CAN THO UNIVERSITY
COLLEGE OF ICT

COMPUTER NETWORK
(CT106H)

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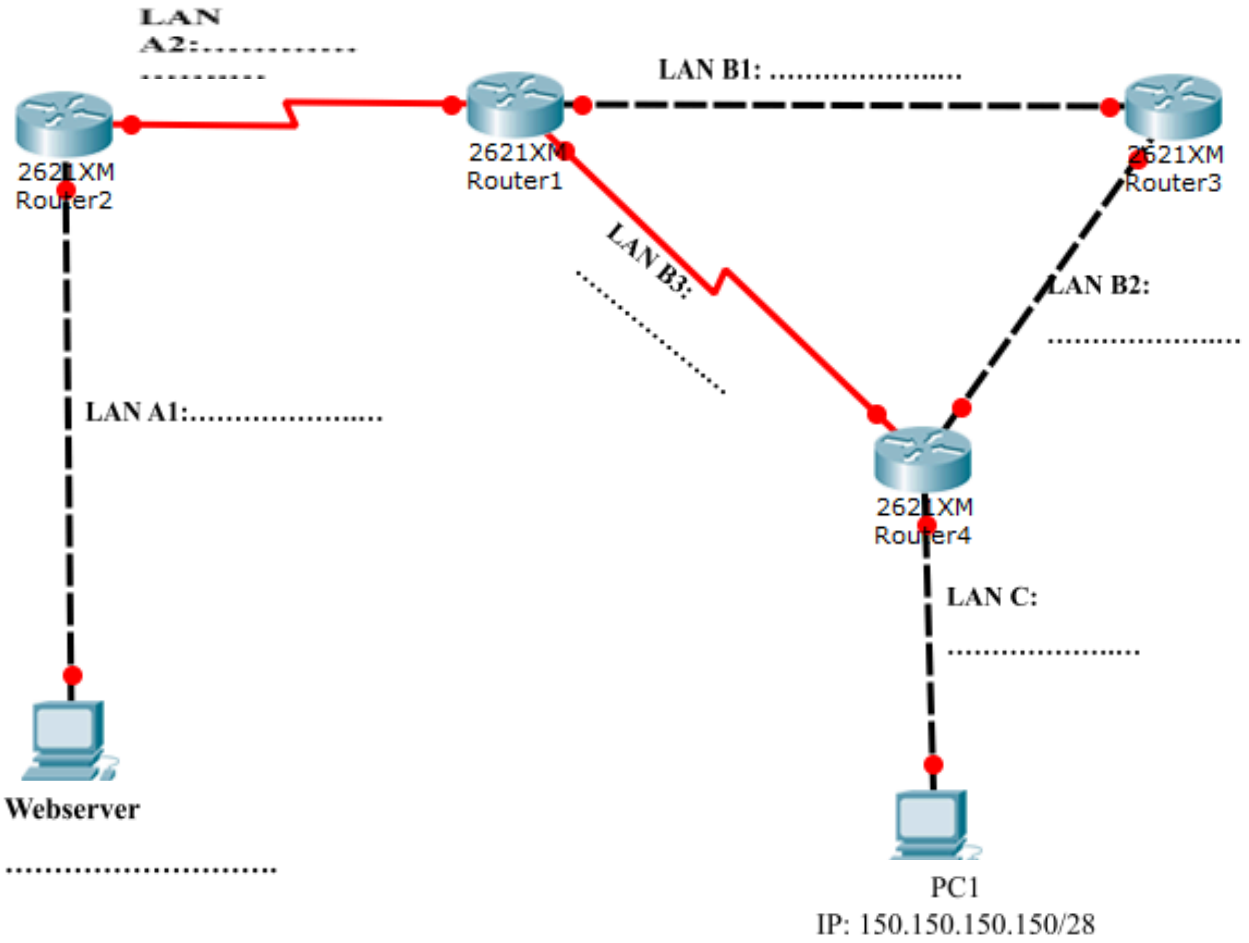
Group: M02

Construct a network system as follows:

- LAN A has a single network address of 156.156.156.0/24, using static routing. LAN A is divided into 2 subnets, consisting of A1 and A2. In addition, there is a Web server running a simple webpage showing "YEAH! My name is *YOUR_FULL_NAME*" (replace *YOUR_FULL_NAME* by your full name) in LAN A1.
- LAN B1 has a network address of 140.140.140.0/27, using the RIPv2 protocol.
- LAN B2 has a network address of 140.140.140.128/27, using the RIPv2 protocol.
- LAN B3 has a network address of 140.140.140.192/27, using the RIPv2 protocol.
- LAN C includes PC1 and Router 4. The IP address of PC1 is 150.150.150.150/28.

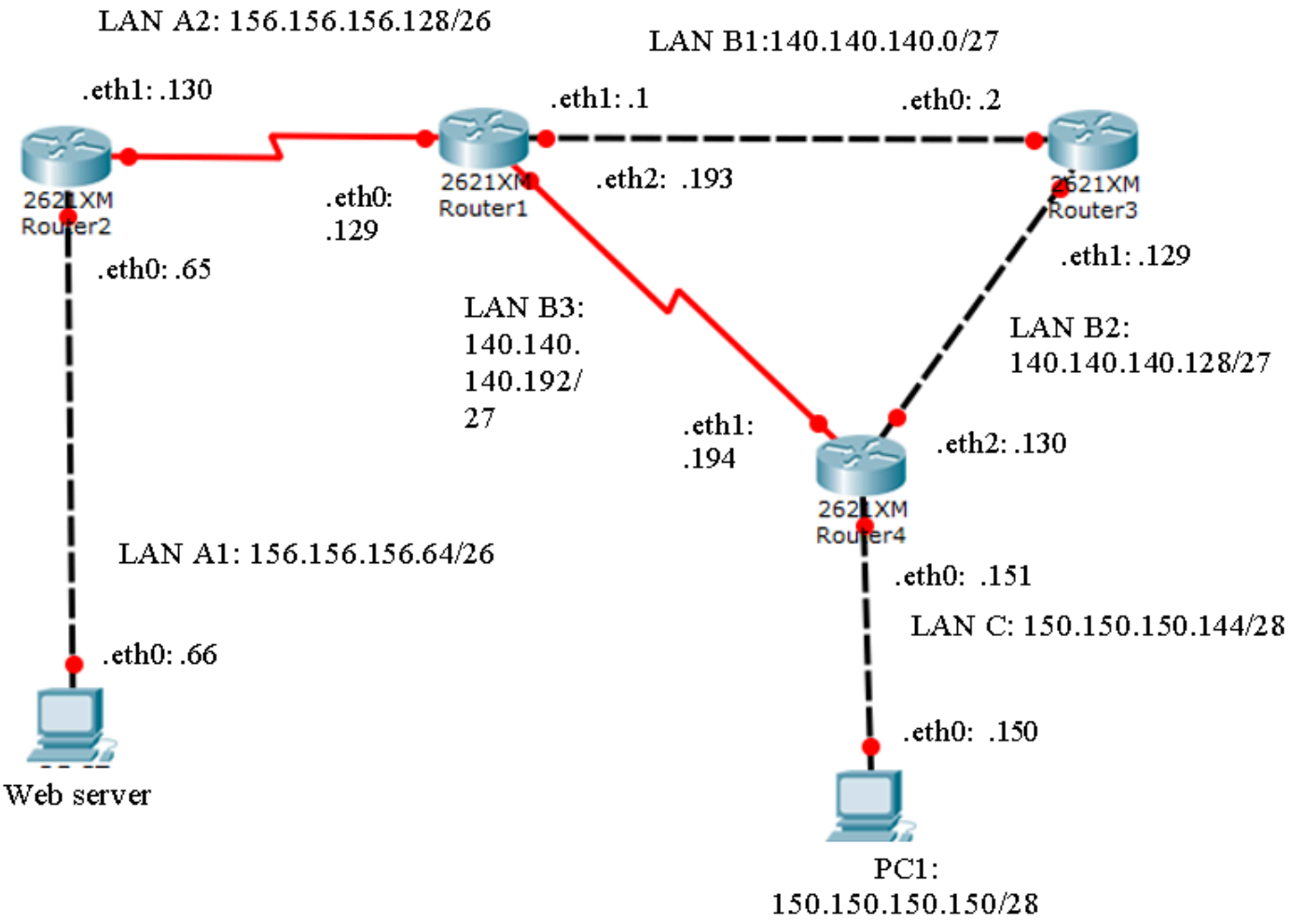


Please take screenshots showing:

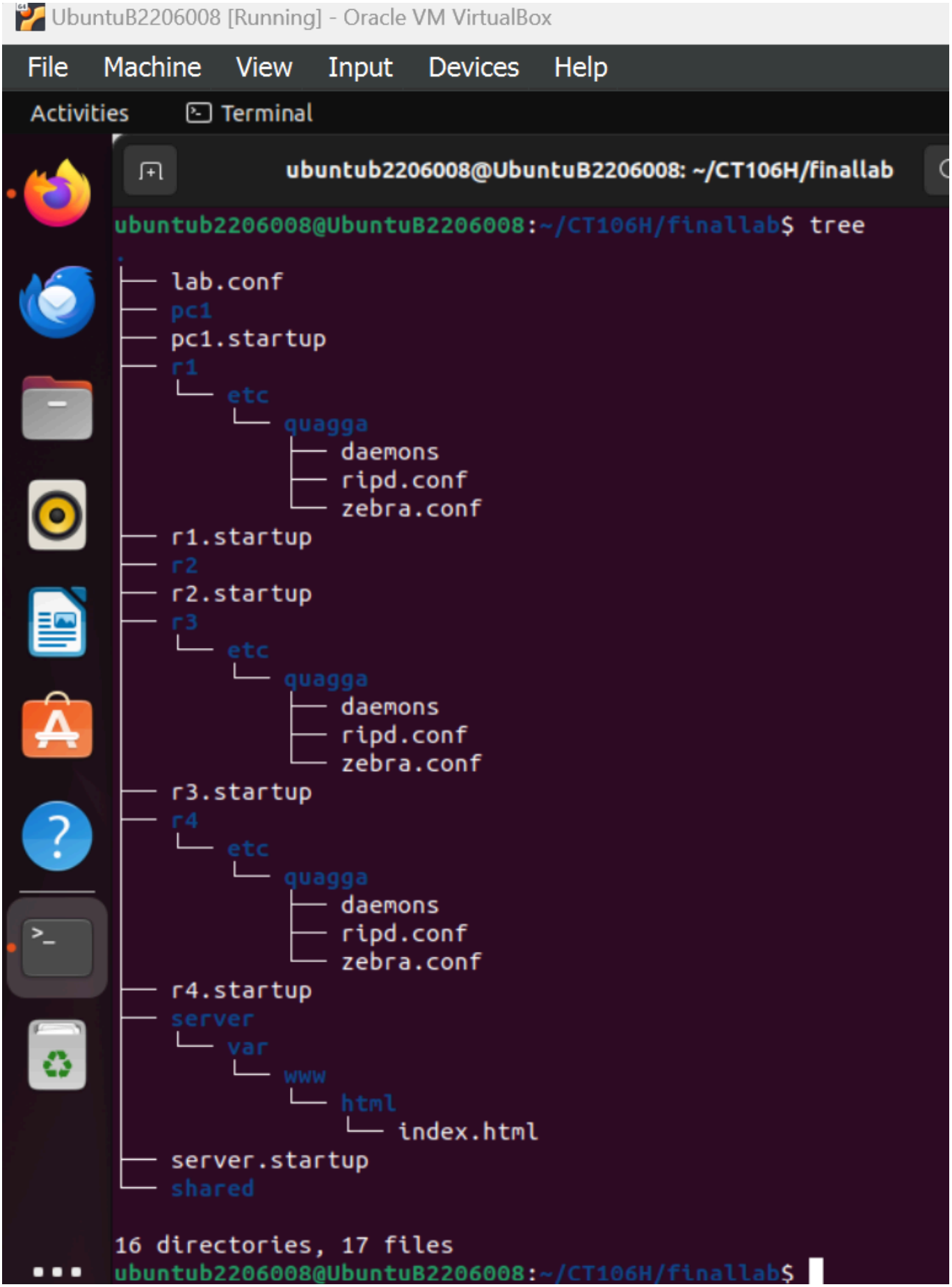
1. (0,5 point) select and assign the IP addresses for all of the Ethernet interfaces.
2. (1,0 point) the directory tree structure of this network system (using the ***tree*** command).
3. (1,0 point) the content of the file *lab.conf*?
4. (5,0 points) the content of all files **. startup*
5. (1,0 point) the contents of all files and commands you use in order to set up the web service on the web server
6. (0,5 point) the command line to check the hops for transmitting data from PC1 to the web server? List all hops between PC1 and the Web server.
7. (1,0 points) check the network system constructed (using the ***ping*** command).

**********GOOD LUCK**********

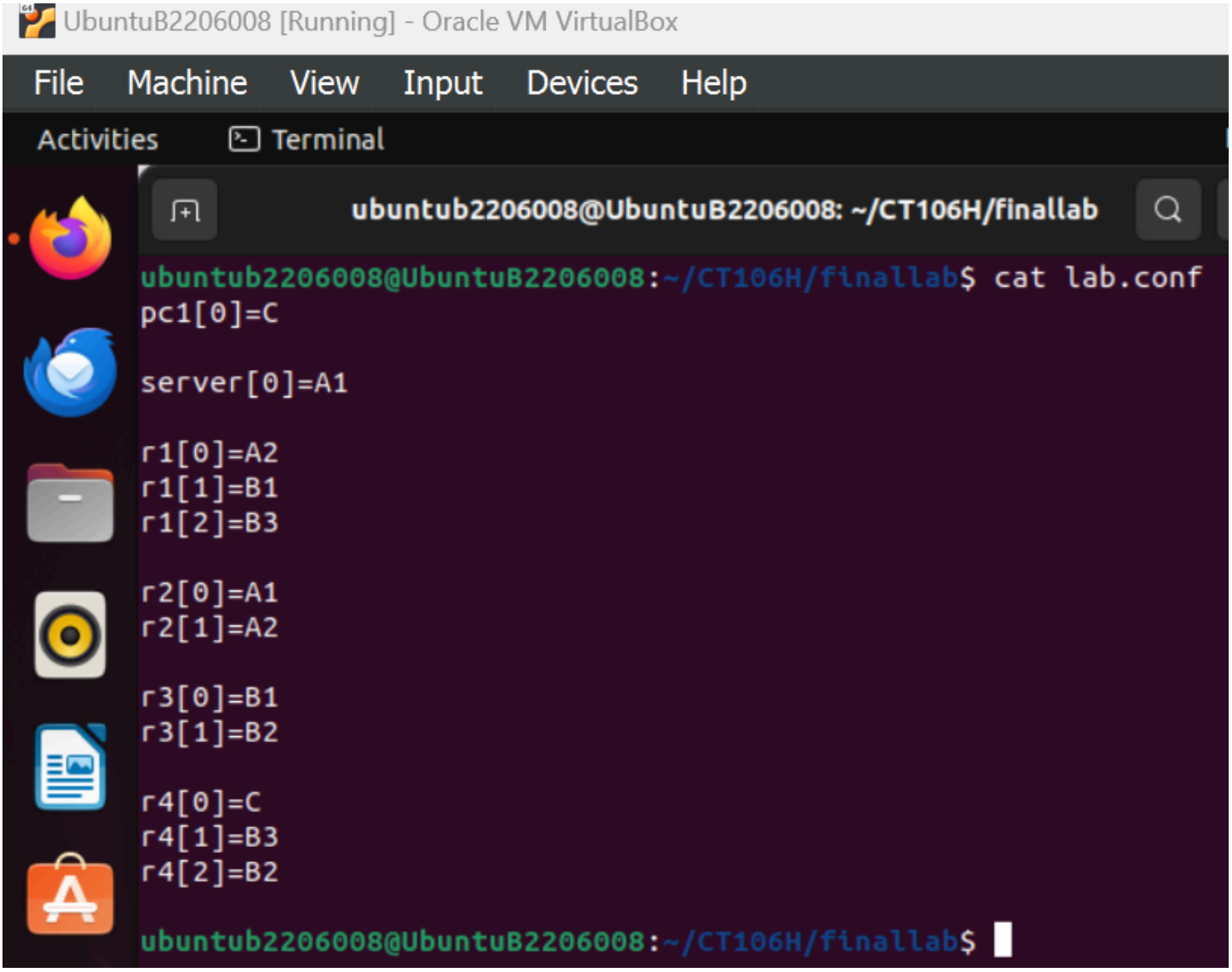
1. **Select and assign the IP addresses for all of the Ethernet interfaces.**



