

Continuous Assessment – 2

CSE -427

VIRTUALIZATION AND CLOUD COMPUTING LABORATORY

Name : Routhu Siddhartha
Reg. No. : 12010599
Section : K20CT
Group : 2
Roll No. : RK20CTB51
Course code : CSE427
Task : Continuous Assessment 2
Date : 23-02-2023

Under the guidance of
AJAY KUMAR BADHAN Sir,
(27337).



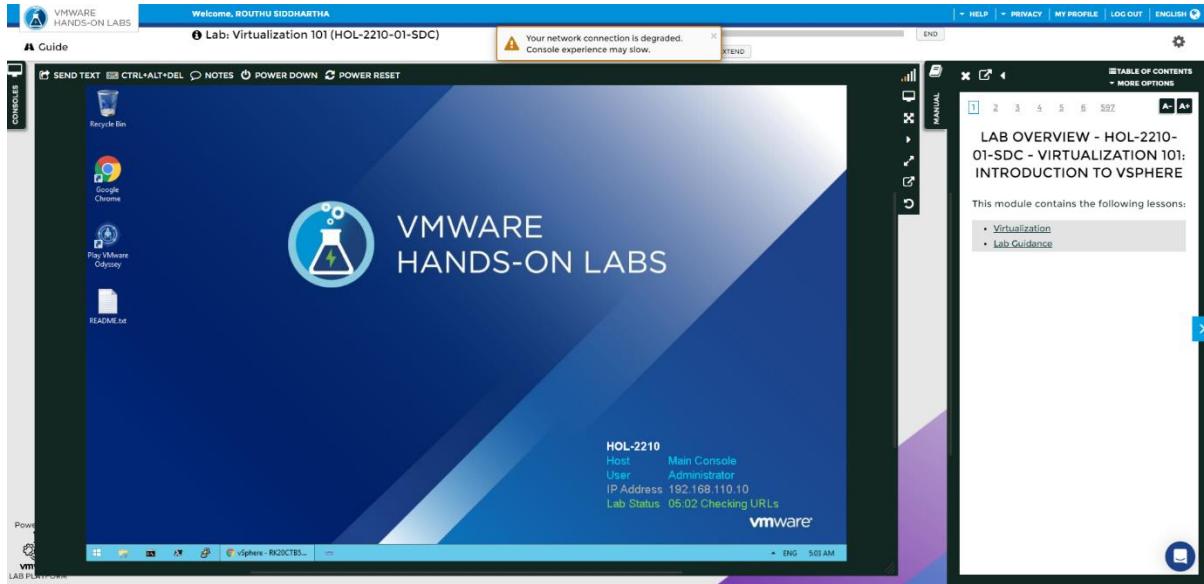
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Task 1 : Creating the Virtual machine on HOL and install the photon OS.

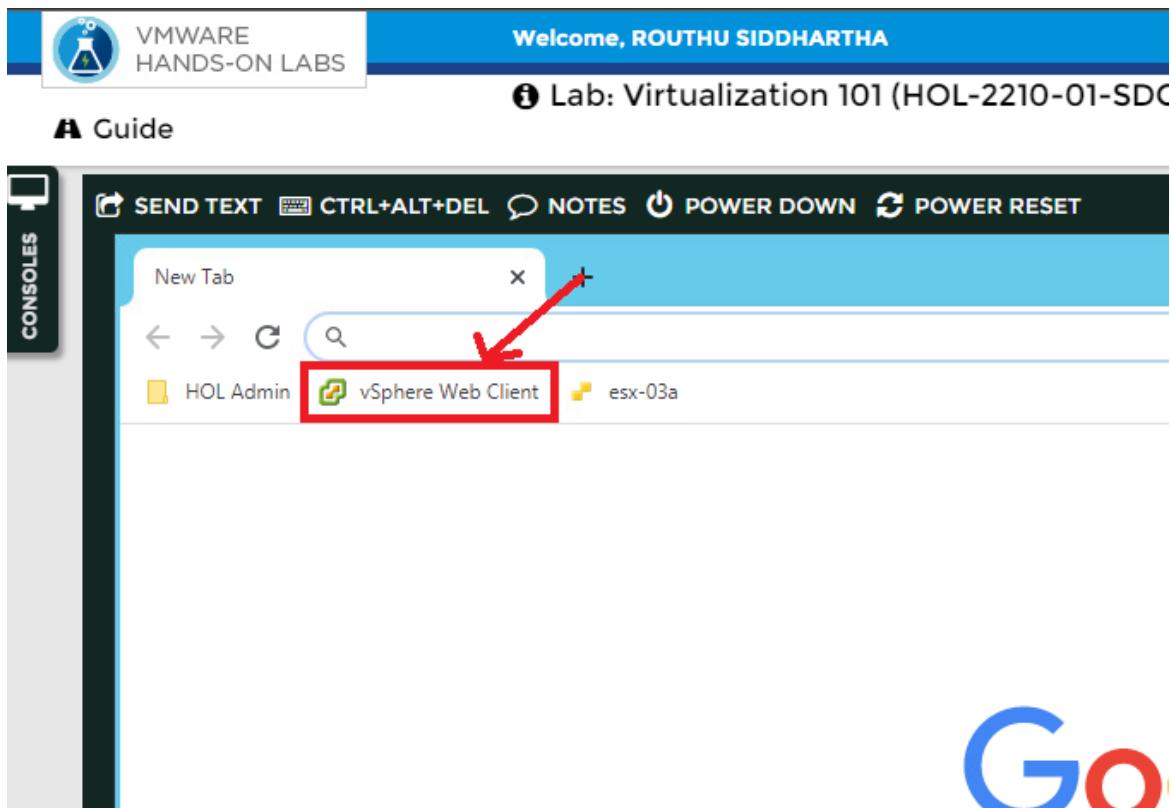
Open any of your favorite browser and search for HOL. Click on the first link which is from vmWare Hands on Lab.

Search for Virtualization 101 (HOL-2210-01-SDC) and then enrol for it. Now start the Lab.

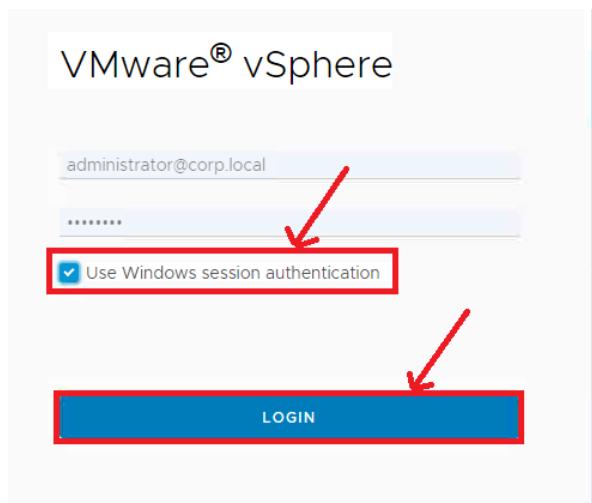
This is the interface of the Hands On Labs Virtual Machine



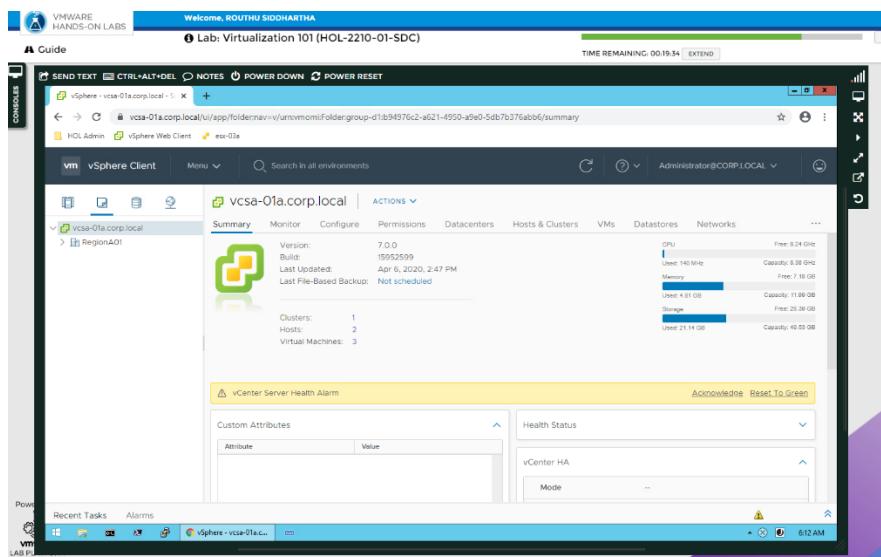
1. Now we need to open the chrome software from the HOL.
And click on **vSphere Web Client** from the bar



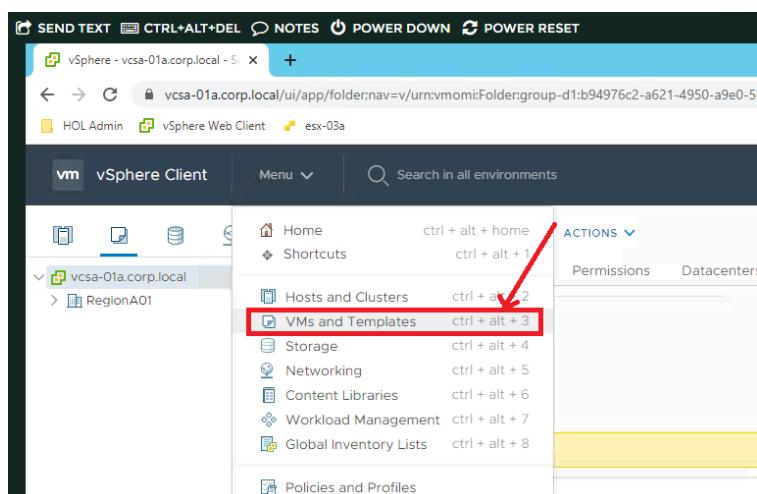
Selecting Use Windows session authentication check box and click on Login



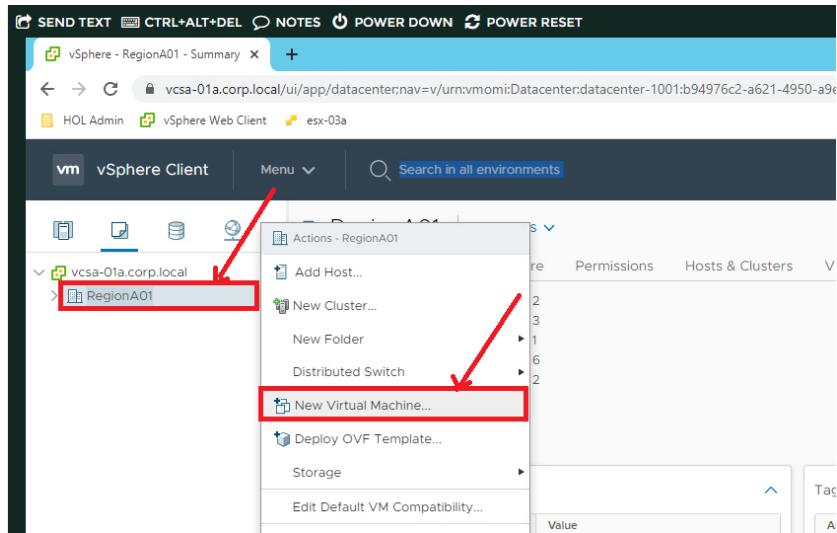
This is the interface of the vSphere Client.



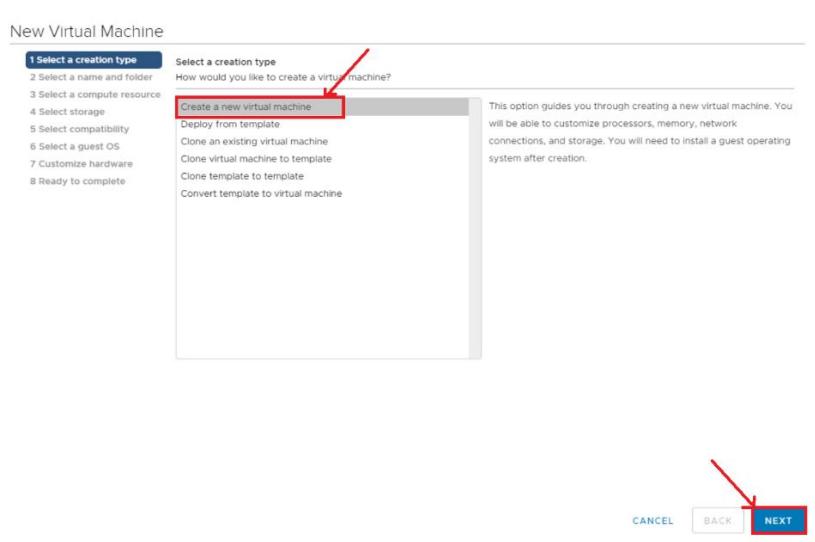
To create the new virtual machine, we need to click on the menu option and then choose VMs and Templates



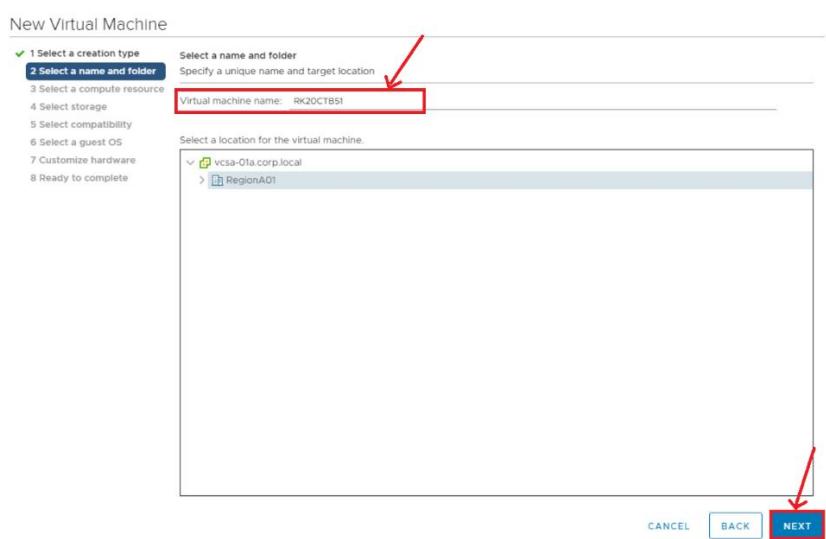
Now we need to right click on RegionA01 and select the New virtual machine option



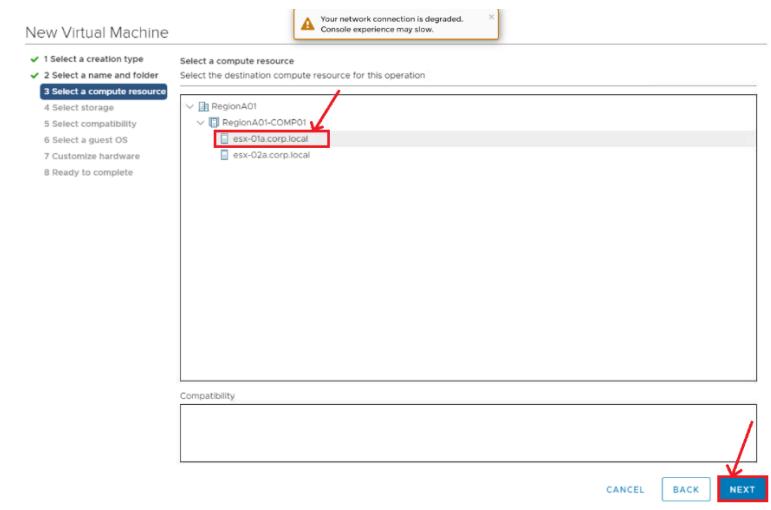
Now we need to choose Create a new virtual machine option. Click on Next



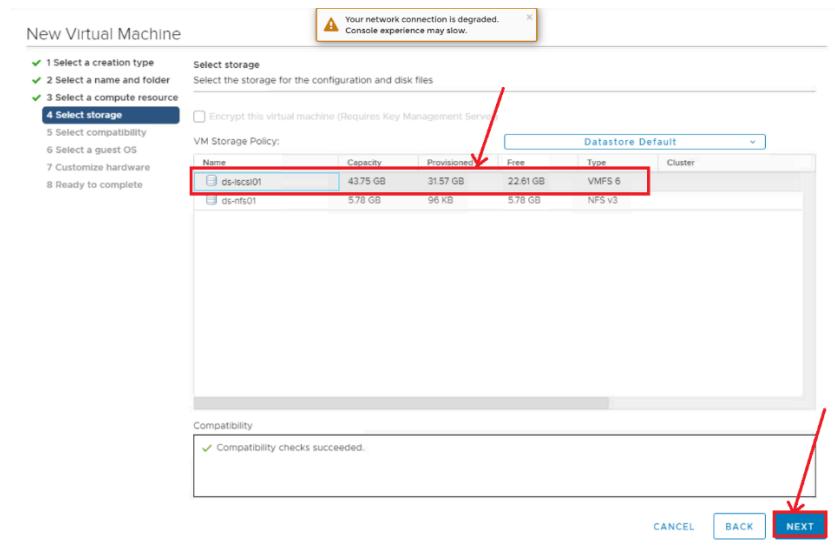
Giving the name for the virtual machine. Click on the Next button.



