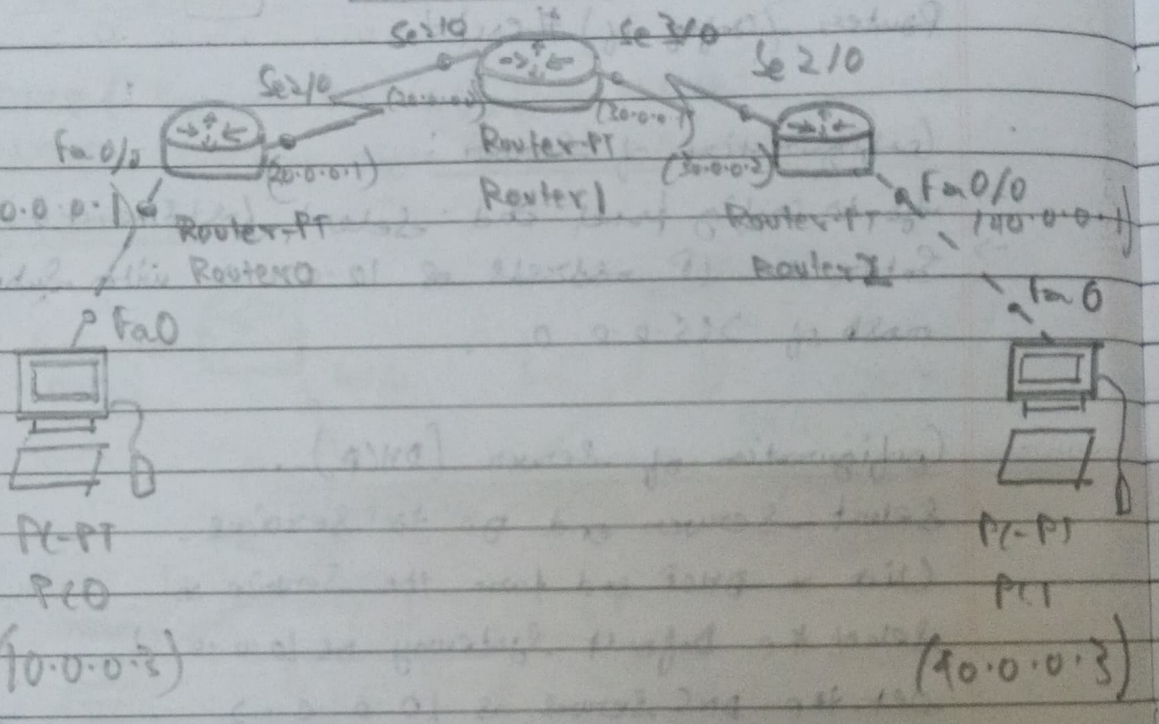
15/12/22

LAB-7

TOPOLOGY:

Configuring RIP routing Protocol in Routers.



- RIP : Router Information Protocol.
- DVA: Distance Vector Algorithm
- -> Finds optimal path. Also known as router-router protocol.
- -> Constant / Periodic updates relayed throughout network.
- -> Information about neighbors passed to all and trusted.

PROCEDURE:

- Select 2 End devices and set their IP addresses as 10.0.0.3 & 40.0.0.3 with Subnet mask 255.0.0.0 respectively.
- Select 3 generic routers and make connections between routers and and devices.

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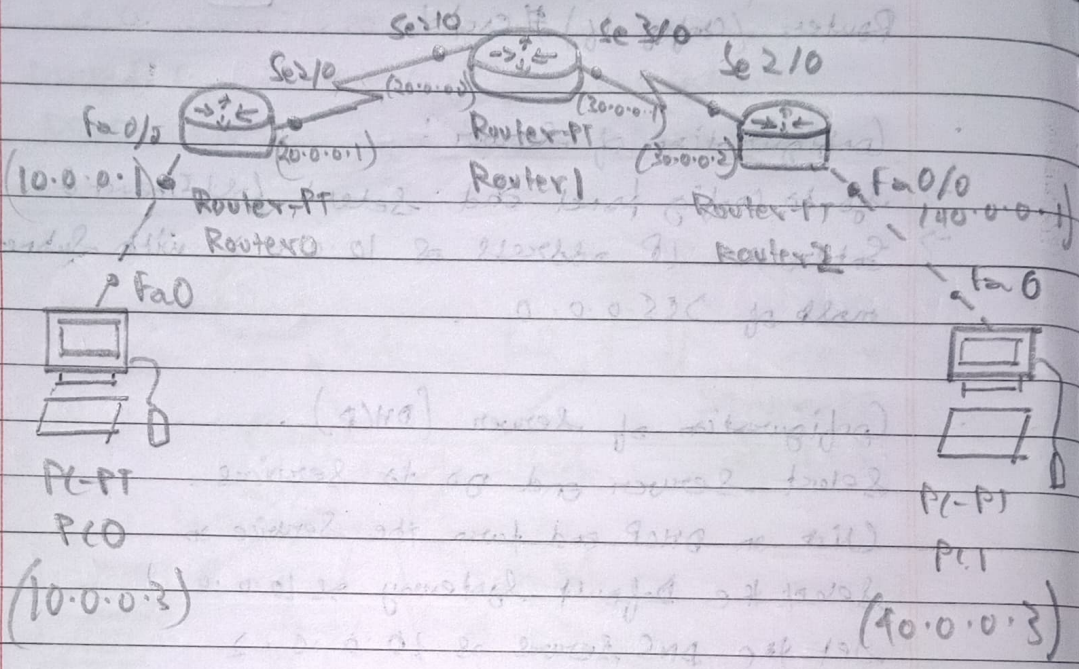
Configuring RIP routing Protocol in Routers.



