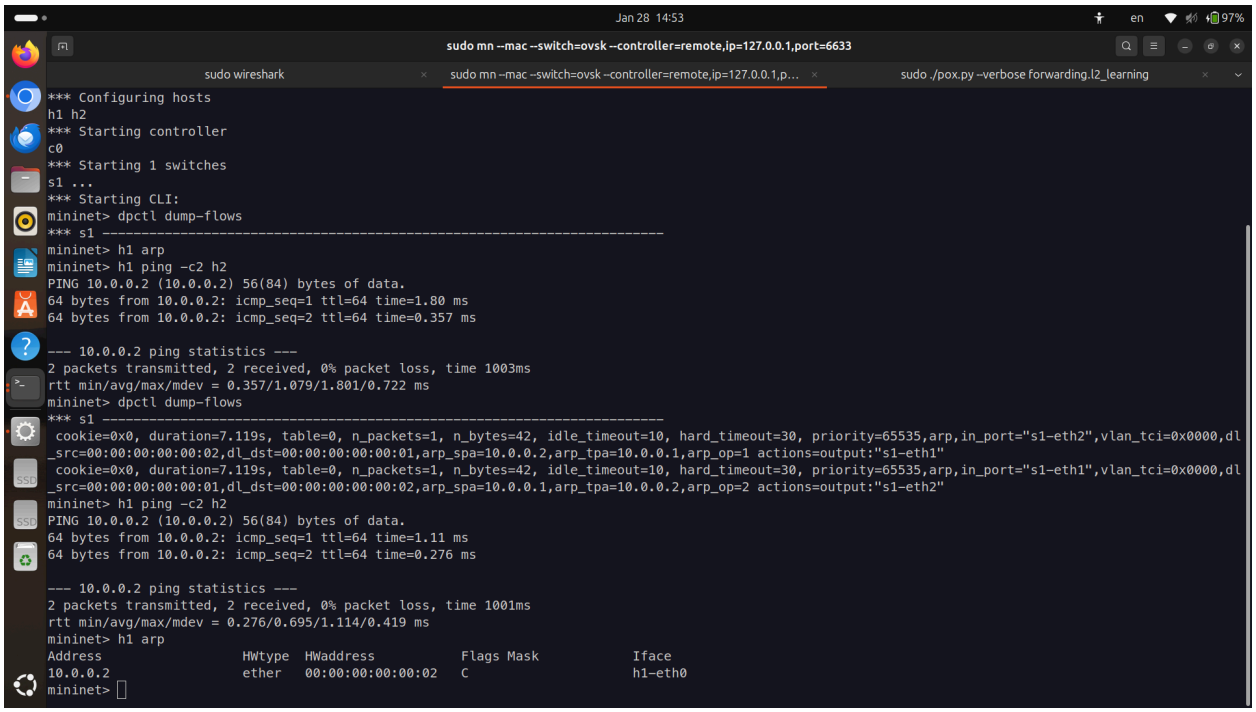
