Setting up VirtualBox and Kali

whoami

- Whoami
  - Matt Fiely
  - Titan on slack

- What do I do?
  - Student
  - Intern in the security realm

Disclaimer

- Kali is a tool suite of Penetration testing tools
- Hacking without written consent is **illegal**
  - **DO NOT** practice on systems you don't own!!!!

- I am not a lawyer
  - I can't help you if you use this knowledge for evil

- **What I'm going over today is for educational purposes only!**

What are we doing?

- Learn how to use virtual machines
  - Install Virtualbox
    - Yes there are others hypervisors, I use VirtualBox
    - It's FREEEE and easy to use

- Get Kali linux installed and setup for use
  - Using Kali because it has lots of tools
  - This process can be used for just about any other OS
   - Debian, Arch, Slackware, Windows

Pre reqs

- Device with
    - At least 4 GB RAM
    - At least 20 GB disk Space
- VirtualBox Install
    - https://www.virtualbox.org/wiki/Downloads
- Kali ISO
    - https://www.kali.org/downloads/

Installing Virtualbox

- Run the executable
- Next x3
- Yes
- Install

- Fairly easy install

Setting up VM

- In VirtualBox, click new (top right, blue star)
- Enter name "Kali Linux"
  - Click Next
- Allocate memory
  - At least 2048 MB
  - Next
- Create your virtual disk
  - Create
  - Keep Hard disk file type default
    - Next
  - Dynamically allocated
    - next
 - Allocate at least 20 GB
    - create
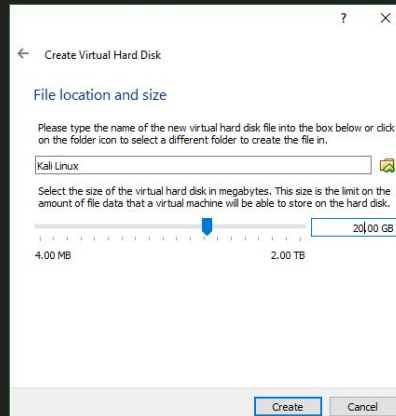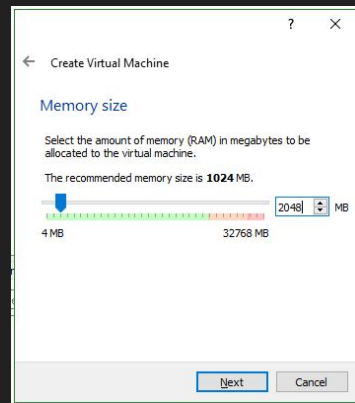
Setting up Kali

- Select your Kali linux vm on the right
    - Click Start Green Arrow top Right
- You should get a popup asking for a startup disk
- Click folder with green arrow
    - Navigate to your Kali .iso File
- Click Start
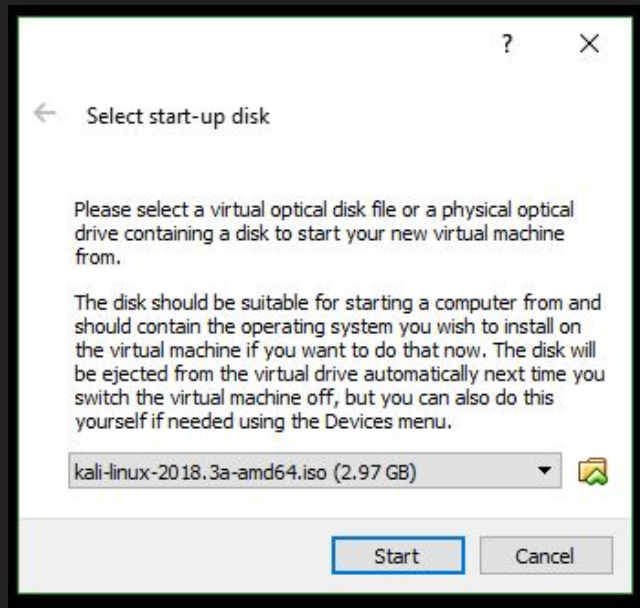
Installing Kali

