

**Ethical Hacking**  
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**Lecture - 16**  
**Demonstration Part I**

Before going to start the demonstration we need to setup our lab. So, in today's session we will basically show how to setup your lab environment. So, in ethical hacking we basically exploit different kind of operating system like starting from the older operating system Windows, XP maybe, Windows 7, Windows 8, Windows 10 and some other Linux operating system are also used as a target wise. And basically preferably we use Kali Linux as the attacker machine; that means, the hackers machine.

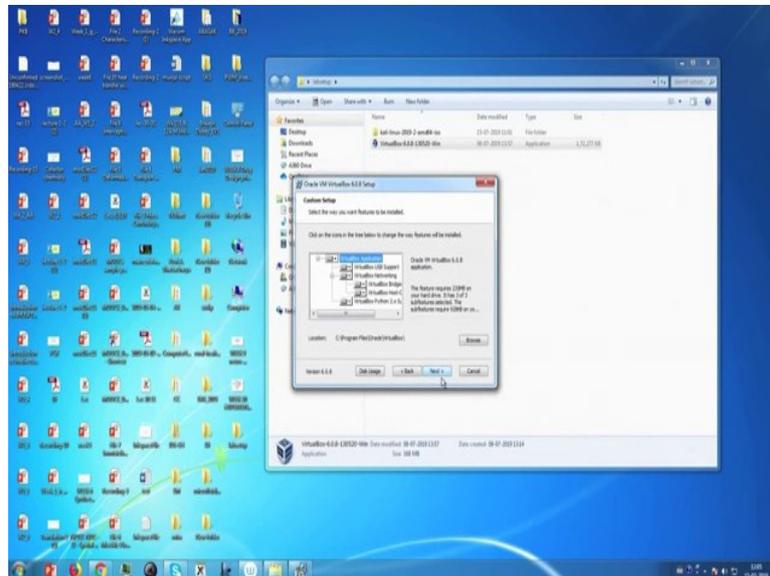
So, it is very difficult to arrange so many systems to run all this operating system. So, that is why we use the virtualization to install all these operating system in a single machine. So, there are different tools are available for virtual platform like VMware workstation, VMware player or a VirtualBox. So, VirtualBox is basically free open source software. So, that is why we use VirtualBox to create our own lab environment. So, here is the VirtualBox software. You can also go to the official website of *virtualbox.org* and from there you can download the VirtualBox for different operating system like windows, OS X, Linux, etc.

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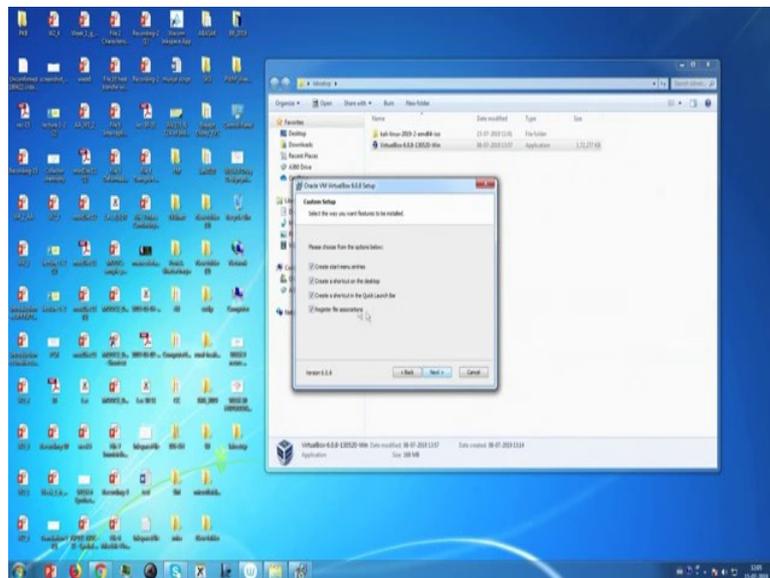
So, now I already downloaded it from *virtualbox.org*. Now, execute this and run.  
Next.

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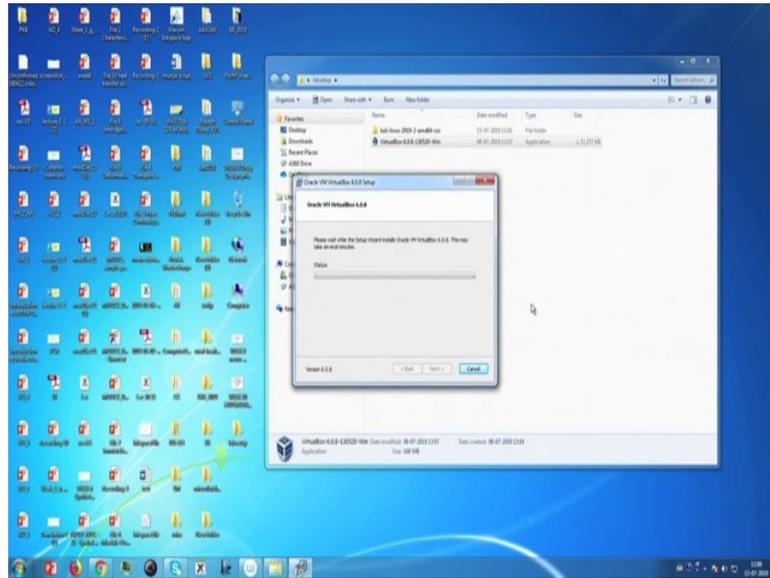
Next.

