

Lab Session

1. Install VMware latest open source version:

Link for VMware workstation

<https://www.vmware.com/in/products/workstation-player/workstation-player-evaluation.html>

2. Install ubuntu(iso) file from ubuntu.com downloads
3. Create new virtual machine on VMware and install ubuntu on it.
4. After installation, modify the window size of ubuntu by changing it to desktop settings
>sudo apt-get install open-vm-tools
>sudo apt-get install open-vm-tools-desktop (Then restart the machine)

OR

*****Hosted Virtualization on Oracle Virtual Box Hypervisor *****

Step 1: Download Oracle Virtual box from <https://www.virtualbox.org/wiki/Downloads>

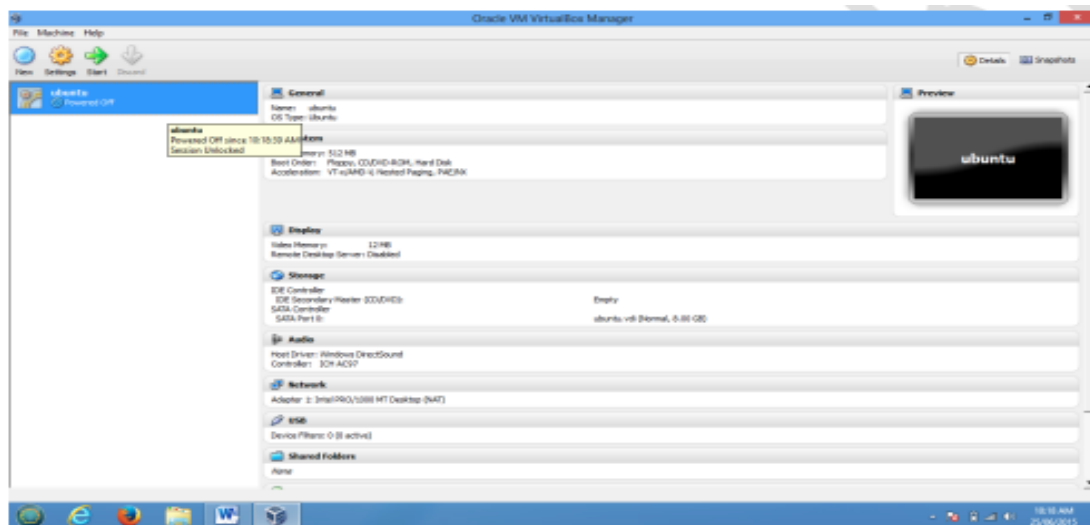


Step 2: Install it in Windows, Once the installation has done open it.



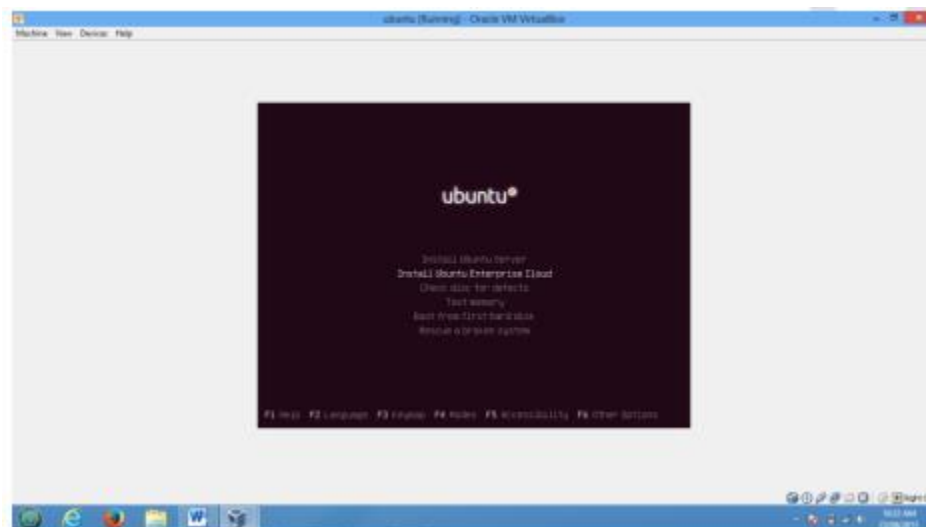
Step 3:-Create Virtual Machine by clicking on New

Step 4:- Specify RAM Size, HDD Size, and Network Configuration and Finish the wizard

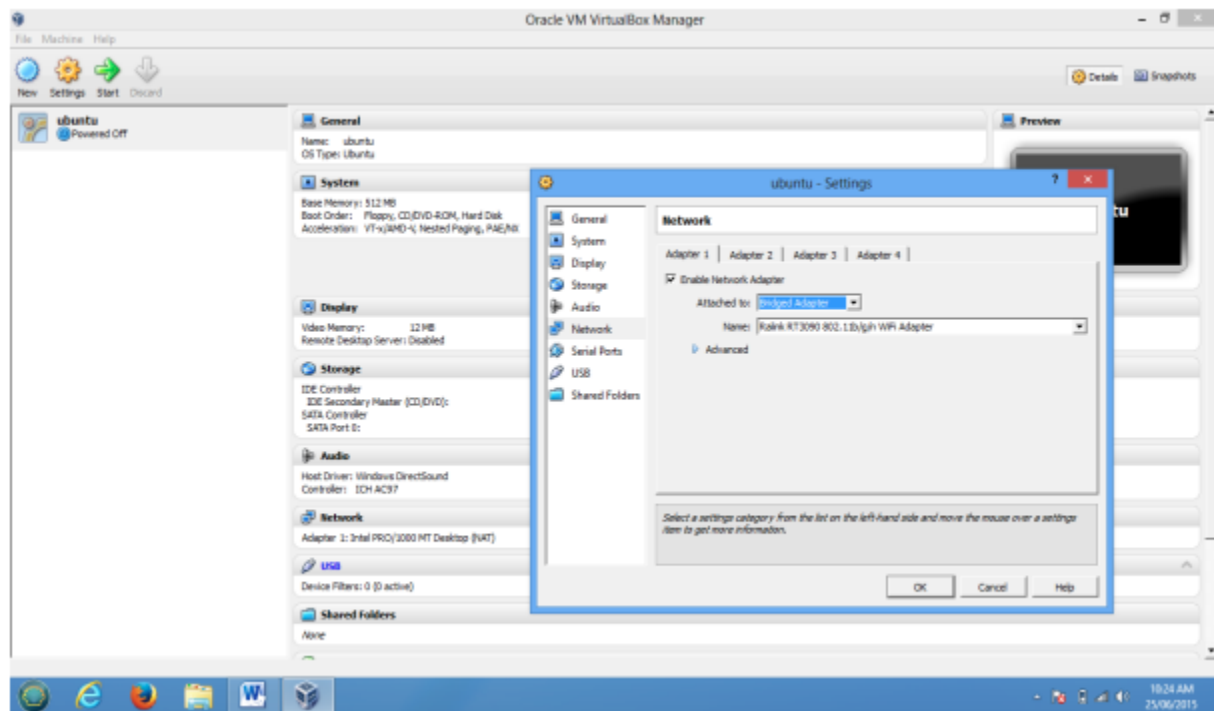


Step 4:- To Select the media for installation Click on start and browse for iso file

