DNS

Aim : Configuring DNS server with LAN

Topology :

Switch-PT

Switch 0

PC-PT
PCO
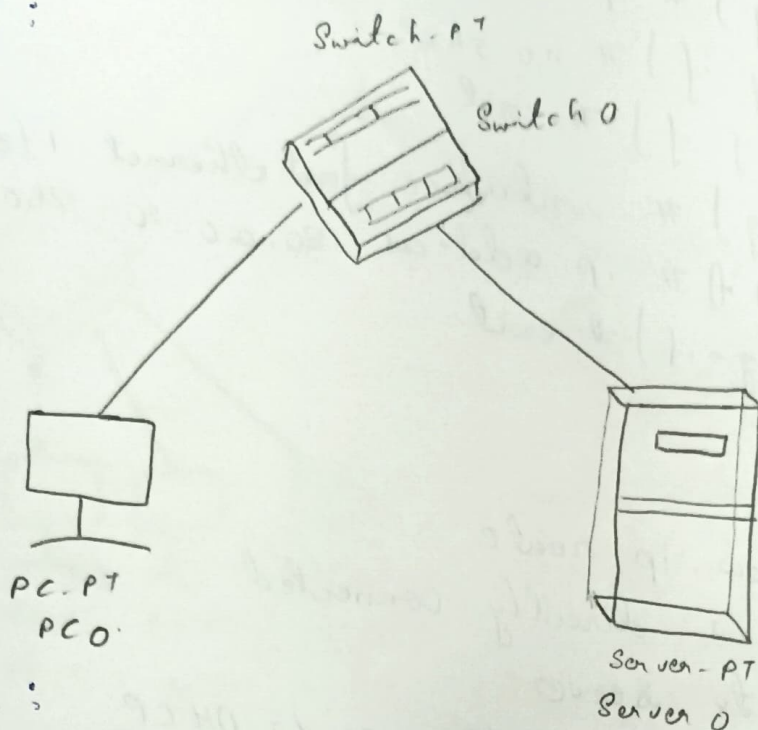
Server - PT
Server 0

Procedure :

1) Create a topology as shown above

2) Configure the pc with IP address and gateway and subnet mask

3) Add DNS as 10.0.0.2 to the PCO & the IP address as 10.0.0.1 and gateway 10.0.0.2

4) click on Server and click on services → HTTP & HTTPS click on 'ON' then select the DNS click on 'ON' and add Name! + also Address! 10.0.0.2

5) Now go to config → fast Ethernet - Ip address 10.0.0.2 subnet mask 255.0.0.0

6) Now go to settings in the config gateway 10.0.0.2 & DNS server 10.0.0.2.

7) Now go to PC click on desktop → web browser and type the 'heel. Com' in URL and click on go

8) You will see the html. index that has written the HTTP ballon.

Observation:

ONS is the Domain Name System, DNS is linked to the internet and focused on a System using Internet protocol. DNS servers are required for working of DNS. The IP address is calculated with the aid of a look up table.
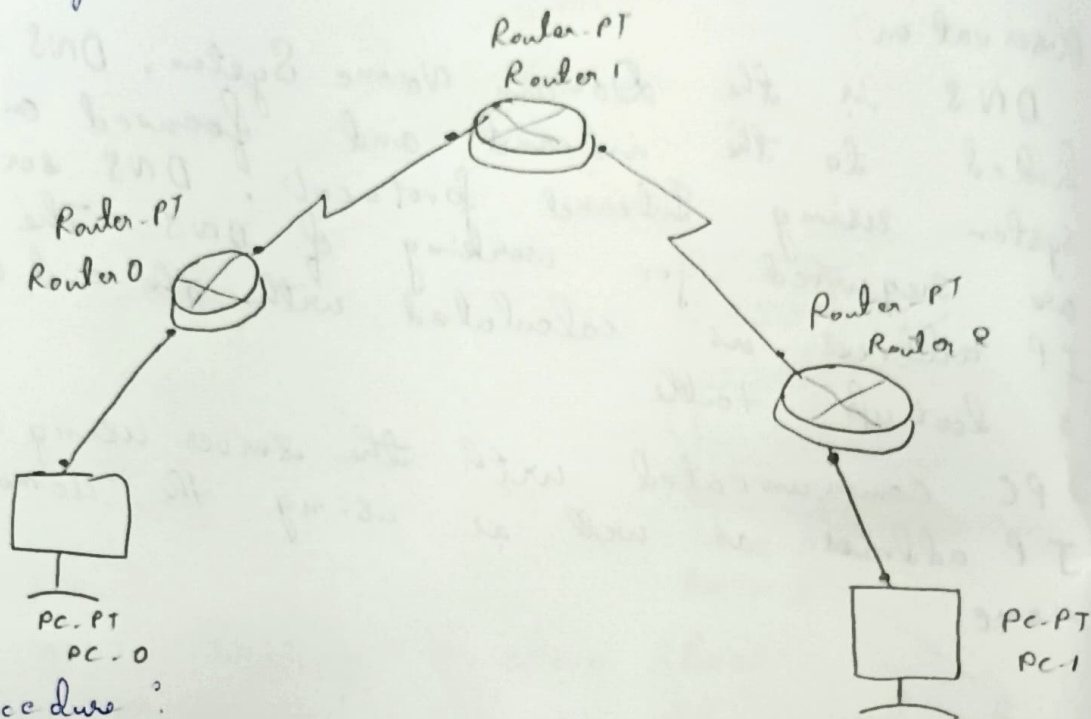
→ PC communicated with the server using the IP address as well as using the domain name.

RIP Routing Protocol

Aim: Configuring RIP Routing Protocol in Routers

Topology:

Router-PT
Router 1

Router-PT
Router 0

Router-PT
Router 2

PC.PT
PC.0

PC-PT
PC-1

Procedure:

1) Three routers and 2 PC's are connected as show in topology.

2) Configure the PC's with proper IP address and gateway address

3) Similarly, configure the Router's with the propo IP address in CLI mode.

→ N. Enable

→ Config T

→ Interface fastethenet 0/0

→ IP address 10.0.0.1   255.0.0.0.

→ encapsulation ppp

→ clockrate 64000

no shut

Note : The encapsulation PPP should be
to all the routers and clockrate 64000. Comma
should be only given to the clock symbols
sides of the router

→ for making the routers to know about the
other devices, in the previous & experiments
we used static and the other with dynamic
address but here we use a routing
protocol algorithm that itself makes the
router to know other devices

→ router rip
→ network 20.0.0.0 } router 2
→ network 30.0.0.0 }

→ router rip
→ network 30.0.0.0 } router 3
→ network 40.0.0.0 }

→ router rip
→ network 10.0.0.0 } router 1
→ network 20.0.0.0 }

Ping output :
. PC > ping 40.0.0.1
pinging 40.0.0.1 with 32 bytes of data
Reply from 40.0.0.1 ; bytes=32 time=0ms TTL:128
Reply from 40.0.0.1 ; bytes=32 time=0ms TTL: 128
Reply from 40.0.0.1 ; bytes=32 time=0ms TTL:128
Reply from 40.0.0.1 ; bytes=32 time=0ms TTL: 128