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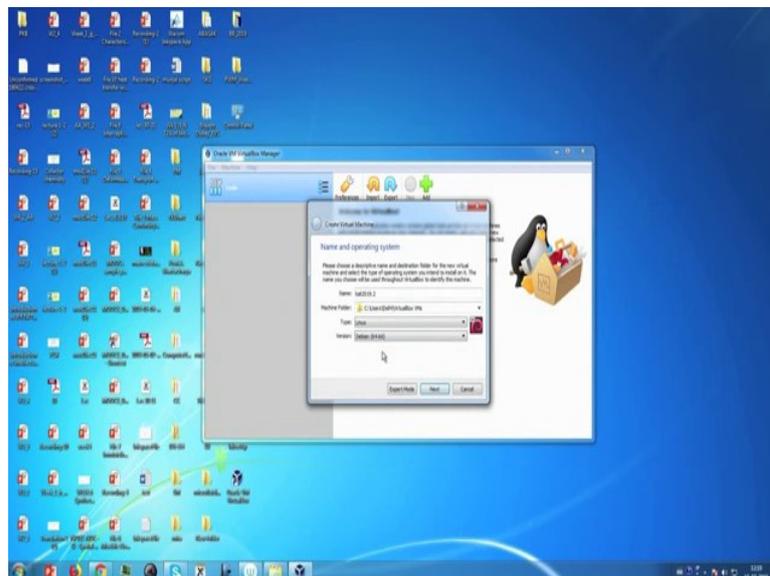
Create start menu entry and also want to create a shortcut on the desktop and also create a shortcut in the quick launch bar and register file associations. Next. Install.

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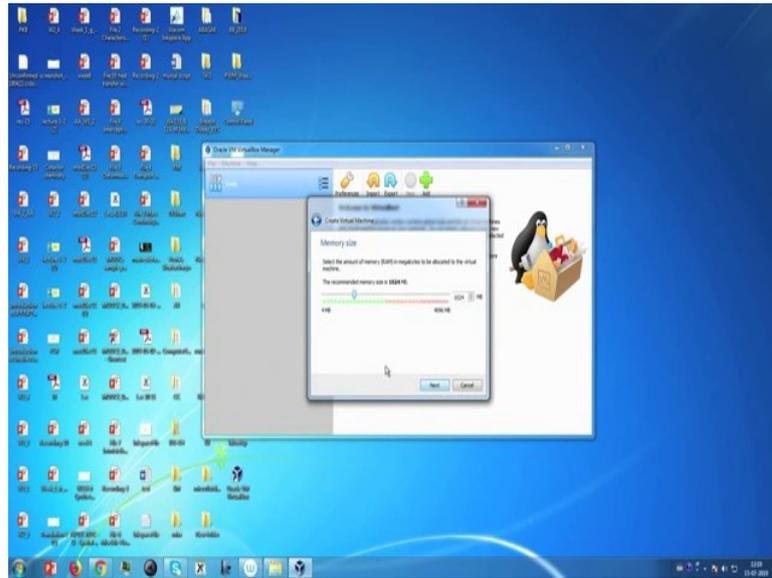
It basically takes some time to install Oracle VM VirtualBox 6.0.8.

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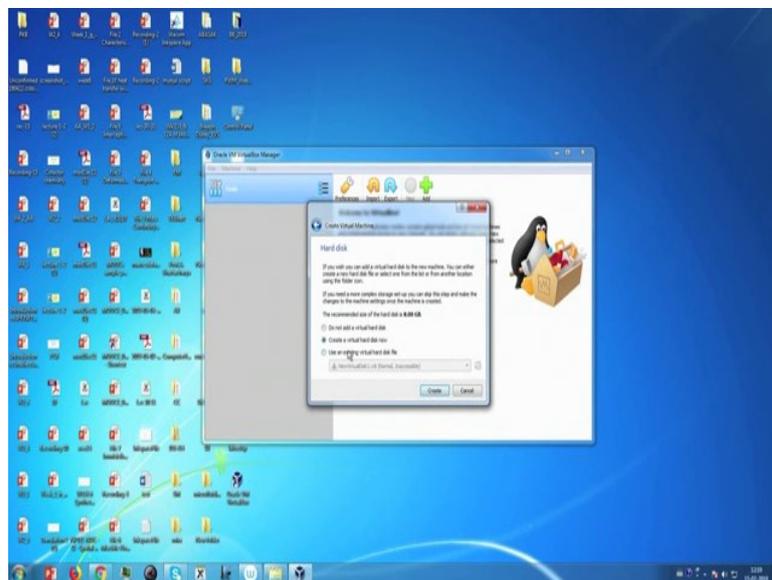
Now, finish. So, Oracle VM VirtualBox is already installed into our system. Now, in the next tutorial, I will show how to install Kali Linux in this virtual platform. Now, in this session we will show how to install Kali Linux in VirtualBox. So, this is the VirtualBox platform. So, first go to the option new and put the name I am going to install Kali Linux version 2019.2 and this is the folder you can also change this folder and it is a Linux operating system and it is Debian 64. So, now, go to next.

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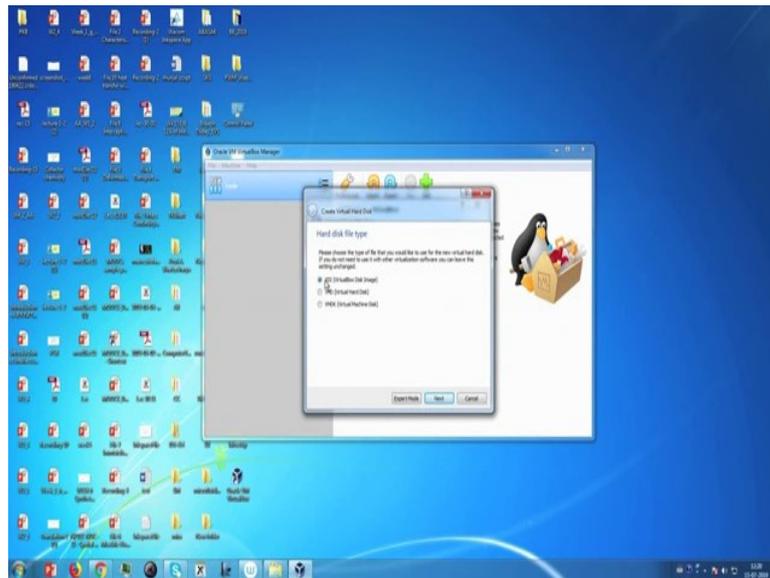
Now, memory size you can also check these things and change it to any other memory size. Recommended memory size is 2 GB that is 2048 MB. Then go to next.

