

## Practical – 1

### **Introduction Virtualization Environment configuration and Cyber Lab setup (Kali, VM ware and Oracle VirtulBox).**

We will install Kali for this we don't need any ISO file. For this a ready made virtual disk image is available on Internet.

Download link for virtual image :-

Kali: <https://cdimage.kali.org/kali-2022.4/kali-linux-2022.4-virtualbox-amd64.7z>

#### **About Kali Linux**

Kali Linux (formerly known as BackTrack Linux) is an open-source, Debian-based Linux distribution aimed at advanced Penetration Testing and Security Auditing. It does this by providing common tools, configurations, and automations which allows the user to focus on the task that needs to be completed, not the surrounding activity.

Kali Linux contains industry specific modifications as well as several hundred tools targeted towards various Information Security tasks, such as Penetration Testing, Security Research, Computer Forensics, Reverse Engineering, Vulnerability Management and Red Team Testing.

Kali Linux is a multi-platform solution, accessible and freely available to information security professionals and hobbyists.

#### **System Requirements**

The installation requirements for Kali Linux will vary depending on what you would like to install and your setup. For system requirements:

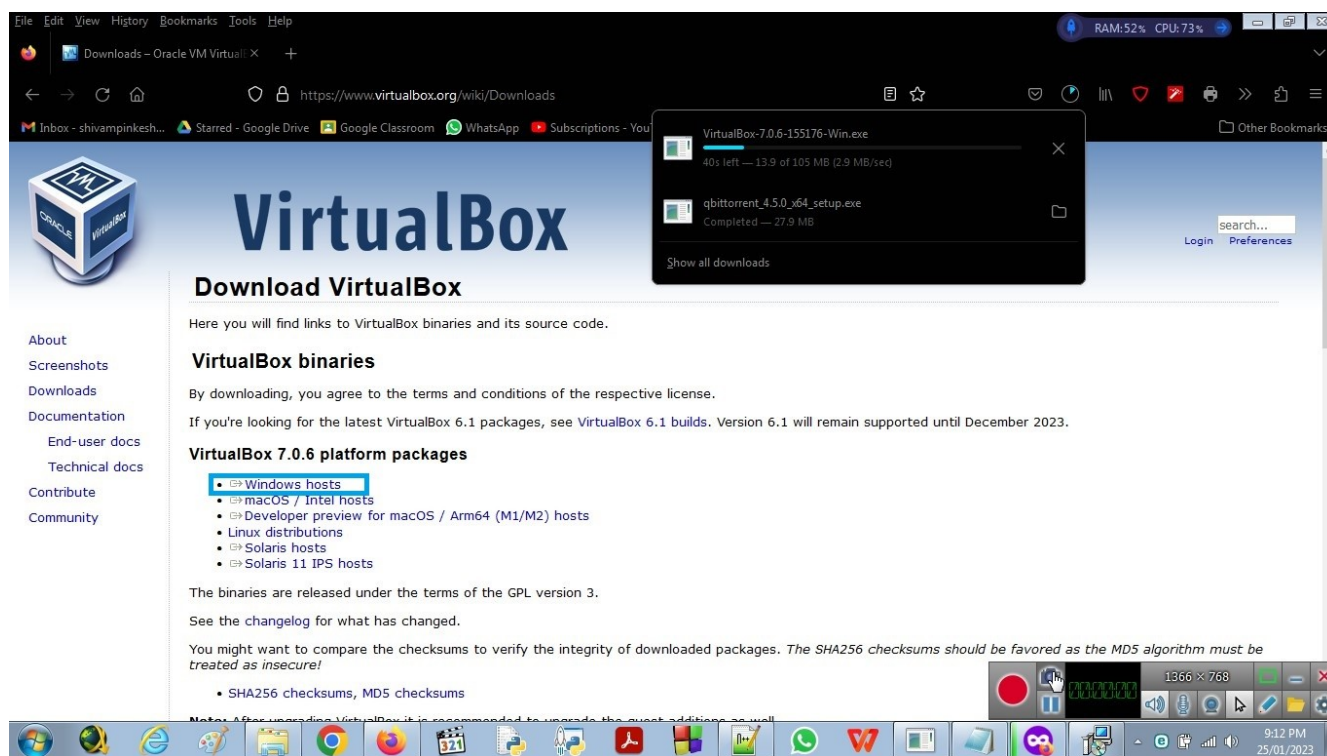
- On the low end, you can set up Kali Linux as a basic Secure Shell (SSH) server with no desktop, using as little as 128 MB of RAM (512 MB recommended) and 2 GB of disk space.
- On the higher end, if you opt to install the default Xfce4 desktop and the kali-linux-default metapackage, you should really aim for at least 2 GB of RAM and 20 GB of disk space.
- When using resource-intensive applications, such as Burp Suite, they recommend at least 8 GB of RAM (*and even more if it is a large web application!*) or using simultaneous programs at the same time.

