

LAB-2

Configure IP address to routers (one and three) in packet tracer. Explore the following messages: ping responses, destination unreachable, request timed out, reply.

OBSERVATION:

LAB-2

Program 2.1

AIM-

Configure IP address to a single router. Explore the following messages: ping message, destination unreachable, request timed out, reply.

TOPOLOGY

Router 0
Router - PT

PC0
10.0.0.1

PC1
20.0.0.1

PROCEDURE

- Select one Generic router & 2 generic PC's. connect the PC's to router using copper: crossovers cable

- Set the IP address of both PC's by clicking on PC & config tab. Along with IP address set gateway in the settings option on config tab
- To set the IP address of a router click on it & go to C11 tab and type the following commands

Step 1: type NO & press enter

Step 2: type enable & press enter

Step 3: type config T & press enter

Step 4: type interface fastEthernet 0/0 & press enter

Step 5: type IP address 10.0.0.10 255.0.0.0 & press enter

Step 6: type NO shut & press enter

Step 7: type exit

Step 8: type interface fastEthernet 1/0 & press enter

Step 9: type IP address 20.0.0.10 25.0.0.0 & press enter

Step 10: type NO shut & press enter

Step 11: type Exit

Step 12: type Exit

Step 13: type show ip route
[for seeing the con

- close the tab 1. If click on PC to go to command prompt. Type ping 20.0.0.1 to send packets across

PING OUTPUT

Packet tracer
PC > ping 20.0.0.1

Request time out

Reply from 20.0.0.1: bytes = 32 time = 0ms TTL = 64

Time = 10mg

Ping Statistics for 20-0-0.1

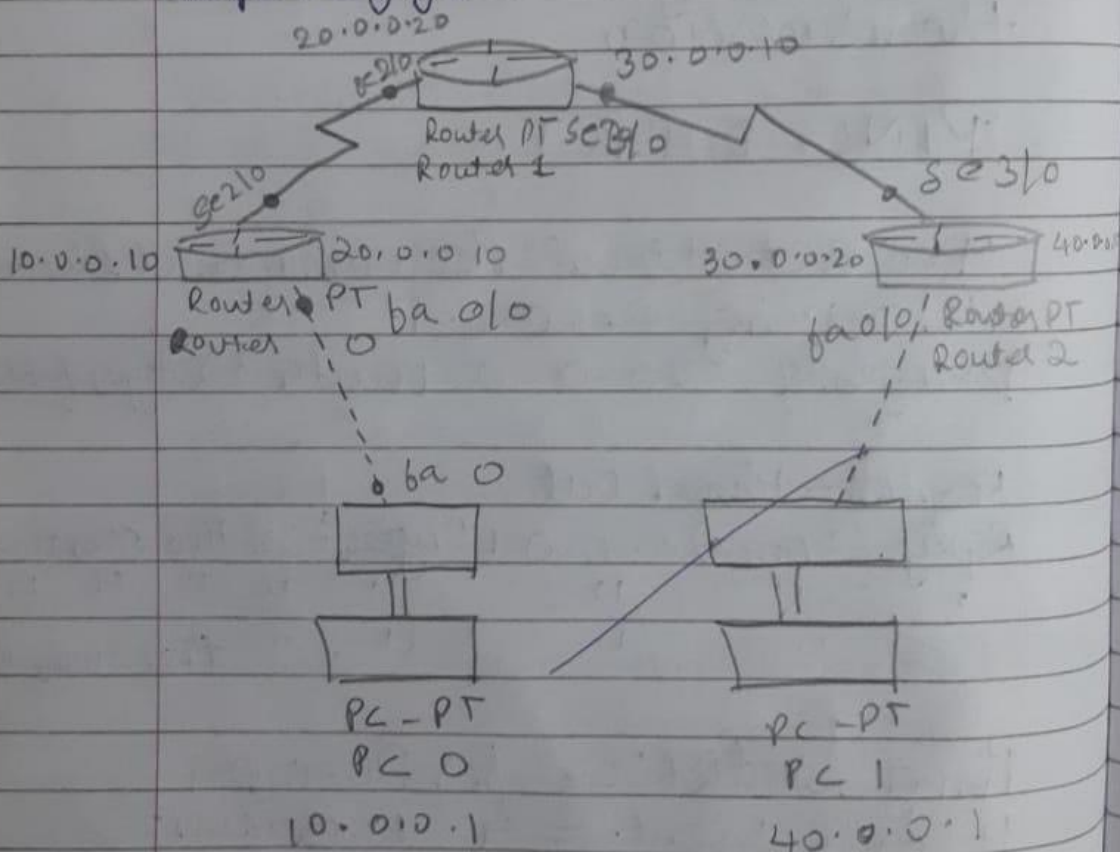
packets: Sent = 4, Received = 3,
lost = 1 (2990 loss), Approximate round
trip times in milliseconds. Minimum
= 0ms, maximum = 10ms, Avg = 3ms