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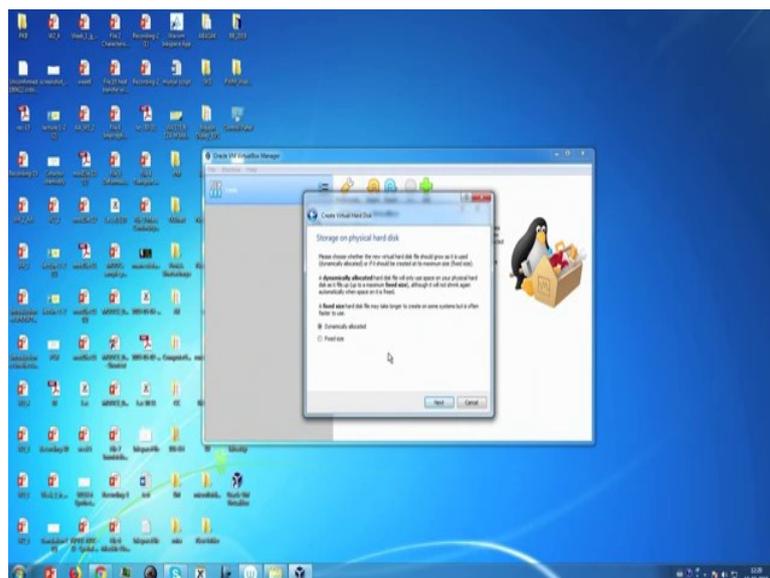


Then create a virtual hard disk now. Now, VDI, VirtualBox Disk Image.

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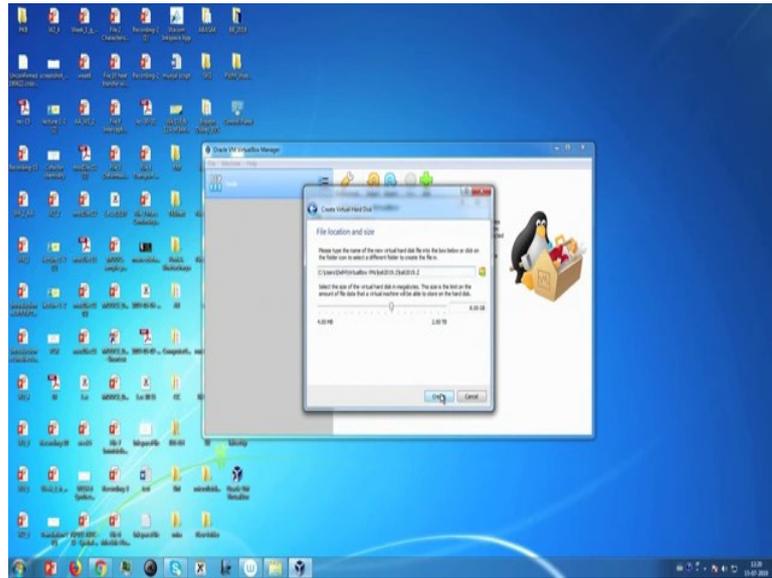


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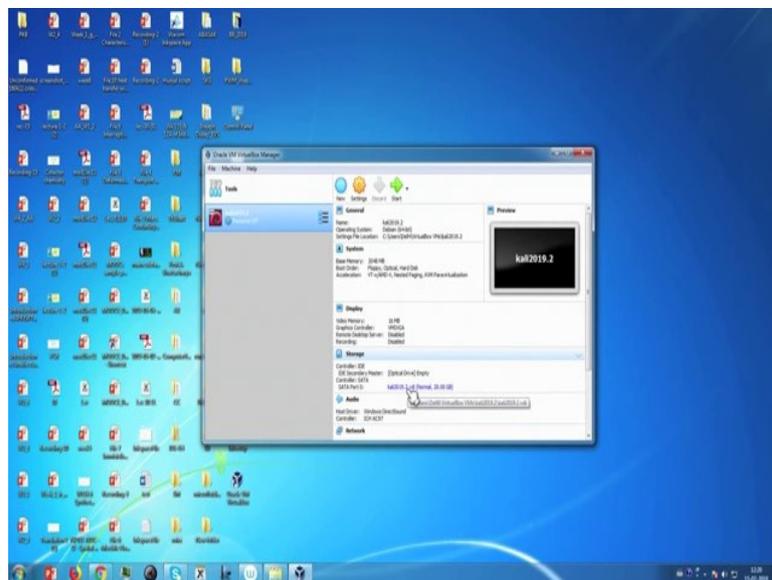
Now, we dynamically allocate the storage on physical hard disk.

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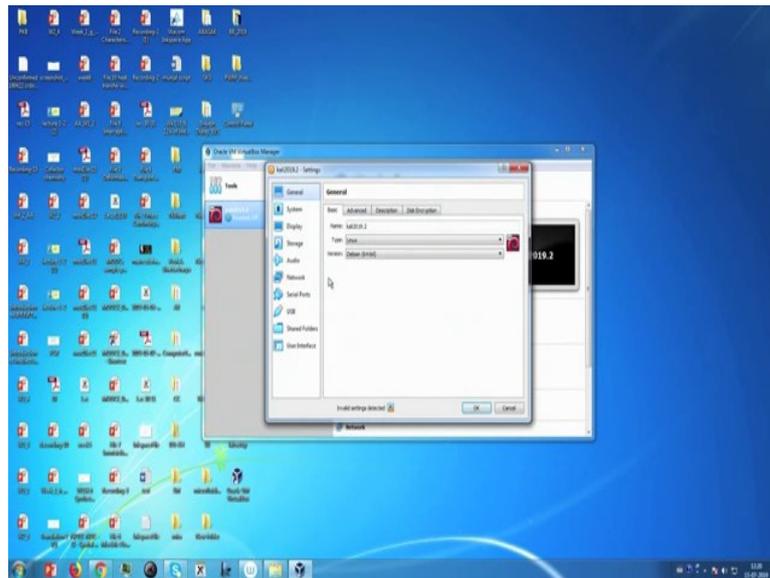
Go to next, and file location and size. This is the file location and this is the size. 8 GB is recommended you can also change it. So, I will change it to 20 GB. Now create.

