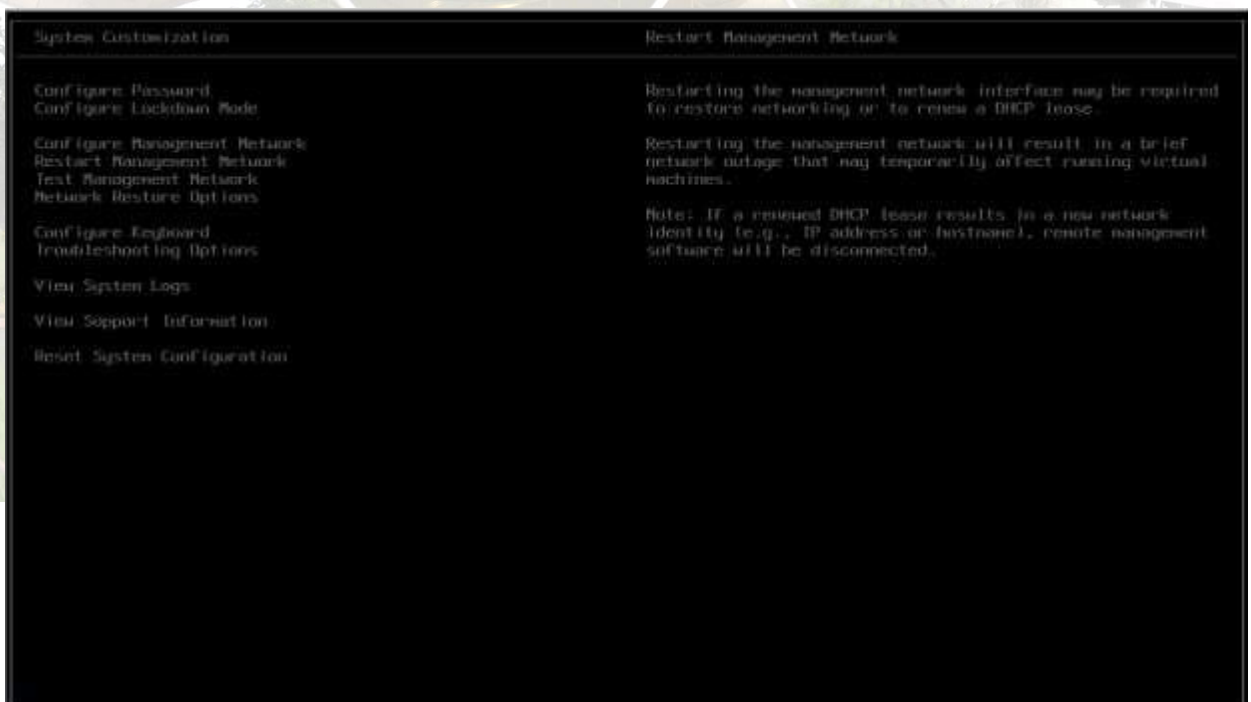


## Set IPV4



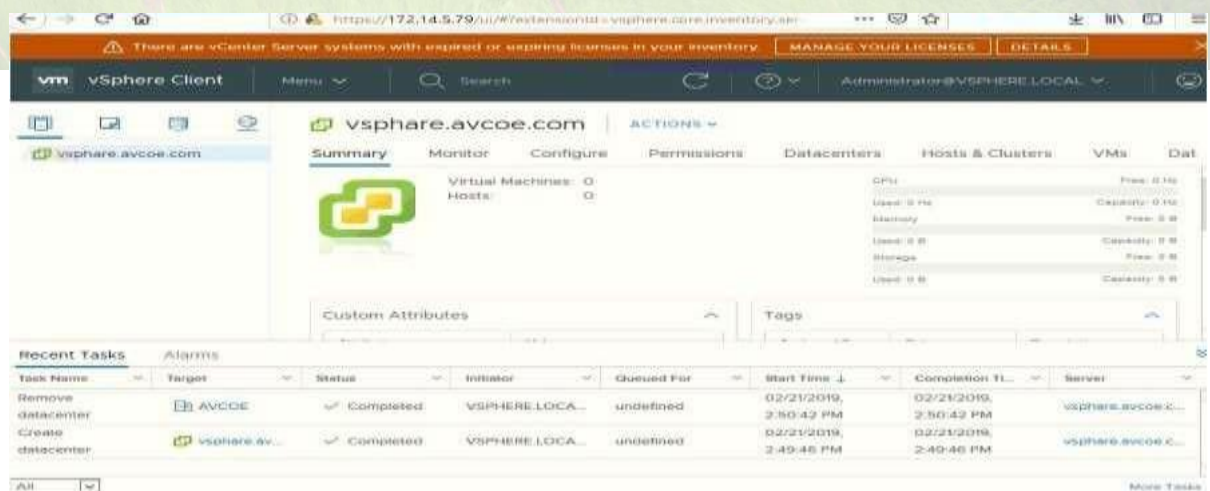
## Set DNSeriver :