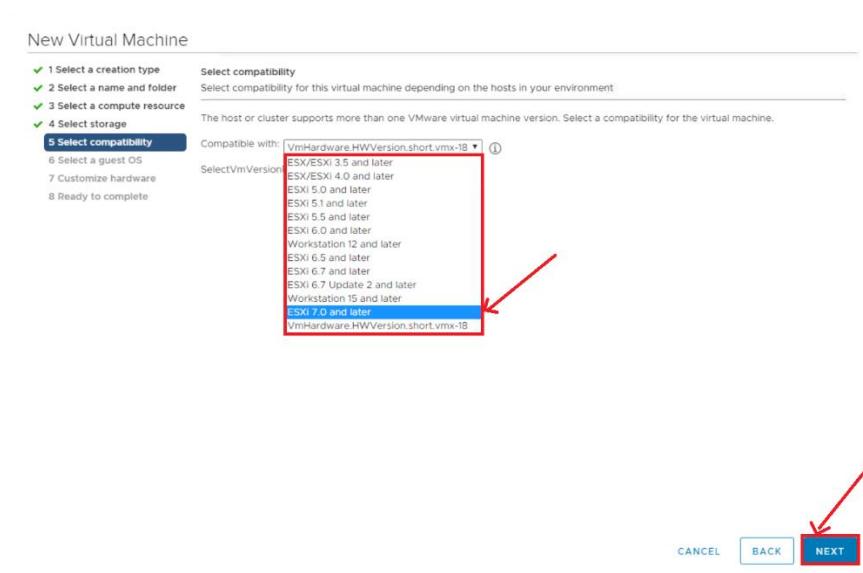
Now, we need to select esx-O1a.corp.local and than click on Next.



Now, we need to select ds-Iscsi01 option. Click on next.



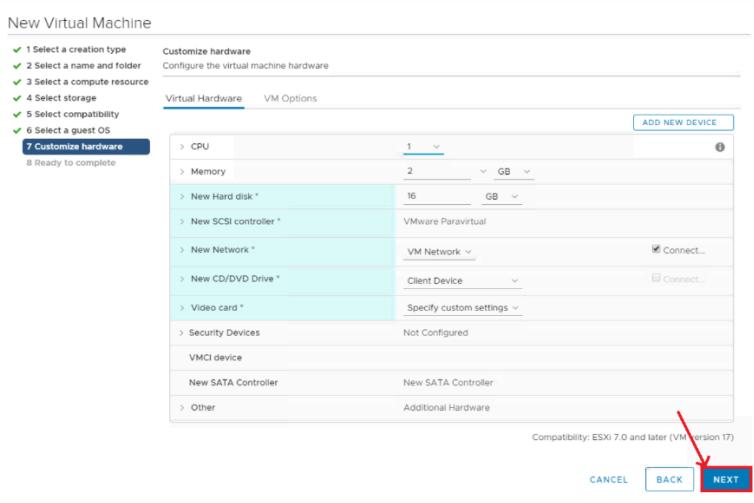
Now, selecting Esxi 7.0 and later for better efficiency. Click on Next.



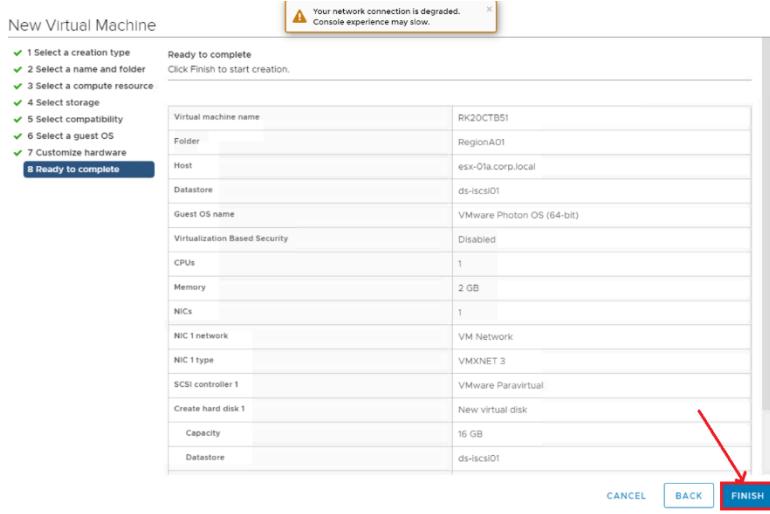
Now, we are going to select the operating system. Here, we select the LINUX VMware photon OS(64 bit). And click on Next.



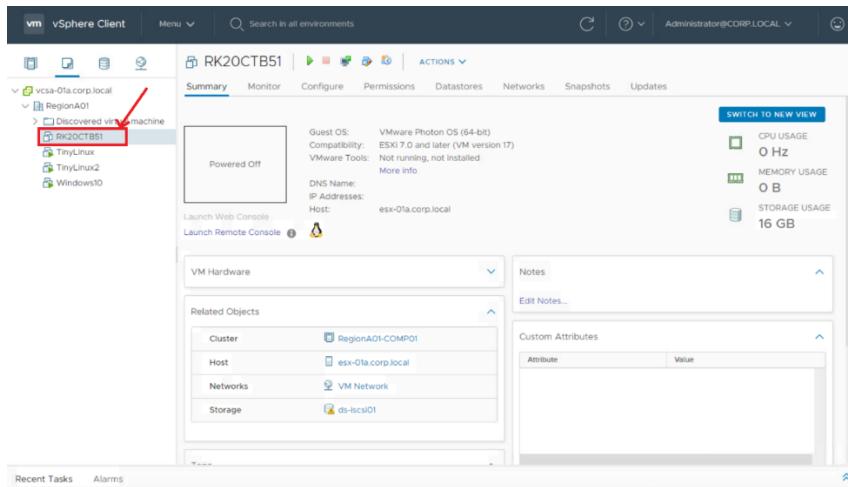
Confirming the requirements of the operating system and click on Next.



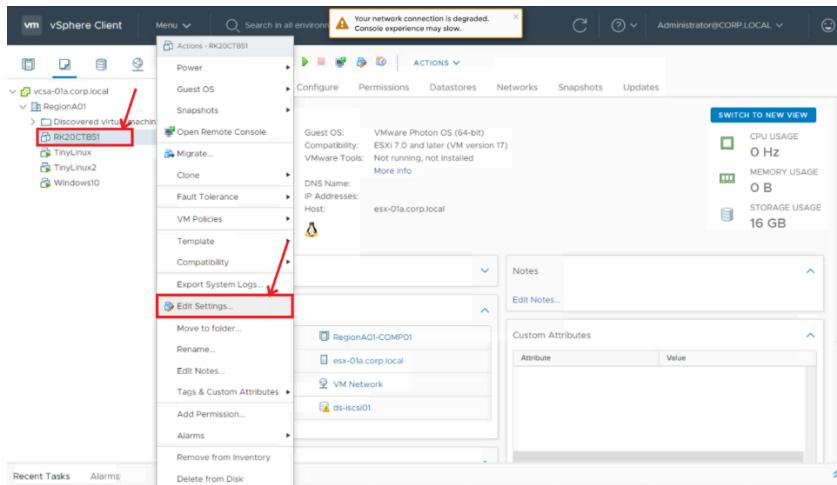
Click on Finish after checking all the details.



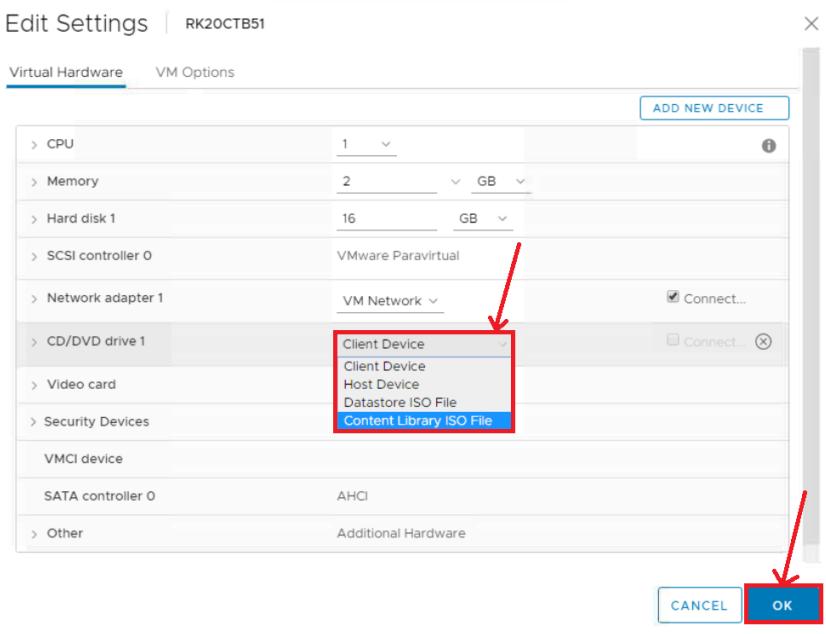
Now we created VM environment for the following operating system. Now we need to install the OS



Right click on the OS which was created and select Edit Settings option

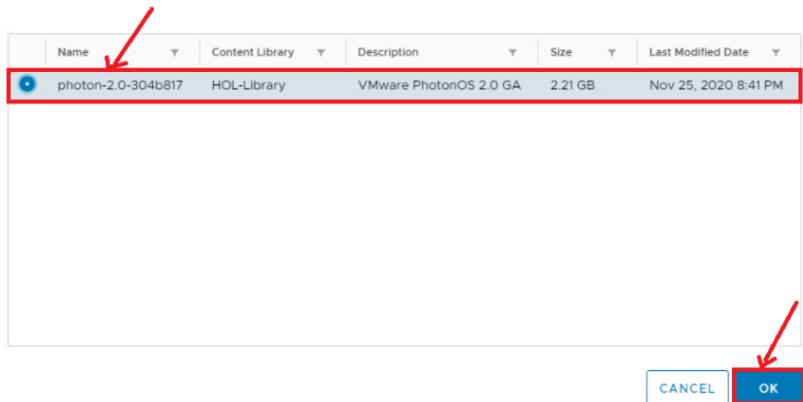


Under CD/DVD drive 1 section select content Library ISO file. And click on OK

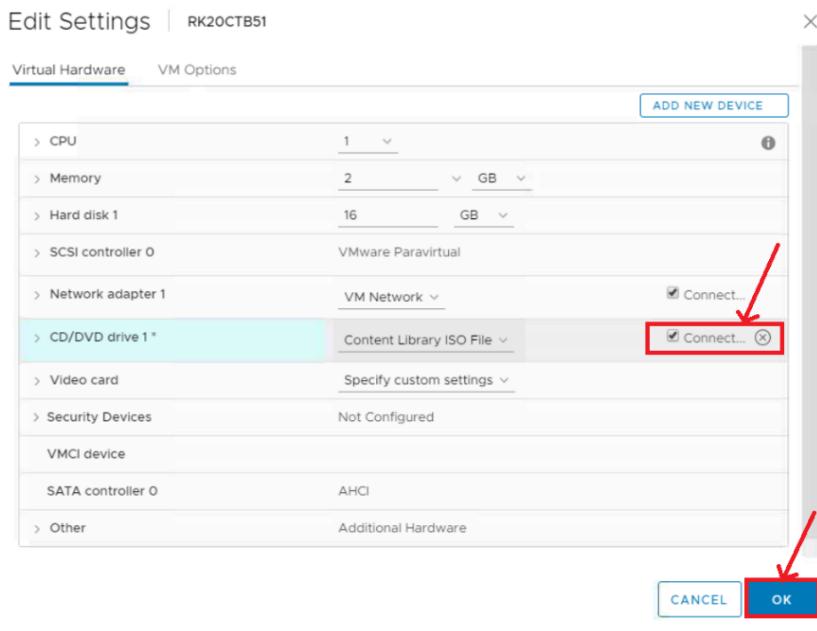


Choose photon as a ISO image to mount. Click on OK

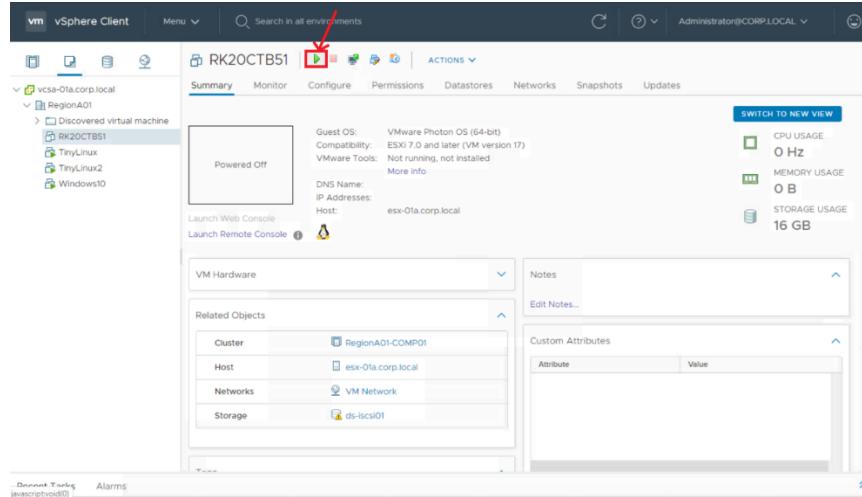
Choose an ISO image to mount



Connecting the ISO file which was mounted. Click on OK



Now power ON the VM to install the OS in the VM



After checking details click on vmware box to get started

RK20CTB51

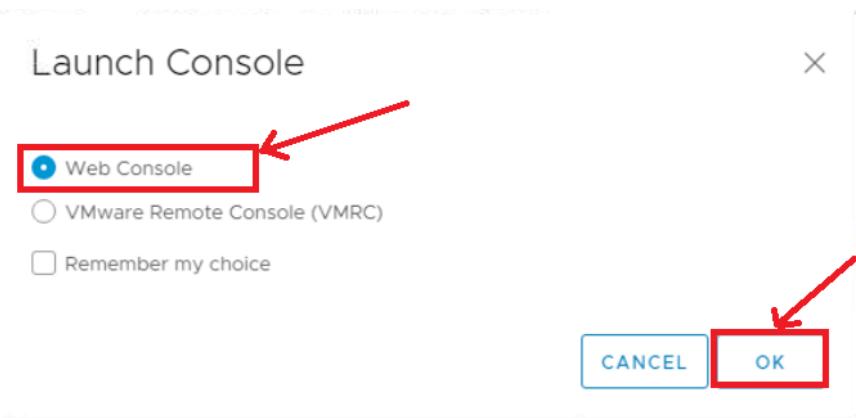
Summary Monitor Configure Permissions Datastores Networks Snapshots Updates