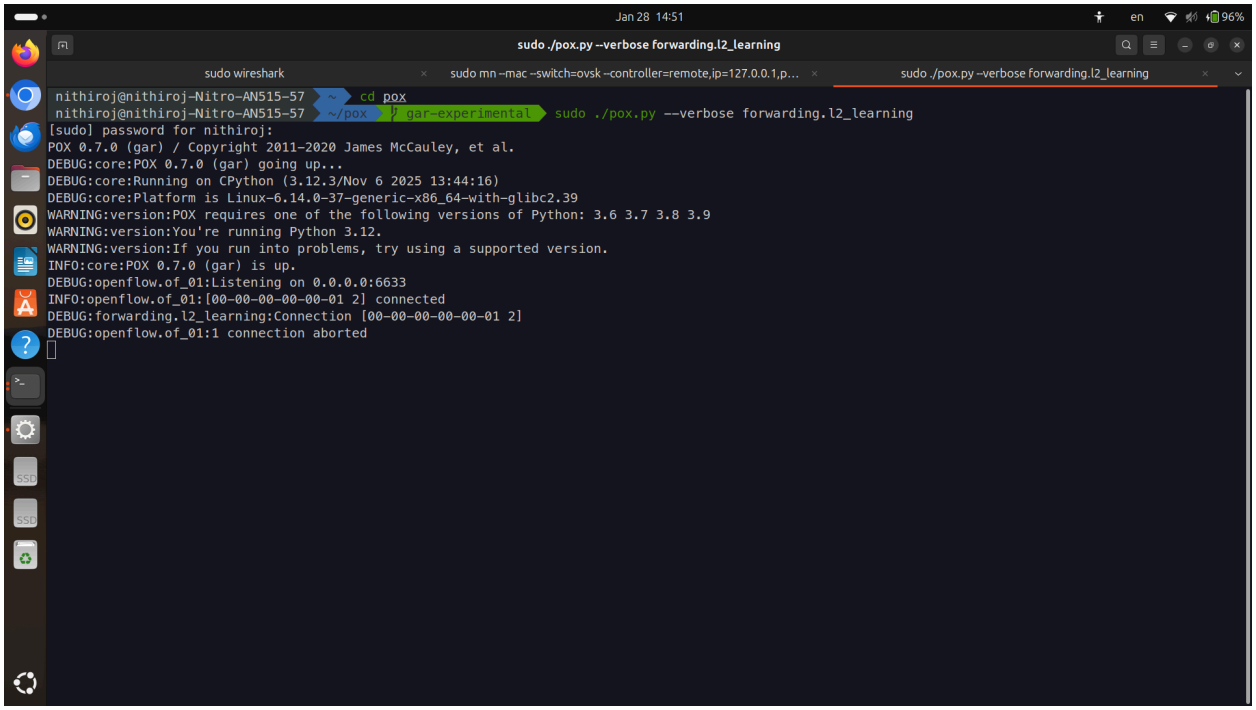
Assignment 5

