Ex No: 11

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Routing at Network Layer

Aim: 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 the routing table.

Network Setup:

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

Router 0 Configuration.

* Router to 30.0.0.0/8 via Router 1 (main) and Router 2 (backup)
* Host route 30.0.0.0/100 via Router 2 (main) and Router 1 (backup).
* Router to 30.0.0.0/8 via Router 2 (main) and Router 1 (backup).

Router Configuration

* Router to 10.0.0.0/8 via Router 0 (main) and Router 2 (backup)
* Router to 400.0.0/8 via Router 0 (main) and Router 2 (backup)

Router Configuration

* Router 1 to 10.0.0.0/8 and 30.0.0.0/8 networks

Verification:

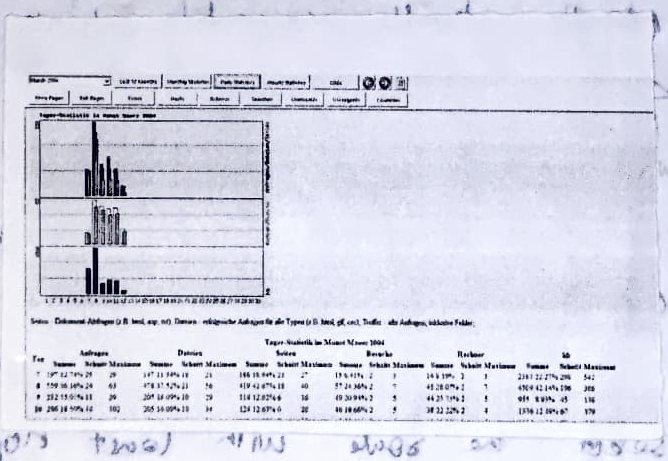
* show ip route static used to verify routing table entries
* ping and tracert used to confirm data path

Failure simulation:

* Link between Router 0 and Router 1 removed to test failovers.
* Router switched to backup route successfully.

Deleting a Static Route

* Use show ip route static to view router
* Remove route using no ip route command
* Backup route becomes the new main route if available.



Result:

Thus Removing static Routing configuration using cisco packet Tracer software performed successfully