

# BHAVAN'S COLLEGE AUTONOMOUS, ANDHERI-WEST

## PRACTICAL JOURNAL

Class: TYIT

Sem: VI

Roll No.: TYIT01

Date :

Course Name: Data Center Technologies

### Practical

#### Configuring ESXi Hosts

**Step 1:** Insert the VMware ESXi 7 installation disk and start Computer. Then, VMware ESXi 7 Installer starts and reads files from the disk.



**Step 2:** Push [Enter] key to proceed to the next



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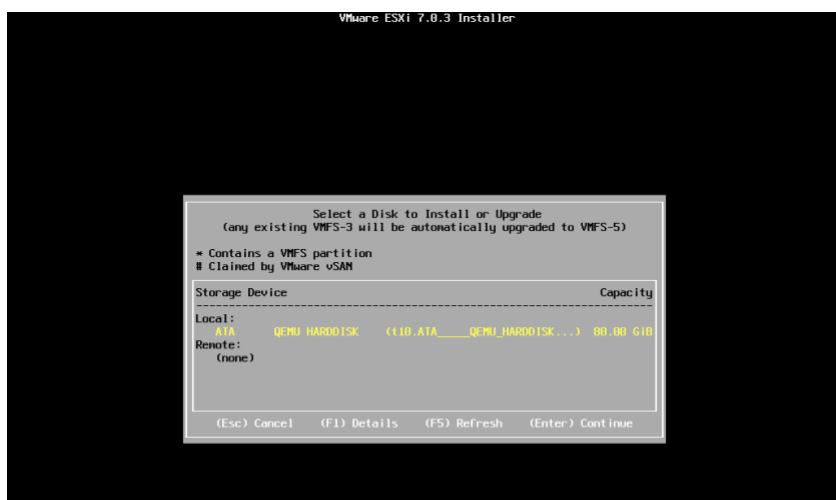
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**Step 3:** Push [F11] key to accept license agreement



**Step 4:** Select a disk you like to install VMware ESXi 7 and Push [Enter] key to proceed to the next



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**Step 5:** Select a keyboard layout you are using and Push [Enter] key to proceed to the next



**Step 6:** Set password for root user account and Push [Enter] key to proceed to the next.



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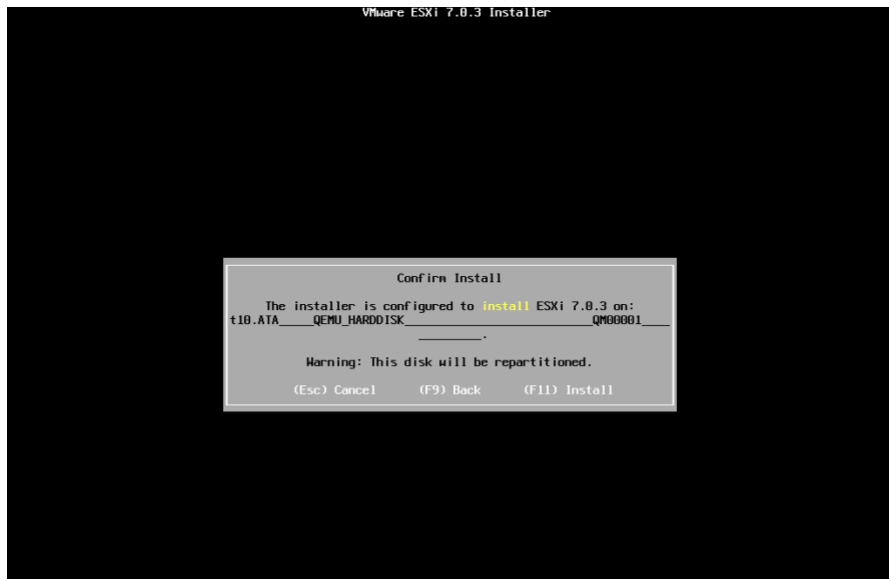
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**Step 7:** Confirm selections and Push [F11] key to begin installation



**Step 8:** After finishing installation, Push [Enter] key to restart computer



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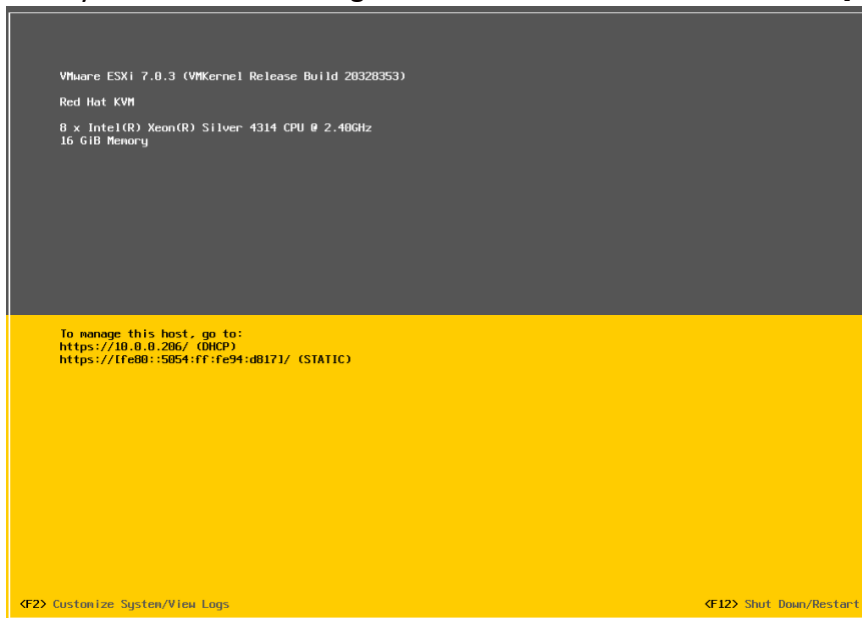
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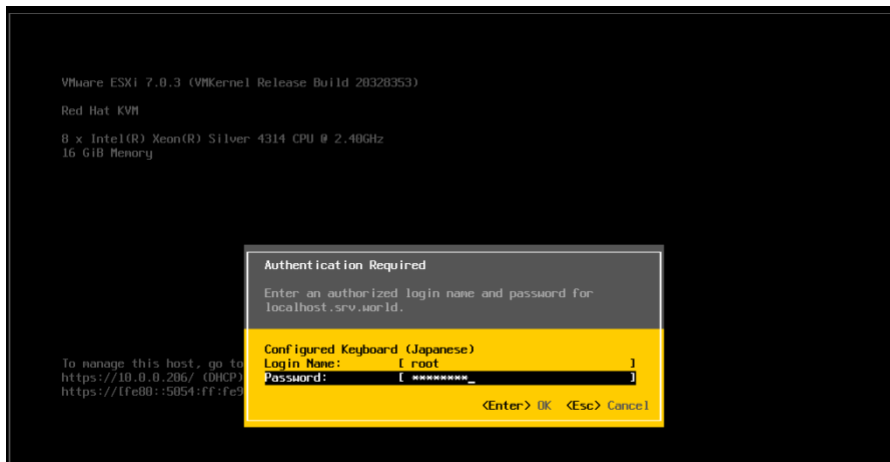
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**Step 9 :** After restarting computer, VMware ESXi 7 default console window is shown.

Verify installation to login with root user account. Push [F2] key.



**Step 10:** Input password for root user account you set during the installation



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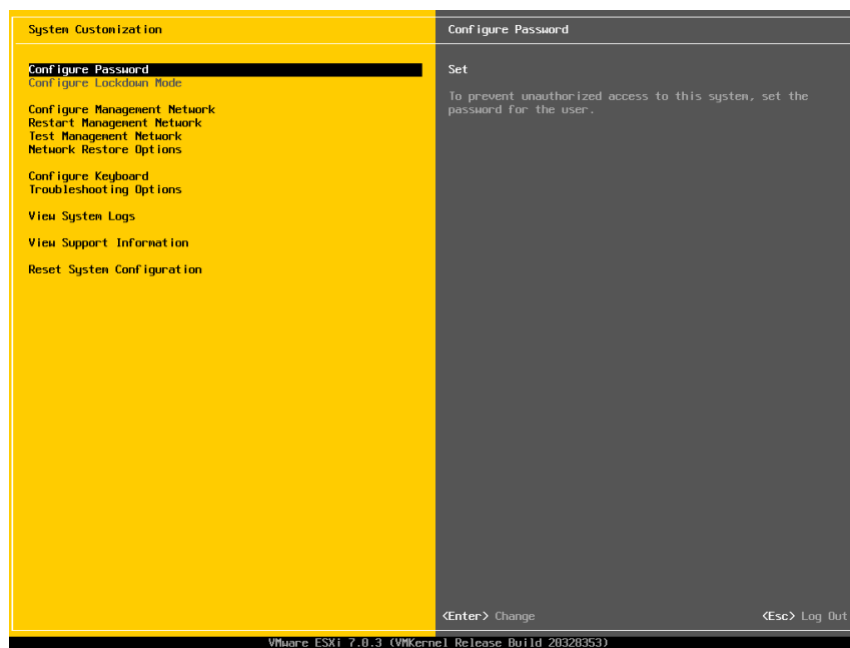
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**Step 11:** If successfully logged in, System configuration windows is shown like follows.

