

Link to Assignment 5: <https://github.com/LordJatonyas/CWM-ProgNets>

## Ping Test

```
ubuntu@ubuntu:~$ ping 192.168.10.1
PING 192.168.10.1 (192.168.10.1) 56(84) bytes of data:
64 bytes from 192.168.10.1: icmp_seq=1 ttl=64 time=0.036 ms
64 bytes from 192.168.10.1: icmp_seq=2 ttl=64 time=0.052 ms
64 bytes from 192.168.10.1: icmp_seq=3 ttl=64 time=0.046 ms
64 bytes from 192.168.10.1: icmp_seq=4 ttl=64 time=0.046 ms
64 bytes from 192.168.10.1: icmp_seq=5 ttl=64 time=0.047 ms
64 bytes from 192.168.10.1: icmp_seq=6 ttl=64 time=0.050 ms
64 bytes from 192.168.10.1: icmp_seq=7 ttl=64 time=0.050 ms
64 bytes from 192.168.10.1: icmp_seq=8 ttl=64 time=0.049 ms
64 bytes from 192.168.10.1: icmp_seq=9 ttl=64 time=0.045 ms
64 bytes from 192.168.10.1: icmp_seq=10 ttl=64 time=0.050 ms
64 bytes from 192.168.10.1: icmp_seq=11 ttl=64 time=0.045 ms
64 bytes from 192.168.10.1: icmp_seq=12 ttl=64 time=0.048 ms
64 bytes from 192.168.10.1: icmp_seq=13 ttl=64 time=0.049 ms
64 bytes from 192.168.10.1: icmp_seq=14 ttl=64 time=0.018 ms
64 bytes from 192.168.10.1: icmp_seq=15 ttl=64 time=0.012 ms
64 bytes from 192.168.10.1: icmp_seq=16 ttl=64 time=0.049 ms
64 bytes from 192.168.10.1: icmp_seq=17 ttl=64 time=0.047 ms
64 bytes from 192.168.10.1: icmp_seq=18 ttl=64 time=0.049 ms
64 bytes from 192.168.10.1: icmp_seq=19 ttl=64 time=0.048 ms
64 bytes from 192.168.10.1: icmp_seq=20 ttl=64 time=0.046 ms
64 bytes from 192.168.10.1: icmp_seq=21 ttl=64 time=0.048 ms
64 bytes from 192.168.10.1: icmp_seq=22 ttl=64 time=0.048 ms
64 bytes from 192.168.10.1: icmp_seq=23 ttl=64 time=0.046 ms
64 bytes from 192.168.10.1: icmp_seq=24 ttl=64 time=0.044 ms
64 bytes from 192.168.10.1: icmp_seq=25 ttl=64 time=0.047 ms
64 bytes from 192.168.10.1: icmp_seq=26 ttl=64 time=0.046 ms
64 bytes from 192.168.10.1: icmp_seq=27 ttl=64 time=0.046 ms
64 bytes from 192.168.10.1: icmp_seq=28 ttl=64 time=0.046 ms
64 bytes from 192.168.10.1: icmp_seq=29 ttl=64 time=0.049 ms
64 bytes from 192.168.10.1: icmp_seq=30 ttl=64 time=0.049 ms
```

## iperf unidirectional

(Server Side)

```
ubuntu@ubuntu:~/Documents/CWM-ProgNets/assignment5$ iperf -s -B 192.168.10.1
-----
Server listening on TCP port 5001
TCP window size: 128 KByte (default)
-----
[ 1] local 192.168.10.1 port 5001 connected with 169.254.46.161 port 41762
[ ID] Interval          Transfer      Bandwidth
[ 1] 0.0000-10.0321 sec  730 MBytes   611 Mbits/sec
[ 2] local 192.168.10.1 port 5001 connected with 169.254.46.161 port 47016
```

