

## KELOMPOK :

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## KOM B

### Administrasi dan Desain Jaringan

#### OPENFLOW

OpenFlow adalah protokol yang digunakan oleh controller SDN untuk berkomunikasi dengan infrastruktur jaringannya. Kemudian berbicara mengenai openflow network/SDN pasti akan menyinggung masalah pemilihan controller. Controller merupakan bagian yang sangat vital pada arsitektur SDN. Karena controller lah yang akan mendefinisikan jaringan, mengatur masalah availability, lajur traffic data, routing dan forwarding dll.

Pertama, buat topologi 3 host 1 switch dan kemudian ping

```
mininet> sh ovs-pfctl dump-flows s1
/bin/sh: 1: ovs-pfctl: not found
mininet> sh ovs-pfctl dump-flows s1
/bin/sh: 1: ovs-pfctl: not found
mininet> h1 ping -c3 h2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.
From 10.0.0.1 icmp_seq=1 Destination Host Unreachable
From 10.0.0.1 icmp_seq=2 Destination Host Unreachable
From 10.0.0.1 icmp_seq=3 Destination Host Unreachable

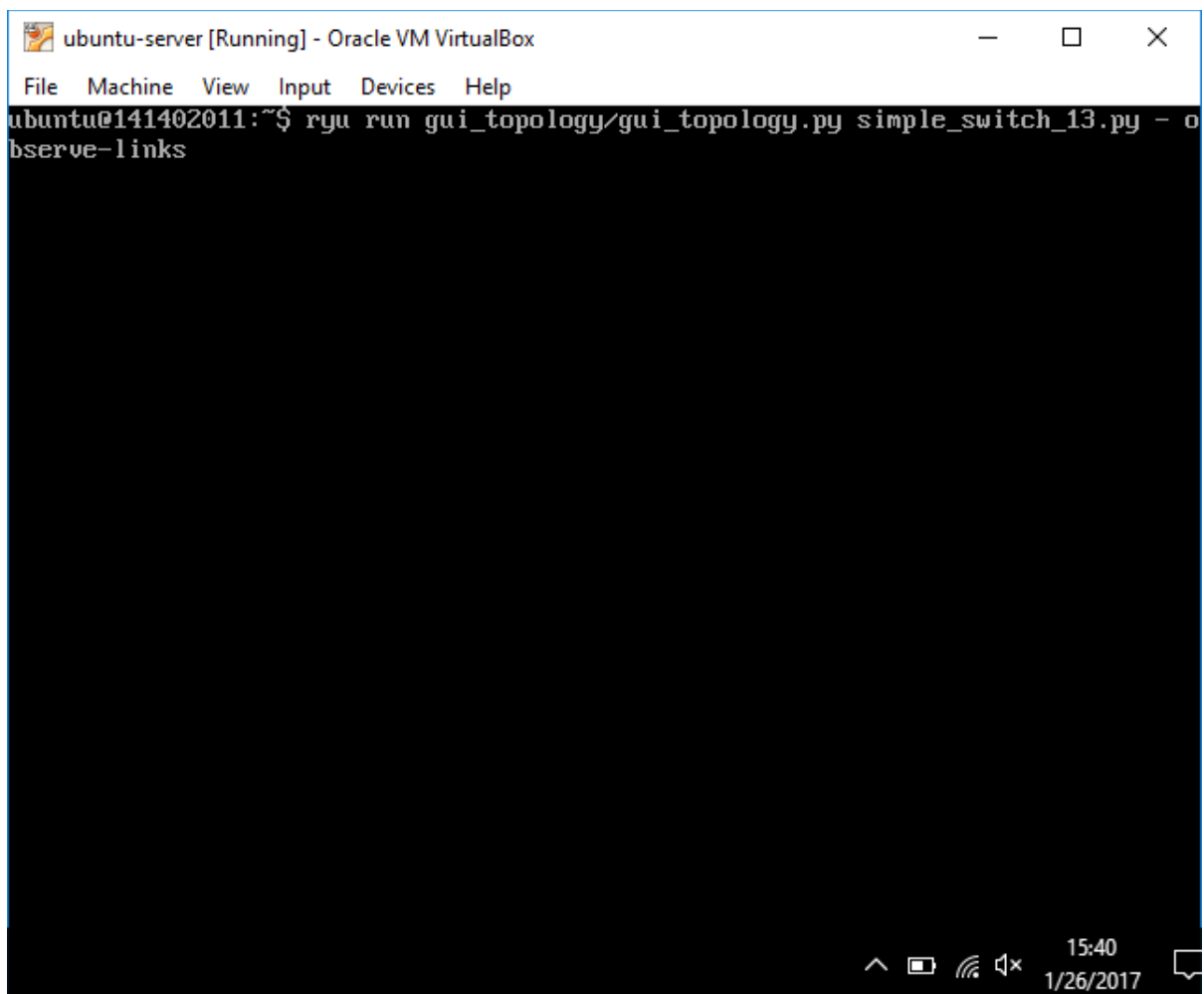
--- 10.0.0.2 ping statistics ---
3 packets transmitted, 0 received, +3 errors, 100% packet loss, time 2014ms
pipe 3
mininet>
```

```
mininet> h1 ping -c3 h2
PING 10.0.0.2 (10.0.0.2) 56(84) bytes of data.
From 10.0.0.1 icmp_seq=1 Destination Host Unreachable
From 10.0.0.1 icmp_seq=2 Destination Host Unreachable
From 10.0.0.1 icmp_seq=3 Destination Host Unreachable

--- 10.0.0.2 ping statistics ---
3 packets transmitted, 0 received, +3 errors, 100% packet loss, time 2016ms
pipe 3
mininet>
```

