WEEK 3

Configure default route, static route to the Router

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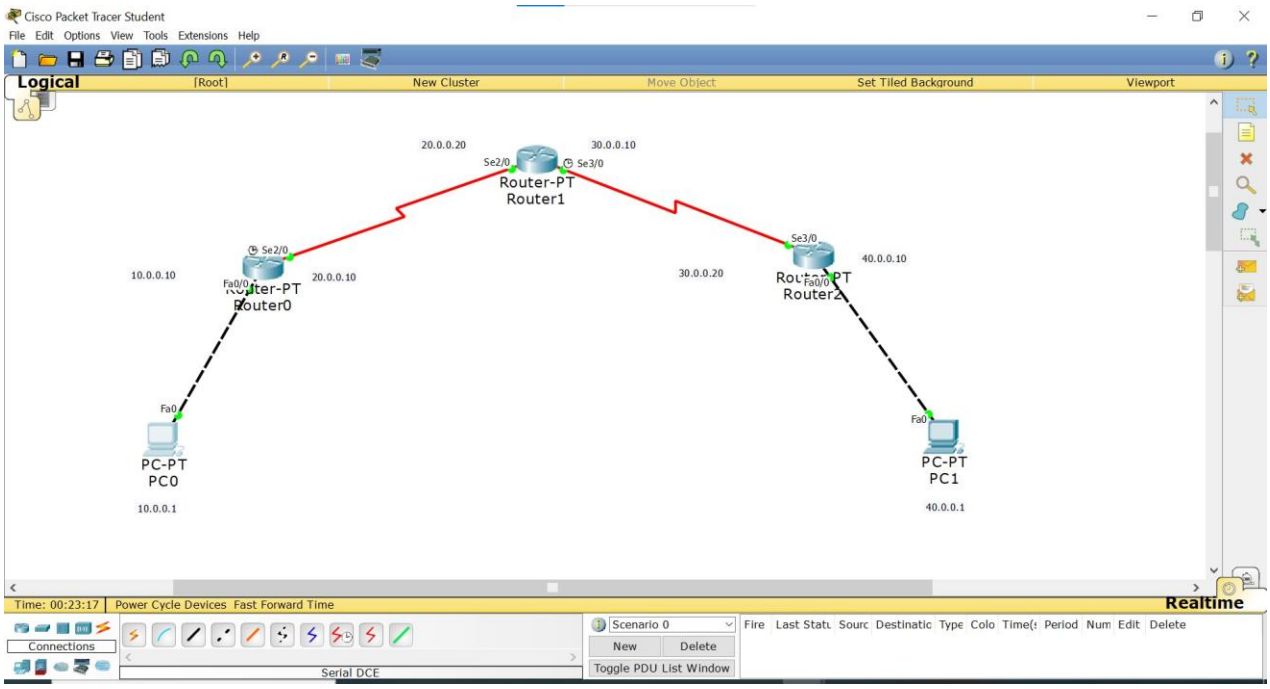
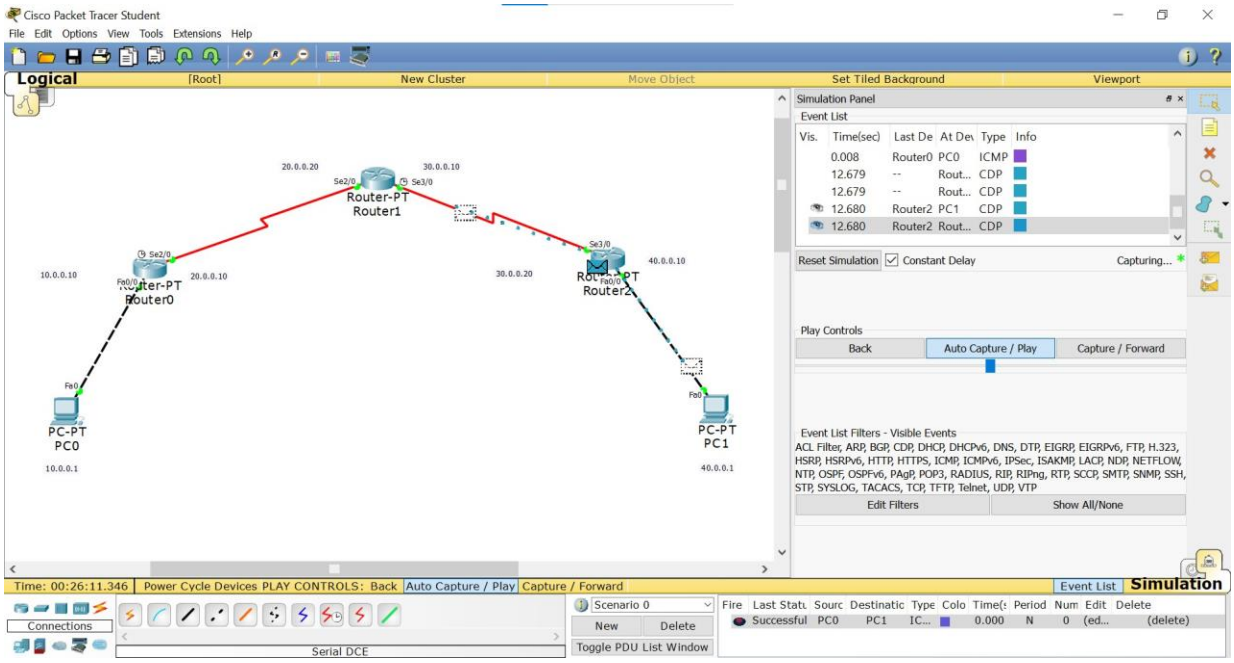
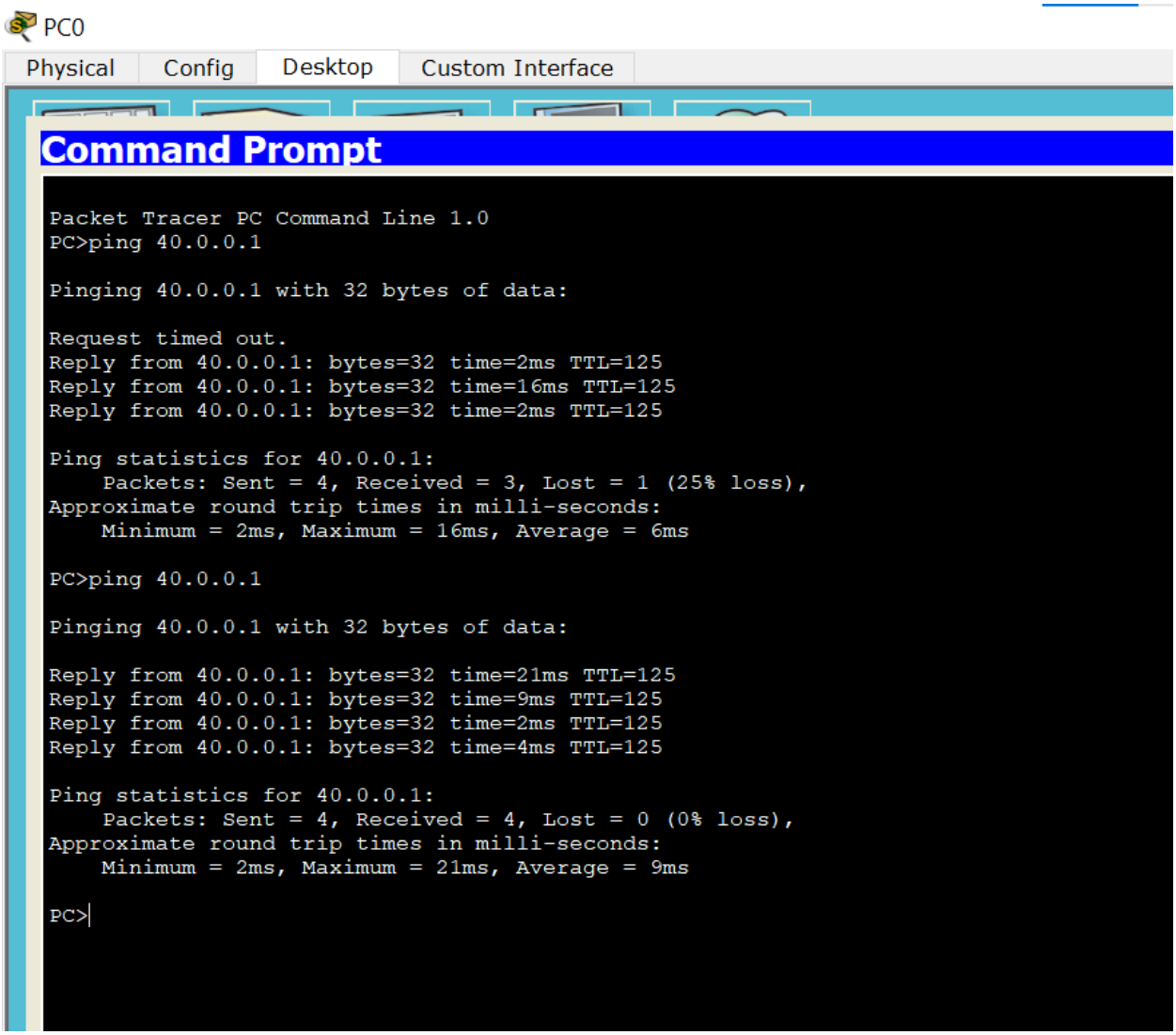
TOPOLOGY:



OUTPUT:





Observation:

Go to PC's command Prompt and type ping message to send packets across

Ping output

Packet trace PC command line 10

PC > Ping 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data

Request timed out

Reply from 10.0.0.1 bytes=32 time 2ms TTL=128

Reply from 10.0.0.1 bytes=32 time=16ms TTL=128

Reply from 10.0.0.1 bytes=32 time=2ms TTL=128

Ping statistics for 10.0.0.1

Packets: Sent=4 Recived=3 Lost=1 (25% loss)

Approx. round trip in milli seconds

minimum=2ms Maximum=16ms Average=6ms

Observation

- A default route is the route which take effect when no other route is available for an IP address current
- If a packet is received, the device first check the IP destination address, If the IP destination address is not local the device checks its routing table
- If the remote destination subnet is not listed then the packet is forwarded to the next hop toward the destination using the default route
- The process repeats until the packet is delivered

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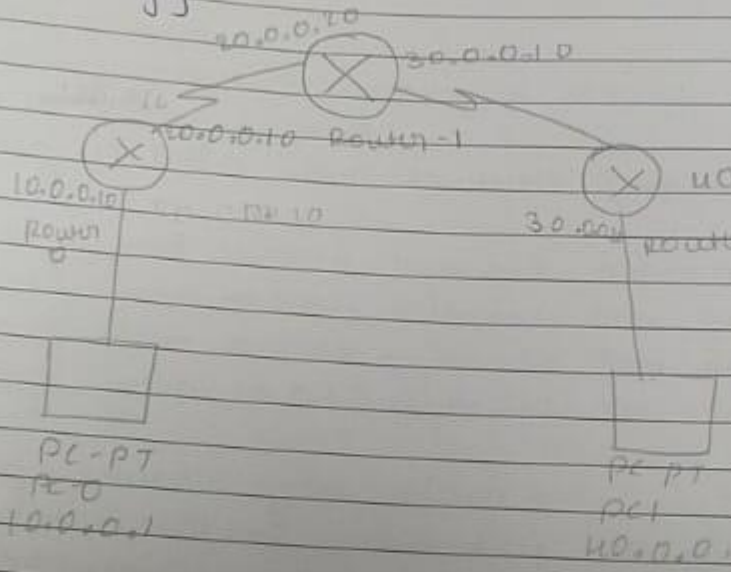
DATE: 13/7/23

Aim

Configure default route, static route to the Router

Topology



Procedure

- Connect 3 Router and 2 PC's using copper cross over cable for PC to router and a serial DCE cable to connect router to router
- Set the IP address of both PC's and respective gateway number

For All 3 Routers Set the Respective 2 IP address in CLI mode by using the commands

Step1 : Enable

Step2 : config T

Step 3 : Interface fast Ethernet 0/0

Step 4 : IP address

step 6 : Exit
step 7 : interface se 2/0
step 8 : IP address 20.0.0.10 255.0.0.0
step 9 : no shut
step 10 : Exit
step 11 : Exit

