Lab *01* – Install Linux VM

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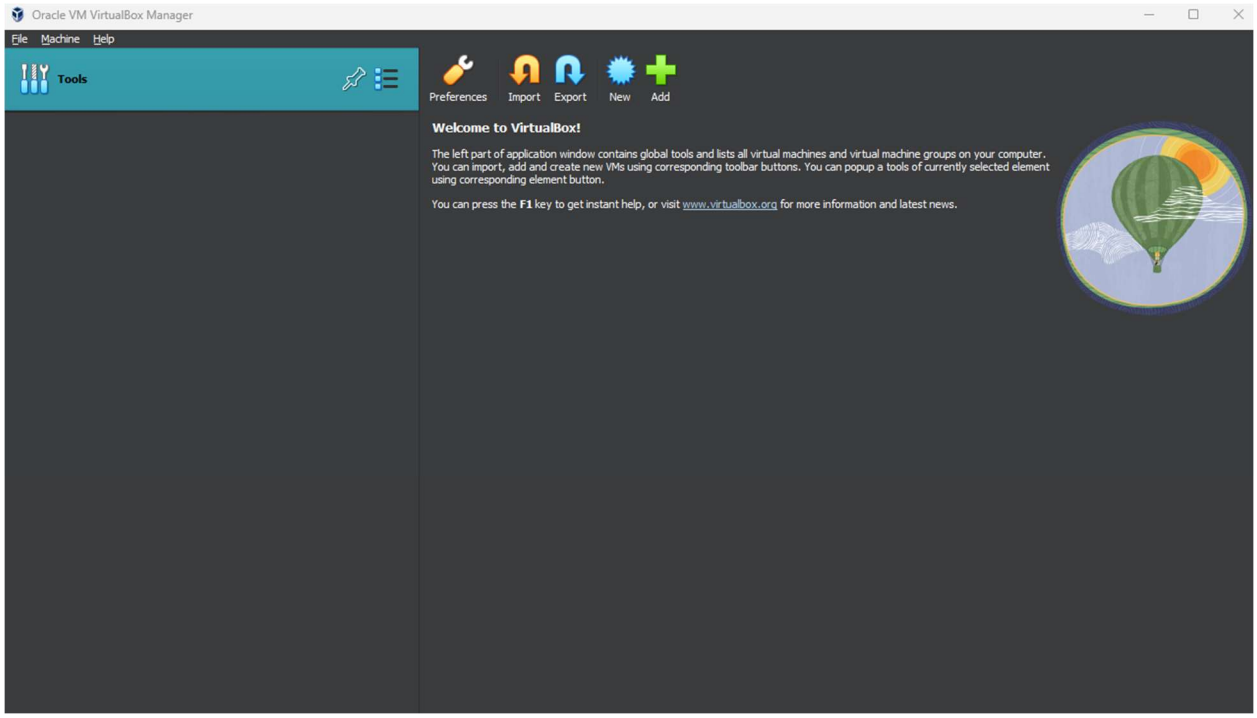
INTRODUCTION

In this lab, I will download and configure a virtual machine using CentOS.

PROCESS

Step *1: Download VirtualBox*

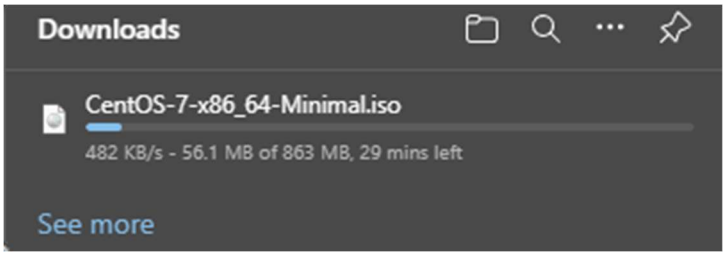
To begin, I downloaded VirtualBox from their website at https://www.virtualbox.org/.



Screenshot of VirtualBox upon successful download.