Step 5:Complete the Installation and use it



Step 6: To Connect OS to the network change network Mode to Bridge Adaptor



*****Hosted Virtualization on KVM Hypervisor *****

The Steps to Create and run Virtual machines in KVM are as follows

Step 1: Check whether CPU has hardware virtualization support

```
>sudo grep -c "svm|vmx" /proc/cpuinfo
```

(if answer is '0' then not supported , 1 or more indicates it does support)

Step 2: Execute following commands to execute KVM on ubuntu

Virt-Manager is a graphical application for managing your virtual machines.you can use the kvm command directly, but libvirt and Virt-Manager simplify the process

```
>sudo apt-get update
>sudo apt-get install qemu-kvm qemu virt-manager virt-viewer libvirt-bin
>virt-manager
```

OR

```
>sudo apt-get install qemu-kvm libvirt-bin bridge-utils virt-manager
```

Step 3 : Create user

Only the root user and users in the libvirtd group have permission to use KVM virtual machines. Run the following command to add your user account to the libvirtd group

```
>sudo adduser USERNAME
```

```
>sudo USERNAME tsec libvirtd
```

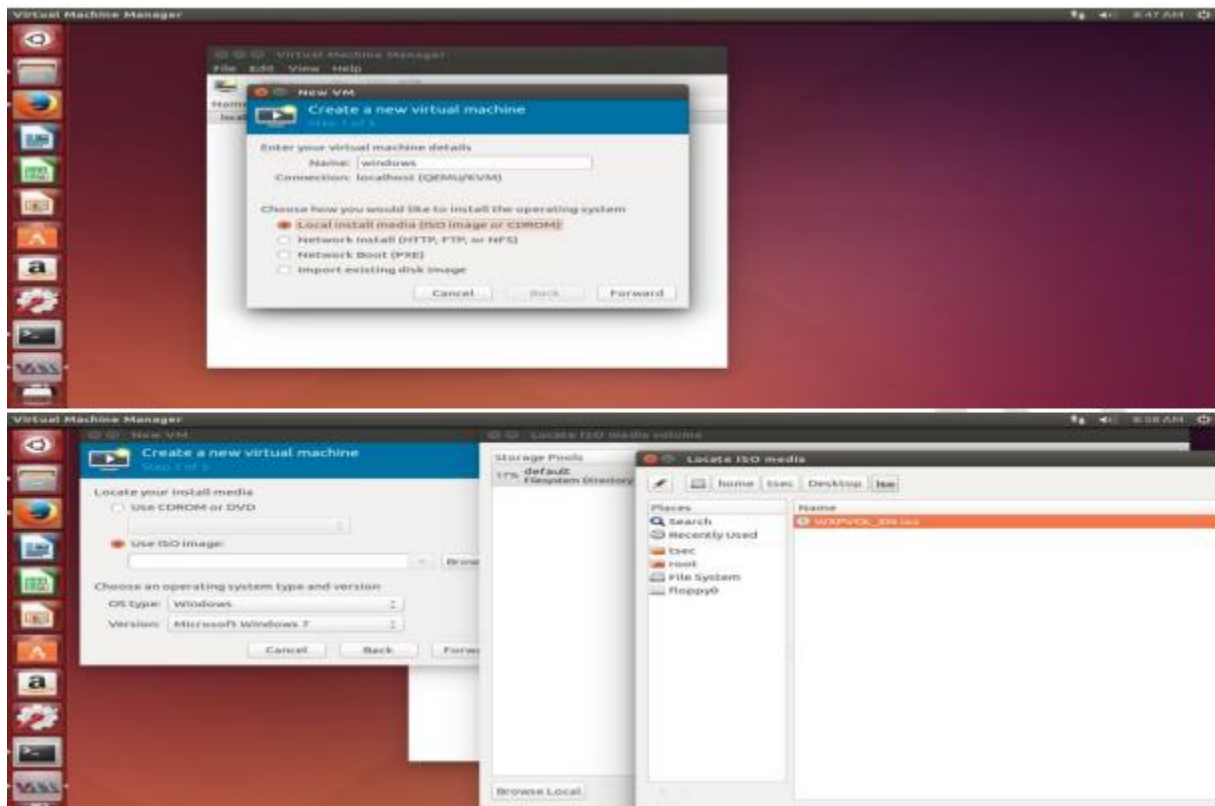
Step 4: Check whether everything is working correctly. Run following command after logging back in as tsec and you should see an empty list of virtual machines. This indicates that everything is working correctly