นายนิธิโรจน์ นันทวโนทยาน 663040653-3

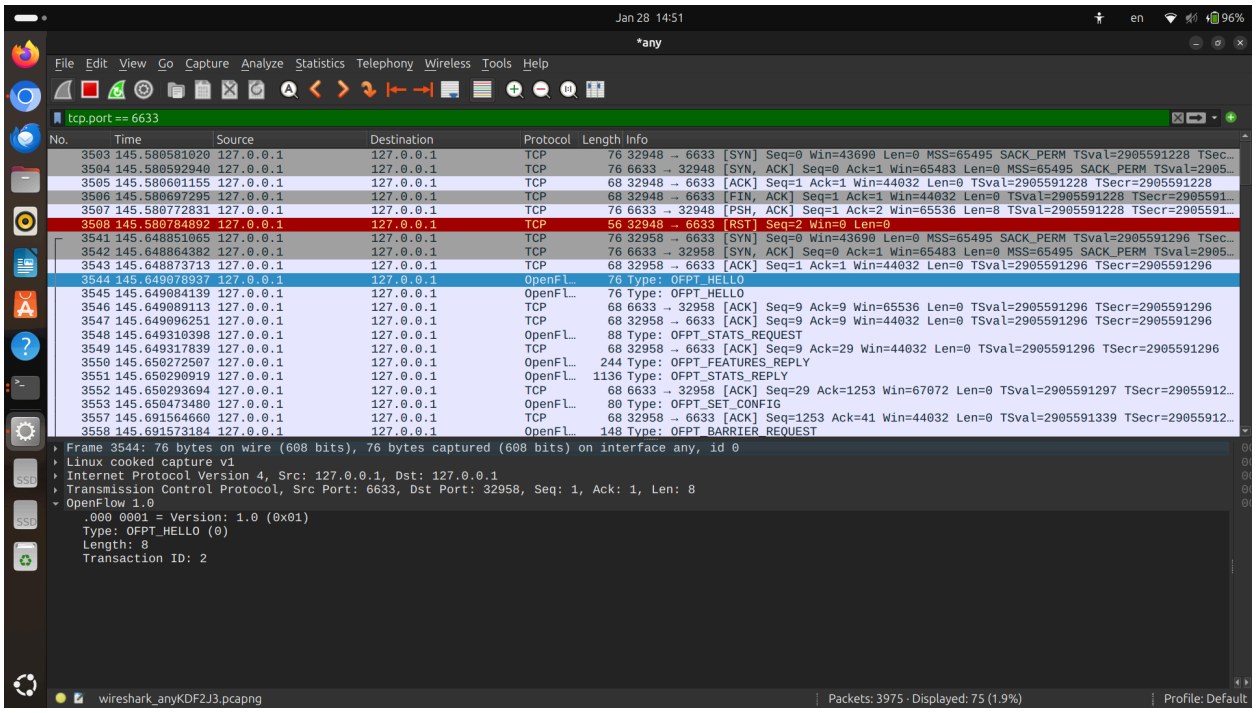
LAB POX



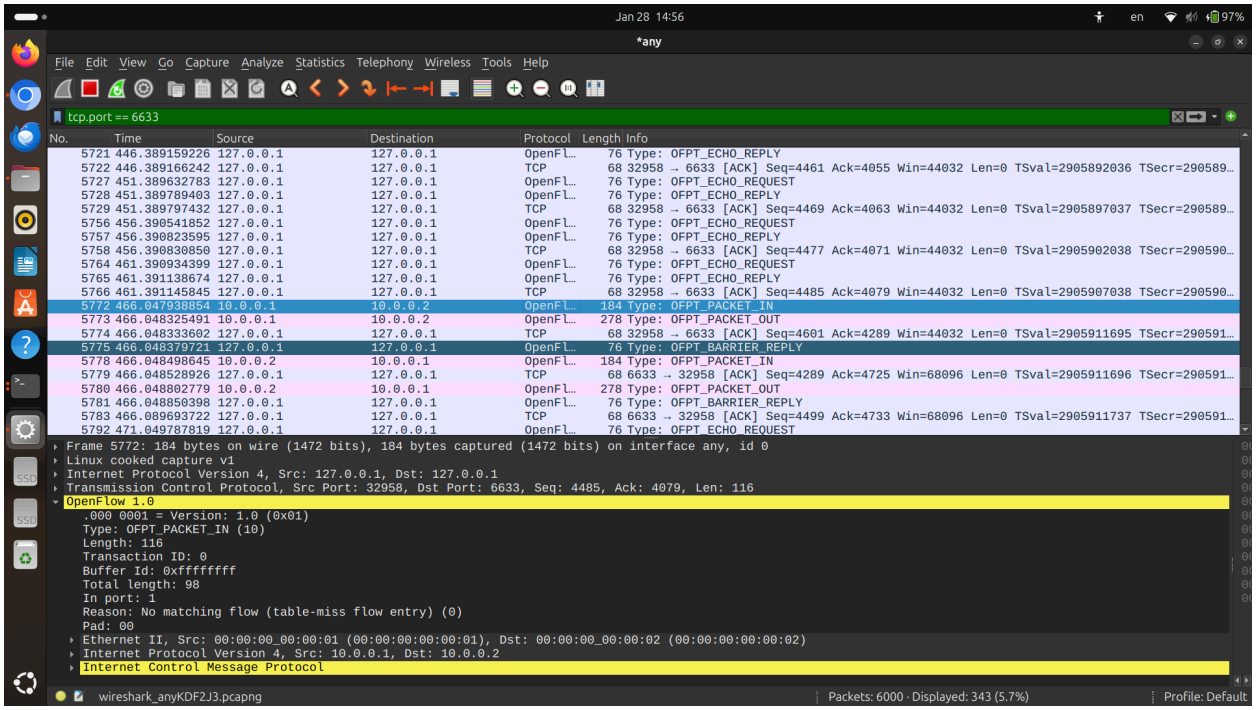
