SCS2205: Computer Networks I

Practical Assignment

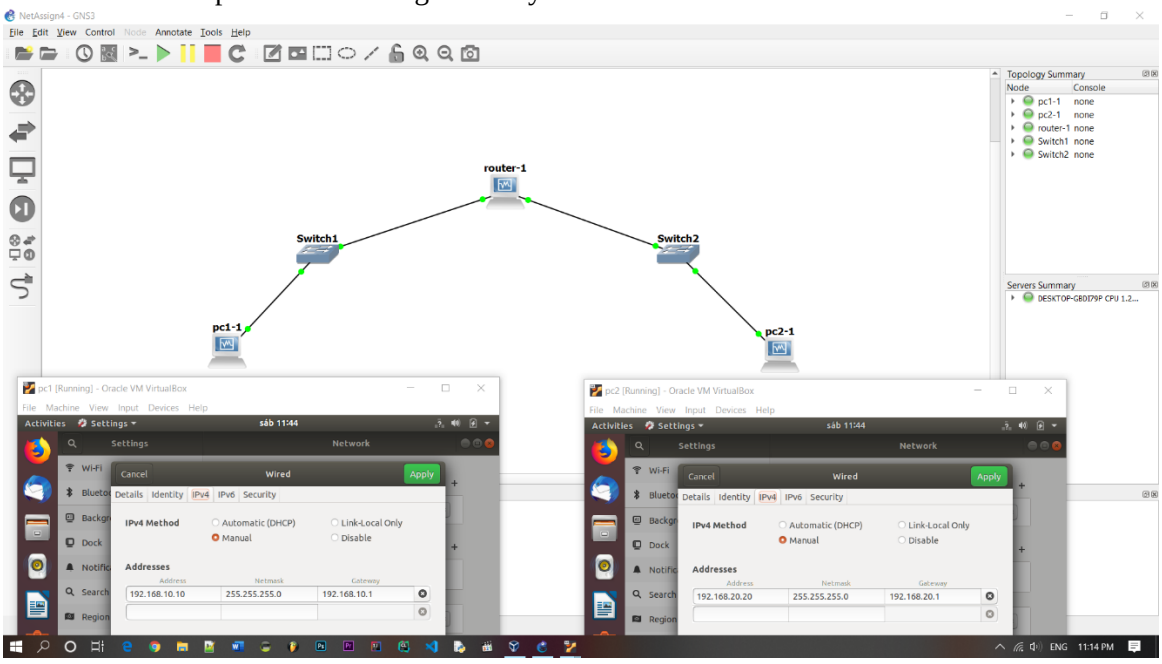
Index No: 18001904

Configuration

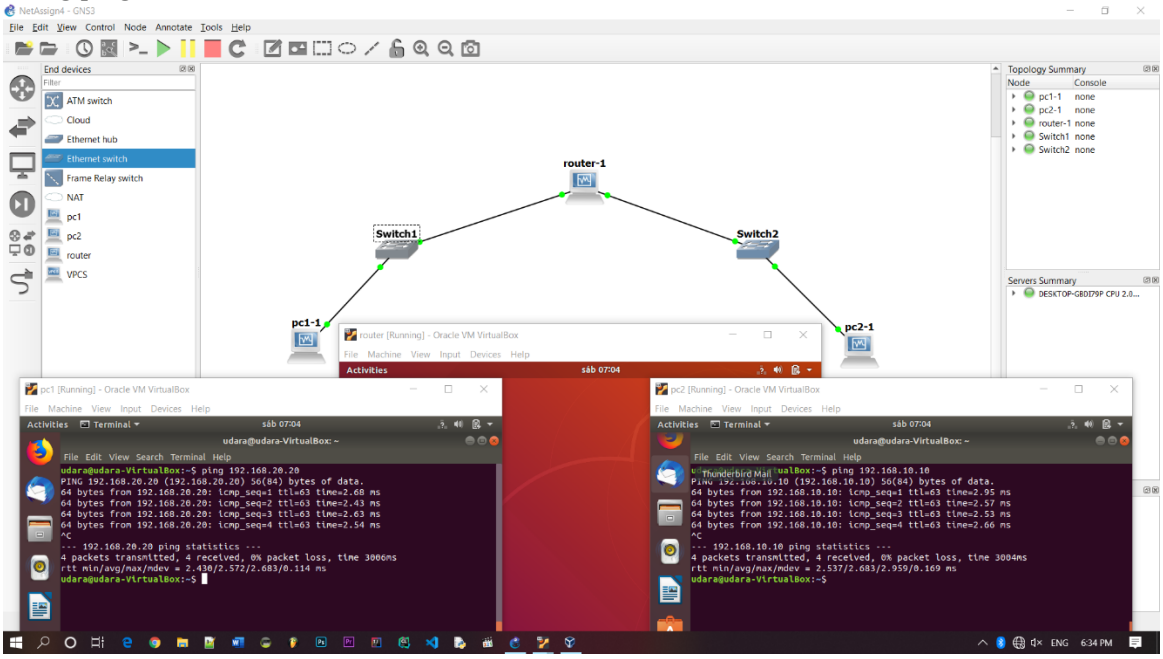
	PC 01	PC 02	Router	
			Adapter 01	Adapter 02
IP Address	192.168.10.10	192.168.20.20	192.168.10.1	192.168.20.1
Subnet Mask	255.255.255.0	255.255.255.0	255.255.255.0	255.255.255.0
Gateway	192.168.10.1	192.168.20.1	192.168.10.1	192.168.20.1

Steps Followed

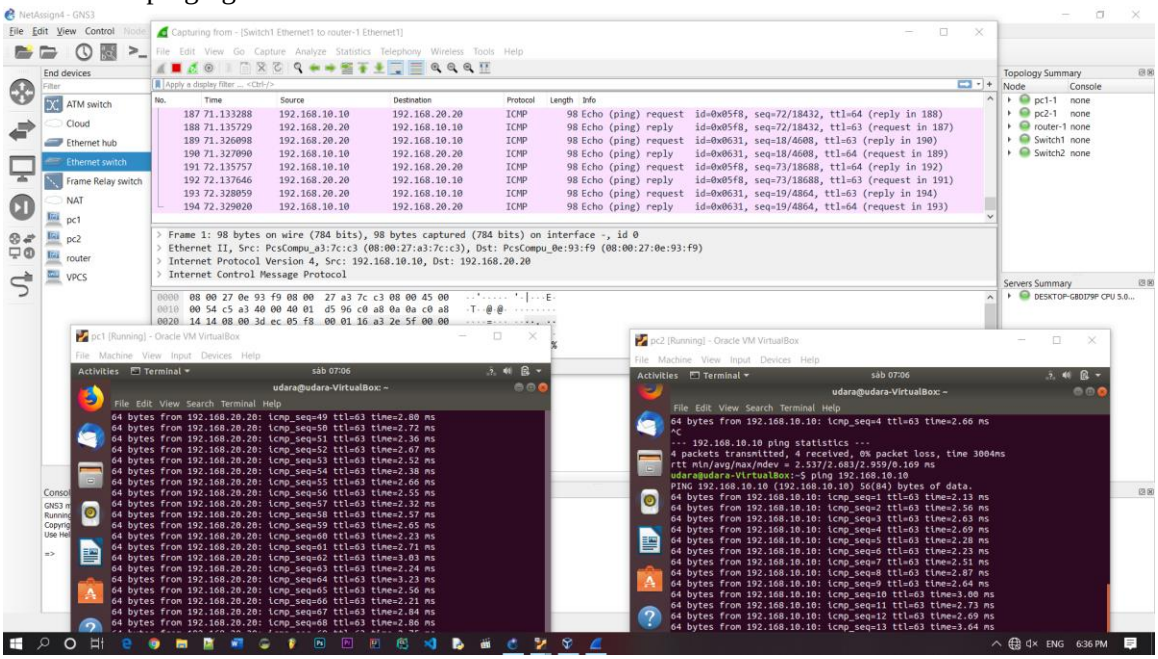
i. Created an Ubuntu 18.04 installed virtual machine using VirtualBox
ii. Cloned created virtual machine 2 times with new MAC addresses and renamed machines as PC1, PC2 and Router
iii. Installed iperf using “sudo apt-get install iperf” command on both PC1 and PC2 (to make things easy in part ii of the assignment)
iv. After turning off both PCs, created new templates in GNS3
v. After drawing diagrams using GNS3, virtual machines were started using GNS3
vi. Configured the network settings on PC1, PC2 and Router with the details in above table and turned on the packet forwarding in /etc/sysctl.conf in router