### Restart Management Network

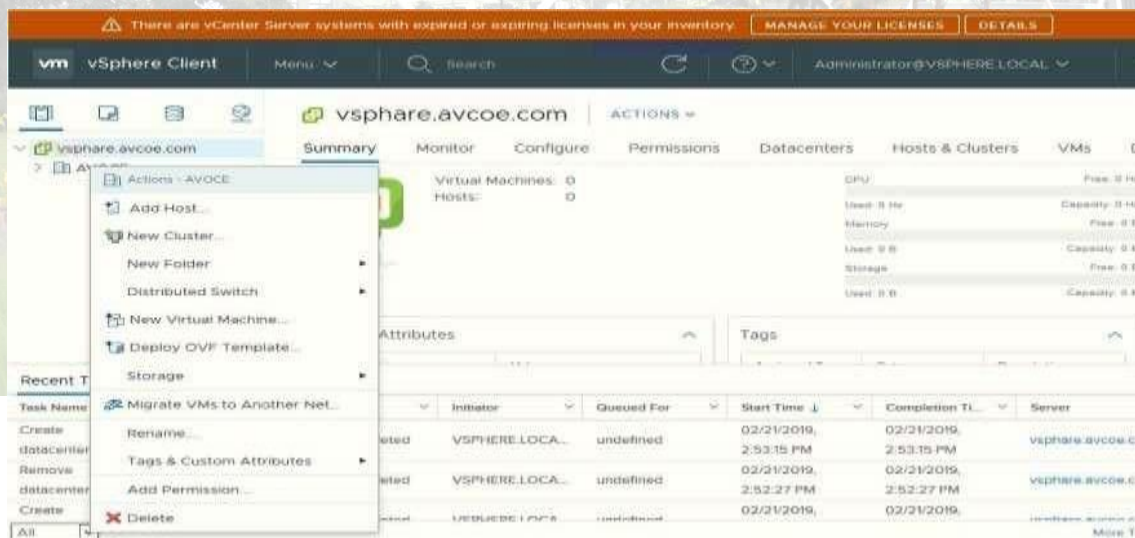
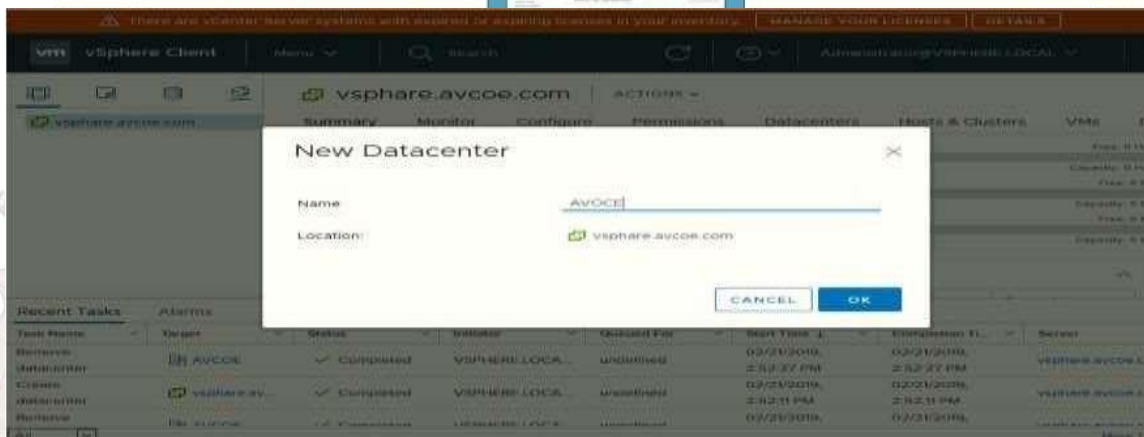
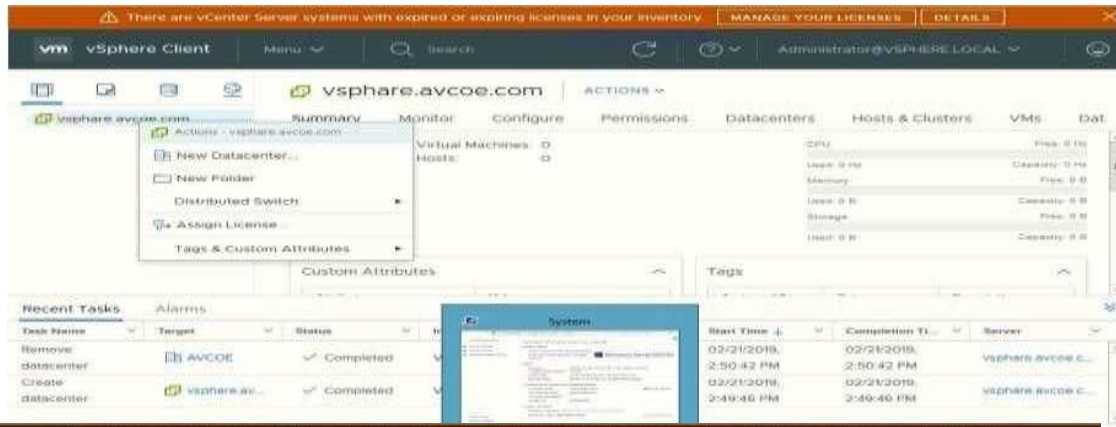