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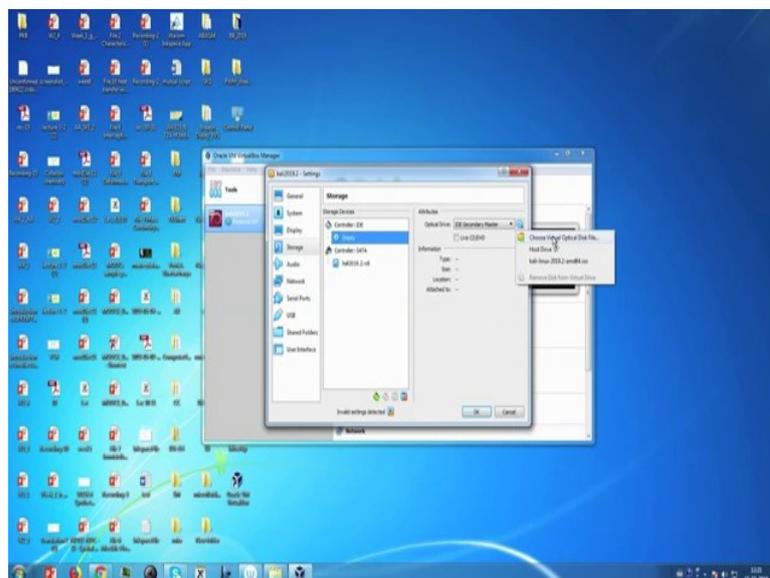
So, it will create the VirtualBox.

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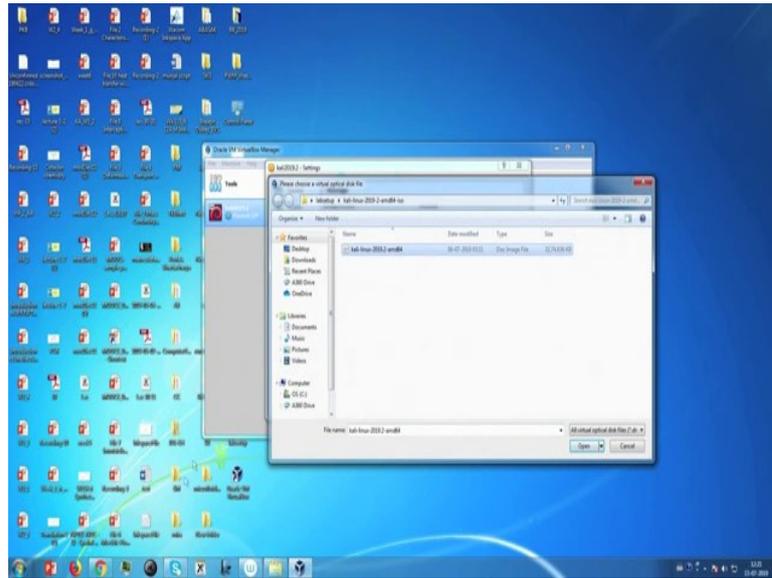
Now, go to the settings, and we need to add the file of that particular operating system.

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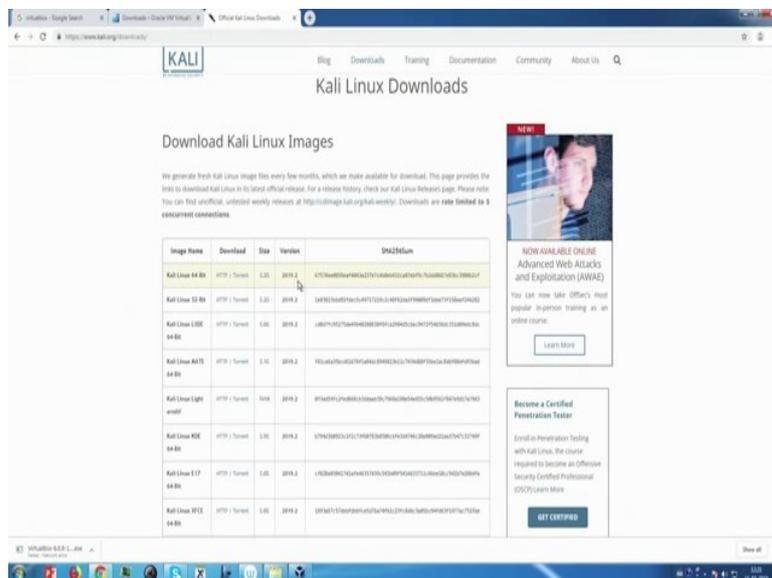
Go to storage and this is empty. Now, choose the virtual optical disk file.

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Now, we choose the Kali Linux 2019.2 ISO file which is available in the website of Kali, that is *Kali.org* and go to the download Kali Linux and you can get the all the available version of Kali Linux.

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I install Kali Linux 64 bit, so these one. And the version is 2019.2. This is the latest version.

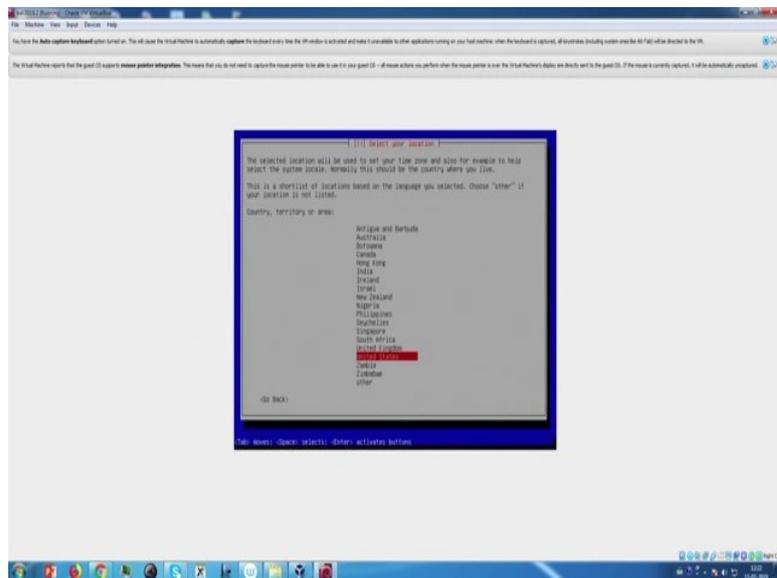
Now, see I already downloaded it and select this ISO file of Kali Linux 2019.2, then open, now ok. Now, start the machine, and say it will start the installation.