Step *2: Download CentOS*

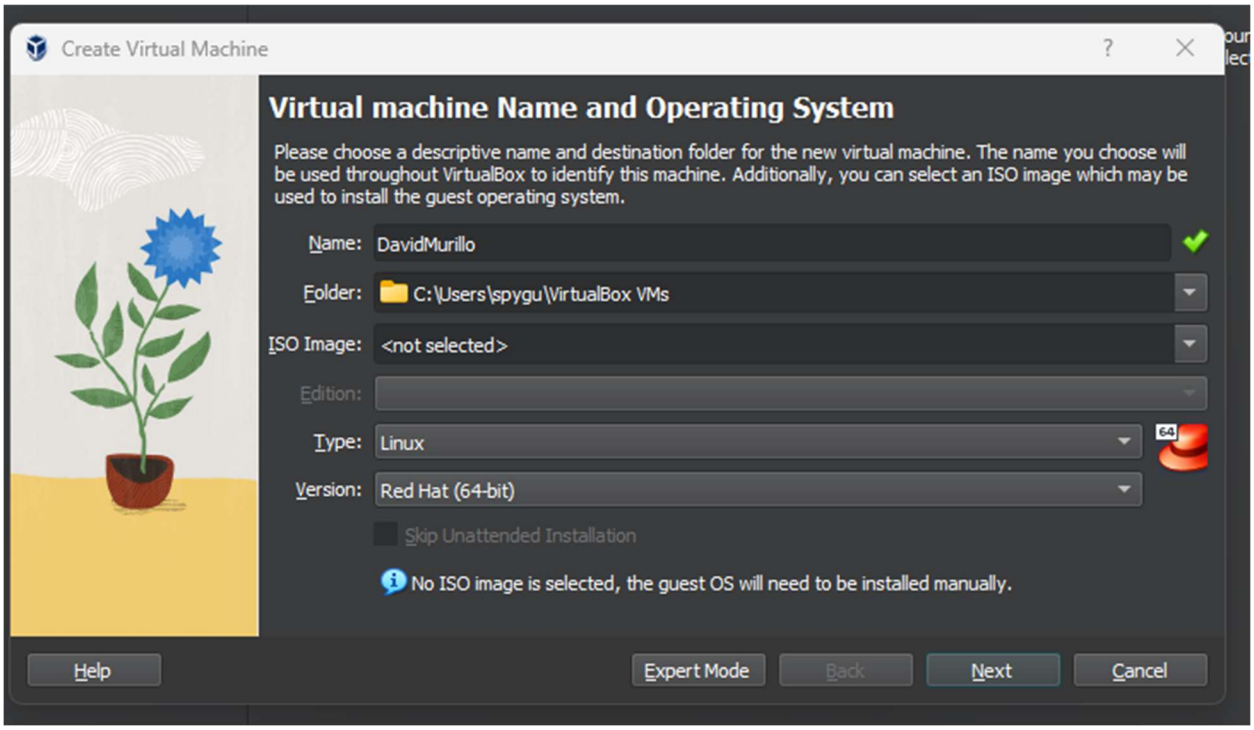
Using the link provided in the lab instructions, I download the CentOS ISO file. (2. Download the 64-bit version of CentOS 7 ISO image (http://buildlogs.centos.org/rolling/7/isos/x86_64/CentOS-7-x86_64-Minimal.iso)



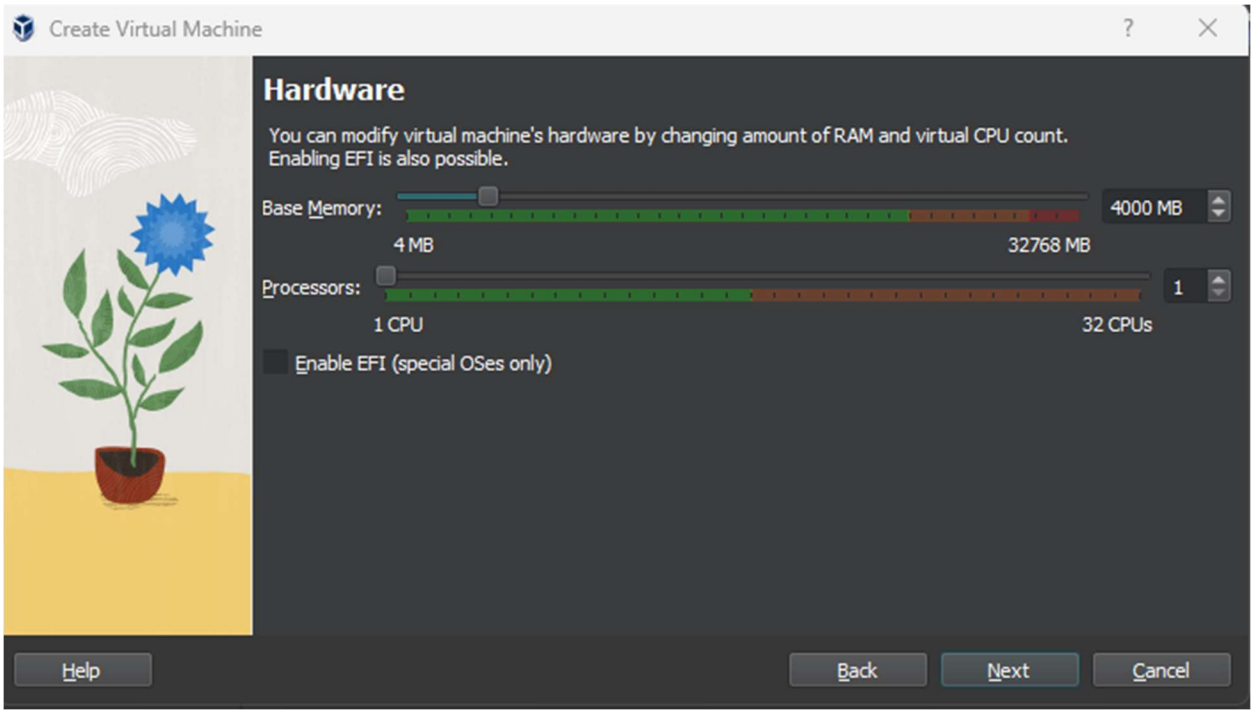
Screenshot of the ISO downloading.