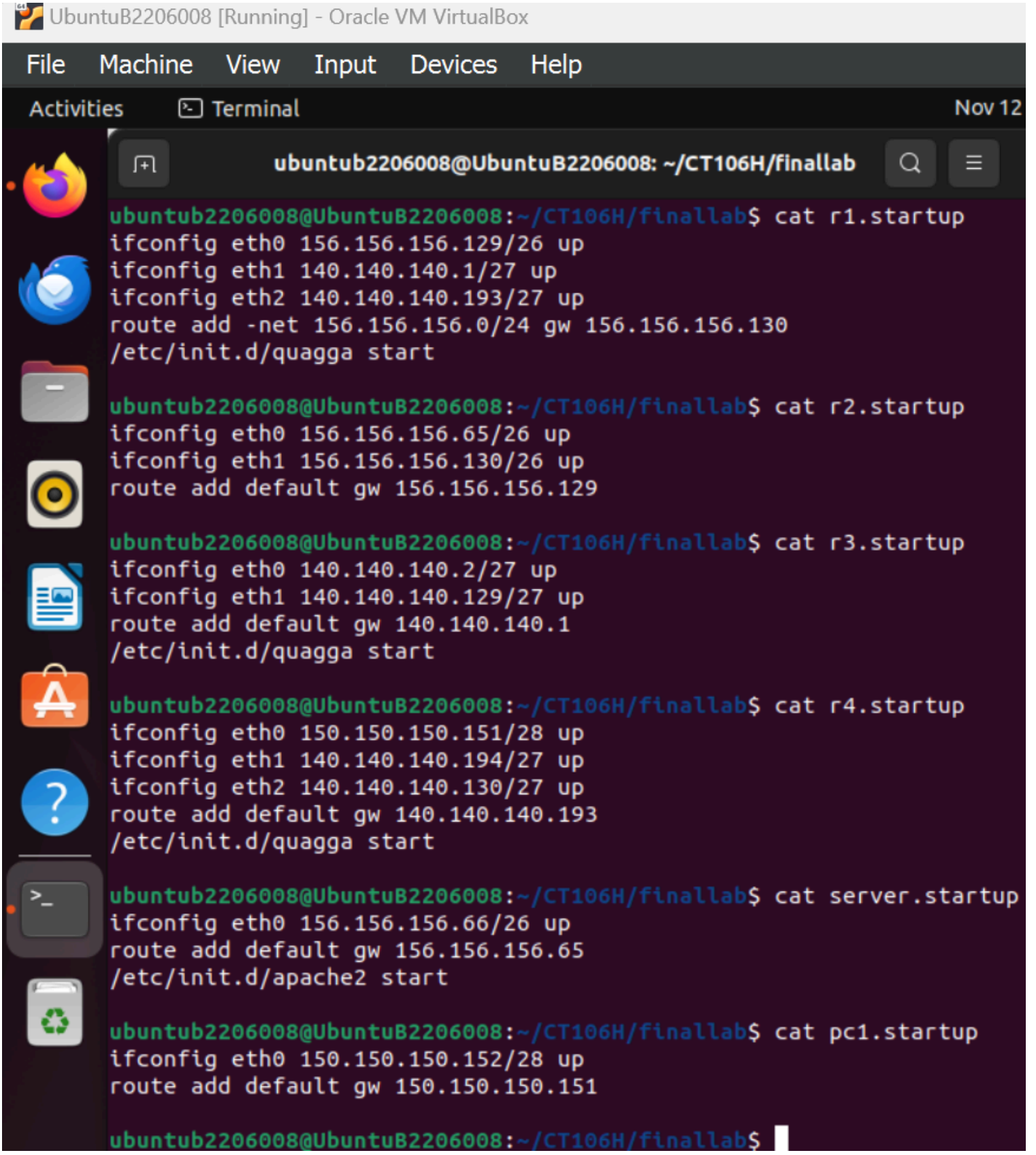
2. **The directory tree structure of this network system (using the *tree* command).**