Program 2.2

AIM

configure IP addresses to three routers in packet-tracer. Explore the following messages: ping response, destination unreachable, request timed out reply

Topology:-



Procedure

- Connect 2 PC's to 3 routers using copper cross over cable for PC to router and serial DCE cable to connect the routers to routers.
- Set the IP addresses of both PC's & gateway numbers
- Now for setting IP address & gateway numbers to routers
Select one router and perform the following commands.

Step 1: type NO & press Enter

Step 2: type Enable & press Enter.

Step 3: type config T & press Enter

Step 4: type Interface fast Ethernet 0/0 & press Enter

Step 5: type IP address 10.0.0.10
255.0.0.0 & press Enter

Step 6: type NO shut & press Enter

Step 7: type Exit

Step 8: type interface se 2/0 & press Enter.

Step 9: type IP address 20.0.0.10
255.0.0.0 & press Enter

Step 10: type NO shut & press Enter

Step 11: type Exit

Step 12: type Exit

- Repeat these commands for the other two routers with respect IP/gateways addresses

- Now to introduce the other two IP address to the first router we type the following commands.

Step 1: type `config T` & press enter

Step 2: type `IPRoute 30.0.0.0 255.0.0.0`
`20.0.0.0 20`

Step 3: type `IPRoute 40.0.0.0`
`255.0.0.0 20.0.0.0 20`

Step 4: `Exit`

Step 5: `Exit`

Step 6: type `Show IPRoute`

- Repeat these steps for the other two routers with appropriate addresses

- Go to command prompt by clicking on PC & `config lab` type ping message to send packets to the destination address.

PING OUTPUT

Output 1:

packet-tracer PC Command Line 1.0

PC > ping 40.0.0.1

ping'ing 40.0.0.1 with 32 bytes of data

Reply from 10.0.0.10: Destination host unreachable

" " " " " "

" " " " " "

Request timed out

ping statistics for 40.0.0.1

packets: Sent = 4, Received = 0,
lost = 4 (100% loss)

Output 2

Packet Tracer PC Command Line 1.0

PC > ping 10.0.0.1

Ping'ing 10.0.0.1 with 32 bytes data

Reply from 10.0.0.1: bytes = 32 time = 2ms TTL = 125

" " " " " time = 8ms "

" " " " " time = 2ms "

" " " " " time = 2ms "