ping statistics from 40.0.0.1
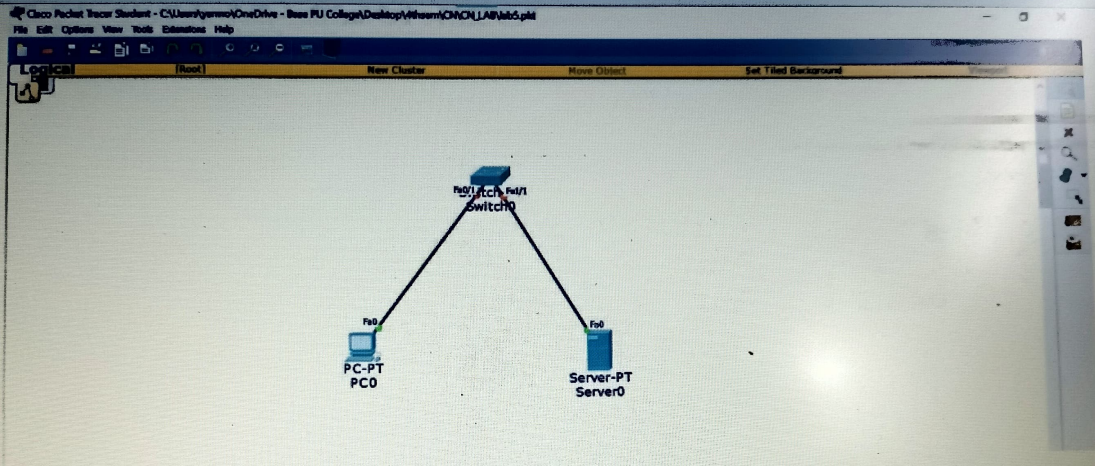packets Sent = 4 Received 4 Lost=0 (0% Lost)
Approximate round trip times in ms
minimum: 0ns, maximum :0ms Average:0ns

Assumption: RIP is the Routing Information Protocol is a distance vector protocol that uses hop count as its primary metric. RIP defines how routers should be share information while moving traffic among an interconnected group of LAN

→ RIP protocol here used to connect the other routers to one other and pc's using RIP protocol and message is pinged successfully

Logical   [Root]   New Cluster   Move Object   Set Tiled Background   Viewport

Fe0/Litch Fe1/1
Switch0

Fe0   Fe0
PC-PT   Server-PT
PC0   Server0

Cisco Packet Tracer

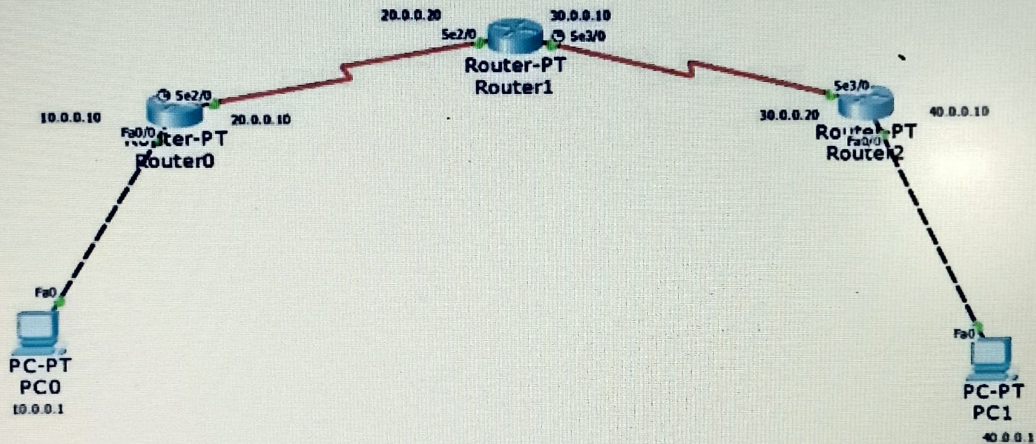Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.

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Network topology diagram showing three routers connected in series with two PCs.

Router1 (Router-PT): Se2/0 — 20.0.0.20, Se3/0 — 30.0.0.10

Router0 (Router-PT): Se2/0 — 20.0.0.10, Fa0/0 — 10.0.0.10

Router2 (Router-PT): Se3/0 — 30.0.0.20, Fa0/0 — 40.0.0.10

PC-PT PC0: Fa0 — 10.0.0.1

PC-PT PC1: Fa0 — 40.0.0.1

Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.1: bytes=32 time=8ms TTL=125
Reply from 40.0.0.1: bytes=32 time=5ms TTL=125
Reply from 40.0.0.1: bytes=32 time=10ms TTL=125

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 5ms, Maximum = 10ms, Average = 7ms


PC>
```