**GUI Access :****Cluster Setup**

- **Creating Datacenter**
- **Creating Cluster**
- **Adding Hosts in cluster**
- **Resources after adding cluster.**
- **DRS**
- **Failover**

**VCenter Access:**

**Create Datacenter:**

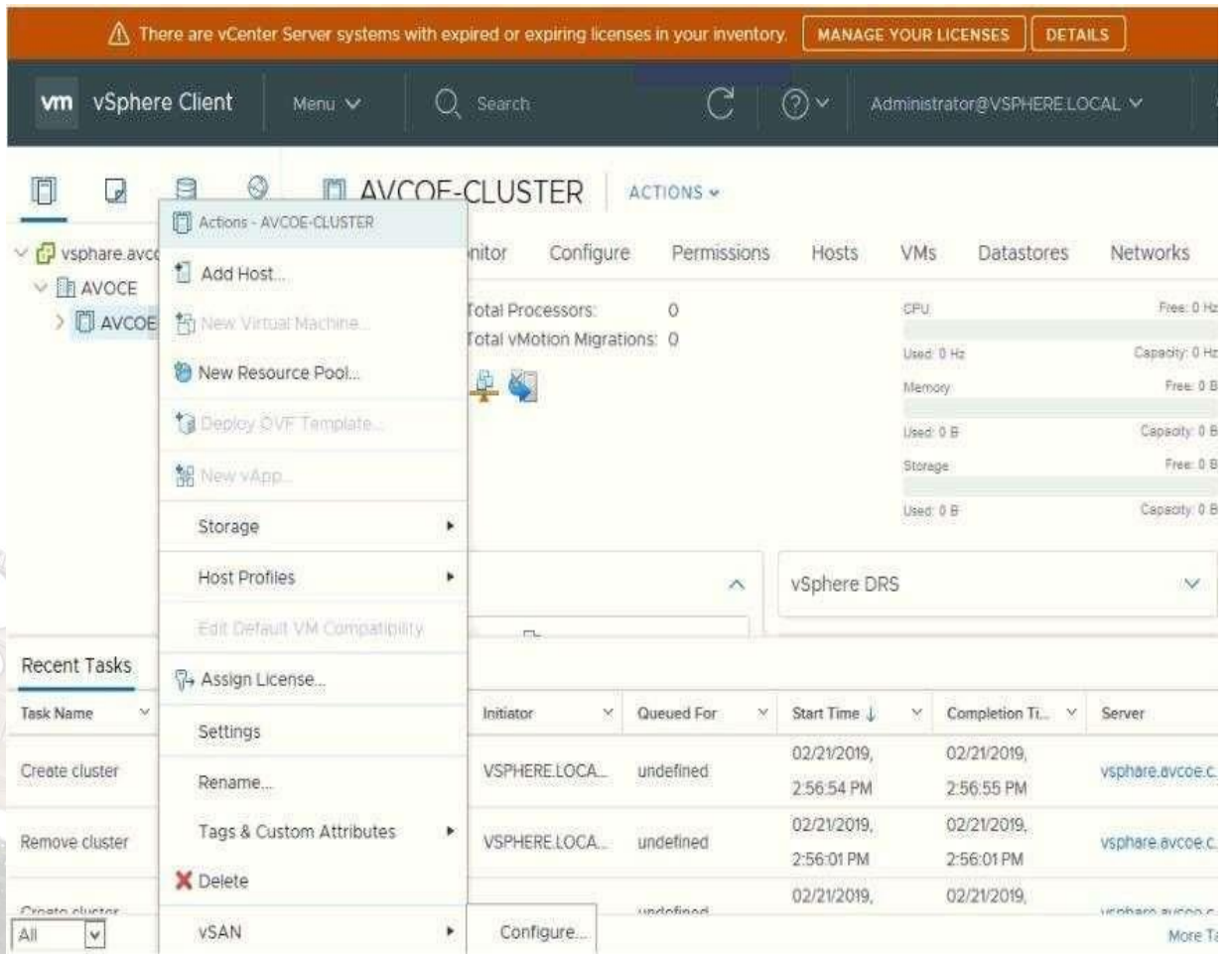


**Create cluster :**

**Assign cluster name :**



**Add host .:**



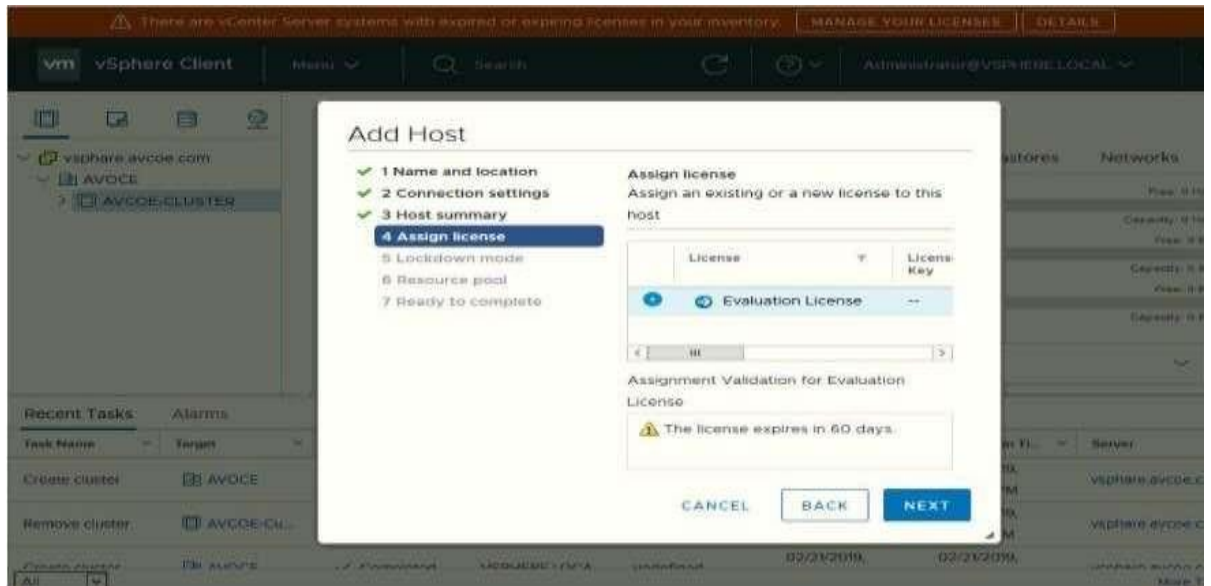
**Add host IP :**



**Enter host credential :**



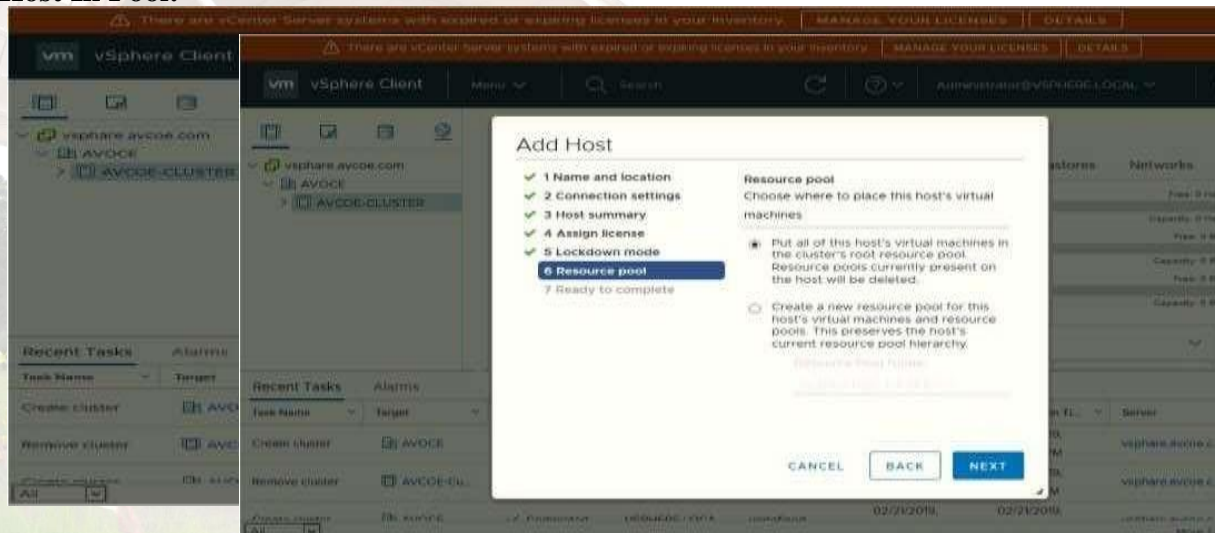




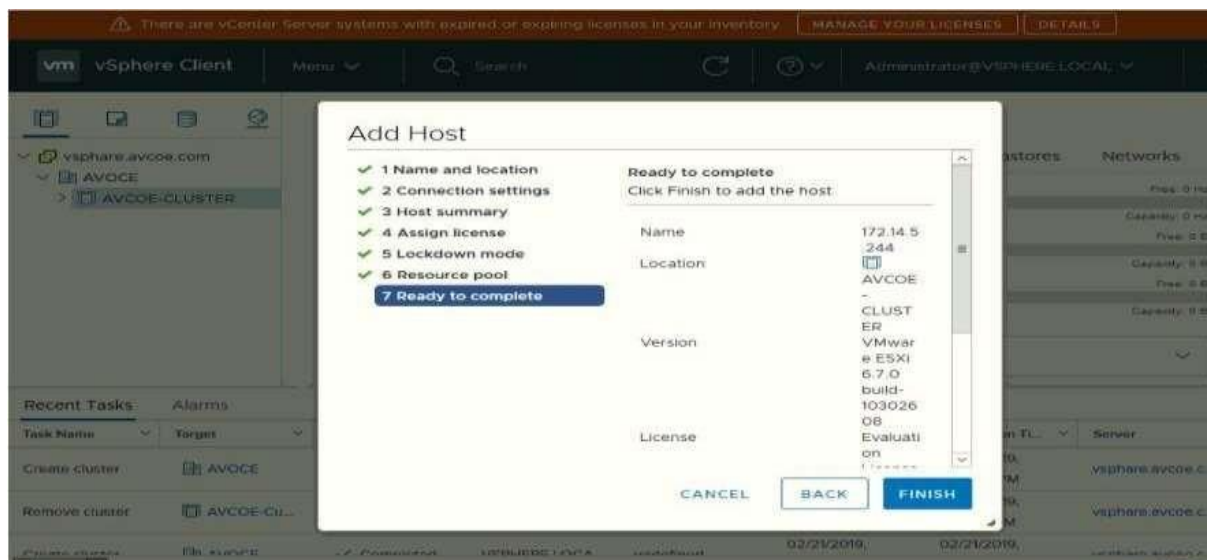