## Installing Virtual Box

Step 1 :- Directly download virtual box from following link or follow step 2:-

<https://download.virtualbox.org/virtualbox/7.0.6/VirtualBox-7.0.6-155176-Win.exe>

Step 2 :- Go to <https://www.virtualbox.org/wiki/Downloads> to download virtual machine



Note :-

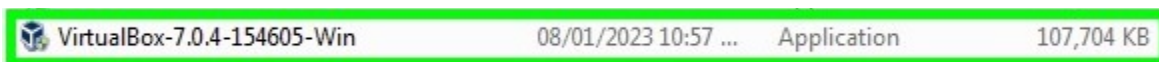
If you follow Step 1 it will only download [VirtualBox-7.0.6-155176-Win.exe](https://download.virtualbox.org/virtualbox/7.0.6/VirtualBox-7.0.6-155176-Win.exe) which may not be the latest version.

If you follow Step 2 if there is any latest version you can download it.

It is recommended to follow Step 2 than Step 1.

for windows : <https://download.virtualbox.org/virtualbox/7.0.6/VirtualBox-7.0.6-155176-Win.exe>

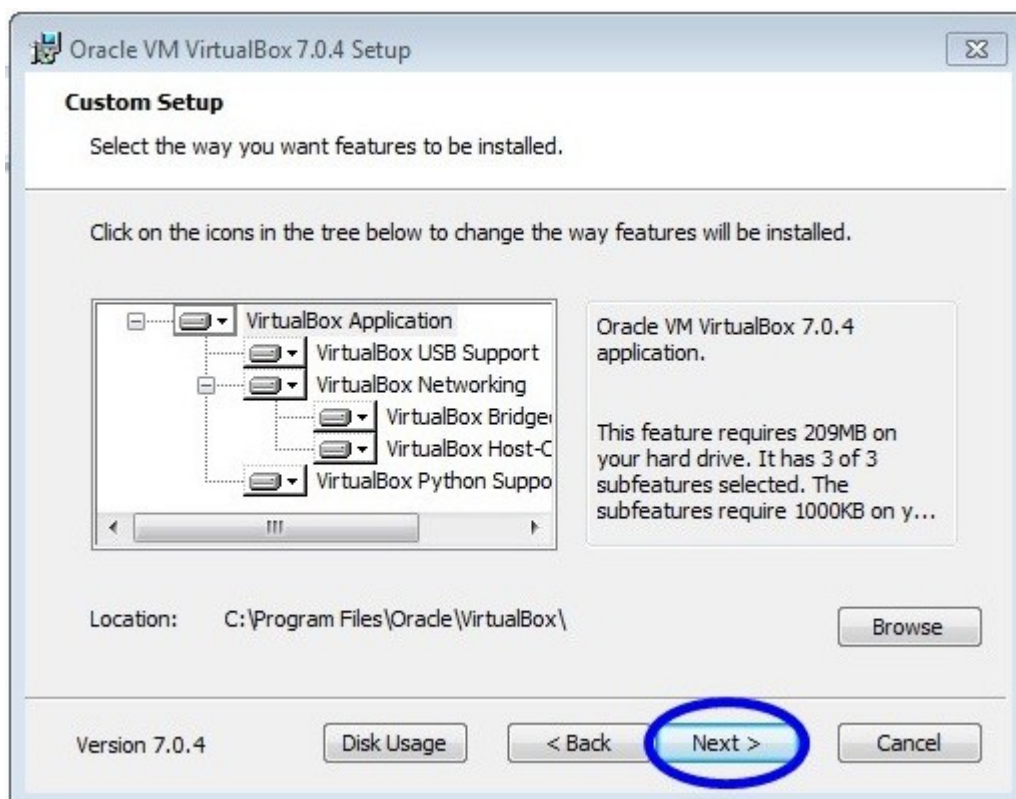
Step 3 :- Run the installer.



Step 4 :- Click on next button.



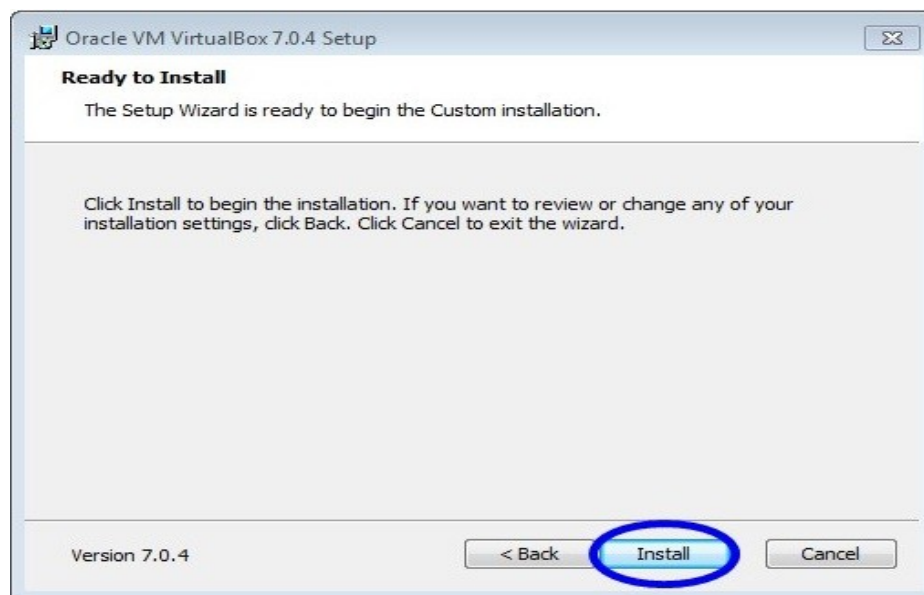
Step 5 :- Click on next button.