To logout from the System, Push [Esc] key.

That's OK, your VMware ESXi 7 installation has completed



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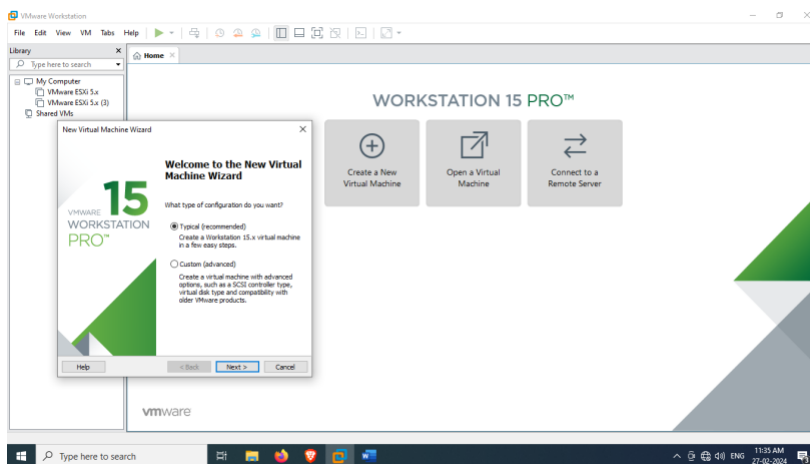
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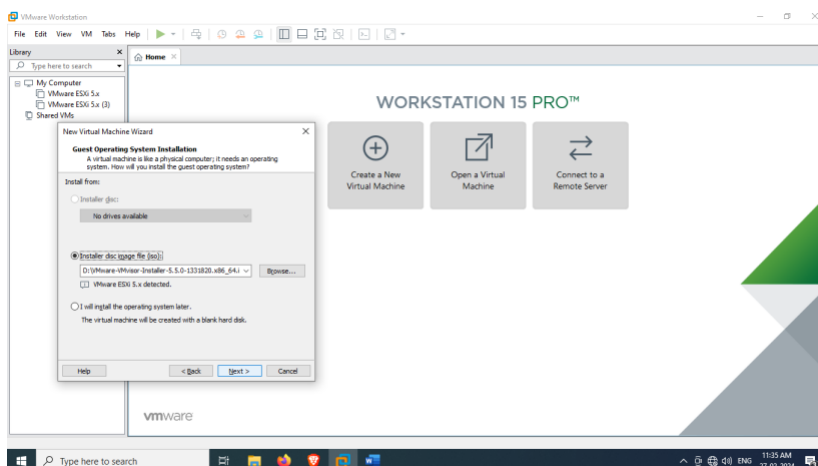
## Practical

### Deploying & Configuring a Virtual Machine

Step 1: Open VMware Workstation > Click on Create a New > Next > Finish



Step 2: Choose Disc Image File > Next



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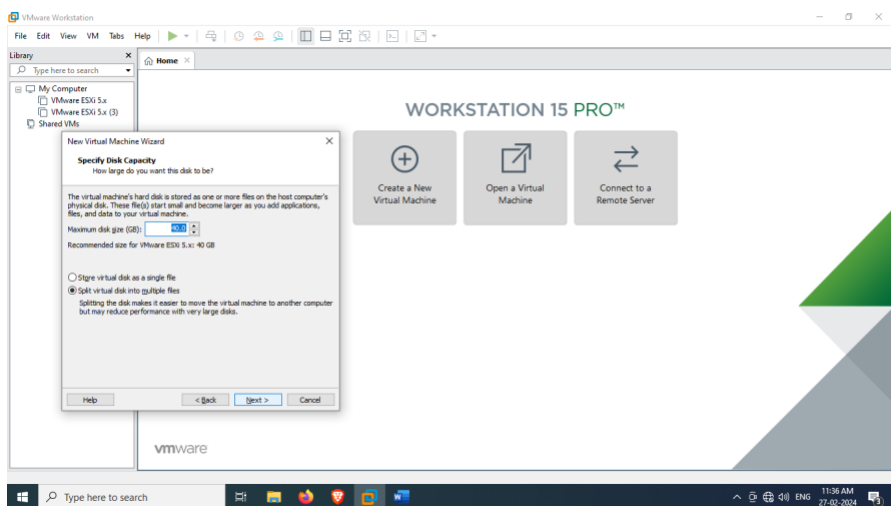
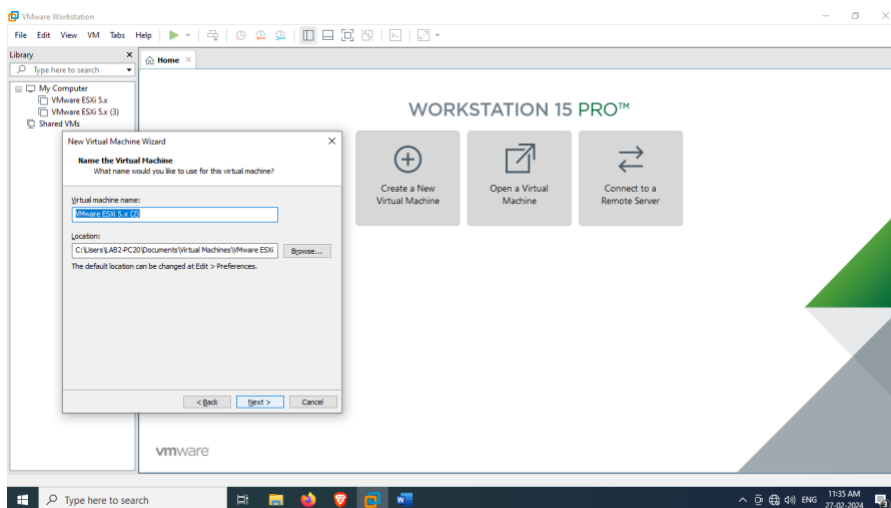
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Step 3: Give Virtual Machine Name > Next > Next



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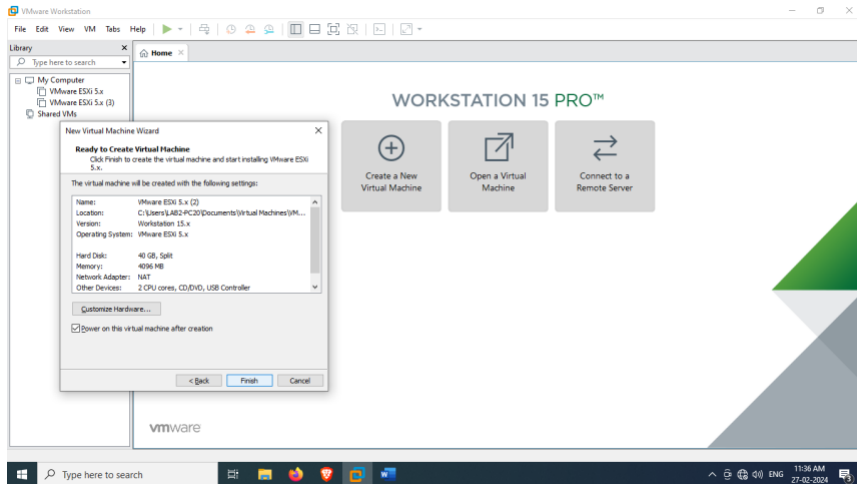
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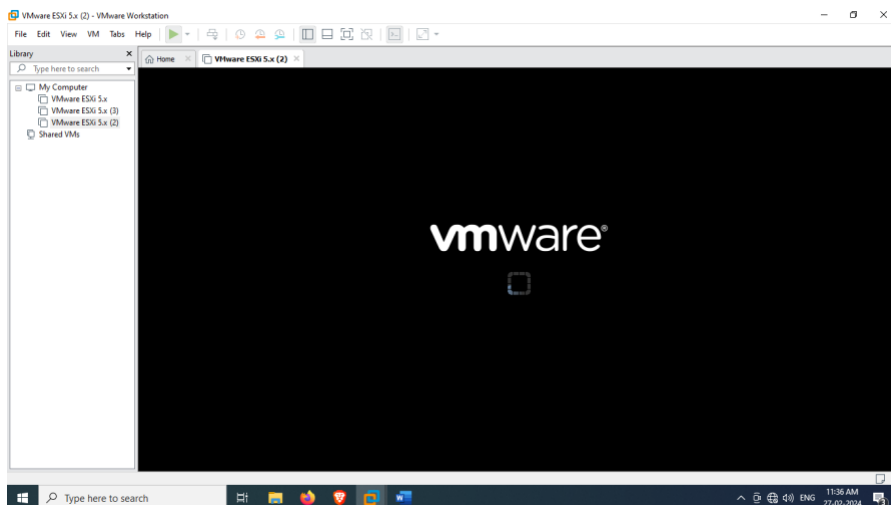
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Step 4: Power On ESXI Machine > it Take some time then click on continue