Ping statistics for 10.0.0.1

packets: Sent = 4, Received = 4, lost = 0

Approximate round trip times in milli

seconds: Minimum = 2ms, Maximum = 8ms

Avg = 3ms

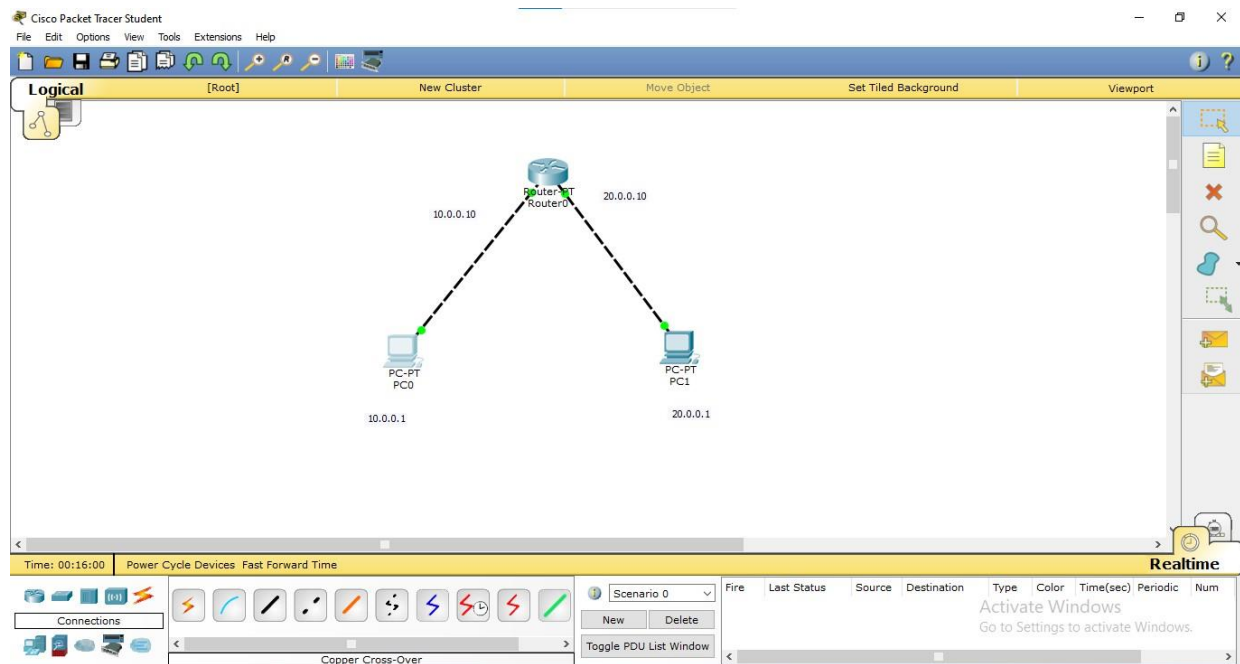
OBSERVATION

- In program 2.1 when we ping the destination address we get allocated with 32 bytes. In this first 8 bytes are used to learn about the router and their addresses. Rest bytes are used for sending packets to destination address. Then, again if we ping all bytes are used for message sending and there will be no timed out message.
- In program 2.2 when the router doesn't know about the remaining address, and we ping a message we get host unreachable message. Once the routers have access / knowledge about other addresses, messages will be sent successfully.

