

Lab-6

1.

```
64 bytes from 10.1.1.4: icmp_seq=7 ttl=64 time=2057 ms
64 bytes from 10.1.1.4: icmp_seq=8 ttl=64 time=1034 ms
64 bytes from 10.1.1.4: icmp_seq=9 ttl=64 time=9.71 ms
64 bytes from 10.1.1.4: icmp_seq=10 ttl=64 time=3.06 ms
64 bytes from 10.1.1.4: icmp_seq=11 ttl=64 time=2.56 ms
64 bytes from 10.1.1.4: icmp_seq=12 ttl=64 time=2.34 ms
64 bytes from 10.1.1.4: icmp_seq=13 ttl=64 time=2.71 ms
64 bytes from 10.1.1.4: icmp_seq=14 ttl=64 time=3.17 ms
^C
--- 10.1.1.4 ping statistics ---
14 packets transmitted, 8 received, +6 errors, 42.8571% packet loss, time 10000ms
rtt min/avg/max/mdev = 2.338/389.315/2057.363/714.902 ms, pipe 4
mininet>
```

2.

```
mininet> a1 ping 10.1.1.3
PING 10.1.1.3 (10.1.1.3) 56(84) bytes of data.
From 10.1.1.1 icmp_seq=1 Destination Host Unreachable
From 10.1.1.1 icmp_seq=2 Destination Host Unreachable
From 10.1.1.1 icmp_seq=3 Destination Host Unreachable
From 10.1.1.1 icmp_seq=4 Destination Host Unreachable
From 10.1.1.1 icmp_seq=5 Destination Host Unreachable
From 10.1.1.1 icmp_seq=6 Destination Host Unreachable
64 bytes from 10.1.1.3: icmp_seq=7 ttl=64 time=2.14 ms
64 bytes from 10.1.1.3: icmp_seq=8 ttl=64 time=1.13 ms
^C
--- 10.1.1.3 ping statistics ---
25 packets transmitted, 2 received, +6 errors, 92% packet loss, time 24502ms
rtt min/avg/max/mdev = 1.130/1.634/2.139/0.504 ms, pipe 4
mininet>
```

3.

```
mininet> h4 iperf -s &
mininet> h1 iperf -c h4
-----
Client connecting to 10.0.0.4, TCP port 5001
TCP window size: 408 KByte (default)
-----
[ 3] local 10.0.0.1 port 55474 connected with 10.0.0.4 port 5001
[ ID] Interval      Transfer    Bandwidth
[ 3] 0.0-10.0 sec   22.2 GBytes 19.0 Gbits/sec
```

4.

```
mininet> h1 iperf -c h4
-----
Client connecting to 10.0.0.4, TCP port 5001
TCP window size: 408 KByte (default)
-----
[ 3] local 10.0.0.1 port 55474 connected with 10.0.0.4 port 5001
[ ID] Interval      Transfer    Bandwidth
[ 3] 0.0-10.0 sec   22.2 GBytes 19.0 Gbits/sec
```

5.

```
mininet> h4 iperf -s &
-----
Server listening on TCP port 5001
TCP window size: 85.3 KByte (default)
-----
[  4] local 10.0.0.4 port 5001 connected with 10.0.0.1 port 55474
[ ID] Interval      Transfer      Bandwidth
[  4]  0.0-10.0 sec  22.2 GBytes  19.0 Gbits/sec
mininet> h1 iperf -c h4 -r
-----
Server listening on TCP port 5001
TCP window size: 85.3 KByte (default)
-----
-----
Client connecting to 10.0.0.4, TCP port 5001
TCP window size:  595 KByte (default)
-----
[  5] local 10.0.0.1 port 60834 connected with 10.0.0.4 port 5001
[ ID] Interval      Transfer      Bandwidth
[  5]  0.0-10.0 sec  20.9 GBytes  17.9 Gbits/sec
[  4] local 10.0.0.1 port 5001 connected with 10.0.0.4 port 44264
[  4]  0.0-10.0 sec   4.53 GBytes   3.88 Gbits/sec
```

6.

```
mininet> h1 iperf -c h4 -d
-----
Server listening on TCP port 5001
TCP window size: 85.3 KByte (default)
-----
-----
Client connecting to 10.0.0.4, TCP port 5001
TCP window size: 85.3 KByte (default)
-----
[  3] local 10.0.0.1 port 57370 connected with 10.0.0.4 port 5001
[  5] local 10.0.0.1 port 5001 connected with 10.0.0.4 port 36518
[ ID] Interval      Transfer      Bandwidth
[  3]  0.0-10.0 sec  12.1 GBytes  10.3 Gbits/sec
[  5]  0.0-10.0 sec   4.07 GBytes   3.48 Gbits/sec
```

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7.

```
mininet> h1 iperf -c h4 -P 5
-----
Client connecting to 10.0.0.4, TCP port 5001
TCP window size: 11.3 MByte (default)
-----
[ 6] local 10.0.0.1 port 58850 connected with 10.0.0.4 port 5001
[ 3] local 10.0.0.1 port 58828 connected with 10.0.0.4 port 5001
[ 7] local 10.0.0.1 port 58856 connected with 10.0.0.4 port 5001
[ 5] local 10.0.0.1 port 58834 connected with 10.0.0.4 port 5001
[ 4] local 10.0.0.1 port 58832 connected with 10.0.0.4 port 5001
[ ID] Interval      Transfer      Bandwidth
[ 6]  0.0-10.2 sec  4.76 GBytes  4.02 Gbits/sec
[ 3]  0.0-10.2 sec  4.71 GBytes  3.98 Gbits/sec
[ 4]  0.0-10.2 sec  4.61 GBytes  3.90 Gbits/sec
[ 7]  0.0-10.2 sec  6.09 GBytes  5.14 Gbits/sec
[ 5]  0.0-10.2 sec  4.01 GBytes  3.39 Gbits/sec
[SUM] 0.0-10.2 sec 24.2 GBytes 20.4 Gbits/sec
-----
mininet> h1 iperf -u -c h4 -b 10m
-----
Client connecting to 10.0.0.4, UDP port 5001
Sending 1470 byte datagrams, IPG target: 1176.00 us (kalman adjust)
UDP buffer size: 208 KByte (default)
-----
[ 3] local 10.0.0.1 port 34411 connected with 10.0.0.4 port 5001
[ ID] Interval      Transfer      Bandwidth
[ 3]  0.0-10.0 sec 11.9 MBytes 10.0 Mbits/sec
[ 3] Sent 8504 datagrams
[ 3] Server Report:
[ 3]  0.0-10.0 sec 11.9 MBytes 10.0 Mbits/sec 0.003 ms 0/ 8504 (0%)
[ 3] 0.0000-9.9980 sec 1 datagrams received out-of-order
mininet> █
```