รูปที่ 1 Mininet Configuration



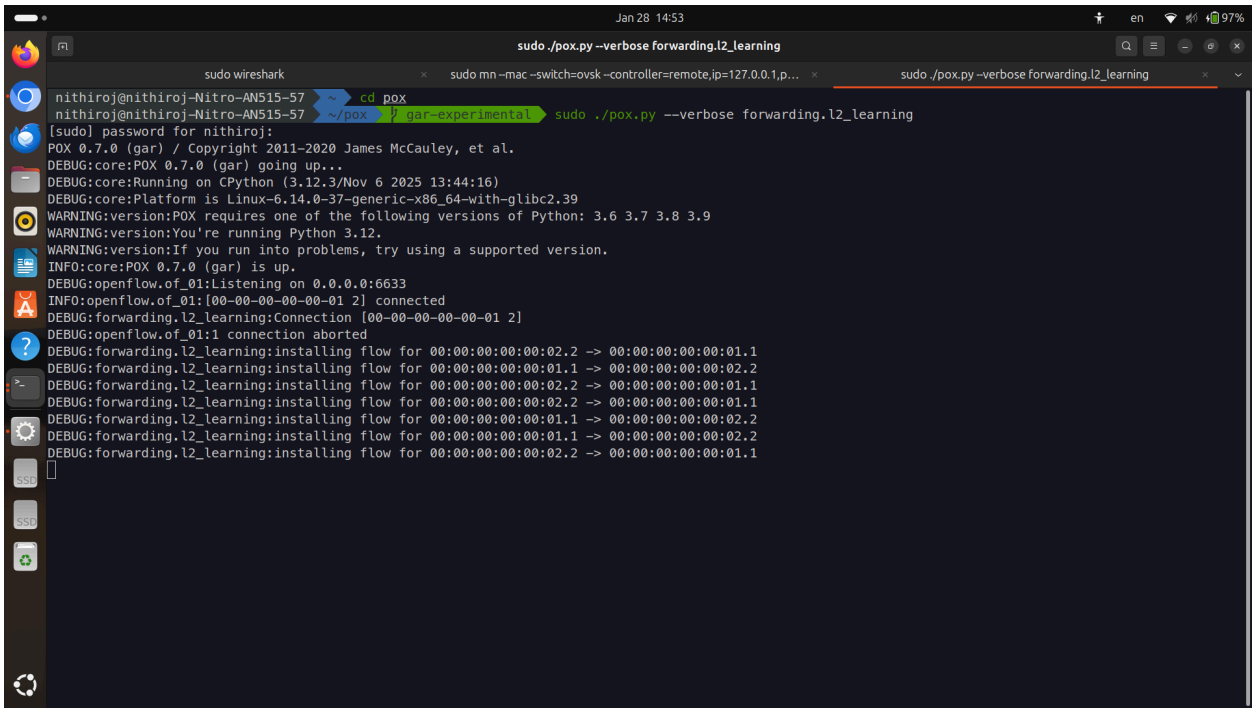
รูปที่ 2 Controller pox information ก่อน ping



