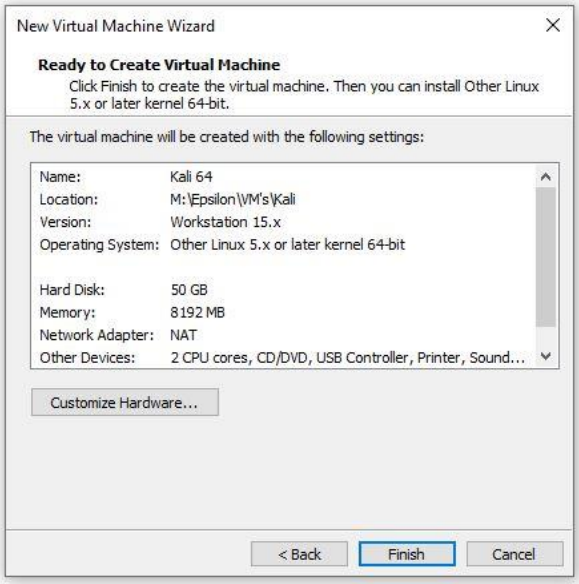
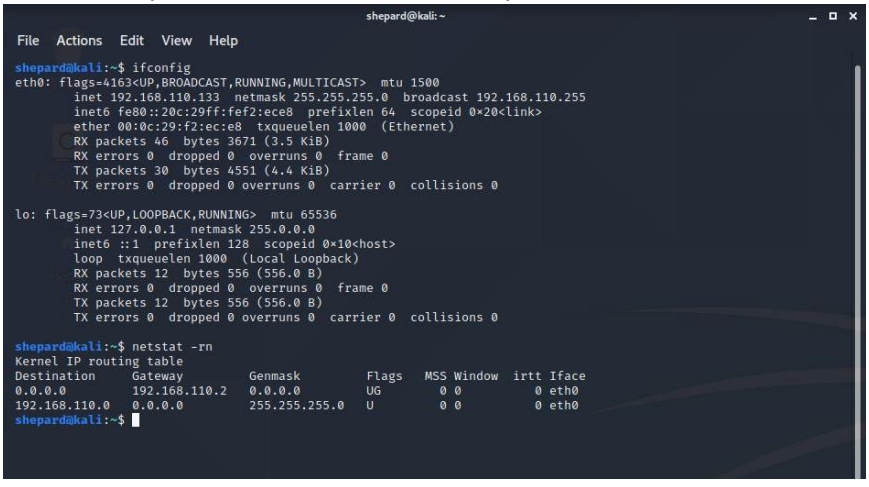
So, the CEO has decided that I should be tested to prove the value of PEN testing to the company. My first test was to create a platform to run all my further tests from. The CEO also asked that I answer a few questions while I did somewhat of a walk through on how I setup my platform and how I came to the answers for the following questions.

1. **What are the configuration details for your VM within the Virtualization Platform?**
    a. The VM I built for my platform was configured with a 50GB virtual drive and 8GB of RAM. It was also set up with two virtual CPUs and placed behind a NAT on the host machine.

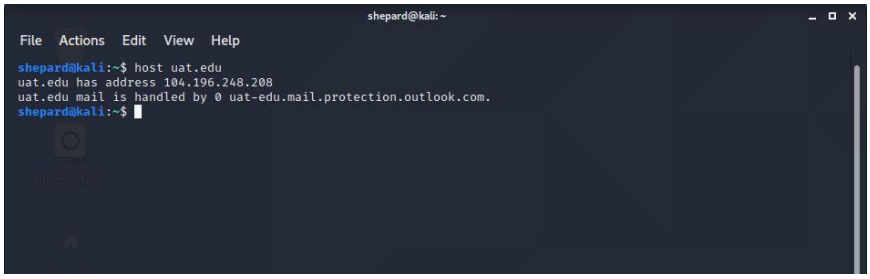


2. **What version Kali are you running?**
    a. I installed Kali Linux 2020.3 onto the VM platform.

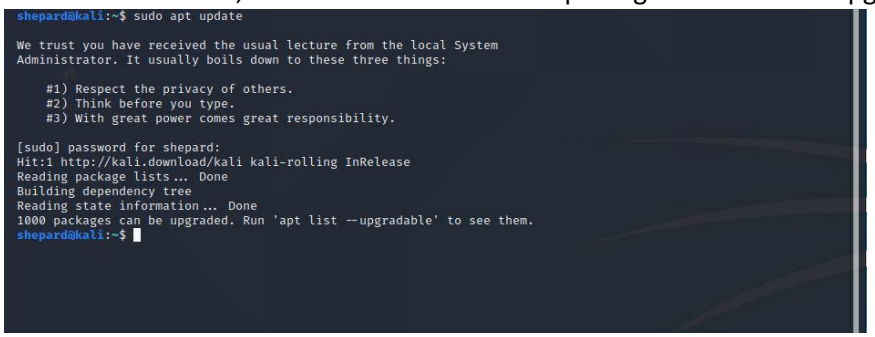
3. **What is the IP address of your virtual machine?**
    a. The IP for my Kali VM at the time of startup was 192.168.110.133.