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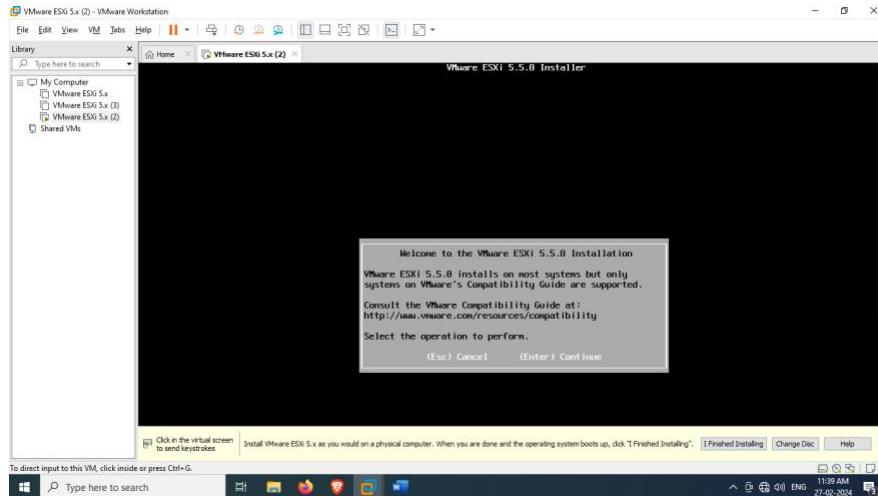
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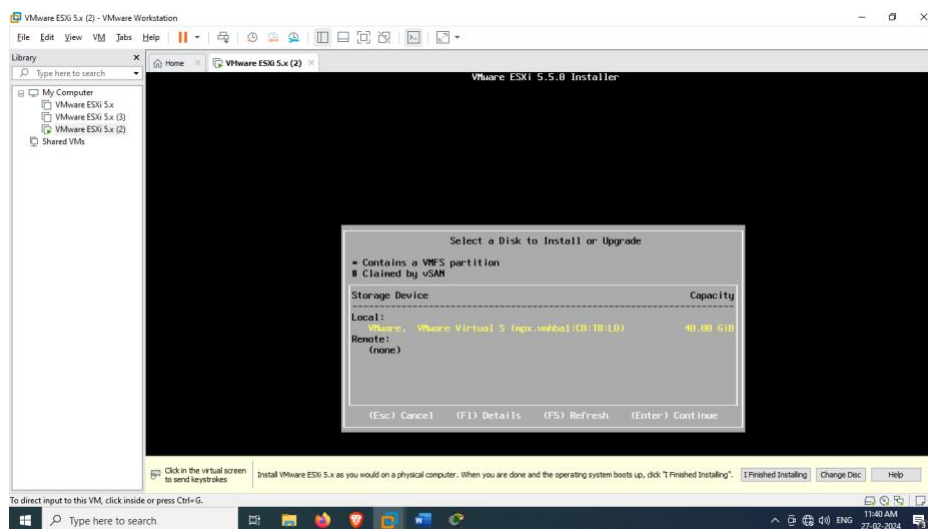
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Step 5: click on Continue > Enter password for root



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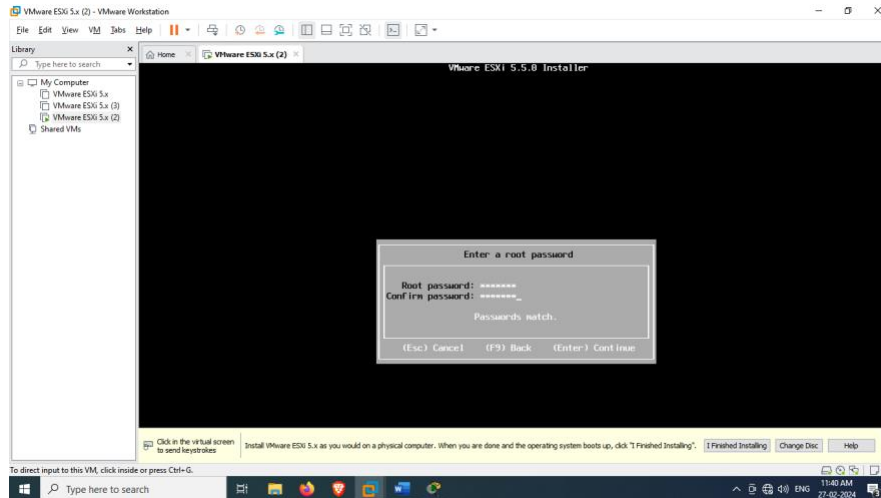
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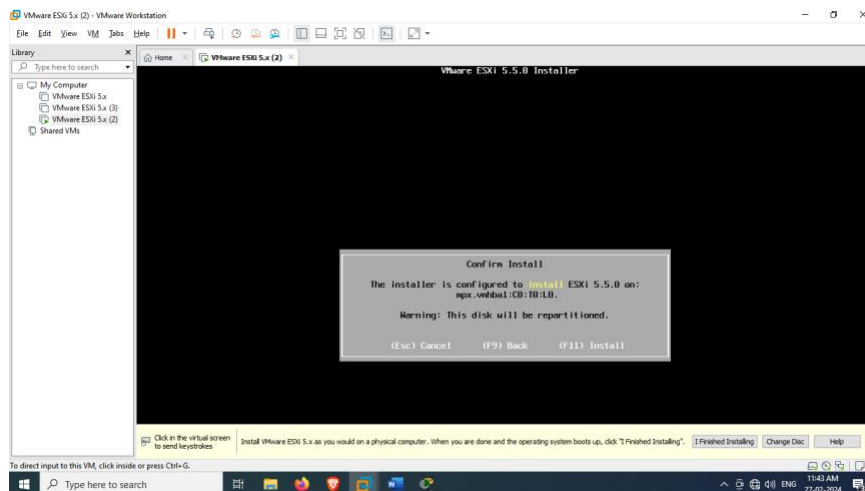
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Step 6: It take some time then click on Continue



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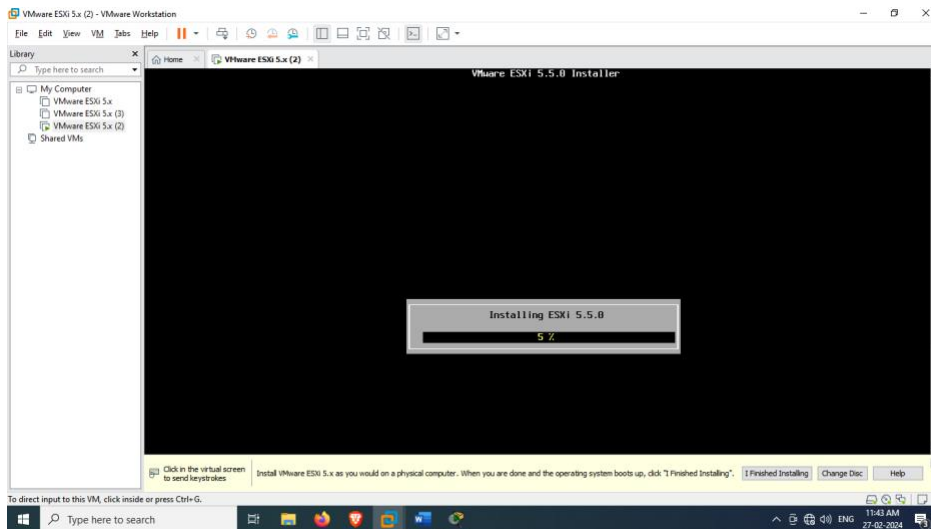
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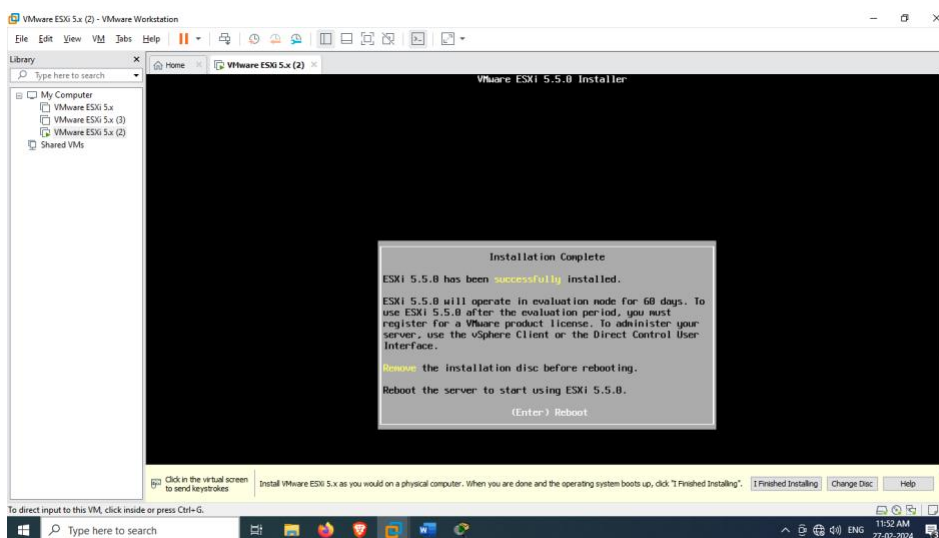
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### Starting Installation process