Step 6 :- Then click on Yes button.



Step 7 :- Click on Install Button. Then the Installation Setup will start.



Step 8 :- It will again ask for confirmation after setup to install it . Then click on Install Tick in check box is optional.



Step 9 :- After few minutes installation will be complete for virtual machine click finish.

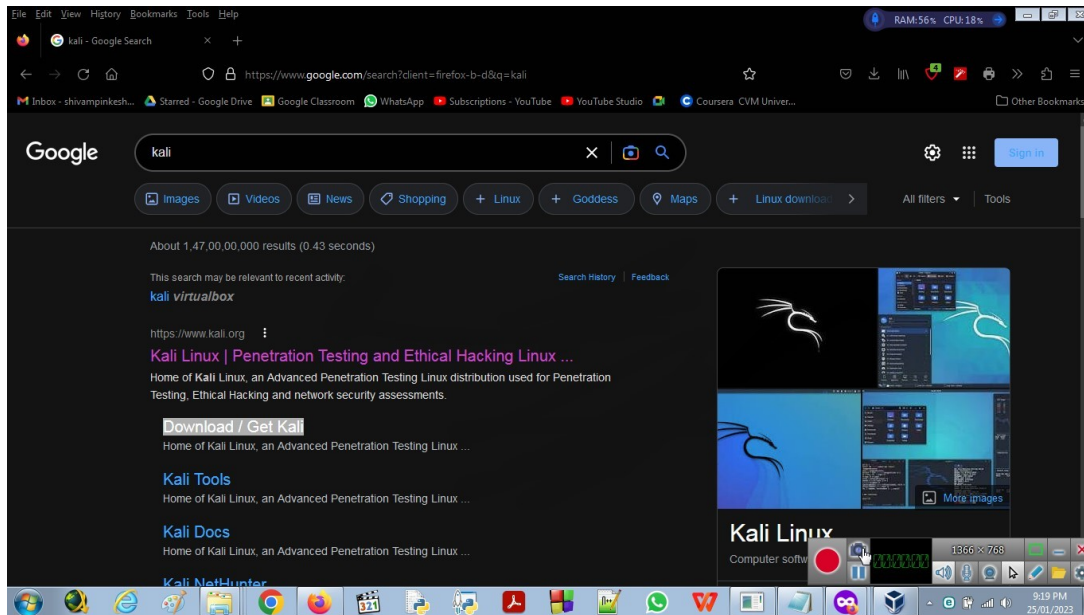


installation of virtual box is finished.