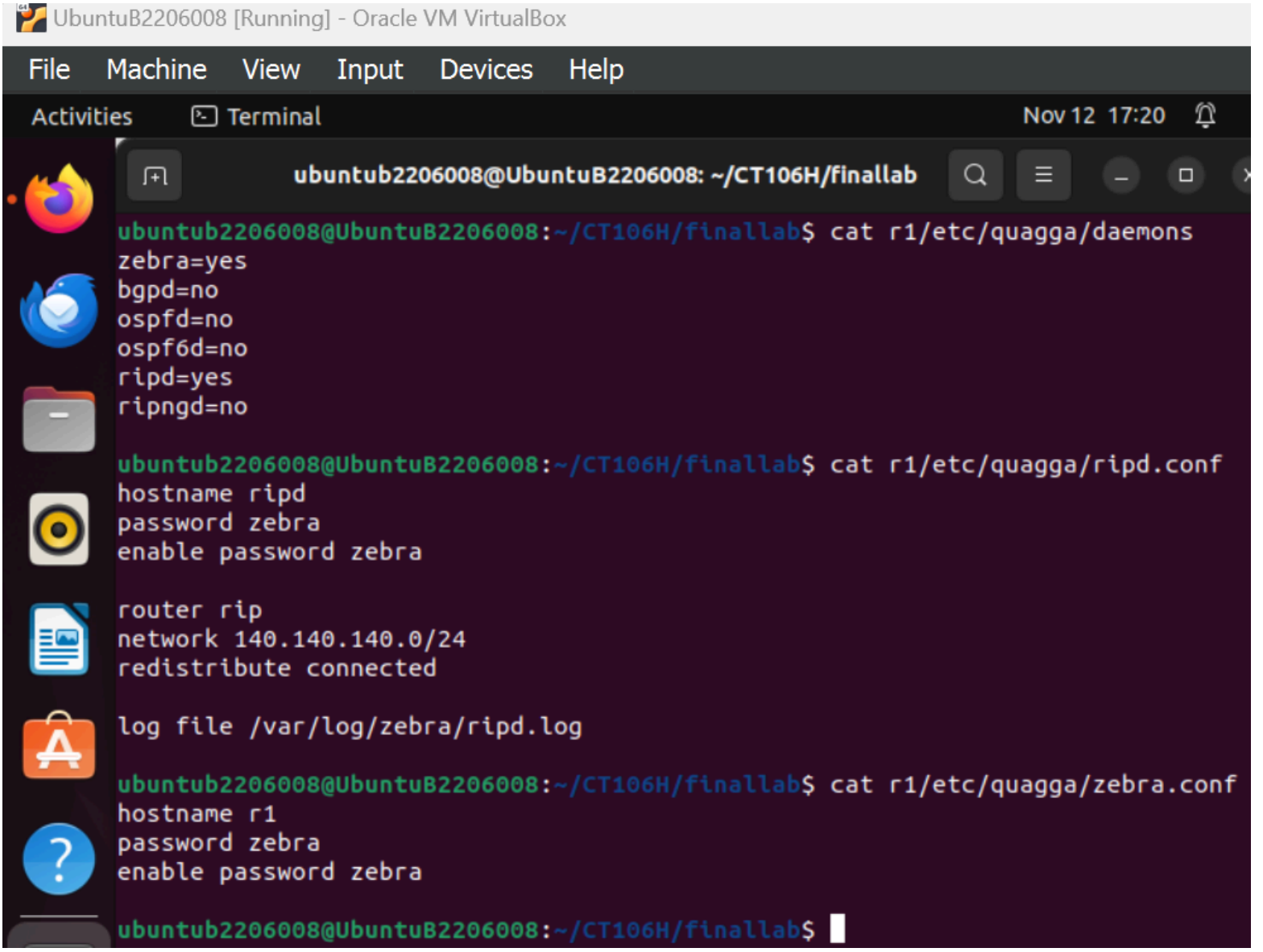


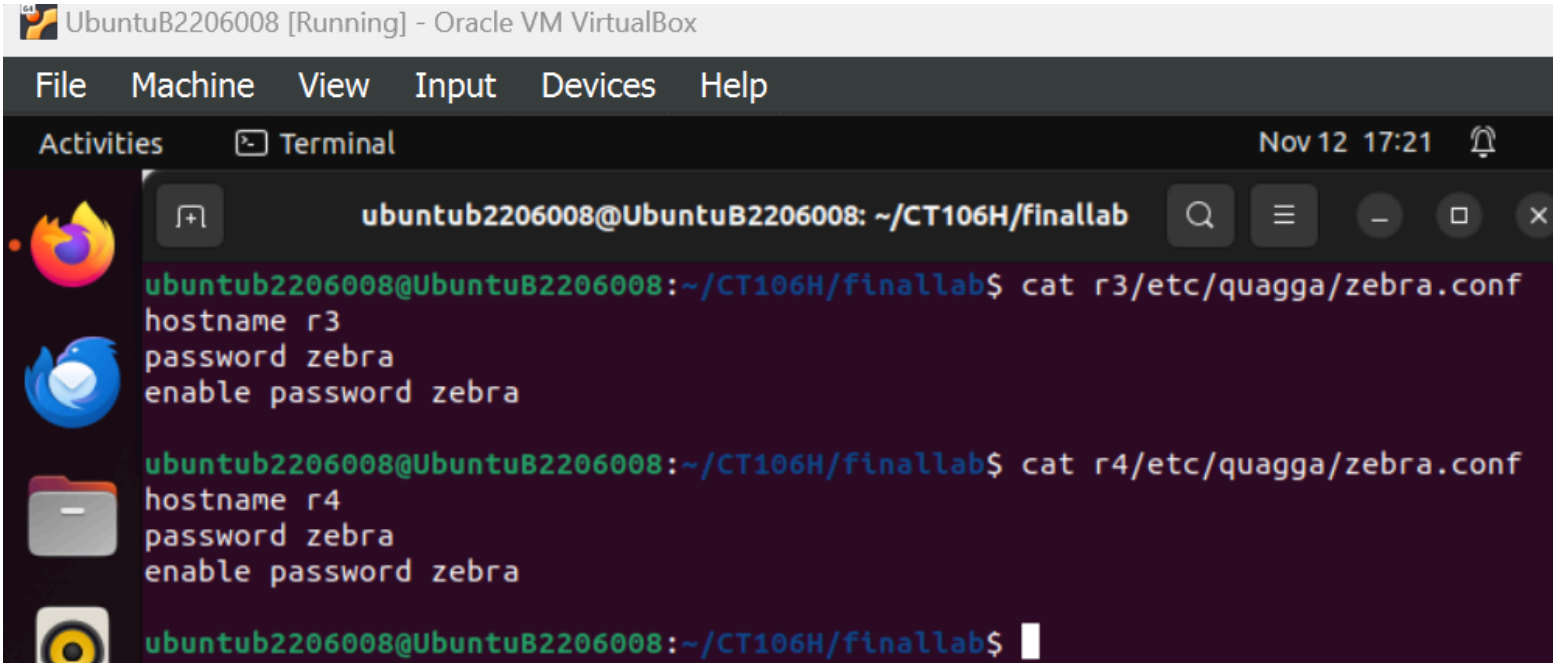
3. **The content of the file *lab.conf*?**



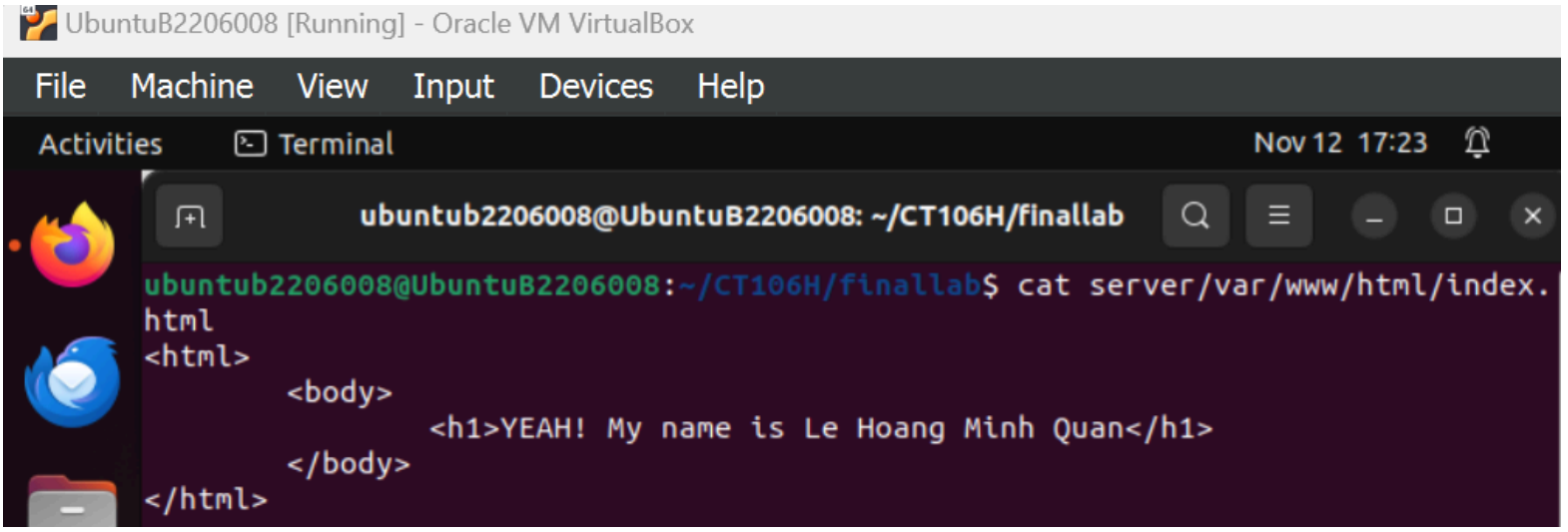
4. **The content of all files **. startup***