### Reboot



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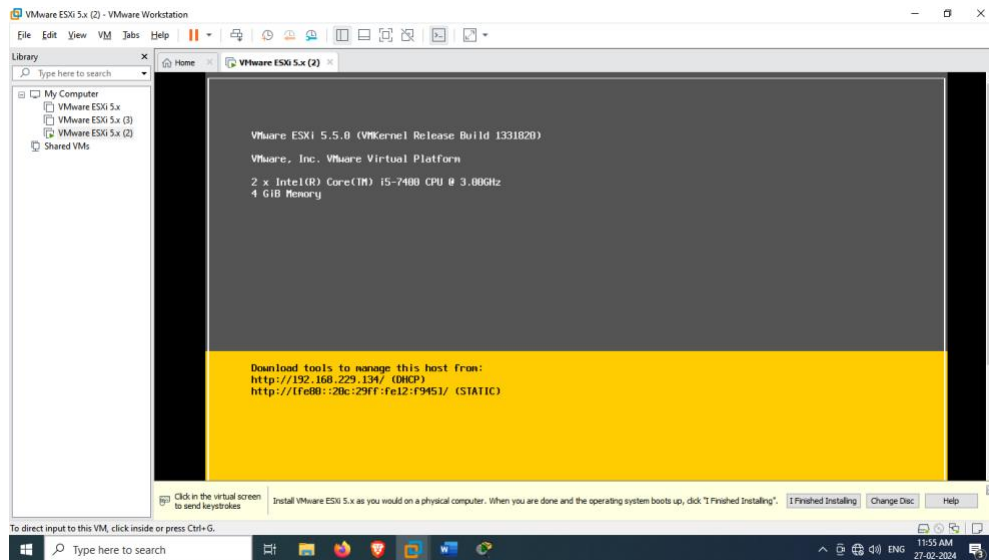
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### Output:



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### Practical

Step 1: Power on VMvare > Power on ESXi > copy the IP address which show on screen

Step 2: Open Vsphere Client then enter IP address that you copy from ESXi

Enter username & password then click on Login



The screenshot shows the VMware vSphere Client login window. The title bar reads "VMware vSphere Client". The main header area has the VMware logo and the text "VMware vSphere Client". Below this, there is a message box with an information icon stating: "In vSphere 5.5, all new vSphere features are available only through the vSphere Web Client. The traditional vSphere Client will continue to operate, supporting the same feature set as vSphere 5.0, but not exposing any of the new features in vSphere 5.5. The vSphere Client is still used for the vSphere Update Manager (VUM) and Host Client, along with a few solutions (e.g. Site Recovery Manager)." Below the message, there is a section with instructions: "To directly manage a single host, enter the IP address or host name. To manage multiple hosts, enter the IP address or name of a vCenter Server." This is followed by three input fields: "IP address / Name:" with a dropdown menu showing "192.168.234.130", "User name:" with a text box containing "root", and "Password:" with a text box containing "\*\*\*\*\*". There is a checkbox labeled "Use Windows session credentials" which is currently unchecked. At the bottom, there are three buttons: "Login", "Close", and "Help".

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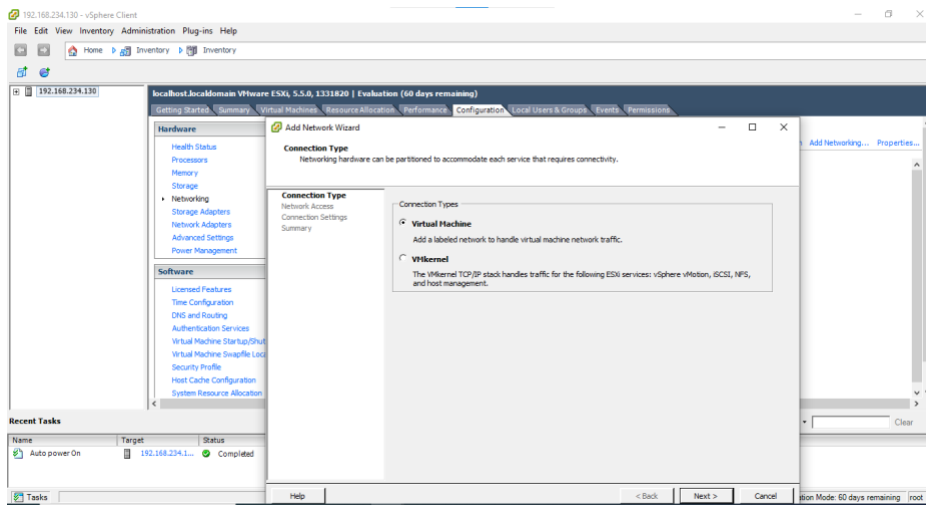
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Step 3: Click on ESXi servers IP

On the Right Hand side we will find configuration tab under configuration tab select Networking > Click on add Networking > Next



Step 4: Create a two network BMS, IT

On the network label give your network name > click next > Ok

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**Add Network Wizard**

**Virtual Machines - Connection Settings**  
Use network labels to identify migration compatible connections common to two or more hosts.

[Connection Type](#)  
[Network Access](#)  
**Connection Settings**  
[Summary](#)

**Port Group Properties**

Network Label:

VLAN ID (Optional):

**Preview:**

Virtual Machine Port Group:

Physical Adapters:

[Help](#) [< Back](#) [Next >](#) [Cancel](#)

**Add Network Wizard**

**Virtual Machines - Connection Settings**  
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[Summary](#)

**Port Group Properties**

Network Label:

VLAN ID (Optional):

**Preview:**

Virtual Machine Port Group:

Physical Adapters:

[Help](#) [< Back](#) [Next >](#) [Cancel](#)

Here are we create IT & BMS Switches

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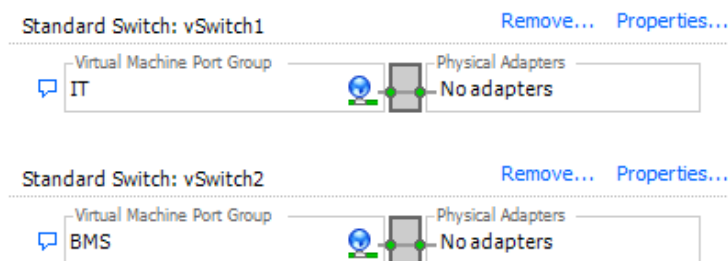
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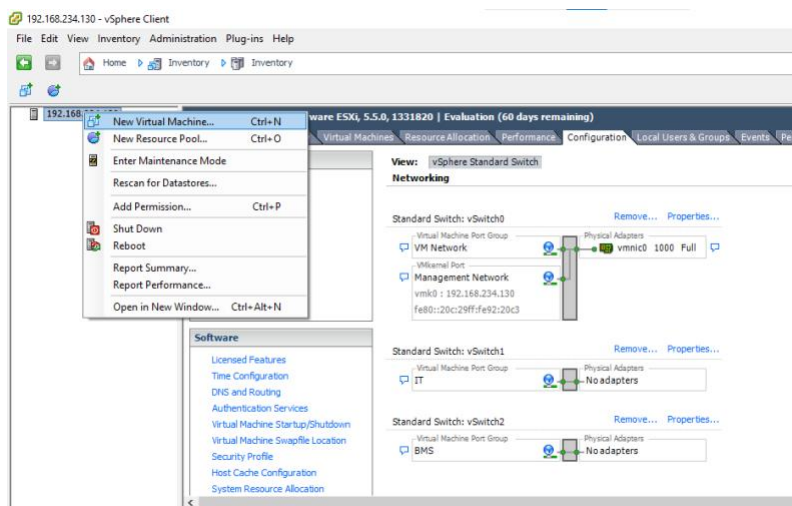
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Step 5: Now assign system to particular Machine for that first we have to Create a Virtual Machine > Click on IP address which present on Right hand side> New Virtual Machine > Click Next > Give Name to machine > create



Step 6: Right hand side click on any one virtual Machine> edit Setting > Network Adapter > from drop down select any on network.

