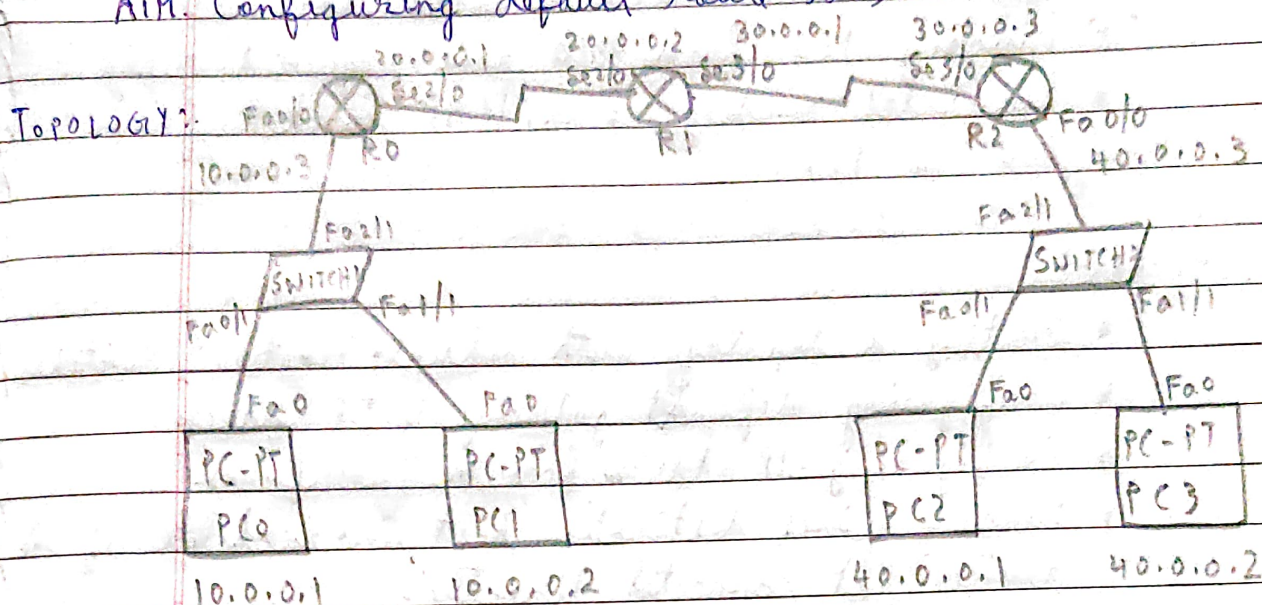


1/12/22

LAB-4

AIM: Configuring default route to the router



PROCEDURE: 1. Topology was created using 3 routers-PT, 2 Switches-PT and 2 PC's connected to each switch using Copper straight through connections & serial DCE connection.

* Default gateways & unique IP addresses were configured for each PC.

* IP addresses were configured for each interface using CLI

* ~~Pinging PC2 from PC0 gave destination~~

OBSERVATION

* Pinging PC2 from PC0 gave destination host unreachable.

* IP routes for each router was viewed using: show ip route.

* Static ip route was configured for R1 using CLI commands: ip route dest-network subnet mask next-hop-address.

- * Default ip route was configured for R0 & R2 using CLI commands:
ip 0.0.0.0 0.0.0.0 next-hop-address
- * Pinging PC2 from PC0 gave required reply.
- * Simulated sending of an ICMP packet from PC0 to PC2.

OUTCOMES:

- * Creating a topology with multiple routers & switches.
- * Configuring default gateway & IP address.
- * Configuring IP address for the interfaces.
- * Pinging gives destination host unreachable if the devices not connected directly.
- * Configuring default IP routes to a router ensures that the packet passes through the default route when no other route is available.
- * On configuring default IP routes, gives required reply.
- * The simulation of sending a simple PDU from source to destination shows the route taken by the ICMP packet.

RESULT: Before setting default router path

> ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data

Request timed out.

Request timed out.

"

"

> ping 30.0.0.1 & all other interfaces after that to end devices of other network.

Pinging 30.0.0.1 with 32 bytes of data

Reply from 10.0.0.3: Destination host Unreachable

"

"

"

Ping statistics

Packets: Sent = 4, Received = 0, Lost = 4 (100% loss)

> Ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes = 32 time = 17 ms TTL = 125

"

time = 3 ms "

"

time = 2 ms "

"

time = 2 ms "

Ping statistics for 10.0.0.2

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)

Approx. round trip time in (ms)

Minimum = 2 ms, Maximum = 17 ms

Average = 6 ms

→ After setting default router path for all routers -

> Ping 30.0.0.1 & 30.0.0.2

Pinging 30.0.0.1 with 32 bytes of data:

Request timed out

Reply from 30.0.0.1: bytes = 32 time = 2 ms TTL = 253

Request timed out

Reply from 30.0.0.1: bytes = 32 time = 12 ms TTL = 253

→ ~~Ping statistics~~

➤ Ping 40.0.0.1 & other interfaces

Pinging 40.0.0.1

Reply from 40.0.0.1: bytes = 32 time = 16 ms TTL = 253

"

time = 12 ms

"

time = 2 ms

"

time = 9 ms

Ping statistics for 40.0.0.1

Packets Sent = 4, Received = 4, Lost = 0 (0% loss)

Approx round trip, (ms)

Min = 2 ms, Max = 16 ms

Average = 9 ms

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