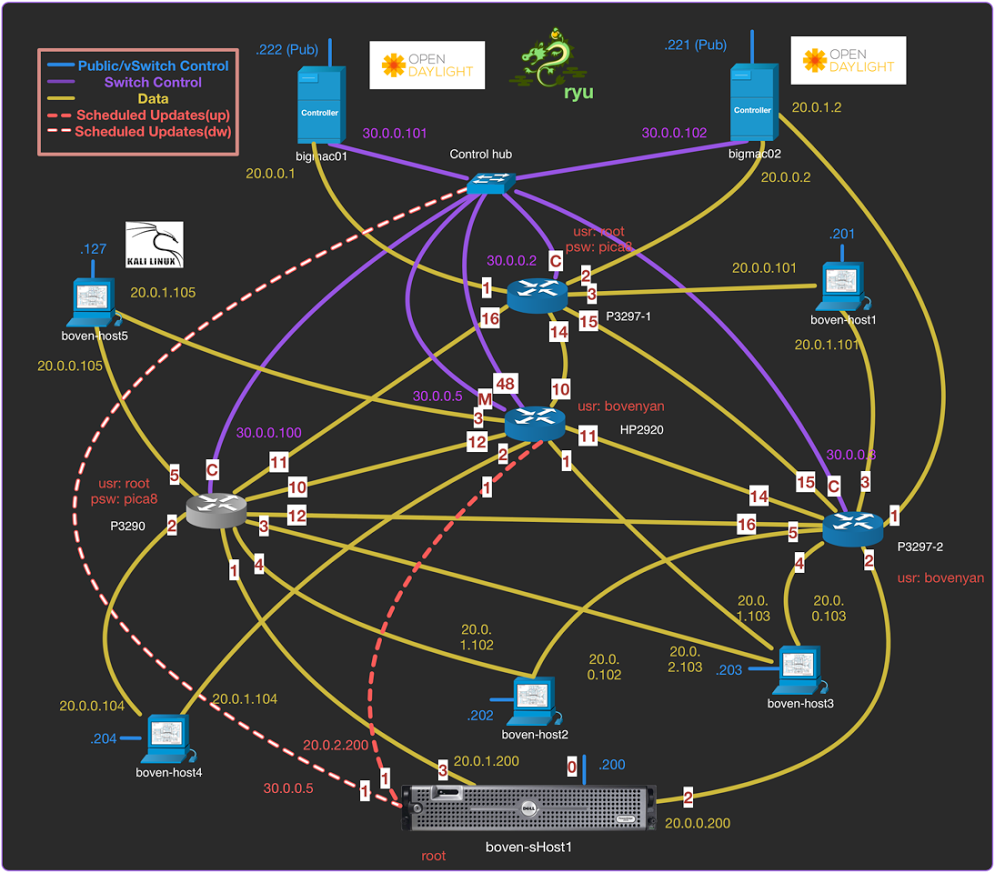
Euthenia evaluation setup and process

1. login poly account:

* IP address: 128.238.147.221
* user: zishuo
* password: unv89sos

1. environment



* server bigmac02
* switch P3297-2
* yellow line: data line
* purple line: control line
* eth2: 20.0.1.2
* br0: P3297-2 ->br0: P3297-1

1. experiment 1: find the bottleneck of OpenFlow switch

* step 1 login ovs: ssh pica8-2 ->ssh admin@30.0.0.2
* step 2 check if ovs is ready: ovs-vstrl show
  + br0 port ge-1/1/1 ->ge-1/1/2
  + monitor port 9000
* step 3 add flow: ovs-ofctl add－flow br0 action= output:controller
* step 4 show flow status: ovvs-ofctl dump-flows br0
* step 5 start server: sudo ./eTest eth2 ->eth1
  + monitor port 6633

1. experiment 2: evaluate the performance of Euthenia

* terminal 1 start controller: ryu-manager simple\_switch\_13.py
* terminal 2 start proxy: ./eproxy 0(for debug)
* terminal 3 add background traffic
  1. add static background traffic (optional)
     1. cd /euth/ovs-test
     2. ./add\_flows.sh br0 rule\_set
        1. in add\_flows.sh, $1means every switch, $2 means rule set
        2. /euth/ovs-test/rule\_set stores rules for different flows, for example, 1000rules.ovs means the rules for less than 1000 flows
        3. rules are generated from Cbench. For example 1000rules. Since Cbench is used for firewall, which uses wildcard for udp and tcp, we use cb2ovs changes the rules into ovs fashion. 1000rules.ovs is the corresponding ovs rule of 1000rules.
  2. add dynamic background traffic
     1. cd ~
     2. ./FlowGen2 device flow\_rate duration packet\_rate
        1. flow\_rate: the total number of new flows
        2. duration: second
        3. packet\_rate: the number of flows that generate a packet in a second
     3. for pica-8, the background is usually ./FlowGen2 eth2 500 120 30
     4. traffic is randomly generated
     5. we don’t use flown.cpp in /home/zishuo/euth/euthenia since it follows the flow pattern in eTest
* terminal 4 add traffic

1. ./FlowGen2 eth2 1000 10 200

->./FlowGen2 eth1 1000 10 200