

<u>Bhavan's College (Autonomous), Andheri (West)</u> <u>Department of Information Technology</u> <u>Practical Journal</u>		
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Practical 4: Working with vCenter Server

Steps for working with vCenter Server are as follows:

1. Download Vcsa-ui installer and run the installer in it.
2. Click on "Install" from the below options.
3. Click on next > Click on "I agree" > next
4. Enter your ESXi host > HTTPS ports > username > Password > Click on next > yes
5. Define vm name > create root password > Confirm root password
6. Select Deployment size > select datastore > configure network setting > Finish
7. Define application configuration > SSO configuration > Configure CEIP > Finish
8. After Successfully setup > Click on the link and launch vSphere web client > (Install required flash)
9. Enter username and password > Launch > Click on new Datacentre > name it > ok
10. Add host > next > username and password > next > select license > lockdown mode > vm location > ready

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Practical 4: Navigating the vSphere Clients.

- The VMware vSphere Client is a web-based application that connects to the vCenter Server so IT administrators can manage installations and handle inventory objects in a vSphere deployment.
- vSphere Client is a part of VMware's comprehensive product line.
- As an application, VMware vSphere Client enables the management of a vSphere installation so IT administrators can access key functions of vSphere without needing access to a vSphere server directly.
- The vSphere Client presents a graphical user interface (GUI) with an object navigator, the main workspace, as well as the tasks and alarms panel.
- Through this GUI, vSphere administrators can manage and supervise the objects listed in a virtualized data centre.

1. vSphere Web Client

Requirements:

- a. domain controller for authentication
- b. Storage server to provide storage

Steps to be followed for installation:

1. Install the adobe flash which is prerequisites for this client to work.
2. Sign on to the VMware single using the username and password. Click on login (using nic account to login).
3. On the Home Screen Check on Monitor-to-monitor issues, System logs and sessions. Configure to configure settings. Permissions –defined permissions for each task VMS- Different Virtual machines.
4. Click on NMBD datacentre check for all the data storage devices available.
5. Click on your existing virtual machine now click on add new virtual machine power on the virtual machine and check on the status bar for results.

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6. Now Switching to the New vSphere Client. It is named as vSphere client HTML. It is created by VMWare itself and do not depend on any third-party tools to be installed for working with it.
 7. Now open the link for vSphere client html on the new tab. Login using your username and password. On this interface we have monitor to monitor issues, sessions, logs etc.
 8. Click on the existing virtual machine select maintenance mode and click on exit maintenance mode.
 9. Click on the ISCSI-VMFS-Datastore1 and select browse files Check for all the files.
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Practical 5: Creating Folders in vCenter Server Appliance

Steps are as follows:

1. Go to vSphere Web Client.
2. Shutdown the guest OS (NLB-PC-01).
3. To create a folder, right click on NLBDatacenter -> New Folder -> New Host and Cluster Folder.
4. Enter folder name as "Main Office" -> ok.
5. Now empty "Main Office" folder will be created on the left panel.
6. Drag and drop "nlb-esxi-01.nlblab.com" host in the "Main Office" folder.
7. Create another folder, right click on NLBDatacenter -> New Folder -> New Host and Cluster Folder.
8. Enter folder name as "Back Office" -> ok.
9. Drag and drop the second "nlb-esxi-02.nlblab.com" host in the "Back Office" folder.
10. Next go to VM's and Template's folder, click on "summary".
11. On the left panel, right click on NLBDatacenter -> New Folder -> New VM and Template Folder.
12. Enter folder name as "Generalized Template" -> ok.
13. We can store different templates in this folder.
14. Right click on NLBDatacenter -> New Folder -> New VM and Template Folder.
15. Enter folder name as "Main Office" -> ok.
16. Move vm "NLB-PC-01" in main office folder.
17. If you click on the main office folder, it will give you the summary of what's inside that folder.

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Practical 6: Using Standard Switches

Steps:

1. Power on VMware > Power on ESXi > copy <https://www.lantmateriet.se/en/geodata/gps-geodesi-och-swepos/gps-and-satellite-positioning/methods-for-gnss-measurement/absolute-andrelative-positioning/#anchor-0> the IP address which show on screen.
2. Open vSphere Client then enter IP address that you copy from ESXi Enter username & password then click on Login.
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.
4. Create a two network BMS, IT. On the network label give your network name > click next > Ok
Here we create IT & BMS Switches.
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.
6. Right hand side click on any one virtual Machine> edit Setting > Network Adapter > from drop down select any on network.
7. Click on next > Next.
8. Finish.
9. Repeat same steps for Other virtual Machine.

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Practical 7: 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.

Steps to create iSCSI Storage:

1. Open vSphere Client.
2. Click configuration > Storage Adaptor add ISCSI Network Configuration Add Dynamic Discovery Add (Enter VM's Name).
3. Click On Add > OK > OK.
4. Right Click on ISCSI Storage adapter name > Property.
5. Network Configuration > Add > OK.
6. Click on Dynamic Discovery > Add > for ISCSI Server choose your Virtual Machine Name > OK.
Here We add successfully ISCSI Target.
7. For Checking Advance Setting > Click on Target Name > The Click on Advance

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Practical 8: Using Template and Clones in vSphere

Templates are used as they are handy tool in deploying new VM saving valuable time and efforts:

- Creating the Template.
 - Go to VMs And Templates on the left panel. Here you can create folders including “New VM and Template folder”.
 - R-click onto the virtual machine previously created > Template > Convert to Template > Yes (The VM becomes a template which you can use to add other VMs).
 - Move the created Template to Templates folder (create one if not created).
 - R-click the Template and Rename it as per desired.

- Creating Customization File:
 - R-click the Template> Policies and Profiles. Here you will have the option to Create New Customization File... click on the icon.
 - In Target VM Operation System: Windows, In the Name field add name of your template > Next
 - Provide Name & Organization in the respective field > Next Select the “Enter a name in the Clone/Deploy wizard” > Next.
 - Enter the Product Key or you can leave it blank > Next.
 - Set the Administration Password> Next.
 - Specify the Time Zone for the VM > Next.
 - Enter commands to run when user logs on first time> Next.
 - Configure Network settings > Next.
 - Set Work Group or Domain > Next.

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- Set Operating System option (Tick the Generate New Security ID dialog box) > Next.
 - The final window will show all the settings> Finish.

 - Deploying the new Virtual Machine using template and customization file:
 - R-click the template from left panel> New VM from this Template.
 - Name the VM and select its location folder> Next.
 - Select a compute resource> Next.
 - Select a Storage> Next.
 - Select clone options> Next.
 - Customize guest OS> Next.
 - Set User Settings> Next.
 - Final window will display all the settings> Finish.
 - After some time, templates will be cloned and the new VM will be created
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