Austin Cupp

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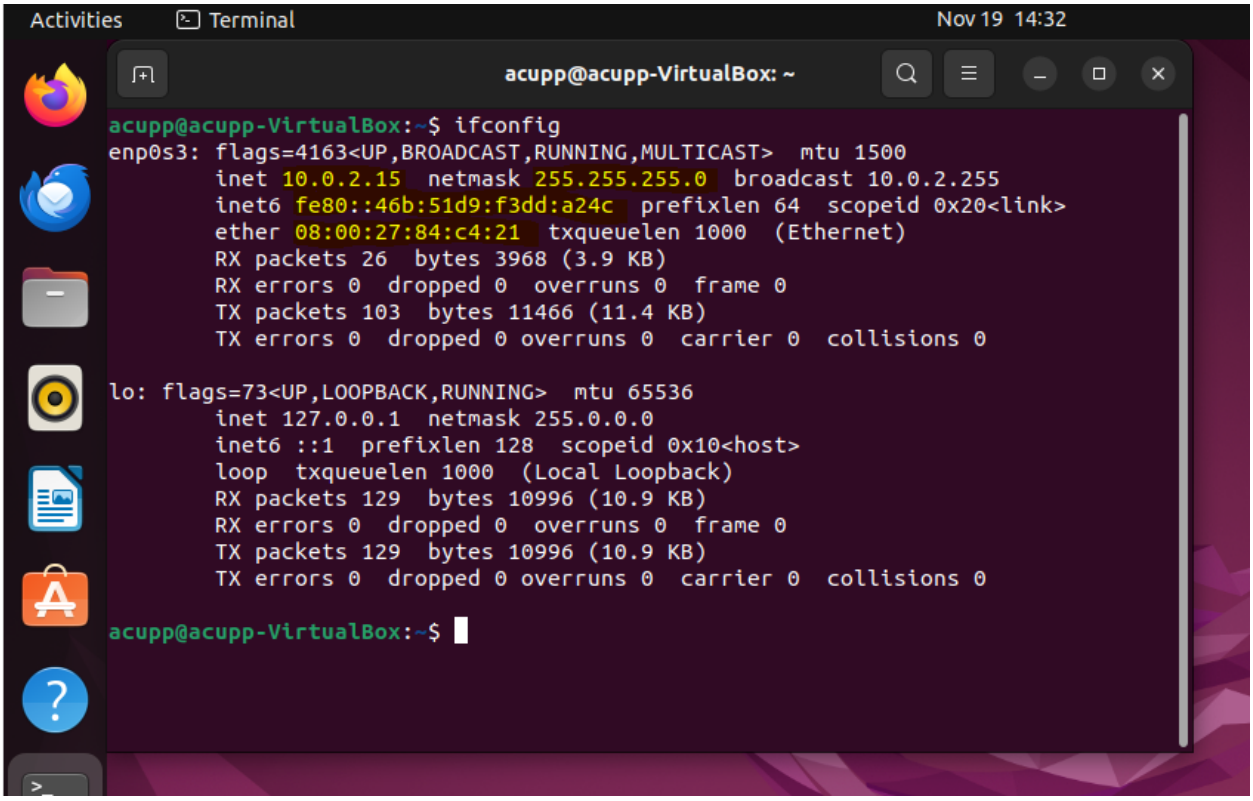
Cyse 270