Guest OS: VMware Photon OS (64-bit)
Compatibility: ESXi 7.0 and later (VM version 17)
VMware Tools: Not running, not installed
More info

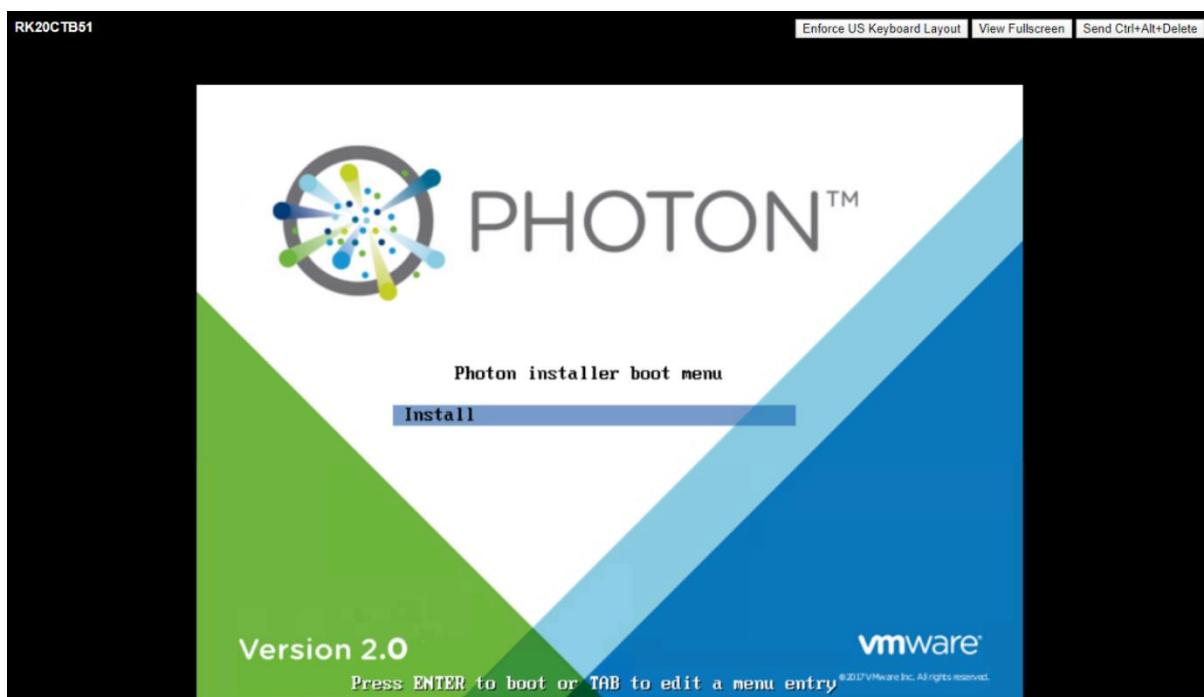
DNS Name: IP Addresses: Host: esxi-01a.corp.local

CPU USAGE 0 Hz
MEMORY USAGE 0 B
STORAGE USAGE 18.08 GB

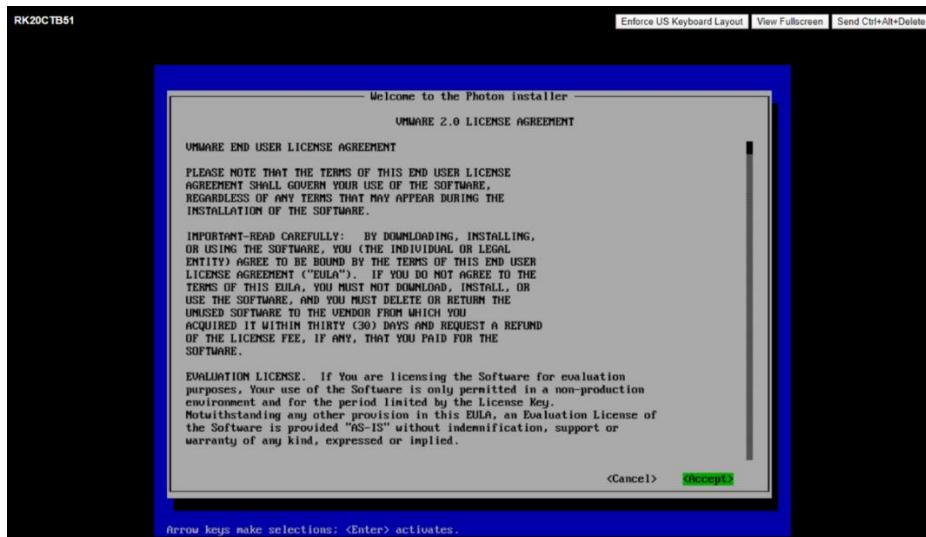
Selecting web console option and click on OK.



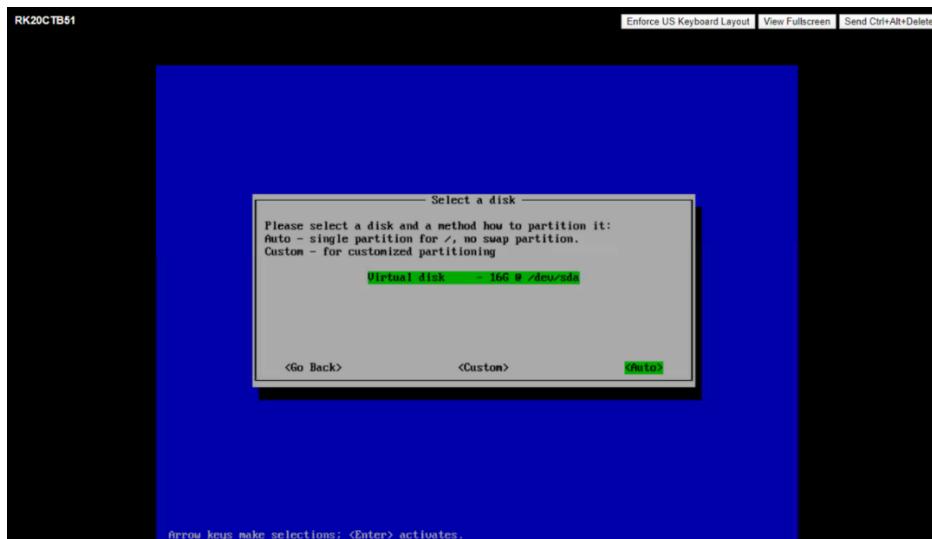
Now installation process get started



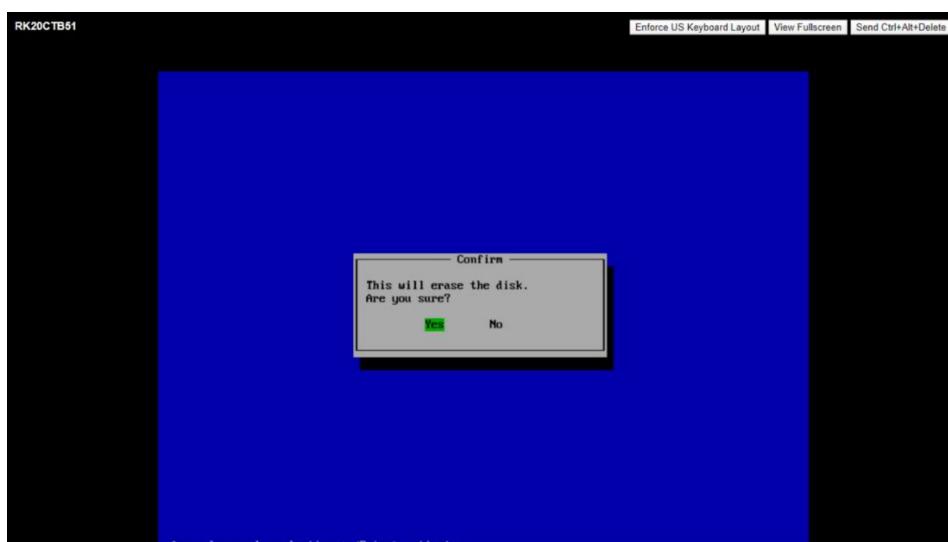
Accept the Agreement by clicking on enter button.



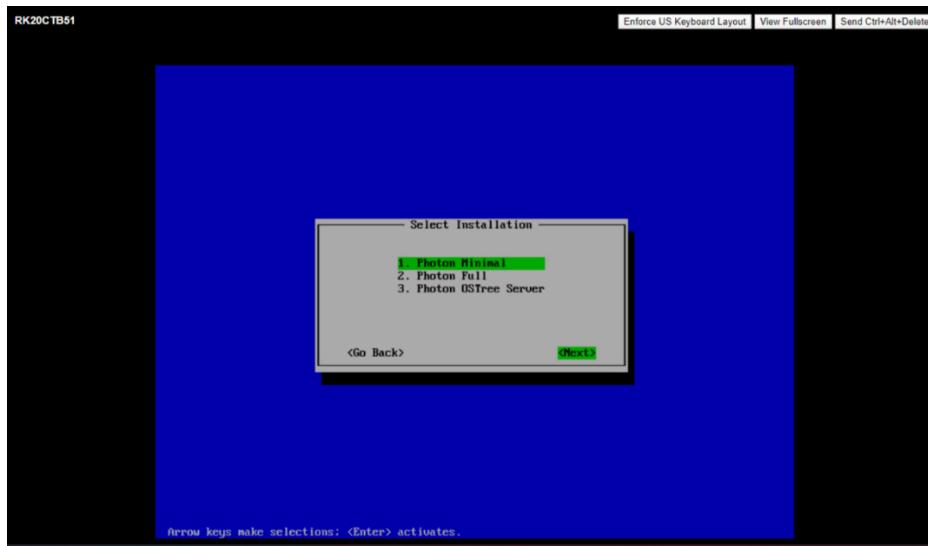
Disk was already selected. So, just we need to click on Enter button on Keyboard.



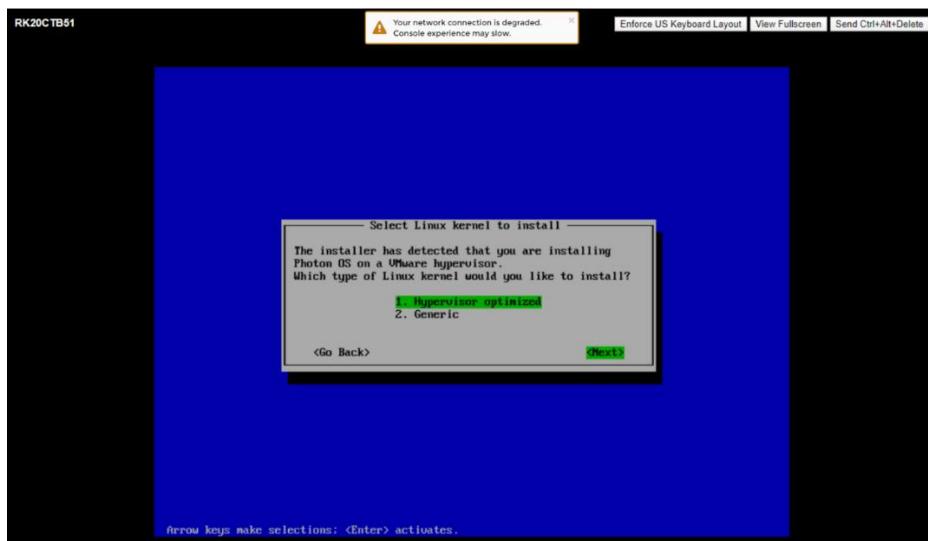
Again, click on enter button.



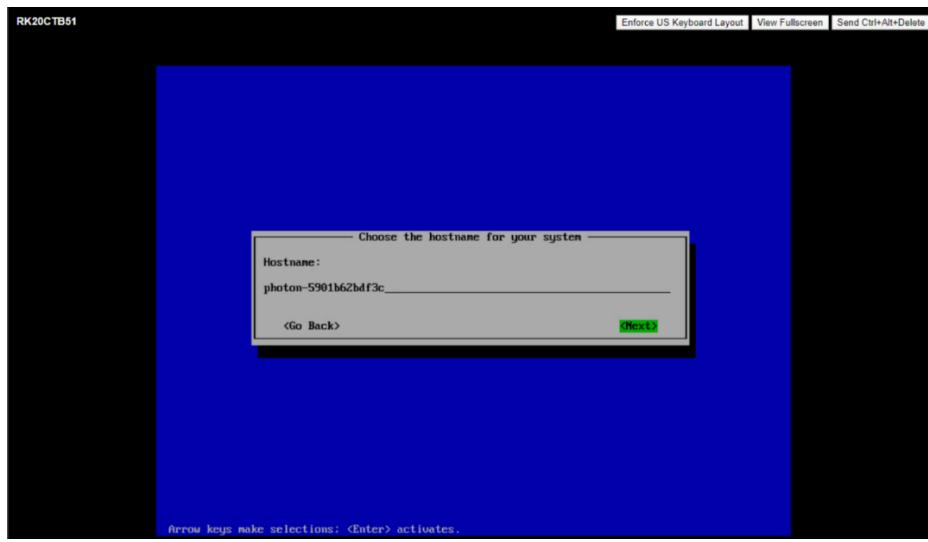
Photon Minimal was already selected. Click on enter button.



