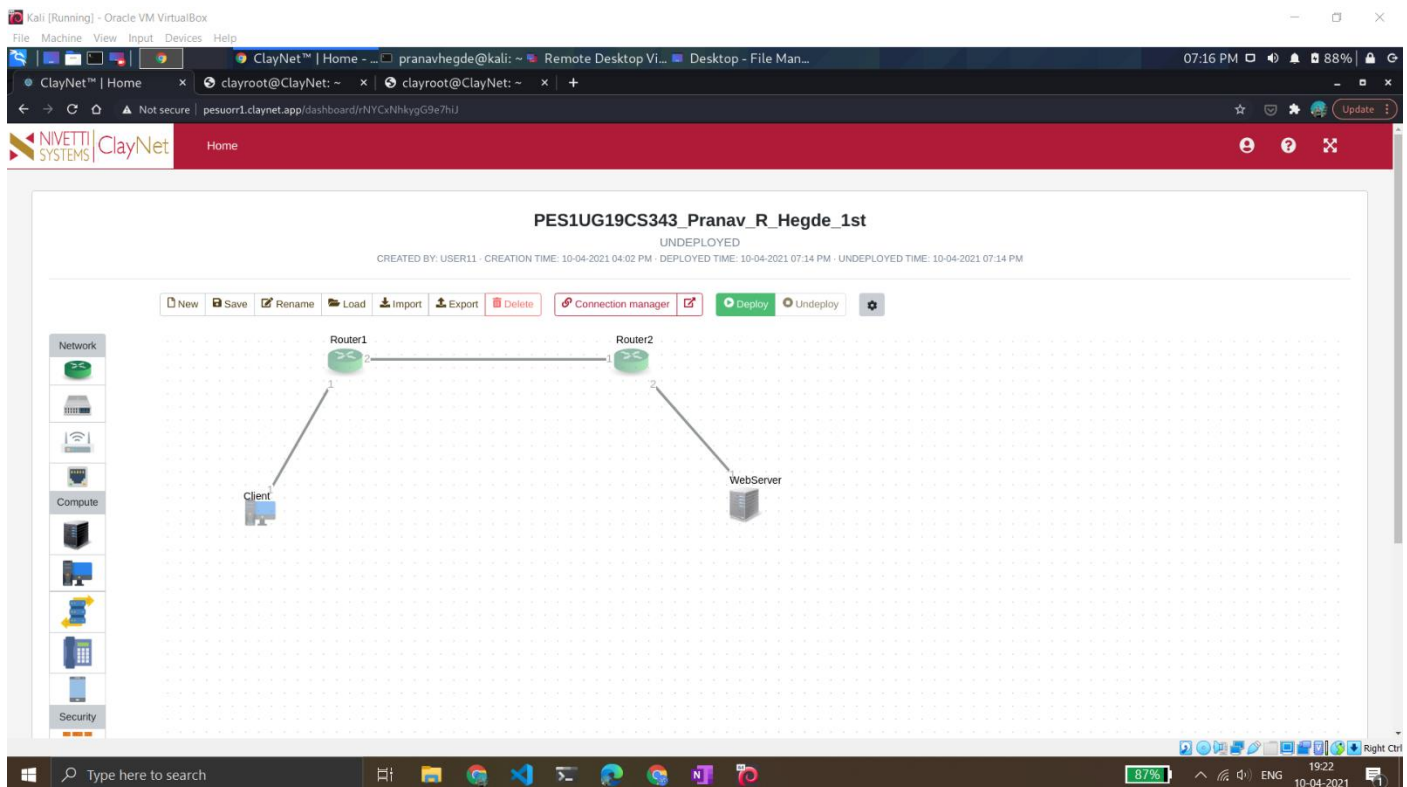


Computer networks laboratory week 8

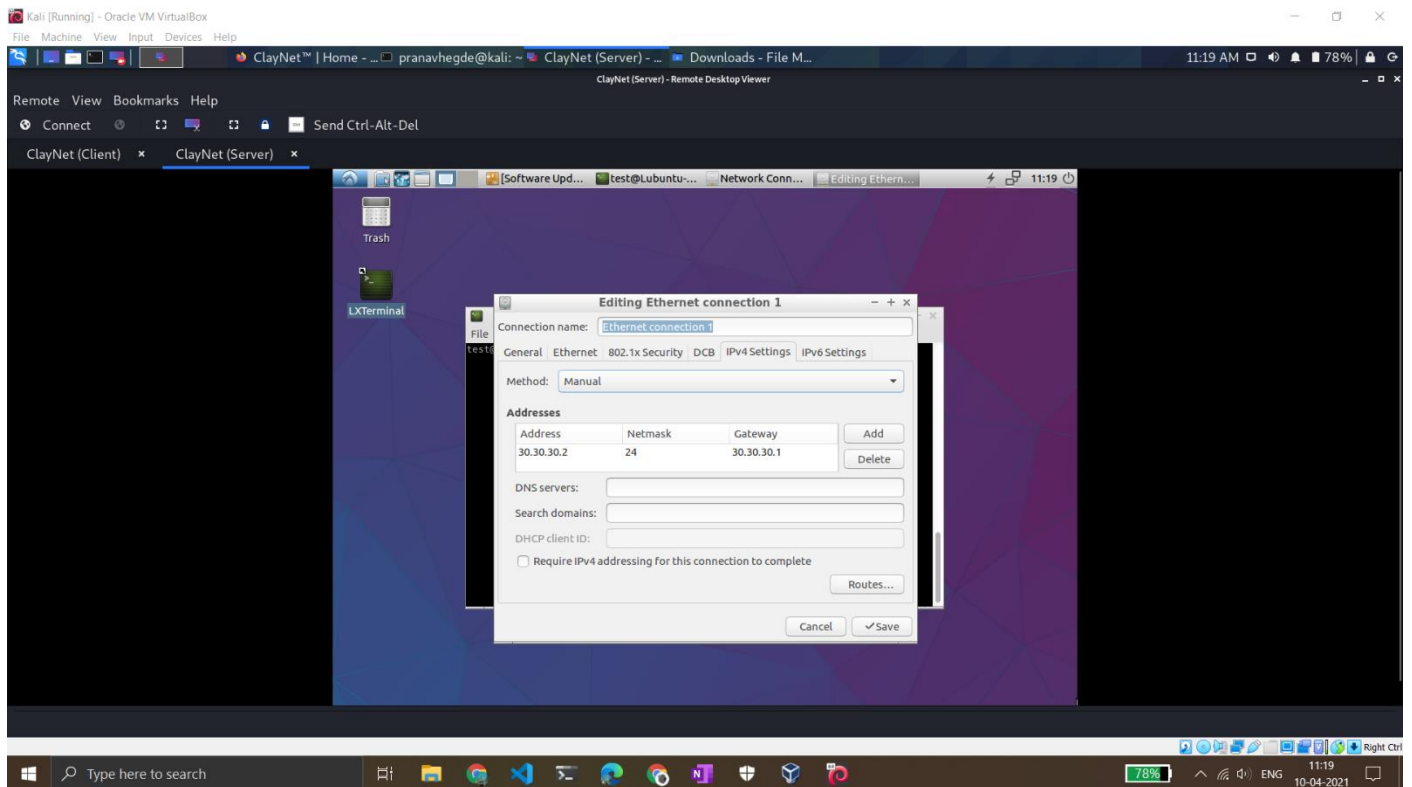