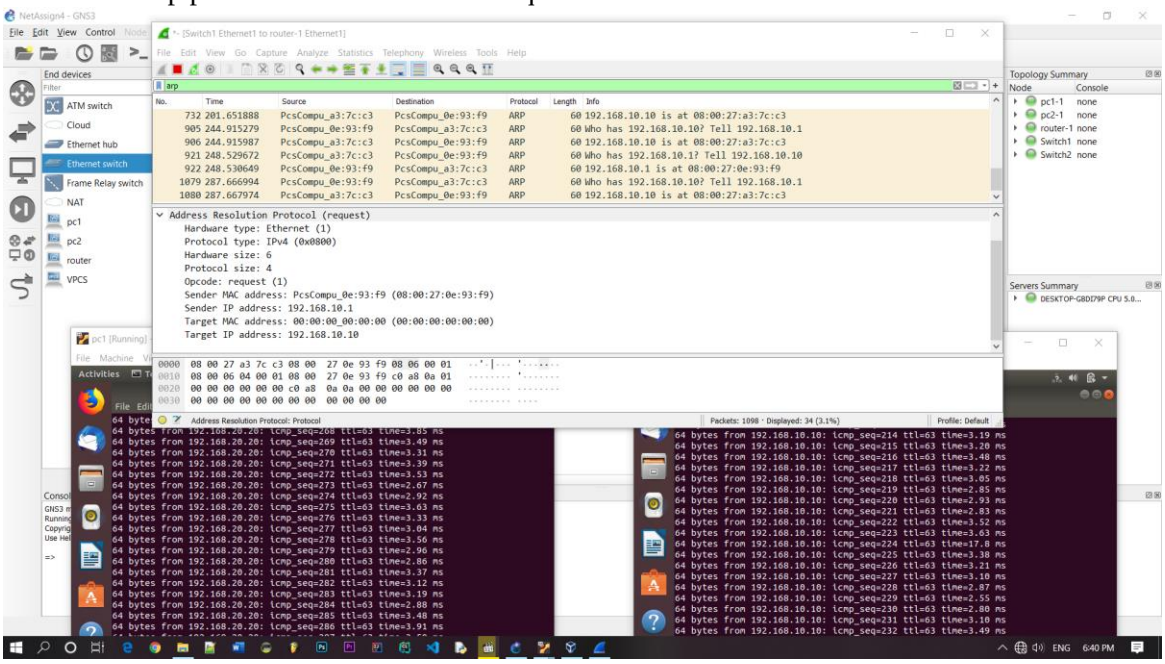
vii. Using ping 192.168.20.20 on PC1, checked the connection of PC1 with PC2
Using ping 192.168.10.10 on PC2, checked the connection of PC2 with PC1