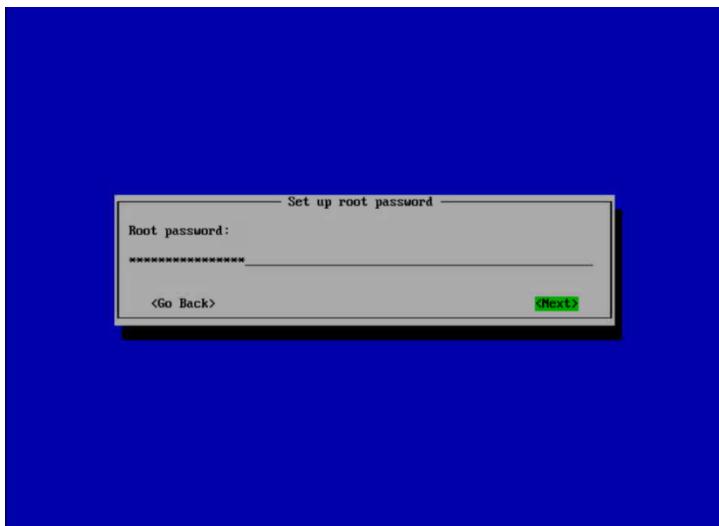
Hypervisor optimized option was already selected. Now click on Next button.



Hostname was already selected. So, click on Next.



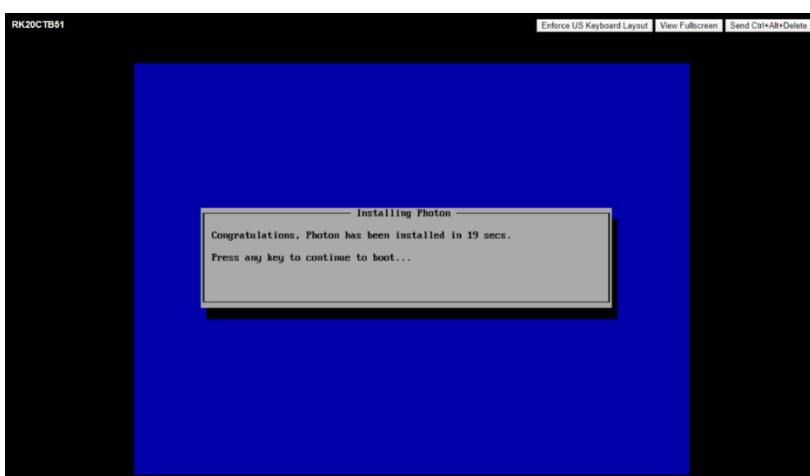
Entering the password. By default the password was VMWare1!VMWare1!



Confirm the same password again and click on next by hitting on enter button.



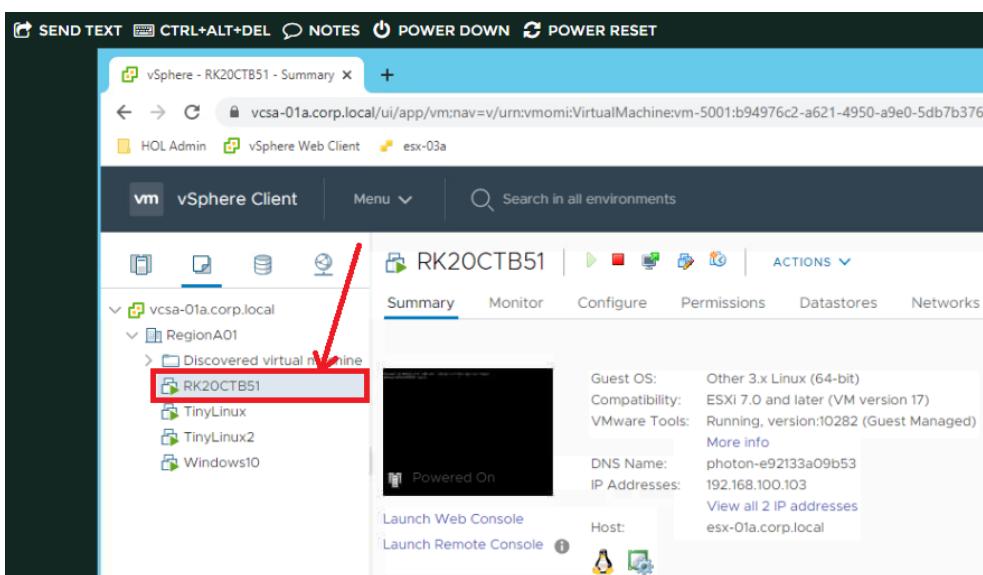
Now the OS get started installing



This is the Terminal interface of the OS

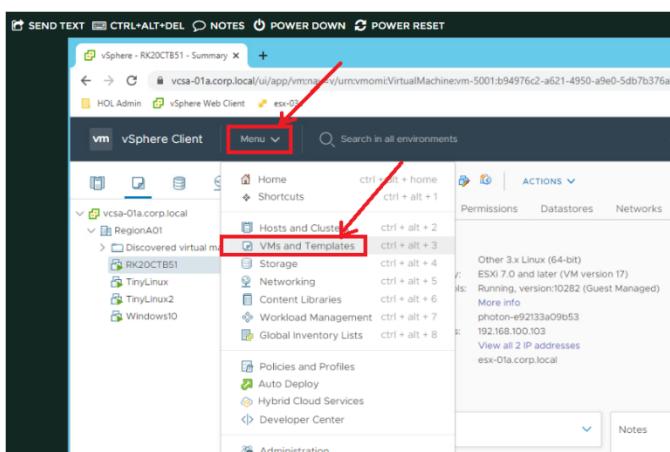


This is the final Interface after the OS got installed.

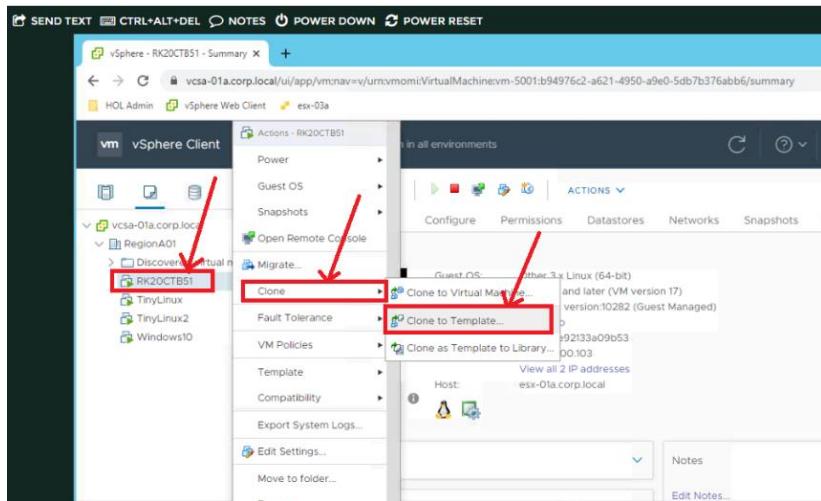


Task 2 : Cloning the Virtual machine using template mode

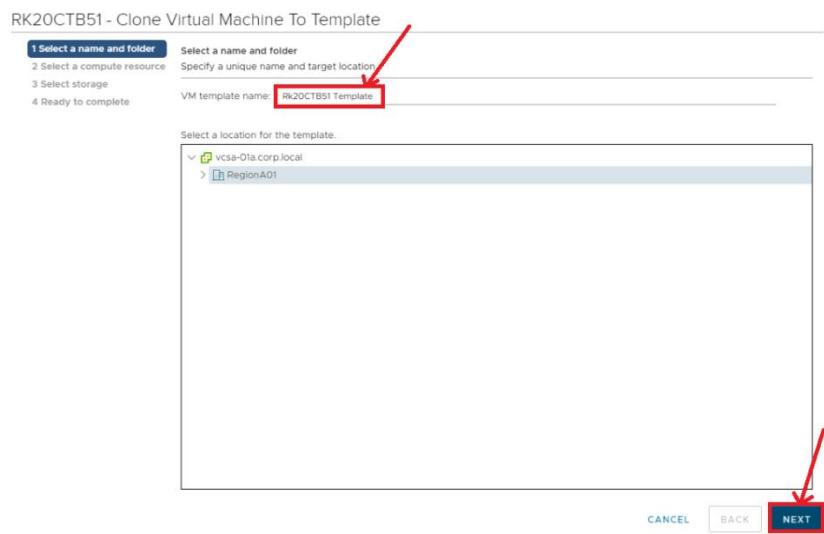
Click on Menu option. Then select VMs and Templates



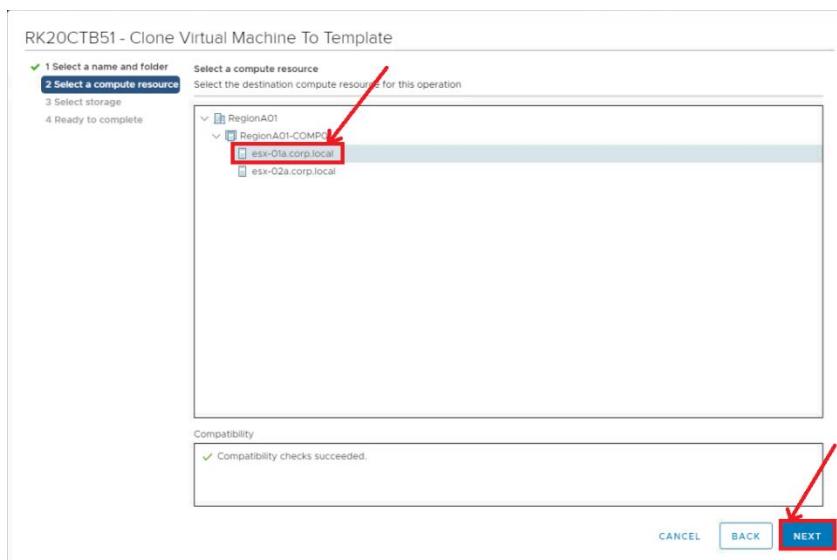
Right click on Created OS. Select Clone option. Then, click on clone to template.



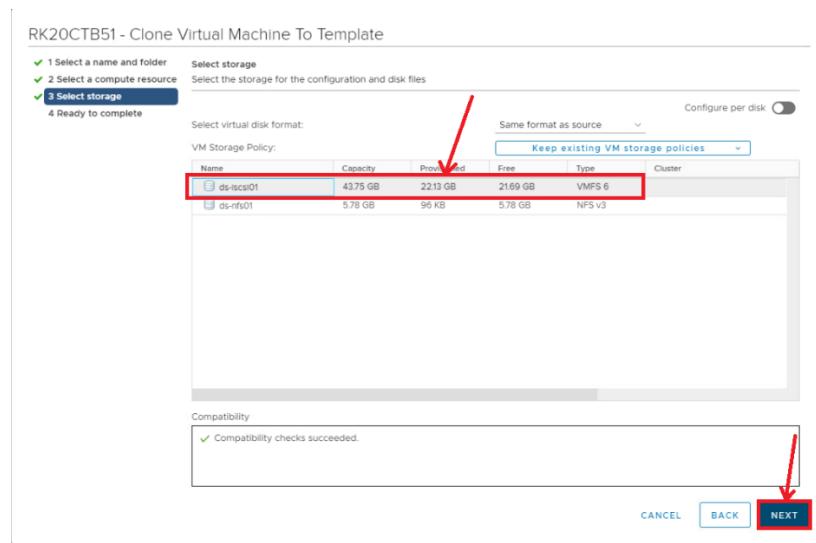
Name the Template accordingly.



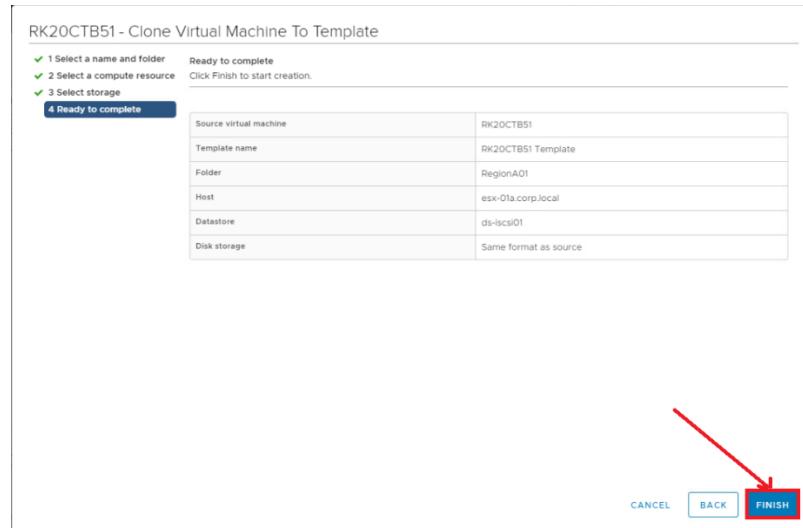
Wee need to select esx-O1a.corp.local . then click on next button



We need to select ds-iscsi01 as it is having the space. Click on Next.



Now, we need to click on Finish button after checking requirements



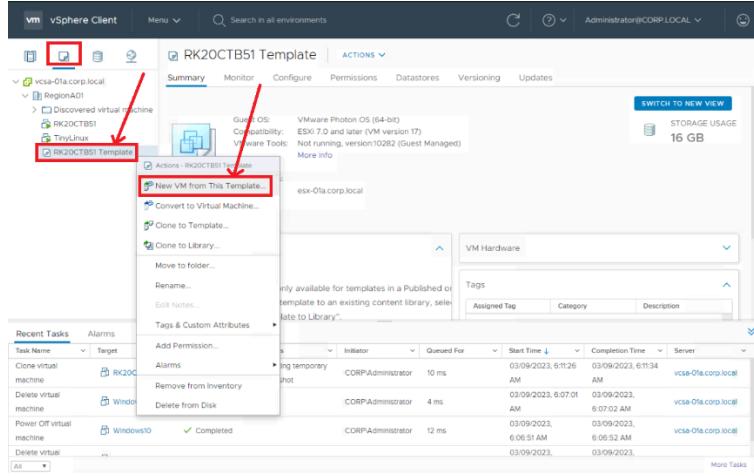
This is the interface which shows the added template

The screenshot shows the vSphere Client interface. In the left sidebar, 'RK20CTB51' is listed under 'Discovered virtual machine'. In the main pane, 'RK20CTB51' is shown as a powered-on VM. On the right, resource usage metrics are displayed. At the bottom, the 'Recent Tasks' table shows a completed task for cloning the VM, with a red box highlighting the 'Completed' status and the target object.