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Router 0 Configuration

Router > enable
Router # config terminal.
Router (config) # interface fast Ethernet 0/0
Router (config-if) # IP address 10.0.0.1 255.0.0.0
Router (config-if) # no shutdown
Router (config-if) # exit.

Router (config) # interface Serial 2/0
Router (config-if) # IP address 20.0.0.1 255.0.0.0
Router (config-if) # encapsulation PPP
Router (config-if) # clock rate 64000
Router (config-if) # no shutdown
Router (config-if) # exit

Router (config) # router rip (RIP Protocol)
Router (config-router) # network 10.0.0.0
Router (config-router) # network 20.0.0.0
Router (config-router) # exit.

Router 1 Configuration.

Router > enable
Router # config terminal.
Router (config) # interface Serial 2/0
Router (config-if) # IP address 20.0.0.2 255.0.0.0
Router (config-if) # encapsulation PPP
Router (config-if) # no shutdown
Router (config-if) # exit.

Router # config terminal
Router (config) # interface Serial 3/0
Router (config-if) # IP address 30.0.0.1 255.0.0.0
Router (config-if) # encapsulation PPP
Router (config-if) # clock rate 64000
Router (config-if) # no shutdown
Router (config-if) # exit

Router (config) # router rip (RIP Protocol)
Router (config-router) # network 20.0.0.0
Router (config-router) # network 30.0.0.0
Router (config-router) # exit.

Router 2 Configuration.

Router > enable
Router # config terminal
Router (config) # interface fastEthernet 0/0
Router (config-if) # IP address 40.0.0.1 255.0.0.0
Router (config-if) # no shutdown
Router (config-if) # exit.

Router (config) # interface Serial 2/0
Router (config-if) # IP address 30.0.0.2 255.0.0.0
Router (config-if) # encapsulation PPP
Router (config-if) # no shutdown
Router (config-if) # exit.

Router (config) # router rip (RIP Protocol)
Router (config-router) # network 30.0.0.0
Router (config-router) # network 40.0.0.0.

Router (config - router) # exit.

Assign 10.0.0.1 DS gateway for End Device (10.0.0.2)
Assign 40.0.0.1 as gateway for End Device (40.0.0.2).

Ping Statistics:

P:\> ping 40.0.0.3

Pinging 40.0.0.3 with 32 bytes of data:

Reply from 40.0.0.3 bytes=32 Time=2ms TTL=125
Reply from 40.0.0.3 bytes=32 time=2ms TTL=125
Reply from 40.0.0.3 bytes=32 time=2ms TTL=125
Reply from 40.0.0.3 bytes=32 time=12ms TTL=125.

Ping statistics for 40.0.0.3:
Packets: Sent=4, Received=4, Lost=0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum=2ms, Maximum=13ms, Average=4ms

OBSERVATION:

RIP protocol enabled the sharing of routing table information throughout the network.
PDU was successfully sent from 1 end device to another end device.

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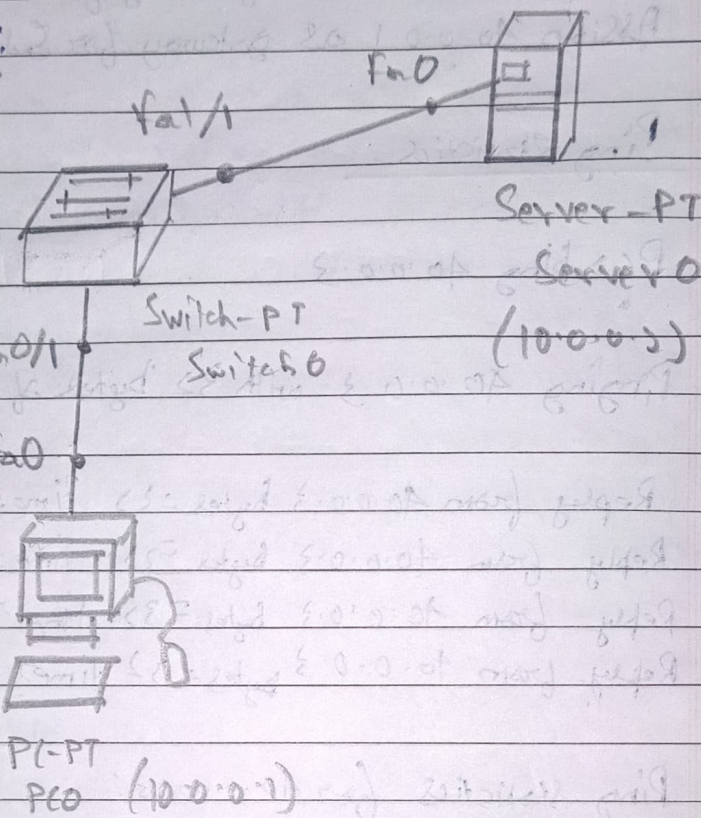
- **Demonstration of WEB Server and DNS using Packet Tracer.**

TOPOLOGY:



PROCEDURE:

- Select end end device and configure it with an IP address of 10.0.0.1 & subnet mask 255.0.0.0
- Connect it to a switch and then make a connection between switch and a server.
- Server Configuration :- make it have an IP address of 10.0.0.2 & Subnet mask 255.0.0.0
- Click on the server and go to Services menu. Ensure that HTTP service is switched on. Go to DNS service, switch

it as. Under resource records enter the name of the desired website (eg: www.lesrosbg.com)
- Enter the IP address of the server and then add the records.
- Select the TFTP service and switch it on.
- Select the end device and go to desktop. Select Web browser icon and in the URL there enter the website name / IP address alongwith filename in HTTP service.
eg) http://10.0.0.3/helloworld.html.
- file is displayed alongwith content.

OBSERVATION:

- files present in the server were accessed by end device using DNS.

Lee 15/12/22