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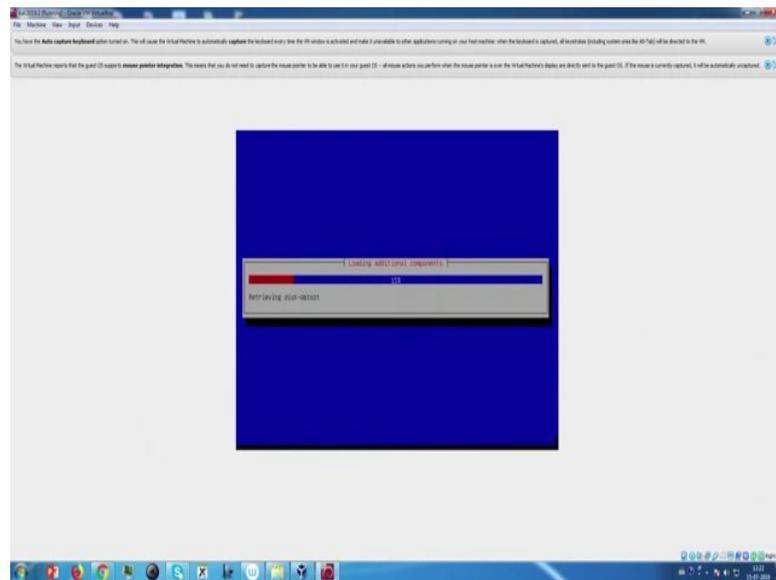
Now, you need to control this using keyboard. Now, go to the install part.

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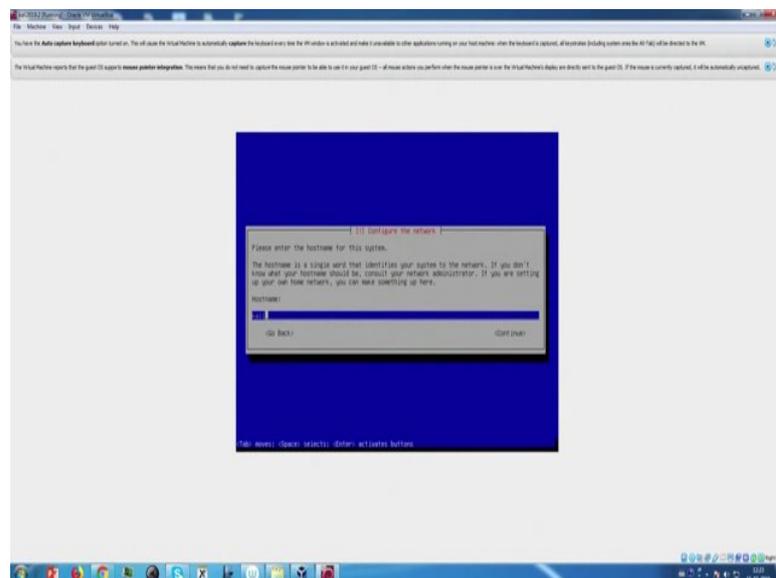
Suppose, I select English and location United States and configure the keyboard as American English.

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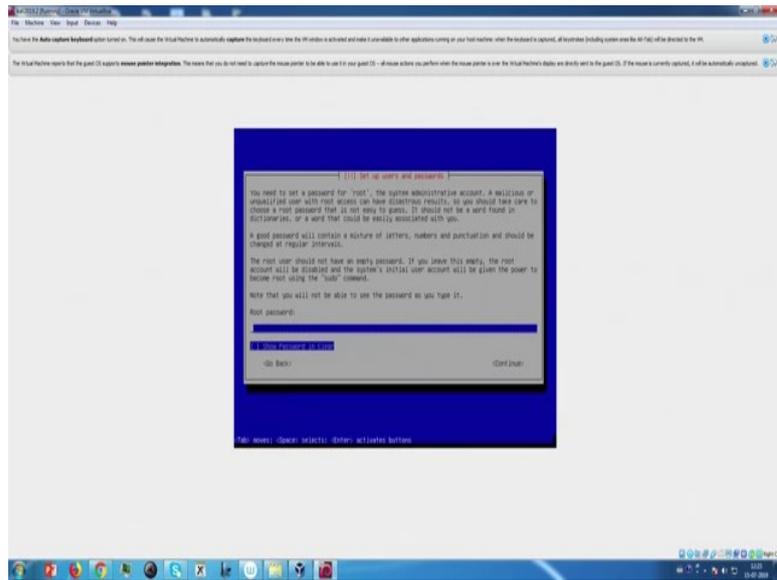
You can also select your own choice.