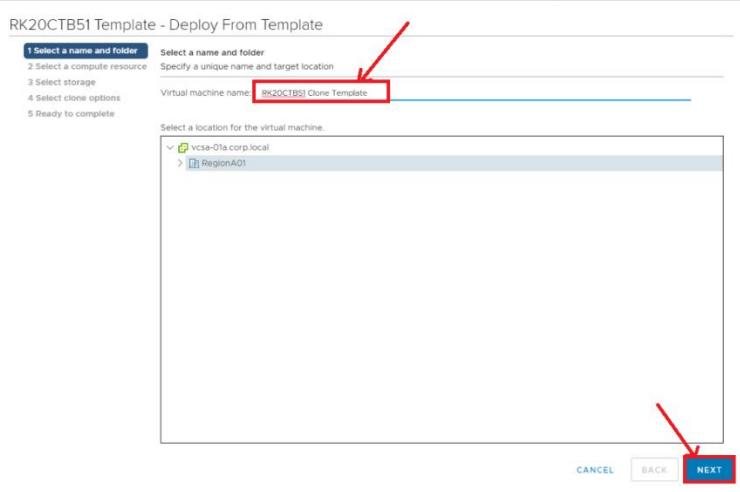
Task Name	Target	Status
Clone virtual machine	RK20CTB51	Completed
Delete virtual machine	Windows10	Completed
Power Off virtual machine	Windows10	Completed
Delete virtual		

Deploying the new Virtual Machine from the Template

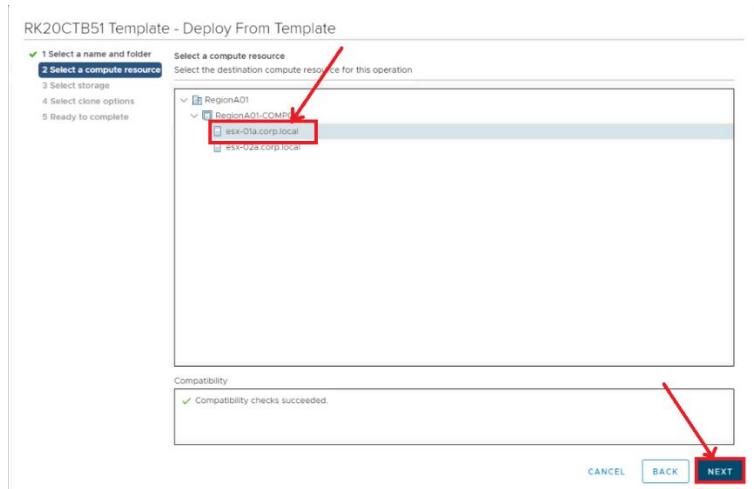
Right click on the template created. Then click on New VM from the Template



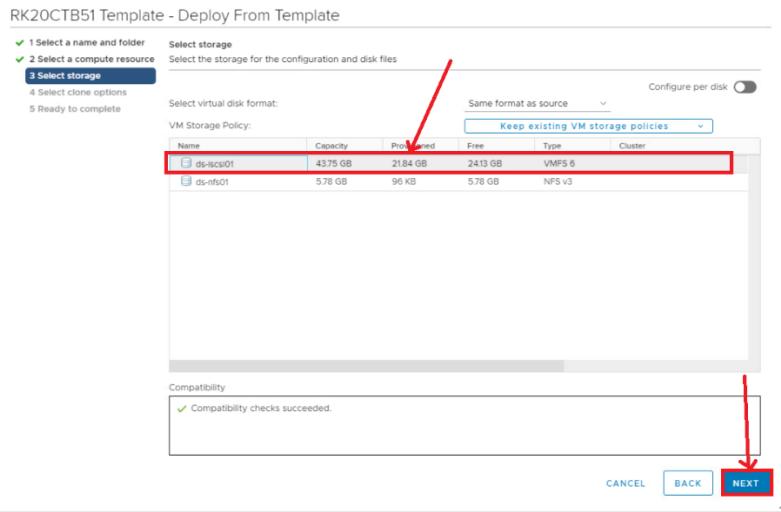
Name the Cloning Template which we are deploying from template.



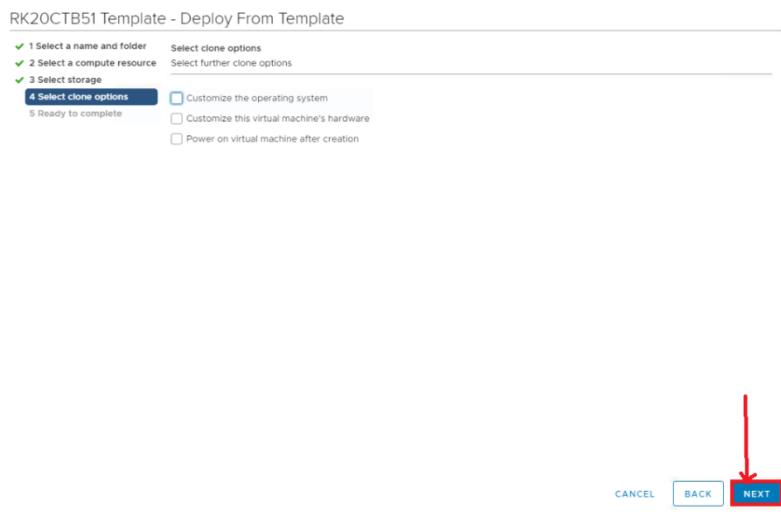
Click on esx-01a.corp.local . Then click on Next button



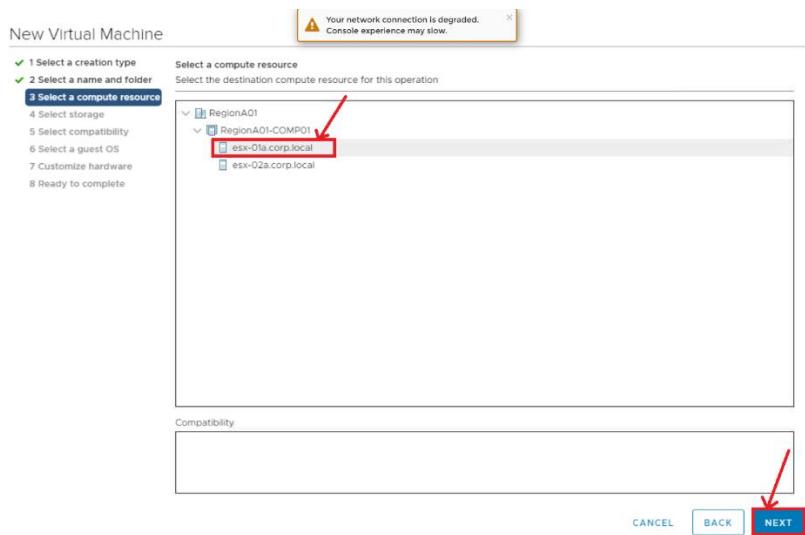
Select the disk for storage. We choose ds.IscsI01. And then click on Next button.



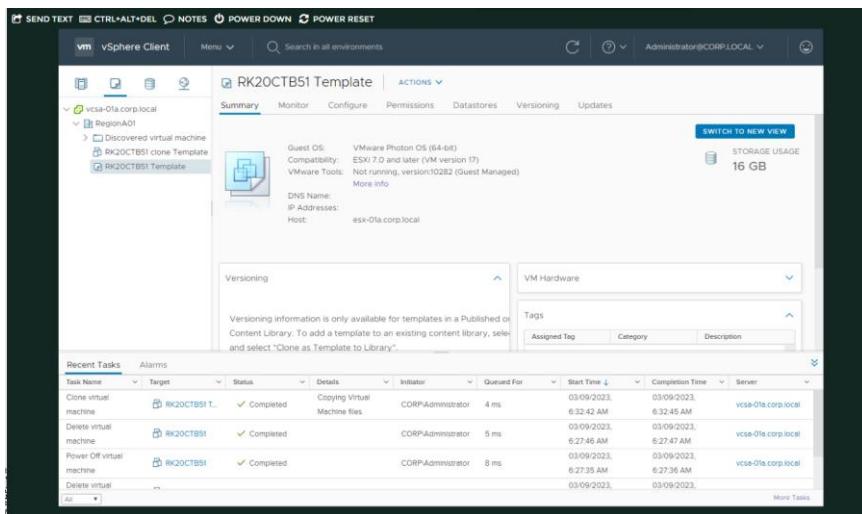
Don't choose anything just click on Next.



Select esx-O1a.corp.local and then click on Next button.



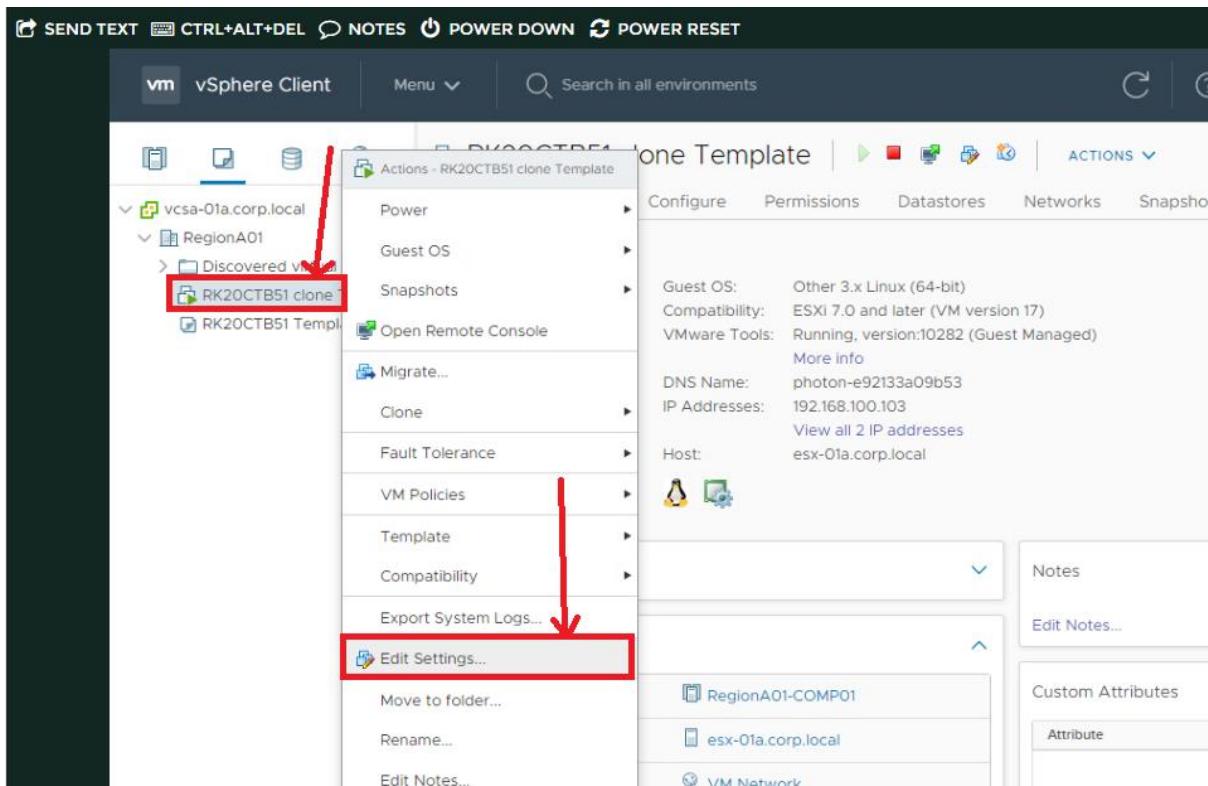
This is the interface for cloning and deploying VM from Template.



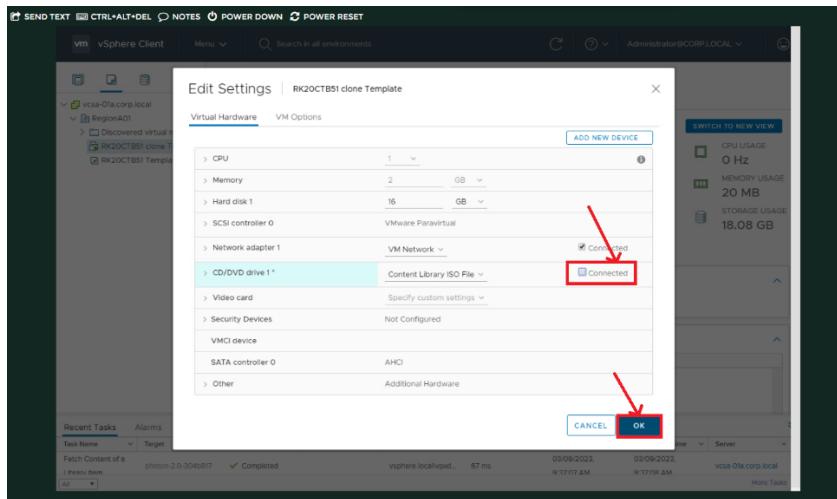
If there is no space in the disk cloud storage we need to delete the unwanted VM OS running in background.

Task 3 : simulating the following

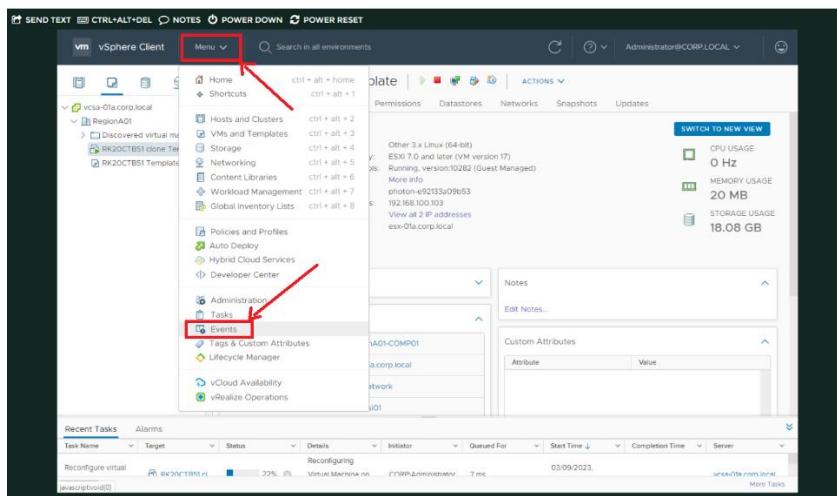
Step 1 : Creating and editing alarms in vCenter Server



Check out the box of connect and click on OK.



Click on Menu option and then select Events.



Now filter the date time manually.

Description	Type	Date Time	Task	User	Event Type ID
User VSPHER...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.UserLog...
vCenter Updat...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter ESXi ...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Log Fl...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Image ...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Design...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Autod...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Boot ...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Root ...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Core ...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
vCenter Stats ...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.Resource...
User VSPHER...	Information	03/09/2023, 9:16:3...		VSPHERE.LOCAL...	vim.event.UserLog...
User VSPHER...	Information	03/09/2023, 9:16:2...		VSPHERE.LOCAL...	vim.event.UserLog...

Clicking on Hosts and Clusters

Lab: Virtualization 101 (HOL-2210-01-SDC)

The screenshot shows the vSphere Client interface. The left sidebar has a 'CONSOLES' tab at the top, followed by a list of categories: Home, Shortcuts, Hosts and Clusters (which is highlighted with a red box), VMs and Templates, Storage, Networking, Content Libraries, Workload Management, Global Inventory Lists, Policies and Profiles, Auto Deploy, and Hybrid Cloud Services. The main pane is titled 'Event Console' and lists various system events with columns for Description, Type, and Date Time.

