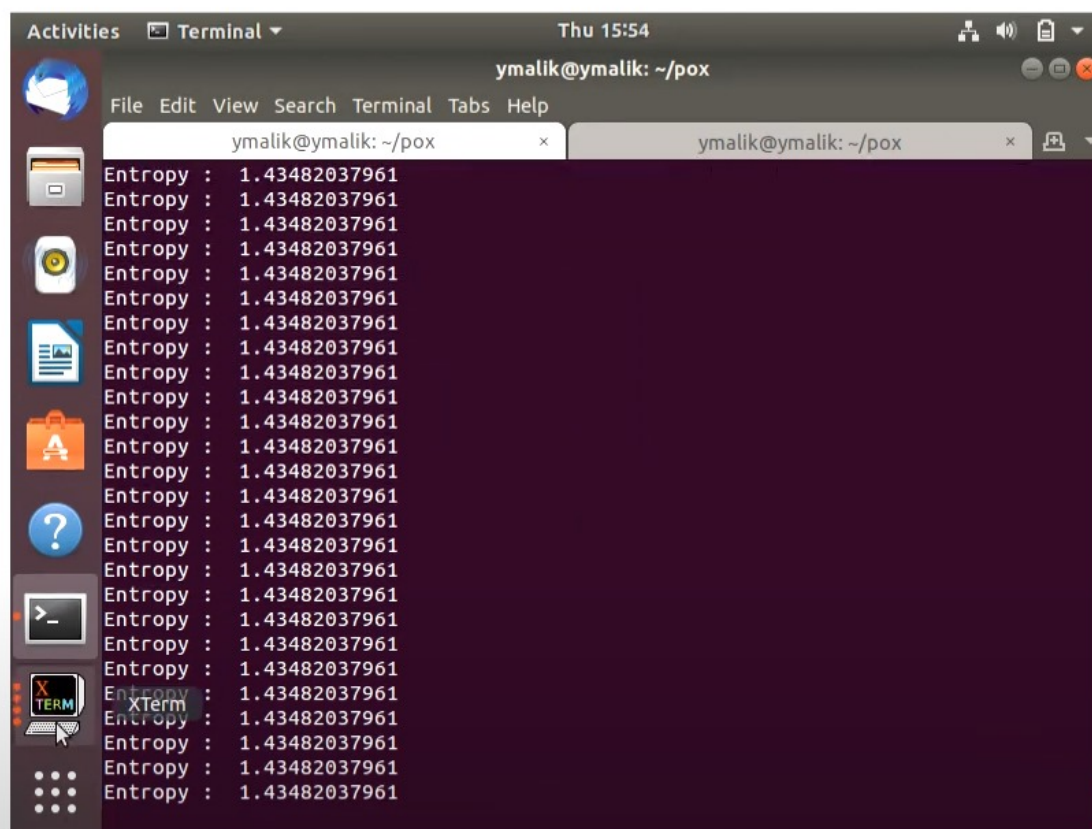
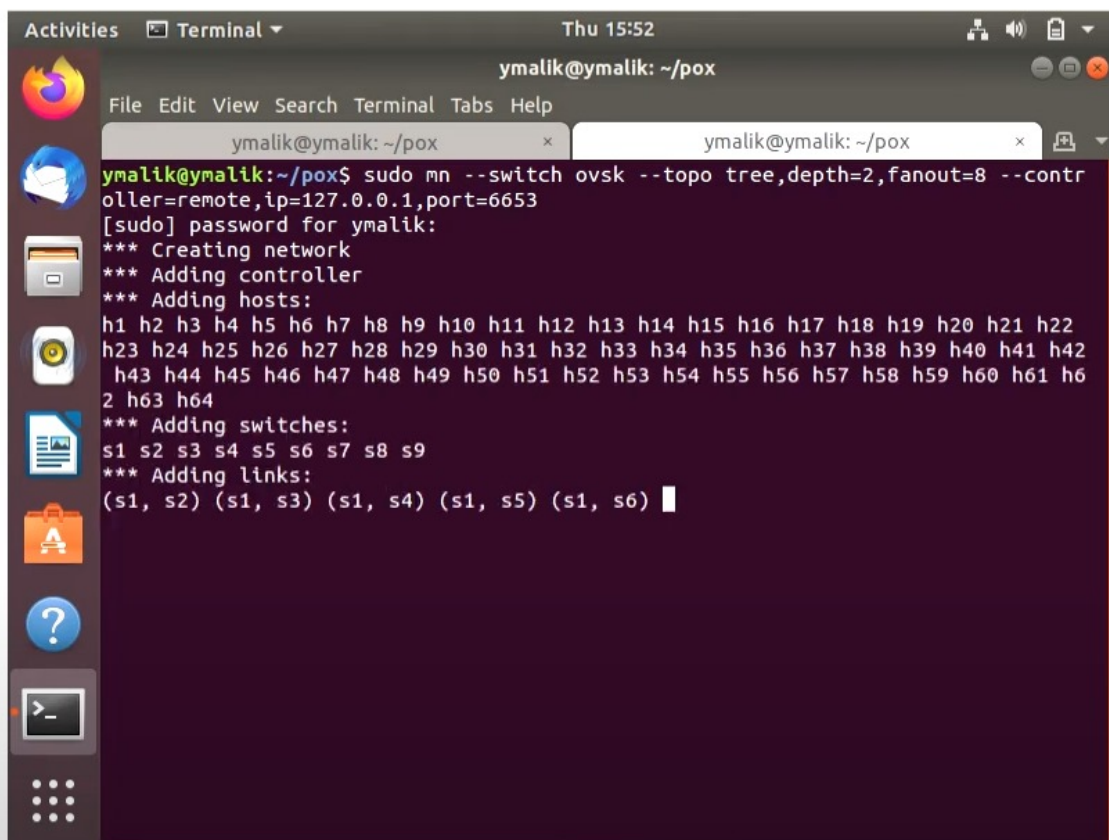


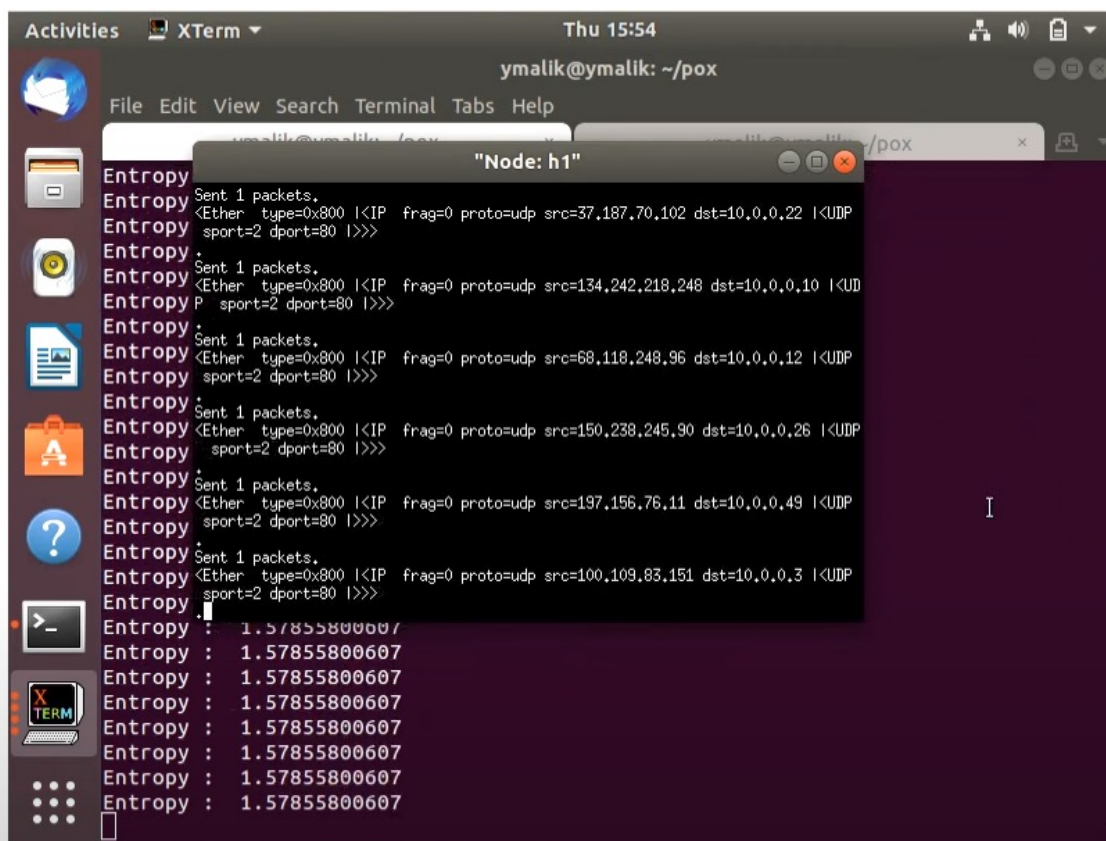
```
Activities XTerm Thu 15:53 ymalik@ymalik: ~/pox
File "Node: h2"
root@ymalik:~/pox# cd
root@ymalik:~/pox# cd mininet
root@ymalik:~/mininet# cd custom
root@ymalik:~/mininet/custom# python traffic.py -s 2 -e 65
<Ether type=0x800 l<IP frag=0 proto=udp src=160.90.110.162 dst=10.0.0.15 l<UDP