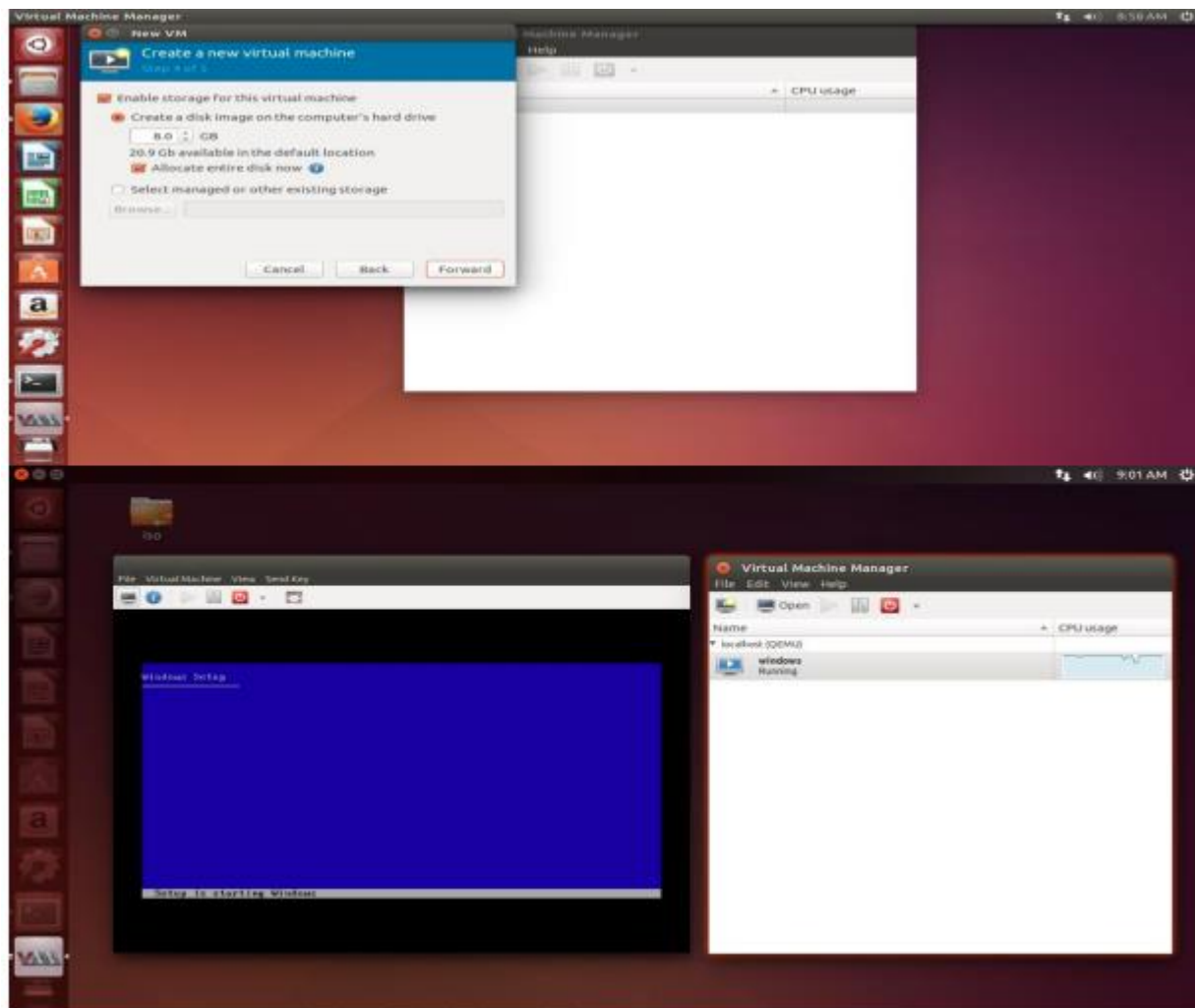
```
>virsh -c qemu:///system list
```

Step 5: Open Virtual Machine Manager application and Create Virtual Machine

```
>virt-manager
```

Step 6: Create and run Virtual Machines





```
$ sudo virsh list --all
```

Id	Name	State
1	ubuntu-vm	running

```
$ virsh
```

```
Welcome to virsh, the virtualization interactive terminal.
```

```
Type: 'help' for help with commands
      'quit' to quit
```

```
virsh #
```

```
virsh #
```

```
virsh # list --all
```

Id	Name	State
1	Windows	running

Creating and running virtual machines on Bare-Metal Hypervisor Xen Server

Step 1: Install Xen Server

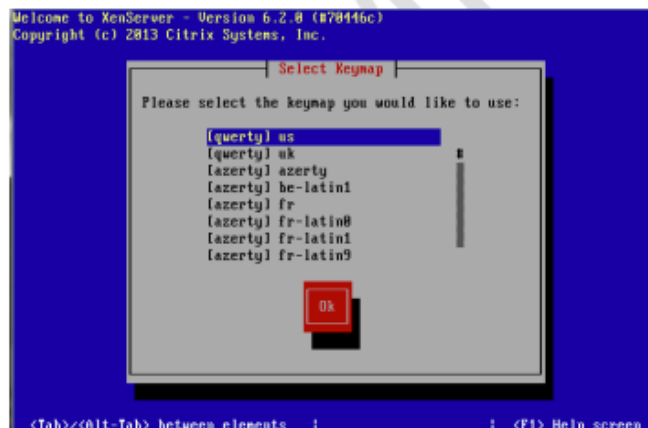
Step i:- Insert Bootable Xen Server CD into CDROM and Make first boot device as a CDROM from BIOS



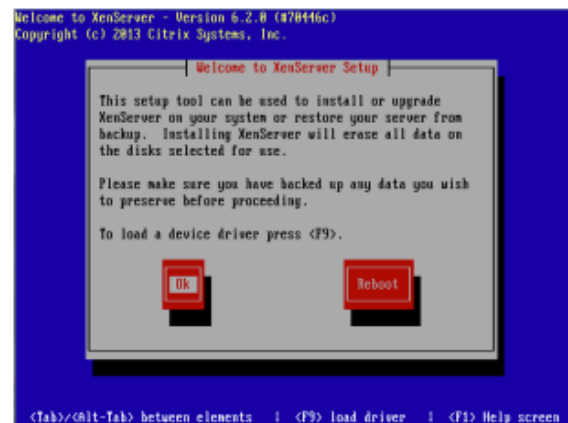
Step ii:- press F2 to see the advanced option otherwise press Enter to start installation



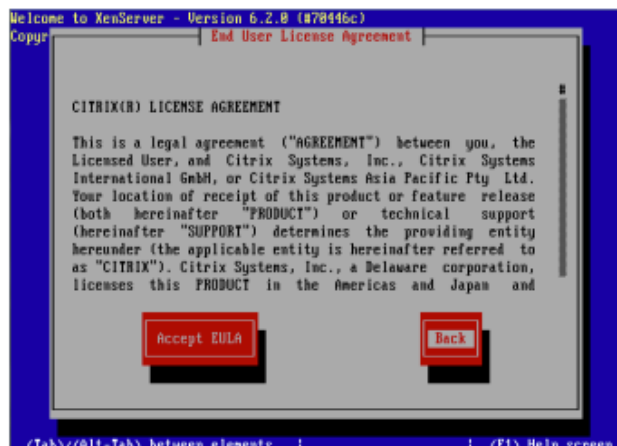
Step iii -: Select Keyboard Layout



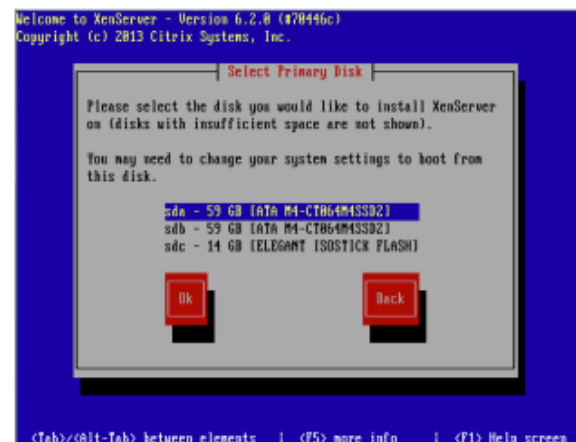
Step iv -:Press Enter to load Device Drivers



Step v -:Press Enter to Accept End user license Agreement



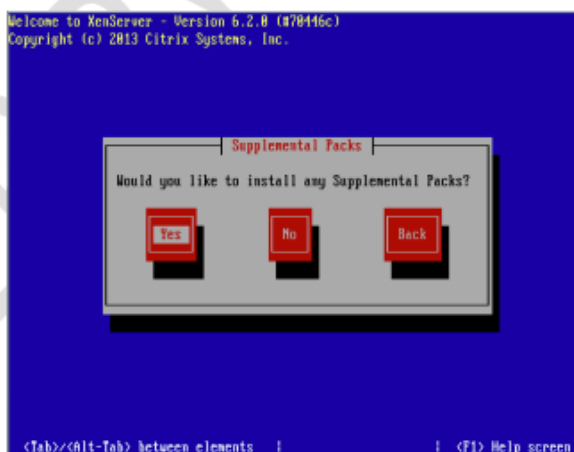
Step vi -:Select Appropriate disk on which you want to install Xen server



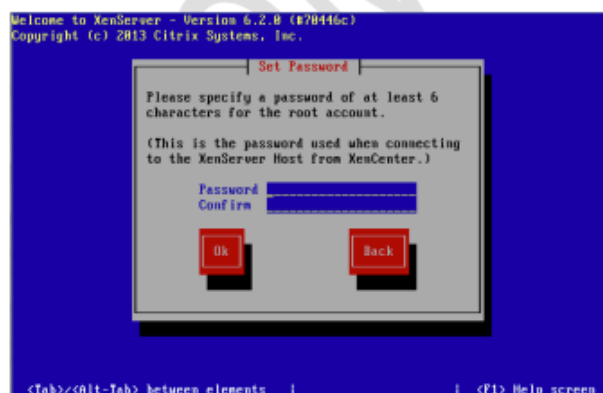
Step vii :-Select Appropriate installation Media