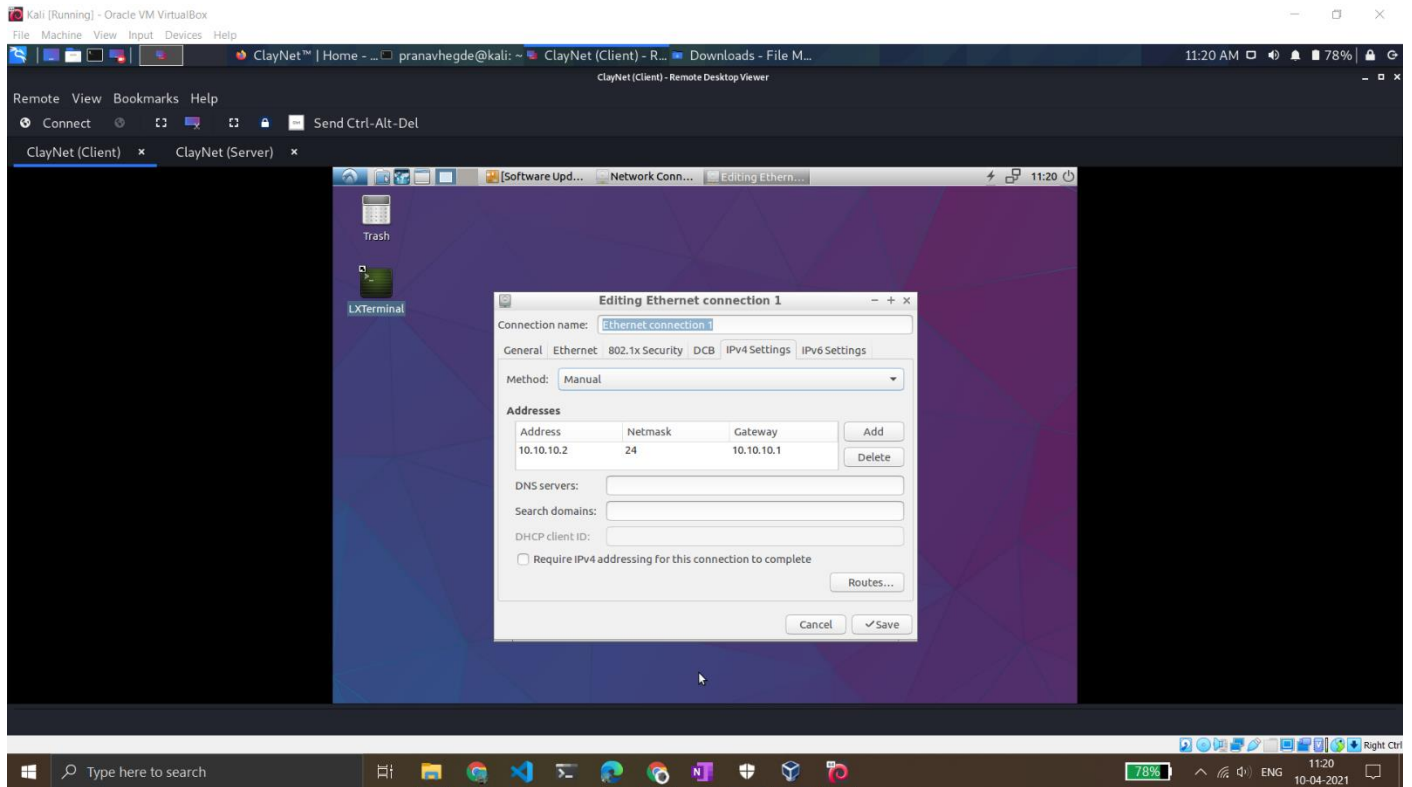
Name: Pranav R. Hegde SRN: PES1UG19CS343 Section: F1

Mandatory: Topology 1

