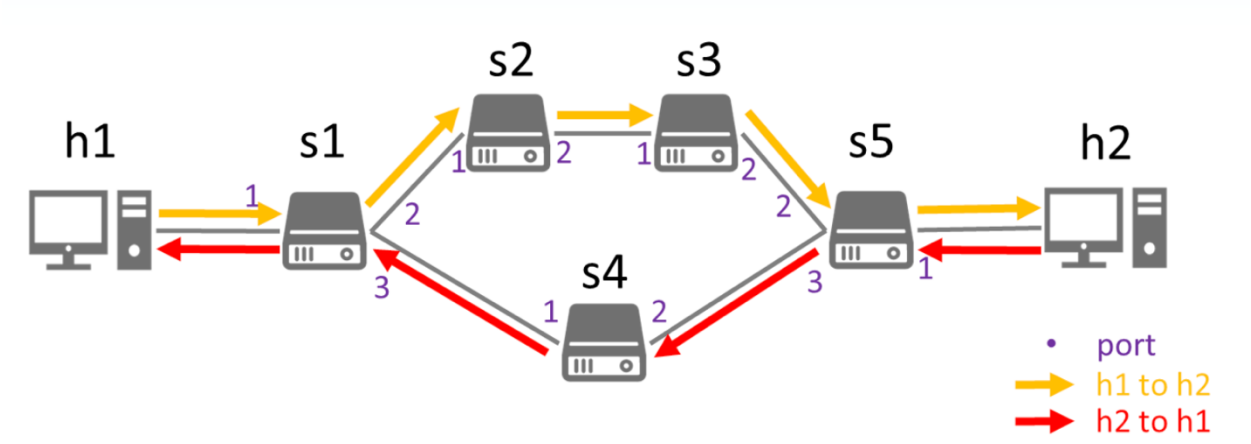
Lab 4

Page 42 (s1-s2 link up)

```
mininet> sh ovs-ofctl dump-ports -O OpenFlow14 s1
OFPST_PORT reply (OF1.4) (xid=0x2): 4 ports
  port LOCAL: rx pkts=0, bytes=0, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=0, bytes=0, drop=0, errs=0, coll=0
           duration=77.122s
  port  "s1-eth1": rx pkts=17853, bytes=13791378, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=80, bytes=10535, drop=0, errs=0, coll=0
           duration=77.134s
  port  "s1-eth2": rx pkts=77, bytes=10233, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=17917, bytes=13800553, drop=0, errs=0, coll=0
           duration=77.136s
  port  "s1-eth3": rx pkts=77, bytes=10233, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=77, bytes=10233, drop=0, errs=0, coll=0
           duration=77.132s
```

```
mininet> sh ovs-ofctl dump-ports -O OpenFlow14 s4
OFPST_PORT reply (OF1.4) (xid=0x2): 3 ports
  port LOCAL: rx pkts=0, bytes=0, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=0, bytes=0, drop=0, errs=0, coll=0
           duration=100.557s
  port  "s4-eth1": rx pkts=93, bytes=12457, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=93, bytes=12457, drop=0, errs=0, coll=0
           duration=100.562s
  port  "s4-eth2": rx pkts=91, bytes=12179, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=93, bytes=12457, drop=0, errs=0, coll=0
           duration=100.561s
```

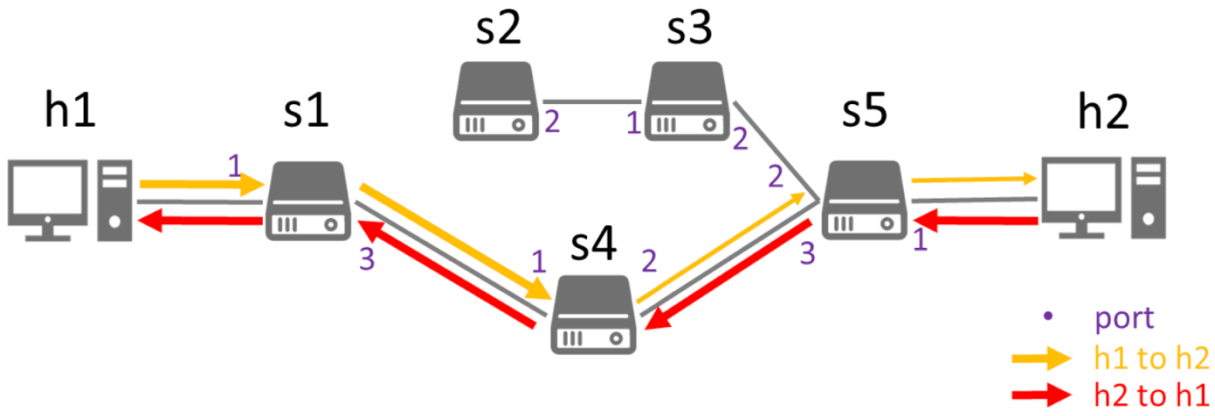


Since the link between s1 and s2 is up, most of the traffic will go through s1's port 2 as we can see from the huge traffic of tx of "s1-eth2" compared to that of "s1-eth3".

Part 43 (s1-s2 link down)

```
mininet> sh ovs-ofctl dump-ports -O OpenFlow14 s1
OFPST_PORT reply (OF1.4) (xid=0x2): 4 ports
  port LOCAL: rx pkts=0, bytes=0, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=0, bytes=0, drop=0, errs=0, coll=0
           duration=53.950s
  port  "s1-eth1": rx pkts=18221, bytes=14075858, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=64, bytes=8332, drop=0, errs=0, coll=0
           duration=53.957s
  port  "s1-eth2": rx pkts=21, bytes=2820, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=21, bytes=2820, drop=0, errs=0, coll=0
           duration=53.958s
  port  "s1-eth3": rx pkts=59, bytes=7832, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=18269, bytes=14082894, drop=0, errs=0, coll=0
           duration=53.954s
```

```
mininet> sh ovs-ofctl dump-ports -O OpenFlow14 s4
OFPST_PORT reply (OF1.4) (xid=0x2): 3 ports
  port LOCAL: rx pkts=0, bytes=0, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=0, bytes=0, drop=0, errs=0, coll=0
           duration=70.384s
  port  "s4-eth1": rx pkts=18281, bytes=14084461, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=81, bytes=15299, drop=0, errs=0, coll=0
           duration=70.388s
  port  "s4-eth2": rx pkts=83, bytes=15577, drop=0, errs=0, frame=0, over=0, crc=0
           tx pkts=8265, bytes=949361, drop=0, errs=0, coll=0
           duration=70.388s
```



Since the link between s1 and s2 is down, traffic can only go through s1's port 3 as we can see from the huge traffic of tx of "s1-eth3" compared to that of "s1-eth2". Moreover, the tx of "s4-eth2" is much lower than the rx of "s4-eth1", meaning that the rate limit applied in the Meter entry of s4 is working as expected.