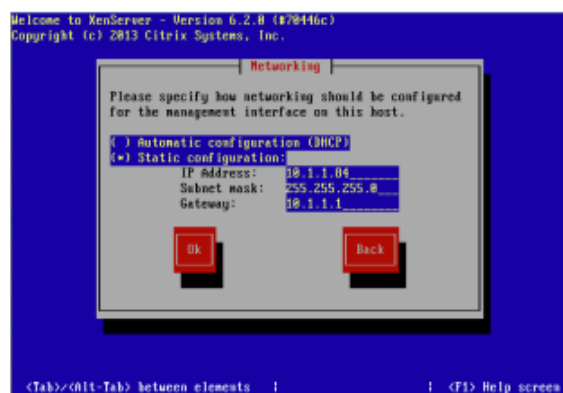
Step viii :-Select Additional Packages for installation



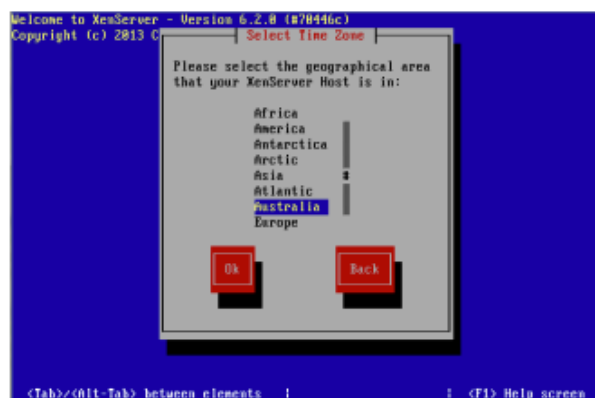
Step ix:- Specify Root password



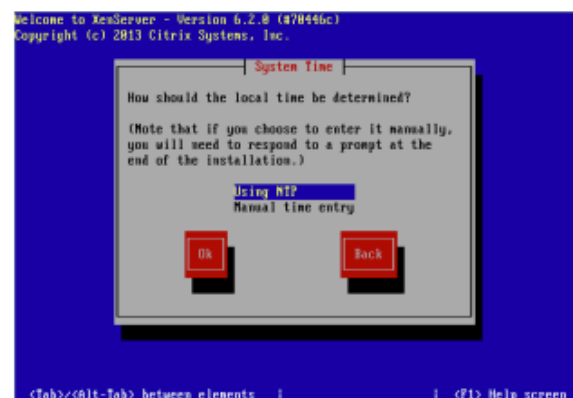
Step x -: Specify IP Address to a Xen Server



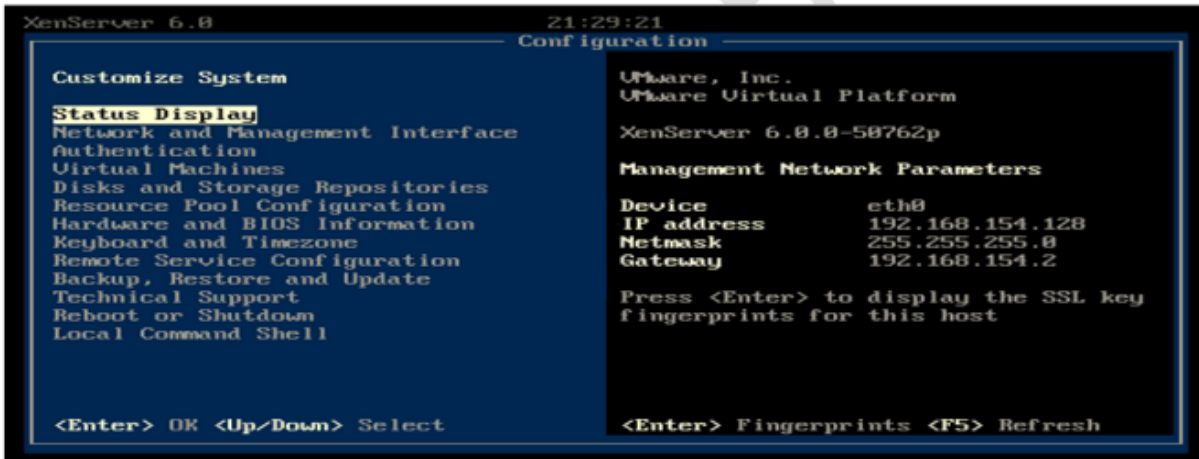
Step xi:-Select Time Zone



Step xii:-Specify NTP Servers address or use manual time entry then start installation



Once installation is done you will see the final screen shown below.

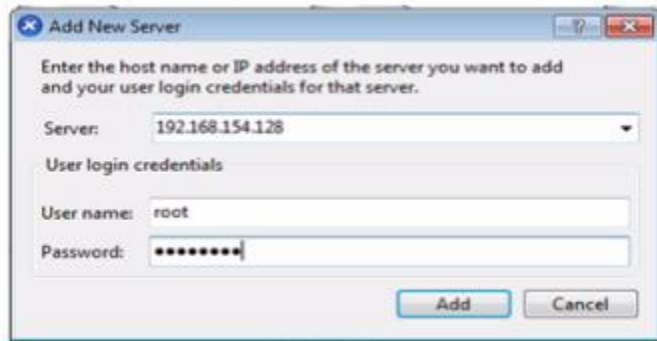


Step 2: Connect Xen Server to Xen Center

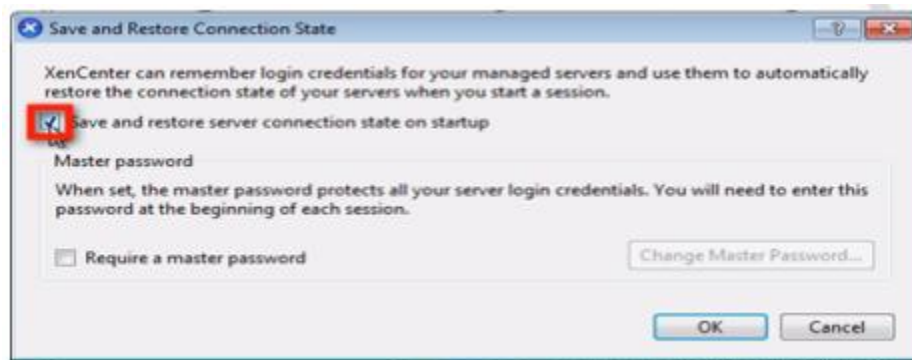
Firstly, download the xen center a management utility from xen server by opening the xen servers IP address as a URL on browser. Once Xen center is downloaded, install it. Open Xen center from start menu of Windows.