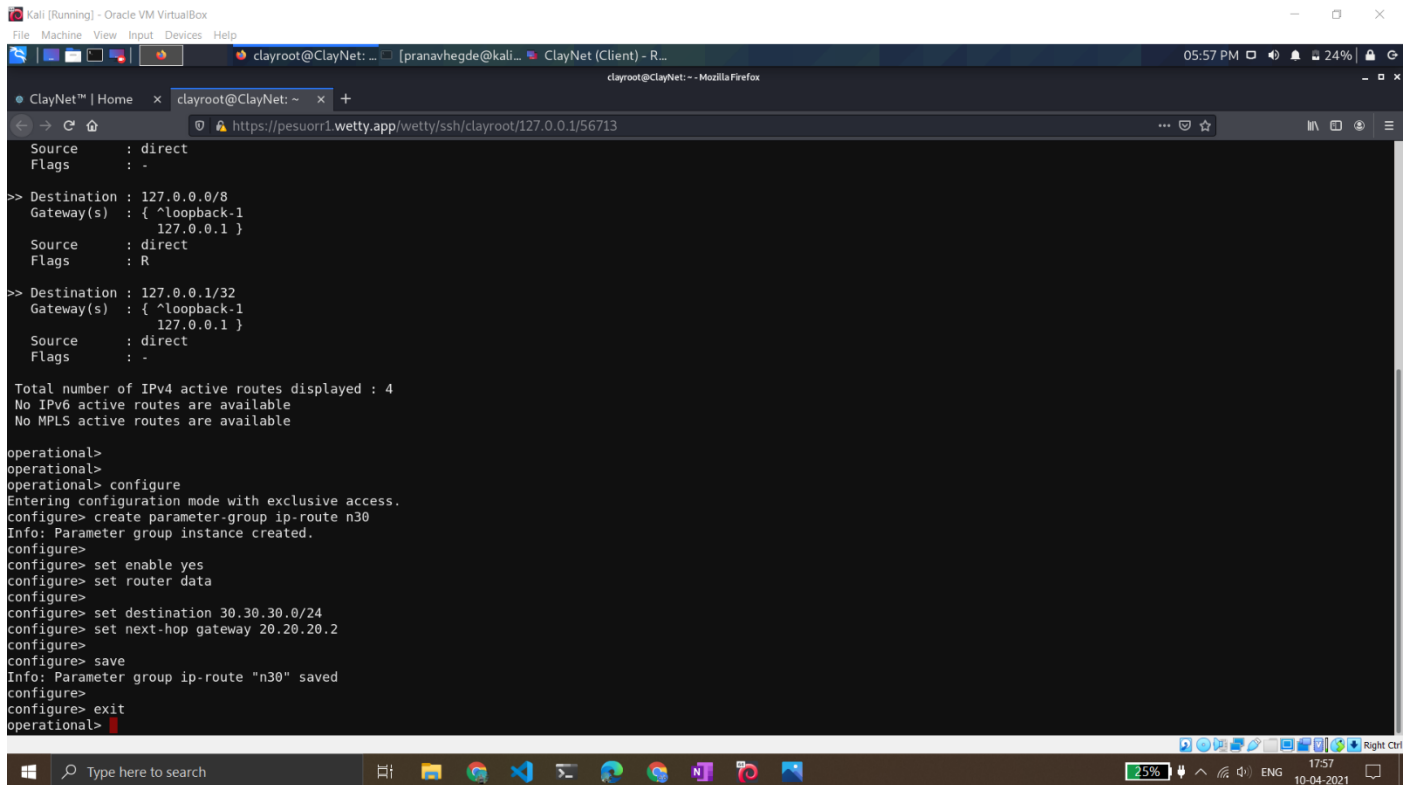
Task 1: Building a topology in Claynet and deploying it.



Task 2: Configuring the Client PC and Webserver PC



Task 3: Configuring the router1 and router2 via console access.



