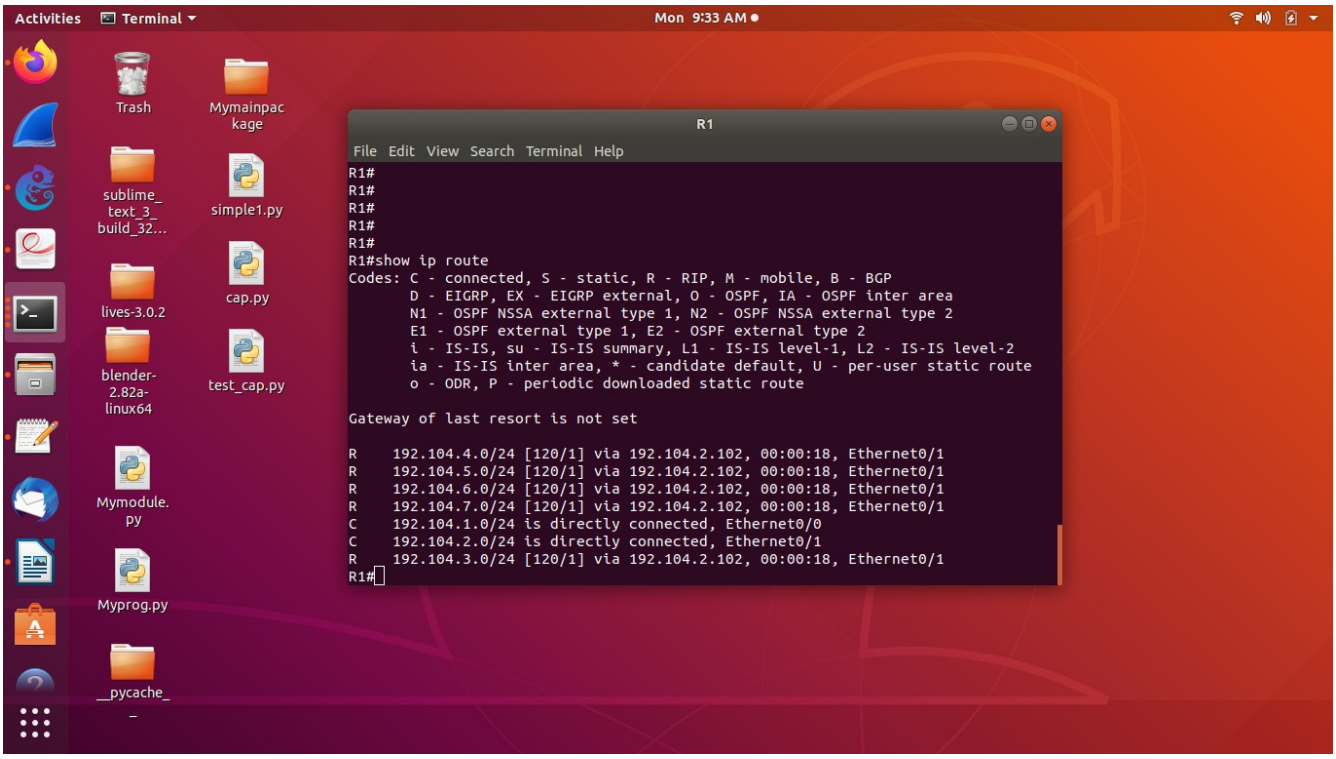
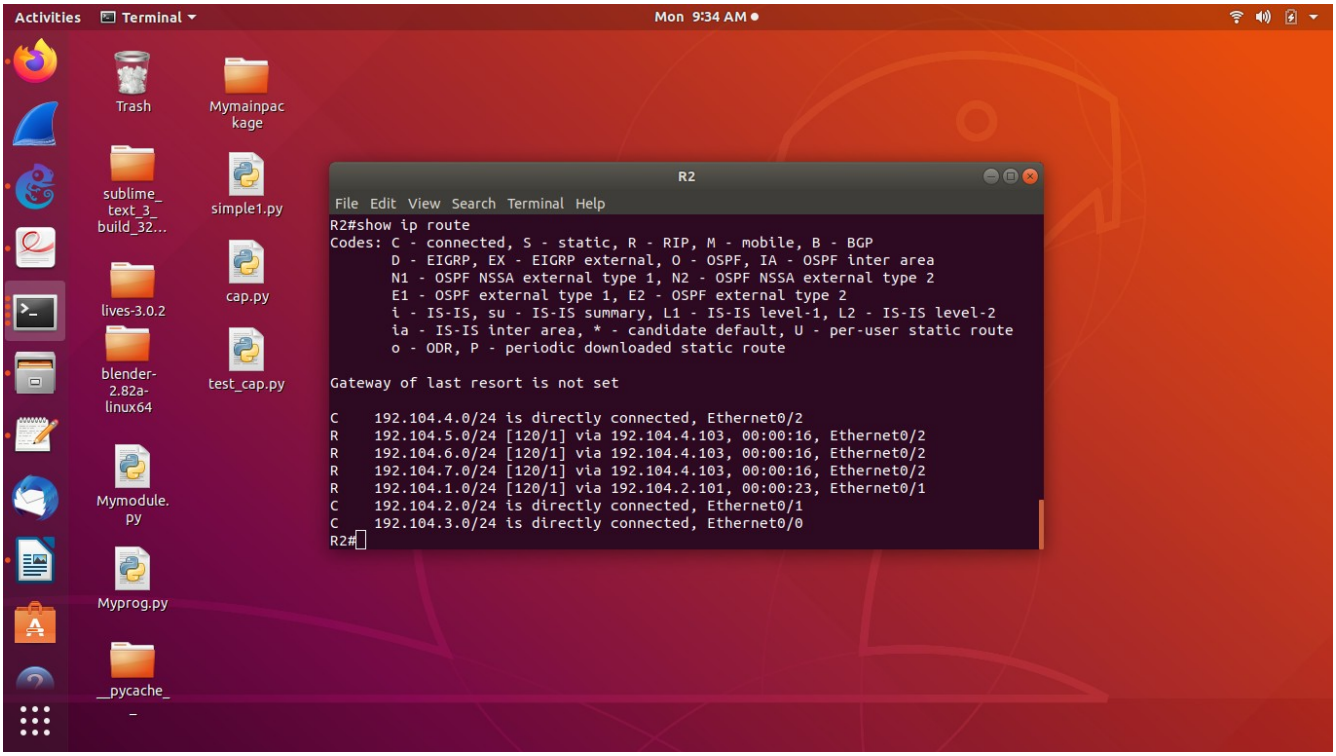
Show ip route :-

