

Part 4:

1)

Pingall

```
mininet> pingall
*** Ping: testing ping reachability
h10 -> X X X X
h20 -> h10 X X X
h30 -> h10 h20 X X
hnotrust1 -> X X X X
serv1 -> h10 h20 h30 X
*** Results: 70% dropped (6/20 received)
mininet> pingall
*** Ping: testing ping reachability
h10 -> h20 h30 X serv1
h20 -> h10 h30 X serv1
h30 -> h10 h20 X serv1
hnotrust1 -> X X X X
serv1 -> h10 h20 h30 X
*** Results: 40% dropped (12/20 received)
```

2)

Iperf

```
mininet> iperf hnotrust1 h10
*** Iperf: testing TCP bandwidth between hnotrust1 and h10
*** Results: ['32.6 Gbits/sec', '32.6 Gbits/sec']
mininet> iperf h10 serv1
*** Iperf: testing TCP bandwidth between h10 and serv1
*** Results: ['22.8 Gbits/sec', '22.9 Gbits/sec']
mininet> iperf hnotrust1 serv1
*** Iperf: testing TCP bandwidth between hnotrust1 and serv1
^C
Interrupt
```

3)

dpctl dump-flows

```
mininet> dpctl dump-flows
*** cores21 -----
cookie=0x0, duration=529.893s, table=0, n_packets=10, n_bytes=836, priority=200,ip,nw_src=172.16.10.100,nw_dst=10.0.4.10 actions=drop
cookie=0x0, duration=529.893s, table=0, n_packets=9, n_bytes=882, priority=200,icmp,nw_src=172.16.10.100 actions=drop
cookie=0x0, duration=332.657s, table=0, n_packets=695623, n_bytes=20427106830, priority=100,ip,nw_dst=10.0.1.10 actions=mod_dl_dst:00:00:00:00:00:01,output:"cores21-eth1"
cookie=0x0, duration=292.632s, table=0, n_packets=9, n_bytes=882, priority=100,ip,nw_dst=10.0.2.20 actions=mod_dl_dst:00:00:00:00:00:02,output:"cores21-eth2"
cookie=0x0, duration=262.583s, table=0, n_packets=9, n_bytes=882, priority=100,ip,nw_dst=10.0.3.30 actions=mod_dl_dst:00:00:00:00:00:03,output:"cores21-eth3"
cookie=0x0, duration=242.544s, table=0, n_packets=366863, n_bytes=24214250, priority=100,ip,nw_dst=172.16.10.100 actions=mod_dl_dst:00:00:00:00:00:05,output:"cores21-eth5"
cookie=0x0, duration=202.531s, table=0, n_packets=321447, n_bytes=14318691110, priority=100,ip,nw_dst=10.0.4.10 actions=mod_dl_dst:00:00:00:00:00:04,output:"cores21-eth4"
*** dcs31 -----
cookie=0x0, duration=529.889s, table=0, n_packets=556547, n_bytes=14334208742, priority=50 actions=FL00D
*** s1 -----
cookie=0x0, duration=529.903s, table=0, n_packets=1383963, n_bytes=34770014202, priority=50 actions=FL00D
*** s2 -----
cookie=0x0, duration=529.906s, table=0, n_packets=48, n_bytes=3904, priority=50 actions=FL00D
*** s3 -----
cookie=0x0, duration=529.917s, table=0, n_packets=49, n_bytes=3894, priority=50 actions=FL00D
mininet>
```