```
Kali [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

clayroot@ClayNet: ~ [pranavhegde@kali... ClayNet (Client) - R... 05:57 PM 24%

ClayNet™ | Home x clayroot@ClayNet: ~ x +
https://pesuor1.wetty.app/wetty/ssh/clayroot/127.0.0.1/56713

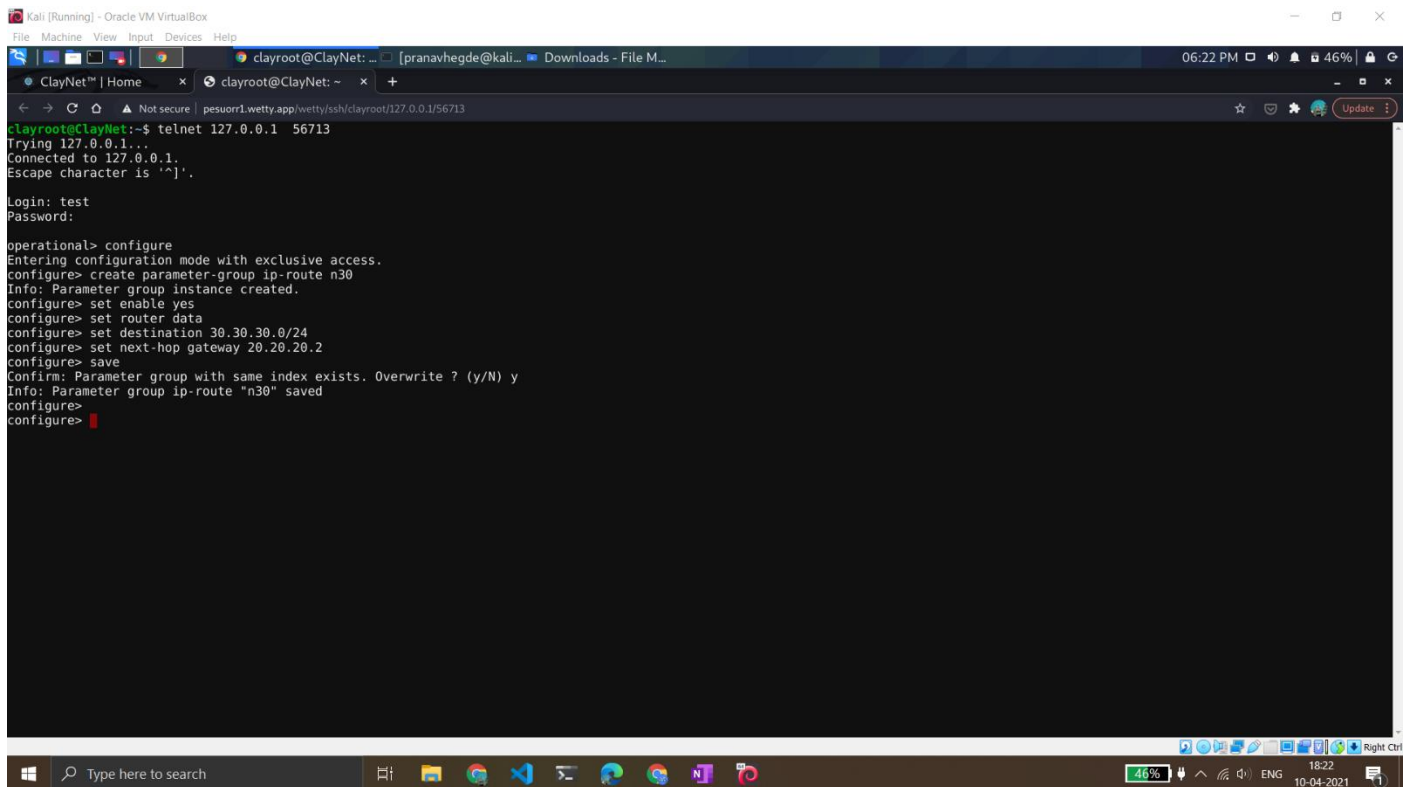
Source : direct
Flags : -

>> Destination : 127.0.0.0/8
Gateway(s) : { ^loopback-1
127.0.0.1 }
Source : direct
Flags : R

>> Destination : 127.0.0.1/32
Gateway(s) : { ^loopback-1
127.0.0.1 }
Source : direct
Flags : -

Total number of IPv4 active routes displayed : 4
No IPv6 active routes are available
No MPLS active routes are available

operational>
operational>
operational> configure
Entering configuration mode with exclusive access.
configure> create parameter-group ip-route n30
Info: Parameter group instance created.
configure>
configure> set enable yes
configure> set router data
configure>
configure> set destination 30.30.30.0/24
configure> set next-hop gateway 20.20.20.2
configure>
configure> save
Info: Parameter group ip-route "n30" saved
configure>
configure> exit
operational>
```



```
Kali [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help

clayroot@ClayNet: ~ [pranavhegde@kali... Downloads - File M... 06:22 PM 46%

ClayNet™ | Home x clayroot@ClayNet: ~ x +
pesuor1.wetty.app/wetty/ssh/clayroot/127.0.0.1/56713

clayroot@ClayNet:~$ telnet 127.0.0.1 56713
Trying 127.0.0.1...
