Setting up the table on the switch CLI.

```
RuntimeCmd: table_add MyIngress.ipv4_lpm MyIngress.ipv4_forward 192.168.10.0/24 => 0c:37:96:5f:8a:0b
0
Adding entry to lpm match table MyIngress.ipv4_lpm
match key:           LPM-c0:a8:0a:00/24
action:              MyIngress.ipv4_forward
runtime data:        0c:37:96:5f:8a:0b  00:00
Entry has been added with handle 67108864
```

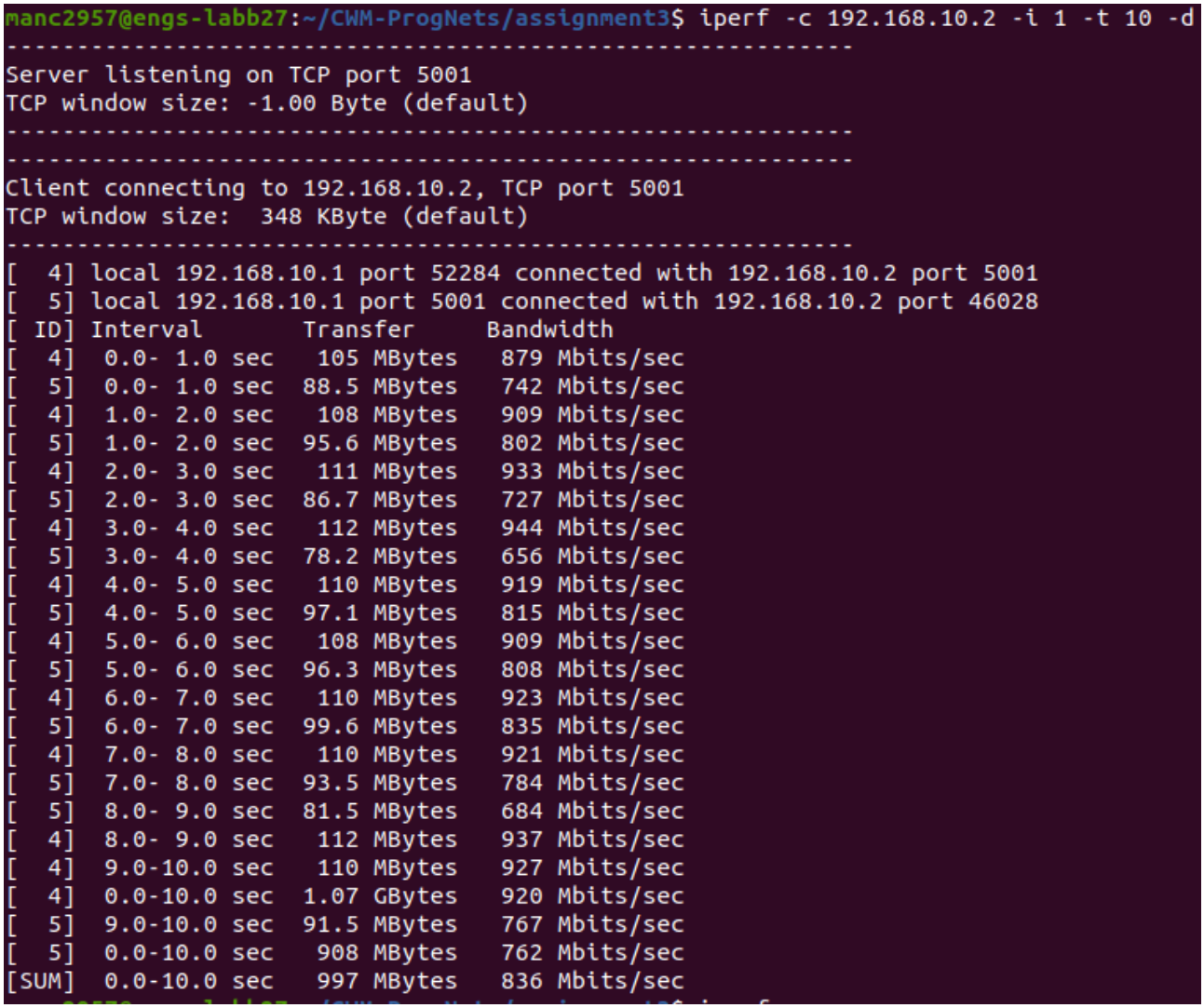
We see that there is a duplicate ping when we try to ping our host machine.

```
pi@p4pi:~/daoxin/CWM-ProgNets/assignment3$ 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=0.500 ms
64 bytes from 192.168.10.1: icmp_seq=1 ttl=64 time=1.63 ms (DUP!)
64 bytes from 192.168.10.1: icmp_seq=2 ttl=64 time=0.417 ms
64 bytes from 192.168.10.1: icmp_seq=2 ttl=64 time=0.792 ms (DUP!)
64 bytes from 192.168.10.1: icmp_seq=3 ttl=64 time=0.452 ms
64 bytes from 192.168.10.1: icmp_seq=3 ttl=64 time=0.799 ms (DUP!)
64 bytes from 192.168.10.1: icmp_seq=4 ttl=64 time=0.553 ms
64 bytes from 192.168.10.1: icmp_seq=4 ttl=64 time=0.807 ms (DUP!)
```

