

```
Activities Terminal Tue 16:45 mininet@mininet-vm: ~
mininet@mininet-vm: ~
File Edit View Search Terminal Tabs Help
mininet@mininet-vm: ~
ps ax | grep -o 'dp[0-9]+' | sed 's/dp/nl:/'
*** Removing OVS datapathsovs-vsctl --timeout=1 list-br
*** Removing all links of the pattern foo-ethX
ip link show | grep -o '(\w+-eth\w+)'
*** Cleanup complete.
mininet@mininet-vm:~$ sudo mn --topo=single,3 --mac --switch=ovs --controller=
emote
*** Creating network
*** Adding controller
Unable to contact the remote controller at 127.0.0.1:6633
*** Adding hosts:
h1 h2 h3
*** Adding switches:
s1
*** Adding links:
(h1, s1) (h2, s1) (h3, s1)
*** Configuring hosts:
h1 h2 h3
*** Starting controller
*** Starting 1 switches
s1
*** Starting CLI:
mininet> pingall
*** Ping: testing ping reachability
h1 -> X X X
h2 -> X X X
h3 -> X X X
*** Results: 100% dropped (0/6 received)
mininet> pingall
*** Ping: testing ping reachability
h1 -> h2 X
h2 -> h1 X
h3 -> X X X
*** Results: 66% dropped (2/6 received)
mininet> h1 ping -c 10 h2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data:
64 bytes from 10.0.0.2: icmp_req=1 ttl=64 time=0.992 ms
64 bytes from 10.0.0.2: icmp_req=2 ttl=64 time=0.038 ms
64 bytes from 10.0.0.2: icmp_req=3 ttl=64 time=0.032 ms
64 bytes from 10.0.0.2: icmp_req=4 ttl=64 time=0.034 ms
64 bytes from 10.0.0.2: icmp_req=5 ttl=64 time=0.034 ms
64 bytes from 10.0.0.2: icmp_req=6 ttl=64 time=0.032 ms
64 bytes from 10.0.0.2: icmp_req=7 ttl=64 time=0.045 ms
64 bytes from 10.0.0.2: icmp_req=8 ttl=64 time=0.041 ms
64 bytes from 10.0.0.2: icmp_req=9 ttl=64 time=0.035 ms
^C
--- 10.0.0.2 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 7999ms
rtt min/avg/max/mdev = 0.032/0.142/0.992/0.308 ms
mininet> 
```

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Activities Terminal Tue 16:46 mininet@mininet-vm: ~
mininet@mininet-vm: ~
File Edit View Search Terminal Tabs Help
mininet@mininet-vm: ~ mininet@mininet-vm: ~
[Group6@group6d ~]$ ssh -Y mininet@192.168.166.161
mininet@192.168.166.161's password:
Welcome to Ubuntu 13.04 (GNU/Linux 3.8.0-19-generic i686)

 * Documentation:  https://help.ubuntu.com/
Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

Now release '13.10' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue May  6 21:42:34 2014 from 192.168.166.1
mininet@mininet-vm:~$ dpctl show tcp:127.0.0.1:6634
features_reply (xid=0x88e79e9e): ver:0x1, dpid:1
n_tables:255, n_buffers:256
features: capabilities:0xc7, actions:0xffff
1(s1-eth1): addr:ce:ca:81:ba:68:09, config: 0, state:0
current: 10GB-FD COPPER
2(s1-eth2): addr:be:01:ec:28:c3:26, config: 0, state:0
current: 10GB-FD COPPER
3(s1-eth3): addr:5a:61:f7:ed:68:e5, config: 0, state:0
current: 10GB-FD COPPER
LOCAL(s1): addr:a2:89:52:c7:24:41, config: 0x1, state:0x1
get_config_reply (xid=0xbd6e14da): miss send len=0
mininet@mininet-vm:~$ dpctl dump-flows tcp:127.0.0.1:6634
stats_reply (xid=0xb3cfd807): flags:none type=1(flow)
mininet@mininet-vm:~$ dpctl add-flow tcp:127.0.0.1:6634 in_port=1,actions=output:2
mininet@mininet-vm:~$ dpctl add-flow tcp:127.0.0.1:6634 in_port=2,actions=output:1
mininet@mininet-vm:~$ dpctl dump-flows tcp:127.0.0.1:6634
stats_reply (xid=0xd32f5c14): flags:none type=1(flow)
cookie=6, duration_sec=99s, duration_nsec=189888880s, table_id=0, priority=32768, n_packets=17, n_bytes=1330, idle_timeout=60,hard_timeout=0,in_port=1,actions=output:2
cookie=0, duration_sec=83s, duration_nsec=530888880s, table_id=0, priority=32768, n_packets=17, n_bytes=1330, idle_timeout=60,hard_timeout=0,in_port=2,actions=output:1
mininet@mininet-vm:~$
```