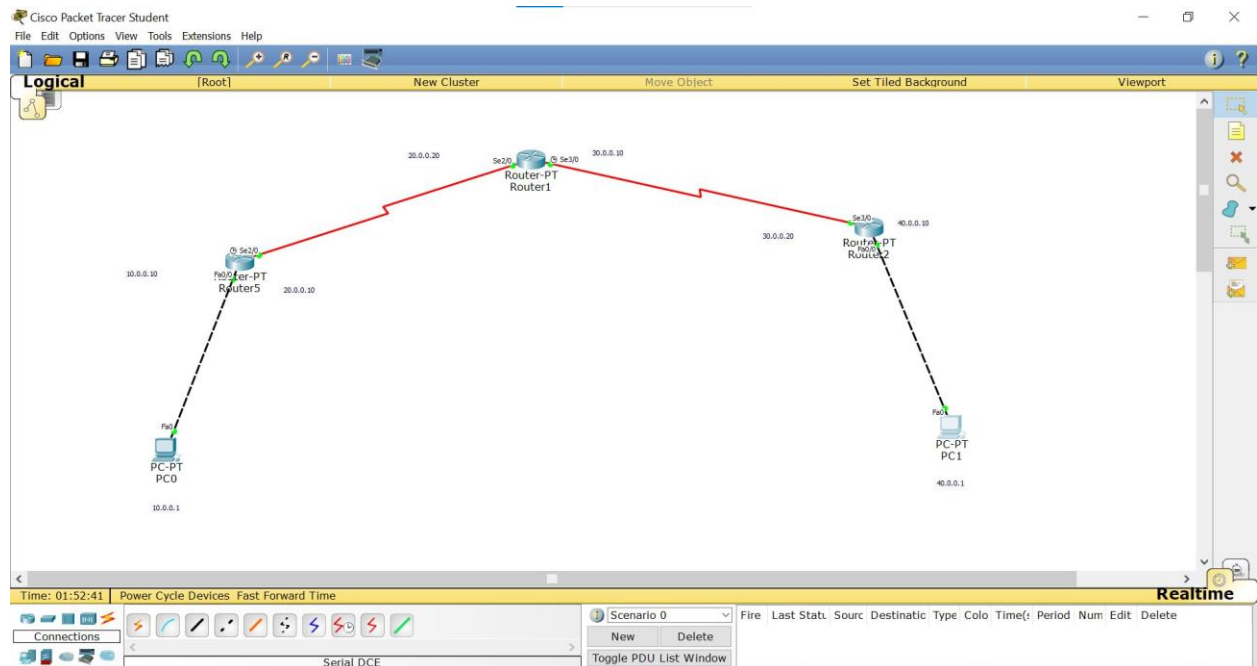
file

TOPOLOGY:

PROGRAM 2.1

