Lab1

Part1.

1. When ONOS activates “org.onosproject.openflow,” what APPs does it activate?

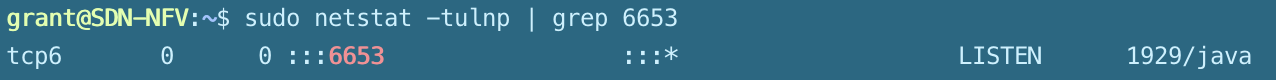
Ans: OpenFlow Provider Suite

1. After we activate ONOS and run the P.17 Mininet command, will H1 ping H2 successfully? Why or why not?

Ans: Yes, it will be successful, because we activate the forwarding app before we ping, and then the packet will pass through OVS S1 and S2.

1. Which TCP port does the controller listen to the OpenFlow connection request from the switch? (Take a screenshot and explain your answer.)

Ans: Port 6653



A screen shot of a computer code

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Screenshots are about s1, s2, s3, three OVS connect to the ONOS controller by port 6653, and the ONOS controller is listening on TCP port 6653

1. In question 3, which APP enables the controller to listen on the TCP port?

Ans: OpenFlow Provider Suite

A screenshot of a computer screen

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The upper graph shows the OpenFlow app activated, and the lower graph shows it deactivated (doesn’t have TCP port 6653).

Part2.

A screenshot of a computer

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A screenshot of a computer program

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Explanation:

In this part, we use Mininet to build a network topology that contains four switches and five hosts, each host communicates with the others through the four switches

Part3.

A screenshot of a computer

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Explanation:

This part is similar to Part 2, but with specific IP addresses assigned to each host.

There are five screenshots below showing Mininet network checks.

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A computer screen with white text

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AI-generated content may be incorrect.A screen shot of a computer program

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Part4.

In this lab, I learned how to use Bazel to build ONOS and how to operate ONOS through both the CLI and GUI to activate its APPs, like OpenFlow or forwarding.

Then we used Mininet to build a network topology. We can use the Mininet instruction to create or write a Python script to create a custom topology.

In Part 3, we learned how to set the specific IP address on each host and use some tools like dump and ifconfig to check the IP address setting.