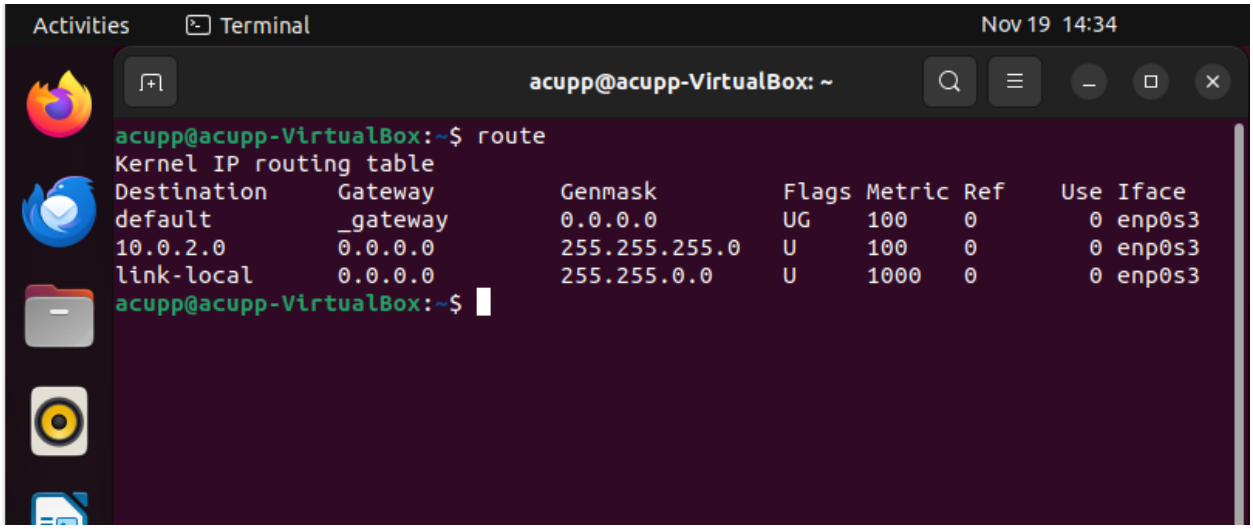
11/19/2023

Assignment #11

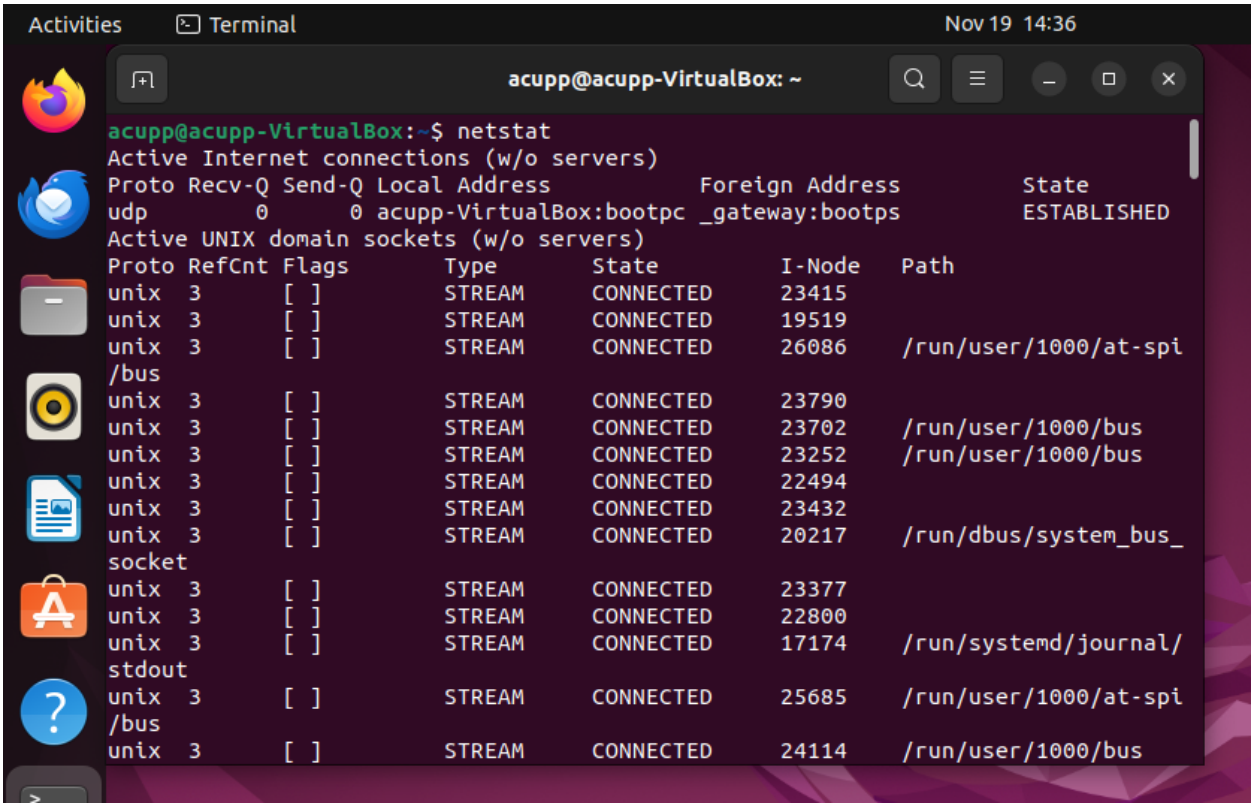
You can use either Ubuntu VM or Kali Linux VM to complete the following tasks.
Task A – Explore Network Configurations (8 * 5 = 40 Points)
{{{{{{{{{Connect your VM in the NAT mode}}}}}}}}}
1. Use the correct ifconfig command to display the current network configuration. Highlight your IP address, MAC address, and the network mask.