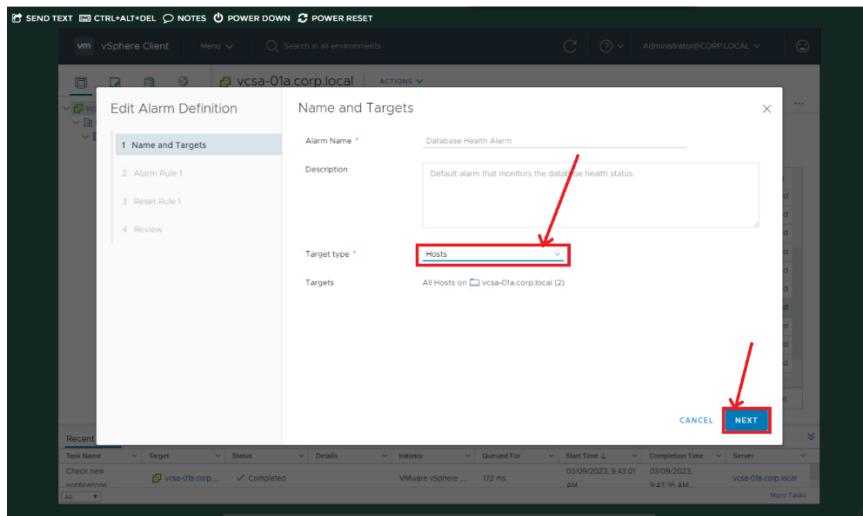
Choose the operating system vcsa-01a.local

The screenshot shows the vSphere Client interface. The left sidebar shows a tree structure with 'vcsa-01a.corp.local' selected (highlighted with a red box). Under 'vcsa-01a.corp.local', there are 'RegionA01' and 'RegionA01-COMP01' with hosts 'esx-01a.corp.local' and 'esx-02a.corp.local'. The 'Configure' tab is selected (highlighted with a red box). In the configuration pane, the 'Alarm Definitions' section is highlighted with a red box. It contains a table with columns for Alarm Name, Object type, Defined in, and Enabled status. Several alarms are listed, such as 'Host connection and power state', 'No compatible host for Secondary...', and 'vMon API Service Health Alarm'.

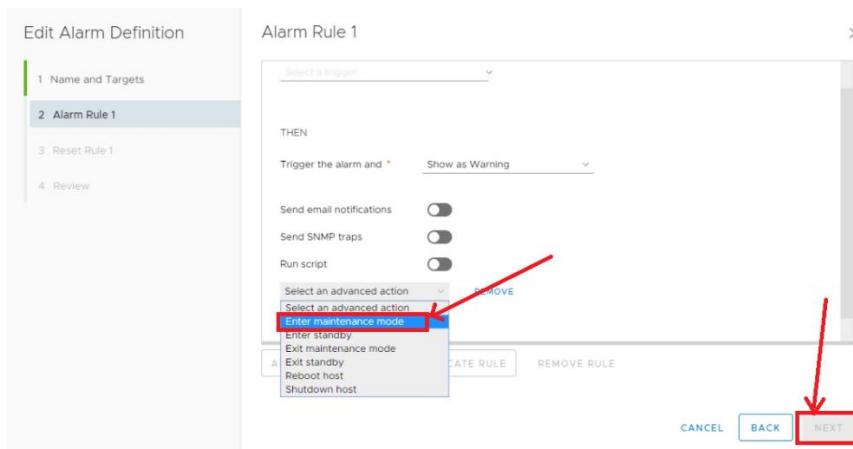
Choose Edit option and select any database.

The screenshot shows the vSphere Client interface. The left sidebar shows a tree structure with 'vcsa-01a.corp.local' selected. The 'Configure' tab is selected. In the configuration pane, the 'Alarm Definitions' section is shown with a table. One row in the table is selected and highlighted with a red box, with the 'EDIT' button also highlighted with a red box. The table has columns for Alarm Name, Object type, Defined in, and Enabled status. Other alarms listed include 'Cis License Health Alarm', 'Component Manager Service Health...', 'Content Library Service Health Alar...', 'Core and Inventory Disk Exhaustio...', 'CPU Exhaustion on vcsa-01a', 'Data Service Health Alarm', 'Datastore capability alarm', 'Datastore cluster is out of space', 'Datastore compliance alarm', and 'Datastore is in multiple datacenters'.

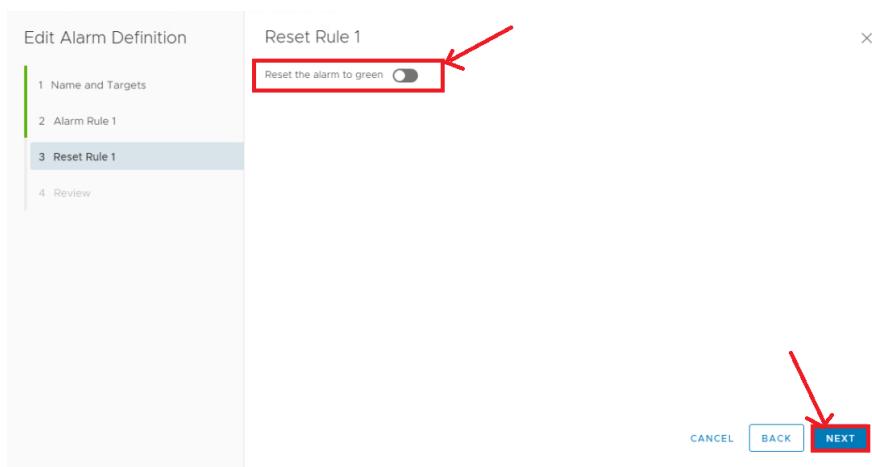
Change the target type and click on Next button.

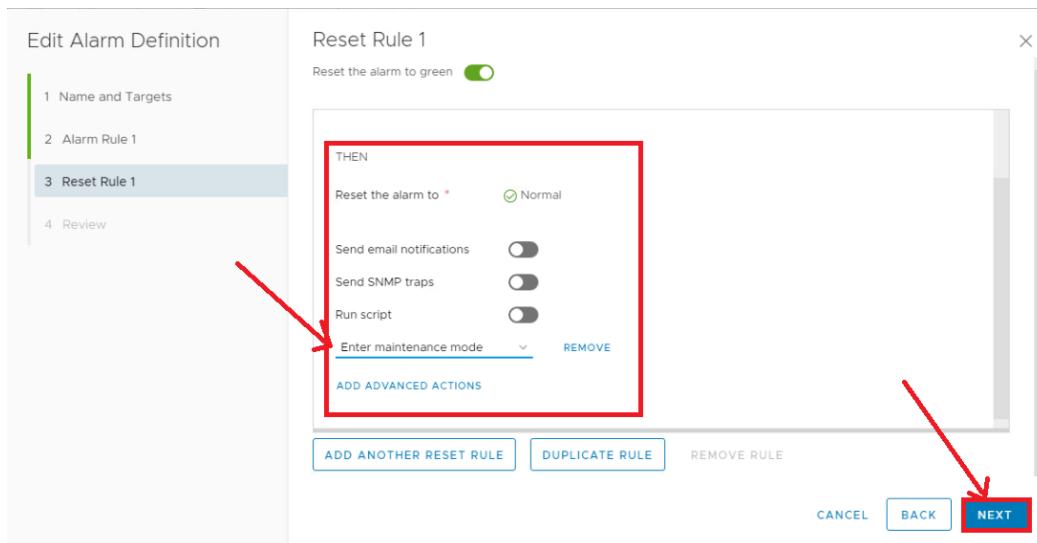


This is the rule 1 for Alarms. Select the Advanced Actions and click on Next.

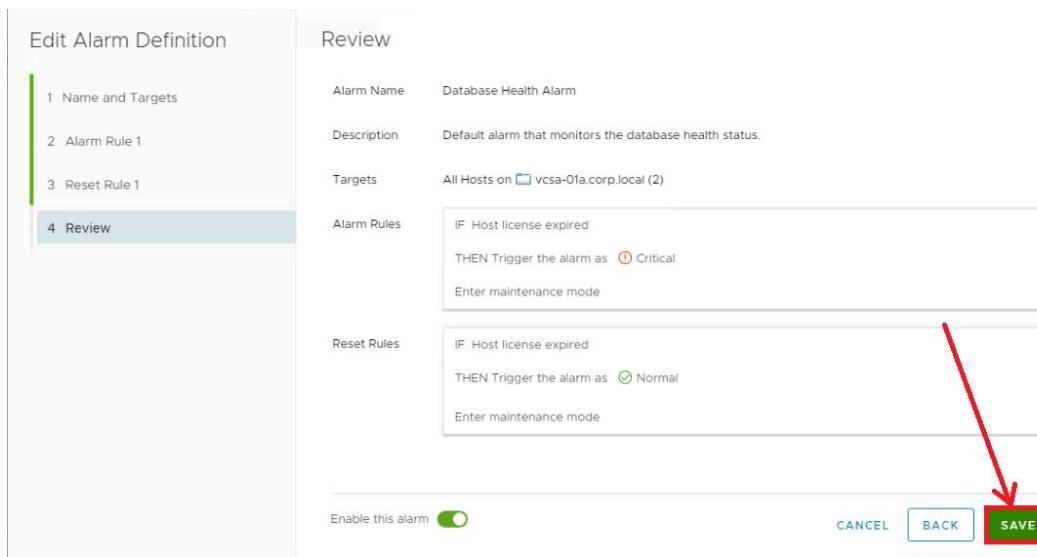


Choose the reset rule to green option which is already selected. Clicking on Next button.

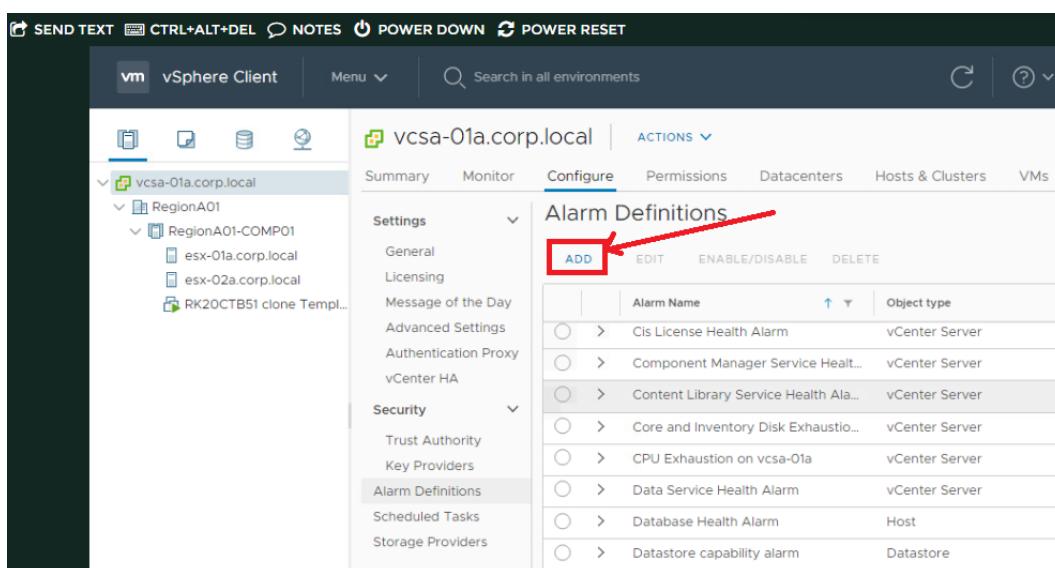




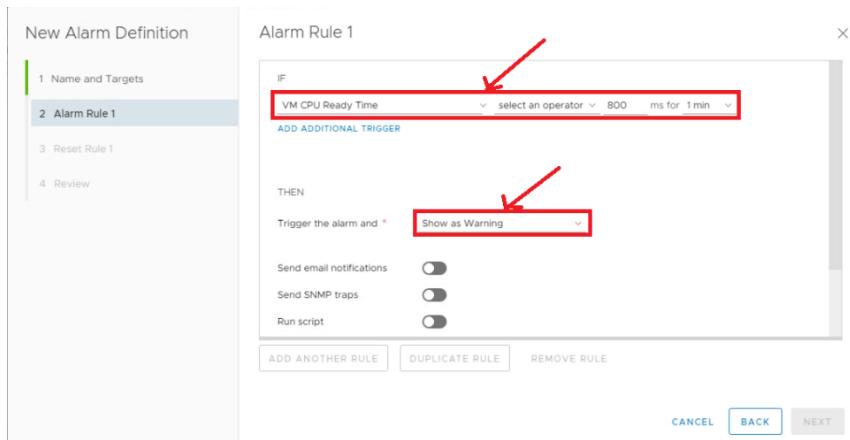
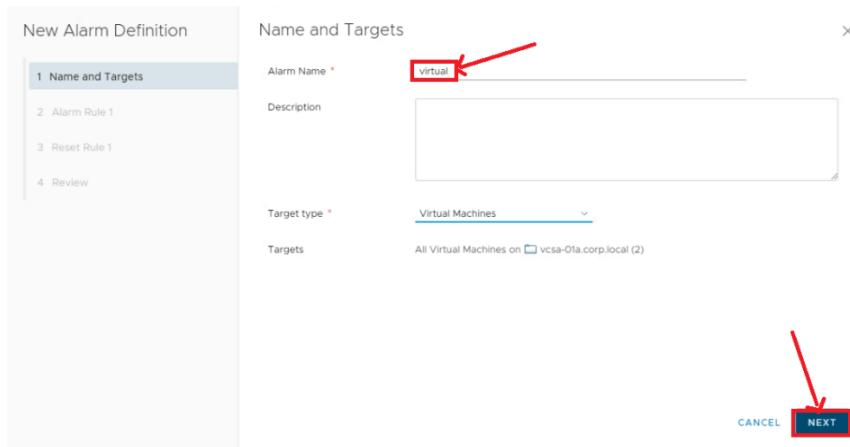
If needed change the alarm definition.



Click on Add Button by seeing the transformation.



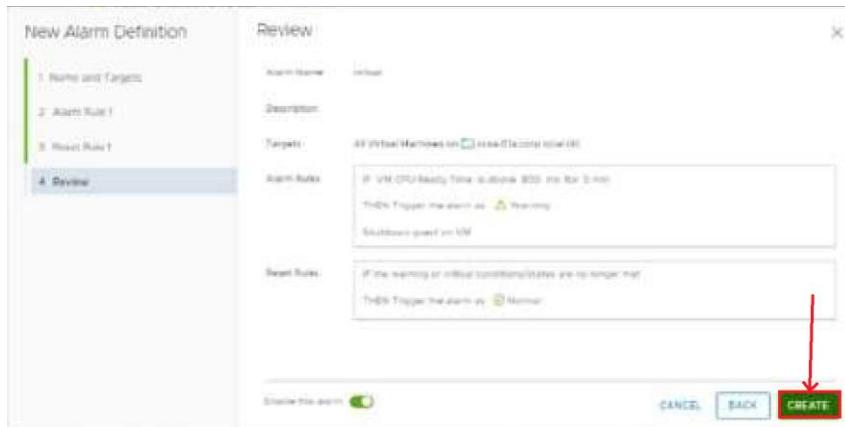
Select the name and Alarms



Simply click on Next.



Here we are in the neighbour helpness.