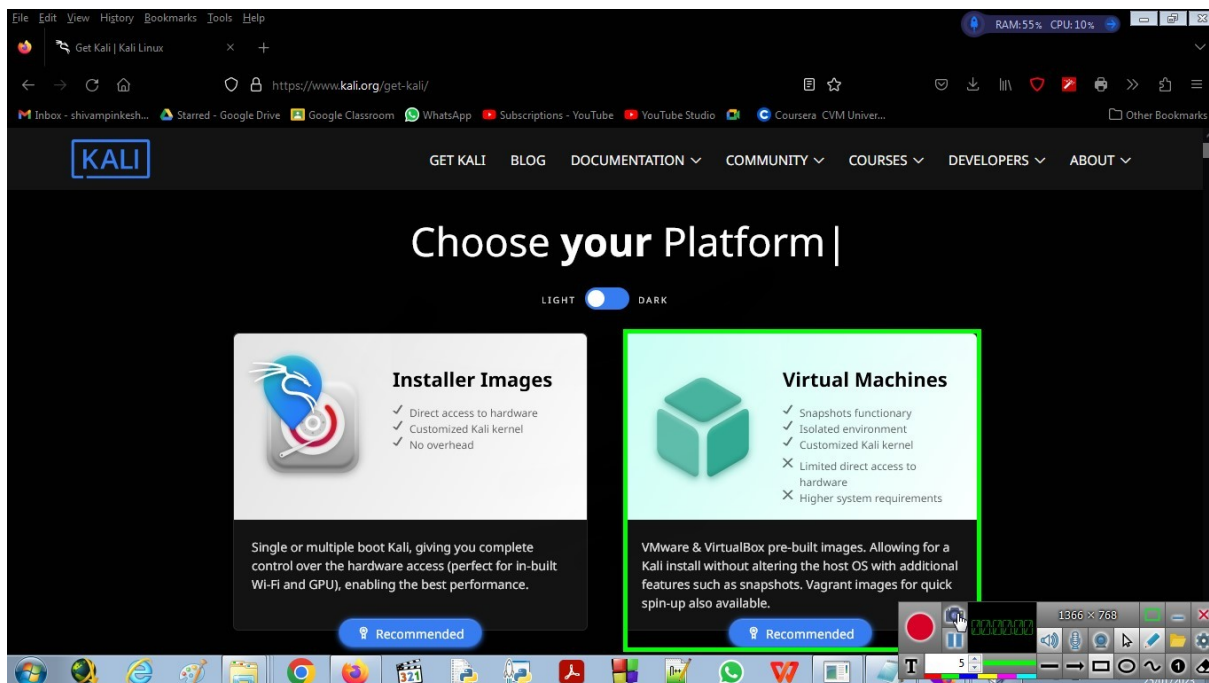


## Installing Kali In Virtual Box

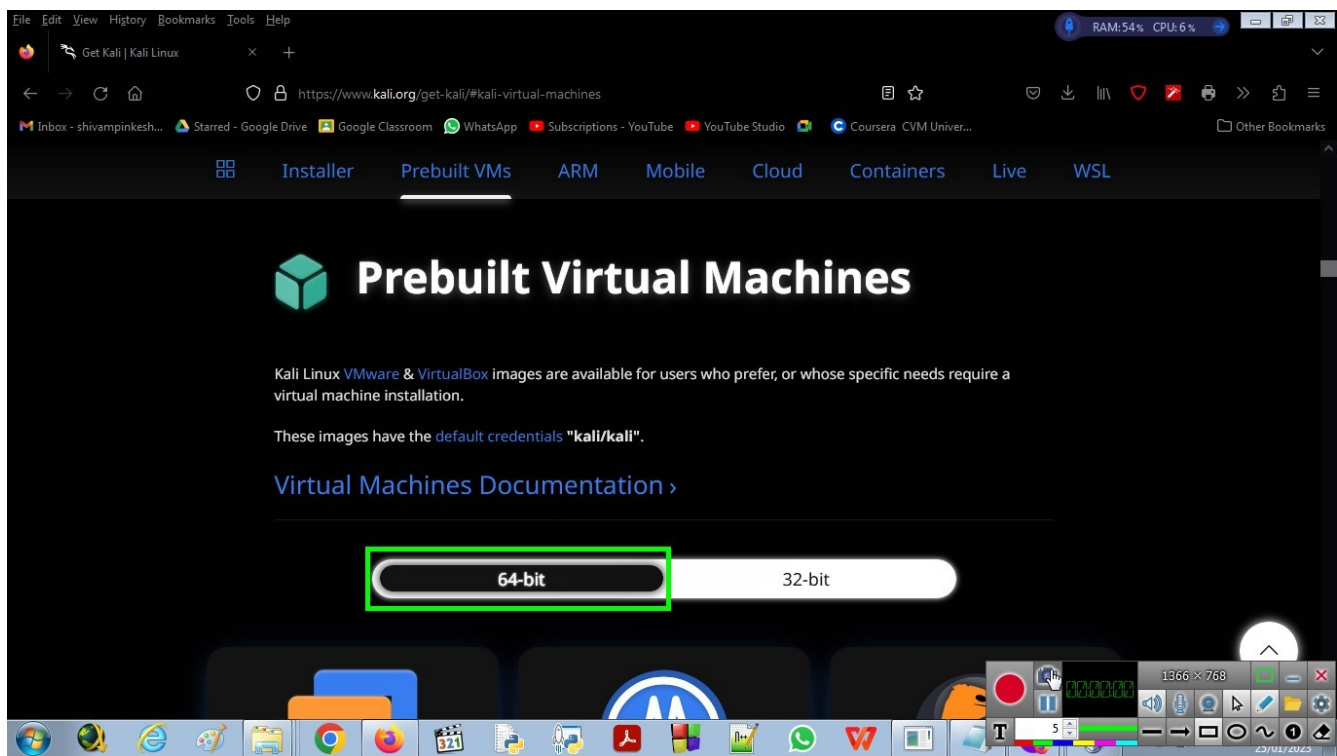
Step 10 :- Now go to kali's official site <https://www.kali.org/>