รูปที่ 3 แพ็กเก็ต ofpt hello



รูปที่ 4 แพ็กเก็ต OFPT_PACKET_IN และ OFPT_PACKET_OUT



รูปที่ 5 แพ็กเก็ต OFPT_PACKET_IN และ OFPT_PACKET_OUT

LAB Step by step OVN Testbed using alpine containers

```
nithiroj@nithiroj-Nitro-AN515-57 ~ for i in {1..4}; do
    sudo docker exec host1 ping -c 3 10.0.0.$i
done
PING 10.0.0.1 (10.0.0.1): 56 data bytes
64 bytes from 10.0.0.1: seq=0 ttl=64 time=0.038 ms
64 bytes from 10.0.0.1: seq=1 ttl=64 time=0.038 ms
64 bytes from 10.0.0.1: seq=2 ttl=64 time=0.040 ms

--- 10.0.0.1 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 0.038/0.038/0.040 ms
PING 10.0.0.2 (10.0.0.2): 56 data bytes
64 bytes from 10.0.0.2: seq=0 ttl=64 time=0.228 ms
64 bytes from 10.0.0.2: seq=1 ttl=64 time=0.052 ms
64 bytes from 10.0.0.2: seq=2 ttl=64 time=0.082 ms

--- 10.0.0.2 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 0.052/0.120/0.228 ms
PING 10.0.0.3 (10.0.0.3): 56 data bytes
64 bytes from 10.0.0.3: seq=0 ttl=64 time=0.238 ms
64 bytes from 10.0.0.3: seq=1 ttl=64 time=0.052 ms
64 bytes from 10.0.0.3: seq=2 ttl=64 time=0.053 ms

--- 10.0.0.3 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 0.052/0.114/0.238 ms
PING 10.0.0.4 (10.0.0.4): 56 data bytes
64 bytes from 10.0.0.4: seq=0 ttl=64 time=0.343 ms
64 bytes from 10.0.0.4: seq=1 ttl=64 time=0.052 ms
64 bytes from 10.0.0.4: seq=2 ttl=64 time=0.055 ms

--- 10.0.0.4 ping statistics ---
3 packets transmitted, 3 packets received, 0% packet loss
round-trip min/avg/max = 0.052/0.150/0.343 ms
nithiroj@nithiroj-Nitro-AN515-57 ~
```

รูปที่ 6 ผลการ Ping ของ host 1 ไปหา host2, host3, host4

```
nithiroj@nithiroj-Nitro-AN515-57 ~ sudo ovn-nbctl show
switch 6450090c-5e56-4949-b00f-02510087dbb9 (ls-test)
    port lp-host1
        addresses: ["02:00:00:00:00:01 10.0.0.1/24"]
    port ln-port
        type: localnet
        addresses: ["unknown"]
    port lp-host4
        addresses: ["02:00:00:00:00:04 10.0.0.4/24"]
    port lp-host2
        addresses: ["02:00:00:00:00:02 10.0.0.2/24"]
    port lp-host3
        addresses: ["02:00:00:00:00:03 10.0.0.3/24"]
nithiroj@nithiroj-Nitro-AN515-57 ~
```

รูปที่ 7 sudo ovn-nbctl show

```
nithiroj@nithiroj-Nitro-AN515-57 ~ sudo ovn-sbctl show
Chassis ovs-host
    hostname: nithiroj-Nitro-AN515-57
    Encap geneve
        ip: "127.0.0.1"
        options: {csum="true"}
nithiroj@nithiroj-Nitro-AN515-57 ~
```

รูปที่ 8 sudo ovn-sbctl show

```
nithiroj@nithiroj-Nitro-AN515-57 ~ sudo ovs-vsctl show
8af89a25-d1e5-40d5-8d8b-c22babcb5957
    Bridge br-int
        fail_mode: secure
        datapath_type: system
        Port br-int
            Interface br-int
                type: internal
    Bridge br-ovs2
        Port patch-ovs2-to-ovs1
            Interface patch-ovs2-to-ovs1
                type: patch
                options: {peer=patch-ovs1-to-ovs2}
        Port br-ovs2
            Interface br-ovs2
                type: internal
        Port veth4
            Interface veth4
        Port veth3
            Interface veth3
    Bridge br-ovs1
        Port patch-ovs1-to-ovs2
            Interface patch-ovs1-to-ovs2
                type: patch
                options: {peer=patch-ovs2-to-ovs1}
        Port veth1
            Interface veth1
        Port br-ovs1
            Interface br-ovs1
                type: internal
        Port veth2
            Interface veth2
    ovs_version: "3.3.4"
nithiroj@nithiroj-Nitro-AN515-57 ~
```

รูปที่ 9 sudo ovn-sbctl show

```
nithiroj@nithiroj-Nitro-AN515-57 ~ sudo ovs-ofctl dump-flows br-ovs1
cookie=0x0, duration=514.965s, table=0, n_packets=141, n_bytes=11094, priority=0 actions=NORMAL
nithiroj@nithiroj-Nitro-AN515-57 ~
```

รูปที่ 10 sudo ovs-ofctl dump-flows br-ovs1