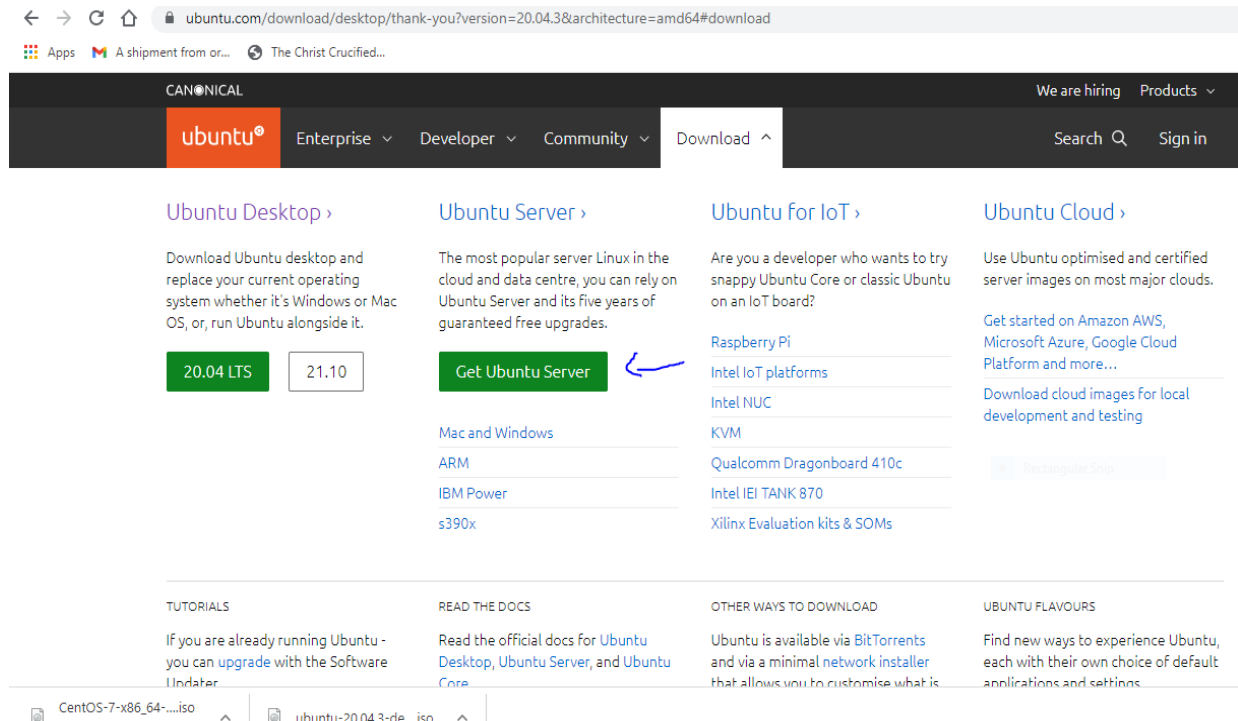


# Ubuntu installation

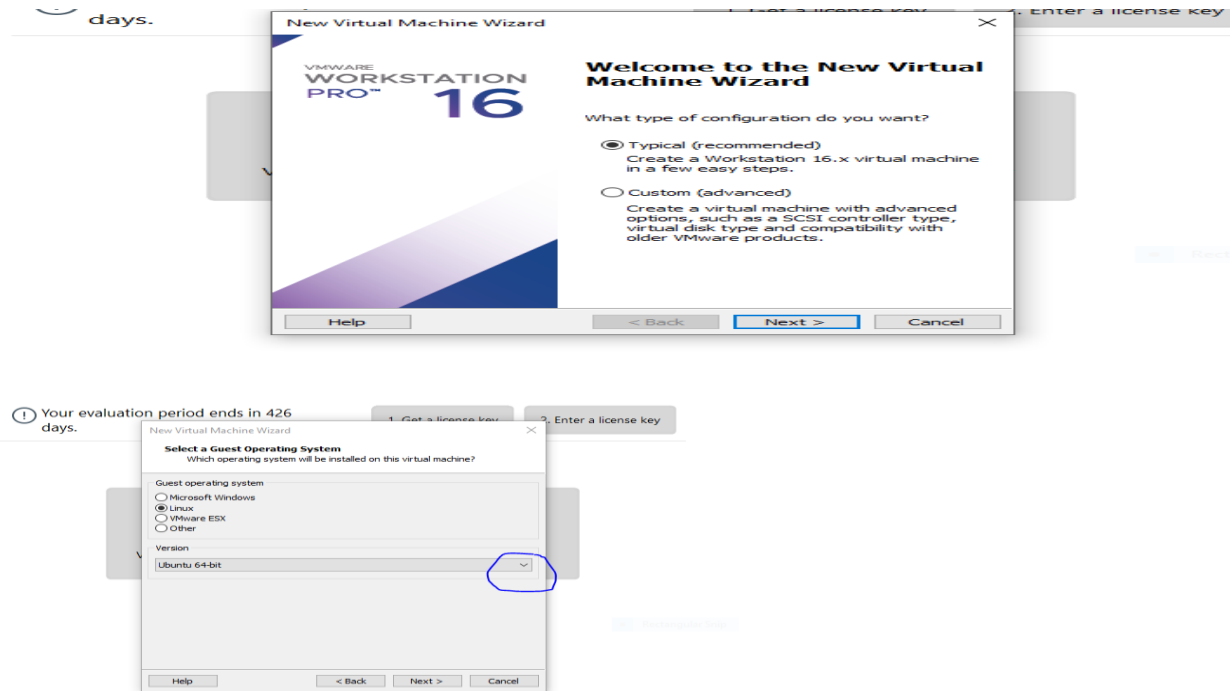
1.



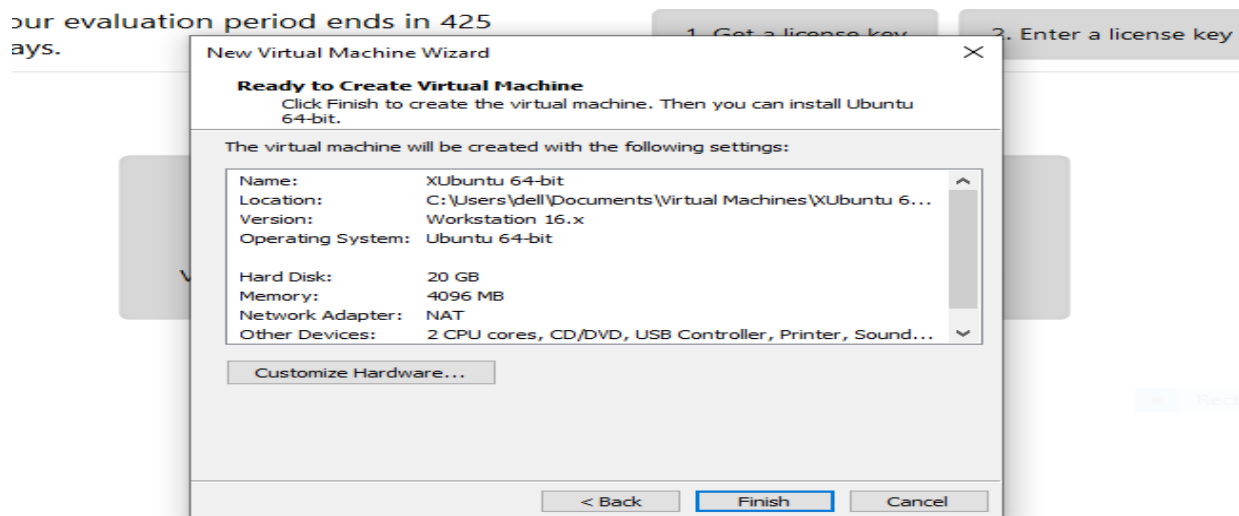
1a.

