

# CN LAB WEEK-9(IPV4 ADDRESSING USING CLAYNET)

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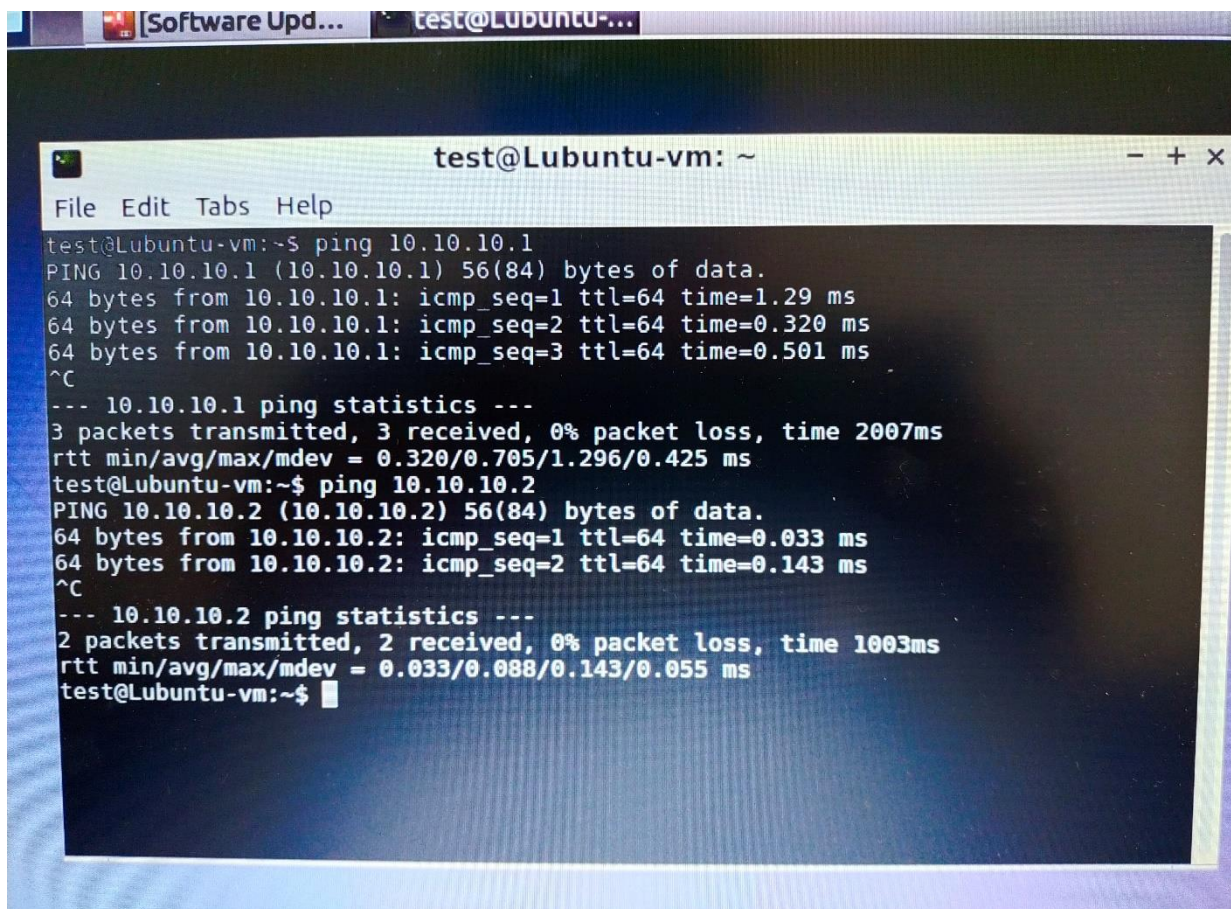
SECTION-D