Step *3: Configure CentOS VM*

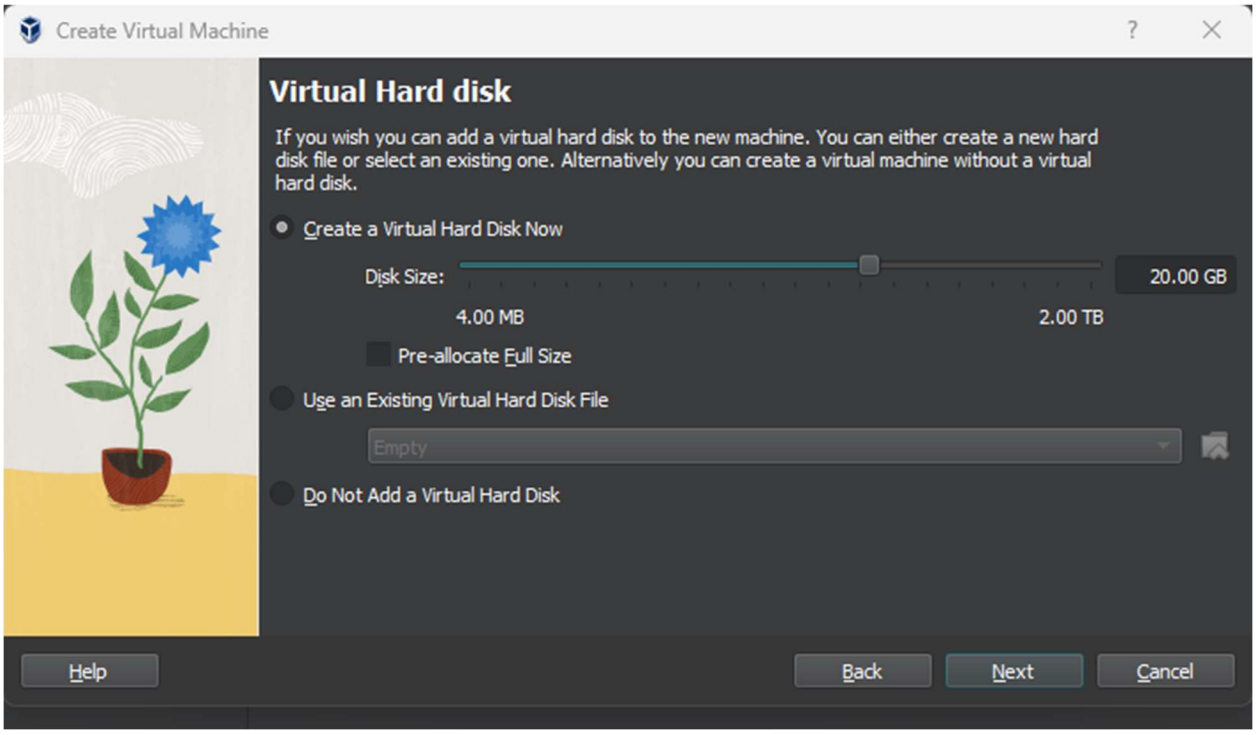
After CentOS downloaded, I opened VirtualBox and configured the virtual machine.