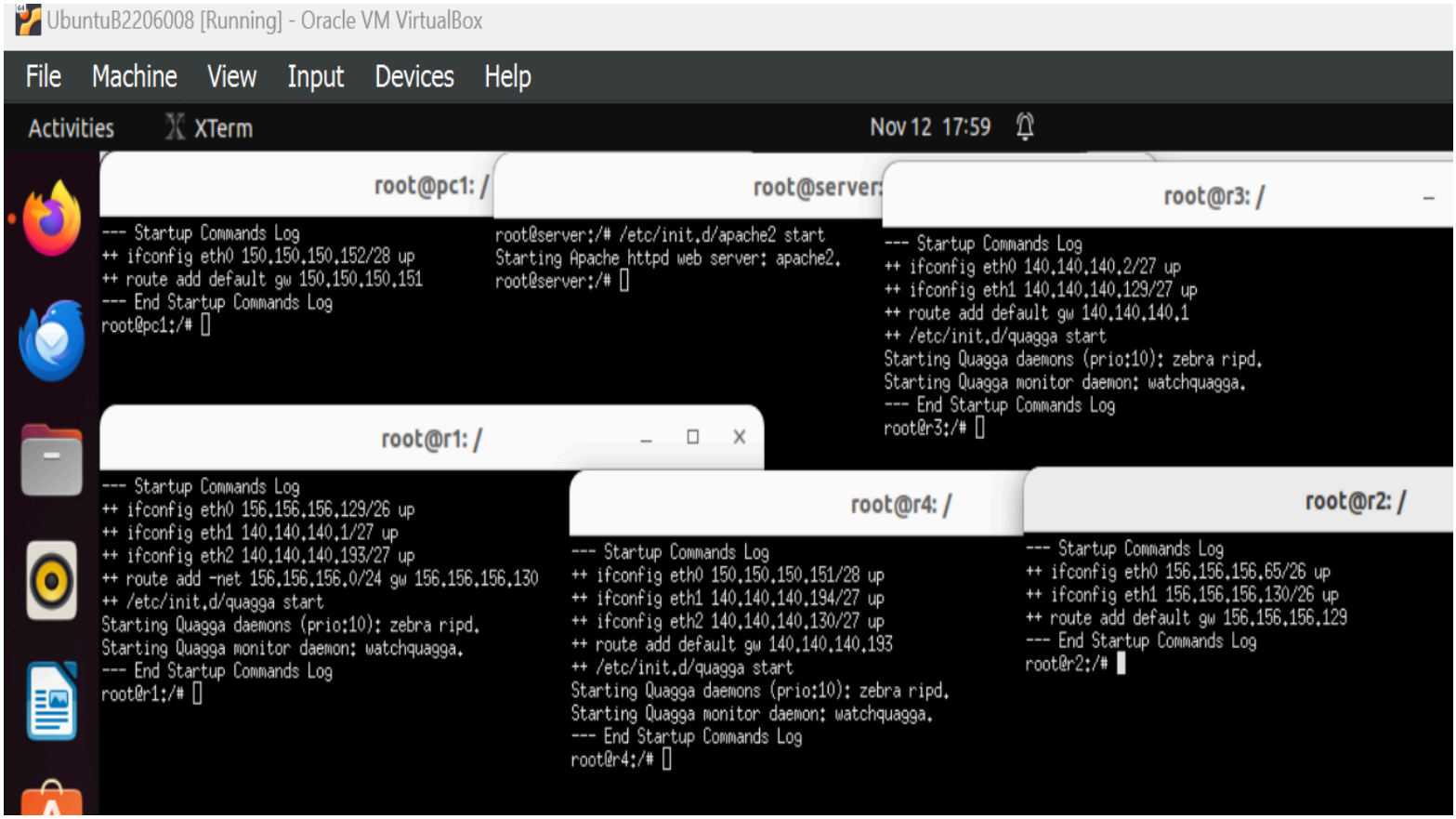

UbuntuB2206008 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 12 17:20
ubuntub2206008@UbuntuB2206008: ~/CT106H/finallab
ubuntub2206008@UbuntuB2206008:~/CT106H/finallab$ cat r1/etc/quagga/daemons
zebra=yes
bgpd=no
ospfd=no
ospf6d=no
ripd=yes
ripngd=no
ubuntub2206008@UbuntuB2206008:~/CT106H/finallab$ cat r1/etc/quagga/ripd.conf
hostname ripd
password zebra
enable password zebra
router rip
network 140.140.140.0/24
redistribute connected
log file /var/log/zebra/ripd.log
ubuntub2206008@UbuntuB2206008:~/CT106H/finallab$ cat r1/etc/quagga/zebra.conf
hostname r1
password zebra
enable password zebra
ubuntub2206008@UbuntuB2206008:~/CT106H/finallab$


UbuntuB2206008 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Nov 12 17:21
ubuntub2206008@UbuntuB2206008: ~/CT106H/finallab
ubuntub2206008@UbuntuB2206008:~/CT106H/finallab$ cat r3/etc/quagga/zebra.conf
hostname r3
password zebra
enable password zebra
ubuntub2206008@UbuntuB2206008:~/CT106H/finallab$ cat r4/etc/quagga/zebra.conf
hostname r4
password zebra
enable password zebra
ubuntub2206008@UbuntuB2206008:~/CT106H/finallab$