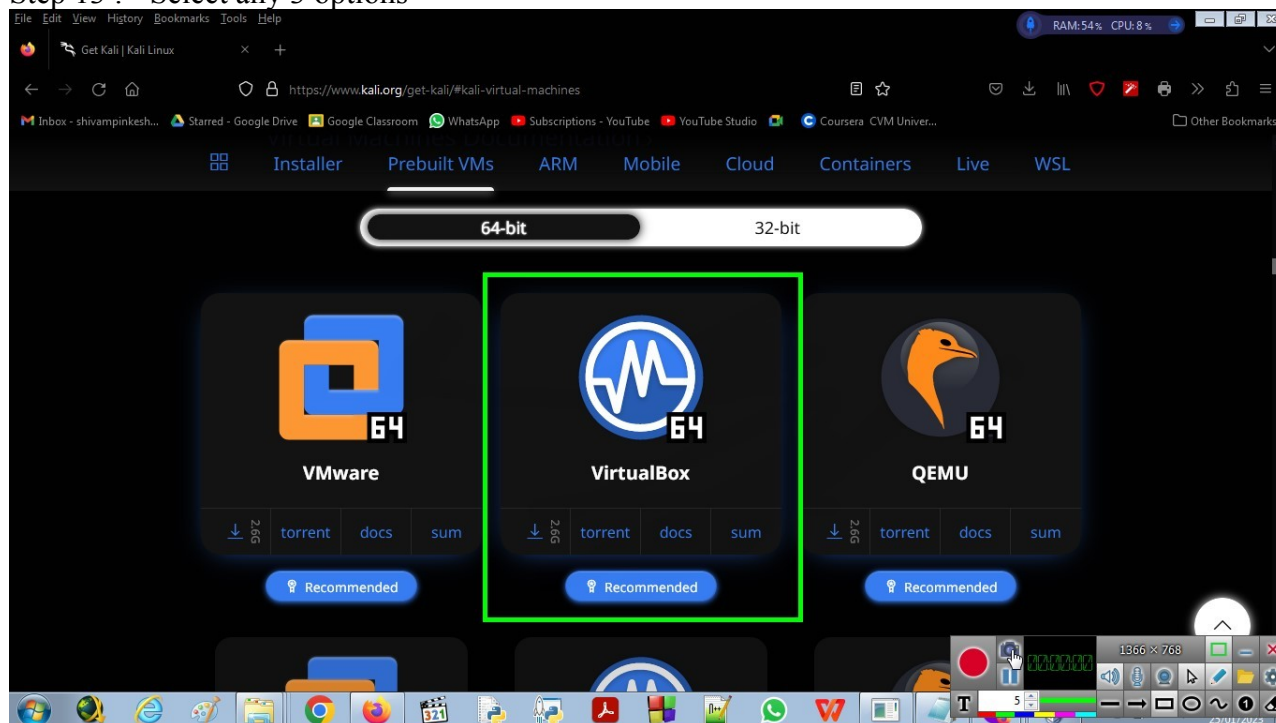
Step 11 :- Click on <https://www.kali.org/get-kali/#kali-virtual-machines> (image similar to image in green box)



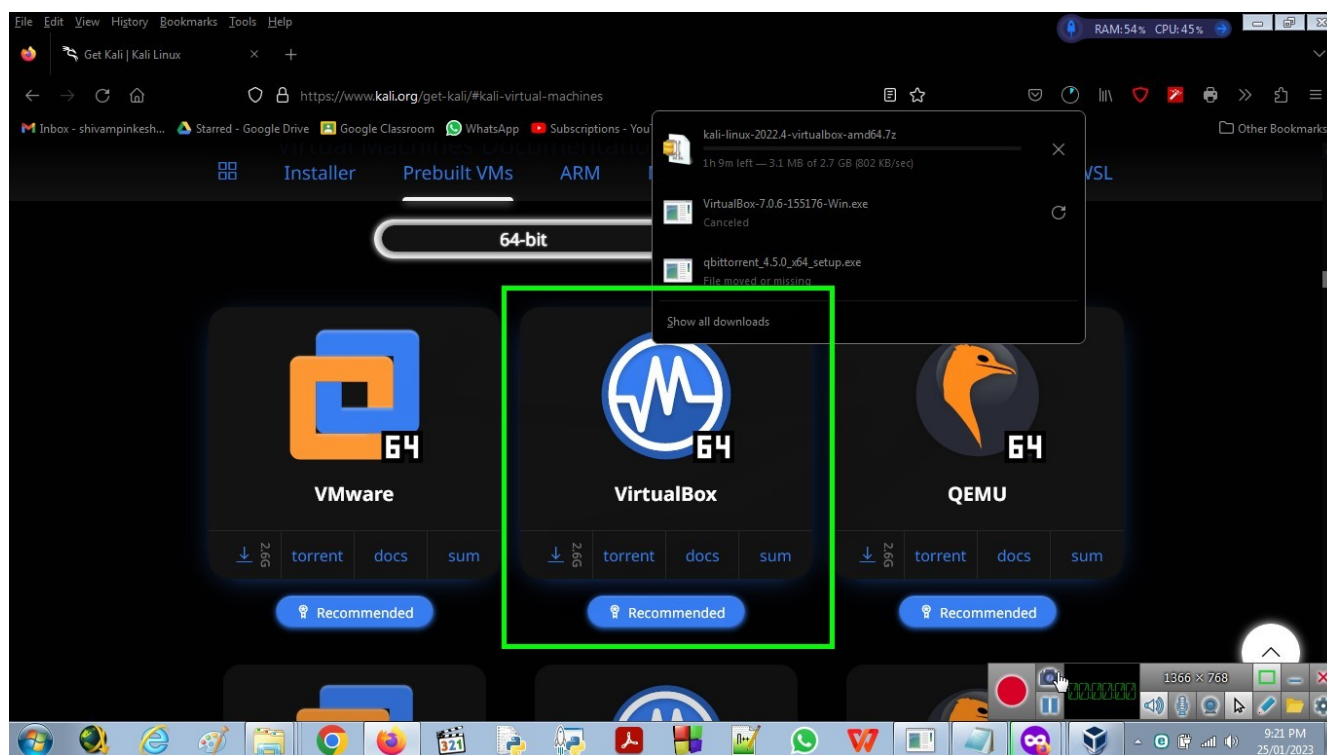
Step 12 :- You may choose any from 64 bit or 32 bit.