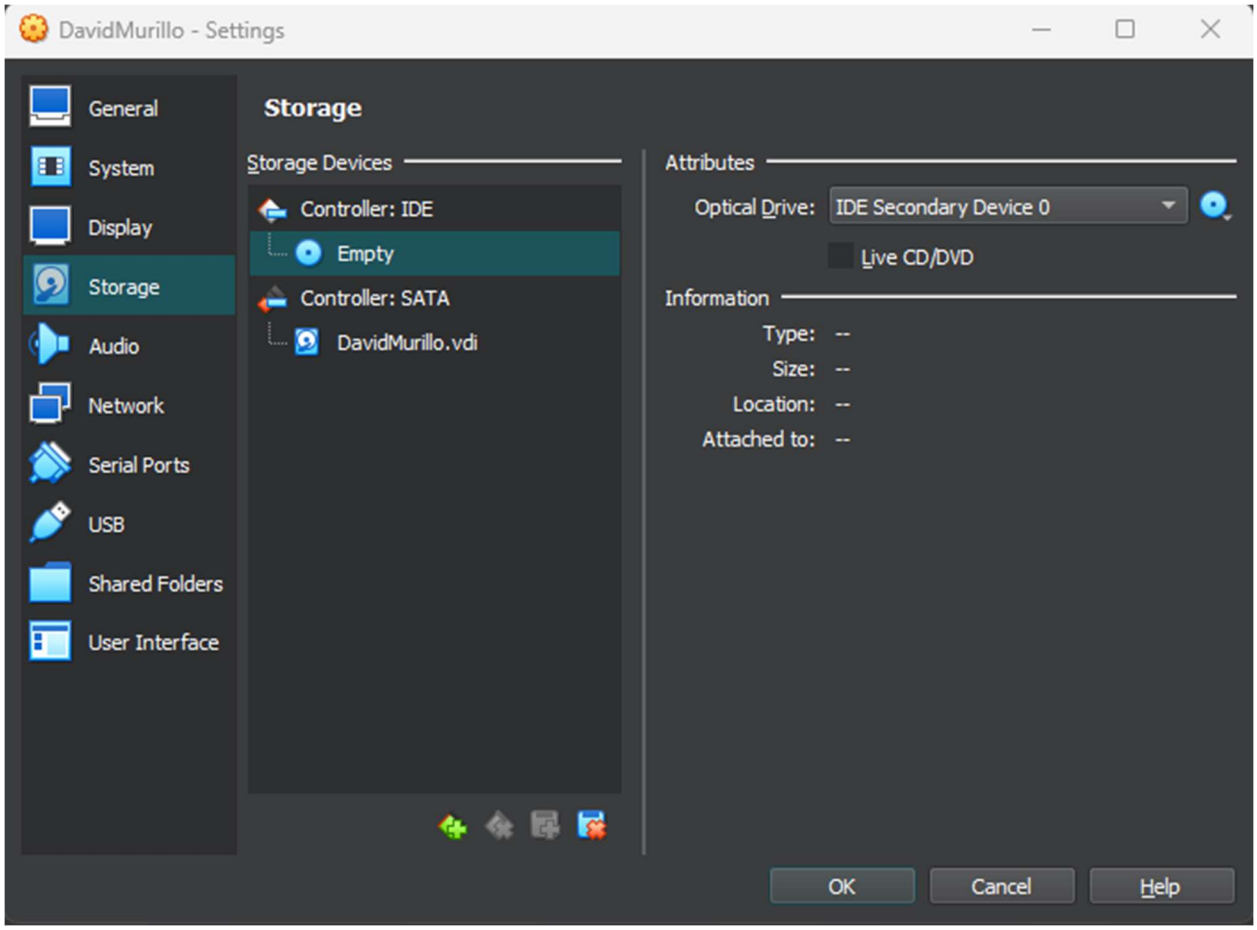
I named the virtual machine after my name, "David Murillo." Next, I selected "Linux" for the type and "Red Hat (64-bit)" for the version.



Next, I allocated 4000 MB to the base memory.



Next, I allocated 20 GB of space to the VM.

