Start Controller

root@server03:~/ryu/ryu/app# ryu-manager simple_switch_stp_13.py

Start Mininet

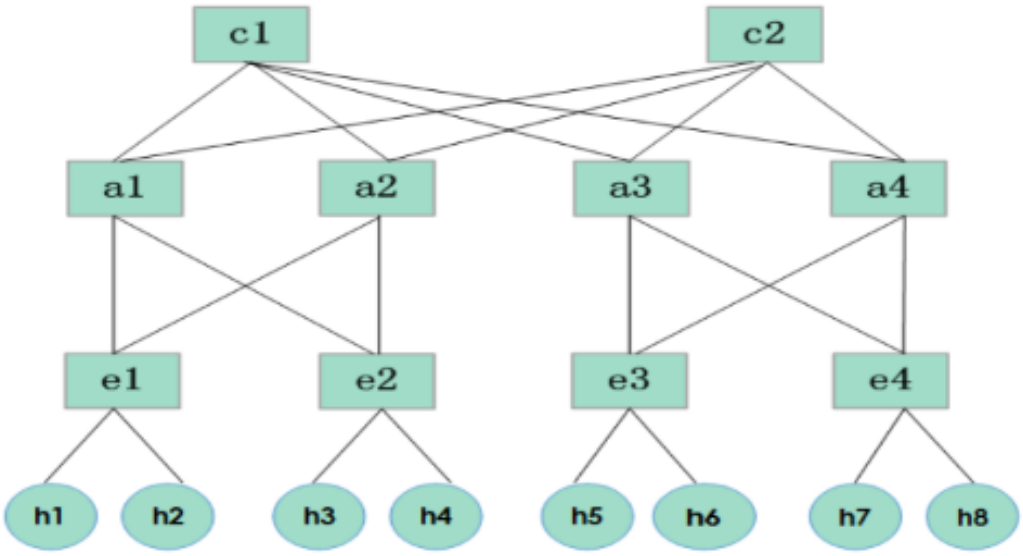
root@server03:~/mininet/custom# sudo mn --custom ./dc_topo.py --topo=mytopo --controller=remote

1. Pingall Test

```
root@server03:~/mininet/custom#
root@server03:~/mininet/custom# sudo mn --custom ./dc_topo.py --topo=mytopo --controller=remote
*** Creating network
*** Adding controller
Connecting to remote controller at 127.0.0.1:6653
*** Adding hosts:
h1 h2 h3 h4 h5 h6 h7 h8
*** Adding switches:
a3 a4 a5 a6 c1 c2 e7 e8 e9 e10
*** Adding links:
(a3, e7) (a3, e8) (a4, e7) (a4, e8) (a5, e9) (a5, e10) (a6, e9) (a6, e10) (c1, a3) (c1, a4) (c1
, a5) (c1, a6) (c2, a3) (c2, a4) (c2, a5) (c2, a6) (e7, h1) (e7, h2) (e8, h3) (e8, h4) (e9, h5)
 (e9, h6) (e10, h7) (e10, h8)
*** Configuring hosts
h1 h2 h3 h4 h5 h6 h7 h8
*** Starting controller
c0
*** Starting 10 switches
a3 a4 a5 a6 c1 c2 e7 e8 e9 e10 ...
*** Starting CLI:
mininet> pingall
*** Ping: testing ping reachability
h1 -> h2 h3 h4 h5 h6 h7 h8
h2 -> h1 h3 h4 h5 h6 h7 h8
h3 -> h1 h2 h4 h5 h6 h7 h8
h4 -> h1 h2 h3 h5 h6 h7 h8
h5 -> h1 h2 h3 h4 h6 h7 h8
h6 -> h1 h2 h3 h4 h5 h7 h8
h7 -> h1 h2 h3 h4 h5 h6 h8
h8 -> h1 h2 h3 h4 h5 h6 h7
*** Results: 0% dropped (56/56 received)
```

2. Topo Check

```
mininet> dump
<Host h1: h1-eth0:10.0.0.1 pid=34466>
<Host h2: h2-eth0:10.0.0.2 pid=34468>
<Host h3: h3-eth0:10.0.0.3 pid=34470>
<Host h4: h4-eth0:10.0.0.4 pid=34472>
<Host h5: h5-eth0:10.0.0.5 pid=34474>
<Host h6: h6-eth0:10.0.0.6 pid=34476>
<Host h7: h7-eth0:10.0.0.7 pid=34478>
<Host h8: h8-eth0:10.0.0.8 pid=34480>
<OVSSwitch a3: lo:127.0.0.1,a3-eth1:None,a3-eth2:None,a3-eth3:None,a3-eth4:None pid=34485>
<OVSSwitch a4: lo:127.0.0.1,a4-eth1:None,a4-eth2:None,a4-eth3:None,a4-eth4:None pid=34488>
<OVSSwitch a5: lo:127.0.0.1,a5-eth1:None,a5-eth2:None,a5-eth3:None,a5-eth4:None pid=34491>
<OVSSwitch a6: lo:127.0.0.1,a6-eth1:None,a6-eth2:None,a6-eth3:None,a6-eth4:None pid=34494>
<OVSSwitch c1: lo:127.0.0.1,c1-eth1:None,c1-eth2:None,c1-eth3:None,c1-eth4:None pid=34497>
<OVSSwitch c2: lo:127.0.0.1,c2-eth1:None,c2-eth2:None,c2-eth3:None,c2-eth4:None pid=34500>
<OVSSwitch e7: lo:127.0.0.1,e7-eth1:None,e7-eth2:None,e7-eth3:None,e7-eth4:None pid=34503>
<OVSSwitch e8: lo:127.0.0.1,e8-eth1:None,e8-eth2:None,e8-eth3:None,e8-eth4:None pid=34506>
<OVSSwitch e9: lo:127.0.0.1,e9-eth1:None,e9-eth2:None,e9-eth3:None,e9-eth4:None pid=34510>
<OVSSwitch e10: lo:127.0.0.1,e10-eth1:None,e10-eth2:None,e10-eth3:None,e10-eth4:None pid=34513>
<RemoteController c0: 127.0.0.1:6653 pid=34460>
```



3. End to end bandwidth test

```
mininet> iperf h1 h2
*** Iperf: testing TCP bandwidth between h1 and h2
*** Results: ['29.1 Gbits/sec', '29.1 Gbits/sec']
mininet>
mininet> iperf h1 h3
*** Iperf: testing TCP bandwidth between h1 and h3
*** Results: ['28.8 Gbits/sec', '28.8 Gbits/sec']
mininet>
mininet> iperf h1 h8
*** Iperf: testing TCP bandwidth between h1 and h8
*** Results: ['25.6 Gbits/sec', '25.6 Gbits/sec']
```