I went to my search engine and typed Ubuntu and went to ubuntu.com and brought me to the page in picture1 and headed over to Ubuntu home page and clicked on the download tab. And gave me two options of Ubuntu Desktop and Ubuntu Server LTS. I choose the Ubuntu server LTS version which means long-term support version and it took me to the Iso files and picked one and downloaded it on my windows operation system.

2.

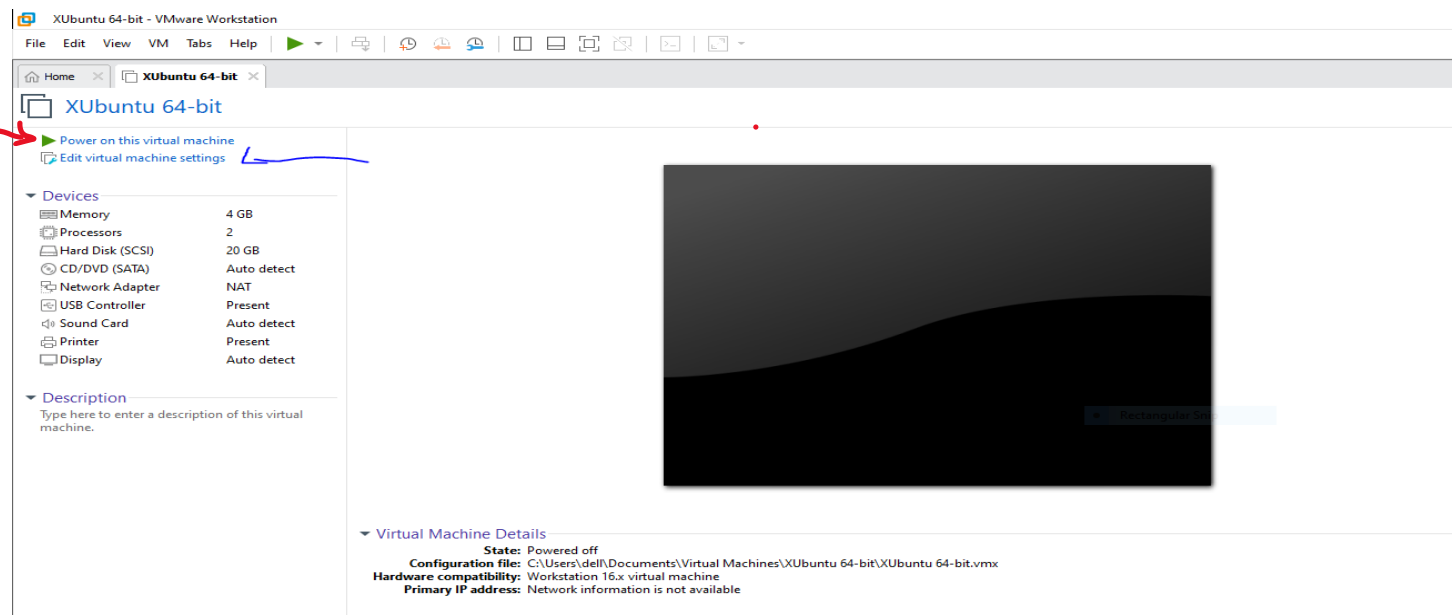
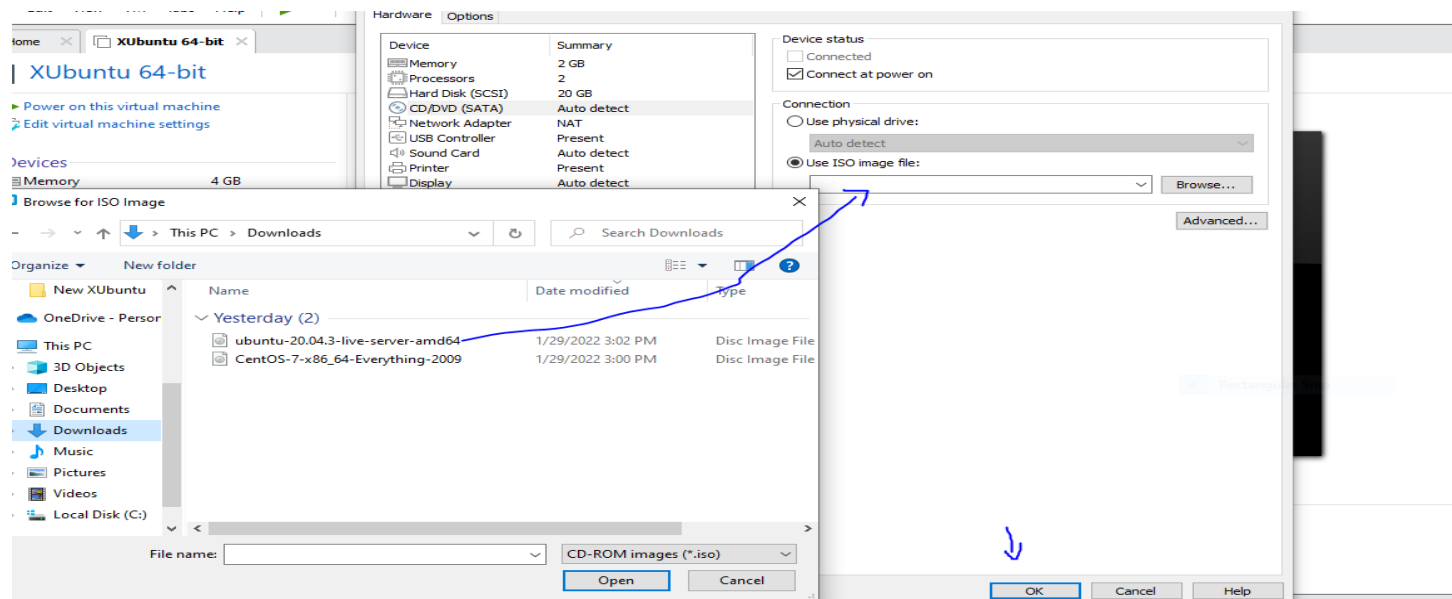


2a. I opened my VMware machines and chose the typical workstation's recommendations for various settings and clicked next then I named my server and configured my network adapter then I clicked next and proceeded through the new virtual machine wizard and pressed Finished.