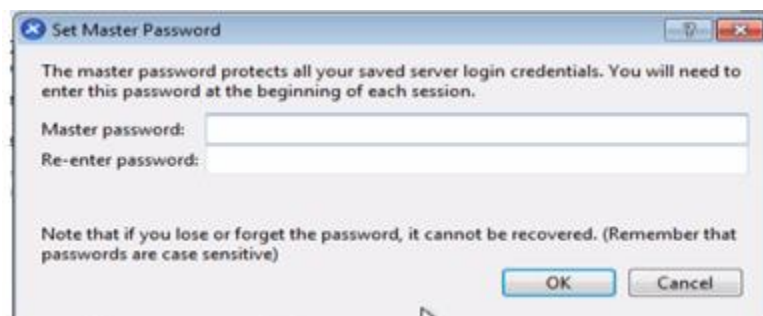
Here's how XenCenter looks like (see screenshot below) before any hosts, resource pools, and so on, are added to it. To connect to the XenServer host you configured earlier, click Add a server. Enter the IP address entered earlier. Also enter the password you assigned for your root account. Click Add.



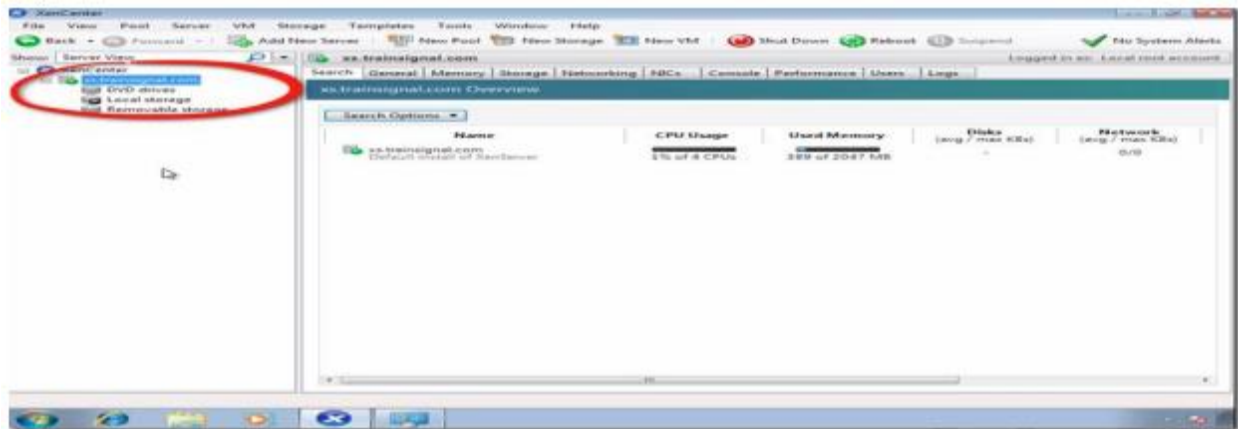
One of the first things you want to make sure as you're adding a new XenServer to XenCenter is to save and restore the server connection state on startup. Check the box that will do just that.



Once you do that, you will be allowed to configure a master password for all the XenServers you'll be associating with this XenCenter. Click the Require a master password checkbox if that's what you want to do, and then enter your desired master password in the fields provided.

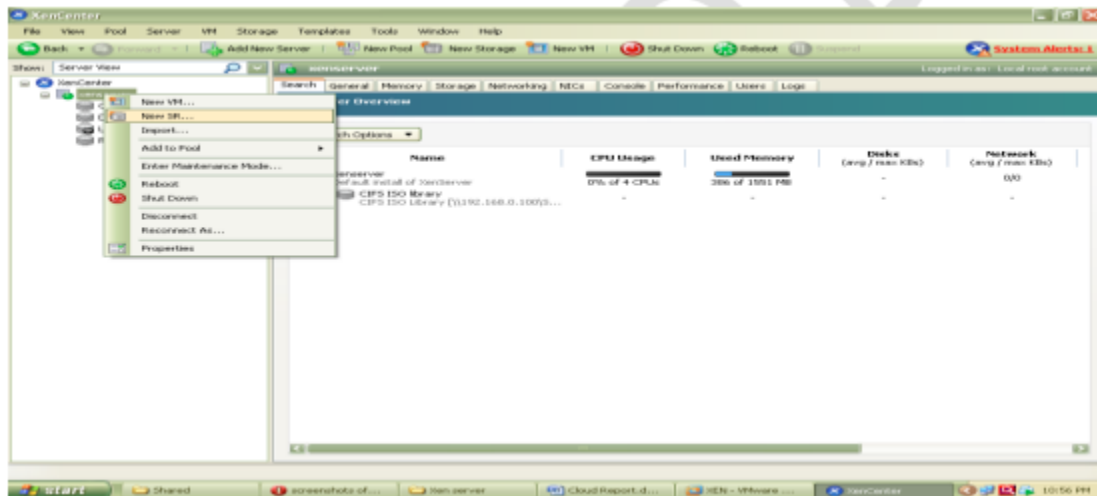


After you click OK, you'll be brought back to the main screen, where you'll see your XenServer already added to XenCenter