(Client Side)

```
ubuntu@ubuntu:~/CWM-ProgNets$ iperf -c 192.168.10.1 -i 1 -t 10
-----
Client connecting to 192.168.10.1, TCP port 5001
TCP window size: 85.0 KByte (default)
-----
[ 1] local 169.254.46.161 port 41762 connected with 192.168.10.1 port 5001
[ ID] Interval          Transfer      Bandwidth
[ 1] 0.0000-1.0000 sec  72.9 MBytes   611 Mbits/sec
[ 1] 1.0000-2.0000 sec  73.0 MBytes   612 Mbits/sec
[ 1] 2.0000-3.0000 sec  74.0 MBytes   621 Mbits/sec
[ 1] 3.0000-4.0000 sec  74.4 MBytes   624 Mbits/sec
[ 1] 4.0000-5.0000 sec  73.0 MBytes   612 Mbits/sec
[ 1] 5.0000-6.0000 sec  71.8 MBytes   602 Mbits/sec
[ 1] 6.0000-7.0000 sec  71.9 MBytes   603 Mbits/sec
[ 1] 7.0000-8.0000 sec  73.1 MBytes   613 Mbits/sec
[ 1] 8.0000-9.0000 sec  71.9 MBytes   603 Mbits/sec
[ 1] 9.0000-10.0000 sec 74.2 MBytes   623 Mbits/sec
[ 1] 0.0000-10.0373 sec 730 MBytes   610 Mbits/sec
```

## iperf bidirectional

(Server Side)

```
Client connecting to 169.254.46.161, TCP port 5001
TCP window size: 348 KByte (default)
-----
[ *3] local 192.168.10.1 port 52150 connected with 169.254.46.161 port 5001 (reverse)
[ ID] Interval      Transfer    Bandwidth
[  2] 0.0000-10.0354 sec   311 MBytes  260 Mbits/sec
[ *3] 0.0000-10.0390 sec   838 MBytes  700 Mbits/sec
[SUM] 0.0000-10.0354 sec   1.12 GBytes  960 Mbits/sec
```

(Client Side)

```
ubuntu@ubuntu:~/CWM-ProgNets$ sudo iperf -c 192.168.10.1 -i 1 -t 10 -d
-----
Server listening on TCP port 5001
TCP window size: 128 KByte (default)
-----
Client connecting to 192.168.10.1, TCP port 5001
TCP window size: 85.0 KByte (default)
-----
[  2] local 169.254.46.161 port 5001 connected with 192.168.10.1 port 52150
[  1] local 169.254.46.161 port 47016 connected with 192.168.10.1 port 5001
[ ID] Interval      Transfer    Bandwidth
[  2] 0.0000-1.0000 sec   83.6 MBytes  701 Mbits/sec
[  1] 0.0000-1.0000 sec   32.1 MBytes  269 Mbits/sec
[  1] 1.0000-2.0000 sec   29.9 MBytes  251 Mbits/sec
[  2] 1.0000-2.0000 sec   83.0 MBytes  696 Mbits/sec
[  1] 2.0000-3.0000 sec   30.4 MBytes  255 Mbits/sec
[  2] 2.0000-3.0000 sec   86.7 MBytes  727 Mbits/sec
[  2] 3.0000-4.0000 sec   84.1 MBytes  706 Mbits/sec
[  1] 3.0000-4.0000 sec   31.0 MBytes  260 Mbits/sec
[  2] 4.0000-5.0000 sec   84.7 MBytes  710 Mbits/sec
[  1] 4.0000-5.0000 sec   31.2 MBytes  262 Mbits/sec
[  1] 5.0000-6.0000 sec   30.8 MBytes  258 Mbits/sec
[  2] 5.0000-6.0000 sec   86.7 MBytes  727 Mbits/sec
[  1] 6.0000-7.0000 sec   31.9 MBytes  267 Mbits/sec
[  2] 6.0000-7.0000 sec   82.4 MBytes  691 Mbits/sec
[  1] 7.0000-8.0000 sec   30.2 MBytes  254 Mbits/sec
[  2] 7.0000-8.0000 sec   80.0 MBytes  671 Mbits/sec
[  1] 8.0000-9.0000 sec   31.4 MBytes  263 Mbits/sec
[  2] 8.0000-9.0000 sec   82.7 MBytes  694 Mbits/sec
[  2] 9.0000-10.0000 sec   80.5 MBytes  676 Mbits/sec
[  1] 9.0000-10.0000 sec   31.5 MBytes  264 Mbits/sec
[  1] 0.0000-10.0416 sec   311 MBytes  259 Mbits/sec
[  2] 0.0000-10.0346 sec   838 MBytes  701 Mbits/sec
```

Note: We have the Server Side IP ADDRESS as 192.168.10.1 because we wanted to test our understanding of the name changes being made so that there are no collisions when networking. i.e. if the Client Side IP ADDRESS has been changed, there should be no need to change the Server Side IP ADDRESS.