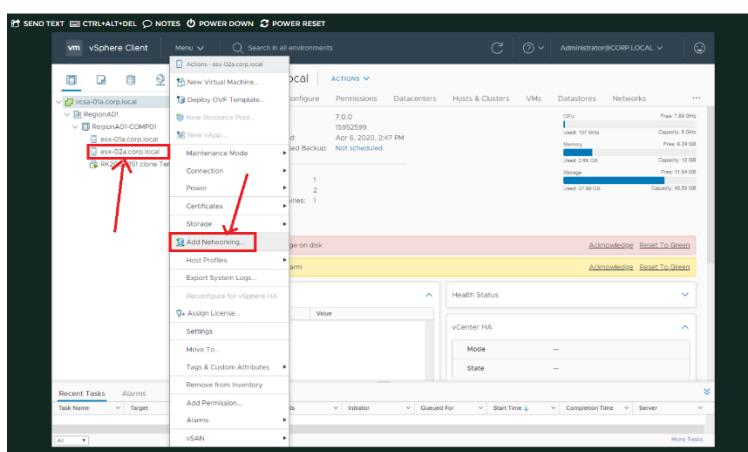


This is the last step to complete the steps for alarm

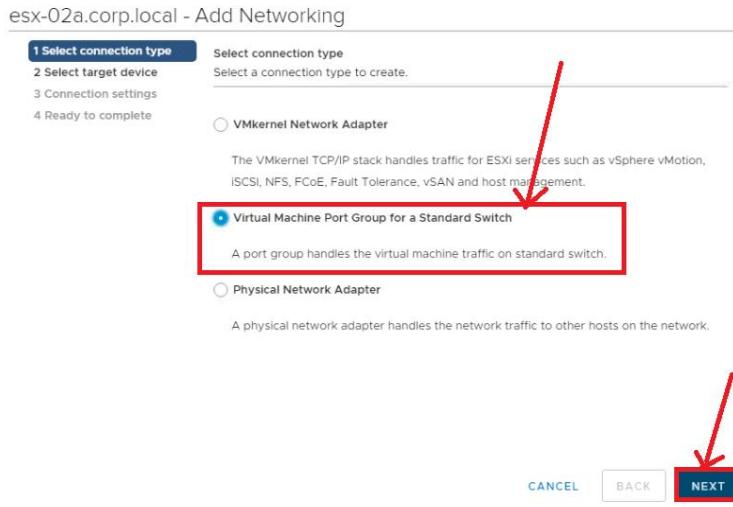
Alarm Name	Object Type	Defined By
vSphere Health	Virtual Machine	
vCenter Server Health	vCenter Server	
vCenter Status Monitor Timeout	vCenter	
vDS Compliance Check fail Tolerance	Cluster	
Virtual machine Computation Power	Virtual Machine	
Virtual machine CPU usage	Virtual Machine	
Virtual machine errors	Virtual Machine	
Virtual machine Fault Tolerance status	Virtual Machine	

Step 2: Migrating VMs using VMware Motion

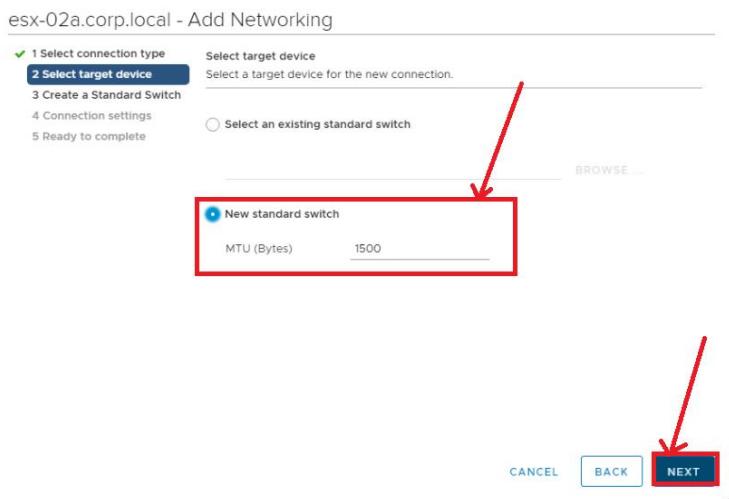
Right click on Esx-02. Then click on Add Networking option.



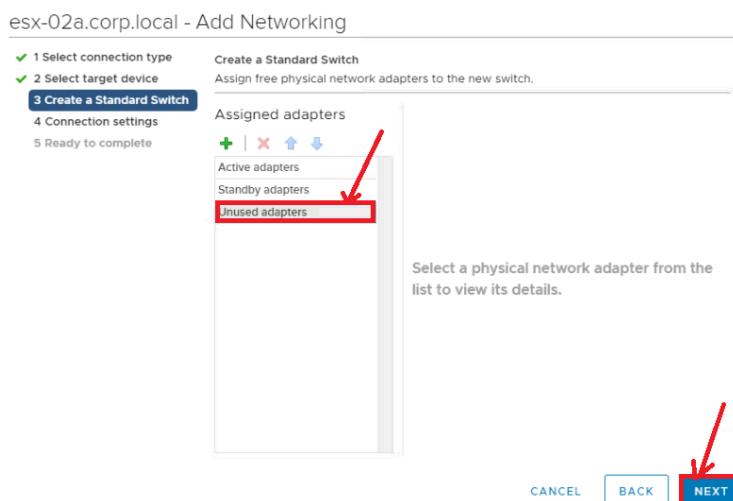
Select the Virtual Machine port and than click on Next button.



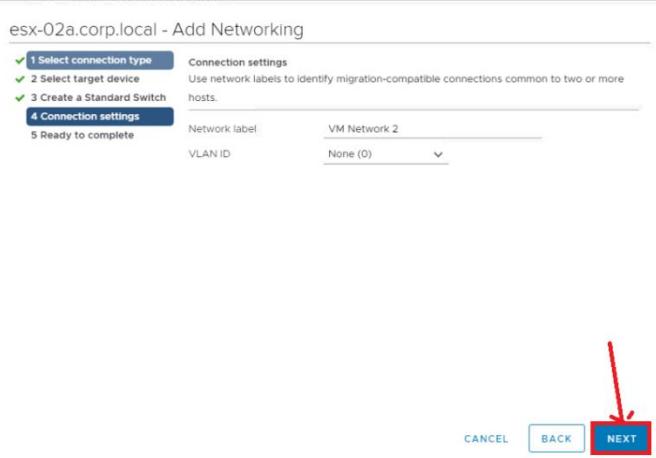
Select the New standard switch .and than click on Next.



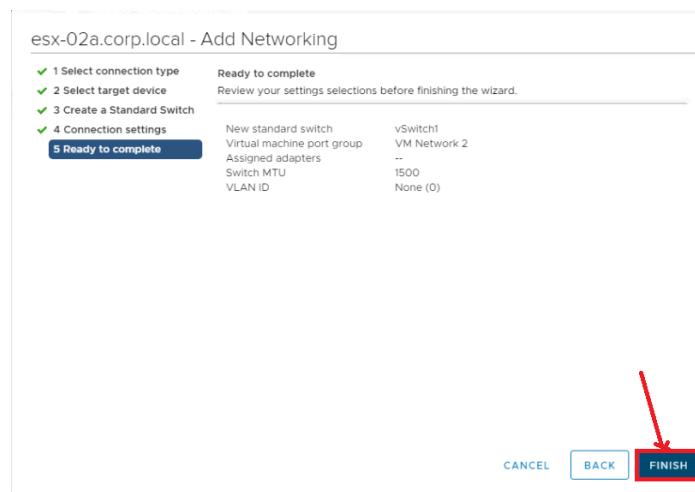
Select Unused adapters. Than click on Next.



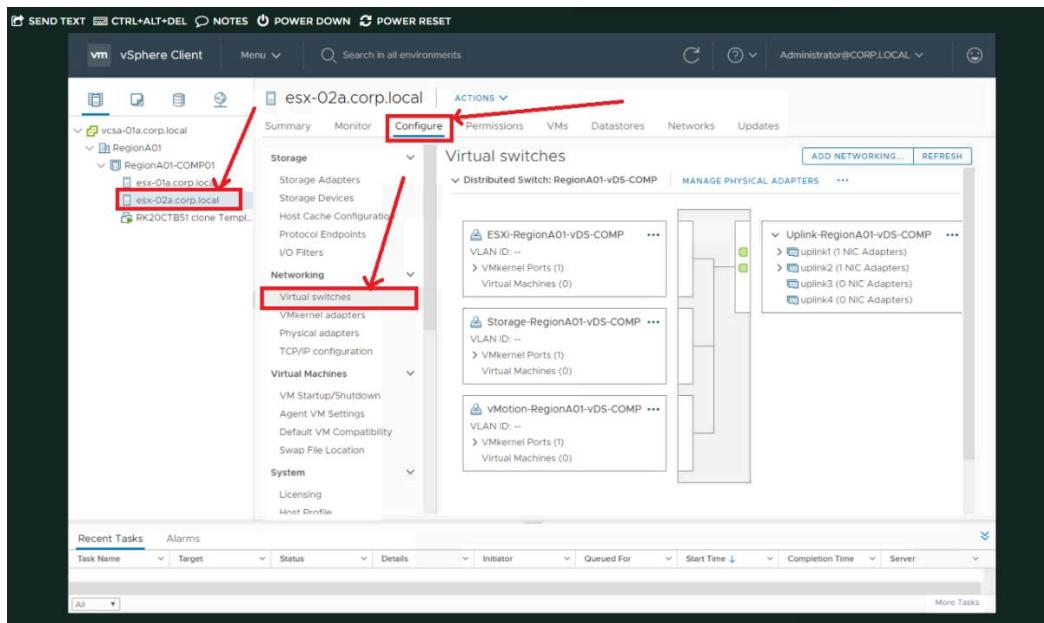
Simply click on Next.



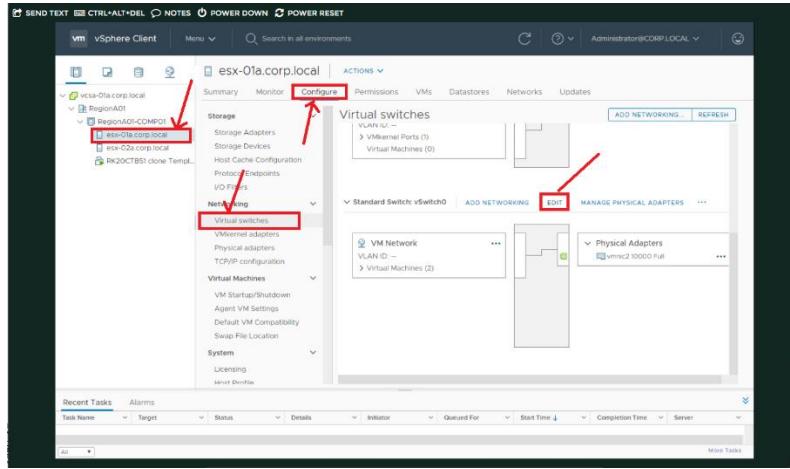
Now click on Finish and move forward.



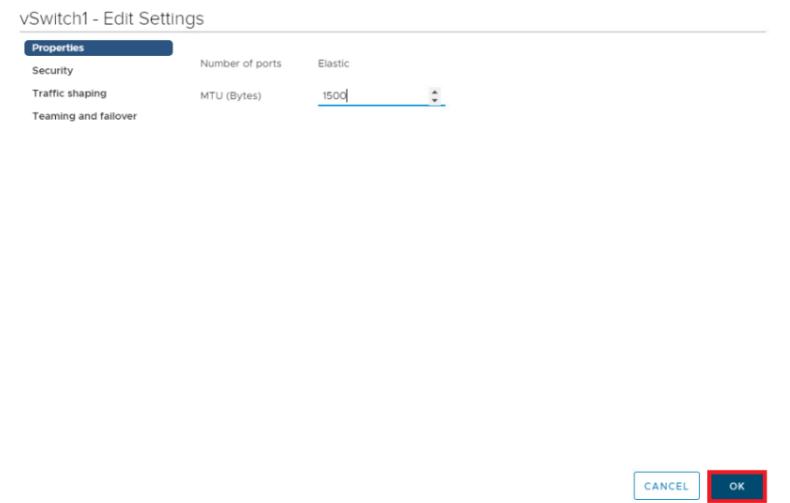
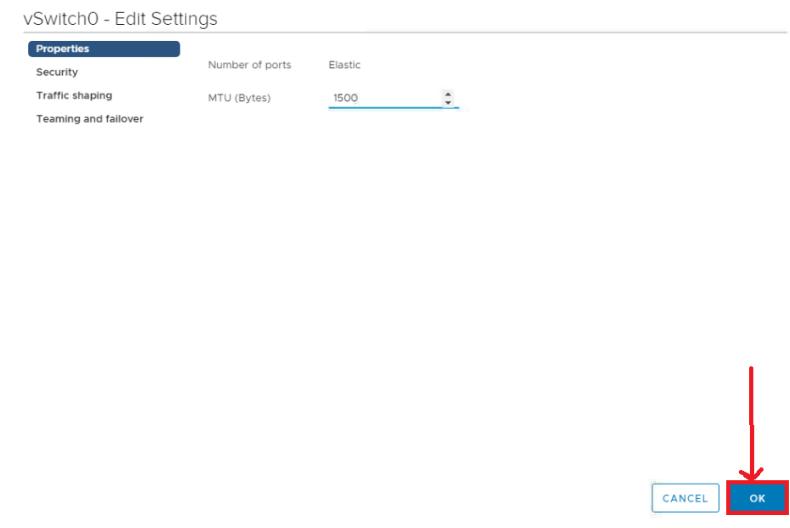
Firstly, Click on esx-02a and than click on configure option and than click on Virtual Switches

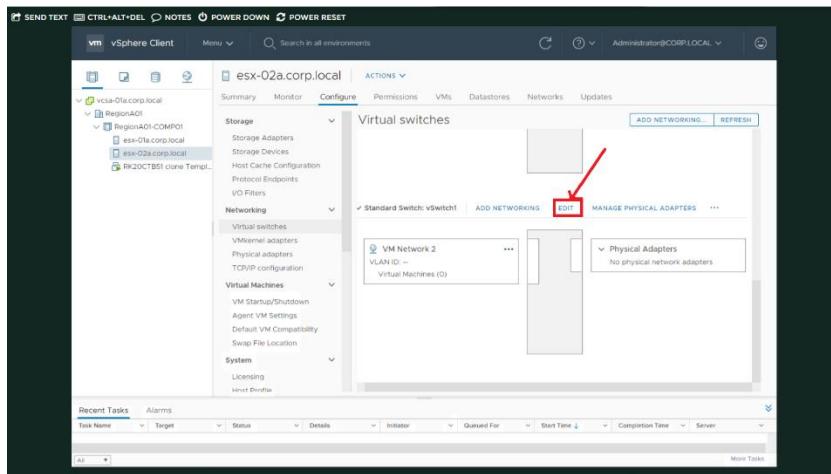


Clicking on esx-01a configure. Than virtual switches and choose Standard switch vswitch 0