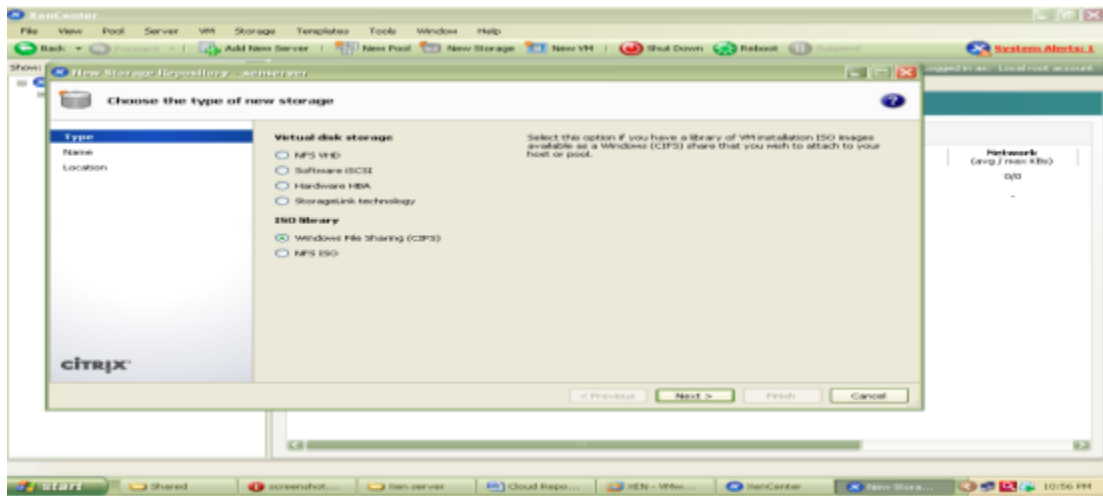


Step-3 Create Storage Repository and Installing VM

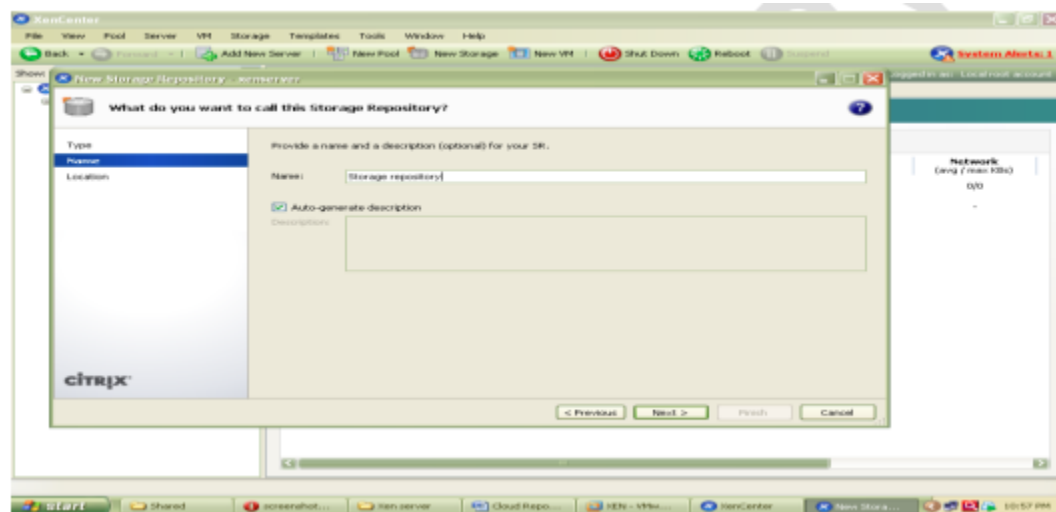
Now Before Creating VM we have to Create Storage Repository first which is nothing but shared directory on Xen Center which holds all iso files and which is required to install Operating system on Xen Server its steps are as follows. Right click on Xenserver icon on xen center and click on New SR



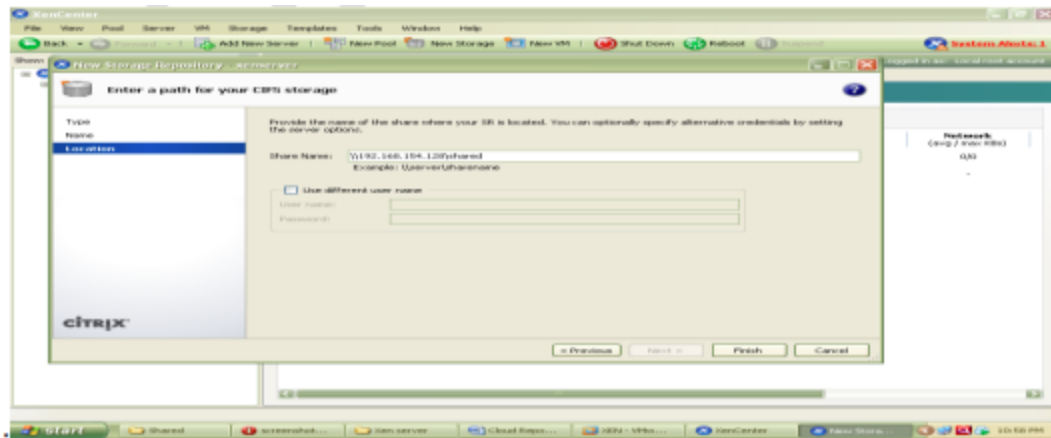
Now Select Windows CIFS library



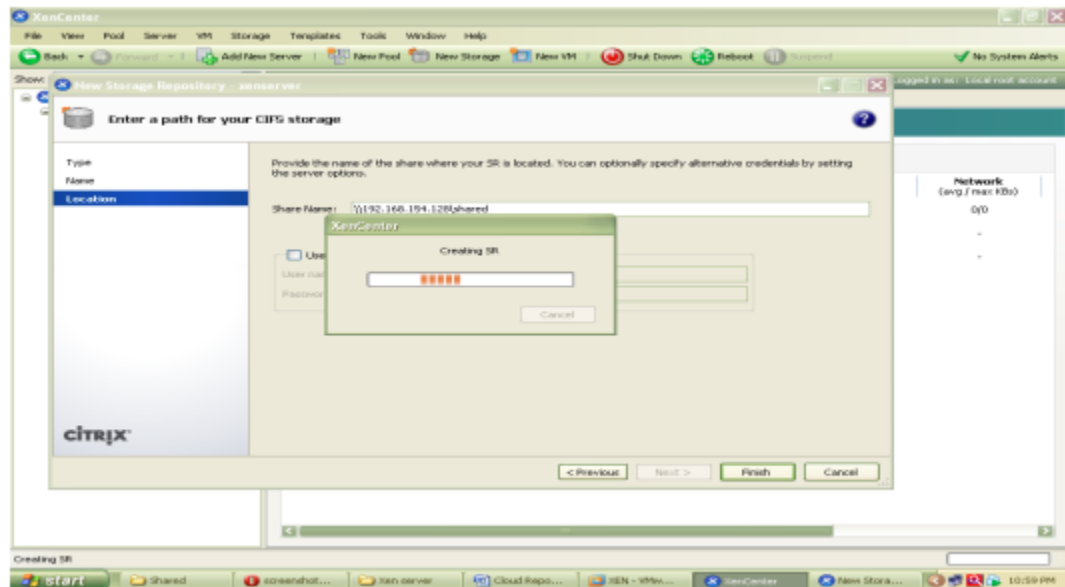
Specify Storage Repository Name



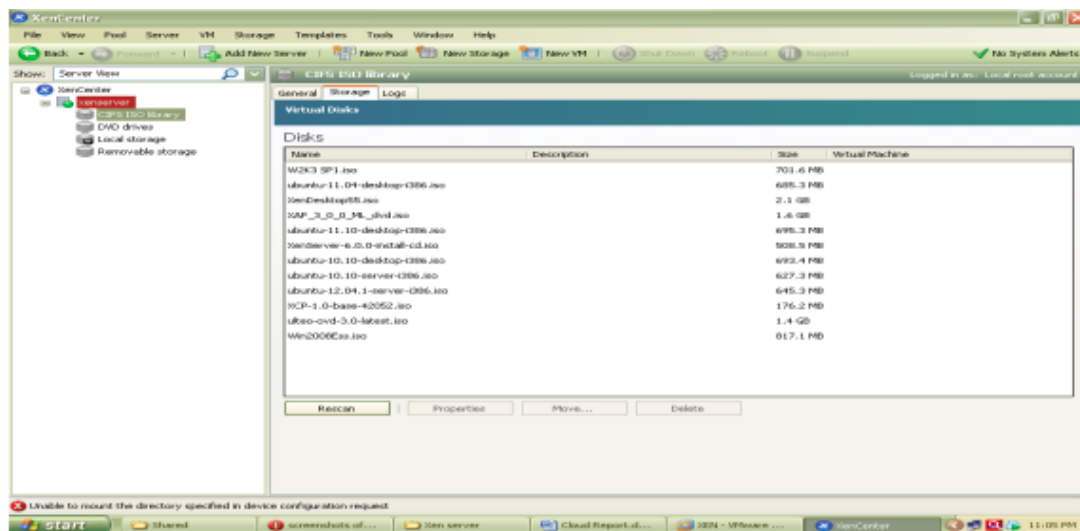
Now specify path of shared folder at client side which holds all iso files of os or VM which we are going to install on Xen Server.



At the end Click on finish to create SR

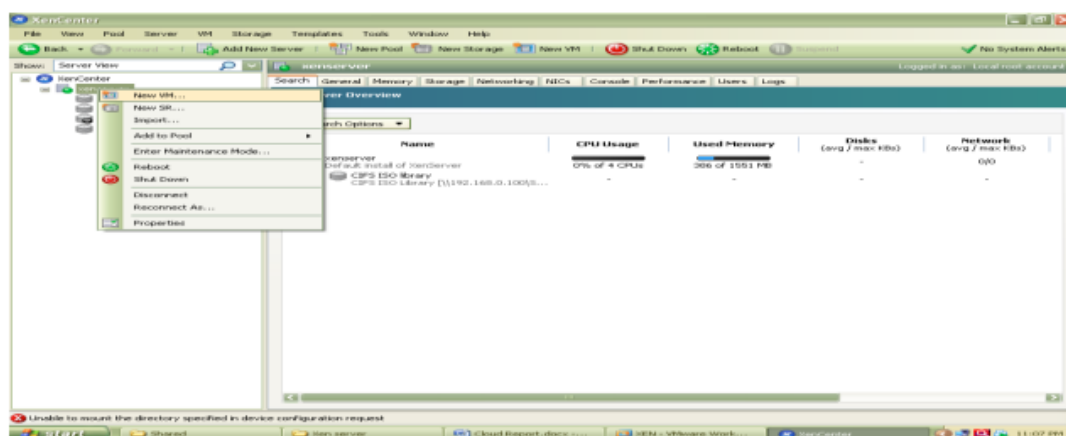


To check all iso files click on CIFS library and select storage this will show you all iso files.

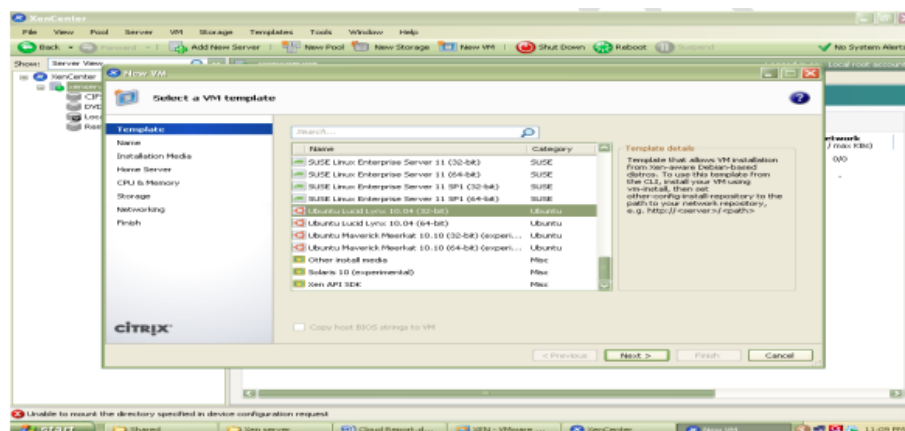


Step 4: Installation of UBUNTU Server on Xen Server

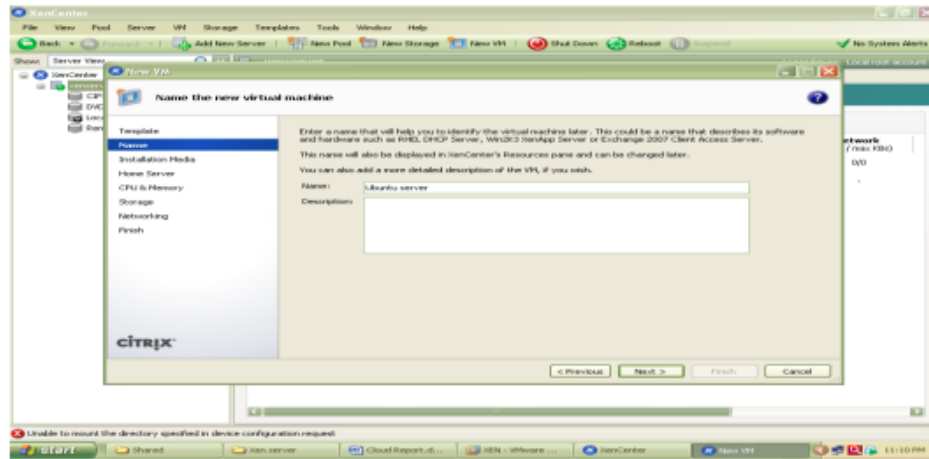
Step 1 -: Right click on Xenserver icon on xen center and select New VM.



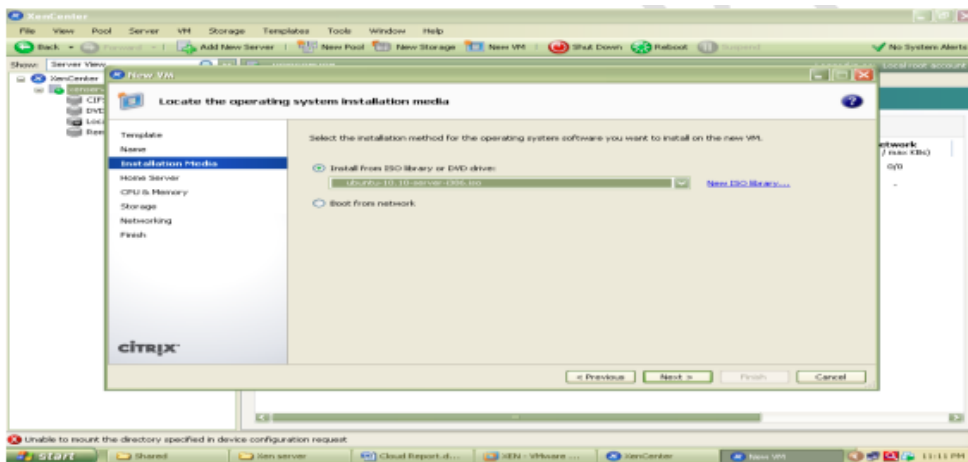
Now select an Operating System to be install here select Ubuntu Lucid Lynx and click on next



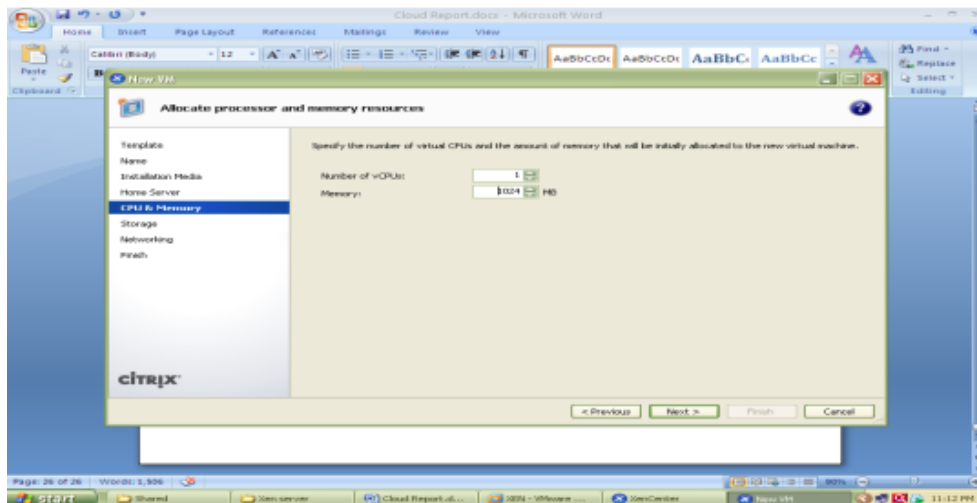
Now specify Instance Name as ubuntu server



