Lab5 Demo Questions

Part 1. Explain your code. (60%)

Preparation:

(1) Show your code in any editor

(2) Build Lab5 topology with your Makefile

(3) Test the connection between h1 and h3

(4) Show the routing information in ONOS console

Questions:

Lab5 code explanation (20%)

Explain why ping works

- Explain BGP mechanism (10%)
- Explain the relationship between zebra and bgpd (10%)
- Explain why h1 knows the packets destined for h3 should be sent to R1 (10%)
- Explain why R1 knows the packets destined for h3 should be sent to R3 (10%)

Part 2. Modify your code. (40%)

Preparation:

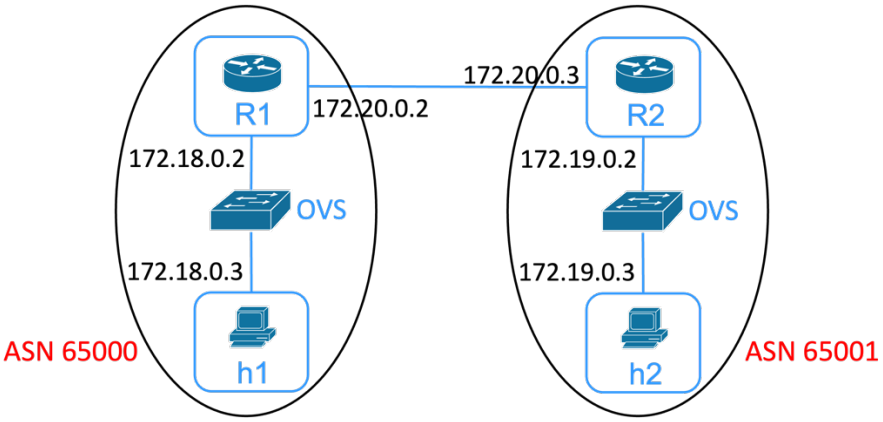
(1) Make a copy of your application

(2) Build the following topology (Use ONOS as OVS Controller)

Questions:

Build a topology with your Makefile and Docker Compose file as below:

- Container creation (10%)
- OVS creation (10%)
- h1 can ping h2 (20%)



Hint1: You should add the following command to your Makefile **after setting up the links**

- docker exec h1 ip route add default via 172.18.0.2
- docker exec h2 ip route add default via 172.19.0.2

Hint2: You should add the following config in your docker-compose.yml to avoid subnet conflicts

```
networks:
  default:
    driver: bridge
    ipam:
      config:
        - subnet: 172.30.0.0/16
```