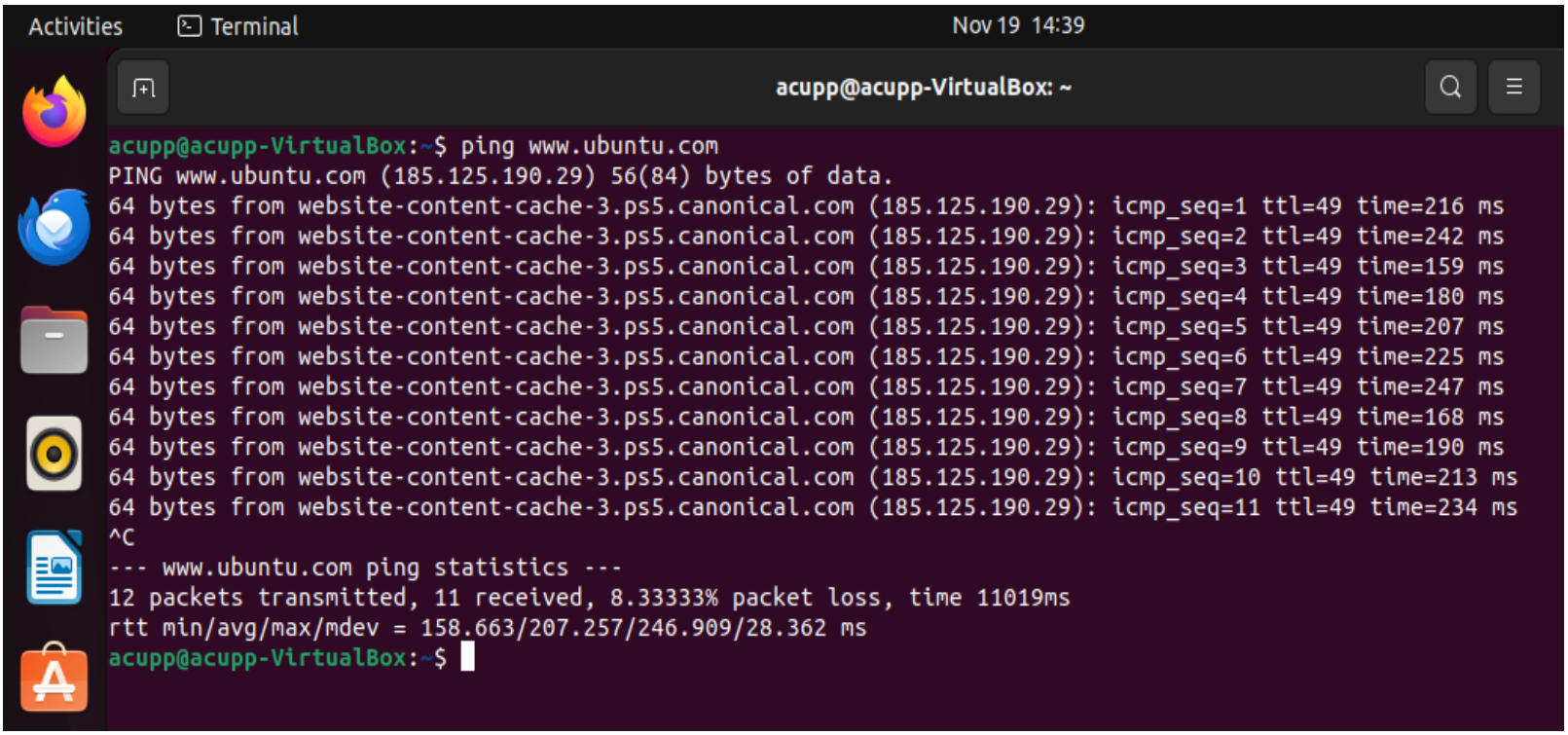
2. Use the correct route command to display the current routing table.