1) R1:



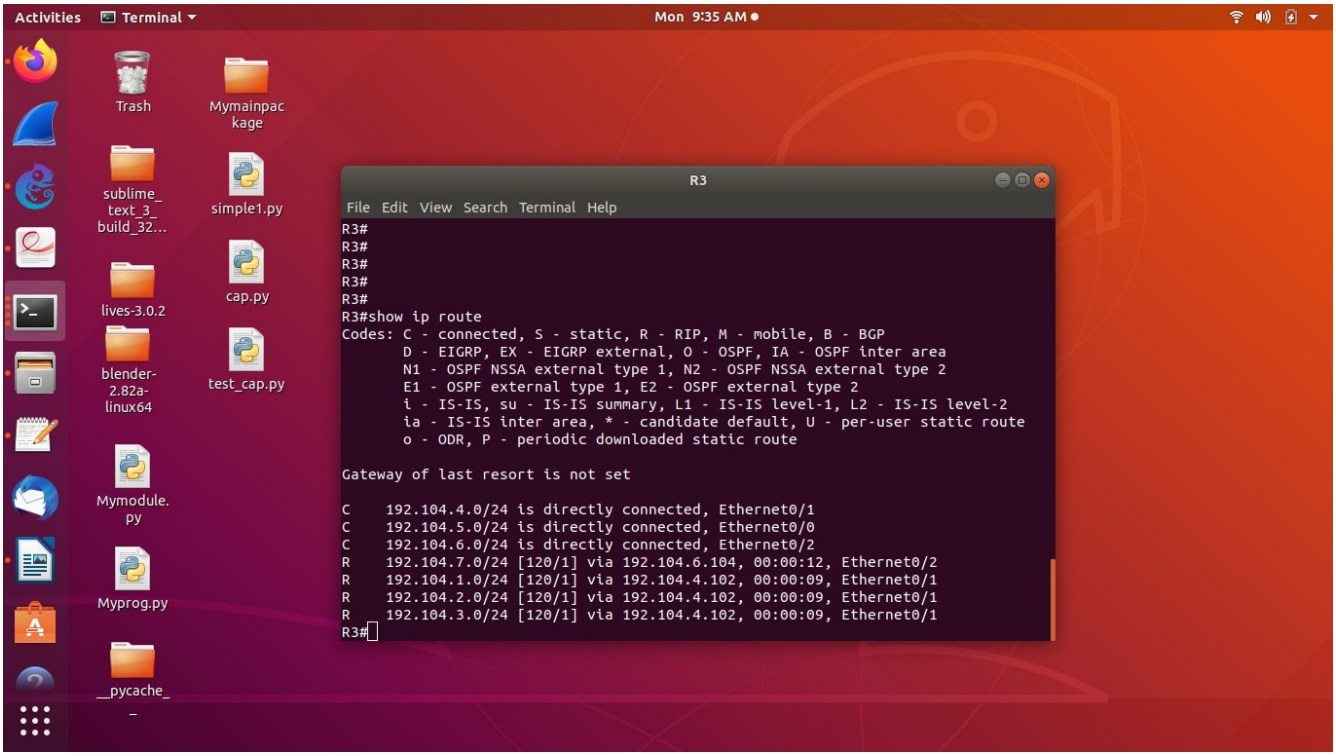
R1 is directly connected(C) to 192.104.1.0 network, which it shares with P1. It is connected to R2 via 192.104.2.0 network.
The information of all the other networks is seen by it via RIP packets, sent to it via Ethernet0/1 interface, which is the interface via which it connects to R2.

2) R2:



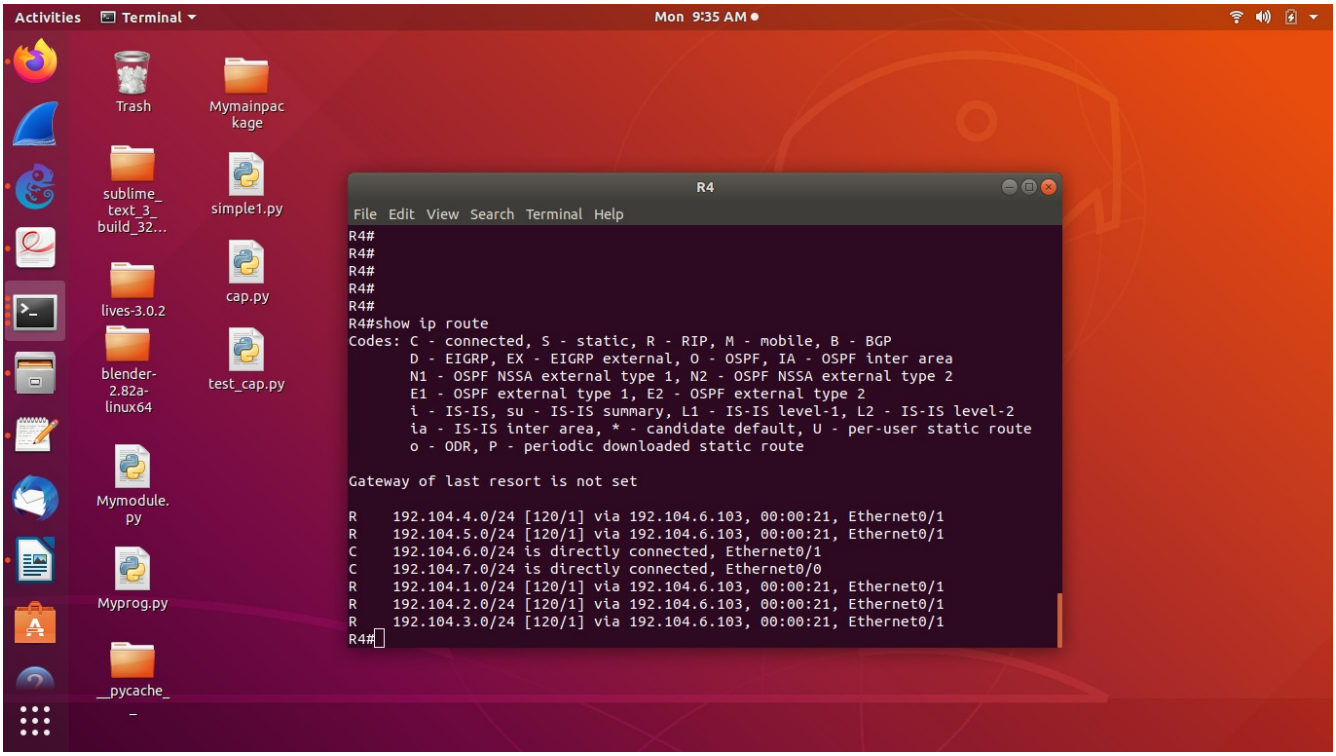
R2 is directly connected(C) to 192.104.3.0 network, which it shares with P2. It is connected to R1 via 192.104.2.0 network, and to R3 via 192.104.4.0 network.
The information of 192.104.1.0 network is sent to it via R1's RIP packets, which it gets by Ethernet0/1 interface.
Info of the other networks is got by R3's RIP packets, and it is connected to R3 via Ethernet0/2 interface.