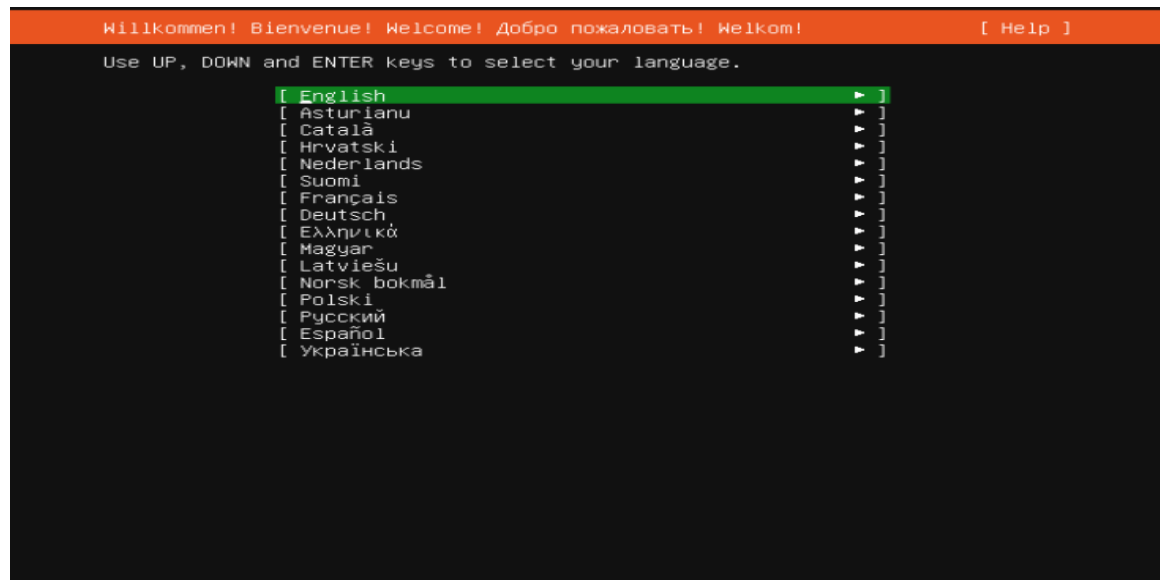
3 I now headed over to edit the virtual machine settings so that I can customize my hardware and configure the memory devices to use the Iso file. then I browsed to navigate where I saved my ISO file and picked it from my windows machine and placed it in the “use of Iso image file” location. you can increase the memory and you can also configure the processor CPU if you want to change it and you can leave the rest as default and press ok when you finish.

And I now power to start the Ubuntu server installation in the virtual machine.



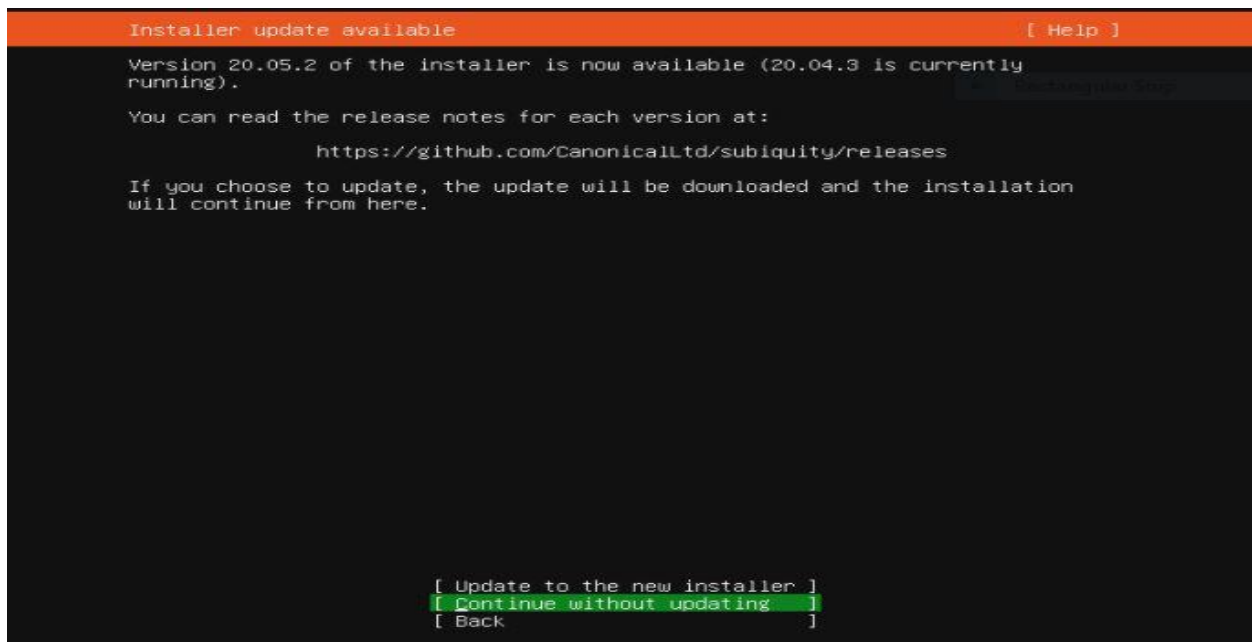
## The beginning of my Ubuntu installation in VMWARE

4.



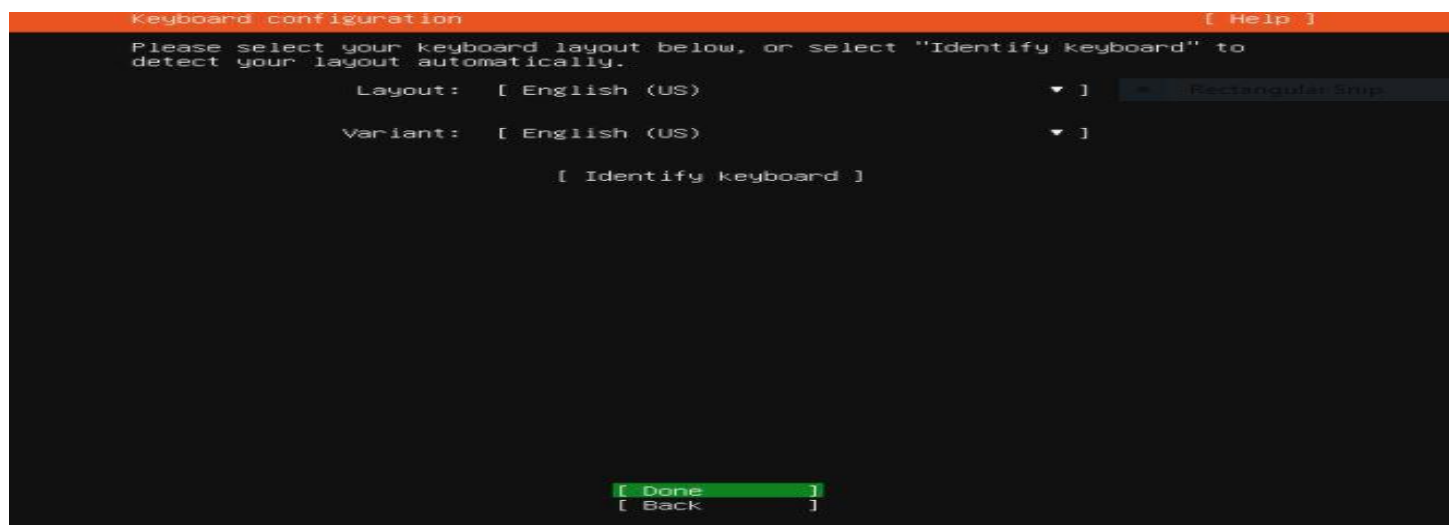
Here's an option of many languages to choose from, so you pick the one that's comfortable for you. I choose English. After clicking done to the following one.