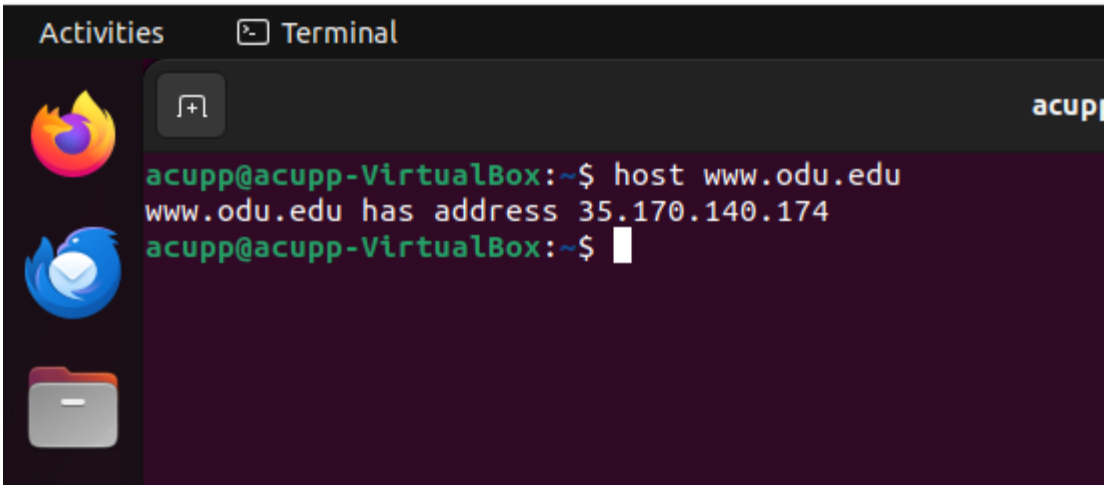
3. Use the netstat command to list current TCP connections.