SRN-PES2UG19CS203

(NOTE: SCREENSHOT COMMAND WAS NOT WORKING AFTER OPENING VNC VIEWER ,  
HENCE HAD TO TAKE PHOTOS MANUALLY)

ping 10.10.10.1

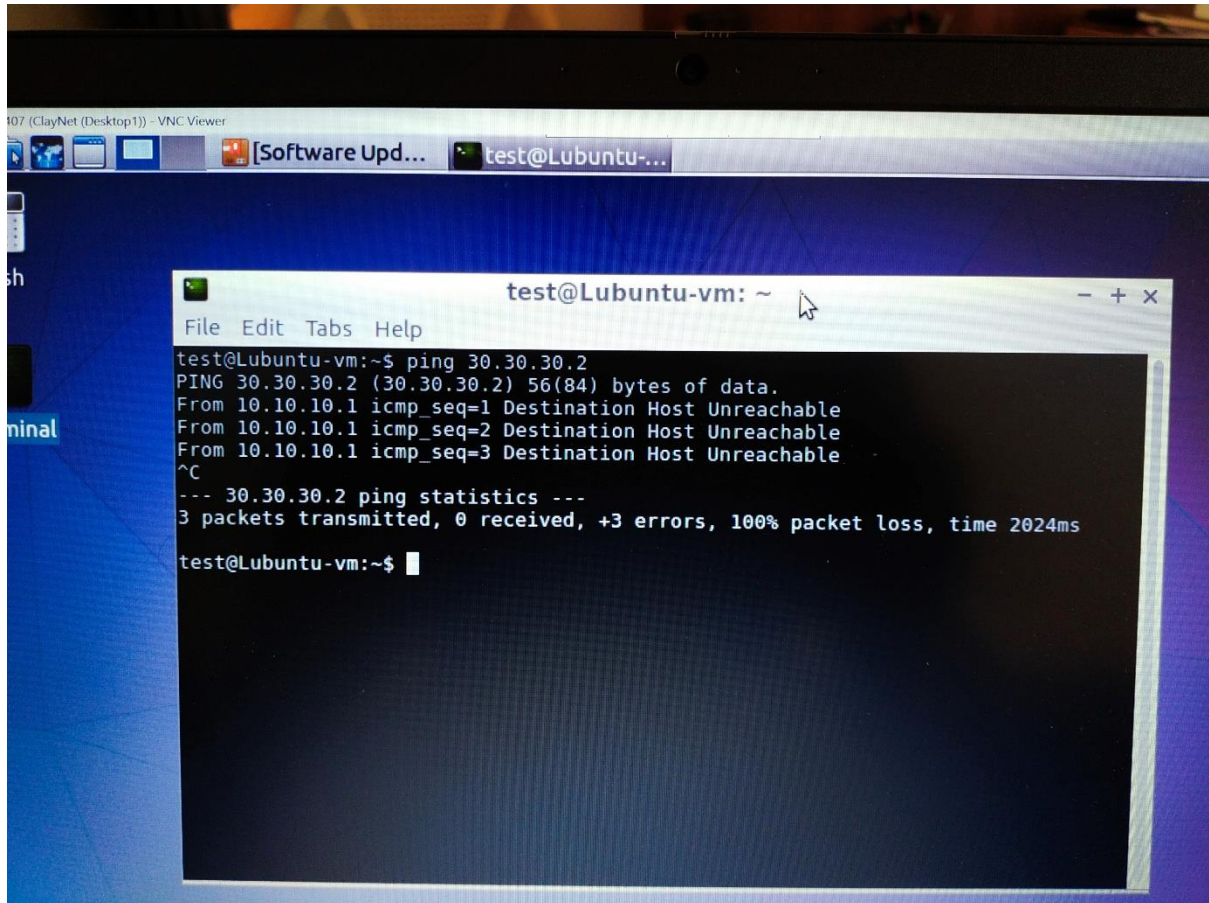
ping 10.10.10.2



```
test@Lubuntu-vm: ~  
File Edit Tabs Help  
test@Lubuntu-vm:~$ ping 10.10.10.1  
PING 10.10.10.1 (10.10.10.1) 56(84) bytes of data.  
64 bytes from 10.10.10.1: icmp_seq=1 ttl=64 time=1.29 ms  
64 bytes from 10.10.10.1: icmp_seq=2 ttl=64 time=0.320 ms  
64 bytes from 10.10.10.1: icmp_seq=3 ttl=64 time=0.501 ms  
^C  
--- 10.10.10.1 ping statistics ---  
3 packets transmitted, 3 received, 0% packet loss, time 2007ms  
rtt min/avg/max/mdev = 0.320/0.705/1.296/0.425 ms  
test@Lubuntu-vm:~$ ping 10.10.10.2  
PING 10.10.10.2 (10.10.10.2) 56(84) bytes of data.  
64 bytes from 10.10.10.2: icmp_seq=1 ttl=64 time=0.033 ms  
64 bytes from 10.10.10.2: icmp_seq=2 ttl=64 time=0.143 ms  
^C  
--- 10.10.10.2 ping statistics ---  
2 packets transmitted, 2 received, 0% packet loss, time 1003ms  
rtt min/avg/max/mdev = 0.033/0.088/0.143/0.055 ms  
test@Lubuntu-vm:~$
```