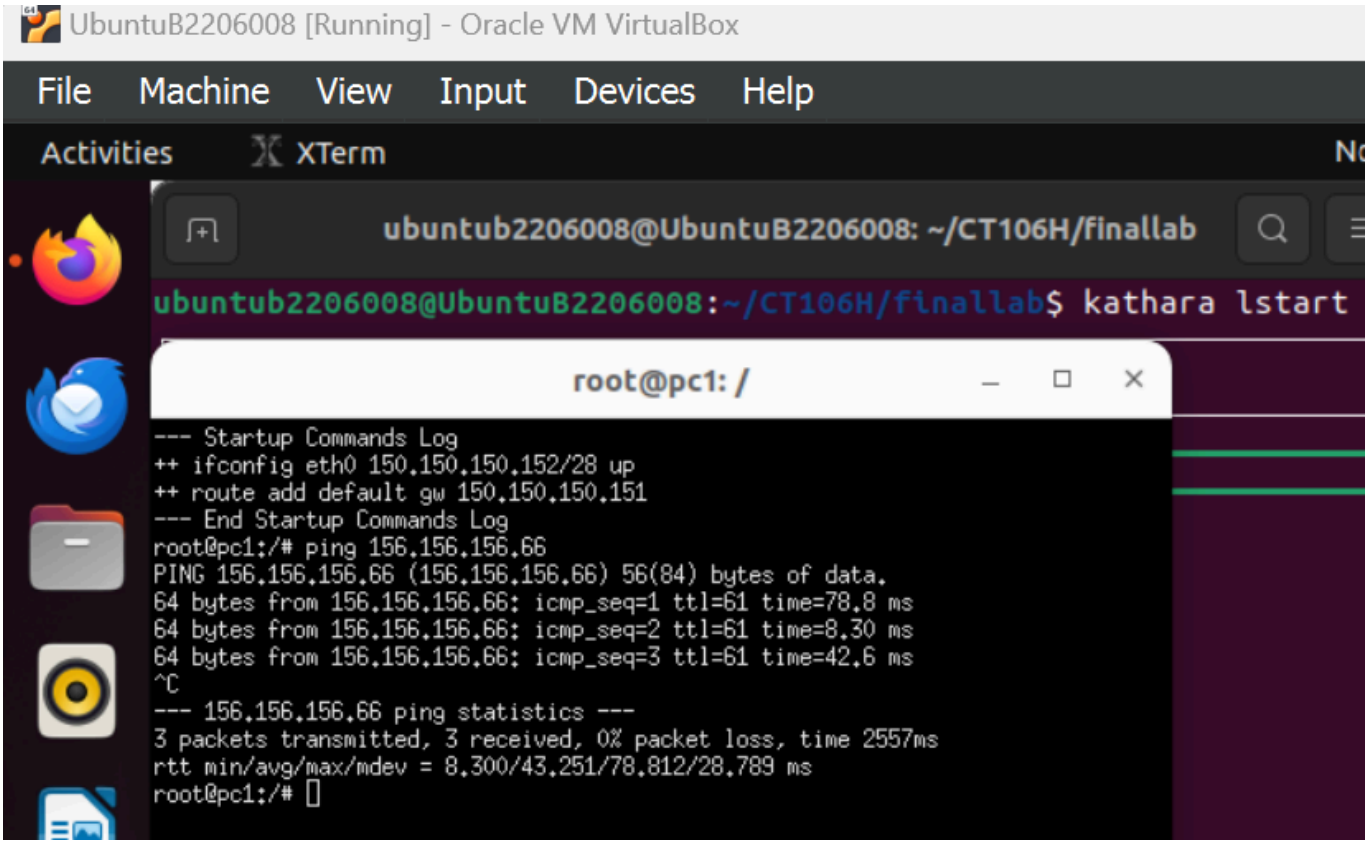
5. **The contents of all files and commands you use in order to set up the web service on the web server**
    - **Content of index.html file:**