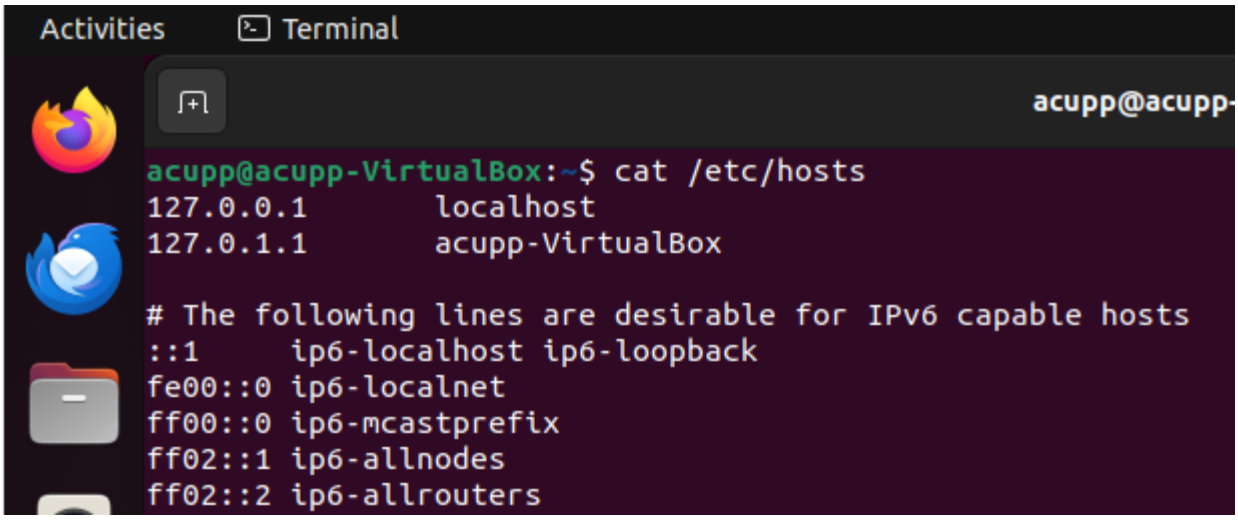
4. Use the ping command to determine if the ubuntu.com system is accessible via the network. (Use the correct option to send 10 ping requests only.)