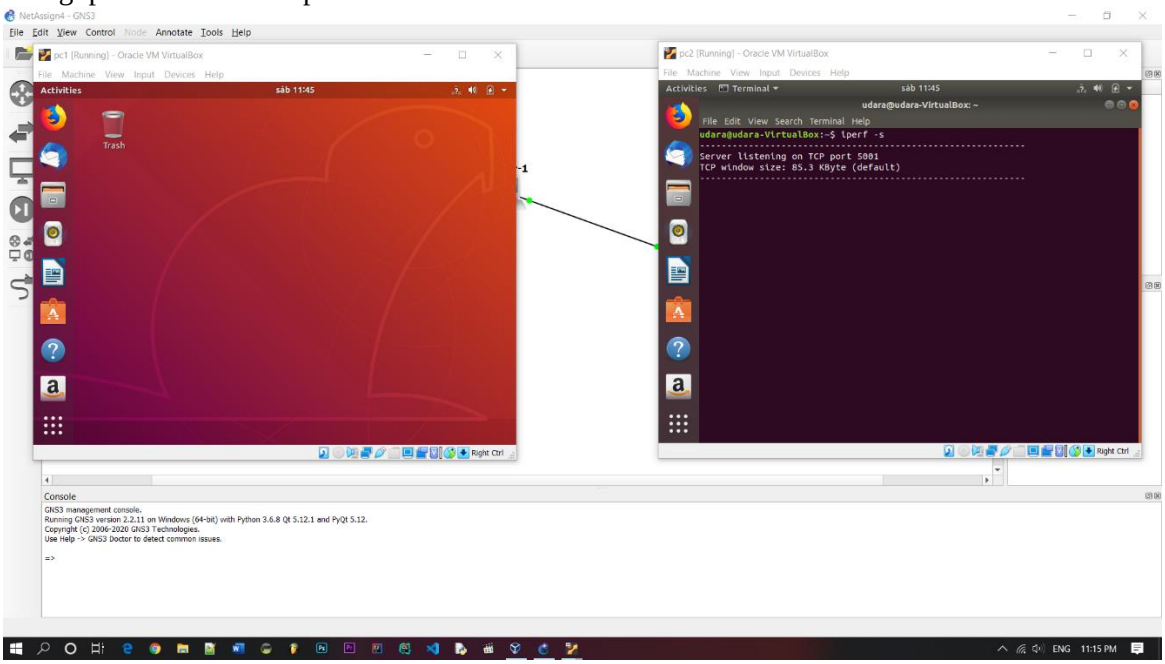
viii. Since the connection was successfully configured, started capturing packets using wire shark while pinging



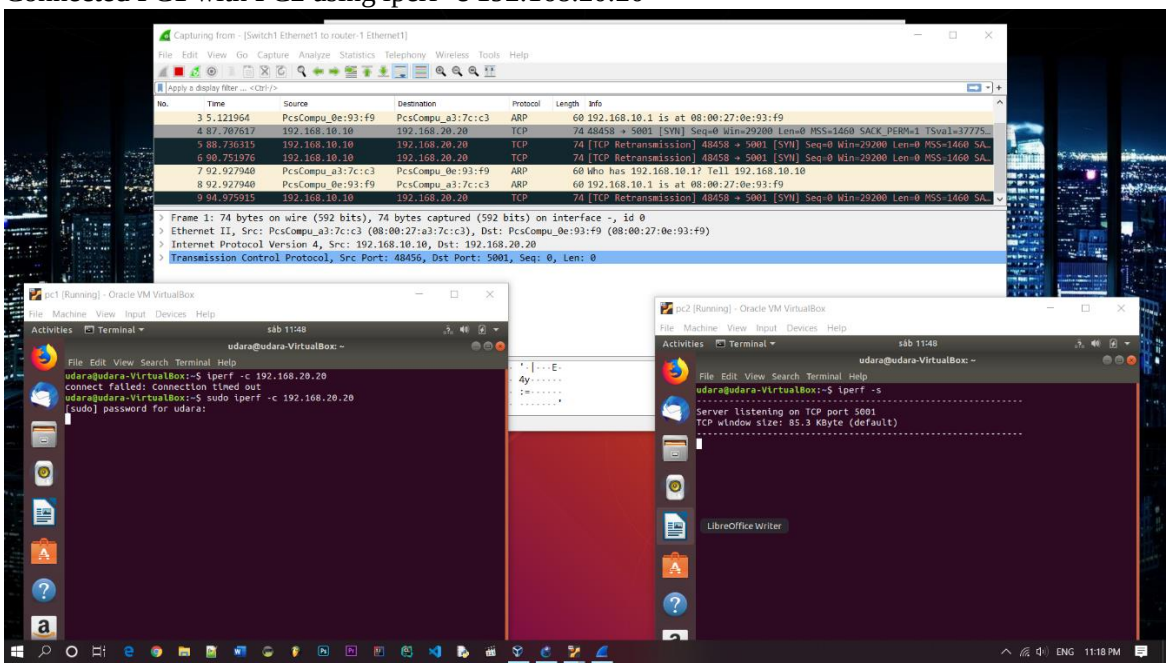
ix. Filtered the arp packets and identified the required details