- Use arrow keys -> Graphical Install
- Select Language
  - English (Or your preference)
  - Continue
- Select Your location
- Select Keyboard Layout
  - Continue
- Wait a bit
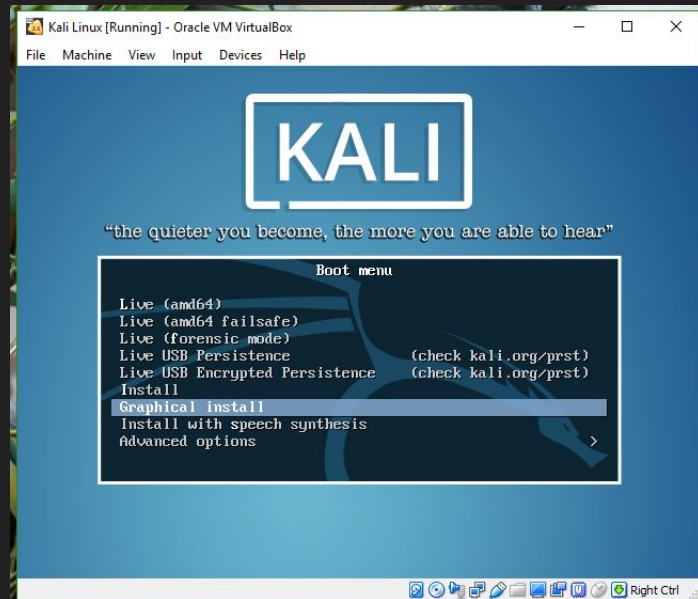
Installing Kali

- Set hostname -> continue
- "Domain Name" -> keep blank -> continue
- Set your root password -> make it strong -> continue
- It may ask you for a username/user account
  - Setup username
  - Setup user password
- Configure clock -> Eastern -> continue

Installing Kali - Partition time

- Guided - use entire disk -> continue
- Default (Different) -> continue
- All files in one partition -> continue
- Finish partitions and write changes to disk -> continue
- Write changes to disk? -> select yes -> continue

Partition disks

Note that all data on the disk you select will be erased, bu really want to make the changes.

Select disk to partition:

SCSI1 (0,0,0) (sda) - 21.5 GB ATA VBOX HARDDISK

If you continue, the changes listed below will be written to the disks. Otherwise, you will be able to make further changes manually.

The partition tables of the following devices are changed:
  SCSI1 (0,0,0) (sda)

The following partitions are going to be formatted:
  partition #1 of SCSI1 (0,0,0) (sda) as ext4
  partition #5 of SCSI1 (0,0,0) (sda) as swap
Write the changes to disks?

○ No
⦿ Yes

Now we wait...... Install time

Questions?

Take a break if you need

Installing Kali

- Use a network mirror -> no -> continue
- Install GRUB boot loader -> yes -> continue
- Select /dev/sda option -> continue

Configure the package manager

A network mirror can be used to supplement the software that is included on the CD-ROM. This may also make newer versions of software available.

Use a network mirror?

- ● No
- ○ Yes

Install the GRUB boot loader on a hard disk

You need to make the newly installed system bootable, by installing the GRUB boot loader on a bootable device. The usual way to do this is to install GRUB on the master boot record of your first hard drive. If you prefer, you can install GRUB elsewhere on the drive, or to another drive, or even to a floppy.