5.



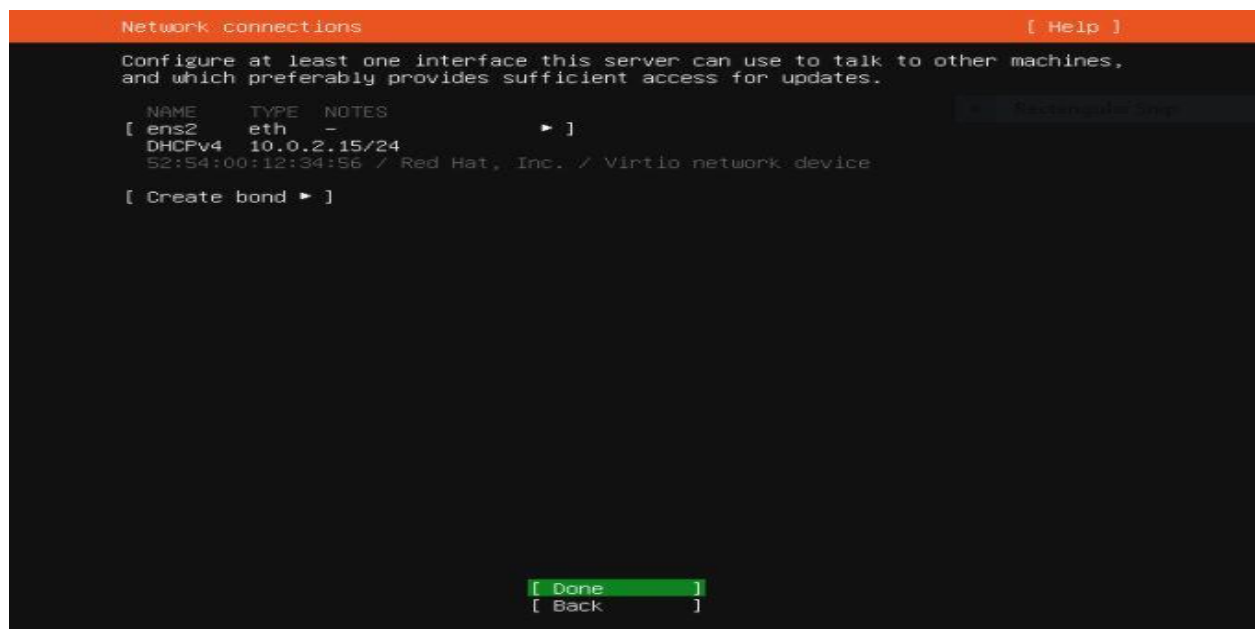
Here I choose to update the installer by clicking update to the new installer.

6



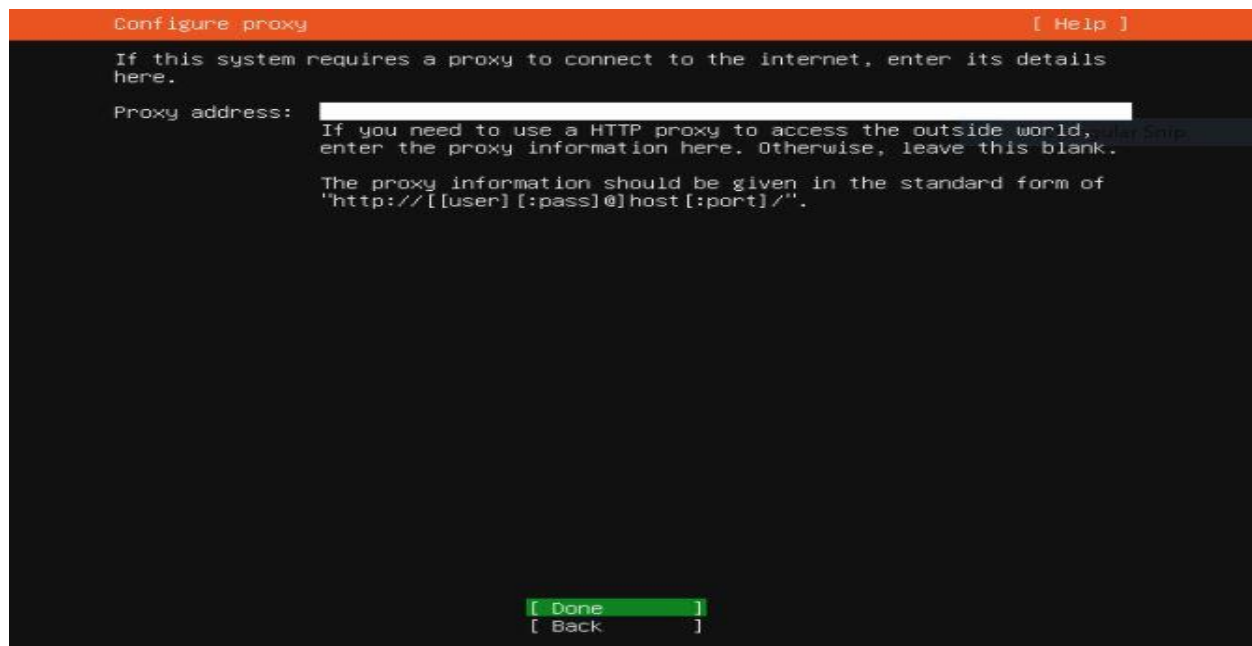
Here you are given the option to choose your preferred keyboard layout and then the done option.

7.



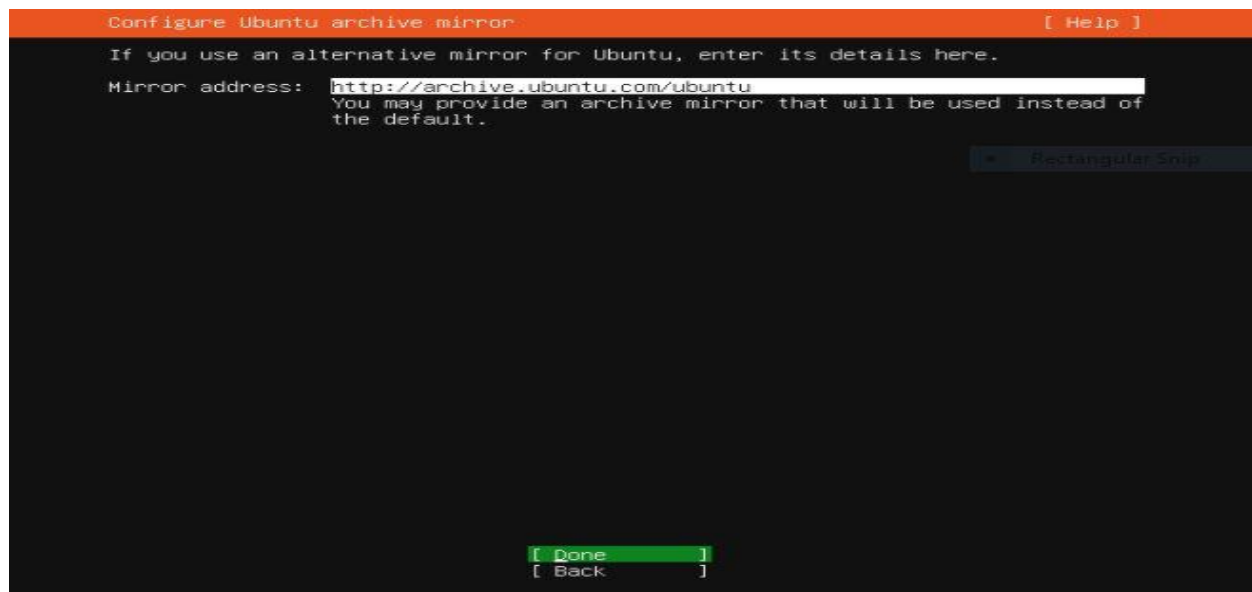
If your system is connected to the network, then you will see your interface card automatically selected IP through DHCP and then choose done and hit enter.