3) R3:



R3 is directly connected(C) to 192.104.5.0 network, which it shares with P3. It is connected to R2 via 192.104.4.0 network, and to R4 via 192.104.6.0 network.
The information of 192.104.1.0, 192.104.2.0 and 192.104.3.0 network is sent to it via R2's RIP packets, which it gets by Ethernet0/1 interface.
Info of 192.104.7.0 is got by R4's RIP packets, and it is connected to R4 via Ethernet0/2 interface.

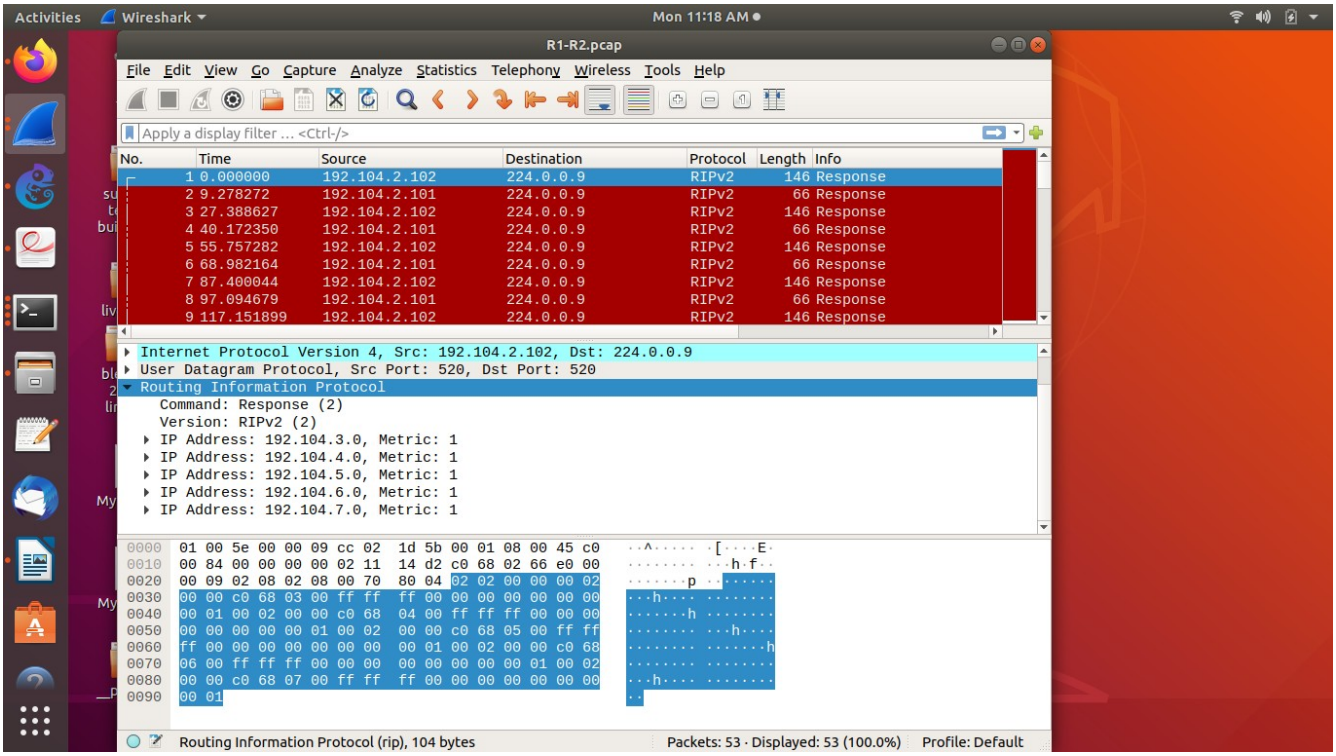
4) R4:



R4 is directly connected to P4 via Ethernet0/0 via 192.104.7.0 , and its directly connected to R3 via Ethernet0/1 via 192.104.6.0.
All the other networks are again got via Ethernet0/1 interface.

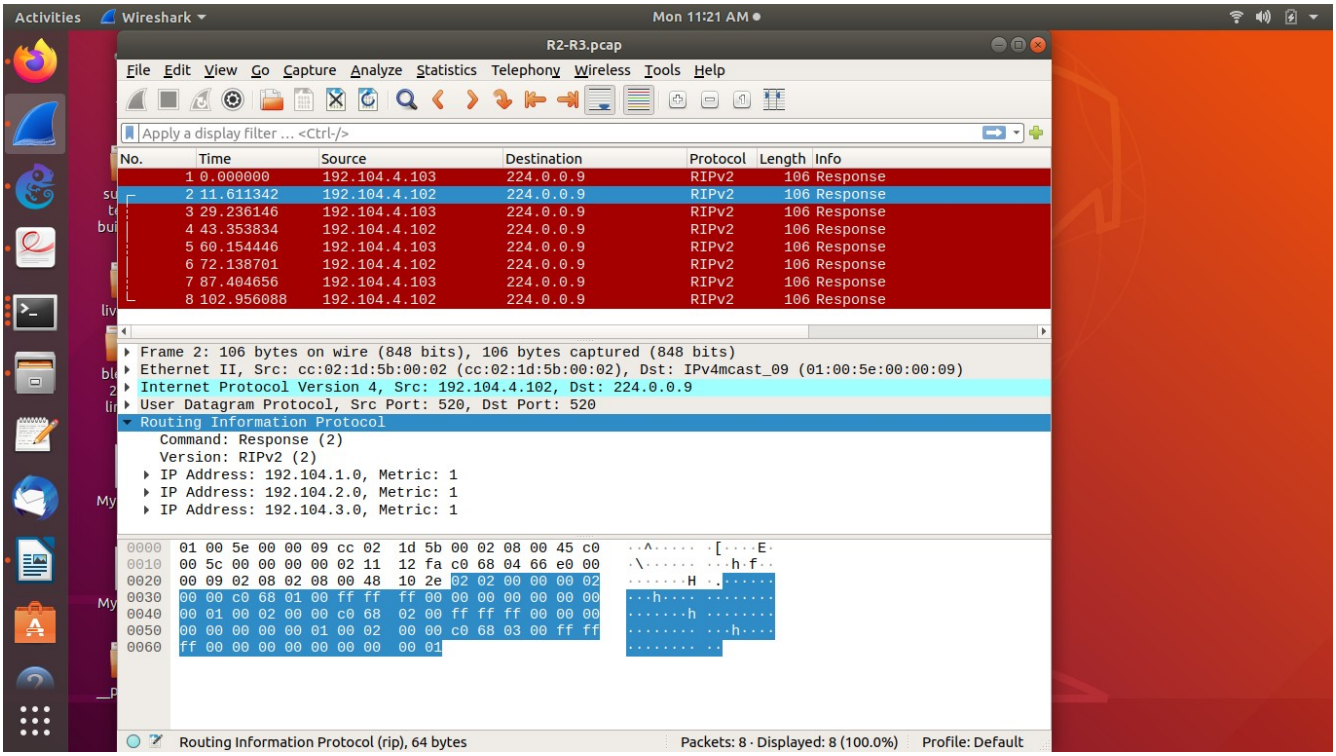
RIP message contents from R2 :-

1) Between R1-R2:



This packet is coming from 192.104.2.102, which is the gateway via which R2 connects to R1's 192.104.2.101.
RIPv2 is protocol used. Destination is 224.0.0.9, which means 'multicast'.
This has info of all the other networks which are present in its routing table and not in R1's, and so, need to be told to R1 via this RIP packet. These networks are 192.104.3.0, 192.104.4.0, 192.104.5.0, 192.104.6.0, 192.104.7.0.

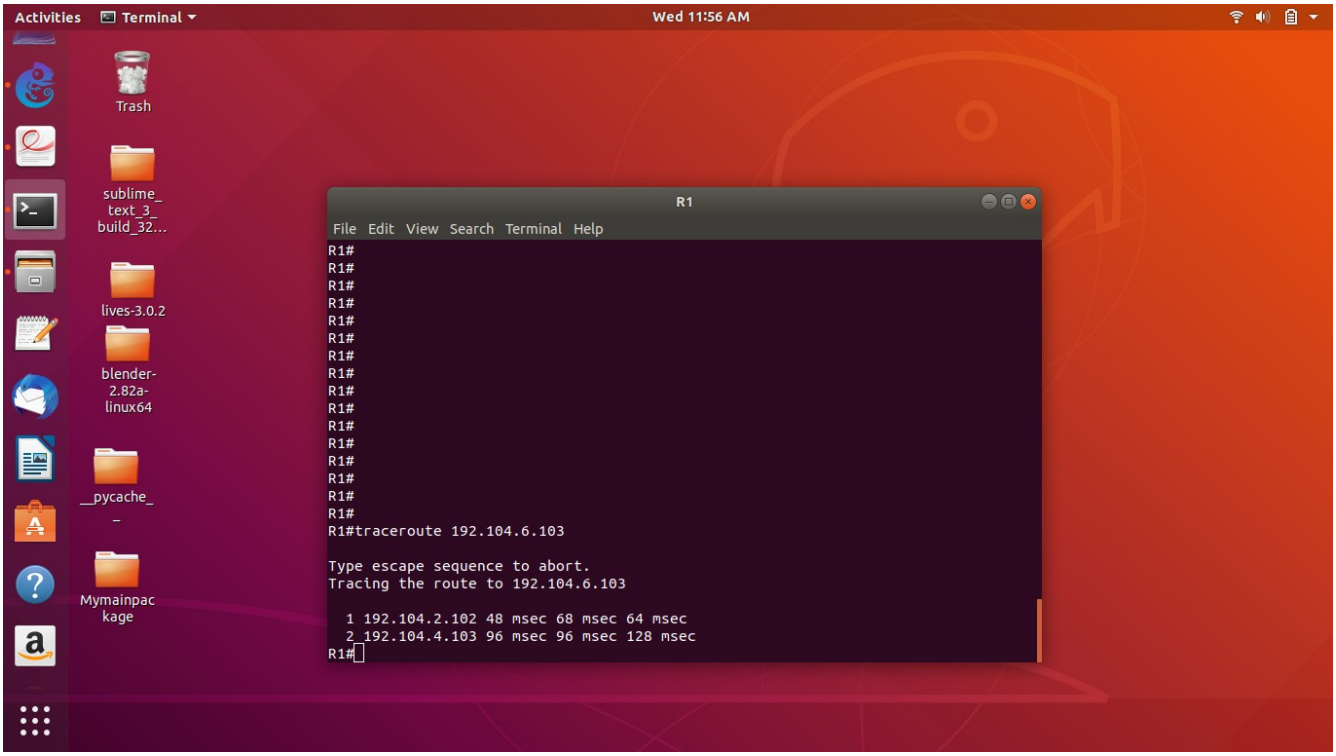
2) R2-R3:



R3 is unaware of the networks 192.104.1.0 (which is the network between P1 and R1), 192.104.2.0 (which is the network between R1 and R2), and 192.104.3.0 (which is the network between R2 and P2). It gets this info from R2 via its this RIP packet. But the info of 192.104.7.0 is not given to it by R2, but by R4's RIP packet.

