

Lab 1 – Testing Kali Linux

- This is an individual assignment, and worth 20 points.
- The due date and time is 1:00 (Sec 01) / 5:30 (Sec 76) on Thursday, September 55
- You need to provide your answers to the “Lab1-Outcome.docx.” Change the file name following the naming convention suggested below.
- Naming convention is as follows: homework, hyphen, last name, first initial, and extension (e.g., Lab1-Outcome-ImG.docx). If you do not follow the convention, I will deduct 1.
- Make screenshots small so that you can save space.

Preparation

- Install VMware workstation (Windows user) or VMware Fusion (MAC user). The VMware site can be accessed from the following link. Install the latest version.
<http://e5.onthehub.com/WebStore/Welcome.aspx?ws=92418b8d-a432-de11-9d57-0030485a8df0>

Kali Linux VM Creation

- Download a Kali Linux VMware Image. This image is a prebuilt Kali image for VMware. Extract the downloaded image file into a designated VM directory, and run with VMware Workstation or VMware Fusion.
 - <https://www.offensive-security.com/kali-linux-vmware-virtualbox-image-download/>

Kali Linux VMware Images		Kali Linux VirtualBox Images		
Image Name	Torrent	Size	Version	SHA256Sum
Kali Linux VMware 64-Bit 7z	Torrent	2.4G	2019.2	4611f3797c53ed37c89443bd8bb94ac1fd860fb807865d8933783c0f6ef21007
Kali Linux VMware 32-Bit 7z	Torrent	2.5G	2019.2	c7f52865f5d0554ad1bc990684a0751eb46d1b8ab552d7c942d71e4fe20b7e67

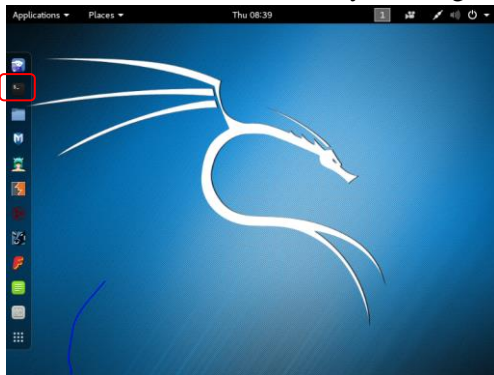
- Alternatively, we can custom build the image from the ISO file. The ISO file is available at the following the link. However, this is not recommended.
 - <https://www.kali.org/downloads/>

Image Name	Download	Size	Version	SHA256Sum
Kali Linux 64-Bit	HTTP Torrent	3.2G	2019.2	67574ee0039eaf4043a237e7c4b0eb432ca07ebf9c7b2dd0667e83bc3900b2cf
Kali Linux 32-Bit	HTTP Torrent	3.2G	2019.2	1e03023bbd81fdec9c49717219c2c48f62da3f99009df1bbe73f158eef246282

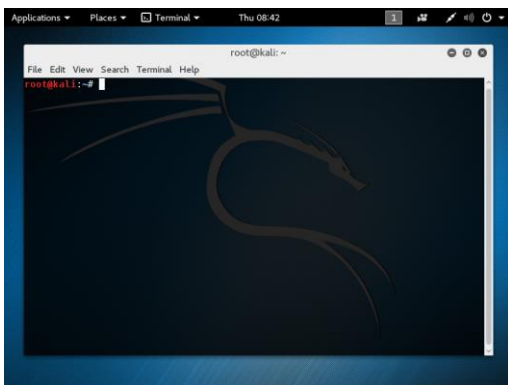
- To be able to download Torrent files, we must use Torrent downloader tools. We can find reliable Torrent downloader tools at the following site:
<https://www.lifewire.com/best-torrent-downloading-software-4061550>
- Open Kali with VMware workstation or VMware Fusion.
 - Go to VMware > File > Open > Go to the Kali directory > Locate "Kali-Linux-2017.1-vm-amd64.vmx" > Open > Click on Power on this virtual machine.
 - Logon to Kali
 - Username / password = root / toor

Tasks

- On Kali, launch a Terminal by clicking on Terminal icon located on the top-left side.



- Now, you can see the following GNOME terminal.



- (Task 1) For this task, you should read the file “Basic Linux Commands for Linux Terminal Beginners (pcsteps.com).pdf” on posted the Blackboard.
 - Open a terminal.
 - On root, create a directory with your first name.
 - Within the directory you created, create an empty file named “cis480.txt”.
 - Using “echo” command, add the text “test1” to the text file.
 - Using “echo” command, append the text “test2” to the text file.
 - Using “cat” command, display the content in the “cis480.txt”.
 - Using “grep” command, search for “test1”.
 - On root, using “tar” command, compress everything in your directory.
 - Delete the compressed file.
- Show the commands you executed and the outcomes in one or two screenshots.

- (Task 2) Let’s try **ifconfig** command. The Windows equivalent is ipconfig. The commands you can use are:
 - ifconfig --help (for help)
 - ifconfig (to get the IP address of your system)
- Run a **ifconfig** command to display the IP address, netmask, broadcast associated with the Kali. Take a screenshot of the outcome.

- (Task 3) Let’s next try **netstat** to display the ports that are open in your system. The state of each port can be listening, waiting, or connected. **netstat** by default does not tell which service is leading a port to be open.
- Run a **netstat** command to display the listening server sockets. Take a screenshot of the outcome. If the screen displays too many entries, you can resize the screen after zooming in/out (View > Zoom In/Out).

- (Task 4) Next, let’s try **traceroute** (tracert in Windows) to trace the route to the destination by sending ICMP Echo Request messages.
 - traceroute (for options)
 - traceroute www.louisville.edu
- Run a **traceroute** command to trace the route to www.louisvilleky.gov. Take a screenshot of the outcome.

- (Task 5) Let’s try **ping** to test the connection to a host. Run a **ping** command to test the connection to www.louisvilleky.gov. Send the ECHO REQUEST message five times only. For this, you have to use count option (-c). Take a screenshot of the outcome.