If we set up the Raspberry PI as the iperf server and ping it from the lab machine.

```
manc2957@engs-labb27:~/CWM-ProgNets/assignment3$ iperf -c 192.168.10.2 -i 1 -t 10
------------------------------------------------------------
Client connecting to 192.168.10.2, TCP port 5001
TCP window size: 1.06 MByte (default)
------------------------------------------------------------
[  3] local 192.168.10.1 port 52282 connected with 192.168.10.2 port 5001
[ ID] Interval       Transfer     Bandwidth
[  3]  0.0- 1.0 sec   104 MBytes   872 Mbits/sec
[  3]  1.0- 2.0 sec   105 MBytes   882 Mbits/sec
[  3]  2.0- 3.0 sec   104 MBytes   869 Mbits/sec
[  3]  3.0- 4.0 sec   105 MBytes   880 Mbits/sec
[  3]  4.0- 5.0 sec   105 MBytes   881 Mbits/sec
[  3]  5.0- 6.0 sec   104 MBytes   869 Mbits/sec
[  3]  6.0- 7.0 sec   105 MBytes   883 Mbits/sec
[  3]  7.0- 8.0 sec   105 MBytes   882 Mbits/sec
[  3]  8.0- 9.0 sec   105 MBytes   878 Mbits/sec
[  3]  9.0-10.0 sec   104 MBytes   871 Mbits/sec
[  3]  0.0-10.0 sec  1.02 GBytes   876 Mbits/sec
```

We notice that the data bandwidth is now slower than before, averaging around 890 Mbits/sec.



The delay becomes more apparent if we ping the machine in bi-directional mode.

If we set up the lab machine as the iperf server and ping it from the Raspberry PI.

```
pi@p4pi:~/daoxin/CWM-ProgNets/assignment3$ 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)
------------------------------------------------------------
[  3] local 192.168.10.2 port 46038 connected with 192.168.10.1 port 5001
[ ID] Interval       Transfer     Bandwidth
[  3] 0.0000-1.0000 sec   108 MBytes   908 Mbits/sec
[  3] 1.0000-2.0000 sec   108 MBytes   905 Mbits/sec
[  3] 2.0000-3.0000 sec   107 MBytes   900 Mbits/sec
[  3] 3.0000-4.0000 sec   104 MBytes   869 Mbits/sec
[  3] 4.0000-5.0000 sec   105 MBytes   884 Mbits/sec
[  3] 5.0000-6.0000 sec   104 MBytes   877 Mbits/sec
[  3] 6.0000-7.0000 sec   106 MBytes   886 Mbits/sec
[  3] 7.0000-8.0000 sec   111 MBytes   928 Mbits/sec
[  3] 8.0000-9.0000 sec   112 MBytes   940 Mbits/sec
[  3] 9.0000-10.0000 sec   112 MBytes   940 Mbits/sec
[  3] 10.0000-10.0077 sec   256 KBytes   272 Mbits/sec
[  3] 0.0000-10.0077 sec  1.05 GBytes   903 Mbits/sec
```

We can see that no handshaking occurs. The bitrate of the link is also not significantly affected.