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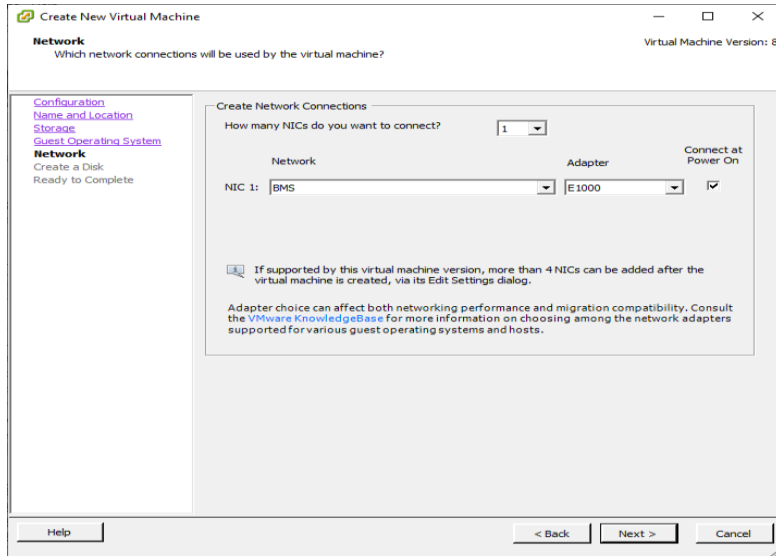
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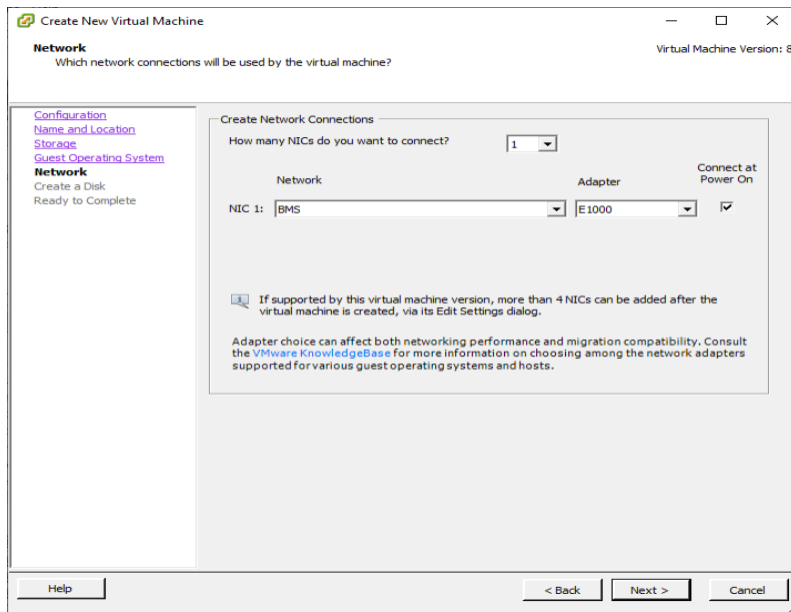
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Click on next



Next

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The screenshot shows the 'Create New Virtual Machine' wizard at the 'Create a Disk' step. The title bar says 'Create New Virtual Machine'. The subtitle is 'Create a Disk' with the instruction 'Specify the virtual disk size and provisioning policy'. The 'Virtual Machine Version' is 8. On the left, a navigation pane lists 'Configuration', 'Name and Location', 'Storage', 'Guest Operating System', 'Network', 'Create a Disk' (which is highlighted), and 'Ready to Complete'. The main area shows 'Datastore: datastore1', 'Available space (GB): 31.6', and 'Virtual disk size: 7 GB'. Under 'Disk provisioning', the 'Thick Provision Lazy Zeroed' option is selected. At the bottom are 'Help', '< Back', 'Next >', and 'Cancel' buttons.

### Step 7: Finish

The screenshot shows the 'Create New Virtual Machine' wizard at the 'Ready to Complete' step. The title bar says 'Create New Virtual Machine'. The subtitle is 'Ready to Complete' with the instruction 'Click Finish to start a task that will create the new virtual machine'. The 'Virtual Machine Version' is 8. On the left, a navigation pane lists 'Configuration', 'Name and Location', 'Storage', 'Guest Operating System', 'Network', 'Create a Disk', and 'Ready to Complete' (which is highlighted). The main area shows 'Settings for the new virtual machine:' with the following details: Name: V1, Host/Cluster: localhost.localdomain, Datastore: datastore1, Guest OS: Microsoft Windows Server 2008 R2 (64-bit), NICs: 1, NIC 1 Network: BMS, NIC 1 Type: E1000, Disk provisioning: Thick Provision Lazy Zeroed, and Virtual Disk Size: 7 GB. At the bottom, there is a checkbox for 'Edit the virtual machine settings before completion' (which is unchecked) and a warning icon with the text 'Creation of the virtual machine (VM) does not include automatic installation of the guest operating system. Install a guest OS on the VM after creating the VM.' At the bottom are 'Help', '< Back', 'Finish', and 'Cancel' buttons.

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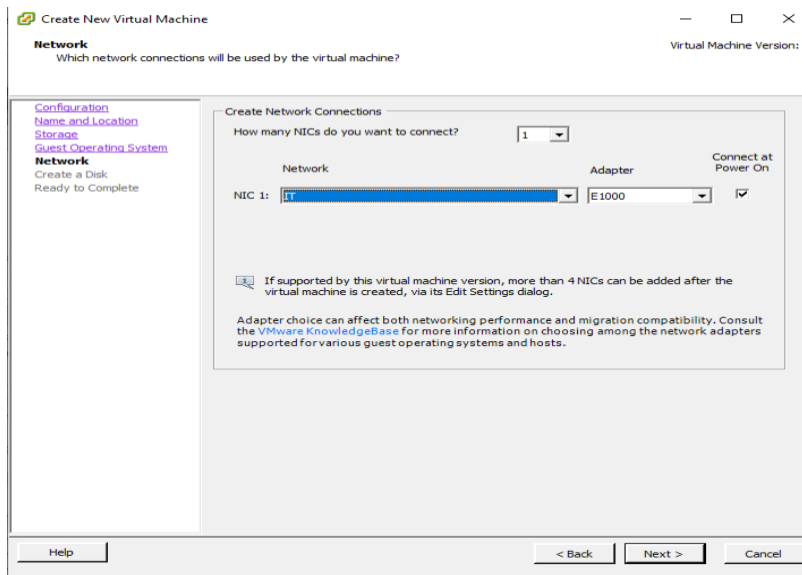
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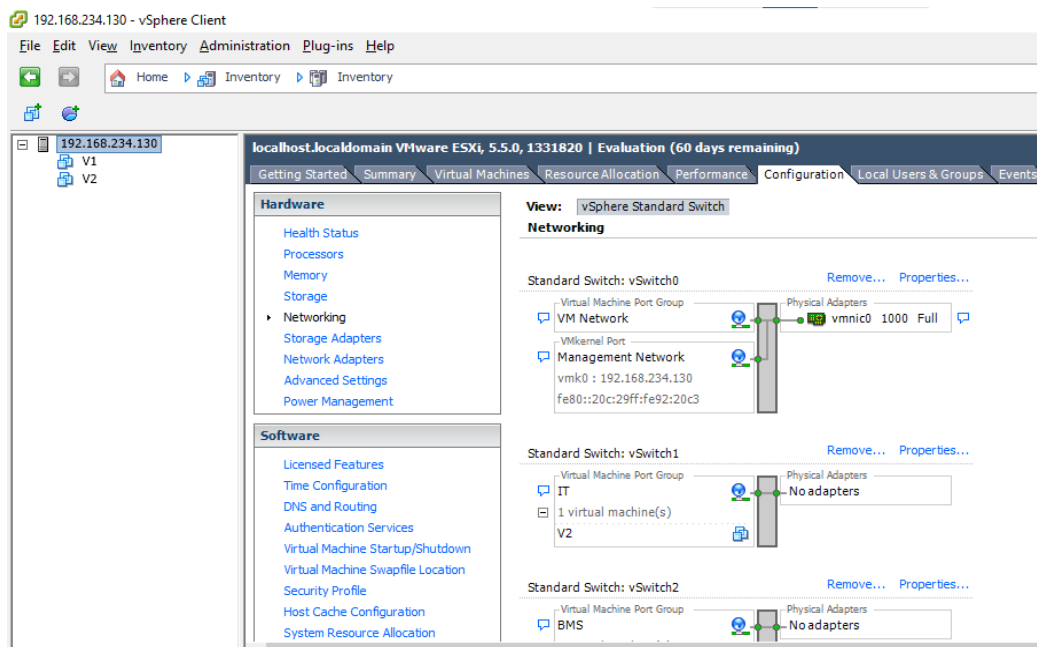
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Repeat same steps for Other virtual Machine