5. Use the host command to perform a DNS query on www.odu.edu

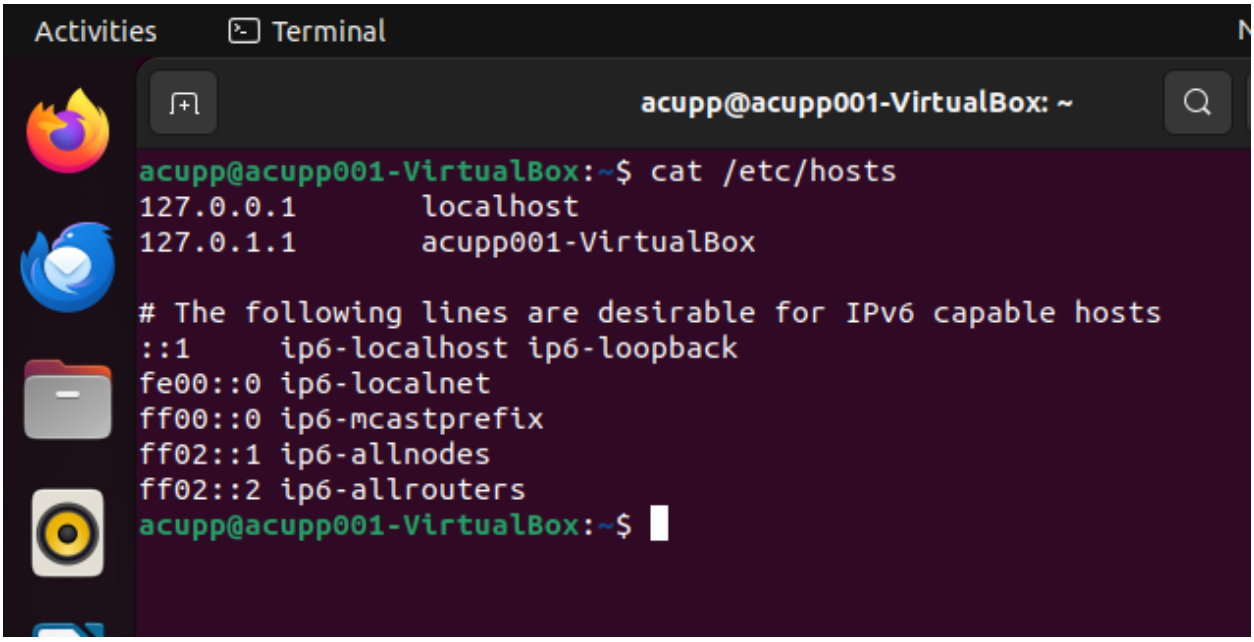


6. Use the cat command to display the contents of the file that contains the system's hostname



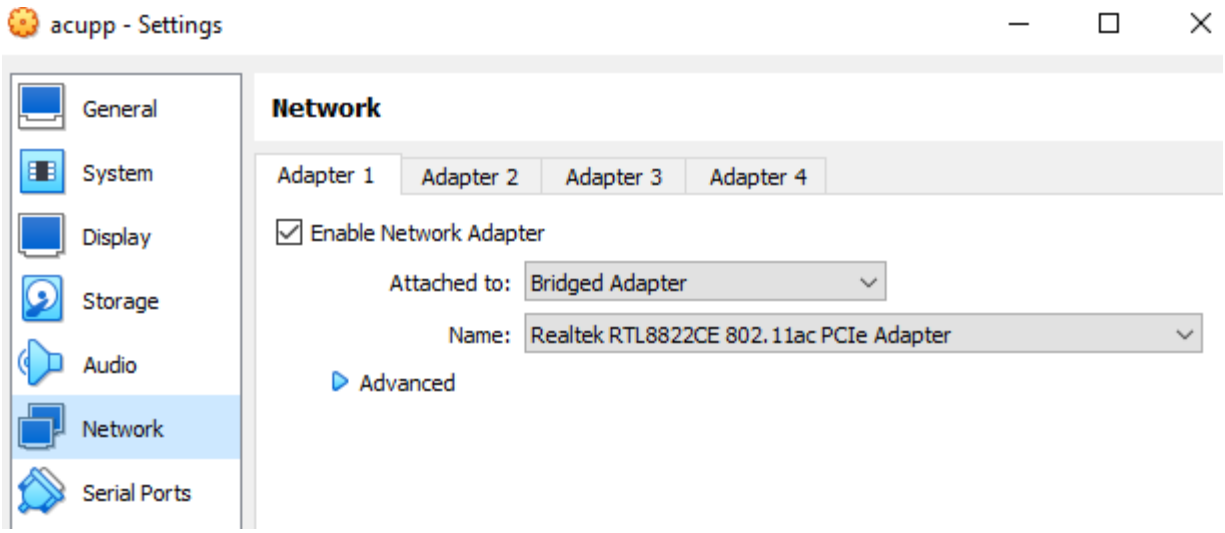
7. Use the cat command to display the contents of the file that contains the DNS servers for this system.