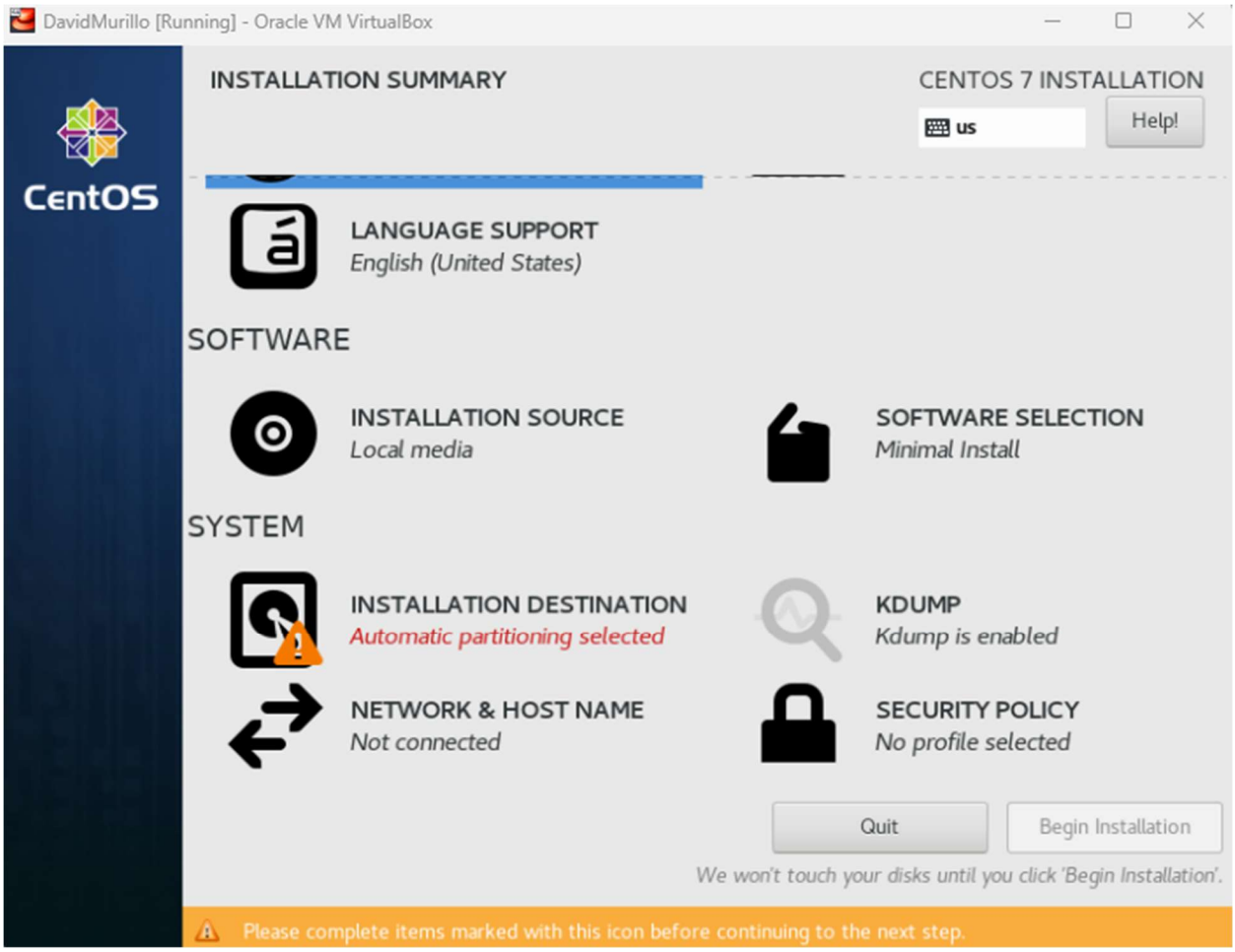


Next, I selected "Settings", "Storage", and inserted the CentOS ISO where the empty CD was.

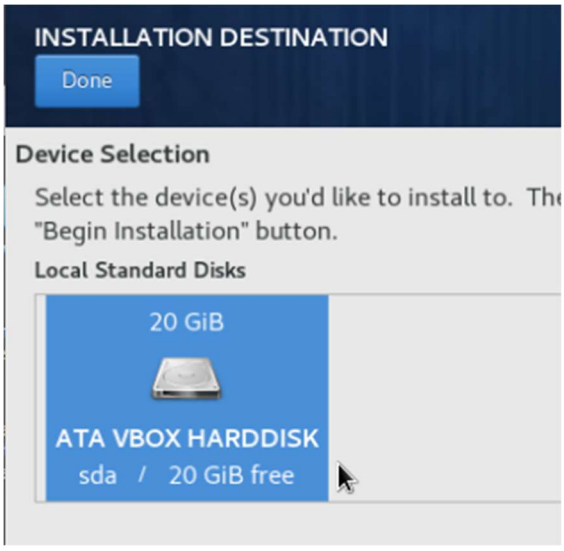
Once the CentOS ISO was selected, I saved the changes and started the VM.

Step *4: CentOS Set Up.*

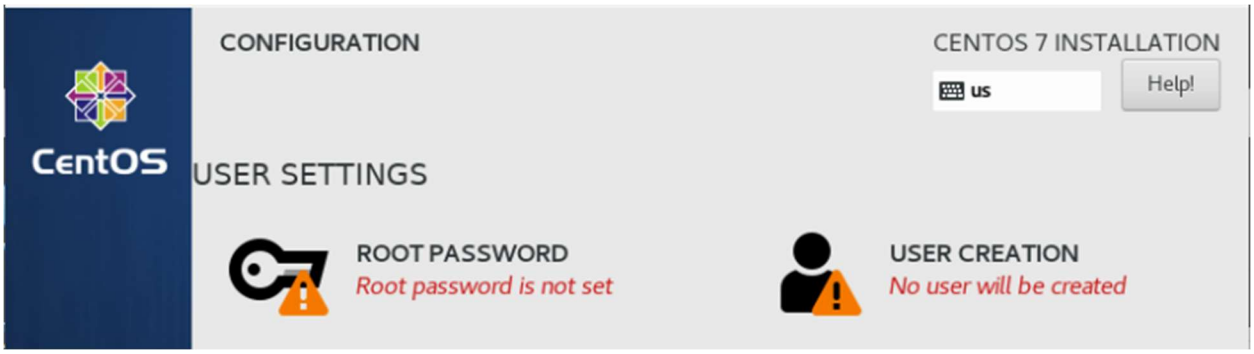
Next, I selected "start" and selected my language, date, and time preferences.



After selecting my preferences, I selected "Installation Destination."

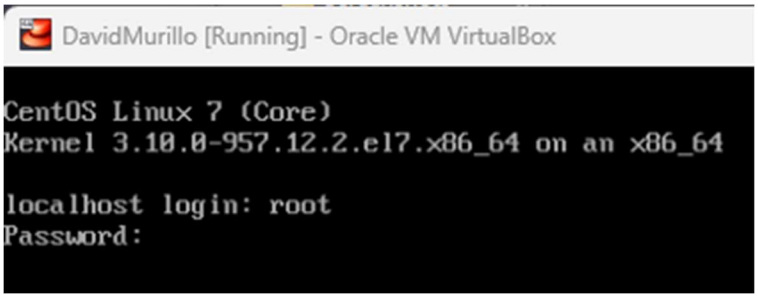


Here, I selected the virtual hard disk I had created earlier.