Device for boot loader installation:

Enter device manually

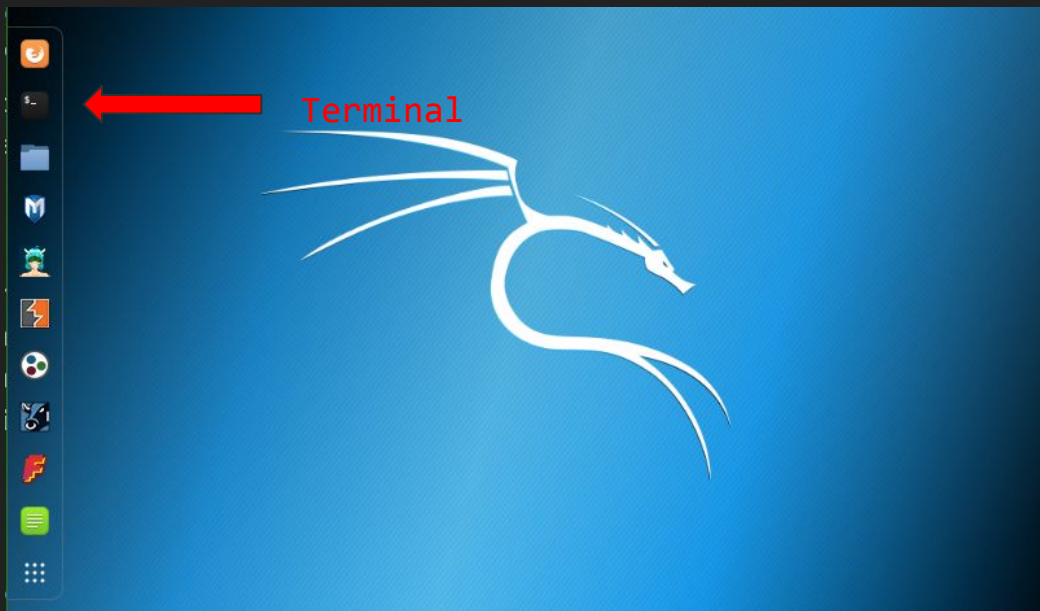/dev/sda (ata-VBOX_HARDDISK_VBfefe967d-d2870a89)

Install Complete

- Installation complete -> continue
- VM will restart

- Good job you installed Kali :)

Housekeeping

- After reboot Log in
  - Root
  - Password you set
- Open a terminal
- Type in the following:
  - Shutdown 0
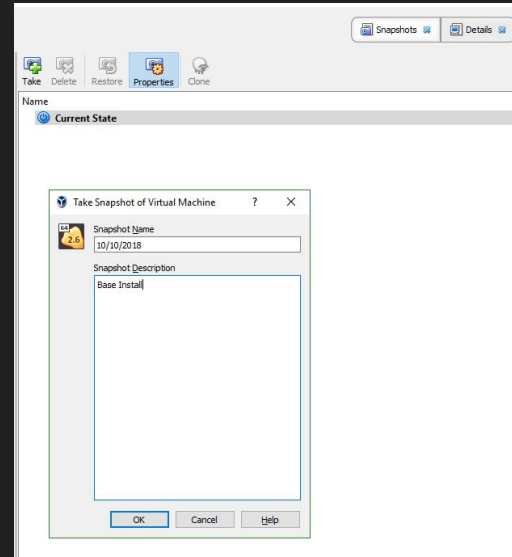   - Or...
    - Shutdown now
  - Hit enter

Terminal

File   Edit   View   Search   Terminal   Help

root@kali:~# shutdown now

Snapshot in Virtualbox

- Select your Kali VM -> click Snapshots (top right)
- Camera green (take) -> click
- Set a Snapshot Name and Description -> OK
- Now you can revert back in the case of anything breaks

update sources.list

- Start your VM
- Login
- Launch firefox ->
  https://docs.kali.org/general-use/kali-linux-sources-list-repositories

