

CS2007-Assignment-10

On fist terminal, we need to run the trunk12.py file for executing the multitrun topology and on the other terminal we need to invoke the pox controller corresponding to it

```
csg@Ubuntu1: ~  
csg@Ubuntu1:~$ sudo python3 ~/Downloads/trunk12.py  
[sudo] password for csg:  
sudo: pypthon3: command not found  
csg@Ubuntu1:~$ sudo python3 ~/Downloads/trunk12.py  
*** Creating network  
*** Adding controller  
Unable to contact the remote controller at 127.0.0.1:6653  
Connecting to remote controller at 127.0.0.1:6633  
*** Adding hosts:  
h1 h2  
*** Adding switches:  
s1 s2 s3 s4 s5 s6 s7 s8  
*** Adding links:  
(20.00Mbit) (20.00Mbit) (h1, s7) (20.00Mbit) (20.00Mbit) (h2, s8) (20.00Mbit) (20.00Mbit) (s1, s4) (20.00Mbit) (20.00Mbit) (s2, s5) (20.00Mbit) (20.00Mbit) (s3, s6) (20.00Mbit) (20.00Mbit) (s7, s1) (20.00Mbit) (20.00Mbit) (s7, s2) (20.00Mbit) (20.00Mbit) (s7, s3) (20.00Mbit) (20.00Mbit) (s8, s4) (20.00Mbit) (20.00Mbit) (s8, s5) (20.00Mbit) (20.00Mbit) (s8, s6)  
*** Configuring hosts  
h1 h2  
*** Starting controller  
c0 c  
**** Starting 8 switches  
s1 s2 s3 s4 s5 s6 s7 s8 ... (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit)  
(t) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit) (20.00Mbit)  
*** Starting CLI:  
mininet> nodes  
available nodes are:  
c c0 h1 h2 s1 s2 s3 s4 s5 s6 s7 s8  
mininet> links  
h1-eth0<->s7-eth4 (OK OK)  
h2-eth0<->s8-eth4 (OK OK)  
s1-eth1<->s4-eth1 (OK OK)  
s2-eth1<->s5-eth1 (OK OK)  
s3-eth1<->s6-eth1 (OK OK)  
s7-eth1<->s1-eth2 (OK OK)  
s7-eth2<->s2-eth2 (OK OK)  
s7-eth3<->s3-eth2 (OK OK)  
s8-eth1<->s4-eth2 (OK OK)  
s8-eth2<->s5-eth2 (OK OK)  
s8-eth3<->s6-eth2 (OK OK)  
mininet> net  
h1 h1-eth0:s7-eth4  
h2 h2-eth0:s8-eth4  
s1 lo: s1-eth1:s4-eth1 s1-eth2:s7-eth1  
s2 lo: s2-eth1:s5-eth1 s2-eth2:s7-eth2  
s3 lo: s3-eth1:s6-eth1 s3-eth2:s7-eth3  
s4 lo: s4-eth1:s1-eth1 s4-eth2:s8-eth1  
s5 lo: s5-eth1:s2-eth1 s5-eth2:s8-eth2  
s6 lo: s6-eth1:s3-eth1 s6-eth2:s8-eth3  
s7 lo: s7-eth1:s1-eth2 s7-eth2:s2-eth2 s7-eth3:s3-eth2 s7-eth4:h1-eth0  
s8 lo: s8-eth1:s4-eth2 s8-eth2:s5-eth2 s8-eth3:s6-eth2 s8-eth4:h2-eth0  
c0 c  
mininet>
```

The pox console command -

```
csg@Ubuntu1:~$ pox/pox.py openflow.discovery openflow.nicira --convert-packet-in log.level --WARNING forwarding.multitrunkpox12
POX 0.7.0 (gar) / Copyright 2011-2020 James McCauley, et al.
WARNING:version:Support for Python 3 is experimental.
```

Then we need to perform iperf and ping on h1 and h2 to verify the connections between h1 and h2

```
mininet> iperf h1 h2
*** Iperf: testing TCP bandwidth between h1 and h2
*** Results: ['44.5 Gbits/sec', '44.4 Gbits/sec']
mininet> iperf h2 h1
*** Iperf: testing TCP bandwidth between h2 and h1
*** Results: ['46.6 Gbits/sec', '46.6 Gbits/sec']
mininet> h1 ping h2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.
64 bytes from 10.0.0.2: icmp_seq=1 ttl=64 time=5.55 ms
64 bytes from 10.0.0.2: icmp_seq=2 ttl=64 time=0.366 ms
64 bytes from 10.0.0.2: icmp_seq=3 ttl=64 time=0.079 ms
^C
--- 10.0.0.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2017ms
rtt min/avg/max/mdev = 0.079/1.996/5.545/2.511 ms
mininet>
```