### Integrasikan Mininet Dengan RYU Menggunakan Protokol OpenFlow 1.3, Pastikan Bahwa Telah Berhasil Konektivitas Antara RYU Dengan Mininet

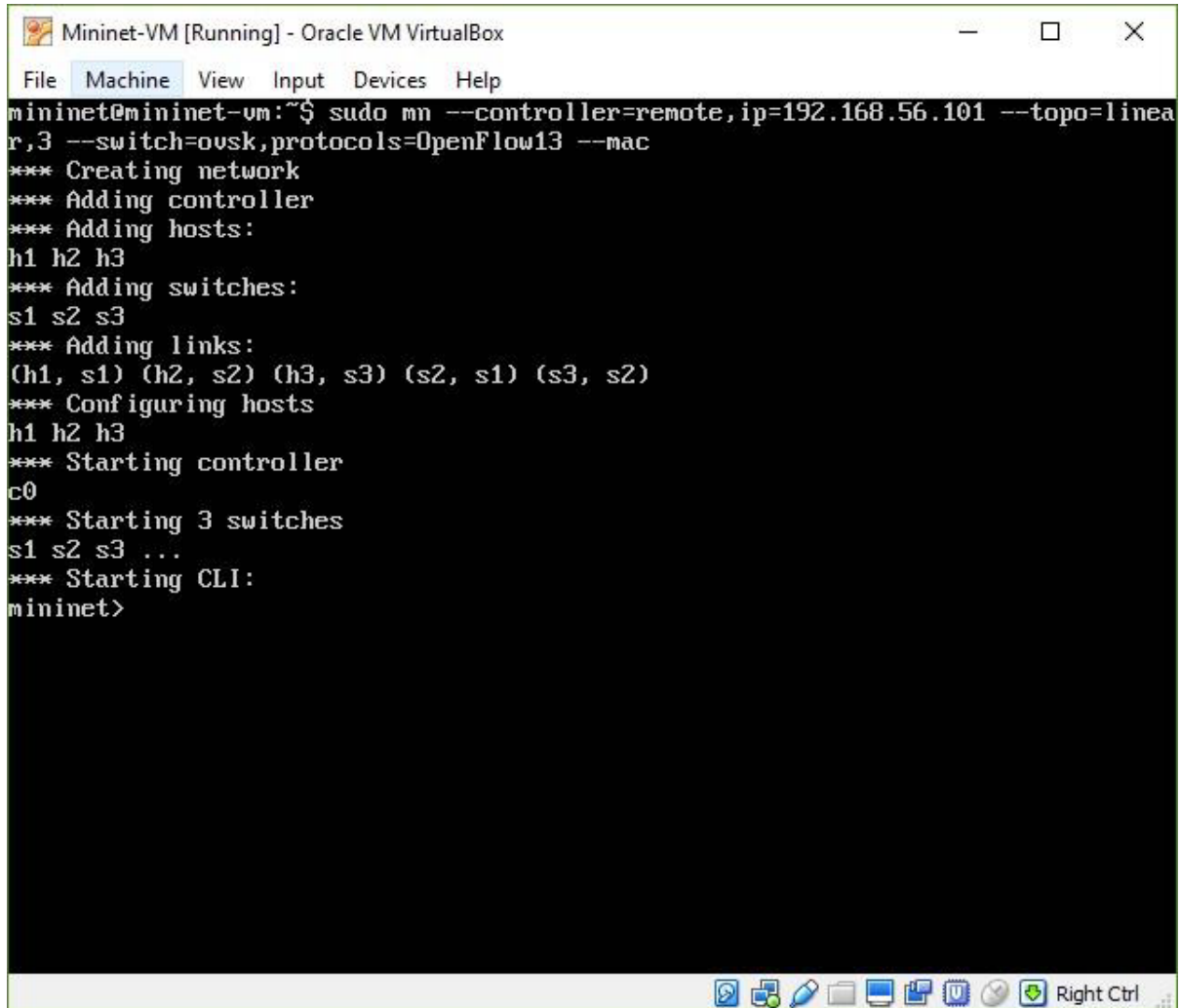
Integrasi Mininet dan RYU dilakukan dengan menggunakan protokol OpenFlow 1.3. Jalankan perintah **ryu run gui\_topology/gui\_topology.py simple\_switch\_13.py --observe-links**.



The screenshot shows a terminal window titled "ubuntu-server [Running] - Oracle VM VirtualBox". The terminal output displays the command `ryu run gui_topology/gui_topology.py simple_switch_13.py --observe-links` being executed. The window includes a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". The system tray at the bottom right shows the time as 15:40 on 1/26/2017.

IP address dapat dilihat dengan perintah **ifconfig** pada Ubuntu Server yaitu inet **eth1**.

Buka Mininet dan jalankan perintah berikut. **sudo mn --controller=remote,ip=192.168.56.101 --topo=linear,3 --switch=ovsk,protocols=OpenFlow13 --mac**.



```
Mininet-VM [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
mininet@mininet-vm:~$ sudo mn --controller=remote,ip=192.168.56.101 --topo=linear,3 --switch=ovsk,protocols=OpenFlow13 --mac
*** Creating network
*** Adding controller
*** Adding hosts:
h1 h2 h3
*** Adding switches:
s1 s2 s3
*** Adding links:
(h1, s1) (h2, s2) (h3, s3) (s2, s1) (s3, s2)
*** Configuring hosts
h1 h2 h3
*** Starting controller
c0
*** Starting 3 switches
s1 s2 s3 ...
*** Starting CLI:
mininet>
```