Step 13 :- Select any 3 options




Step 14 :- Click on download sign to download before torrent file or open below link  
<https://cdimage.kali.org/kali-2022.4/kali-linux-2022.4-virtualbox-amd64.7z>

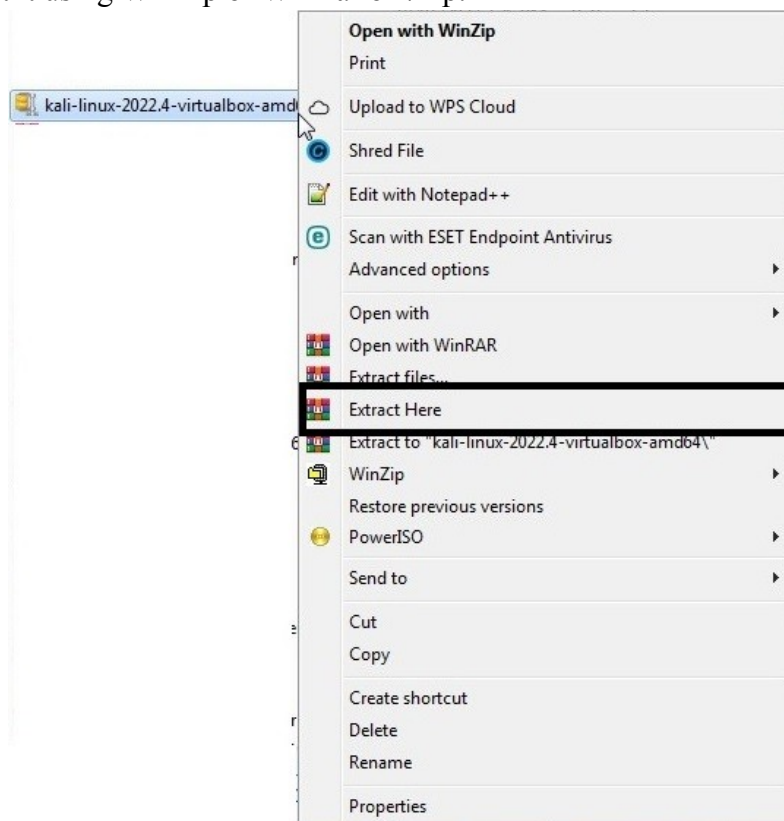






Step 15 :- A compressed file will be downloaded.

 kali-linux-2022.4-virtualbox-amd64	08/01/2023 1:45 PM	WinZip File	2,807,903 KB
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Step 16 :- Extract it using WinZip or WinRAR or 7zip.



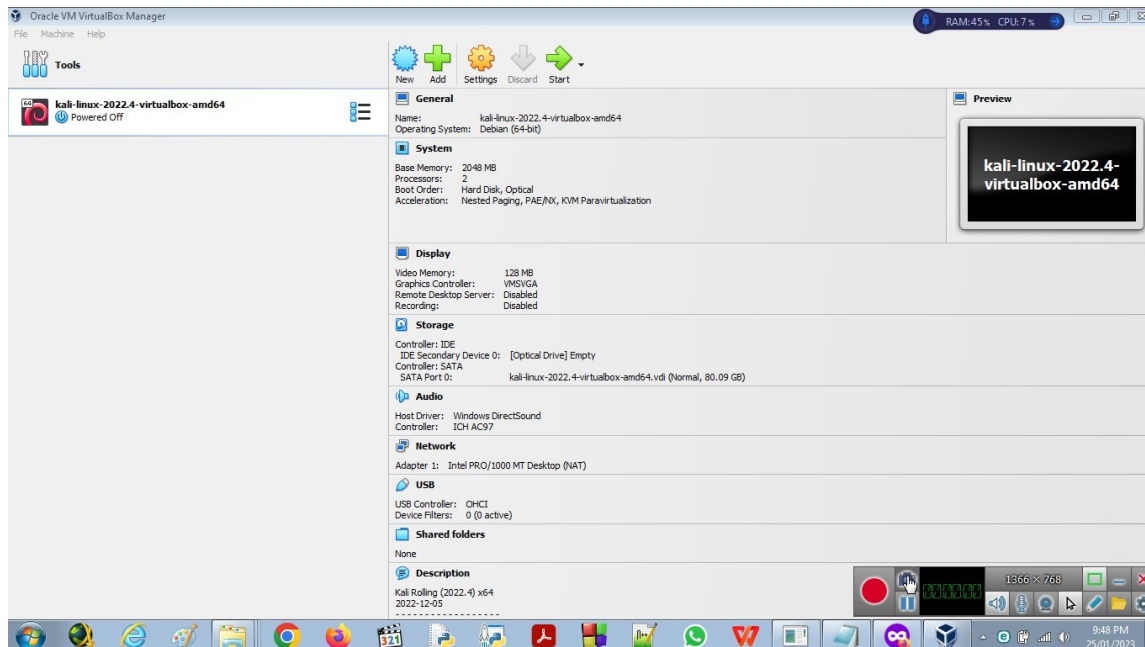
Step 17 :- You will see two files in extracted folder.

 kali-linux-2022.4-virtualbox-amd64	23/01/2023 7:51 PM	VirtualBox Machin...	6 KB
 kali-linux-2022.4-virtualbox-amd64	23/01/2023 7:51 PM	Virtual Disk Image	15,349,057 ...

