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Practical - 11 (a)

Aim:

Simulate static Routing Configuration Using CISCO Packet-Tracer.

Static routes are the routes that you manually add to the other's routing table. The process of adding a static route to the routing table is known as static routing.

If we specify the routes for the same destination, the router automatically selects the best route for the destination and adds the route to the routing table.

Creating, adding, verifying static routes:

Routers automatically learn their connected networks. We only need to add routes for the networks that are not available on the router's interfaces:

Three routers are chosen to perform this activity with each router having its own local network interface separated by IP address.

Router 0 - 10, 20, 40 (0.0.0/8)

Router 1 - 20, 30, 50 (0.0.0/8)

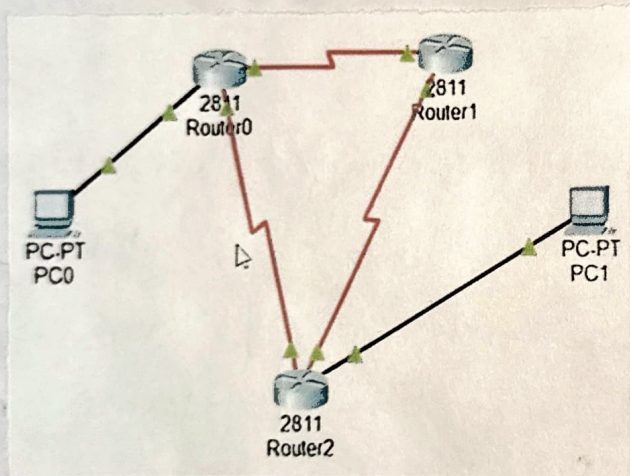
Router 2 - 40, 50 (0.0.0/8)

Verifying Static Routing

By listening the routing table entries on router 0. Since a router uses the routing table to forward data packets.

Deleting a static route

- Use the 'show ip route static' command
- Note down the route to delete
- Use 'no ip route' command to delete



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Practical - 11 (Cb)

Aim: Simulate RIP using Cisco Packet Tracer.

Assign IP address to PCs

Double click PCs and click desktop menu item and click IP configuration. Assign IP address referring the table.

Serial interface needs two additional parameters Clock rate and Bandwidth. Every serial cable has two ends DTE and DCE. These parameters are always configured at DCE end.

Configure RIP routing protocol.

- Enable RIP routing protocol from global configuration mode.
- Tell RIP routing protocol which networks you want to advertise.

RIP protocol automatically manage all routes for us. If one route goes down, it auto switches to another one:

~~Code~~

Commands

- interface fastethernet 0/0: to enter interface mode
- IP address -- : to assign IP address to interface
- no shutdown: to bring interface up.

- exit: return to global configuration mode
- Router(Config-if) # no-shutdown: - brings interface up
- Router # configure terminal: enter global configuration mode.
- show controllers interface: privilege mode to check the cable's end
- router rip: command tell router to enable the RIP routing protocol.
- network: specifies which network we want to advertise
- tracer. to see the magic of dynamic routing.

IOS Command Line Interface

```
Router#show controllers serial 0/0/0
Interface Serial0/0/0
Hardware is PowerQUICC MPC860
DCE V.35, clock rate 2000000
[Output omitted]
```

Router0

Physical Config CLI

IOS Command Line Interface

```
Router#configure terminal
```

Result: Hence static Routing & RIP was simulated successfully.

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