Output:



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### Practical

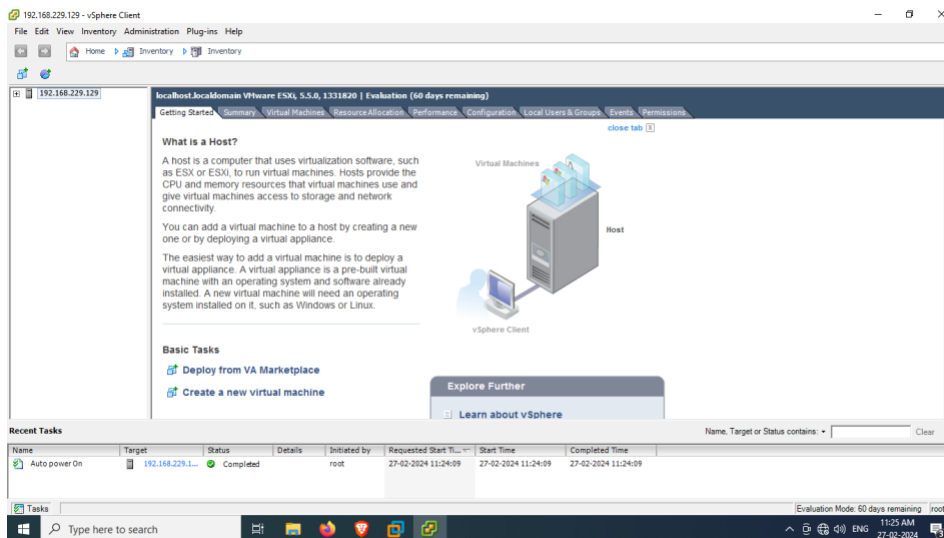
#### Accessing ISCSI Storage.

iSCSI stands for "Internet Small Computer System Interface." It's a protocol used for linking data storage facilities over a network, typically Ethernet. iSCSI enables the transmission of SCSI commands over IP networks

**Initiator:** The initiator is the client device that initiates the request for data from the storage device. It could be a server, desktop, or any other computing device that requires access to the storage.

**Target:** The target is the storage device that holds the data being accessed. It could be a disk array, a tape library, or even a single hard drive. The target responds to the requests made by the initiator.

#### Step 1: Open vSphere Client



**Step 2:** Click configuration -> Storage Adaptor→ add→ iSCSI → Network Configuration→Add→Dynamic Discovery→Add (Enter VM's Name)

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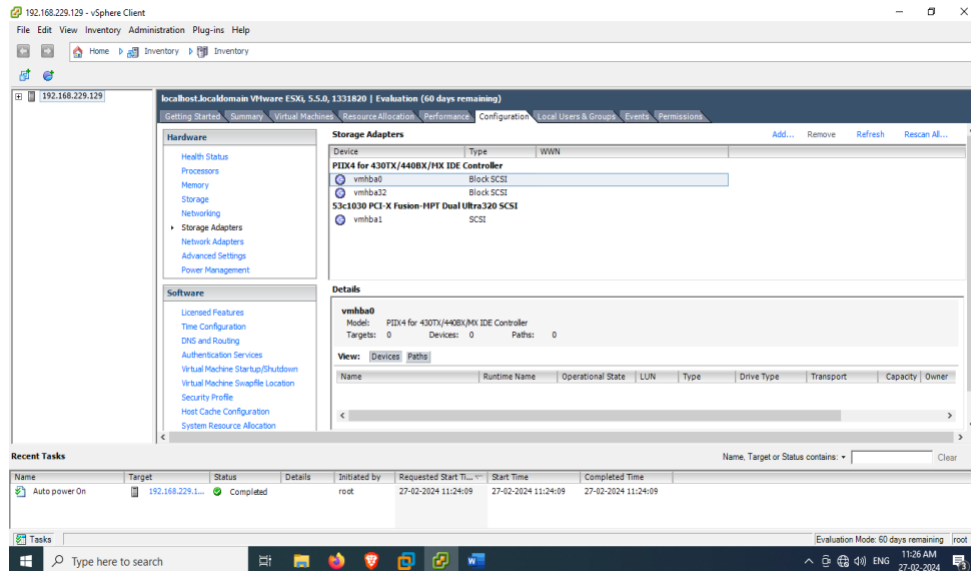
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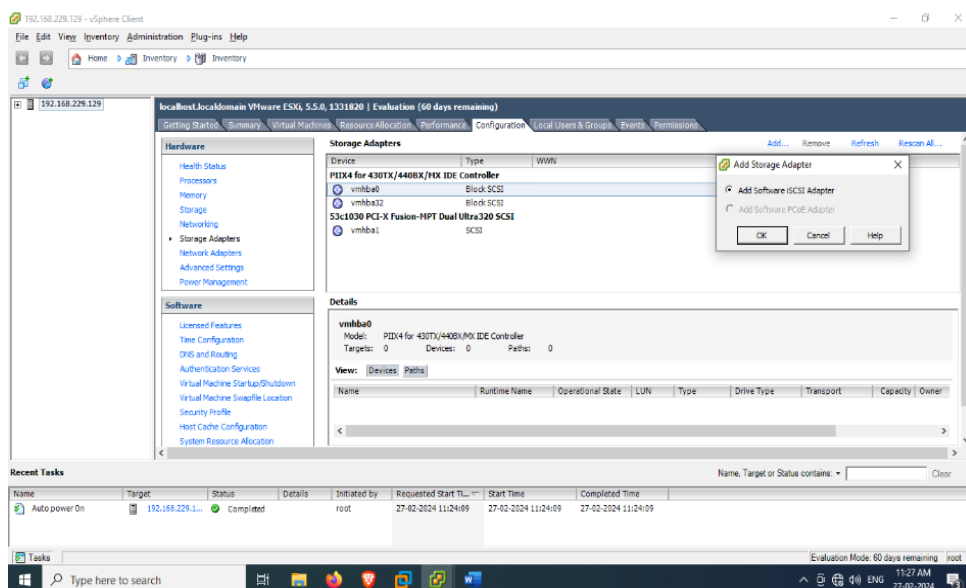
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**Step 3: Click On Add > OK > OK**



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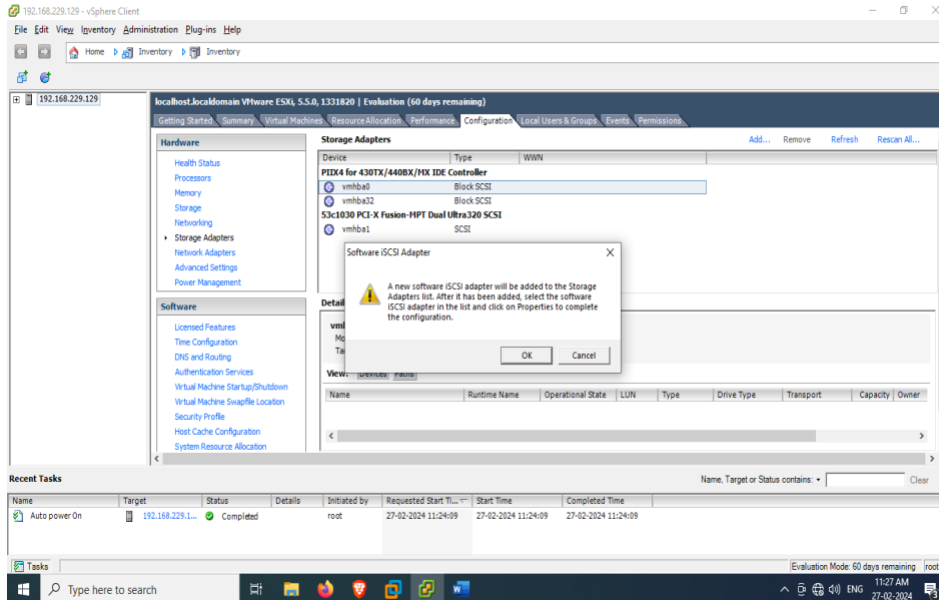
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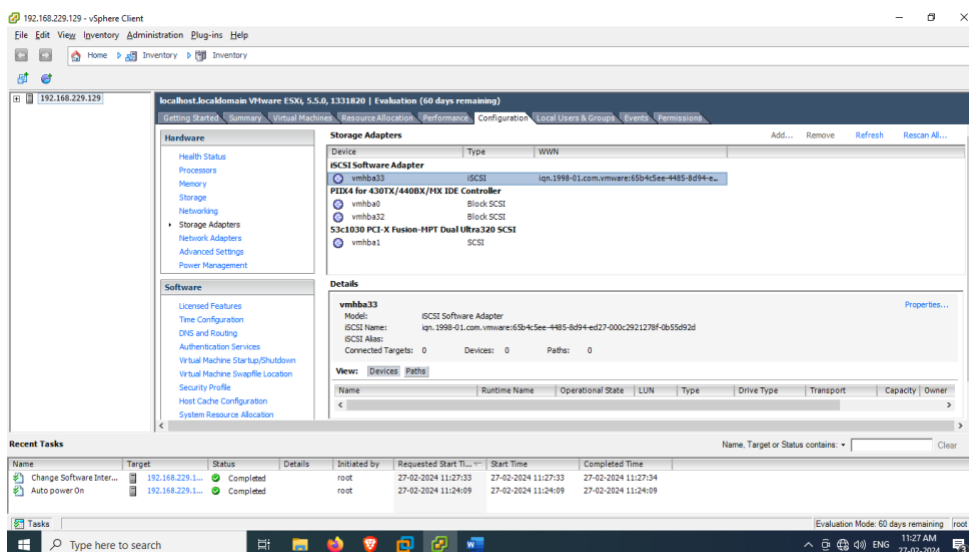
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**Step 4:** Right Click on iSCSI Storage adapter name > Property