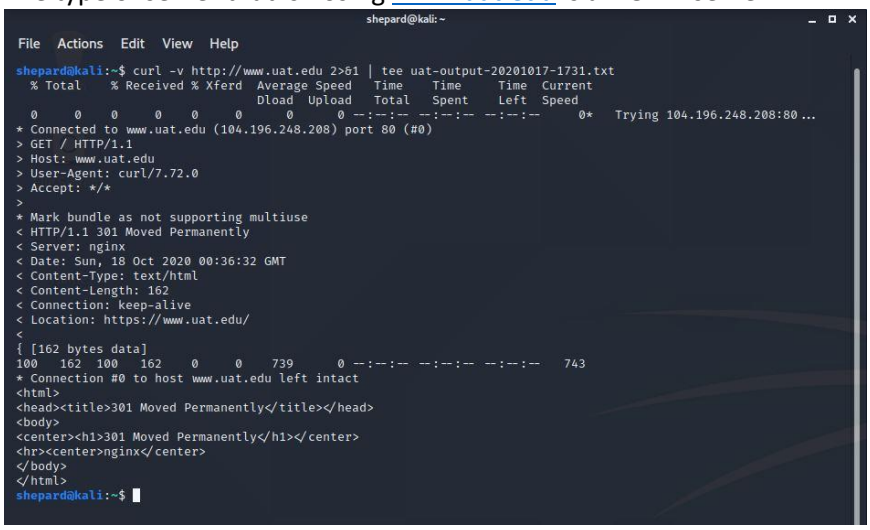
4. **What is the IP address of your router?**
    a. The IP for the router at the time of startup was 192.168.110.0.
5. **What is the IP address for www.uat.edu?**
    a. The IP for www.uat.edu is 104.196.248.208.



6. **How many packages required updating after installing Kali image?**
    a. After I installed Kali, there were 1053 different packages that needed upgrading.



7. **What type of server is hosting www.uat.edu?**
    a. The type of server that is hosing www.uat.edu is a NGINX server.



To begin, I researched what the minimal configuration needs were for a Kali Linux install. While doing a quick search I found this site (https://www.nakivo.com/blog/install-kali-linux-vmware/) that had a very decent step by step walk through on installing Kali Linux for the first time. On that site it suggested the minimal requirements for a Kali install were 20GB virtual drive, 2GB of RAM, and one virtual CPU. The system that is hosing this VM platform has quite a bit of overhead in the system

resources department, so I opted to increase the suggested minimal specs to 50GB virtual drive, 8GB of RAM, and two virtual CPUs.

As for which version of Kali Linux to run, that was easy as the version I'm running, Kali Linux 2020.3, is the current version from the Kali Linux site (https://www.kali.org/downloads/).

Looking up the IP of whatever machine you are using as well as its router is very easy in Linux, if you know the syntax and commands. Linux is great in that it has manuals for all basic kernel commands. (https://www.unix.com/man-page/centos/8/ifconfig/ , https://www.unix.com/man-page/centos/8/netstat/)

Many things in Linux can be done any number of ways. Looking up the IP address of a website is no different. Two commonly used commands are the ***host*** and ***dig*** commands. These two commands give a verity of different information but they both give you the IP address of the site you are querying.

Usually after you newly install any OS, it is a good idea to check if there are any updates that need to be installed. In Linux, it is very easy to see how many packages in a given OS may need to be upgraded by running the ***apt update*** command. But for this to work you need to be in a n elevated user state so its best that you run that command with the ***sudo*** command, ie. ***sudo apt update***.

Lastly, finding out what kind of server is hosting a website can be done many ways as well. The command string I used was a combination of using the ***curl*** command with a *verbose* option enabled then doing something called *piping*, or redirecting an output to another command to do something with the output of the previous command, to the ***tee*** command which created a readable text file of the information output from the first command. This command string was suggested by my PEN Testing Mentor, Aaron Jones.

With this I hope the CEO is satisfied with the outcome of this first test and I hope that I beginning to prove the value of Pen Testing. I have also provided a copy of time stamped logs for the steps I took while working on this exercise.

Logs

10/17/20 15:33 – Began process for installation of Kali Linux 2020.3 in VMware Workstation 15

10/17/20 15:35 – Researched the correct settings for installing Kali Linux in VMware

10/17/20 15:41 – Set configurations for the VM that will house Kali Linux

10/17/20 15:45 – Powered on the new Kali VM to begin installing Kali Linux

10/17/20 15:46 – Selected Graphical Installer and began installing Kali Linux

10/17/20 16:18 – Completed install of Kali Linux

10/17/20 16:30 – Logged into Kali Linux for first time

10/17/20 16:31 – Opened terminal in Kali, ran ***ifconfig*** and ***netstat -rn***

10/17/20 16:35 – In Kali terminal, ran ***host*** on uat.edu

10/17/20 16:38 – In Kali terminal, ran ***dig*** on uat.edu

10/17/20 16:42 – In Kali terminal, ran ***sudo apt update***

10/17/20 16:51 – In Kali terminal, ran ***sudo apt upgrade***

10/17/20 17:19 – Completed upgrade of 1053 packages

10/17/20 17:31 – In Kali terminal, ran ***curl*** on www.uat.edu, using command string suggestion supplied by instructor