sport=2 dport=80 l>>>
.
Sent 1 packets.
<Ether type=0x800 l<IP frag=0 proto=udp src=58.176.80.146 dst=10.0.0.10 l<UDP
sport=2 dport=80 l>>>
.
Sent 1 packets.
<Ether type=0x800 l<IP frag=0 proto=udp src=166.72.220.61 dst=10.0.0.48 l<UDP
sport=2 dport=80 l>>>
.
Sent 1 packets.
<Ether type=0x800 l<IP frag=0 proto=udp src=63.192.135.72 dst=10.0.0.10 l<UDP
sport=2 dport=80 l>>>
.
h1 h2 h
h23 h24
h43 h44 n4:
2 h63 h64
*** Starting cu
c0
*** Starting 9 sweetnes
s1 s2 s3 s4 s5 s6 s7 s8 s9 ...
*** Starting CLI:
mininet> xterm h1 h2 h3 h64
mininet> 
```

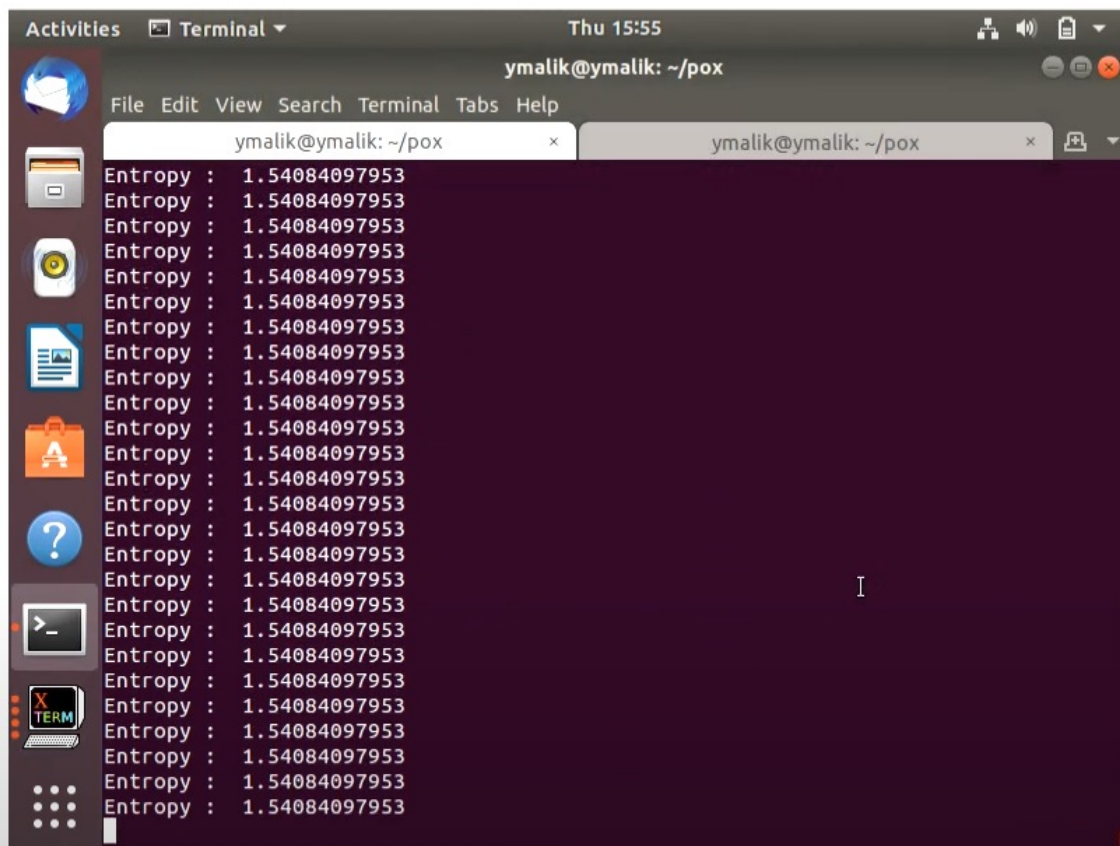


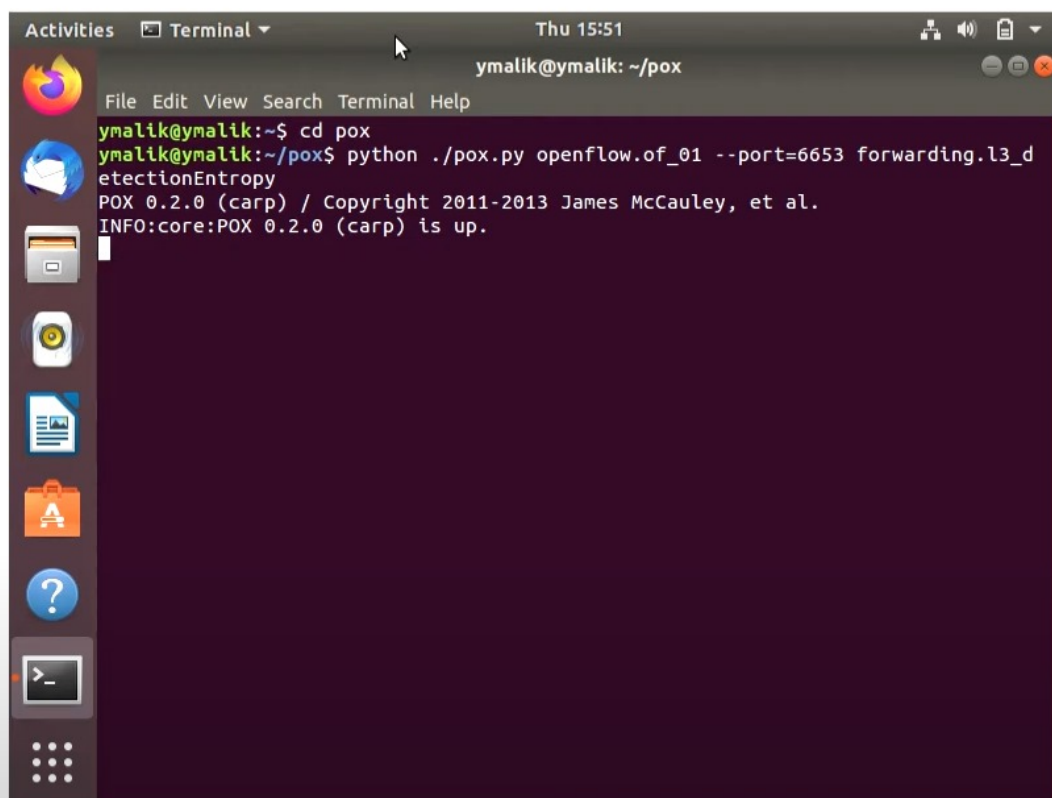


The image shows a Linux terminal window with a dark theme. The title bar indicates the current time is 15:52 on a Thursday. The terminal displays the execution of the 'mn' command with various flags to create a network topology. The output shows the successful creation of a network with 64 hosts (h1-h64), 9 switches (s1-s9), and 6 links between them. The left sidebar of the terminal window contains several application icons, including Firefox, a mail client, a file manager, a disk utility, a document viewer, a help icon, and a terminal icon.