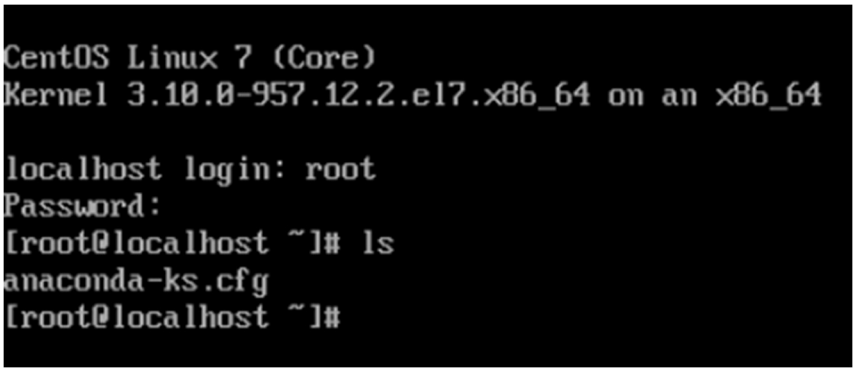


Next, I selected "Root Password" to create am administrative account.

Once the installation was complete, I selected "Reboot" to reboot the OS.



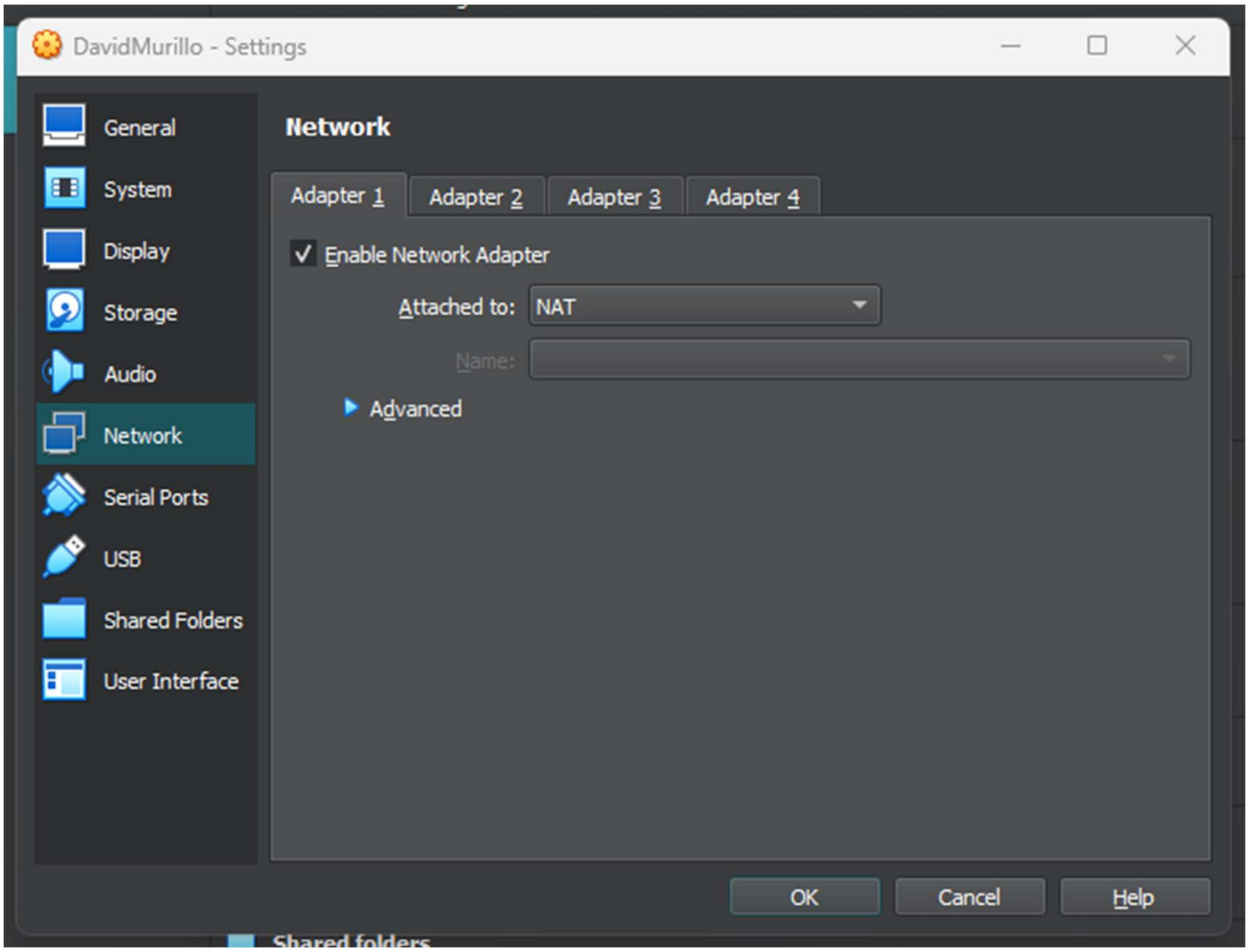
Upon reboot, I logged in as the root user using the password I had just created.



I logged in as the root user and, to verify that I was logged in, I entered a command, I chose to enter "ls".

Step *5: Configure Network Settings.*

Next, I needed to connect the VM to the internet. To do so, I first needed to verify the Network Settings were correctly set up.