ping 30.30.30.2

BEFORE SETTING UP ROUTING TABLE.



The image shows a screenshot of a VNC viewer window titled "107 (ClayNet (Desktop1)) - VNC Viewer". Inside the viewer, there is a desktop environment with a blue background. A terminal window titled "test@Lubuntu-vm: ~" is open, displaying the output of a ping command. The terminal shows three failed ping attempts to 30.30.30.2, each resulting in "Destination Host Unreachable". The statistics at the bottom indicate "3 packets transmitted, 0 received, +3 errors, 100% packet loss, time 2024ms".

```
test@Lubuntu-vm:~$ ping 30.30.30.2
PING 30.30.30.2 (30.30.30.2) 56(84) bytes of data.
From 10.10.10.1 icmp_seq=1 Destination Host Unreachable
From 10.10.10.1 icmp_seq=2 Destination Host Unreachable
From 10.10.10.1 icmp_seq=3 Destination Host Unreachable
^C
--- 30.30.30.2 ping statistics ---
3 packets transmitted, 0 received, +3 errors, 100% packet loss, time 2024ms
test@Lubuntu-vm:~$
```



ping 30.30.30.2

AFTER SETTING UP ROUTING TABLE.

```
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=1.44 ms
64 bytes from 30.30.30.2: icmp_seq=2 ttl=62 time=1.60 ms
64 bytes from 30.30.30.2: icmp_seq=3 ttl=62 time=4.10 ms
64 bytes from 30.30.30.2: icmp_seq=4 ttl=62 time=1.32 ms
64 bytes from 30.30.30.2: icmp_seq=5 ttl=62 time=1.78 ms
64 bytes from 30.30.30.2: icmp_seq=6 ttl=62 time=1.14 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=1.30 ms
64 bytes from 30.30.30.2: icmp_seq=9 ttl=62 time=1.15 ms
64 bytes from 30.30.30.2: icmp_seq=10 ttl=62 time=1.11 ms
64 bytes from 30.30.30.2: icmp_seq=11 ttl=62 time=1.46 ms
64 bytes from 30.30.30.2: icmp_seq=12 ttl=62 time=1.10 ms
64 bytes from 30.30.30.2: icmp_seq=13 ttl=62 time=0.982 ms
64 bytes from 30.30.30.2: icmp_seq=14 ttl=62 time=1.11 ms
64 bytes from 30.30.30.2: icmp_seq=15 ttl=62 time=44.4 ms
64 bytes from 30.30.30.2: icmp_seq=16 ttl=62 time=1.39 ms
64 bytes from 30.30.30.2: icmp_seq=17 ttl=62 time=1.19 ms
64 bytes from 30.30.30.2: icmp_seq=18 ttl=62 time=1.27 ms
64 bytes from 30.30.30.2: icmp_seq=19 ttl=62 time=0.992 ms
64 bytes from 30.30.30.2: icmp_seq=20 ttl=62 time=0.914 ms
64 bytes from 30.30.30.2: icmp_seq=21 ttl=62 time=1.57 ms
64 bytes from 30.30.30.2: icmp_seq=22 ttl=62 time=1.19 ms
64 bytes from 30.30.30.2: icmp_seq=23 ttl=62 time=1.02 ms
64 bytes from 30.30.30.2: icmp_seq=24 ttl=62 time=1.00 ms
64 bytes from 30.30.30.2: icmp_seq=25 ttl=62 time=1.40 ms
64 bytes from 30.30.30.2: icmp_seq=26 ttl=62 time=1.11 ms
64 bytes from 30.30.30.2: icmp_seq=27 ttl=62 time=1.13 ms
64 bytes from 30.30.30.2: icmp_seq=28 ttl=62 time=1.14 ms
64 bytes from 30.30.30.2: icmp_seq=29 ttl=62 time=1.26 ms
```



## WIRESHARK CAPTURE

5.180.226-9407 (ClayNet (Desktop1)) - VNC Viewer

test@Lubuntu-... test@Lubuntu-... Capturing from...

