

```
[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)
```

In the first “pingall”, some pings failed as the router learned of routes. Because the router does not know which port corresponds to which host, so it cannot forward it to the correct destination.

In the second “pingall”, none of the pings failed except for the ones related to hnotrust1, because the router has now learned of all the routes.

```
[mininet> iperf hnotrust1 h10
*** Iperf: testing TCP bandwidth between hnotrust1 and h10
*** Results: ['23.4 Gbits/sec', '23.4 Gbits/sec']
[mininet> iperf h10 serv1
*** Iperf: testing TCP bandwidth between h10 and serv1
*** Results: ['23.2 Gbits/sec', '23.2 Gbits/sec']
```

```
mininet> dpctl dump-flows
*** cores21 -----
NXST_FLOW reply (xid=0x4):
cookie=0x0, duration=91.349s, table=0, n_packets=58758, n_bytes=3878876, idle_age=39, priority=10,ip,nw_dst=172.16.10.100 actions=mod_d1_dst:00:00:00:00:00:05,output:5
cookie=0x0, duration=81.343s, table=0, n_packets=315108, n_bytes=14678976768, idle_age=27, priority=10,ip,nw_dst=10.0.1.10 actions=mod_d1_dst:00:00:00:00:00:01,output:1
cookie=0x0, duration=81.343s, table=0, n_packets=0, n_bytes=0, idle_age=81, priority=10,ip,nw_dst=10.0.2.20 actions=mod_d1_dst:00:00:00:00:00:02,output:2
cookie=0x0, duration=81.343s, table=0, n_packets=254113, n_bytes=14518188978, idle_age=27, priority=10,ip,nw_dst=10.0.4.10 actions=mod_d1_dst:00:00:00:00:00:04,output:4
cookie=0x0, duration=81.343s, table=0, n_packets=0, n_bytes=0, idle_age=81, priority=10,ip,nw_dst=10.0.3.30 actions=mod_d1_dst:00:00:00:00:00:03,output:3
cookie=0x0, duration=323.9s, table=0, n_packets=13, n_bytes=1274, idle_age=86, priority=100,icmp,nw_src=172.16.10.100 actions=drop
cookie=0x0, duration=323.859s, table=0, n_packets=0, n_bytes=0, idle_age=323, priority=90,ip,nw_src=172.16.10.100,nw_dst=10.0.4.10 actions=drop
*** dcs31 -----
NXST_FLOW reply (xid=0x4):
cookie=0x0, duration=323.883s, table=0, n_packets=312412, n_bytes=14514037216, idle_age=27, actions=FLOOD
*** s1 -----
NXST_FLOW reply (xid=0x4):
cookie=0x0, duration=323.903s, table=0, n_packets=628011, n_bytes=29185046390, idle_age=27, actions=FLOOD
*** s2 -----
NXST_FLOW reply (xid=0x4):
cookie=0x0, duration=323.938s, table=0, n_packets=30, n_bytes=2492, idle_age=81, actions=FLOOD
*** s3 -----
NXST_FLOW reply (xid=0x4):
cookie=0x0, duration=323.905s, table=0, n_packets=29, n_bytes=2394, idle_age=81, actions=FLOOD
```