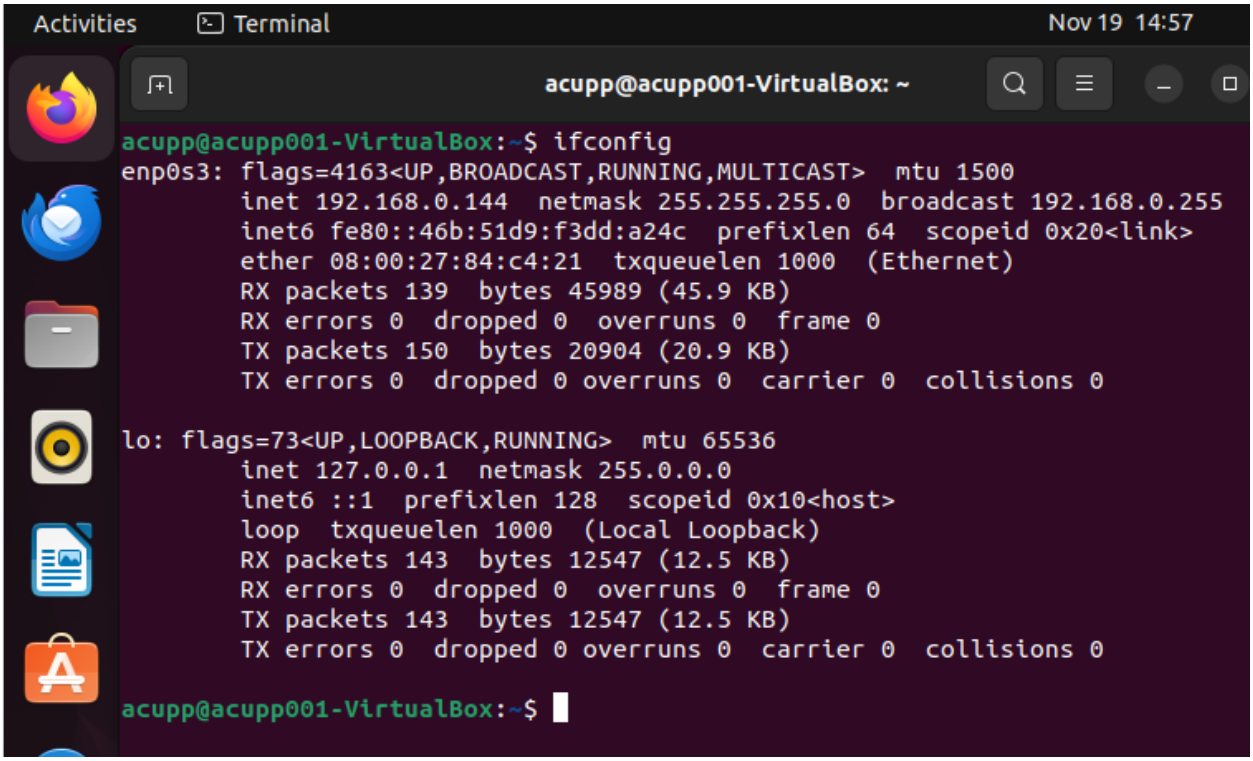
8. Edit the same file you display in the previous step, set the system's hostname to your MIDAS ID permanently. Reboot system and repeat step 6.

