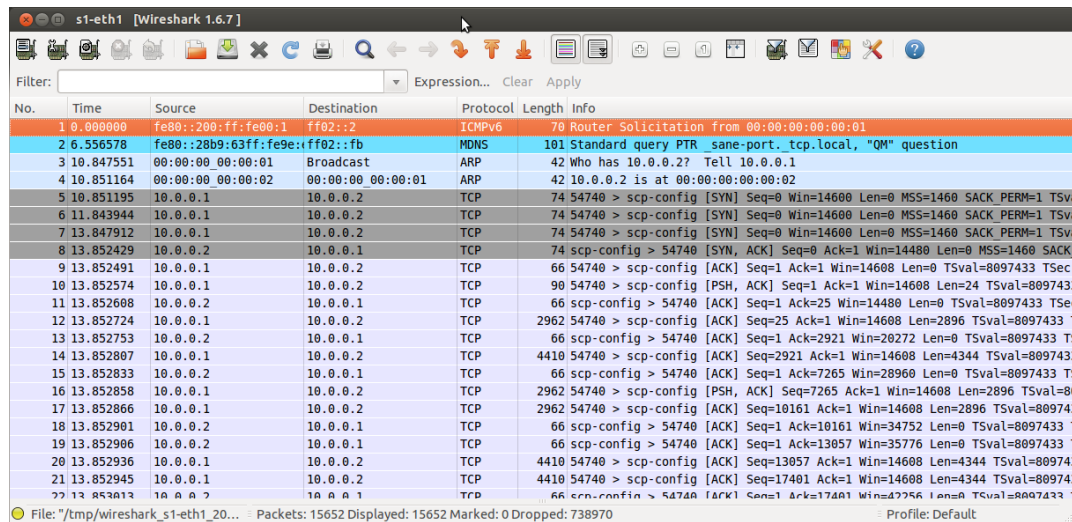


[illegible]

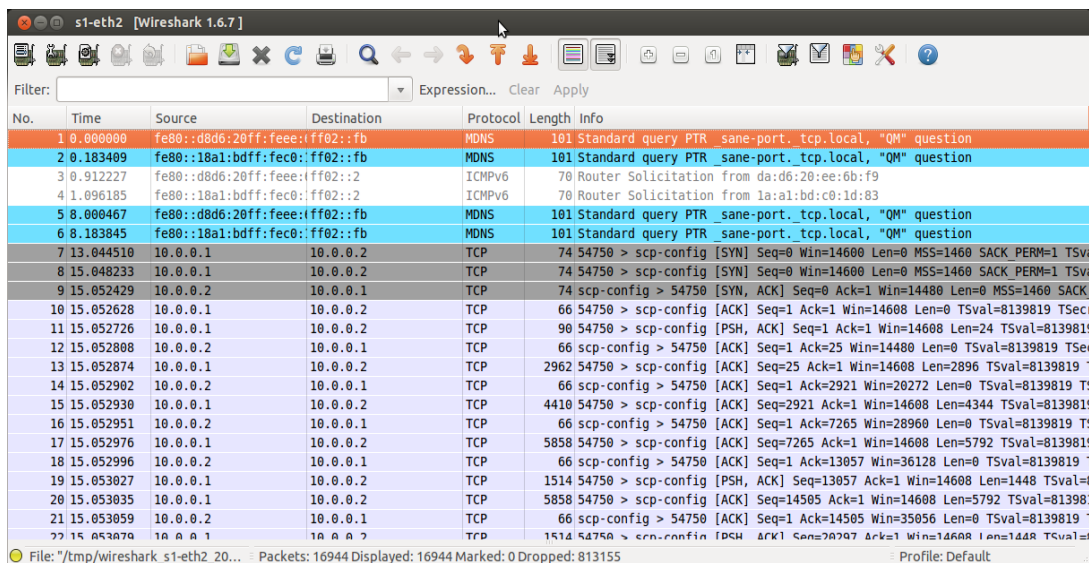
LAB-4 HIGH SPEED NETWORKS

4. S1 eth1: ARP only at eth1=> Packets going to controller



No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	fe80::200:ff:fe00:1	ff02::2	ICMPv6	78	Router Solicitation from 00:00:00:00:00:01
2	6.556578	fe80::20b9:63ff:fe9e:ff02::fb		MDNS	101	Standard query PTR sane-port. tcp.local, "QM" question
3	10.847551	00:00:00 00:00:01	Broadcast	ARP	42	Who has 10.0.0.2? Tell 10.0.0.1
4	10.851164	00:00:00 00:00:02	00:00:00 00:00:01	ARP	42	10.0.0.2 is at 00:00:00:00:00:02
5	10.851195	10.0.0.1	10.0.0.2	TCP	74	54740 > scp-config [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK PERM=1 TSval=8097433 TSecr=0
6	11.843944	10.0.0.1	10.0.0.2	TCP	74	54740 > scp-config [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK PERM=1 TSval=8097433 TSecr=0
7	13.847912	10.0.0.1	10.0.0.2	TCP	74	54740 > scp-config [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK PERM=1 TSval=8097433 TSecr=0
8	13.852429	10.0.0.2	10.0.0.1	TCP	74	54740 > scp-config [SYN, ACK] Seq=0 Ack=1 Win=14480 Len=0 MSS=1460 SACK PERM=1 TSval=8097433 TSecr=0
9	13.852491	10.0.0.1	10.0.0.2	TCP	66	54740 > scp-config [ACK] Seq=1 Ack=1 Win=14608 Len=0 TSval=8097433 TSecr=0
10	13.852574	10.0.0.1	10.0.0.2	TCP	90	54740 > scp-config [PSH, ACK] Seq=1 Ack=1 Win=14608 Len=24 TSval=8097433 TSecr=0
11	13.852608	10.0.0.2	10.0.0.1	TCP	66	54740 > scp-config [ACK] Seq=1 Ack=25 Win=14480 Len=0 TSval=8097433 TSecr=0
12	13.852724	10.0.0.1	10.0.0.2	TCP	2962	54740 > scp-config [ACK] Seq=25 Ack=1 Win=14608 Len=2896 TSval=8097433 TSecr=0
13	13.852753	10.0.0.2	10.0.0.1	TCP	66	54740 > scp-config [ACK] Seq=1 Ack=2921 Win=20272 Len=0 TSval=8097433 TSecr=0
14	13.852807	10.0.0.1	10.0.0.2	TCP	4410	54740 > scp-config [ACK] Seq=2921 Ack=1 Win=14608 Len=4344 TSval=8097433 TSecr=0
15	13.852833	10.0.0.2	10.0.0.1	TCP	66	54740 > scp-config [ACK] Seq=1 Ack=7265 Win=28960 Len=0 TSval=8097433 TSecr=0
16	13.852858	10.0.0.1	10.0.0.2	TCP	2962	54740 > scp-config [PSH, ACK] Seq=7265 Ack=1 Win=14608 Len=2896 TSval=8097433 TSecr=0
17	13.852866	10.0.0.1	10.0.0.2	TCP	2962	54740 > scp-config [ACK] Seq=10161 Ack=1 Win=14608 Len=2896 TSval=8097433 TSecr=0
18	13.852901	10.0.0.2	10.0.0.1	TCP	66	54740 > scp-config [ACK] Seq=1 Ack=10161 Win=34752 Len=0 TSval=8097433 TSecr=0
19	13.852906	10.0.0.2	10.0.0.1	TCP	66	54740 > scp-config [ACK] Seq=1 Ack=13057 Win=35776 Len=0 TSval=8097433 TSecr=0
20	13.852936	10.0.0.1	10.0.0.2	TCP	4410	54740 > scp-config [ACK] Seq=13057 Ack=1 Win=14608 Len=4344 TSval=8097433 TSecr=0
21	13.852945	10.0.0.1	10.0.0.2	TCP	4410	54740 > scp-config [ACK] Seq=17481 Ack=1 Win=14608 Len=4344 TSval=8097433 TSecr=0
22	13.853012	10.0.0.2	10.0.0.1	TCP	66	54740 > scp-config [ACK] Seq=1 Ack=17481 Win=42756 Len=0 TSval=8097433 TSecr=0

