

Ex 11:

Routing at Network Layer

Ques: (a) Simulate Static Routing Configuration using Cisco Packet Tracer.

The process of adding static routes to the routing table is known as static routing. To understand how to use static routing to create and add a static routes to routing table.

Network Setup:

- * Three routers: Router 0, Router 1, Router 2.
- * Each router has directly connected networks & requires static routes for unreachable networks.

Router 0 Configuration:
* Routes to 30.0.0.0/8 via Router 1 (main) &

* Routes to 30.0.0.0/8 via Router 2 (main).

Router 2 Configuration:
* Main Route 30.0.0.0/8 via Router 2 (main) &

Router 1 Configuration:

* Routes to 30.0.0.0/8 via Router 2 (main) and Router 0 (Backup).

Router 1 Configuration:
* Routes to 10.0.0.0/8 via Router 0 (main) and Router 2 (Backup).

* Routes to 400.0.0.0/8 via Router 0 (main) and Router 2 (Backup).

Router 2 Configuration:

* Routes to 10.0.0.0/8 and 30.0.0.0/8 network.

Verification:

* Show ip route static used to verify routing table entries.

* ping and traceroute used to confirm data path.

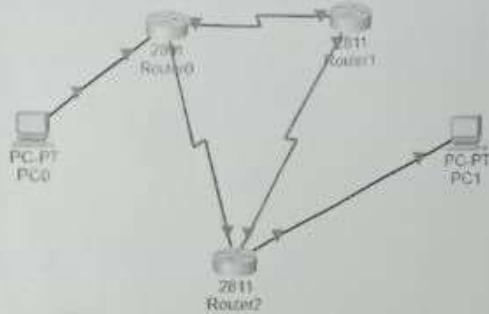
Failure Simulation:

* Link between Router 0 and Router 1 removed to failover.

* Router switched to backup Route successfully.

Deleting a Static Route:

- * Use show ip route static to view routes.
- * Remove Route using no ip route Command.
- * Backup route becomes the new main route if available.



```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End withCTRL-Z.
Router(config)#interface serial0/0
Router(config-if)#ip address 192.168.1.250 255.255.255.252
Router(config-if)#no shutdown

Router(config)#interface serial0/0/0
Router(config-if)#line protocol is up
Router(config-if)#exit
Router(config)#interface serial0/0/1
Router(config-if)#line protocol is down
Router(config-if)#exit
Router(config)#interface serial0/0/2
Router(config-if)#line protocol is up
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 192.168.1.248
Router(config-router)#network 192.168.1.249
Router(config-router)#

```