

i341 TCP/IP Routing Protocol Lab Topology

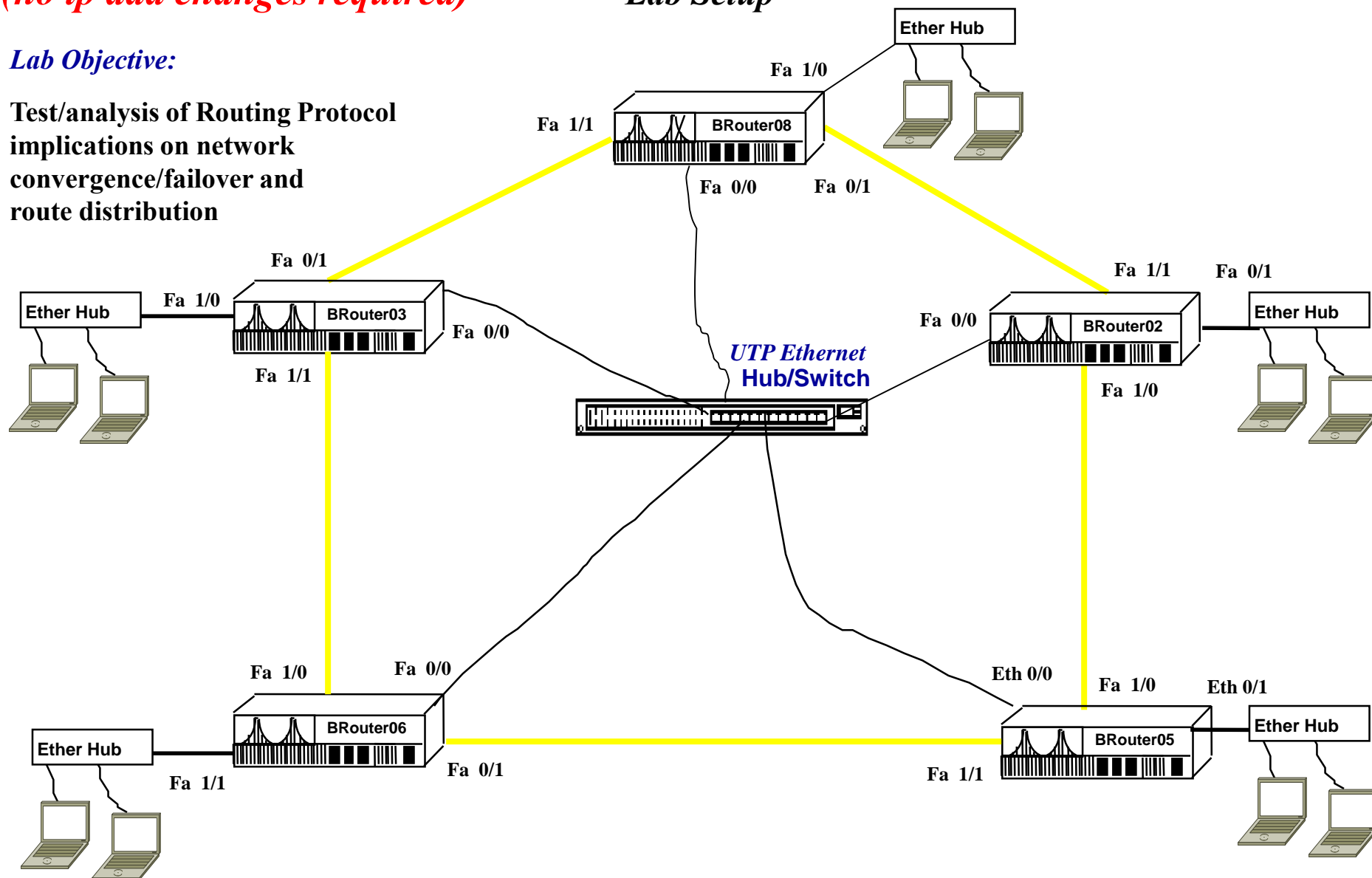
*Same Net Topology as last lab
(no ip add changes required)*

Facing WhiteBoard - **Front of Class**

Lab Setup

Lab Objective:

**Test/analysis of Routing Protocol
implications on network
convergence/failover and
route distribution**



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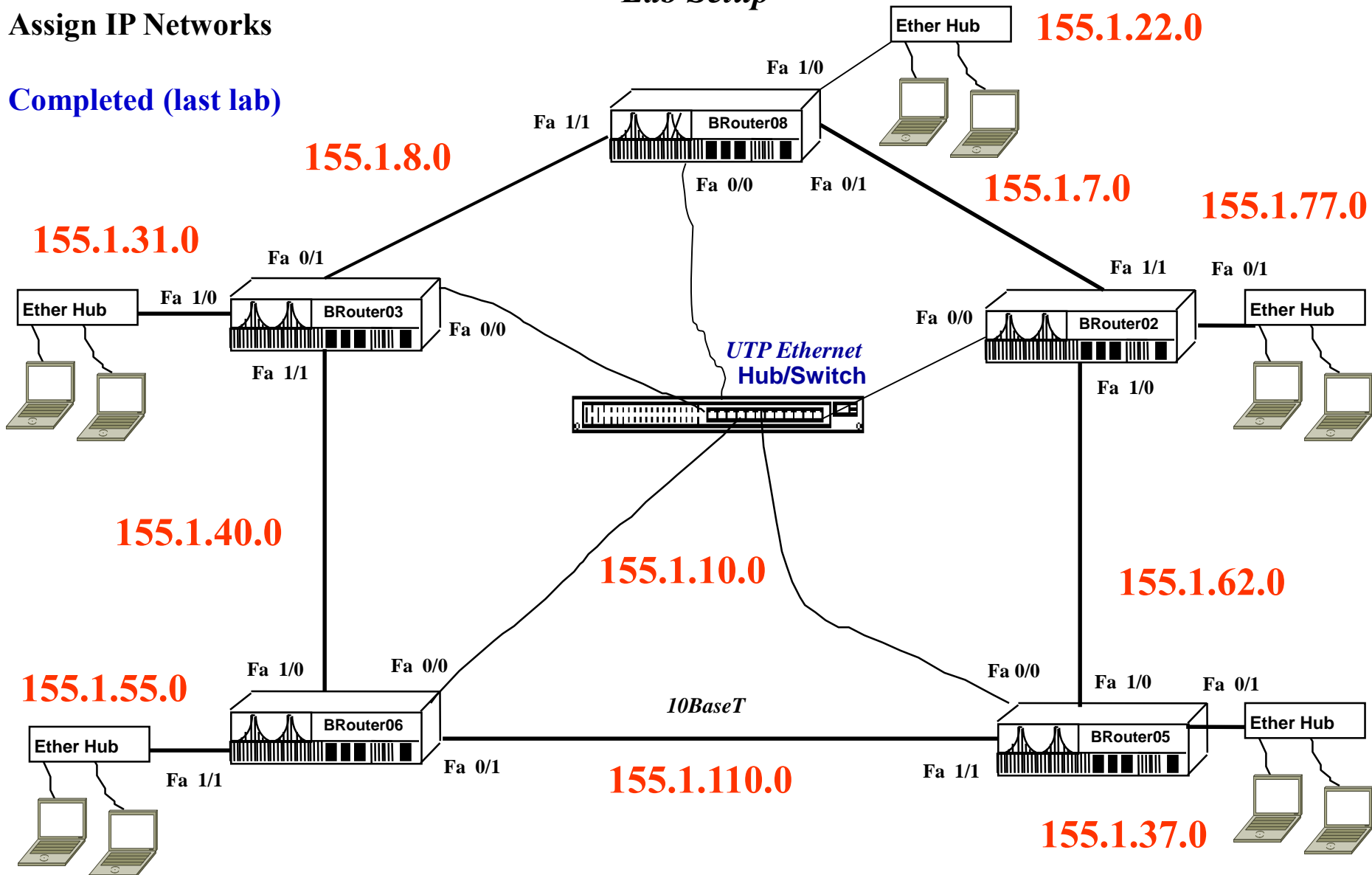
Step 1:

Assign IP Networks

Completed (last lab)