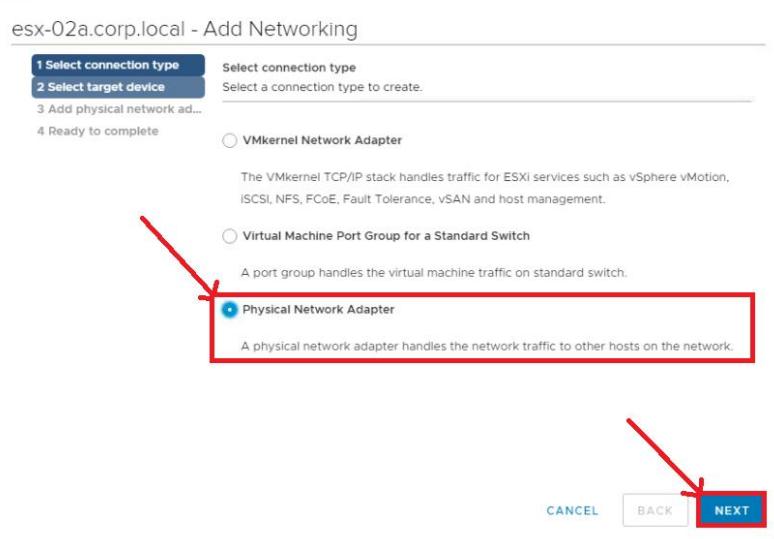
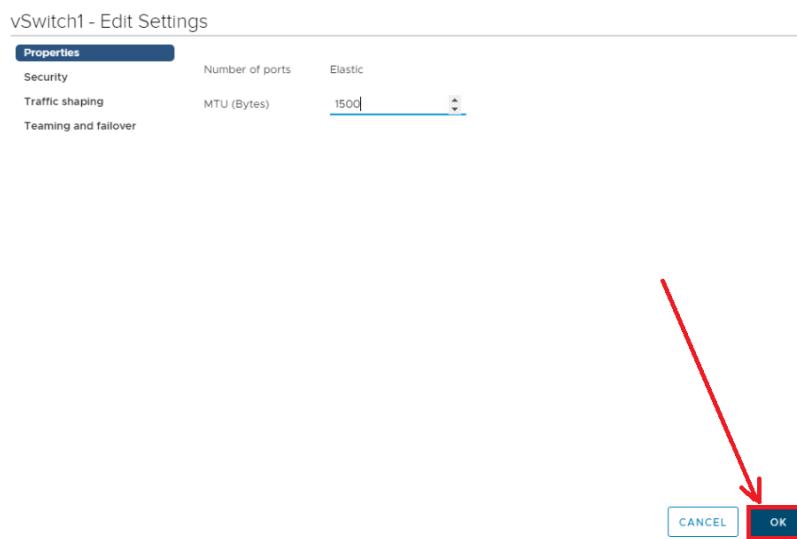


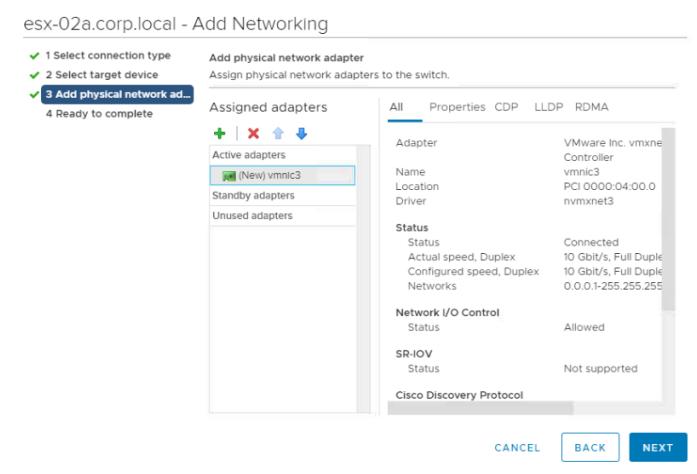
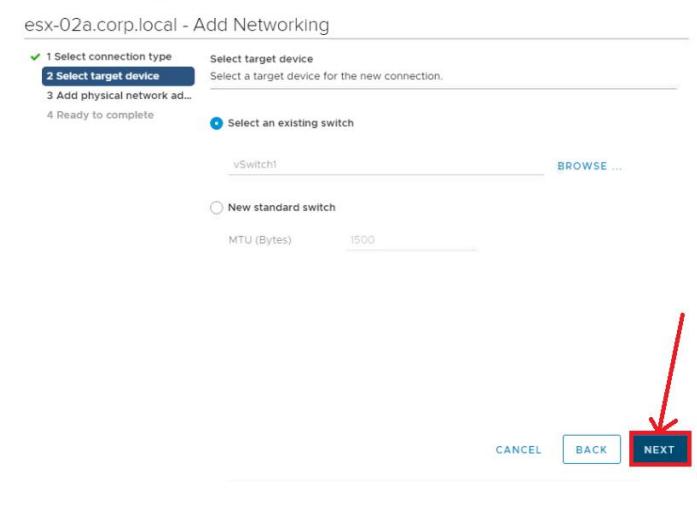
Clicking on Add Networking and than Select Physical Network Adapter. Click on Next





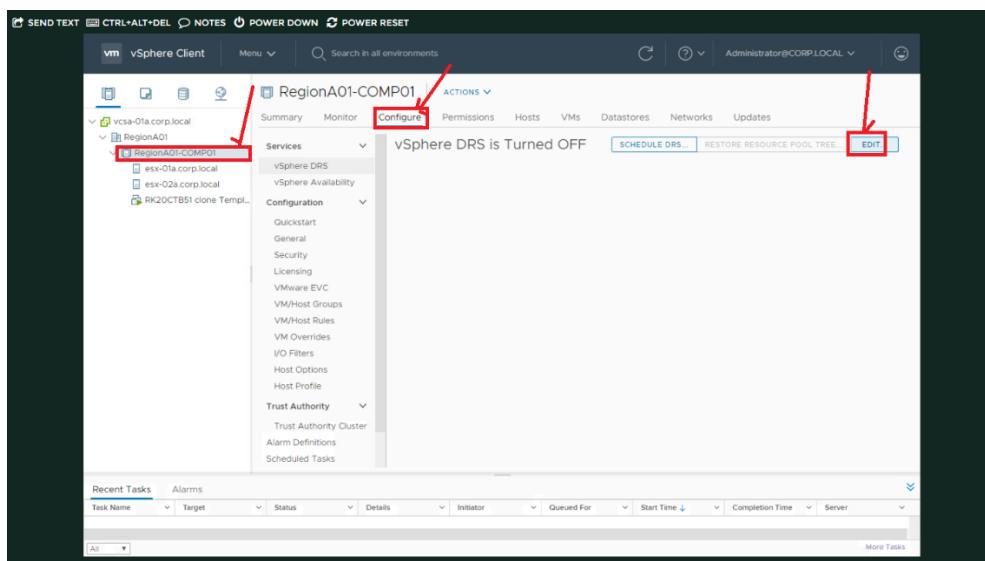
Click on OK.



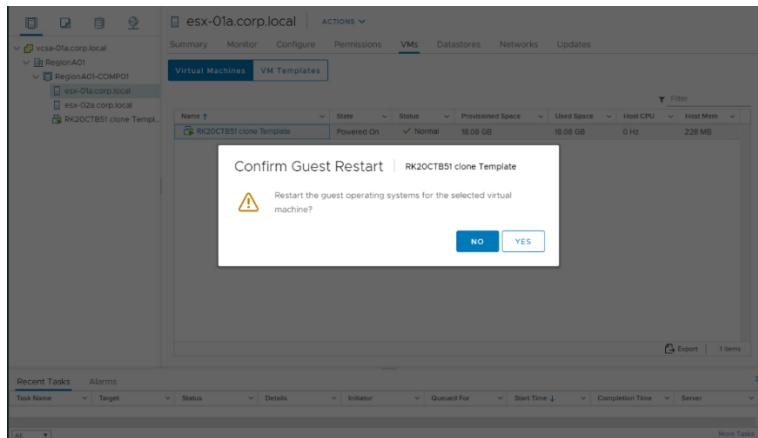


Step 3: vSphere Monitoring and performance

Firstly, Click on the Region A01 than Configure and development. Click on Edit.

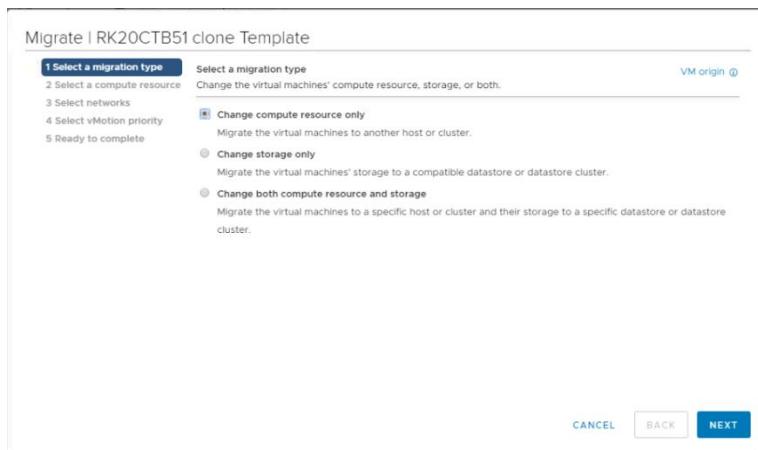


Select the VMs in which click on Select all VM. Right click on it and migrate option.

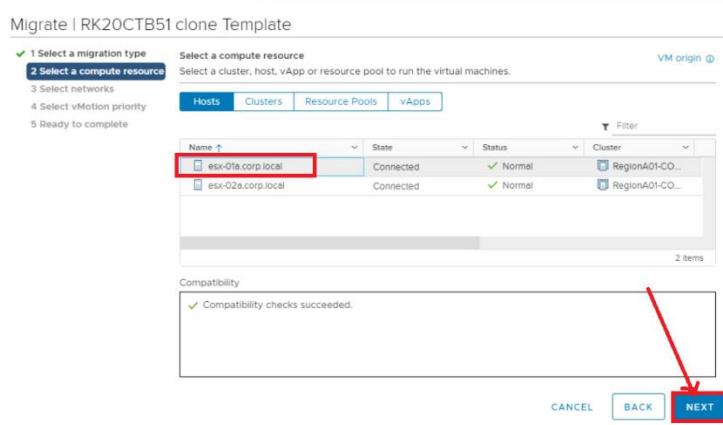


Click on yes.

Click on Next button



Click on Next option. After selecting esx-01a.corl.local.



Click on Next button after checking the requirements and details.

Migrate | RK20CTB51 clone Template

✓ 1 Select a migration type
 ✓ 2 Select a compute resource
 ✓ 3 Select networks
4 Select vMotion priority
 5 Ready to complete

Select vMotion priority
 Protect the performance of your running virtual machines by prioritizing the allocation of CPU resources.

VM origin [?](#)

Schedule vMotion with high priority (recommended)
 vMotion receives higher CPU scheduling preference relative to normal priority migrations. vMotion might complete more quickly.

Schedule normal vMotion
 vMotion receives lower CPU scheduling preference relative to high priority migrations. You can extend vMotion duration.

CANCEL BACK **NEXT**

Click on Finish button.

Migrate | RK20CTB51 clone Template

✓ 1 Select a migration type
 ✓ 2 Select a compute resource
 ✓ 3 Select networks
 ✓ 4 Select vMotion priority
5 Ready to complete

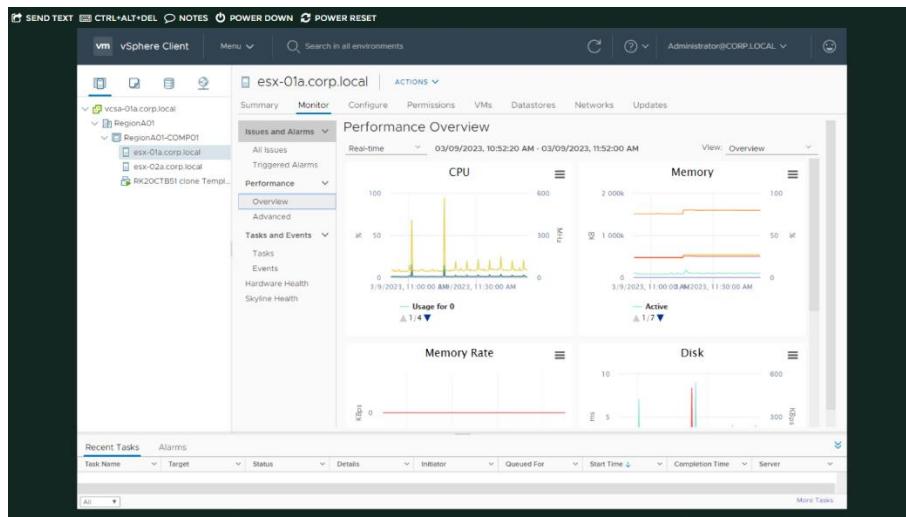
Ready to complete
 Verify that the information is correct and click Finish to start the migration.

VM origin [?](#)

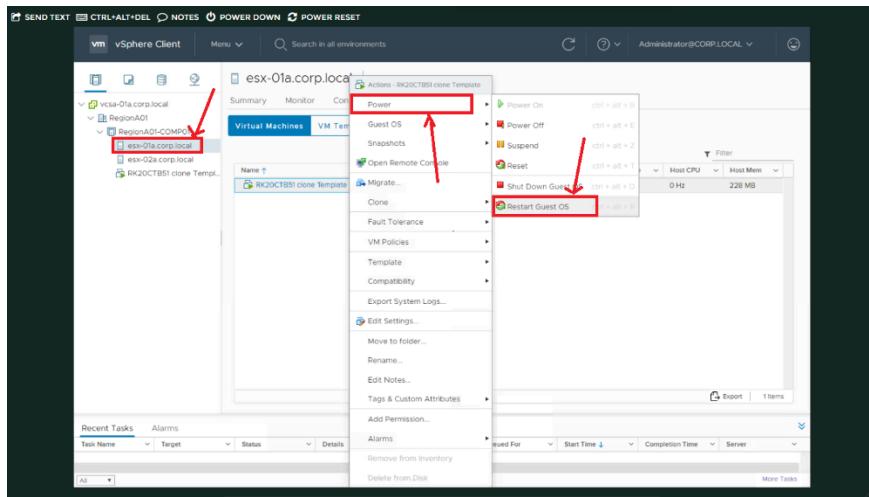
Migration Type	Change compute resource. Leave VM on the original storage
Virtual Machine	RK20CTB51 clone Template
Cluster	RegionA01-COMP01
Host	esx-01a.corp.local
vMotion Priority	High
Networks	No network reassignments

CANCEL BACK **FINISH**

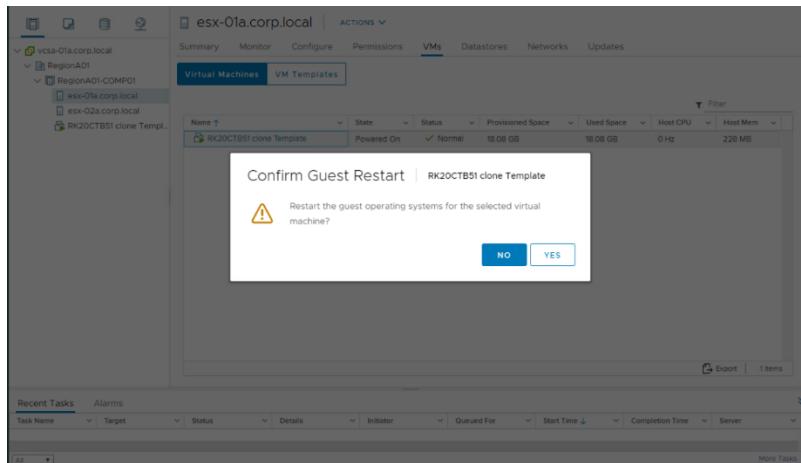
Go to the step Select esx01a, then choose Monitor. In that Select Overview and Real-time along with Select view as Virtual Machines



Now, Select esx-01a. From that Select all VM. Do Right Click and choose Power and Restart Guest OS



Click on Yes



Select esx-01a to choose Monitor. Than Select Chart Options. In that choose Memory and Select all counters and at last click on OK.