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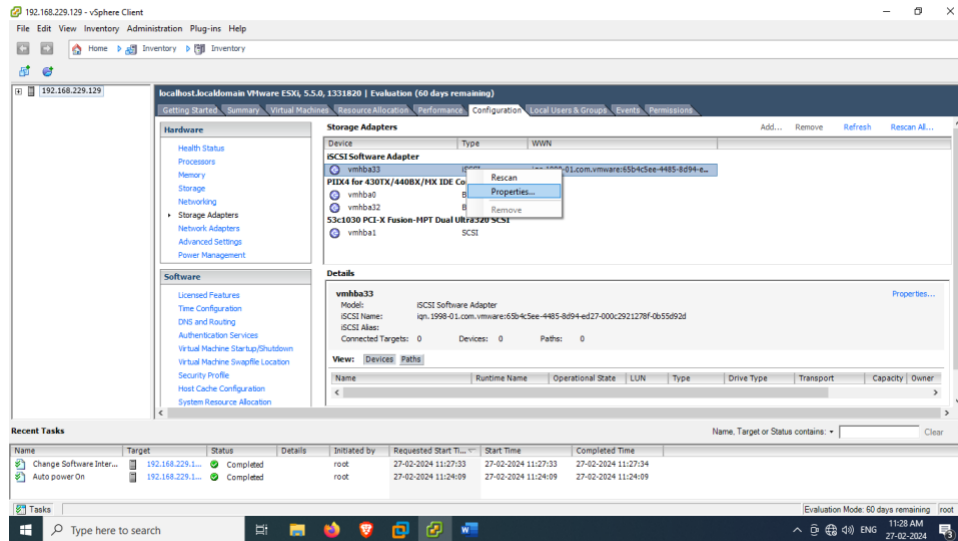
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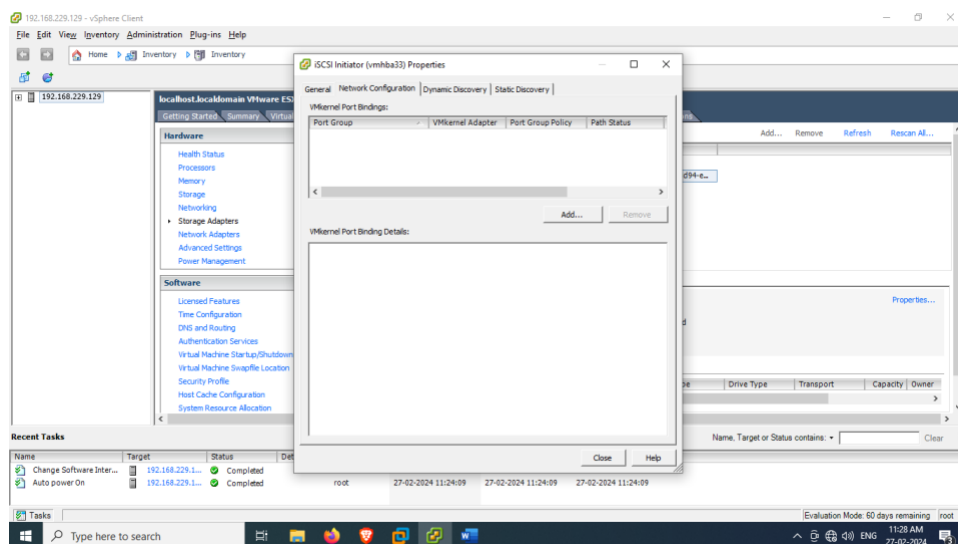
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### Step 5: Network Configuration > Add > OK



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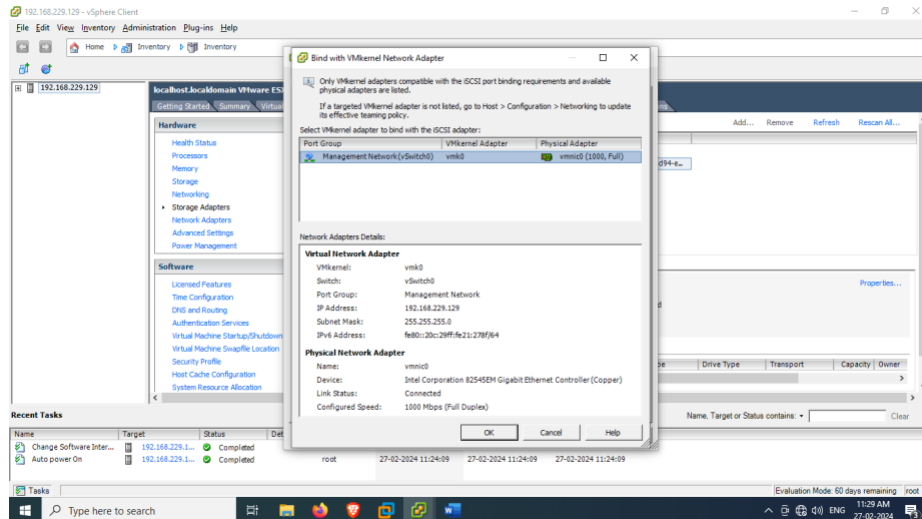
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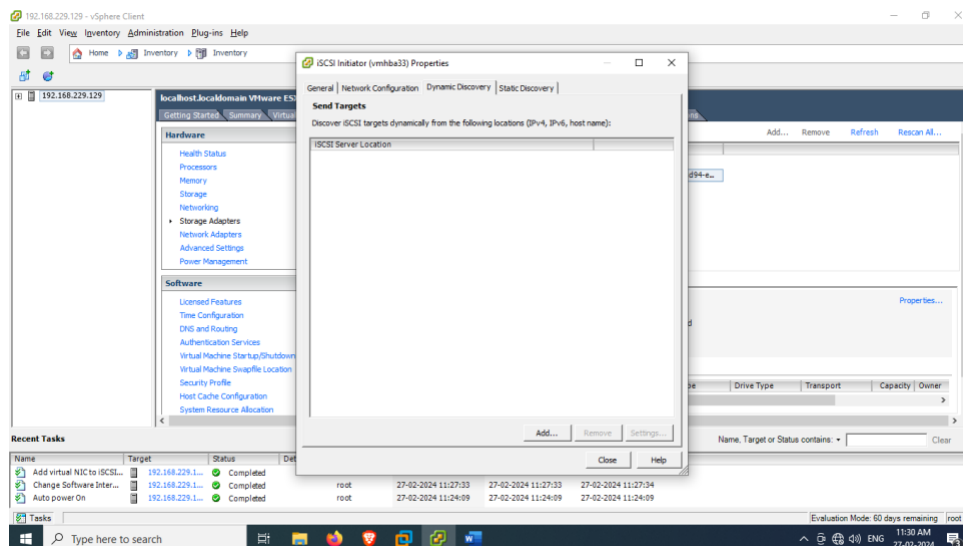
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**Step 6:** Click on Dynamic Discovery > Add > for iSCSI Server choose your Virtual Machine Name > OK