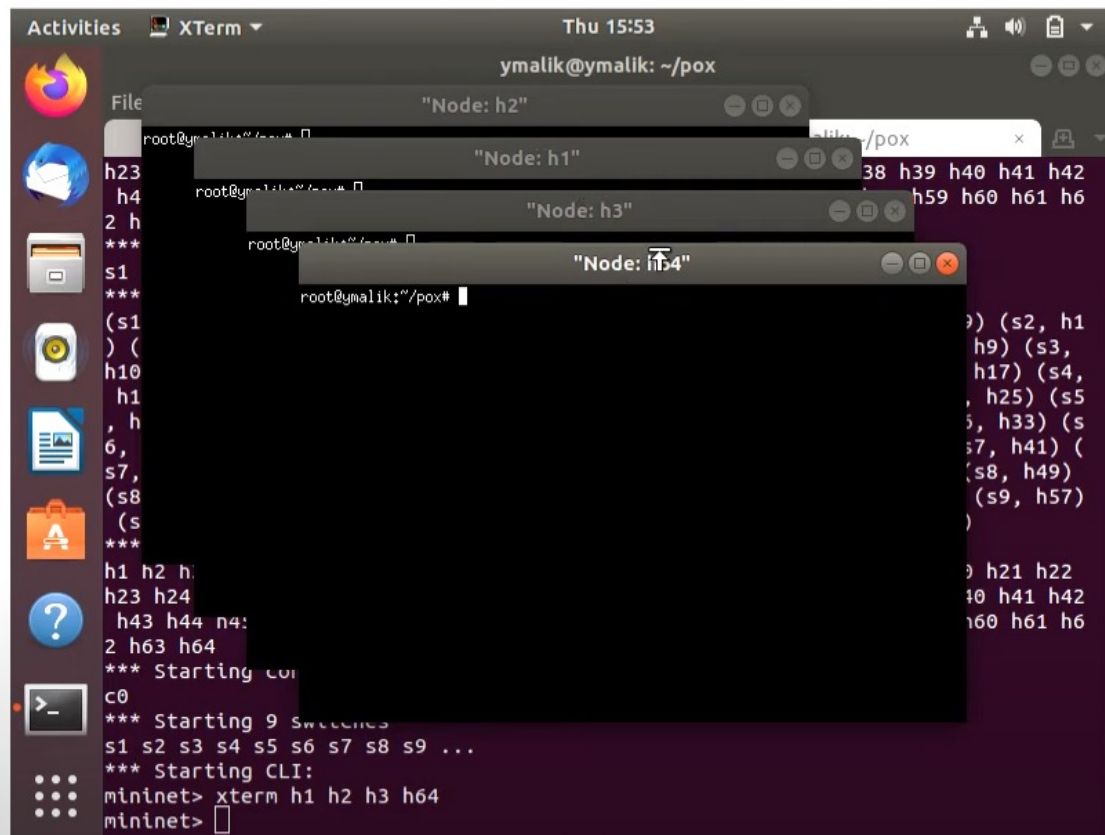
```
Activities  Terminal  Thu 15:52  ymalik@ymalik: ~/pox
File Edit View Search Terminal Tabs Help
ymalik@ymalik: ~/pox  x  ymalik@ymalik: ~/pox  x
ymalik@ymalik:~/pox$ sudo mn --switch ovsk --topo tree,depth=2,fanout=8 --controller=remote,ip=127.0.0.1,port=6653
[sudo] password for ymalik:
*** Creating network
*** Adding controller
*** Adding hosts:
h1 h2 h3 h4 h5 h6 h7 h8 h9 h10 h11 h12 h13 h14 h15 h16 h17 h18 h19 h20 h21 h22
h23 h24 h25 h26 h27 h28 h29 h30 h31 h32 h33 h34 h35 h36 h37 h38 h39 h40 h41 h42
h43 h44 h45 h46 h47 h48 h49 h50 h51 h52 h53 h54 h55 h56 h57 h58 h59 h60 h61 h62 h63 h64
*** Adding switches:
s1 s2 s3 s4 s5 s6 s7 s8 s9
*** Adding links:
(s1, s2) (s1, s3) (s1, s4) (s1, s5) (s1, s6)
```





A screenshot of a Linux terminal window. The window title bar shows 'Activities', 'Terminal', and the time 'Thu 15:51'. The terminal content shows a user named 'ymalik' navigating to a directory named 'pox' and running a Python script. The script outputs version information and a status message.