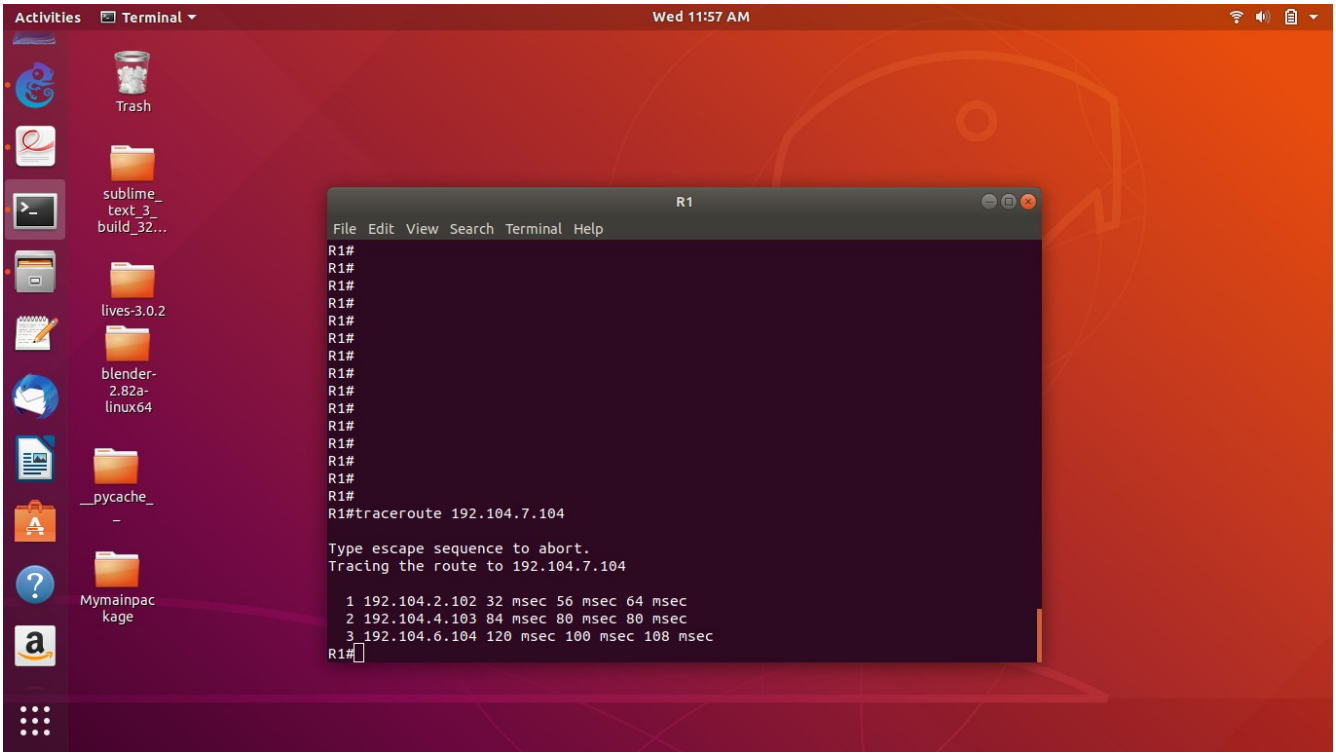
Traceroute on R1's interface:-

1) To R3's 192.104.6.103:-



Thus 192.104.6.103 is reached from R1, via, 192.104.2.102, which is R2's gateway from which connects it to R1; and from R2's 192.104.4.102, we can reach R3's 192.104.4.103. Thus, we reached R3.
We can see that 3 test packets are fired from each router node, and all of them return.
On average double the time is taken for a packet to reach R3, and get back to R1 (96ms), as compared to time taken for a packet to reach R2 and come back to R1(48 ms). Thus, perhaps, it shows that the both the links have equal traversal speed.

2) To R4's 192.104.7.104:



From R1's 192.104.2.101, reach R2's 192.104.2.102, and from there, reach R3's 192.104.4.103, and from there you can reach R4 via 192.104.6.104.
3 packets are sent from each node.