- Repeat the command for other two router with their respective IP addresses
- for Router 1, set the IP route of other IP address statically by using following steps

step 1 : config t
step 2 : IP route 10.0.0.0 255.0.0.0 20.0.0.10
step 3 : IP route 40.0.0.0 255.0.0.0 30.0.0.20
step 4 : exit
step 5 : exit
step 6 : show IP route

- ~~Repeat~~ These commands for other two router with their respective IP addresses

For Router 0 set the IP route of other IP address statically by using following

For Router 0 & Router we set default IP route which means it can acces any IP address with any subnet mask

set the default IP route by following this command

step 1 : config T
step 2 : IP route 0.0.0.0 0.0.0.0 20.0.0.20
step 3 : IP route 0.0.0.0 0.0.0.0 30.0.0.10

given for Router 0 & step 3 command

DATE PAGE

Well request for an IP address are successfully get
The DHCP request also sets the IP address
Repeat this steps for other 2 PC's
to send a packet across PC's go to PC's command
Prompt and type ping destination IP address

Ping output
Packet tracer PC command line 10
PC > Ping 10.0.0.3
Ping 10.0.0.3 with 32 bytes of data

Reply from 10.0.0.3 bytes=32 time=0ms TTL=128
Reply from 10.0.0.3 bytes=32 time=0ms TTL=128
Reply from 10.0.0.3 bytes=32 time=0ms TTL=128
Reply from 10.0.0.3 bytes=32 time=0ms TTL=128

Ping statistics from 10.0.0.3
Packets: sent=4, Recived=4 lost=0 (0% loss)
Approximate round trip time in milli seconds
minimum=0ms, maximum=1ms Average=0ms

Observation:
DHCP is used to dynamically assign an IP address
to any device or node
It is a client-server protocol to which servers
manage a pool of unique IP address & also
about client configuration parameter
DHCP enabled client sends a request to DHCP server
When they want to connect to a network
The DHCP server responds to the client request
by providing IP configuration information

from address pools, previously specified by a network administrator

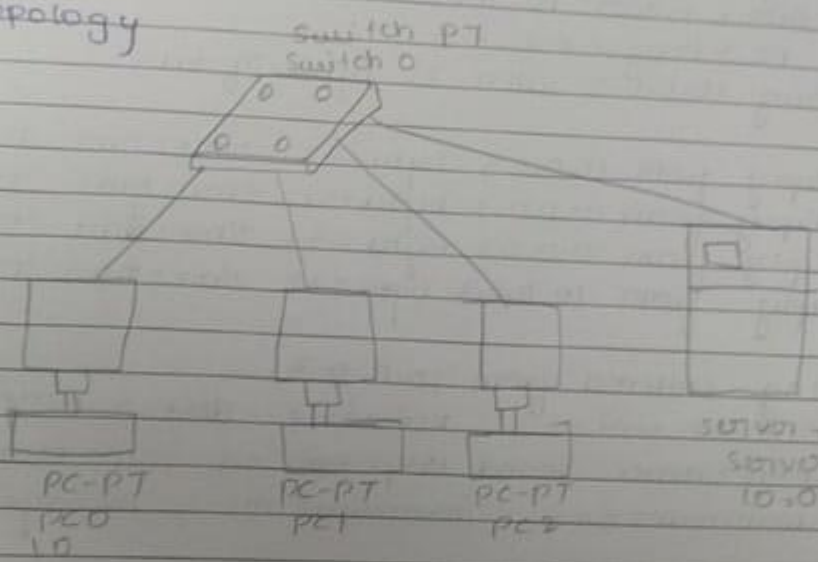
DATE 13/7/22

configure defaut route

Aim:-

configure DHCP within a LAN and outside LAN

Topology



Procedure:-

Connect 3 pc's and 1 server to a Switch using upper Straeght Through Cable

click on server and go to Services tab Select DHCP and turn ON the DHCP service

Set the IP address of the start IP address as 10.0.0.2 and click on save button

Before this. Set the IP address of server in config Tab under fast ethernet as 10.0.0.1

Next click on Pc_0 and go to desktop tab,