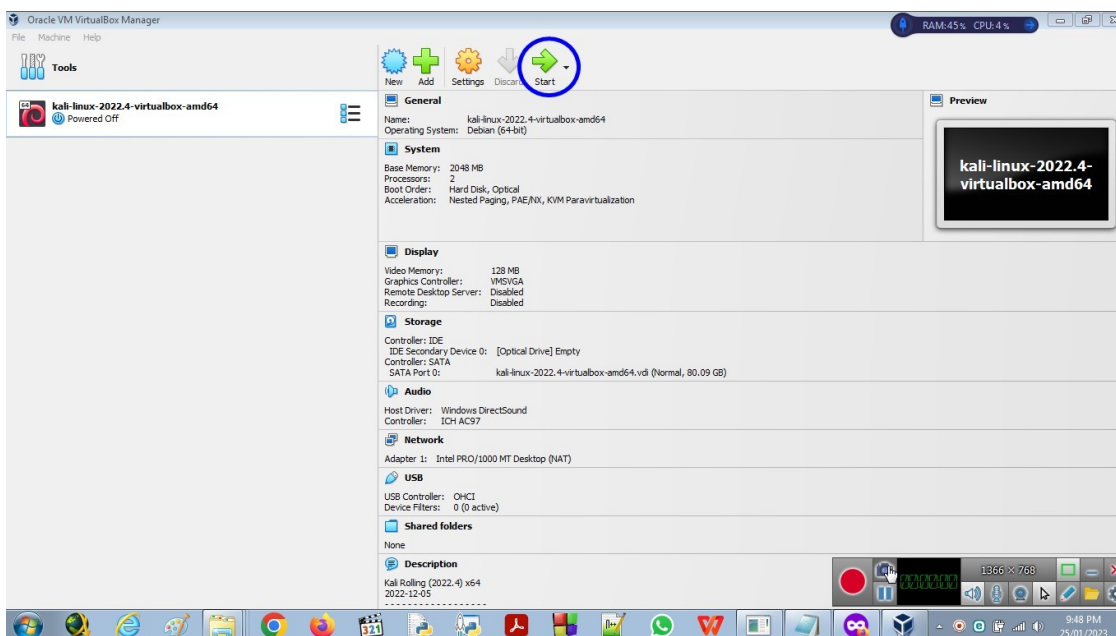
Step 18 :- Open file with blue box which is VirtualBox Machine file.

 kali-linux-2022.4-virtualbox-amd64	23/01/2023 7:51 PM	VirtualBox Machin...	6 KB
 kali-linux-2022.4-virtualbox-amd64	23/01/2023 7:51 PM	Virtual Disk Image	15,349,057 ...