8.



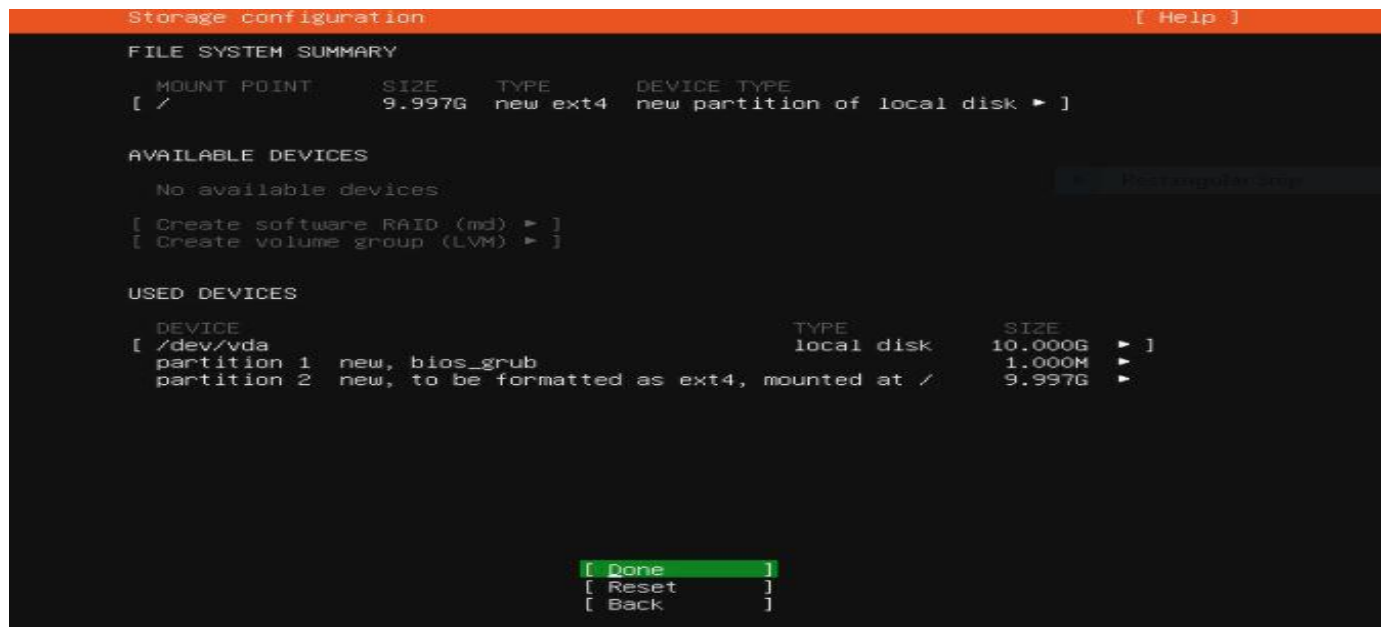
If your system is connected to a network and running behind a proxy server then we can specify the proxy otherwise leave it blank and hit done.

9.



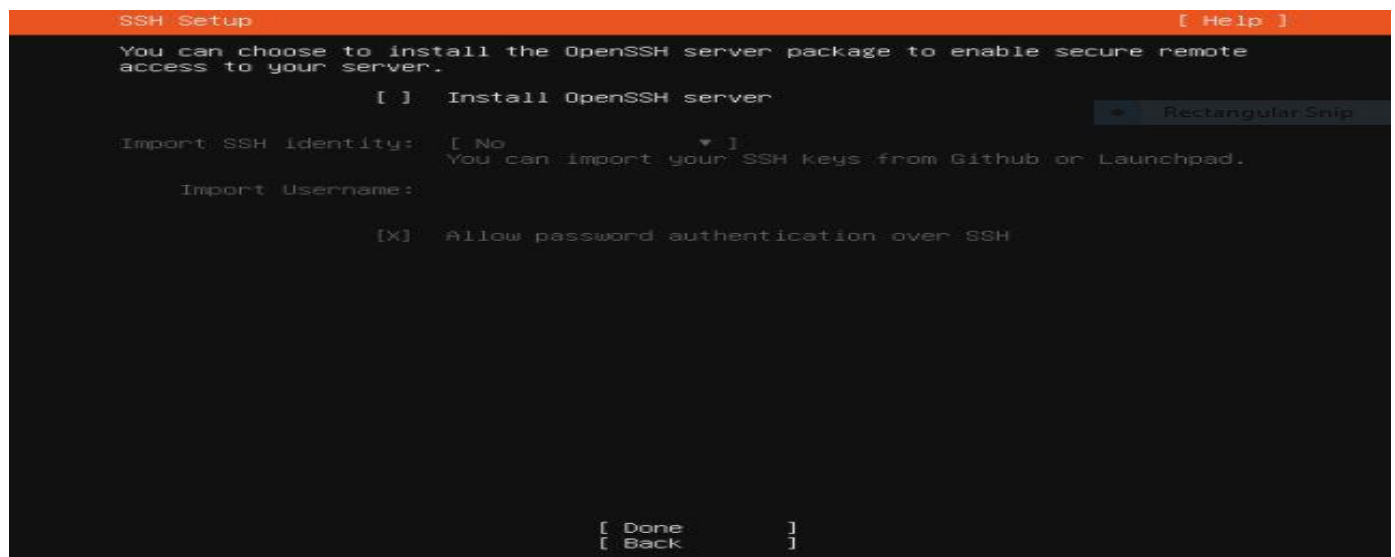
The installer will automatically configure the ubuntu archive mirror based on the country location and hit done.

10.



Here I review the storage configuration and select default and hit done the next same page choose to continue to write changes into the disk and hit done.

11.



Here you are given a choice to install ssh now and import your keys now to enable password secure log in or you can install OpenSSH later. I skipped and installed everything later.

12.

Profile setup [ Help ]

Enter the username and password you will use to log in to the system. You can configure SSH access on the next screen but a password is still needed for sudo.

Your name:

Your server's name:  The name it uses when it talks to other computers.

Pick a username:

Choose a password:

Confirm your password:

[ Done ]

This will be my account root user so I will need to specify the local user details and hostname that I want to set for my server and create a password and hit enter to start the installation process.

13.

