

CN LAB-2

OBSERVATION

PROGRAM 2.1

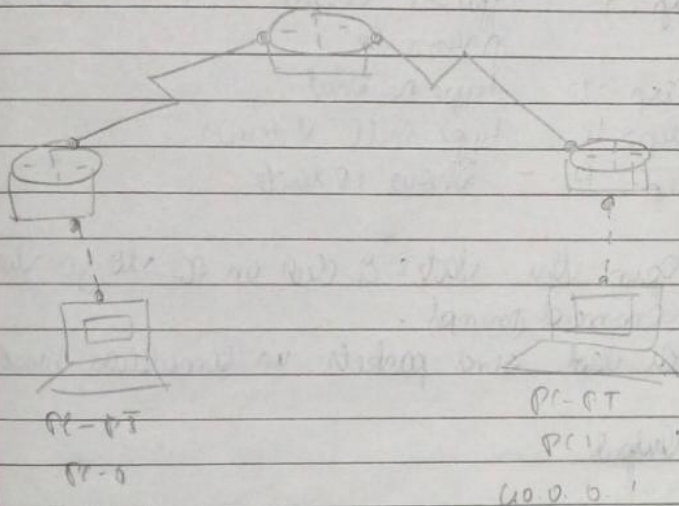
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STB-2

Program 2.1

Configure IP address to router (one & other) in packet tracer. Execute the following commands:
ping response, destination, unreachable, request denied etc.

Topology:



Procedure

- Select one generic router & a generic PC's connected the PC's to router using copper crossover cable.
- Set the IP address of both PC's by clicking 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 and go to CLI tab. & type the following commands

Step 1 - type no & press enter

Step 2 - type enable & press enter

Step 3 - type config & press enter

- Step-4. type interface fastEthernet 0/0 & press enter
Step-5 - type ip address 10.0.10.10 255.0.0.0 & press enter
Step-6 : type no & press enter
Step-7 : type end
Step-8 : type interface FastEthernet 0/0 & press enter
Step-9 - type ip address 20.0.0.10 255.0.0.0 & press enter
Step-10 : type no shut
Step-11 : type exit & then
Step-12 - Show ip route

- Open the lab & click on PC to go to command prompt.
- At last send packets in simulation mode

Output

Packet Tracer PC Command line 1.0
PC>ping 20.0.0.1

Request timed out

Reply from 20.0.0.1: bytes=32 Time=0ms TTL=128

Reply from 20.0.0.1: bytes=32 Time=0ms TTL=128

Reply from 20.0.0.1: bytes=32 Time=10ms TTL=128

Ping statistics for 20.0.0.1

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

Approximate round trip times in milli-seconds

Minimum=0ms, Maximum=10ms, Average=3ms

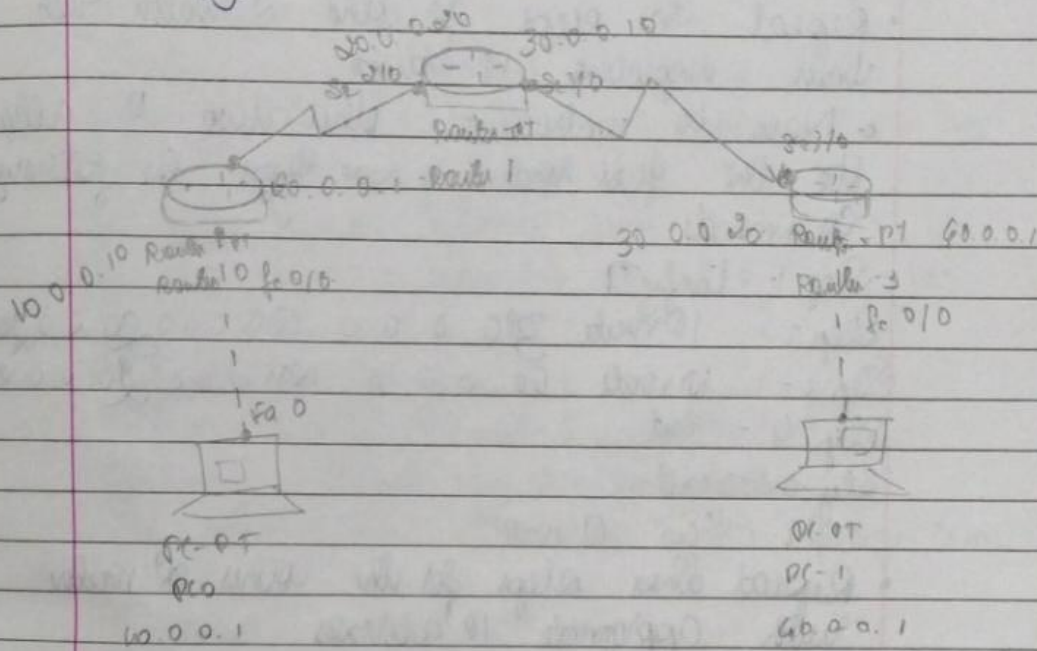
PROGRAM 2.2

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Program 2.2

Sum:- Configure 10 address to three routers in packet tracer.

Topology



Procedure

- Connect 3 PC's to 3 routers using copper wire and one cable from PC to router.
- Set the IP address of both PCs and gateway numbers to routers.
- Select one router & perform the commands.

Step 1 - No

Step 2 - Enable

Step 3 - Config T

Step 4 - interface fastEthernet 0/0

Step 5 - No shut

Step-7: End

Step-8: Interface S0/0/0

Step-9: IP address 20.0.0.10 255.0.0.0

Step-10: No shut

Step-11: End

Step-12: 9th

• Repeat the steps for other 2 routers with their respective IP address

• Now to introduce other two IP address to the first router, we type the following commands

Step-1: Config

Step-2: IP route 30.0.0.0 255.0.0.0 30.0.0.10

Step-3: IP route 40.0.0.0 255.0.0.0 30.0.0.10

Step-4: End

Step-5: End

Step-6: Show IP route

• