Setting up a Virtual Home lab

A virtual home lab is a simulated environment created on a host machine using virtualization software like Oracle VirtualBox. It allows users to safely experiment with different operating systems, network configurations, and services without impacting their primary systems.

Let’s dive in!

My virtualization software will be the Oracle VirtualBox and it is versatile that it offers a range of featues for creating and managing virtual machines. It also has the ability to run multiple operating systems simultaneously on a single physical machine.

Now, I proceed to download and Install the Oracle VirtualBox by clicking the link. Once the download is completed, I launched the installation. After that, I proceeded through the installation using all the default options by just clicking ‘yes’ to every yes/no prompts. After the installation is completed, click finish and launch the newly installed VirtualBox.

Then I proceed to download the desired Virtual Machines: Kali Linux and Ubuntu Server. Once I click the download link, the download starts. Once the download is complete, I go back to launch the VirtualBox.

The next thing to do after launching the VirtualBox is to mount my already downloaded virtual machines. Now, to mount my first Virtual Machine (Ubuntu Server), click on New, it opens a new VM window. Go ahead to create a name for your VM, I’ll name mine ‘Ubuntu server 00’, click on the ISO image, it opens a dropdown, select ‘other’, go to downloads and select the Ubuntu server file that was downloaded.After that, proceed to the next step which is ‘Unattended install’. Here, you create the Username and password for your Ubuntu VM and also the Hostname. Done with that, click on next, which takes you to the Hardware settings of your VM and we leave it as it is and click on finish. Then, proceed to start your VM. It might require you to restart your PC before it can run properly.

The next thing to do now is to set up and install the other VM which is the Kali Linux. So, I go back to my downloads folder, I can see that the downloaded Kali Linux is a ZIP file so the next thing to do is right click on it and click on ‘extract all’. After extracting, go back to the Virtual Box. Click on new, it launches a new VM window to set up the Kali Linux. I’ll name my VM ‘My Kali’. Select Linux as the type, sub-type as Ubuntu. Click next to go to the ‘Unattended Install’ tab and set the username and password and also the Host name. Next, I have to increase the Base Memory to 4096 MB and Processors to 2 CPUS. I also have to click next to increase the Hard Disk size to about 80 GB click on finish. Then I proceed to open the settings, go to storage, click on the Kali Linux.vdi. Then, in the attributes tab, select the option to Choose/Create a Virtual Hard Disk and click it and it opens a window to select a Hard Disk. Click on ‘Add’, go to the extracted Kali file and select and choose and click Okay. That’s all on the setting up but now, I have to restart my PC so I can run my Virtual machines.

So, now my PC has restarted and I’m about to launch the VirtualBox. I selected my Kali Linux and click and clicked on start. Now, my Kali Linux is up amd running

perfectly

After running the Kali Linux, I made sure to go and modify the settings and changed the Network type from NAT Network to Bridged Adapter which will cause your router to treat your VM as a physical computer. And your VM is running fine.

That’s it! We can try other Virtual Machines also and other Virtualization software.