```
Activities Terminal Tue 16:47 mininet@mininet-vm: ~
mininet@mininet-vm: ~
File Edit View Search Terminal Tabs Help
mininet@mininet-vm: ~
ip link show | egrep -o '(\w+-eth\w+)'
*** Cleanup complete.
mininet@mininet-vm:~$ sudo mn --topo=single,3 --mac --switch=ovsk --controller=f
enote
*** Creating network
*** Adding controller:
Unable to contact the remote controller at 127.0.0.1:6633
*** Adding hosts:
h1 h2 h3
*** Adding switches:
s1
*** Adding links:
[h1, s1] [h2, s1] [h3, s1]
*** Configuring hosts
h1 h2 h3
*** Starting controller
*** Starting 1 switches
s1
*** Starting CLI:
mininet> pingall
*** Ping: testing ping reachability
h1 -> X X
h2 -> X X
h3 -> X X
*** Results: 100% dropped (0/6 received)
mininet> pingall
*** Ping: testing ping reachability
h1 -> h2 X
h2 -> h1 X
h3 -> X X
*** Results: 66% dropped (2/6 received)
mininet> h1 ping -c 10 h2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data:
64 bytes from 10.0.0.2: icmp_req=1 ttl=64 time=0.992 ms
64 bytes from 10.0.0.2: icmp_req=2 ttl=64 time=0.036 ms
64 bytes from 10.0.0.2: icmp_req=3 ttl=64 time=0.032 ms
64 bytes from 10.0.0.2: icmp_req=4 ttl=64 time=0.034 ms
64 bytes from 10.0.0.2: icmp_req=5 ttl=64 time=0.034 ms
64 bytes from 10.0.0.2: icmp_req=6 ttl=64 time=0.032 ms
64 bytes from 10.0.0.2: icmp_req=7 ttl=64 time=0.045 ms
64 bytes from 10.0.0.2: icmp_req=8 ttl=64 time=0.041 ms
64 bytes from 10.0.0.2: icmp_req=9 ttl=64 time=0.035 ms
^C
--- 10.0.0.2 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 799ms
rtt min/avg/max/mdev = 0.032/0.142/0.992/0.309 ms
mininet> dctl dump-flows tcp:127.0.0.1:6634
*** s1 ***
ovs-ofctl: field tcp:127.0.0.1:6634 missing value
mininet> 
```

```
Activities Terminal Tue 16:48 mininet@mininet-vm: ~
mininet@mininet-vm: ~
File Edit View Search Terminal Tabs Help
mininet@mininet-vm: ~
mininet@mininet-vm: ~
*** Creating network
*** Adding controller
Unable to contact the remote controller at 127.0.0.1:6633
*** Adding hosts:
h1 h2 h3
*** Adding switches:
s1
*** Adding links:
(h1, s1) (h2, s1) (h3, s1)
*** Configuring hosts
h1 h2 h3
*** Starting controller
*** Starting 1 switches
s1
*** Starting CLI:
mininet> pingall
*** Ping: testing ping reachability
h1 -> X X
h2 -> X X
h3 -> X X
*** Results: 100% dropped (0/6 received)
mininet> pingall
*** Ping: testing ping reachability
h1 -> h2 X
h2 -> h1 X
h3 -> X X
*** Results: 66% dropped (2/6 received)
mininet> h1 ping -c 10 h2
PING 10.0.0.2 (10.0.0.2): 56(84) bytes of data:
64 bytes from 10.0.0.2: icmp_req=1 ttl=64 time=0.992 ms
64 bytes from 10.0.0.2: icmp_req=2 ttl=64 time=0.036 ms
64 bytes from 10.0.0.2: icmp_req=3 ttl=64 time=0.032 ms
64 bytes from 10.0.0.2: icmp_req=4 ttl=64 time=0.034 ms
64 bytes from 10.0.0.2: icmp_req=5 ttl=64 time=0.034 ms
64 bytes from 10.0.0.2: icmp_req=6 ttl=64 time=0.032 ms
64 bytes from 10.0.0.2: icmp_req=7 ttl=64 time=0.045 ms
64 bytes from 10.0.0.2: icmp_req=8 ttl=64 time=0.041 ms
64 bytes from 10.0.0.2: icmp_req=9 ttl=64 time=0.035 ms
^C
--- 10.0.0.2 ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 7999ms
rtt min/avg/max/mdev = 0.032/0.142/0.992/0.300 ms
mininet> dctl dump-flows tcp:127.0.0.1:6634
*** s1 ***
ovs-ofctl: field tcp:127.0.0.1:6634 missing value
mininet> dctl del-flows tcp:127.0.0.1:6634
*** s1 ***
ovs-ofctl: field tcp:127.0.0.1:6634 missing value
mininet> 
```

```
Activities Terminal Tue 16:50 Group 6
mininet@mininet-vm: ~/pox

File Edit View Search Terminal Tabs Help
mininet@mininet-vm ~ - mininet@mininet-vm ~ - mininet@mininet-vm: ~/pox
[Group6@group6d ~]$ ssh -Y mininet@192.168.166.161
mininet@192.168.166.161's password:
Welcome to Ubuntu 13.04 (GNU/Linux 3.8.0-19-generic i686)

 * Documentation:  https://help.ubuntu.com/
Your Ubuntu release is not supported anymore.
For upgrade information, please visit:
http://www.ubuntu.com/releaseendoflife

Now release '13.10' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Tue May  6 21:43:55 2014 from 192.168.166.1
mininet@mininet-vm:~$ cd pox
mininet@mininet-vm:~/pox$ ./pox.py samples.pretty_log forwarding.12_learning
POX 0.1.0 (beta) / Copyright 2011-2013 James McCauley, et al.
[core] POX 0.1.0 (beta) is up.
[openflow.af_01] [00-00-00-00-00-01 1] connected
```