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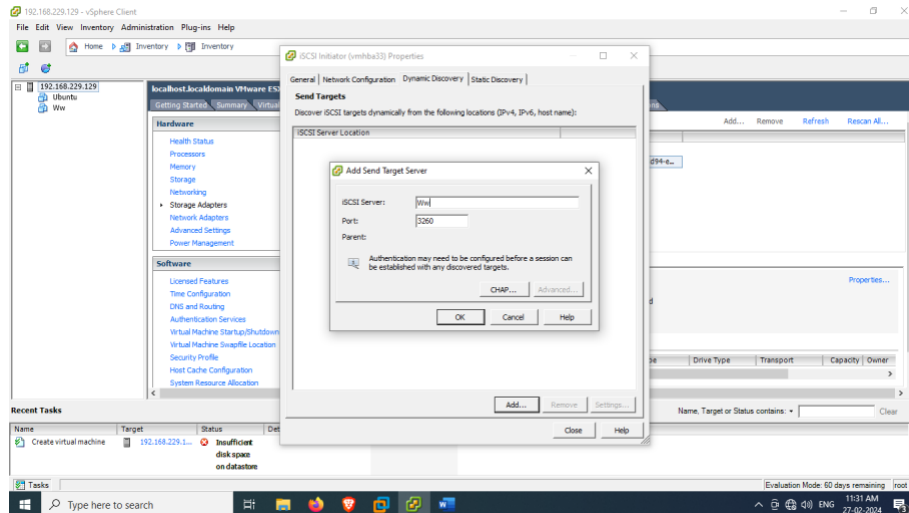
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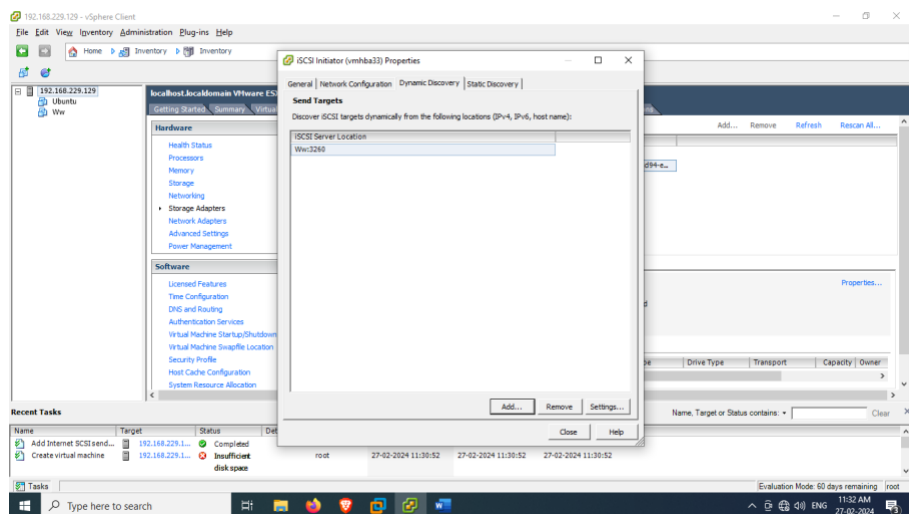
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Here We add successfully iSCSI Target



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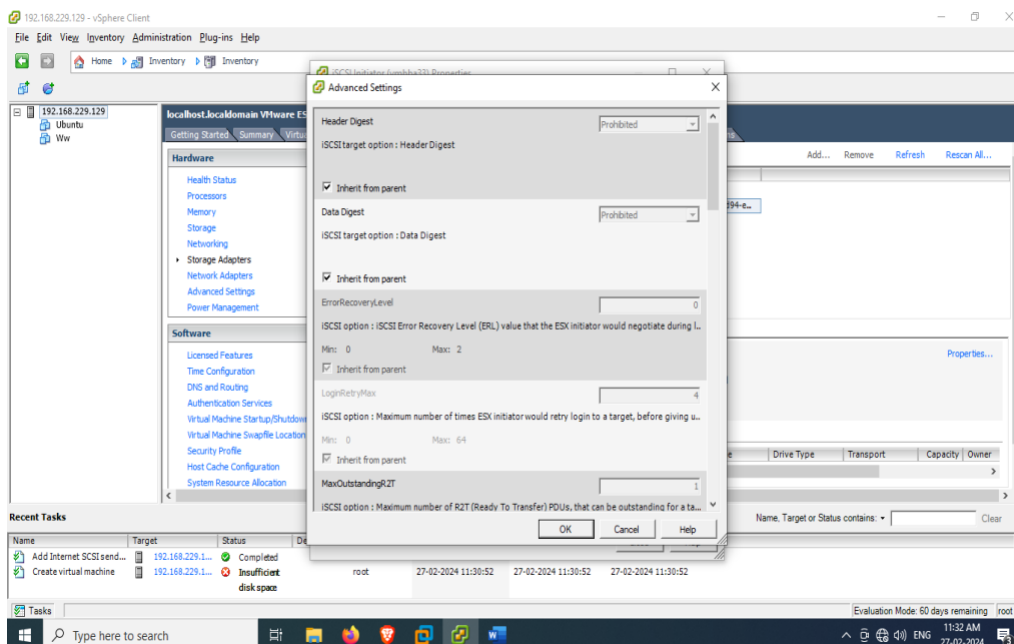
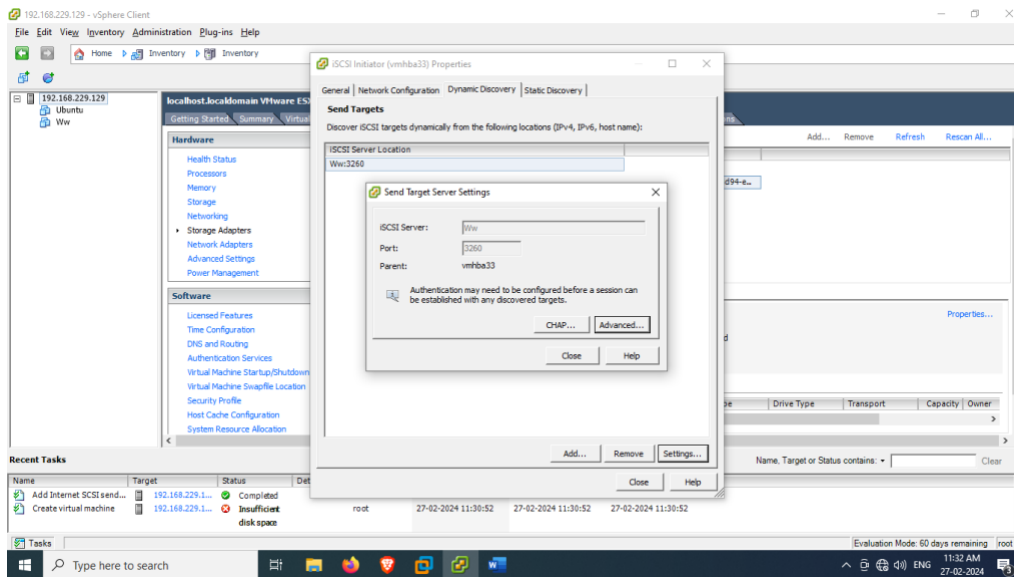
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**Step 7:** For Checking Advance Setting > Click on Target Name > The Click on Advance



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### Output:

The screenshot displays the vSphere Client interface for a host named 'localhost.localdomain' running VMware ESXi 5.5.0. The 'Storage Adapters' tab is selected, showing a list of storage controllers. The 'vmhba33' controller is highlighted, and its details are shown in the 'Details' pane. The details pane shows the controller is an 'iSCSI Software Adapter' with a model of 'PIDX4 for 430TX/440BX/HX IDE Controller'. It lists three controllers: 'vmhba0' (Block SCSI), 'vmhba32' (Block SCSI), and 'vmhba1' (SCSI). The 'Details' pane also shows the 'View' tab with a table of storage devices.

Device	Type	WWN
vmhba33	iSCSI	iqn.1998-01.com:vmware:65b4c5ee-4485-8d94-e...
vmhba0	Block SCSI	
vmhba32	Block SCSI	
vmhba1	SCSI	

**Details**

**vmhba33** [Properties...](#)

Model: iSCSI Software Adapter  
iSCSI Name: iqn.1998-01.com:vmware:65b4c5ee-4485-8d94-ed27-000c2921278f-0b55d92d  
iSCSI Alias:  
Connected Targets: 0 Devices: 0 Paths: 0

**View:** [Devices](#) [Paths](#)

Name	Runtime Name	Operational State	LUN	Type	Drive Type	Transport	Capacity	Owner
<								

**Recent Tasks**

Name	Target	Status	Details	Initiated by	Requested Start Time	Start Time	Completed Time
Rescan HBA	192.168.229.1...	In Progress		root	27-02-2024 11:33:01	27-02-2024 11:33:01	
Add Internet SCSI send...	192.168.229.1...	Completed		root	27-02-2024 11:31:21	27-02-2024 11:31:21	27-02-2024 11:31:46
Create virtual machine	192.168.229.1...	Insufficient		root	27-02-2024 11:30:52	27-02-2024 11:30:52	27-02-2024 11:30:52

Tasks Evaluation Mode: 60 days remaining root

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