Connected to 127.0.0.1.
Escape character is '^]'.

Login: test
Password:

operational> configure
Entering configuration mode with exclusive access.
configure> create parameter-group ip-route n30
Info: Parameter group instance created.
configure> set enable yes
configure> set router data
configure> set destination 30.30.30.0/24
configure> set next-hop gateway 20.20.20.2
configure>
configure> save
Confirm: Parameter group with same index exists. Overwrite ? (y/N) y
Info: Parameter group ip-route "n30" saved
configure>
configure>
```

Task3: Observe the ping in Wireshark and terminal

```
test@Lubuntu-vm: ~  
File Edit Tabs Help  
test@Lubuntu-vm:~$ ping 30.30.30.2  
PING 30.30.30.2 (30.30.30.2) 56(84) bytes of data.  
64 bytes from 30.30.30.2: icmp_seq=1 ttl=62 time=1.43 ms  
64 bytes from 30.30.30.2: icmp_seq=2 ttl=62 time=1.57 ms  
64 bytes from 30.30.30.2: icmp_seq=3 ttl=62 time=1.18 ms  
64 bytes from 30.30.30.2: icmp_seq=4 ttl=62 time=1.07 ms  
64 bytes from 30.30.30.2: icmp_seq=5 ttl=62 time=1.24 ms  
64 bytes from 30.30.30.2: icmp_seq=6 ttl=62 time=1.34 ms  
64 bytes from 30.30.30.2: icmp_seq=7 ttl=62 time=1.25 ms  
64 bytes from 30.30.30.2: icmp_seq=8 ttl=62 time=1.03 ms  
64 bytes from 30.30.30.2: icmp_seq=9 ttl=62 time=1.26 ms  
64 bytes from 30.30.30.2: icmp_seq=10 ttl=62 time=1.40 ms  
64 bytes from 30.30.30.2: icmp_seq=11 ttl=62 time=1.17 ms  
64 bytes from 30.30.30.2: icmp_seq=12 ttl=62 time=1.11 ms  
64 bytes from 30.30.30.2: icmp_seq=13 ttl=62 time=1.21 ms  
64 bytes from 30.30.30.2: icmp_seq=14 ttl=62 time=1.50 ms  
64 bytes from 30.30.30.2: icmp_seq=15 ttl=62 time=1.14 ms
```

- We can observe here that the ttl is 62 because of the two routers used in between.

The screenshot shows a terminal window on the left and a Wireshark packet capture window on the right. The terminal window displays the output of a ping command to 30.30.30.2, showing 15 successful pings with a TTL of 62. The Wireshark window shows a capture of the ICMP echo request and reply packets. The packet list shows the first packet as an ICMP Echo (ping) request from 10.10.10.2 to 30.30.30.2. The packet details show the Internet Protocol Version 4, Src: 10.10.10.2, Dst: 30.30.30.2, and the Internet Control Message Protocol. The packet bytes show the raw data of the ICMP echo request.

No.	Time	Source	Destination	Protocol	Length	Info
838	339.231973374	10.10.10.2	30.30.30.2	ICMP	100	Echo (ping) request ...
839	339.232581247	30.30.30.2	10.10.10.2	ICMP	100	Echo (ping) reply ...
840	340.255910201	10.10.10.2	30.30.30.2	ICMP	100	Echo (ping) request ...
841	340.256555004	30.30.30.2	10.10.10.2	ICMP	100	Echo (ping) reply ...
842	341.279913605	10.10.10.2	30.30.30.2	ICMP	100	Echo (ping) request ...
843	341.280644750	30.30.30.2	10.10.10.2	ICMP	100	Echo (ping) reply ...
844	342.303911840	10.10.10.2	30.30.30.2	ICMP	100	Echo (ping) request ...
845	342.304844644	30.30.30.2	10.10.10.2	ICMP	100	Echo (ping) reply ...