Installation complete! Finished install!

```
curtin command install
preparing for installation
configuring storage
  running 'curtin in-block-meta custom'
curtin command block-meta
  removing previous storage devices
  configuring disk: disk-0
  configuring partition: part-0
  configuring partition: part-1
  configuring format: fs-0
  configuring mount: mount-0
configuring network
  running 'curtin net-meta auto'
curtin command net-meta
writing install sources to disk
  running 'curtin extract'
curtin command extract
  acquiring and extracting image from cp:///rofs
configuring installed system
  running 'curtin curthooks'
curtin command curthooks
  configuring apt
  installing missing packages
  installing kernel
  setting up swap
  apply networking config
  writing etc/fstab
  configuring multipath
  updating packages on target system
  configuring pollinate user-agent on target system
finalizing installation
  running 'curtin hook'
curtin command hook
executing late commands
```

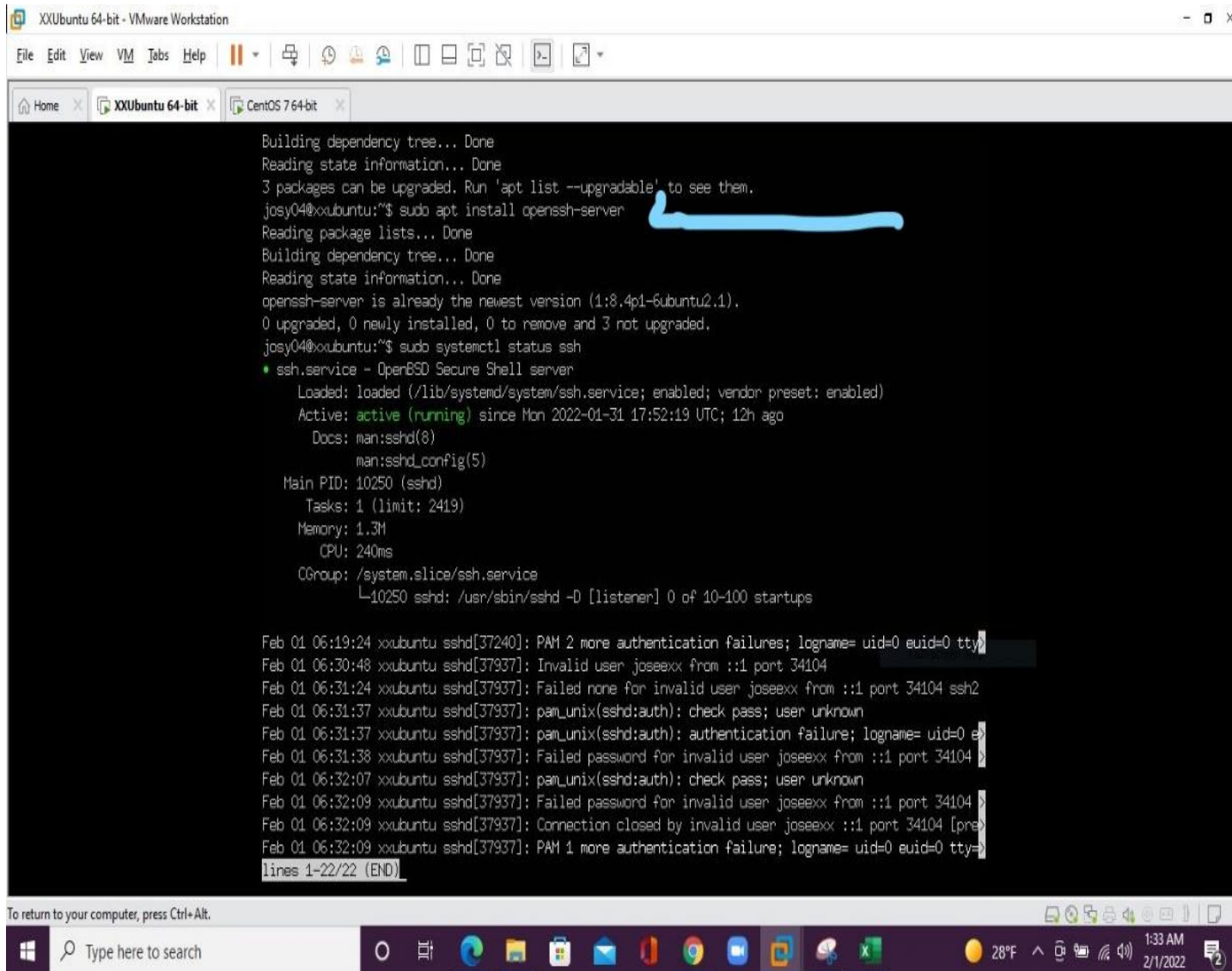
[ View full log ] [ Reboot Now ]

7 / 8

Here's a bunch of installed files downloading and security updates, once the installation is completed the installer will prompt to reboot the system. After the reboot, I will use the local credentials that I have created during the installation for login. After the installation is complete, I update and upgrade using the command `sudo apt`. which updates the list of available packages and versions while upgrading installed new versions of a package.



14. I now installed OpenSSH-server packages were installed and I was prompt to continue with the installation to press N for no and Y for yes. I typed Y and continued installing and you will see active running in green letters. When you have an ssh-server you can access this operating system from any remote location.



```
XXUbuntu 64-bit - VMware Workstation
File Edit View VM Tabs Help
Home XXUbuntu 64-bit CentOS 7 64-bit

Building dependency tree... Done
Reading state information... Done
3 packages can be upgraded. Run 'apt list --upgradable' to see them.
josey04@xxubuntu:~$ sudo apt install openssh-server
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
openssh-server is already the newest version (1:8.4p1-6ubuntu2.1).
0 upgraded, 0 newly installed, 0 to remove and 3 not upgraded.
josey04@xxubuntu:~$ sudo systemctl status ssh
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Mon 2022-01-31 17:52:19 UTC; 12h ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Main PID: 10250 (sshd)
    Tasks: 1 (limit: 2419)
   Memory: 1.3M
      CPU: 240ms
   CGroup: /system.slice/ssh.service
           └─10250 sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups

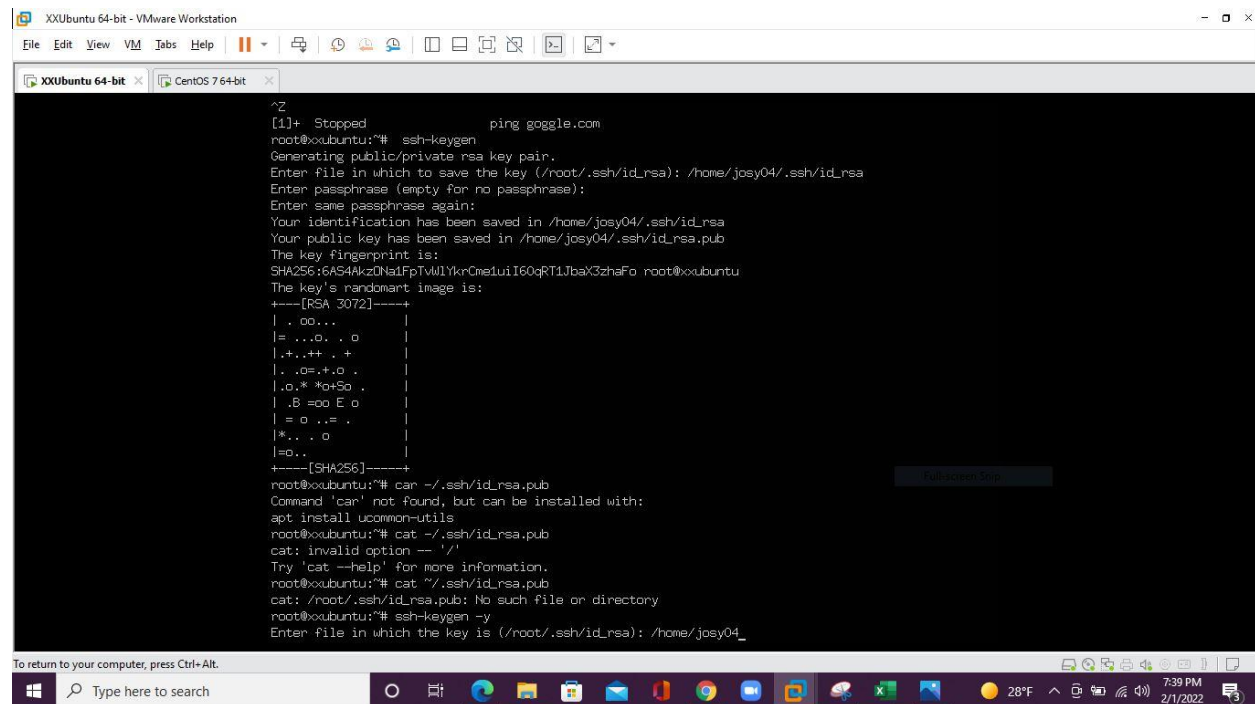
Feb 01 06:19:24 xxubuntu sshd[37240]: PAM 2 more authentication failures; logname= uid=0 euid=0 tty=
Feb 01 06:30:48 xxubuntu sshd[37937]: Invalid user joseexx from ::1 port 34104
Feb 01 06:31:24 xxubuntu sshd[37937]: Failed none for invalid user joseexx from ::1 port 34104 ssh2
Feb 01 06:31:37 xxubuntu sshd[37937]: pam_unix(sshd:auth): check pass; user unknown
Feb 01 06:31:37 xxubuntu sshd[37937]: pam_unix(sshd:auth): authentication failure; logname= uid=0 e
Feb 01 06:31:38 xxubuntu sshd[37937]: Failed password for invalid user joseexx from ::1 port 34104
Feb 01 06:32:07 xxubuntu sshd[37937]: pam_unix(sshd:auth): check pass; user unknown
Feb 01 06:32:09 xxubuntu sshd[37937]: Failed password for invalid user joseexx from ::1 port 34104
Feb 01 06:32:09 xxubuntu sshd[37937]: Connection closed by invalid user joseexx ::1 port 34104 [pre
Feb 01 06:32:09 xxubuntu sshd[37937]: PAM 1 more authentication failure; logname= uid=0 euid=0 tty=
lines 1-22/22 (END)
```