Hot summary :

Lock Down mode:

Add Host In Pool:



Finish:



**Host View and View Config:**

**Cluster View and Configuration:**

Task Name	Target	Status	Initiator	Queued For	Start Time	Completion TL	Server
Configuring vSphere HA	172.14.5.245	6%	System	156 ms	02/21/2019, 3:04:54 PM		vsphere.avcoe.c...
Add host	AVCOE-CL...	✓ Completed	VSPHERE.LOCA...	undefined	02/21/2019, 3:04:48 PM	02/21/2019, 3:04:54 PM	vsphere.avcoe.c...
Configuring	172.14.5.244	✓ Completed	System	64 ms	02/21/2019,	02/21/2019,	vsphere.avcoe.c...

Task Name	Target	Status	Initiator	Queued For	Start Time	Completion TL	Server
Configuring vSphere HA	172.14.5.245	✓ Completed	System	156 ms	02/21/2019, 3:04:54 PM	02/21/2019, 3:05:34 PM	vsphere.avcoe.c...
Add host	AVCOE-CL...	✓ Completed	VSPHERE.LOCA...	undefined	02/21/2019, 3:04:48 PM	02/21/2019, 3:04:54 PM	vsphere.avcoe.c...
Configuring	172.14.5.244	✓ Completed	System	64 ms	02/21/2019,	02/21/2019,	vsphere.avcoe.c...

**Conclusion:** Like this we have configure VSphere Private Cloud