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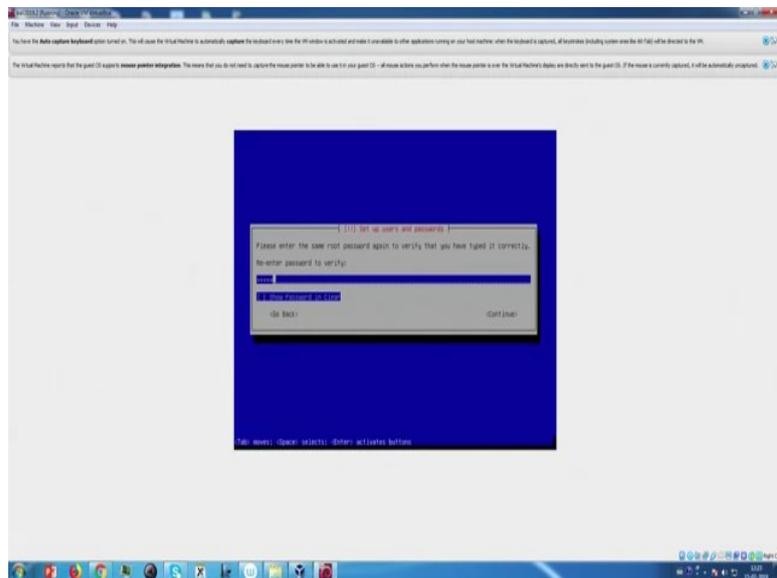
Hostname, you can also change the hostname.

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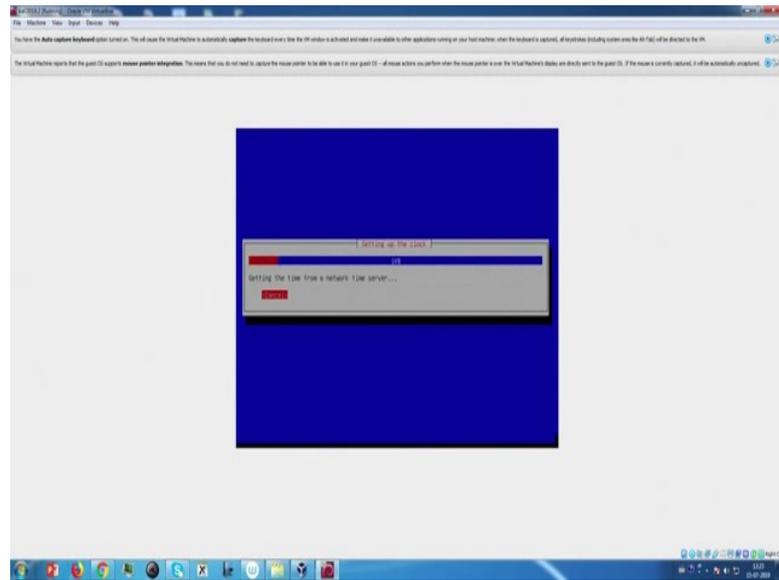
I simply continue, and root password, then continue.

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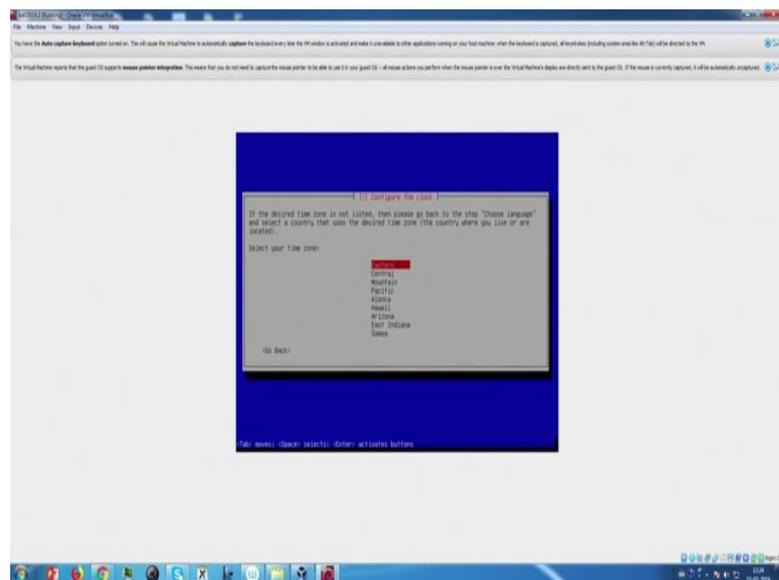


Then reenter and continue again.

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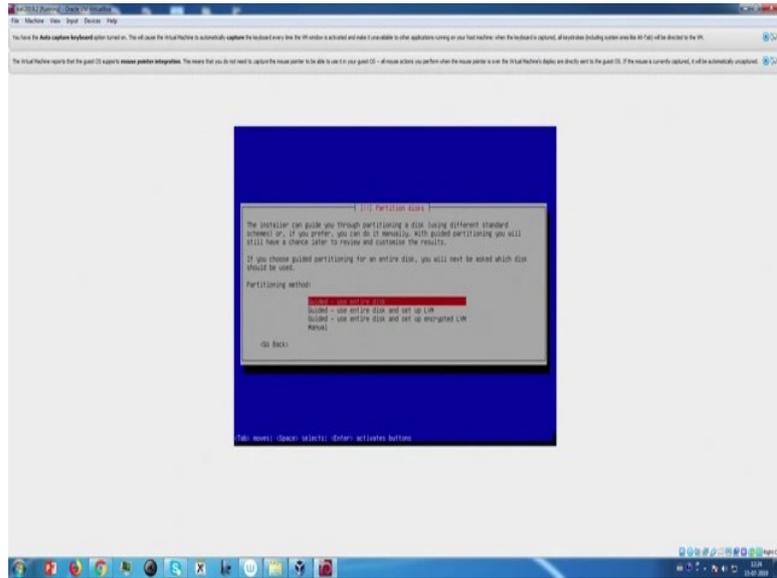


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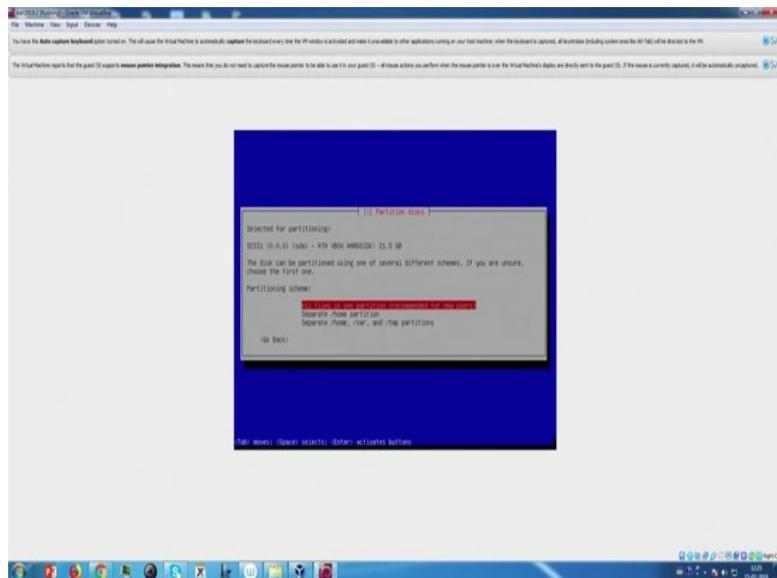
Now, configure the clock. I choose the default one.