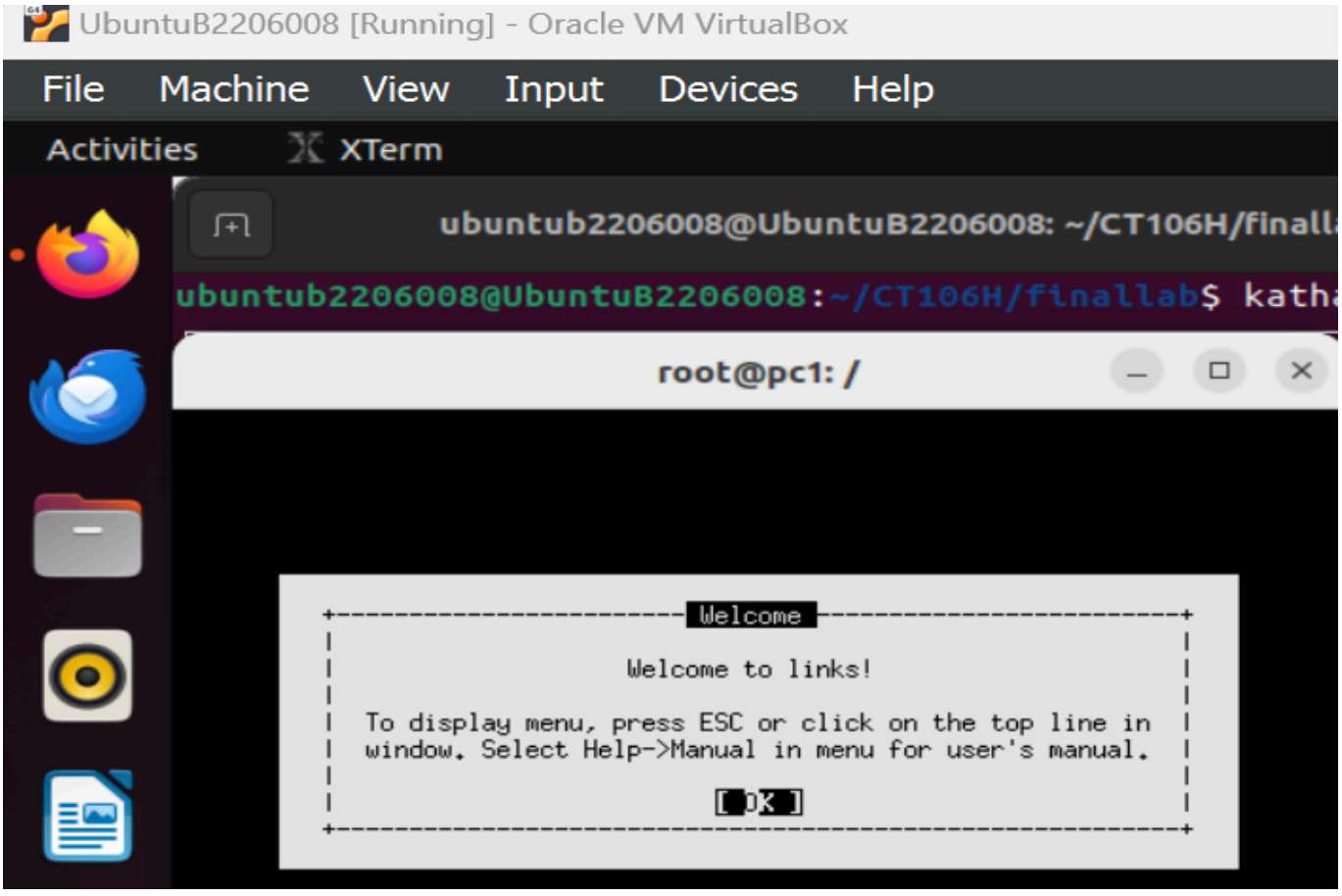
    - **kathara lstart**



    - **On pc1:**
        - ping to server: ping 156.156.156.66

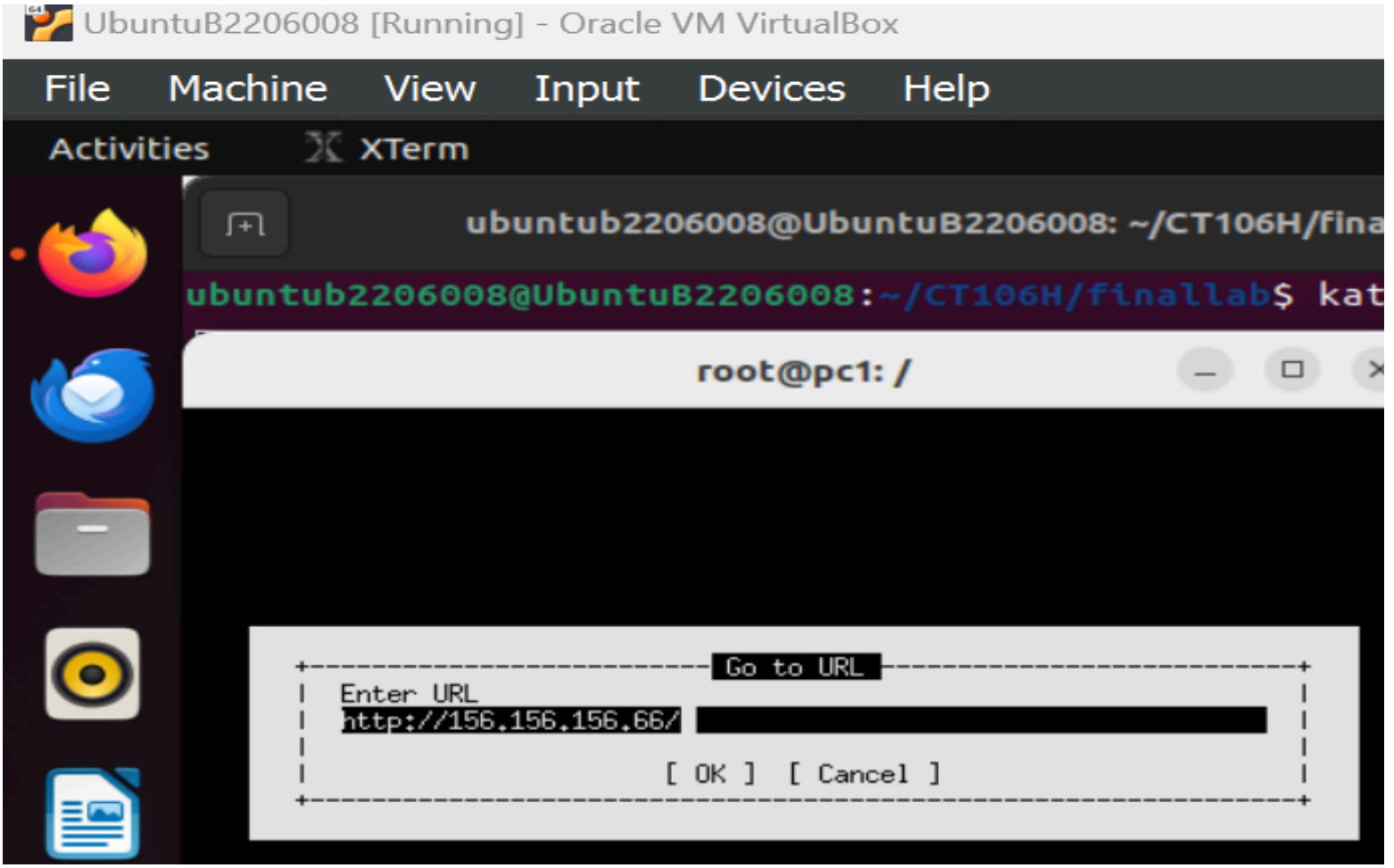


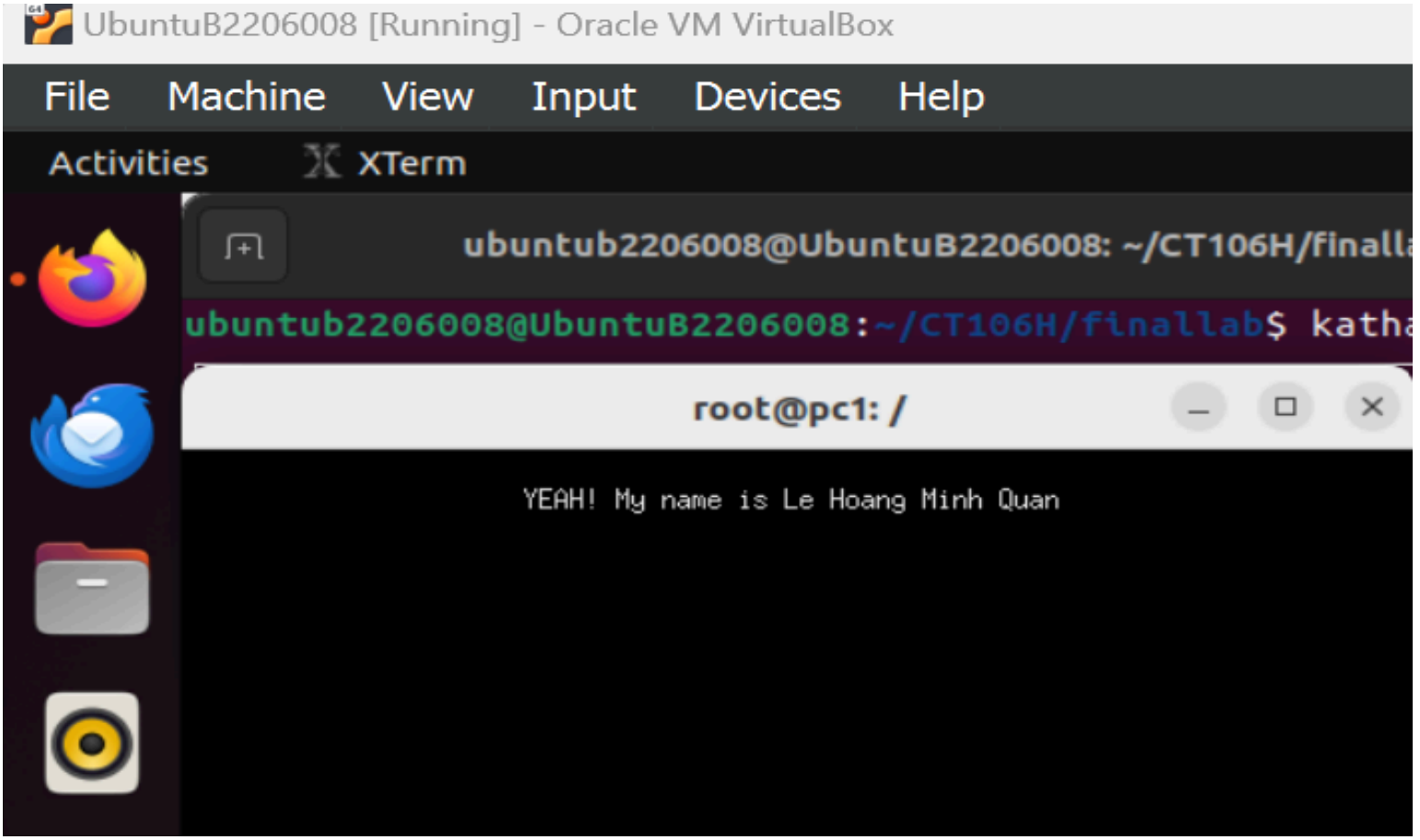
- **Use links command**
  - links



- **Go to server by URL**

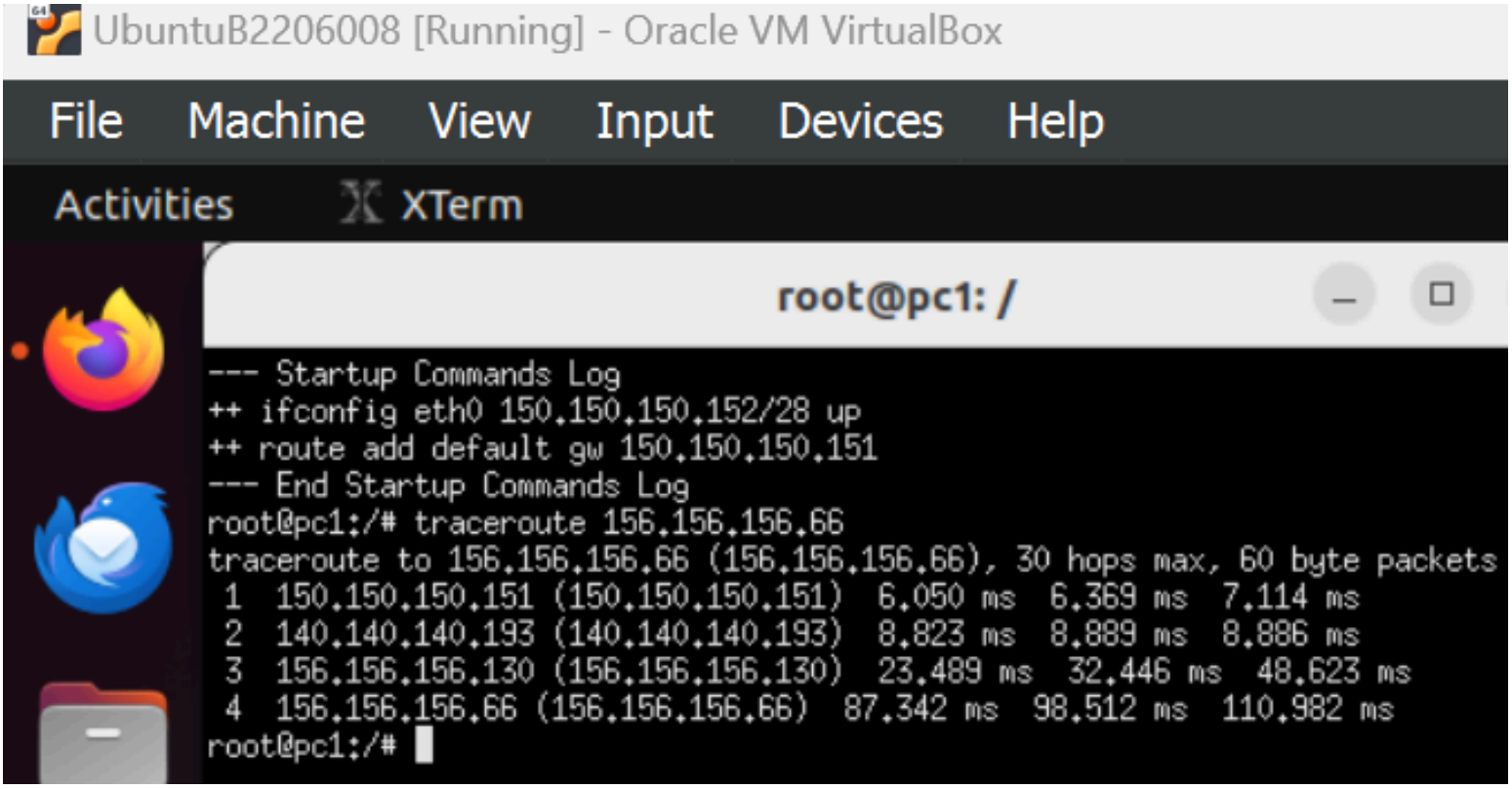
- Press “F10” then choose “Go to URL” and type the server address http://156.156.156.66/





6. **The command line to check the hops for transmitting data from PC1 to the web server? List all hops between PC1 and the Web server.**