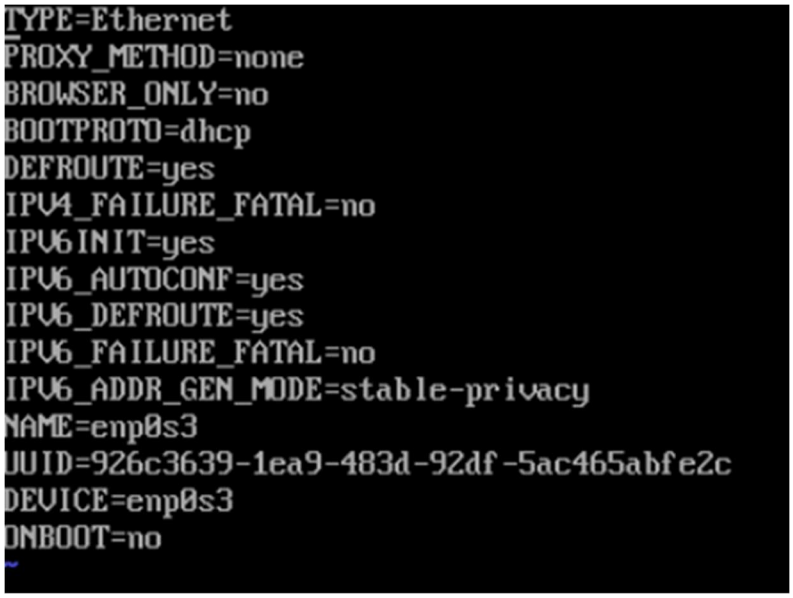
To verify the Network Settings, I shut down the VM, then opened its settings, selected network, and verified that it was configured for NAT.

Next, I booted up the VM, logged back in, and used the cd command to change onto the network-scripts directory.

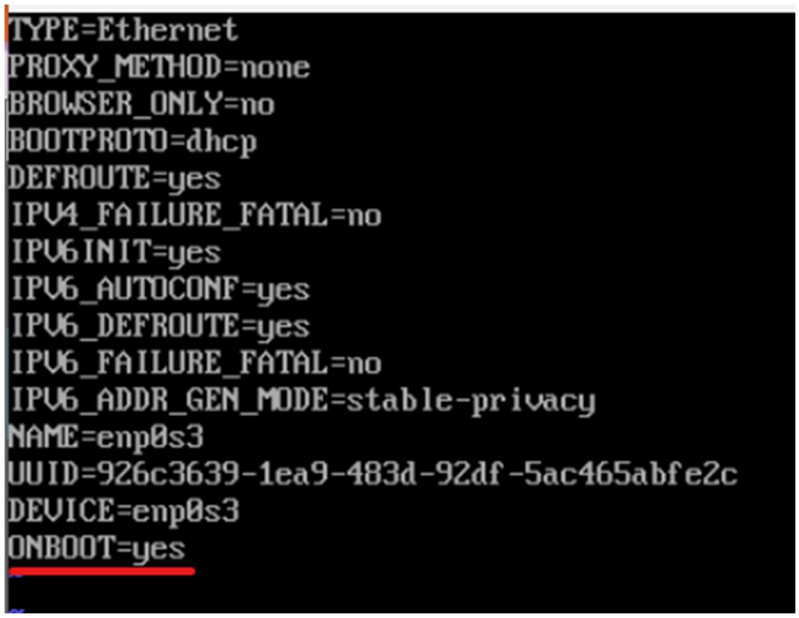
```
[root@localhost ~]# cd /etc/sysconfig/network-scripts/
[root@localhost network-scripts]# ls
ifcfg-enp0s3  ifdown-ipv6    ifdown-Team      ifup-eth    ifup-post      ifup-tunnel
ifcfg-lo      ifdown-isdn    ifdown-TeamPort  ifup-ippp   ifup-ppp       ifup-wireless
ifdown        ifdown-post    ifdown-tunnel    ifup-ipv6   ifup-routes    init.ipv6-global
ifdown-bnep   ifdown-ppp     ifup             ifup-isdn   ifup-sit       network-functions
ifdown-eth    ifdown-routes  ifup-aliases     ifup-plip   ifup-Team      network-functions-ipv6
ifdown-ippp   ifdown-sit     ifup-bnep        ifup-plusb  ifup-TeamPort
[root@localhost network-scripts]#
```

I entered "cd /etc/sysconfig/network-scripts/" to change onto the network scripts directory. Next, I used the "ls" command to view the contents of the directory.

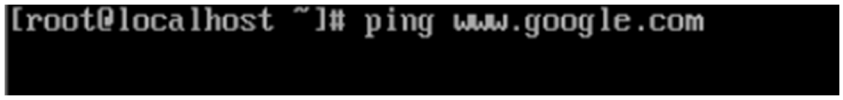
I was looking for the network configuration file named "ifcfg-enp0s3" which was the first file on the list of contents.



Next, I entered "vi ifcfg-enp0s3" to edit the "ifcfg-enp0s3" file.



Next, I edited the file to contain "ONBOOT = yes", saved the changes and rebooted the VM using the "reboot" command.



Upon logging back in, I used the ping command to ping www.google.com in order to verify that the VM was connected to the internet.