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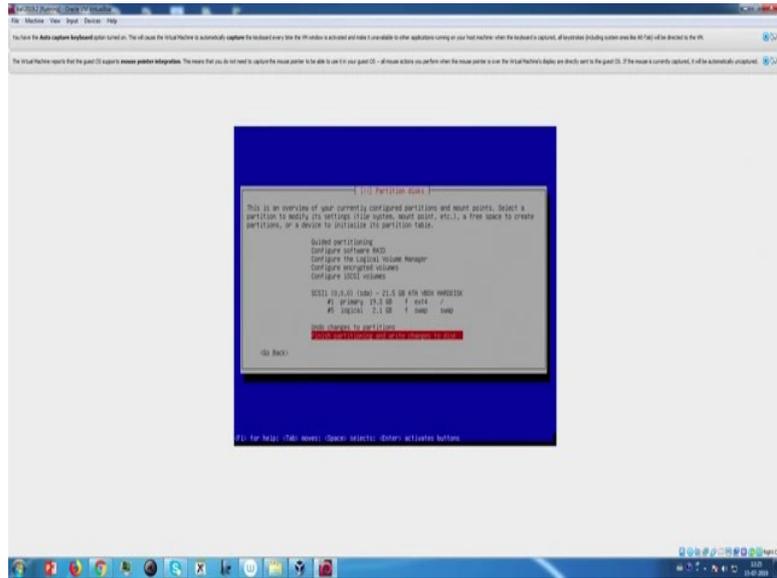
Now, partition disk. I choose the guided use entire disk. All file in one partition.

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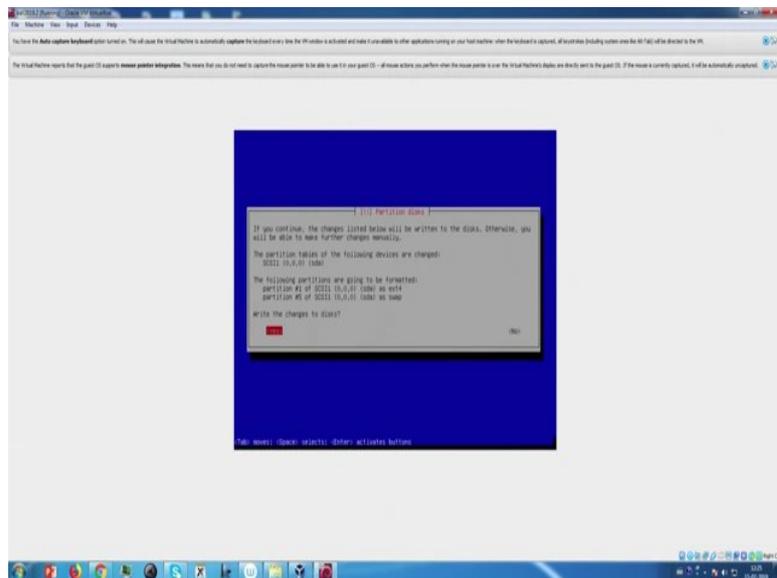
It is recommended for new users.

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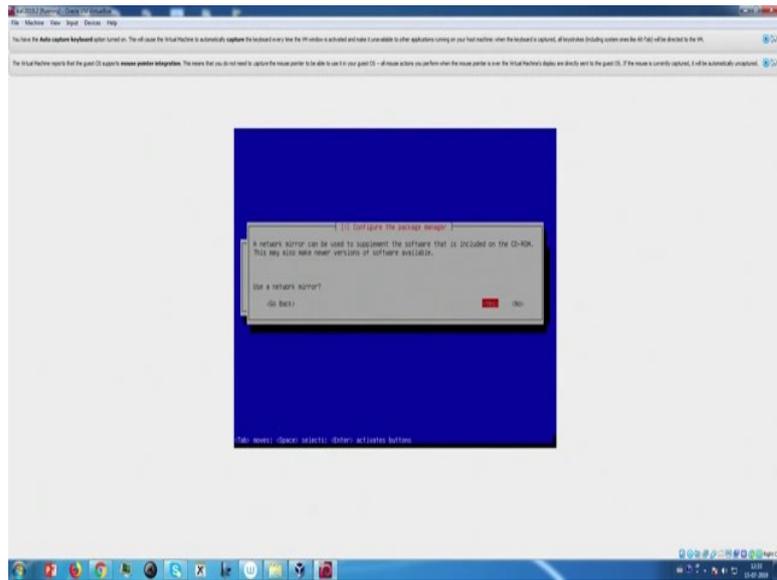
Now, finish partitioning and write changes to disk. Yes. Now, put yes.