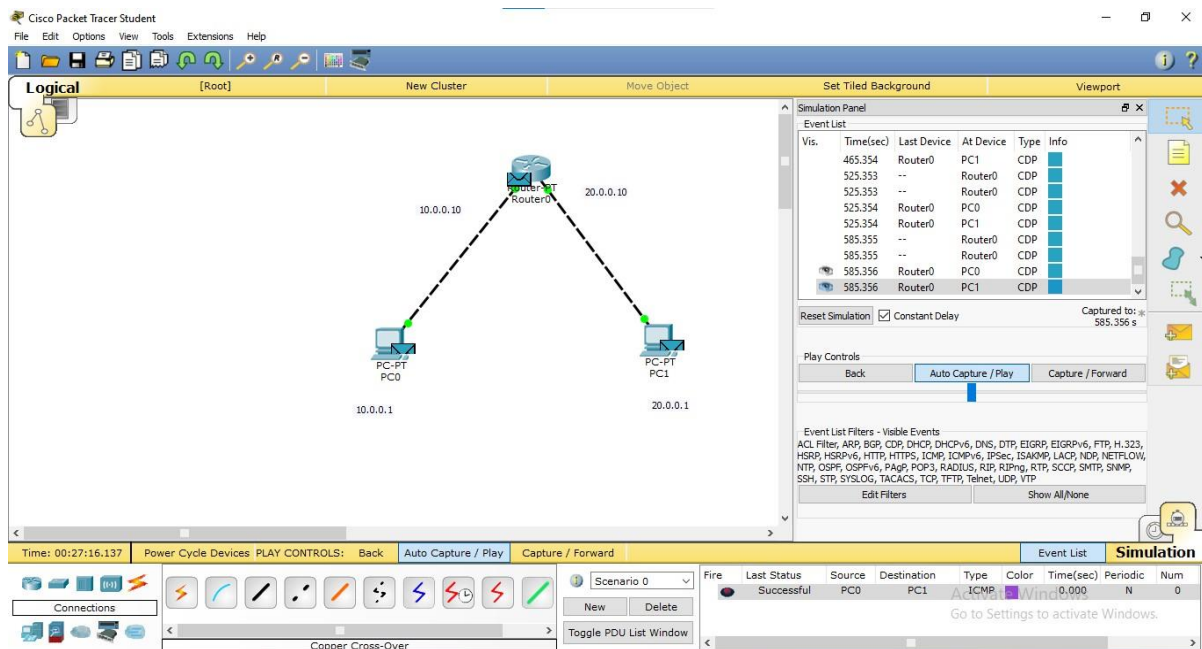
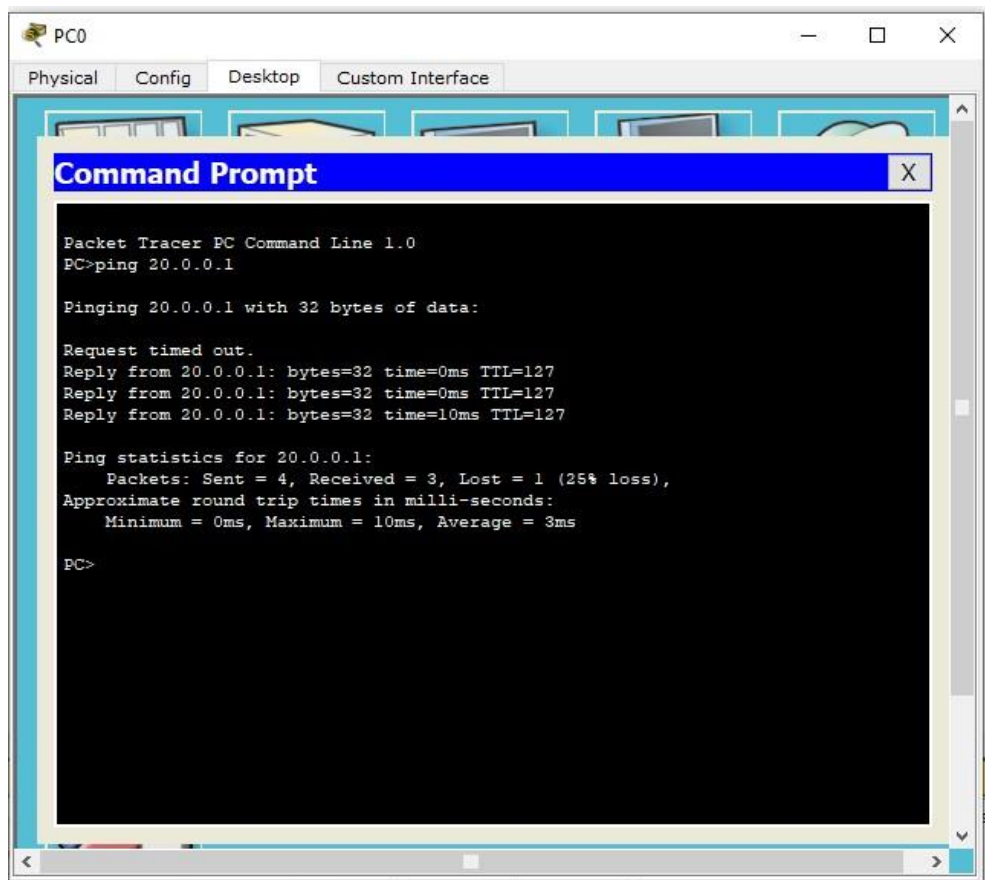