```
ymalik@ymalik:~$ cd pox
ymalik@ymalik:~/pox$ python ./pox.py openflow.of_01 --port=6653 forwarding.l3_d
etectionEntropy
POX 0.2.0 (carp) / Copyright 2011-2013 James McCauley, et al.
INFO:core:POX 0.2.0 (carp) is up.
```


```
Activities XTerm Thu 15:56 ymalik@ymalik: ~/pox
File "Node: h2"
Sent 1 packets.
dpi<Ether type=0x800 l<IP frag=0 proto=udp src=177.88.105.96 dst=['10.0.0.64'] l<
UDP sport=80 dport=1 l>>>
Ent:
dpiSent 1 packet.
dpi<Ether type=
Ent<UDP sport=root@ymalik:~/pox# cd
root@ymalik:~/pox# cd mininet
dpiSent 1 packet.
dpiroot@ymalik:~/mininet# cd custom
Ent<Ether type=root@ymalik:~/mininet/custom# python attack.py 10.0.0.64
dpi<Ether type=0x800 l<IP frag=0 proto=udp src=134.23.93.3 dst=['10.0.0.64'] l<UDP
P sport=80 dport=1 l>>>
Ent:
Sent 1 packet.
dpi<Ether type=Sent 1 packets.
Ent<UDP sport=<Ether type=0x800 l<IP frag=0 proto=udp src=48.96.176.126 dst=['10.0.0.64'] l<
UDP sport=80 dport=1 l>>>
dpiSent 1 packet.
Ent<Ether type=Sent 1 packets.
dpi<UDP sport=<Ether type=0x800 l<IP frag=0 proto=udp src=181.45.243.184 dst=['10.0.0.64'] l<
UDP sport=80 dport=1 l>>>
Sent 1 packet.
Sent 1 packets.
P sport=80<Ether type=0x800 l<IP frag=0 proto=udp src=54.7.210.95 dst=['10.0.0.64'] l<UDP
P sport=80 dport=1 l>>>
.
Sent 1
root@y
{2: {2: 35}}
2020-04-23 15:56:31.454883 : BLOCKED PORT NUMBER : 2 OF SWITCH ID: 2
ymalik@ymalik:~/pox$
```

```
Activities  Terminal  Thu 15:57
ymalik@ymalik: ~/pox

File Edit View Search Terminal Tabs Help

ymalik@ymalik: ~/pox x ymalik@ymalik: ~/pox x

dpid port and its packet count: 2 {2: 29} 29
Entropy : 0.0
dpid port and its packet count: 2 {2: 30} 30
Entropy : 0.0
dpid port and its packet count: 2 {2: 31} 31
Entropy : 0.0
dpid port and its packet count: 2 {2: 32} 32
Entropy : 0.0
dpid port and its packet count: 2 {2: 33} 33
Entropy : 0.0
dpid port and its packet count: 2 {2: 34} 34
Entropy : 0.0
dpid port and its packet count: 2 {2: 35} 35

-----
DDOS DETECTED

{2: {2: 35}}
2020-04-23 15:56:31.454883 : BLOCKED PORT NUMBER : 2 OF SWITCH ID: 2

ymalik@ymalik:~/pox$
```