Regular repositories

On a standard, clean install of Kali Linux, you should have the following entry present in **/etc/apt/sources.list**:
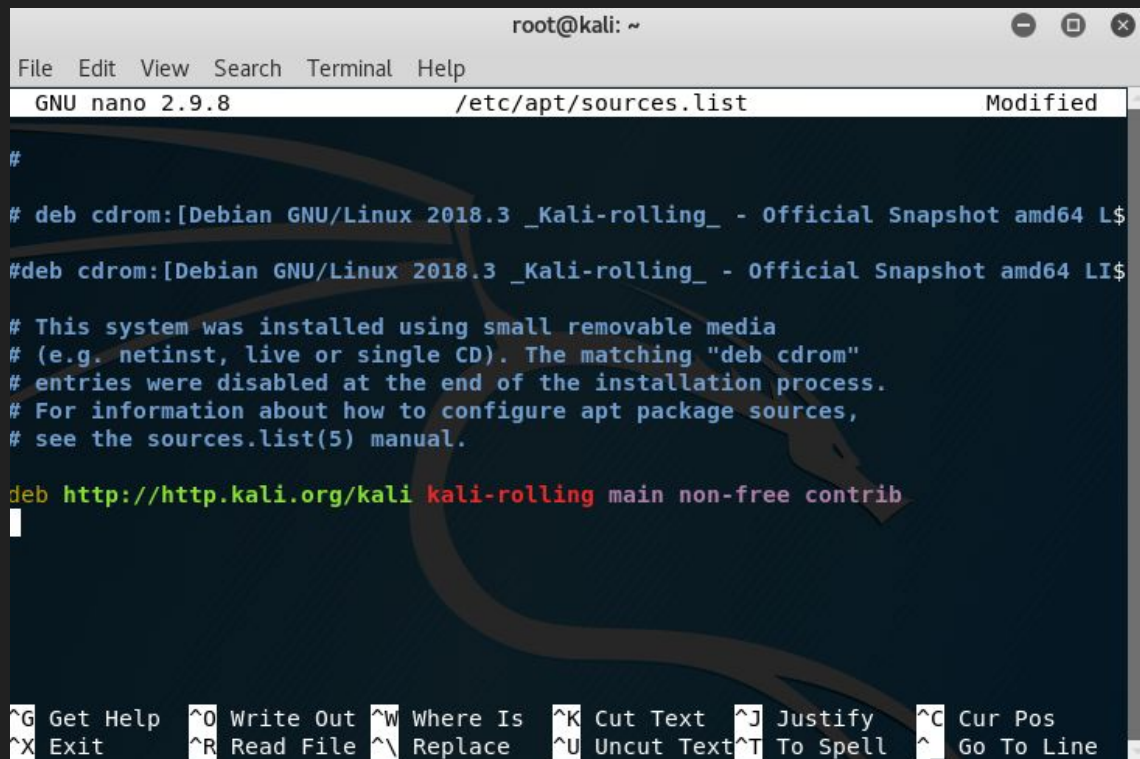
```
deb http://http.kali.org/kali kali-rolling main non-free contrib
```

You can find a list of official Kali Linux mirrors here.

update sources.list

- Copy from site
  - deb http://http.kali.org/kali kali-rolling main non-free contrib
- Open a terminal
  - Type -> nano /etc/apt/sources.list
  - Hit enter
- Move to the bottom of the terminal with arrow keys
- Paste the line (ctrl+shift+v)

- Terminal should look like following slide

update sources.list

Update && Upgrade

- Type Ctrl+O (to write out)
  - Hit Enter
- Type Ctrl+x (to exit)
- Should be back in the terminal
- Type the following in your terminal
  - Apt-get update && apt-get upgrade -y && apt-get dist-upgrade -y
  - Hit enter
- IF TERMINAL PAUSES try one of the following
  - "Do you want to continue Y/N" -> Hit Y -> Enter
  - If text and at the bottom it says "press q to quit" -> Hit "q"
  - If you have a grey box with a blue background -> hit enter for default value

- This can take a while
  - Anyone stuck? Questions?

Install Virtualbox Guest additions

- Shutdown your vm
- Take a snapshot
- Start VM again

- Open terminal
  - Apt-get install -y virtualbox-guest-x11
  - Shutdown

- I'd recommend taking another snapshot
- Start vm again to check guest additions, resolution should be good now

All done

- Any questions?