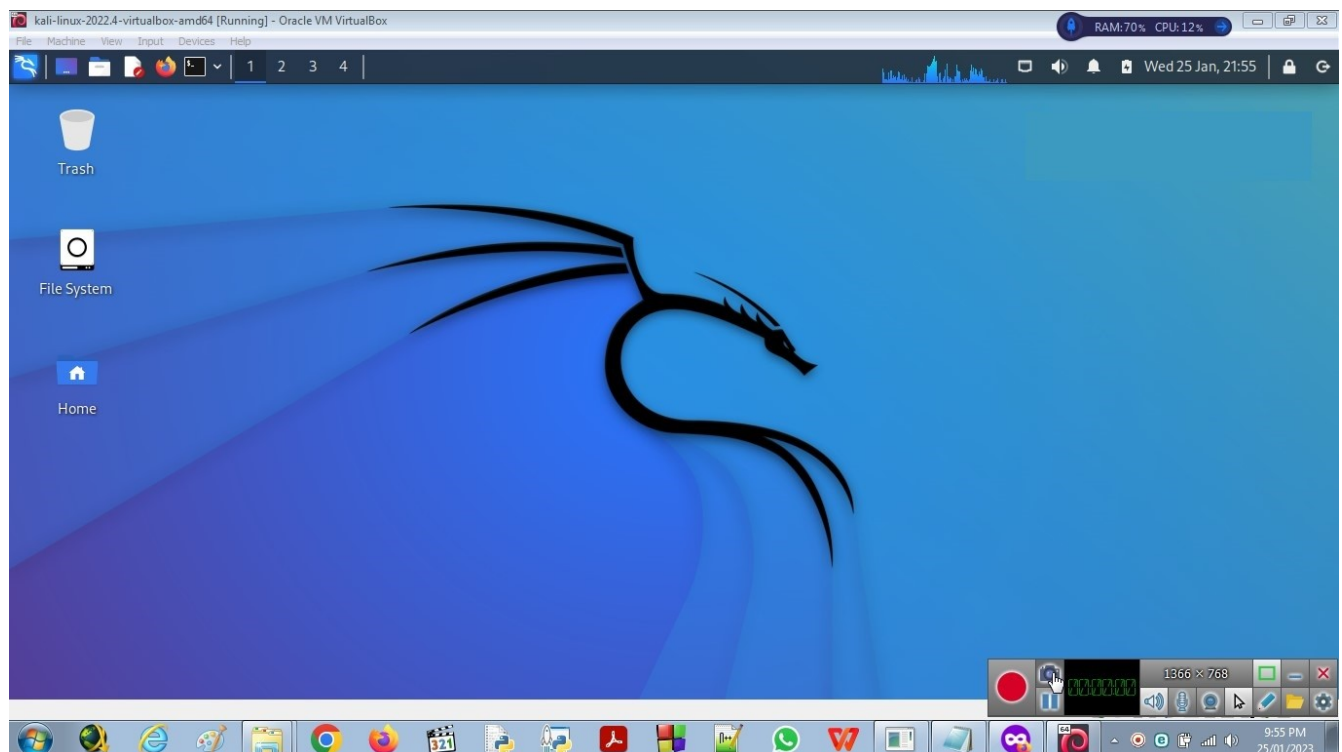
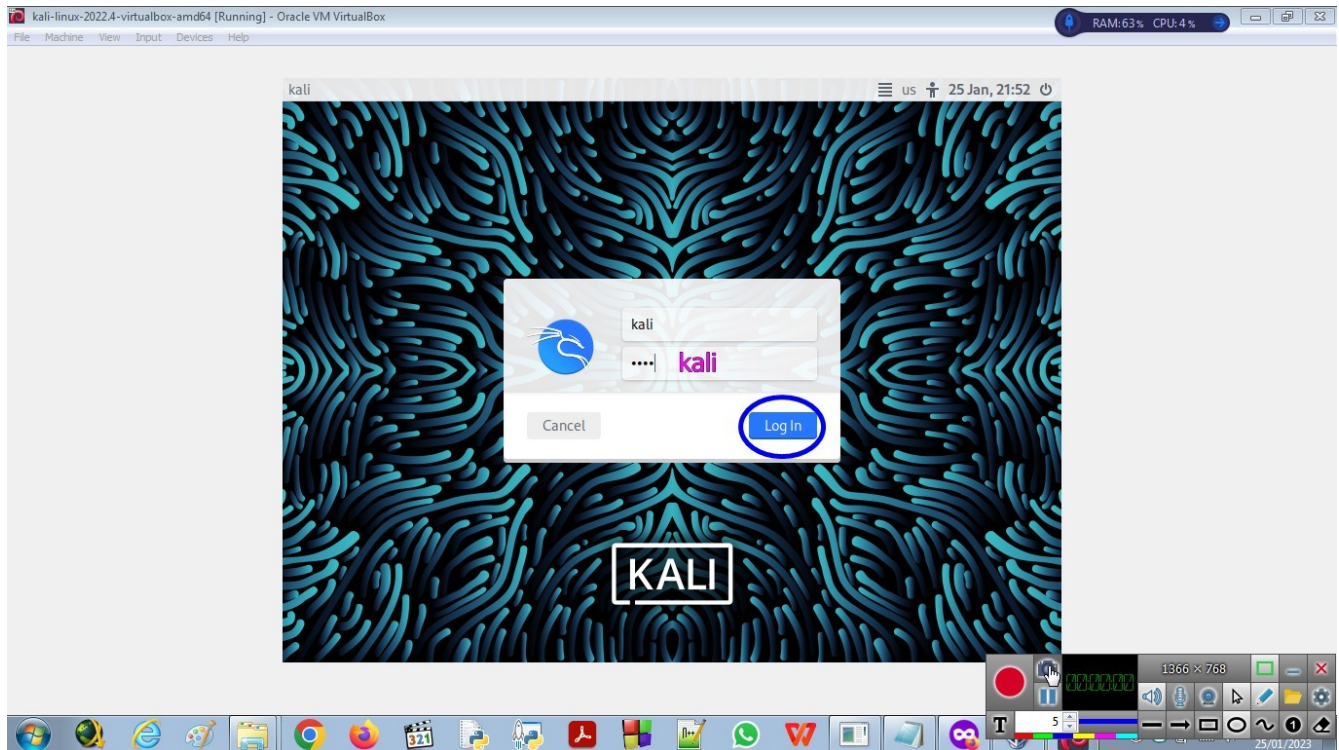
Step 19 :- Virtual machine will start.



Step 20 :- Click on Start button and it will start your Linux Os.



Step 21 :- Login by Username = “ kali “ & Password = “ kali “ All in small letters .



Setting up linux Os in virtual machine is completed.