PROGRAM 2.2

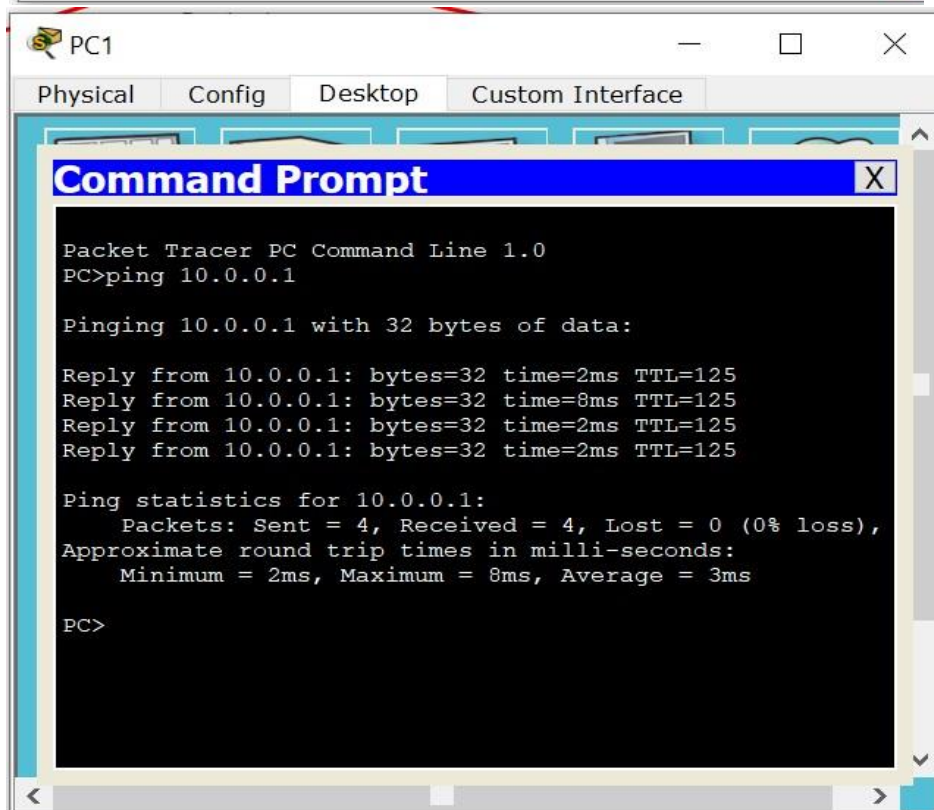
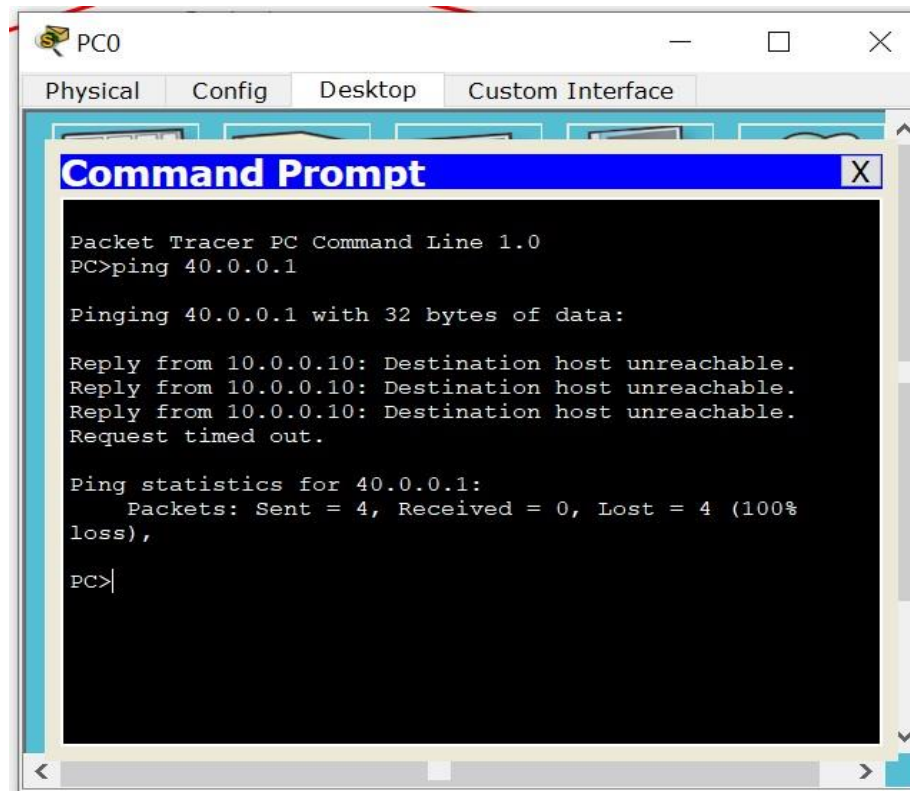


OUTPUT:

PROGRAM 2.1



PROGRAM 2.2



Cisco Packet Tracer Student

File Edit Options View Tools Extensions Help

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

Simulation Panel

Event List

Vis.	Time(sec)	Last De	At Dev	Type	Info
	28.315	--	Rout...	CDP	
	28.316		Router5	PC0	CDP
	28.316		Router5	Rout...	CDP
	45.862	--	Rout...	CDP	
	45.862	--	Rout...	CDP	

Reset Simulation ☒ Constant Delay Captured to: 45.862 s

Play Controls

Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events

ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NTP, NETFLOW, NTP, OSPF, OSPFv6, PAgg, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP

Edit Filters Show All/None

Time: 01:54:00.015 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Connections

Serial DCE

Scenario 0

New Delete

Toggle PDU List Window

Simulation

Fire	Last Statu	Sourc	Destinatio	Type	Colo	Time(s)	Period	Num	Edit	Delete
	Successful	PC0	PC1	IC...		0.000	N	0	(ed...	(delete)