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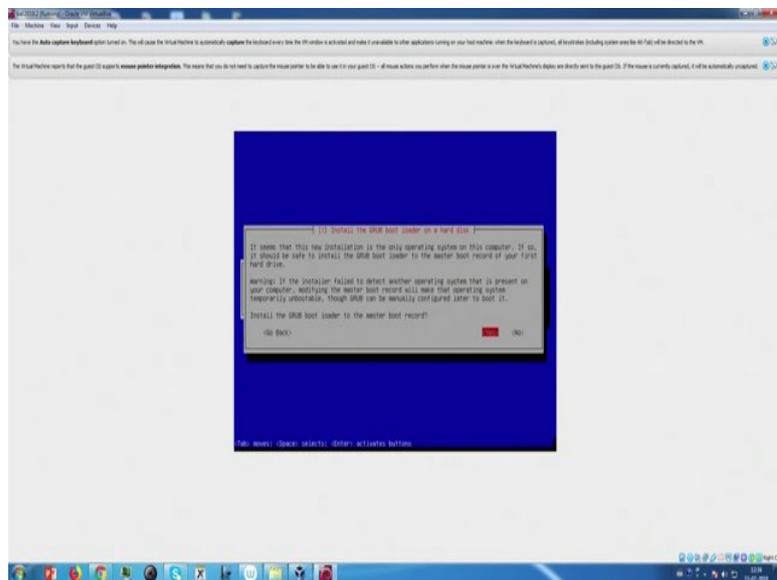
Now, it will take some time to install the system.

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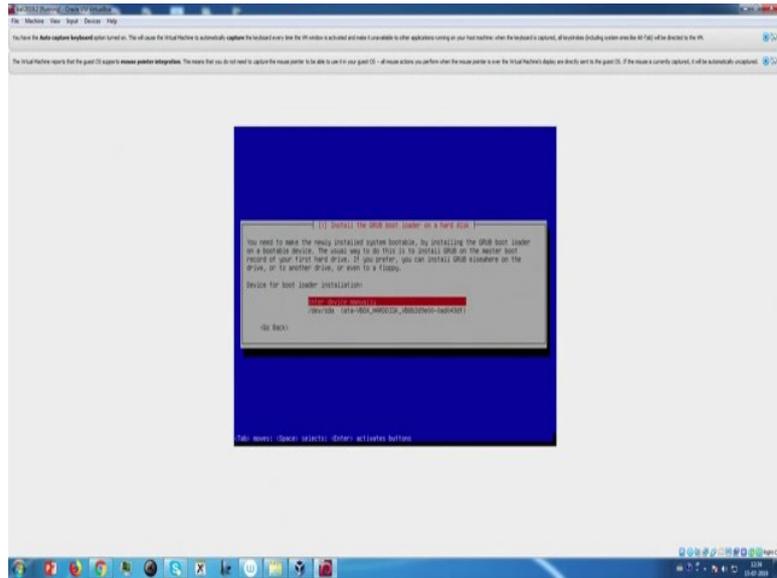
A configure the package manager; use a network mirror, I select no. Now, it is installing grub boot loader. It is very important.

(Refer Slide Time: 09:15)



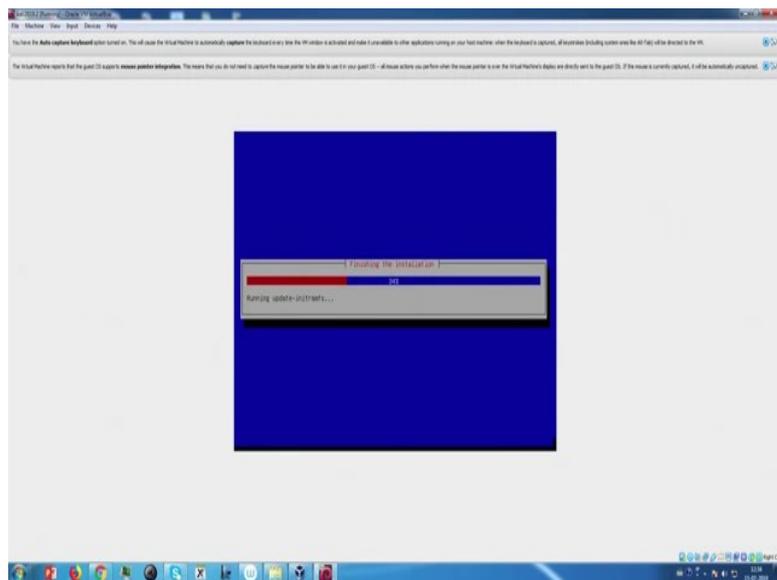
So, install the grub boot loader on a hard disk, always yes.

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Now, for the first time not manually use */dv/hda*.

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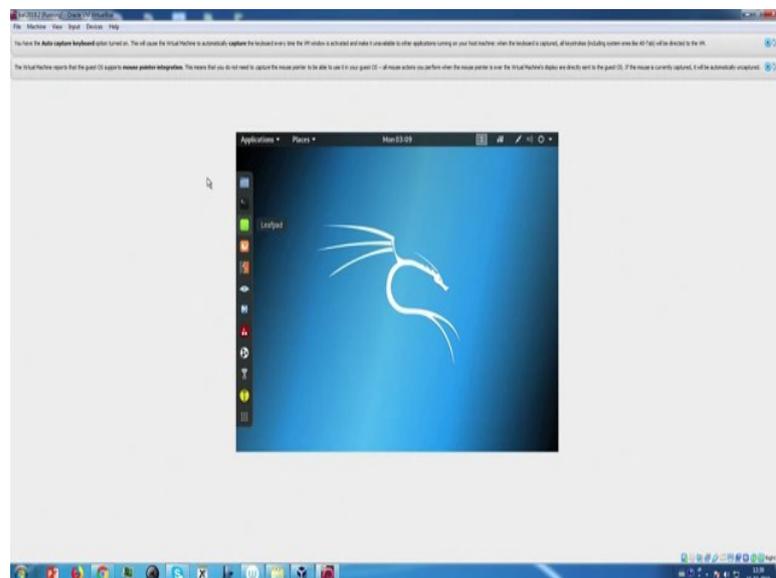
Now, it is finishing the installation. Finish the installation, continue.

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Now, Kali Linux is already installed and it opening now.

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So, now use the username root and password which we which we provide at the time of installation. Yes, now there is the Kali Linux. We successfully installed Kali Linux into the virtual platform.

Now, always remember that before going to install any operating system into virtual platform, always enable the virtualization option in your BIOS setup. Now, this way you

can install other operating system such as windows XP, windows 7, 8, 10, and other Linux operating system also and this way you can set up your own lab environment.

Thank you.