CS 6480: Lab Assignment 1
Mininet - Software Defined Networking

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1 Tasks Completed

- Installed SDN VM.
- Went through papers the "Mininet Walk-through" and the "Introduction to Mininet" and tried commands and other configuration on VM
- Traced network traffic using Wireshark.
- Went through OpenFlow implementations and tutorial papers.
- Partially understood how POX is working.
- Completed controller setup using POX for static - hardcoded IPs and ports. Inserted table entries for ARP and for HTTP. Hosts are able to ping each other. See Figure 1.
- Set one host as http server and send request from another node. Request and response were successful. See Figure 2.

2 Hurdle

During random mutation of IP address, DNS will respond to external node with a fake IP. So external node will send requests destined for fake IP. Even if switch routes those requests to real web server, destination IP in the packet will not match with IP of web server. So web server will reject those packets. In this case, action in switch should change IP in packet and then route. (Is it right? if yes how? In case of yes, when response is sent back to external node, source ip should be changed back to original fake ip)

3 Tasks Planned Next week

- Implement DNS look up.
- Build action to exchange packets using "fake" ip.
- Action should change destination ip to real ip while routing request to web server and should change source ip to fake ip while sending response to node.

Figure 1: Entries for ARP and HTTP

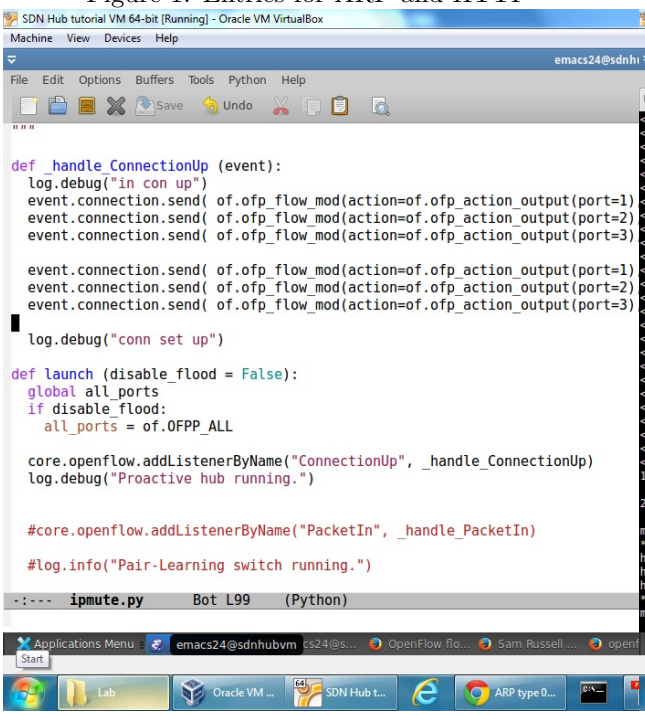

Figure 2: Demo of ping and http request