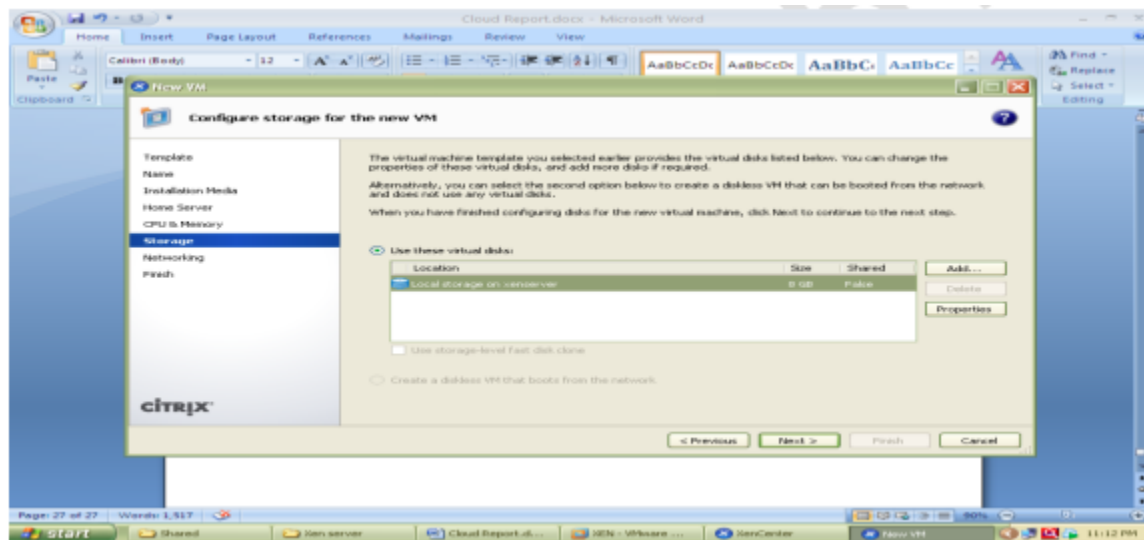
Select iso file of Ubuntu server 10.10 to be install



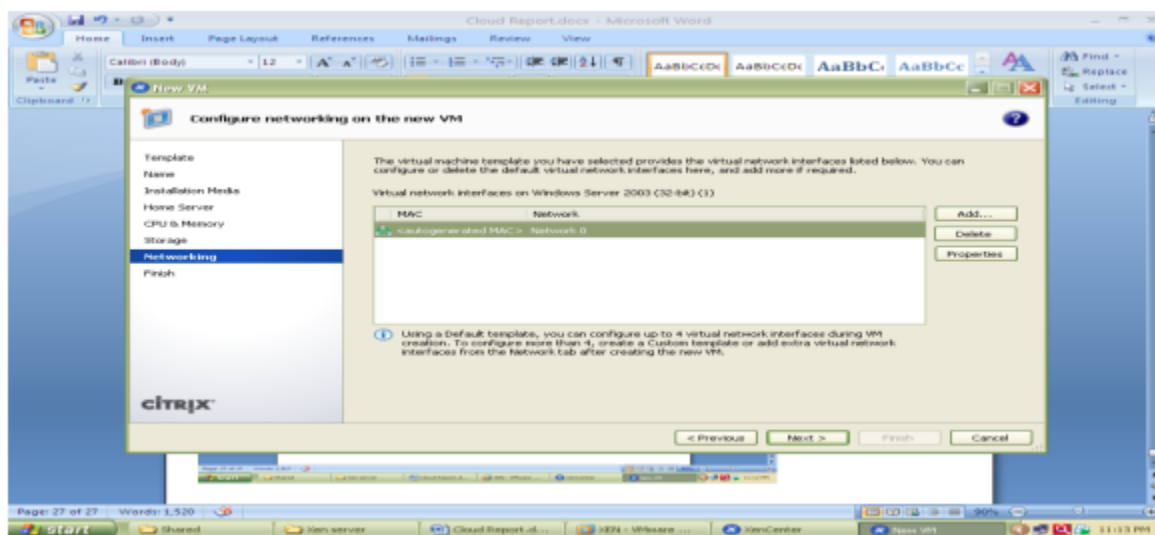
Now select hardware for vm i.e. no. of cpu's and memory



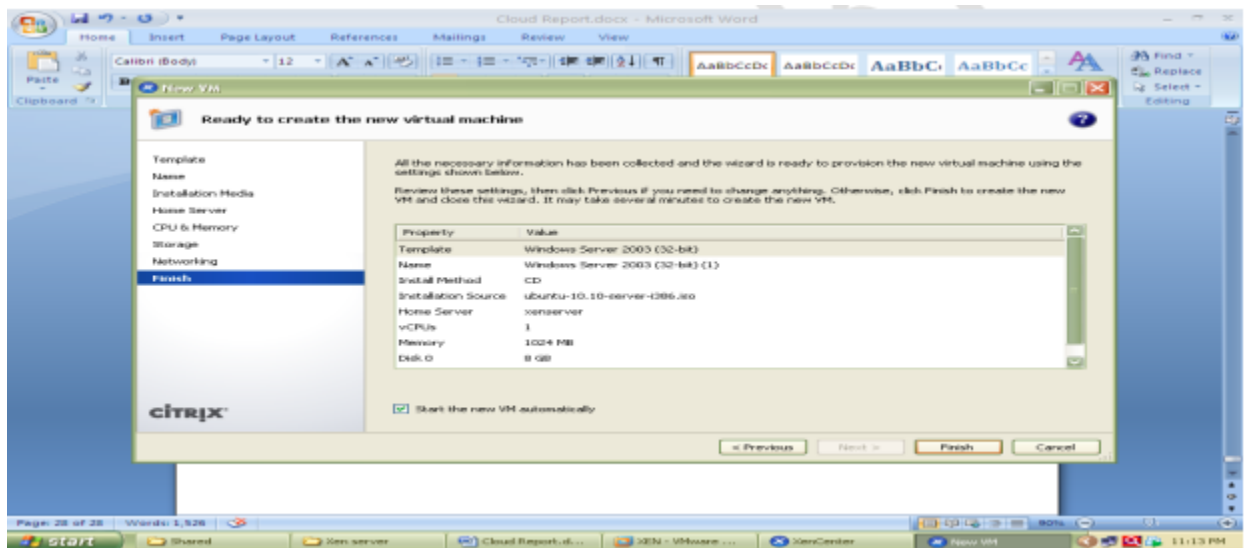
Select local storage



Select Network



And click on Finish



Now go to Console tab to install ubuntu and follow installation Steps.