**Capturing from eth0**

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-/>

No.	Time	Source	Destination	Protocol	Length	Info
70	32.095288606	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=33/8448, ttl=64
71	33.095550171	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=34/8704, ttl=64
72	33.096825179	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=34/8704, ttl=64
73	34.096346597	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=35/8960, ttl=64
74	34.097723615	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=35/8960, ttl=64
75	35.096372677	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=36/9216, ttl=64
76	35.097240567	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=36/9216, ttl=64
77	36.096048232	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=37/9472, ttl=64
78	36.097054806	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=37/9472, ttl=64
79	37.097186504	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=38/9728, ttl=64
80	37.098378254	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=38/9728, ttl=64

Frame 1: 98 bytes on wire (784 bits), 98 bytes captured (784 bits) on interface 0  
Ethernet II, Src: 2a:26:00:00:0e:9c (2a:26:00:00:0e:9c), Dst: 2a:26:00:00:00:e2 (2a:26:00:00:00:e2)  
Internet Protocol Version 4, Src: 10.10.10.2, Dst: 30.30.30.2  
Internet Control Message Protocol

Type here to search

5.180.226-9407 (ClayNet (Desktop1)) - VNC Viewer

test@Lubuntu-... test@Lubuntu-... Capturing from...

**Capturing from eth0**

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help

Apply a display filter ... <Ctrl-/>

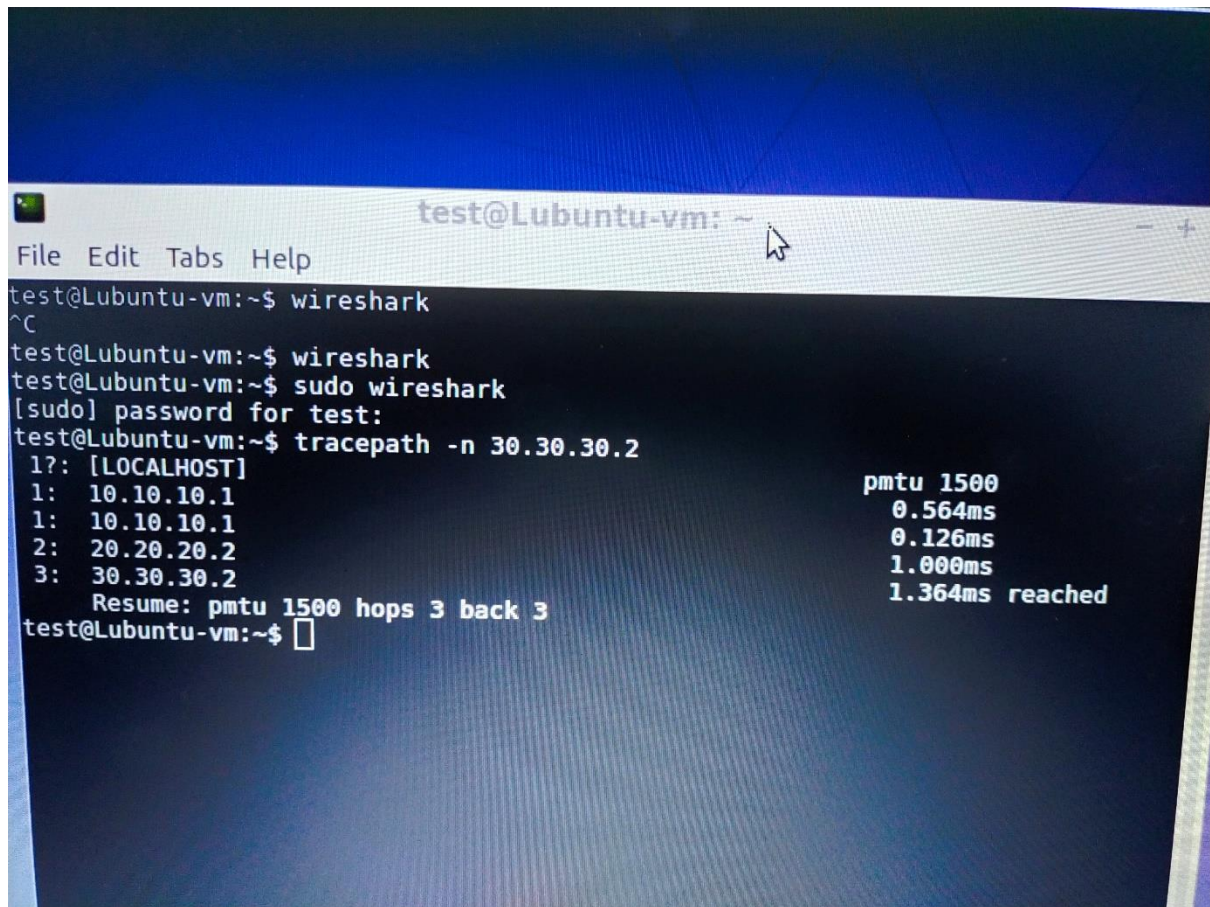
No.	Time	Source	Destination	Protocol	Length	Info
89	41.138469372	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=42/10752, ttl=62 (request id=0x0c41, seq=42/10752, ttl=62)
90	42.138614286	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=43/11008, ttl=64 (reply id=0x0c41, seq=42/10752, ttl=62)
91	42.139516078	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=43/11008, ttl=62 (request id=0x0c41, seq=43/11008, ttl=64)
92	43.153439033	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=44/11264, ttl=64 (reply id=0x0c41, seq=43/11008, ttl=62)
