

MININET WIFI SDN LAB Guide

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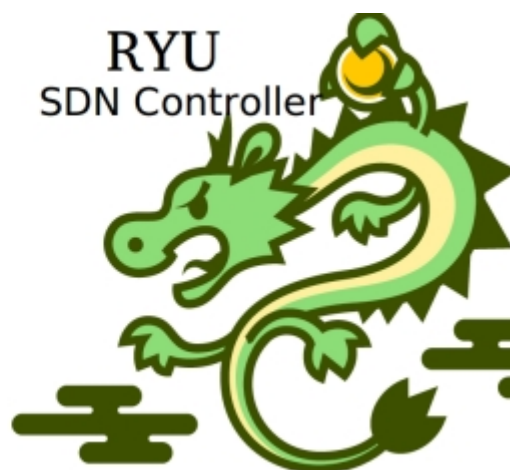
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Online Training, Consulting & Academic SDN Project assistance.

Mininet



RYU
SDN Controller



1. Introduction

Todo

2. Quick Start

Download the prebuilt VM

Download the prebuilt VM (ubuntu 20.04) image given by the mininet-wifi forum.

1. Click the below link and save the file in your laptop.

<https://drive.google.com/file/d/1gRqGmkyPcw1waBlwfSGn0cucvXsHvATx/view>

2. Use Virtual Box and import this image, and setup.

```
username: wifi  
passwordk: wifi
```

Thats all

Reference: <https://github.com/intrig-unicamp/mininet-wifi#pre-configured-virtual-machine>

Quick Test

1. Login to VM
2. run the below command

```
sudo mn --wifi
```

3. once the mininet wifi prompt comes , do "pingall"

it should pin

Test with RYU SDN Controller

1. Install RYU

```
sudo pip3 install ryu  
ryu-manager --version
```

2. run the below command

start the controller

```
ryu-manager ryu.app.simple_switch_13
```

start the mininet wifi topology

```
sudo mn --wifi --controller=remote,127.0.0.1 --topo=linear,4
```

3. once the mininet wifi prompt comes , do "pingall"

it should ping all

4. verify the flows

```
sudo ovs-ofctl -O OpenFlow13 dump-flows ap1
sudo ovs-ofctl -O OpenFlow13 dump-flows ap2
sudo ovs-ofctl -O OpenFlow13 dump-flows ap3
sudo ovs-ofctl -O OpenFlow13 dump-flows ap4
```

Test with Mininet Wifi GUI

1. start the controller

```
ryu-manager ryu.app.simple_switch_13
```

2. start the mininet wifi topology

```
sudo mn --wifi --controller=remote,127.0.0.1 --topo=linear,4 --positio
```

3. verify it (do pingall, and check flows.)

10. FAQ

1. How to use Mininet WiFi VM image(ova) to Linux Virtual Machine (KVM) format?

If you are using Linux laptop and want to use in KVM , convert this image to qcow2 and

use it. Refer the below link. <https://blog.ricosharp.com/posts/2019/Converting-ova-file-to-qcow2>

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10. FAQ

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