i310 Lab – Access Control Lists

This lab will teach you how to block network traffic on a protocol basis in what are known as ACLs (access control lists). Basically they are almost identical in syntax to firewall and/or packet filter rule definitions.

Step – 1 understand topology, connect physical interfaces to match topology diagram.

Step – 2 define router interfaces (TCP/IP definitions).

Step – 3 end user devices/laptops (TCP/IP definitions).

Step – 4 test/verify connectivity (pings, telnet to routers)

Step – 5 define router interfaces (ACLs).

Step – 6 test/verify connectivity (telnet)

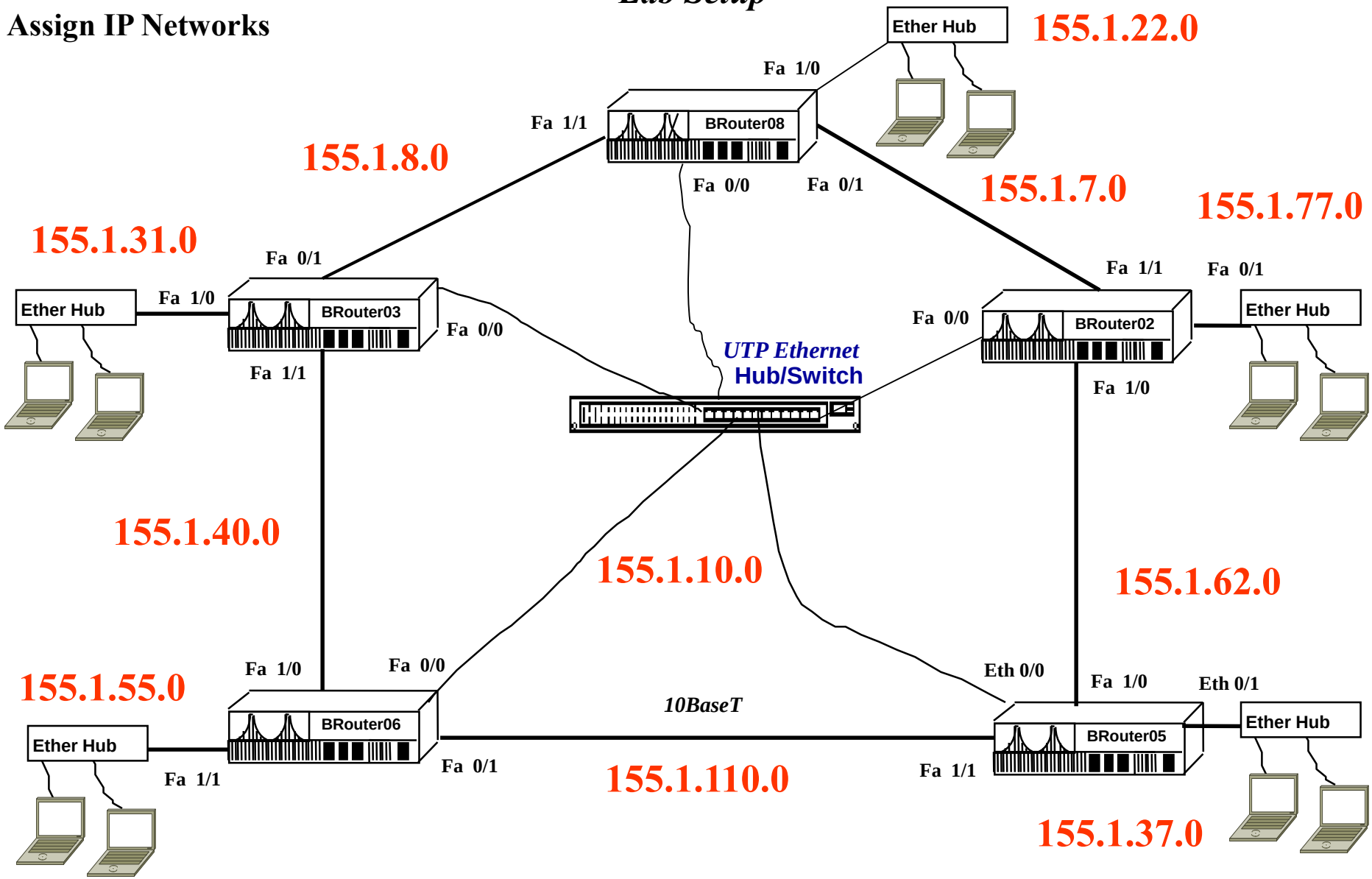
i341 TCP/IP Routing Lab Topology

Facing WhiteBoard - Front of Class

Step 2:

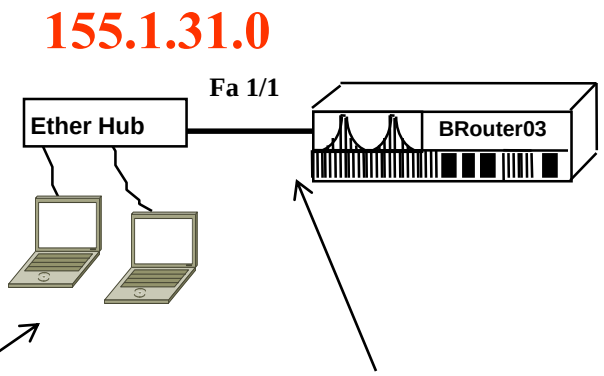
Assign IP Networks

Lab Setup



Rev: Feb, 2016

IP Addressing Example



Step 2 ????

Address End Systems

155.1.31.11 /24
155.1.31.12 /24

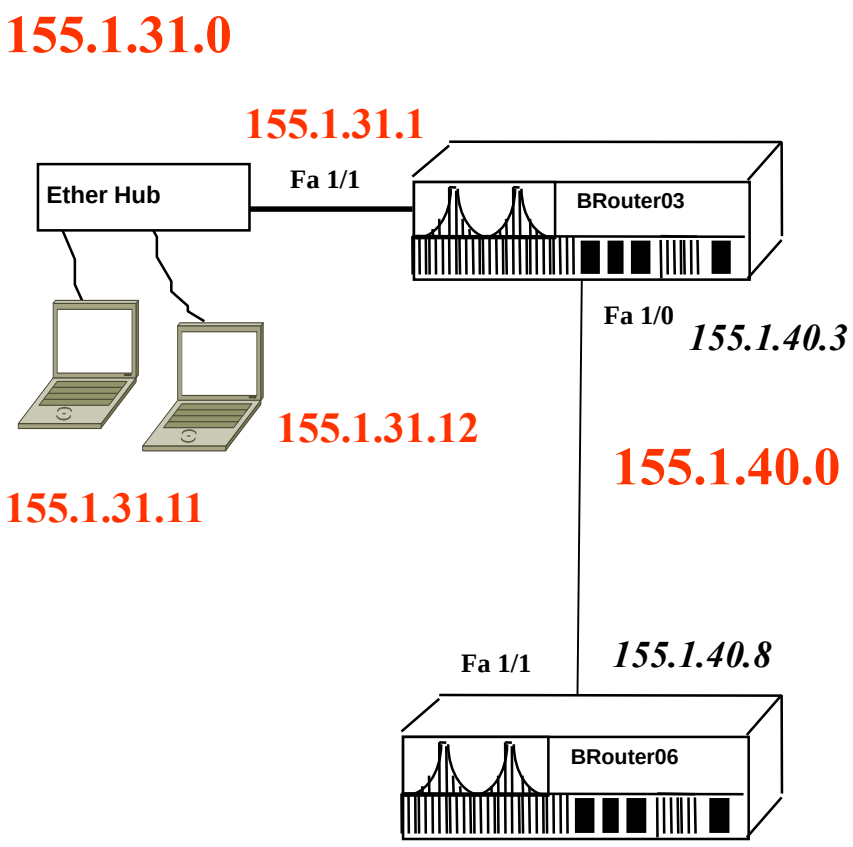
Step 1 ????

Router IP addressing

Interface Fastether 1/1 (physical int)

IP address 155.1.31.1 255.255.255.0
Ip broadcast-add 155.1.31.255
EXACT SYNTAX REQUIRED ! !

IP Addressing Example - 2



BRouter03 config

Int Fastether 1/0
IP add 155.1.40.3 255.255.255.0
ip broadcast-add 155.1.40.255

Int Fastether 1/1
IP add 155.1.31.1 255.255.255.0
ip broadcast-add 155.1.31.255

i310 ACL (Access Control List) Lab

Router Access Control Lists (ACL's)

Set-up network per previous illustration ***(ensure connectivity – show int, IP routes)***

Ensure you can telnet from router/PC to different group routers

configure access list (139) to block telnet

Configuration : **(global command)**

```
access-list 139 deny   tcp any any eq 23
access-list 139 permit ip any any
```

Apply Access List 139 to router interfaces ***(which interfaces ???):***

```
ip access-group 139 in
```

Test telnet access

Example:

```
interface Ethernet 0  (backbone)
    ip address 192.168.100.100  255.255.255.0
    ip access-group 139 in
```