93	43.154900130	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=44/11264, ttl=62 (request id=0x0c41, seq=44/11264, ttl=64)
94	44.155076357	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=45/11520, ttl=64 (reply id=0x0c41, seq=44/11264, ttl=62)
95	44.156103647	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=45/11520, ttl=62 (request id=0x0c41, seq=45/11520, ttl=64)
96	45.156249849	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=46/11776, ttl=64 (reply id=0x0c41, seq=45/11520, ttl=62)
97	45.157614435	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=46/11776, ttl=62 (request id=0x0c41, seq=46/11776, ttl=64)
98	46.157811294	10.10.10.2	30.30.30.2	ICMP	98	Echo (ping) request id=0x0c41, seq=47/12032, ttl=64 (reply id=0x0c41, seq=46/11776, ttl=62)
99	46.158991457	30.30.30.2	10.10.10.2	ICMP	98	Echo (ping) reply id=0x0c41, seq=47/12032, ttl=62 (request id=0x0c41, seq=47/12032, ttl=64)

Frame 1: 98 bytes on wire (784 bits), 98 bytes captured (784 bits) on interface 0  
Ethernet II, Src: 2a:26:00:00:0e:9c (2a:26:00:00:0e:9c), Dst: 2a:26:00:00:00:e2 (2a:26:00:00:00:e2)  
Internet Protocol Version 4, Src: 10.10.10.2, Dst: 30.30.30.2  
Internet Control Message Protocol

Type here to search



# TRACEPATH



The screenshot shows a terminal window titled "test@Lubuntu-vm: ~". The terminal contains the following text:

```
File Edit Tabs Help
test@Lubuntu-vm:~$ wireshark
^C
test@Lubuntu-vm:~$ wireshark
test@Lubuntu-vm:~$ sudo wireshark
[sudo] password for test:
test@Lubuntu-vm:~$ tracepath -n 30.30.30.2
 1?: [LOCALHOST]                pmtu 1500
 1:  10.10.10.1                  0.564ms
 1:  10.10.10.1                  0.126ms
 2:  20.20.20.2                  1.000ms
 3:  30.30.30.2                  1.364ms reached
    Resume: pmtu 1500 hops 3 back 3
test@Lubuntu-vm:~$
```

The output of the `tracepath` command shows the path from the local host to the destination IP 30.30.30.2. The path consists of three hops: the local host (10.10.10.1), an intermediate hop (10.10.10.1), and the destination (20.20.20.2). The final hop to 30.30.30.2 is marked as "reached". The path MTU is 1500, and the total time taken for the path is 1.364ms.