

Project 2

*Implementing a Router - Understanding Ethernet,
ARP, IP and ICMP*

Project in one slide

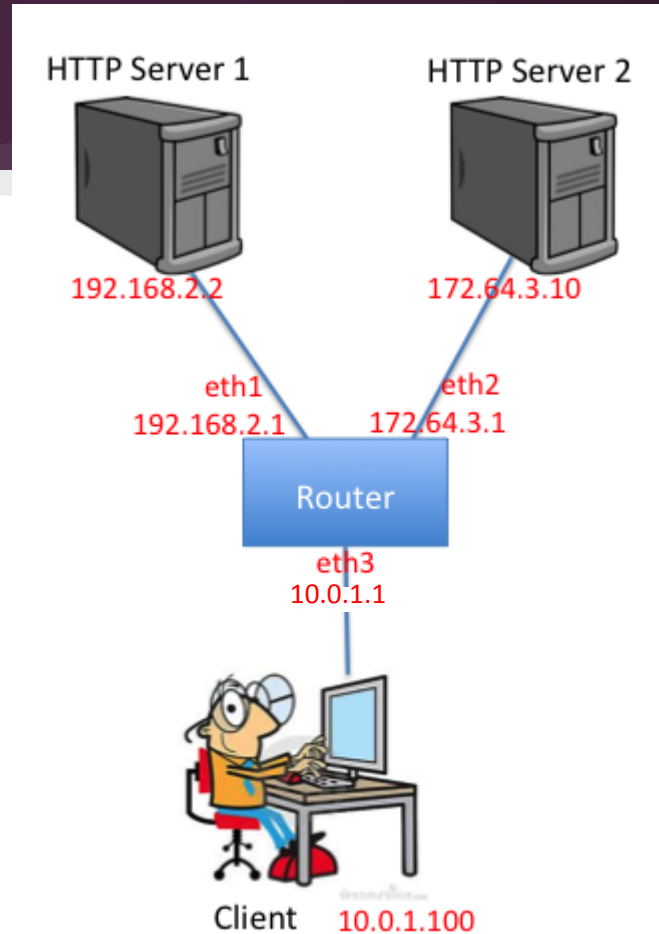
What : A Simple Router

How : Mininet

Where : Virtual Machine

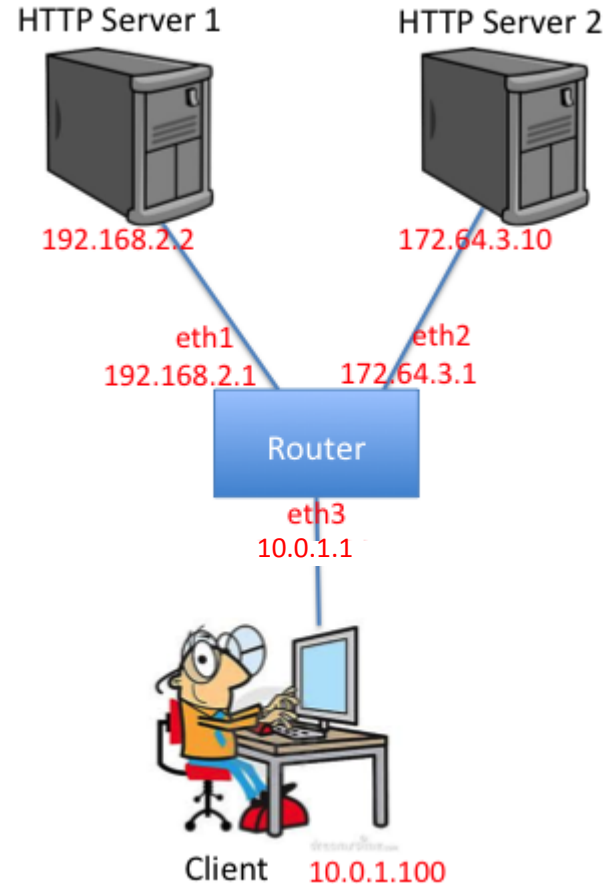
When : By 12/06 - Friday 6 PM

Lets get started!



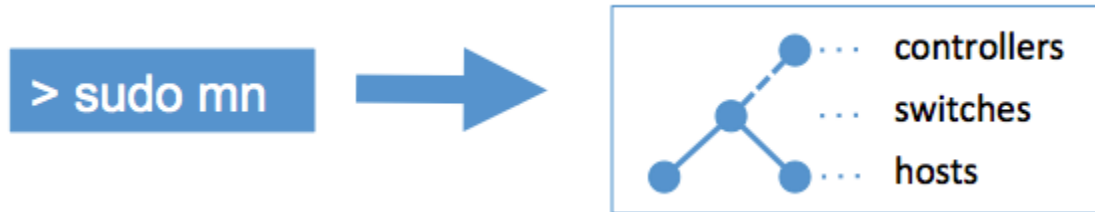
What : A Simple Router

- Implement a router in C
 - Provided : Code to receive Ethernet frames
 - TODO : Forwarding Logic
- Router should forward real packets in an emulated topology.
- You are done when :
 - Ping/TraceRoute from client to router's interfaces.
 - Ping/TraceRoute from client to HTTP servers.
 - Download a file from the HTTP servers.



How : Mininet

- The project runs on Mininet.
- Mininet is a project built at Stanford. It is used for emulating network topologies on a single machine.
- You don't have to know Mininet to complete this assignment.



Where : Virtual Machine

- The skeleton and dependencies of the project have been setup in a VM for your convenience.
- VM has the network topology and the allows your router implementation to talk with the network topology.



Get started

- Load the **virtual machine** disk image into your favourite VMM. Eg: VMWare Player, VirtualBox, VMWare fusion etc.
- Username/Password is mininet/mininet.
- Start **Mininet** and POX. Two steps to get the infrastructure up and running
 - `./cse123-p2/run_mininet.sh`
 - `./cse123-p2/run_pox.sh`
- Build and execute **router**
 - `make clean`
 - `make`
 - `./sr`
- Check packet flow with wireshark
- Expected output

Thank you!

Questions..