

SDN Programming with RYU

Syllabus:

Part 1

1. SDN Introduction
2. Setup the SDN Test bed
3. Tools overview (Mininet, OVS, Wireshark, IPerf)
4. Mininet Commands
5. Mininet Custom Topology
6. Openflow in detail
7. OVS commands

Part 2 – RYU Programming

1. RYU Controller Installation
2. RYU Controller Applications overview
3. RYU Controller Programming Guideline
4. L3, L4 Switch Exercise
5. Flow Timeouts Exercise
6. Pipeline Processing Exercise
7. Group Tables
8. ARP Proxy
9. Port Statistics Collection
10. Flow statistics Collection exercises
11. REST Interface implementation

Part 3 – Mini Projects (Any two)

1. L3 Router
2. QoS
3. DDoS
4. VLAN
5. BGP