LAB Report Due 2/23/16 *(to Canvas)*

Approx 1 page write-up (based on what you learned in lab)

a.Describe the role of an ACL and how ACLs are configured and applied. 35%

b. How YOU would advise/recommend a company, organization to utilize access-lists and packet filters in their company that currently has open Internet access (no filtering). ***(.75 tech .25 ops)*** 35%

c. How to apply concepts you learned from lab to potential application in whatever field you plan to intern/work in. How will you use what you learned 30%

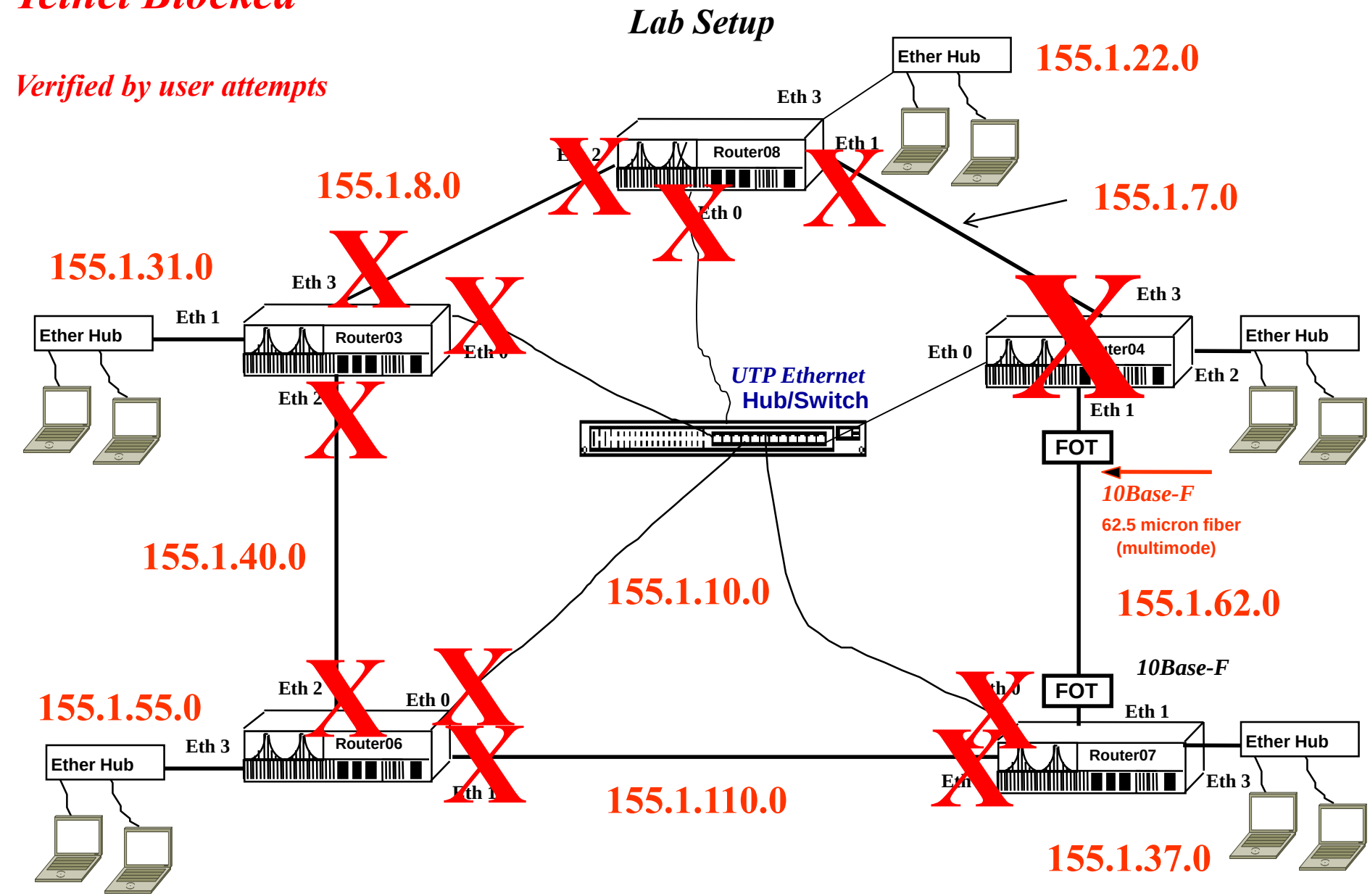
LATE SUBMITTALS – POINTS LOST

I310 Access-List/Port Filter Lab Topology

Facing WhiteBoard - Front of Class

Telnet Blocked

Verified by user attempts



Rev: February, 2014

What did you learn ?

What issues were encountered ?

How were issues mitigated/resolved ?

What specific technical skills did you feel you needed (perhaps lacked) to successfully complete the task/lab ?

What would you do differently next time ?