Facing WhiteBoard - **Front of Class**

Lab Setup



Step 2: i341 TCP/IP Routing Protocol Lab Topology

Determine # of IP Networks

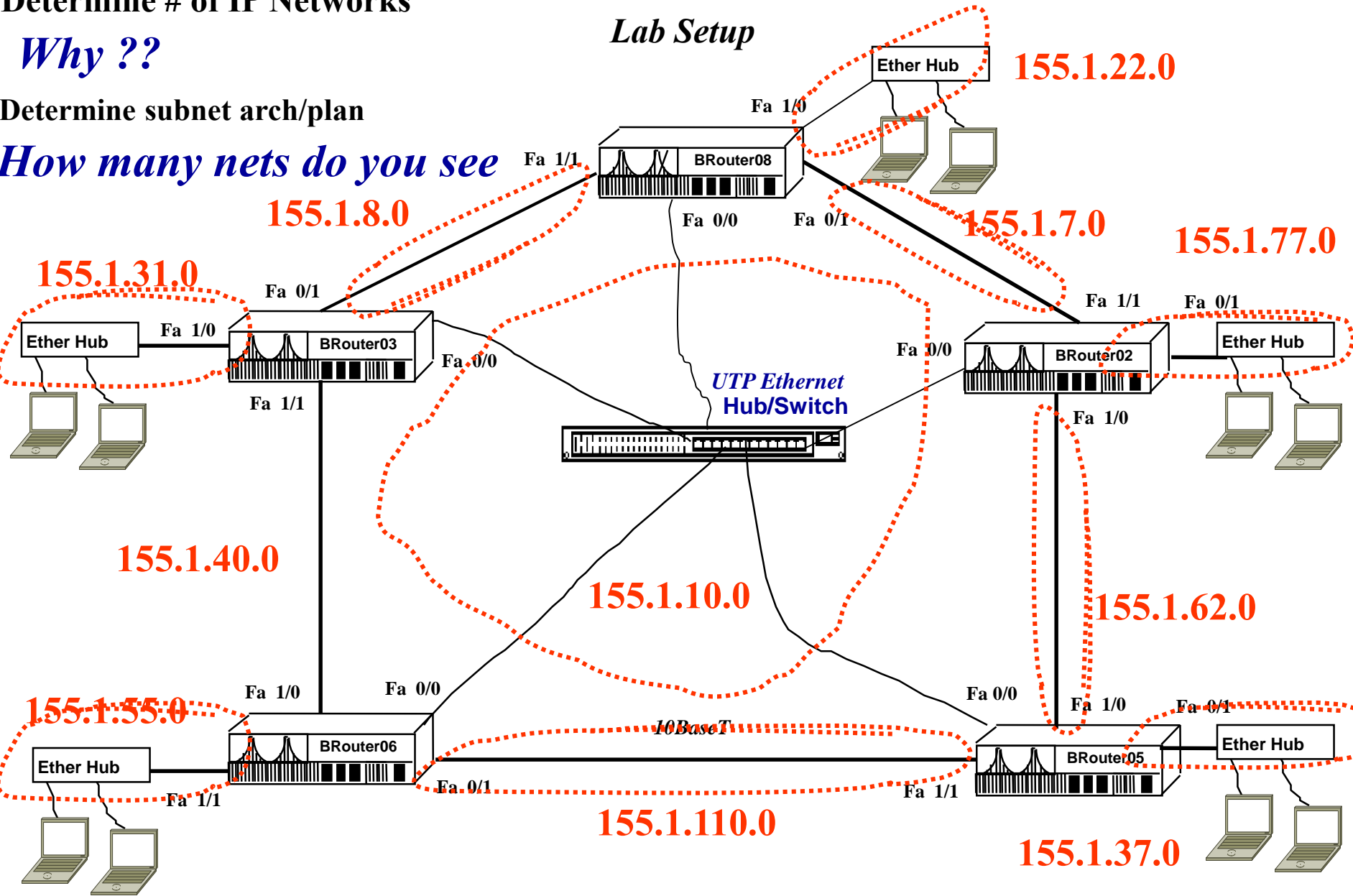
Why ??

Determine subnet arch/plan

How many nets do you see

Facing WhiteBoard - **Front of Class**

Lab Setup



Routing Protocol Config Example

FOR RIP - Each router would require:

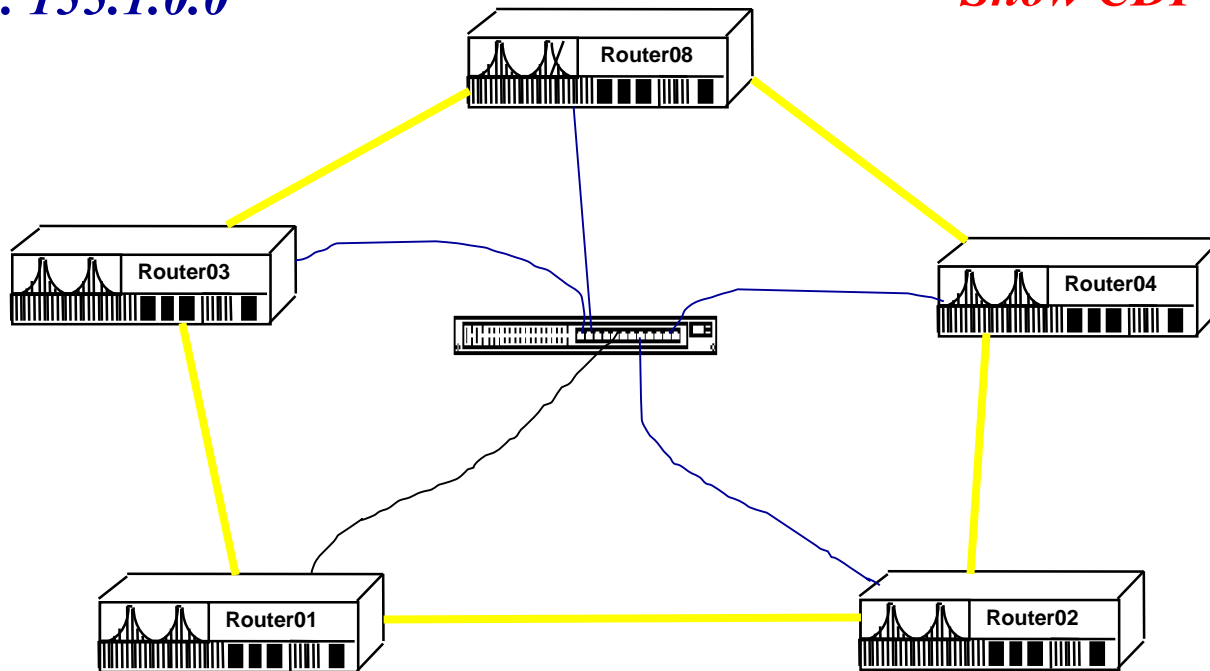
Router RIP

Network i.e. 155.1.0.0

Display Route Table Cmd:

Show IP Route

Show CDP Neighbor



Routing Protocol Config Example

FOR EIGRP - Each router would require:

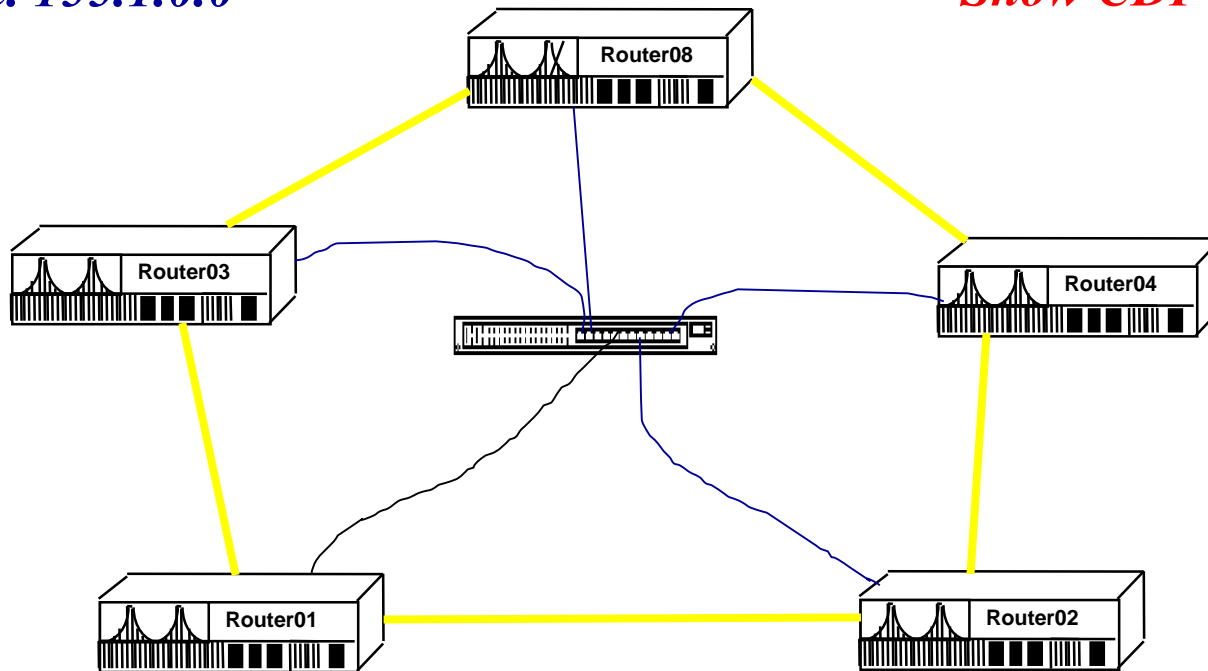
Router EIGRP 33 (10 = AS number)

Network i.e. 155.1.0.0

Display Route Table Cmd:

Show IP Route

Show CDP Neighbor



Lab A

1) Turn on RIP

On each router (global not interface command)

Router rip

Network 155.1.0.0 <enter>

When config completed – enter following commands:

Show ip route

Ping (to ip add's on other nets)

Will force re-route of traffic – how long to converge (to alt paths) ?

Lab B

2) Turn on EIGRP

On each router (global not interface command)

No Router rip

Router eigrp 10 (where 10 is AS #) *<enter>*

Network 155.1.0.0 *<enter>*

When config completed – enter following commands:

Show ip route

Ping (to ip add's on other nets)

Will force re-route of traffic – how long to converge ?

Lab Assignment *(due 11/15/16)*

Deliverable: short write-up (1/2 to 1 page) explaining:

- a) Concept of autonomous system – how used in lab **20%**
- b) Route/path convergence **30%**
- c) Why some routing protocols converge faster than others **20%**
- d) Implications of routing protocols (during network failure modes/events) on distributed applications. How would you apply this knowledge learned as a technician or tech mgr **30%**

Late submittals will be penalized.