5. S1 eth2:



No.	Time	Source	Destination	Protocol	Length	Info
1	0.000000	fe80::d0d6:20ff:feee:ff02::fb		MDNS	101	Standard query PTR sane-port. tcp.local, "QM" question
2	0.183409	fe80::18a1:bdff:fec0:ff02::fb		MDNS	101	Standard query PTR sane-port. tcp.local, "QM" question
3	0.912227	fe80::d0d6:20ff:feee:ff02::2		ICMPv6	70	Router Solicitation from da:d6:20:ee:6b:f9
4	1.096185	fe80::18a1:bdff:fec0:ff02::2		ICMPv6	70	Router Solicitation from 1a:a1:bd:c0:d:83
5	0.000467	fe80::d0d6:20ff:feee:ff02::fb		MDNS	101	Standard query PTR sane-port. tcp.local, "QM" question
6	0.183845	fe80::18a1:bdff:fec0:ff02::fb		MDNS	101	Standard query PTR sane-port. tcp.local, "QM" question
7	13.044510	10.0.0.1	10.0.0.2	TCP	74	54750 > scp-config [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK PERM=1 TSval=8139819 TSecr=0
8	15.048233	10.0.0.1	10.0.0.2	TCP	74	54750 > scp-config [SYN] Seq=0 Win=14600 Len=0 MSS=1460 SACK PERM=1 TSval=8139819 TSecr=0
9	15.052429	10.0.0.2	10.0.0.1	TCP	74	54750 > scp-config [SYN, ACK] Seq=0 Ack=1 Win=14480 Len=0 MSS=1460 SACK PERM=1 TSval=8139819 TSecr=0
10	15.052628	10.0.0.1	10.0.0.2	TCP	66	54750 > scp-config [ACK] Seq=1 Ack=1 Win=14608 Len=0 TSval=8139819 TSecr=0
11	15.052726	10.0.0.1	10.0.0.2	TCP	90	54750 > scp-config [PSH, ACK] Seq=1 Ack=1 Win=14608 Len=24 TSval=8139819 TSecr=0
12	15.052808	10.0.0.2	10.0.0.1	TCP	66	54750 > scp-config [ACK] Seq=1 Ack=25 Win=14480 Len=0 TSval=8139819 TSecr=0
13	15.052874	10.0.0.1	10.0.0.2	TCP	2962	54750 > scp-config [ACK] Seq=25 Ack=1 Win=14608 Len=2896 TSval=8139819 TSecr=0
14	15.052902	10.0.0.2	10.0.0.1	TCP	66	54750 > scp-config [ACK] Seq=1 Ack=2921 Win=20272 Len=0 TSval=8139819 TSecr=0
15	15.052930	10.0.0.1	10.0.0.2	TCP	4410	54750 > scp-config [ACK] Seq=2921 Ack=1 Win=14608 Len=4344 TSval=8139819 TSecr=0
16	15.052951	10.0.0.2	10.0.0.1	TCP	66	54750 > scp-config [ACK] Seq=1 Ack=7265 Win=28960 Len=0 TSval=8139819 TSecr=0
17	15.052976	10.0.0.1	10.0.0.2	TCP	5858	54750 > scp-config [ACK] Seq=7265 Ack=1 Win=14608 Len=5792 TSval=8139819 TSecr=0
18	15.052996	10.0.0.2	10.0.0.1	TCP	66	54750 > scp-config [ACK] Seq=1 Ack=13057 Win=36128 Len=0 TSval=8139819 TSecr=0
19	15.053027	10.0.0.1	10.0.0.2	TCP	1514	54750 > scp-config [PSH, ACK] Seq=13057 Ack=1 Win=14608 Len=1448 TSval=8139819 TSecr=0
20	15.053035	10.0.0.1	10.0.0.2	TCP	5858	54750 > scp-config [ACK] Seq=14505 Ack=1 Win=14608 Len=5792 TSval=8139819 TSecr=0
21	15.053059	10.0.0.2	10.0.0.1	TCP	66	54750 > scp-config [ACK] Seq=1 Ack=14505 Win=35056 Len=0 TSval=8139819 TSecr=0
22	15.053079	10.0.0.1	10.0.0.2	TCP	1514	54750 > scp-config [PSH, ACK] Seq=14505 Ack=1 Win=14608 Len=1448 TSval=8139819 TSecr=0

I have implemented task 1 in 2 ways-

1. Separate topology file and controller file: Iperf should be switched on manually : (lab4topoh.py and cont_prog.py)
2. Topology file that includes iperf and connection to remote host:(iperf_prog.py and cont_prog.py)

Comments are included in the code.

Task 2- I didn't understand much, tried to hardcode it (for LPR.py). I have submitted this file.