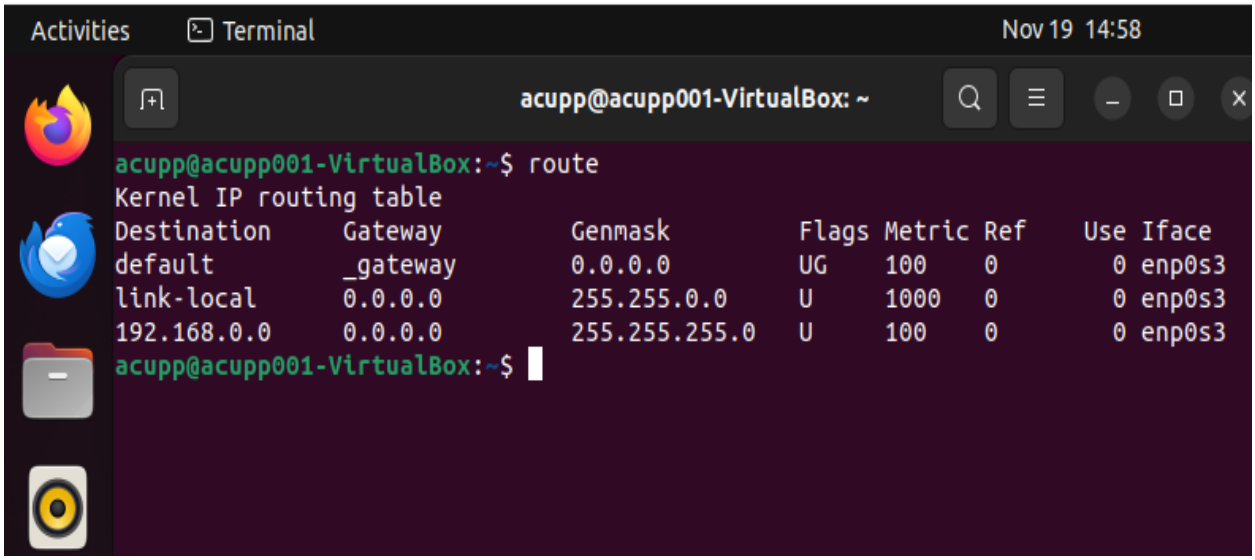


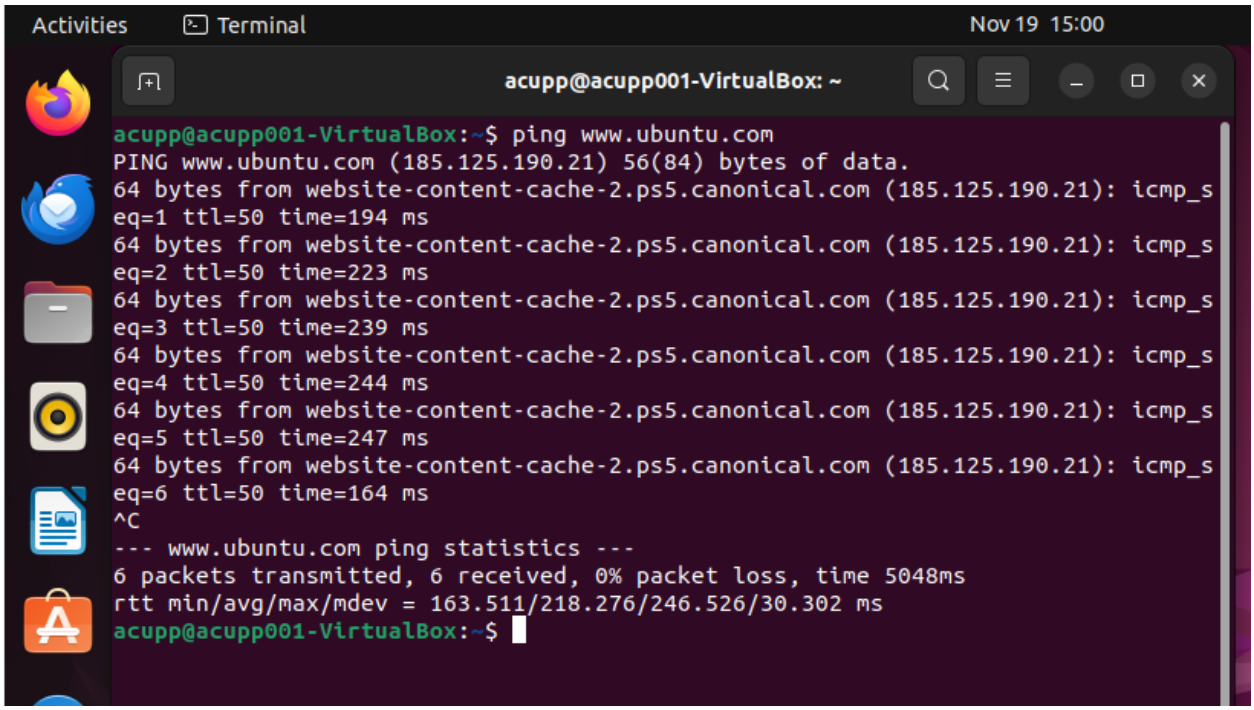
Task B – A Different Network Setting (3 * 20 = 60 Points)

1. Change the VM network connection from NAT to the bridge mode (you will lose your Internet connection if you are connected to the ODU campus Wi-Fi network, but it is okay).
2. Reboot your system, then repeat Steps 1 – 7 in Task A.
3. Highlight the differences at the end of each step and discuss what do you find.









The differences between launching the VM Ubuntu in NAT mode and bridge mode is there is a change in the IP address, information in the routing table is changed, and when pinging www.ubuntu.com there is a 0% packet loss, compared to an 8.3333% packet loss when pinging www.ubuntu.com in NAT mode.