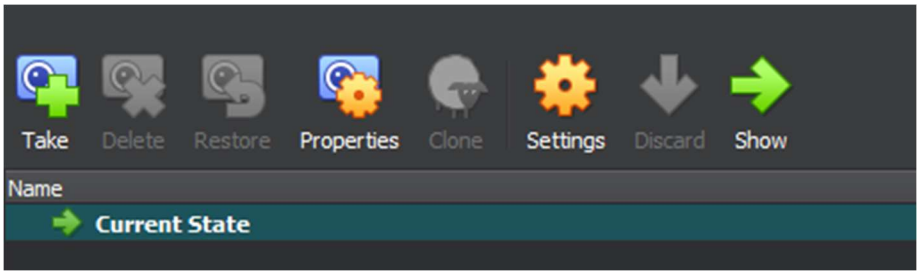
```
Last login: Sat Jan 27 23:24:47 on tty1
[root@localhost ~]# ping www.google.com
PING www.google.com (142.250.190.100) 56(84) bytes of data.
64 bytes from ord37s35-in-f4.1e100.net (142.250.190.100): icmp_seq=1 ttl=113 time=37.8 ms
64 bytes from ord37s35-in-f4.1e100.net (142.250.190.100): icmp_seq=2 ttl=113 time=37.5 ms
64 bytes from ord37s35-in-f4.1e100.net (142.250.190.100): icmp_seq=3 ttl=113 time=39.7 ms
64 bytes from ord37s35-in-f4.1e100.net (142.250.190.100): icmp_seq=4 ttl=113 time=38.6 ms
^C
--- www.google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3007ms
rtt min/avg/max/mdev = 37.548/38.422/39.721/0.843 ms
```

Since the Google servers echoed back my request, I was able to confirm my computer's internet connection.

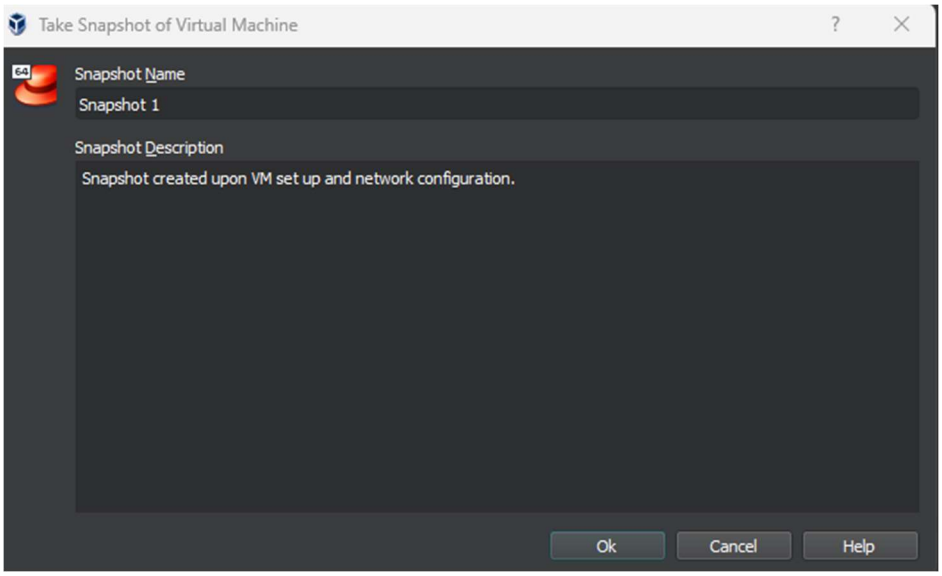
Step *6: Create a Snapshot.*

Finally, I created a snapshot for system recovery.

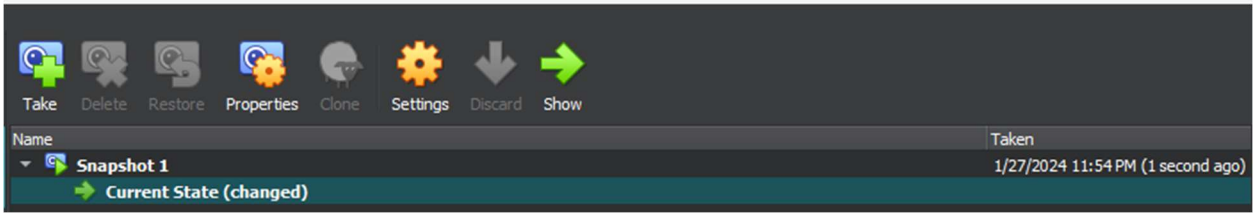
To do this, I went back onto VirtualBox and selected the menu icon and then selected "Snapshots."



Next, I selected "Take" in order to create the snapshot.



Next, I named the snapshot "Snapshot 1" and wrote a brief description to specify what contents the VM may have at that point.



Once selecting "ok", I was able to verify that the snapshot was successfully created as it was shown the list of snapshots.

LIMITATIONS/CONCLUSION

In this lab, I successfully configured a CentOS virtual machine, connected it to the internet, and saved a snapshot upon configuration.