To return to your computer, press Ctrl+Alt.

Windows taskbar: Type here to search, 1:33 AM, 2/1/2022, 28°F

**15.** I created an ssh key: (**ssh-keygen**) is the command which is an authentication method used to gain access to an encrypted connection between systems and ultimately used those connections to manage the remote system, and your public key is uploaded to my server to use ssh key authentication for access control and to display your public key (cat \*.pub) and you can't see the encrypted words for security reasons.

## 15a



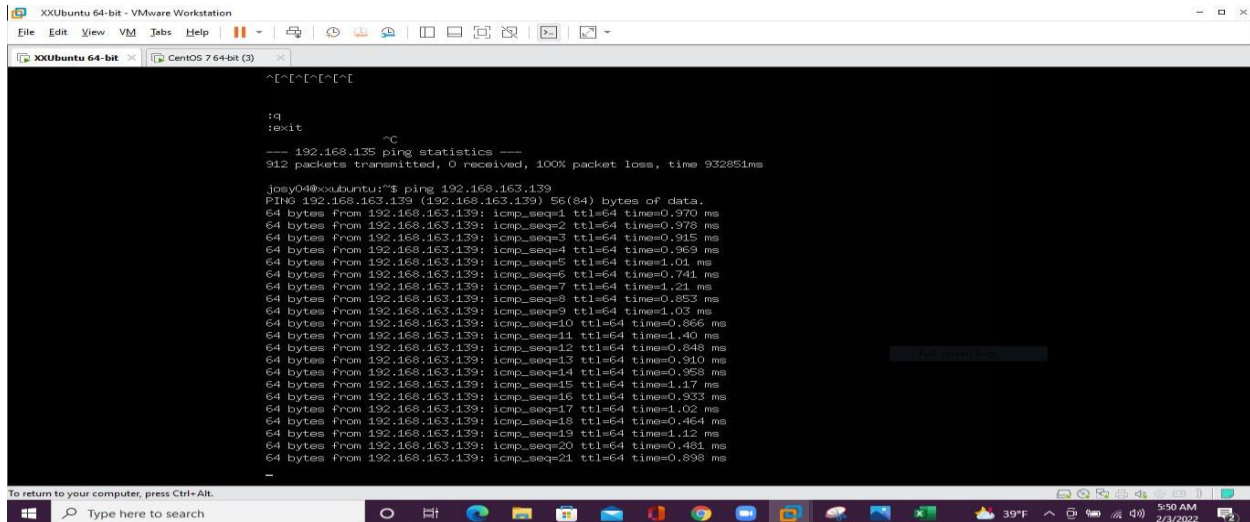
```
XXUbuntu 64-bit - VMware Workstation
File Edit View VM Tabs Help
XXUbuntu 64-bit x CentOS 7 64-bit x
^Z
[1]+  Stopped                  ping google.com
root@xxubuntu:~# ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa): /home/josy04/.ssh/id_rsa
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/josy04/.ssh/id_rsa
Your public key has been saved in /home/josy04/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:6AS4Akz0Na1FpTVuJYkrCme1ui160qRT1JbaX3zhaFo root@xxubuntu
The key's randomart image is:
+--[RSA 3072]-----+
| . oo... |
| = ...o. . o |
| +..+ . + |
| .o=+.o . |
| .o* *oSo . |
| .B =oo E o |
| = o .. = . |
| *.. . o |
| =o.. |
+--[SHA256]-----+
root@xxubuntu:~# cat ~/.ssh/id_rsa.pub
Command 'cat' not found, but can be installed with:
apt install ucommon-utils
root@xxubuntu:~# cat ~/.ssh/id_rsa.pub
cat: invalid option -- '/'
Try 'cat --help' for more information.
root@xxubuntu:~# cat ~/.ssh/id_rsa.pub
cat: /root/.ssh/id_rsa.pub: No such file or directory
root@xxubuntu:~# ssh-keygen -y
Enter file in which the key is (/root/.ssh/id_rsa): /home/josy04_
```