   - **Use traceroute command**
   - **On pc1:**

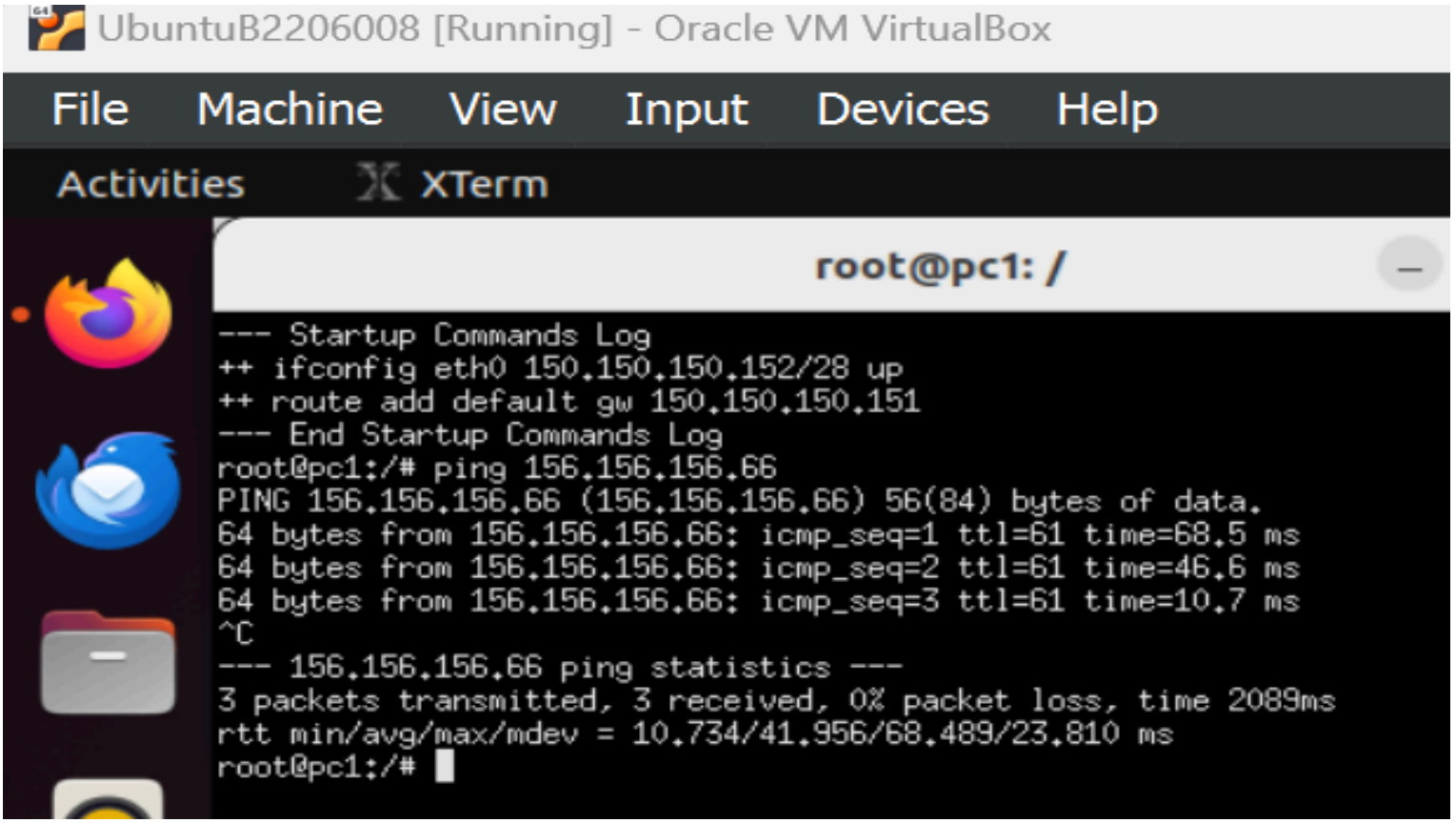
     traceroute 156.156.156.66



- **Hop between pc1 and server:**
  4 hops:
  Hop 1: 150.150.150.151 (r4 eth0)
  Hop 2: 140.140.140.193 (r1 eth2)
  Hop 3: 156.156.156.130 (r2 eth1)
  Hop 4: 156.156.156.66 (server eth0)

7. **Check the network system constructed (using the *ping* command).**

- **On pc1:**
  - ping 156.156.156.66



- traceroute 156.156.156.66