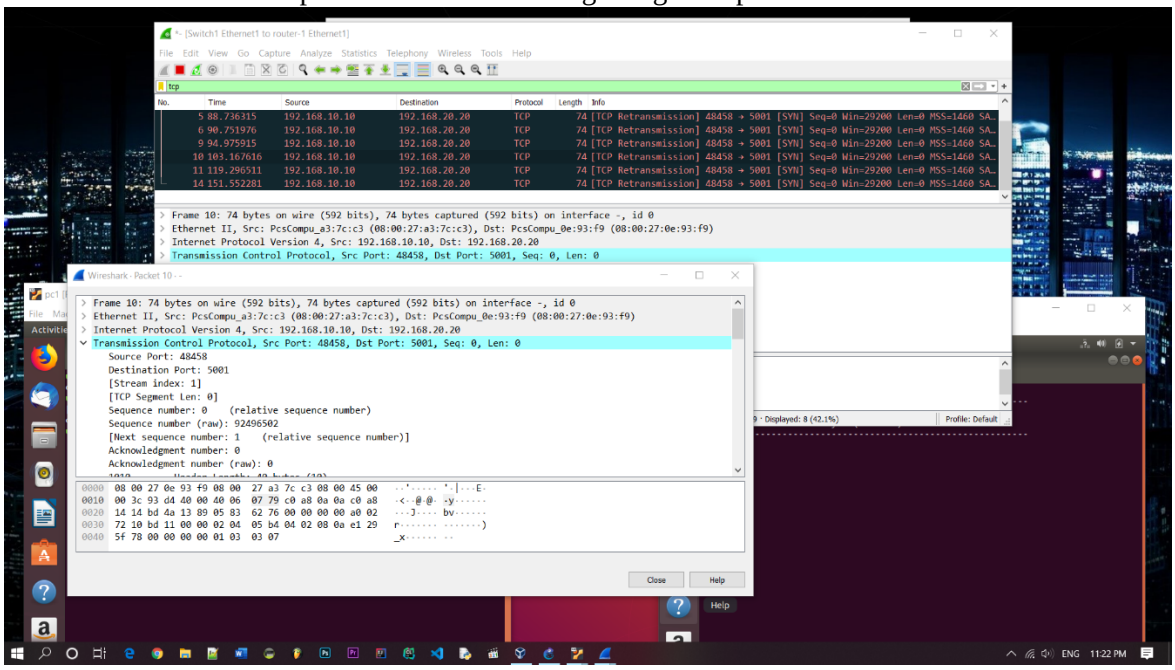
x. Using iperf -s command iperf service was started in PC2



xi. Connected PC1 with PC2 using iperf -c 192.168.20.20



xii. Wireshark showed some packets were transferring using TCP protocol



xiii. Found this information inside details

i. Source Port: 48456

ii. Destination Port: 5001

iii. Maximum Segment Size: 1460