## 15b



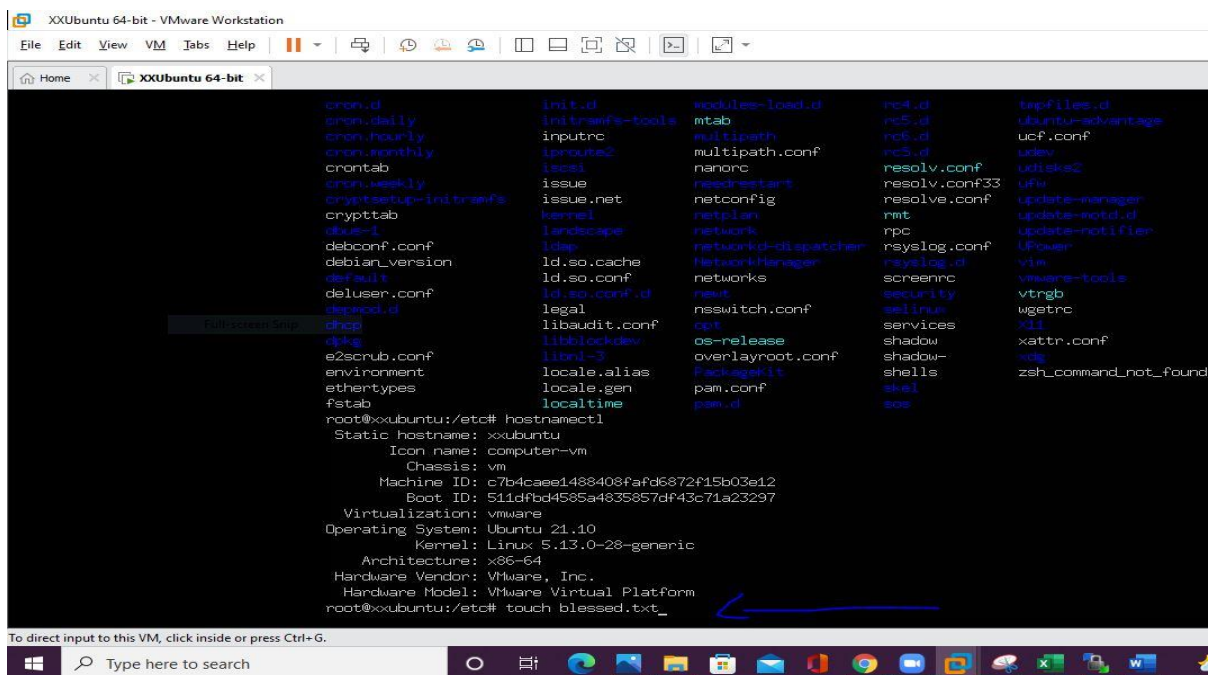
```
josy04@xxubuntu:~/.ssh$ cat *.pub
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAQGDs2jCwmKIuaB/jp/HGjj+8nAymka8zrbhe/IkYFvrbG7oIjwikH4taN1b56zLF
JHg0jnk1cEnn1h3JLGMiij+mQMF1xpszbhpQFzmpQwId0FH/p4/ytaLwLm7RUxImiY3wnt3ByudNe1sXB/OnzIENT8fzQDaPQXhj
xQz5aXnw8tn1b0tzZdiWP53LA2e5LeYLvcsZrFEKUrDnQwNjTetxNg7eSgjTz/wAUak3bIT6EU7hfVhd5BFukRiTvse+EvIs1
vQA4CnH1FnPMQ+nKfMTsriQXsiUBfBMJ8HT7ffp3PmpHfByVUMB/xsesfTS1vkH49UAH5AX80cucvqiJkJNal483tonuJ+pvpgK
RIQZ5mInnQPJZk5Tt2cz0KIbJaNIb5iQ+42YLLyNDfzVEK9Hjdh3bbp1xZu0eL59jreT4+LCvN6iQU8RMrvD/nVPFmHR4zTfokMSU
Xtt2Q0rcSG2fREKLaryABAXuyWAdAg/Gn4Xac1mkKUGmfRslahE= root@xxubuntu
josy04@xxubuntu:~/.ssh$
```

16. Now I was able to ping another server like yahoo.com or google.com. in this picture, I pinged my CentOS server and the package was transferred, and it replied which means there was network connectivity between the ubuntu server and CentOS server.



```
root@xxubuntu:~# ping 192.168.139.139
PING 192.168.139 (192.168.139) 56(84) bytes of data:
64 bytes from 192.168.139: icmp_seq=1 ttl=64 time=0.970 ms
64 bytes from 192.168.139: icmp_seq=2 ttl=64 time=0.978 ms
64 bytes from 192.168.139: icmp_seq=3 ttl=64 time=0.915 ms
64 bytes from 192.168.139: icmp_seq=4 ttl=64 time=0.969 ms
64 bytes from 192.168.139: icmp_seq=5 ttl=64 time=1.01 ms
64 bytes from 192.168.139: icmp_seq=6 ttl=64 time=0.741 ms
64 bytes from 192.168.139: icmp_seq=7 ttl=64 time=1.21 ms
64 bytes from 192.168.139: icmp_seq=8 ttl=64 time=0.953 ms
64 bytes from 192.168.139: icmp_seq=9 ttl=64 time=1.03 ms
64 bytes from 192.168.139: icmp_seq=10 ttl=64 time=0.866 ms
64 bytes from 192.168.139: icmp_seq=11 ttl=64 time=1.40 ms
64 bytes from 192.168.139: icmp_seq=12 ttl=64 time=0.848 ms
64 bytes from 192.168.139: icmp_seq=13 ttl=64 time=0.910 ms
64 bytes from 192.168.139: icmp_seq=14 ttl=64 time=0.958 ms
64 bytes from 192.168.139: icmp_seq=15 ttl=64 time=1.17 ms
64 bytes from 192.168.139: icmp_seq=16 ttl=64 time=0.933 ms
64 bytes from 192.168.139: icmp_seq=17 ttl=64 time=1.02 ms
64 bytes from 192.168.139: icmp_seq=18 ttl=64 time=0.464 ms
64 bytes from 192.168.139: icmp_seq=19 ttl=64 time=1.12 ms
64 bytes from 192.168.139: icmp_seq=20 ttl=64 time=0.481 ms
64 bytes from 192.168.139: icmp_seq=21 ttl=64 time=0.898 ms
^C
--- 192.168.139 ping statistics ---
912 packets transmitted, 0 received, 100% packet loss, time 932851ms
```

17. I displayed the contents of my directory using the ls command and made sure I didn't have the same file in there, Here I created a file in my home directory called blessed.txt using the touch command (touch command can be used to create an empty file). I was able to share this file with my WinSCP window machine.



```
root@xxubuntu:~# ls
cron.d             init.d             xxdm5-1oad.d      rcS.d             tmpfiles.d
cron.daily          initramfs-tools   mtab              rcS.d             ubuntu-advantage
cron.hourly        inputrc           multipath         rcS.d             ucf.conf
cron.monthly       iproute2          multipath.conf    rcS.d             udev
crontab            iscsi            nanorc            resolv.conf       udisks2
cron.weekly        issue            needrestart       resolv.conf33     ufw
cryptsetup-initramfs issue.net          netconfig         resolve.conf      update-manager
crypttab           kernel            netplan           rpm               update-notif.d
debconf            landscape         network           rpc               update-notifier
debian_version     ld.so.cache       networkd-dispatcher rsyslog.conf     uPower
dev            ld.so.conf       networkd          screenrc          vim
deluser.conf       ld.so.conf.d      networks          security          vmware-tools
dev            legal             nsswitch.conf    selinux          vmtg
deluser.conf       libaudit.conf     os-release        services          wgetrc
dev            liblockdev        overlayroot.conf shadow            xattr.conf
environment         locale.alias      packagekit        shadow-          xfs
ethertypes         locale.gen        pam.conf          shells            zsh_command_not_found
fstab              localtime        pass.d           socl
root@xxubuntu:/etc# touch blessed.txt
```

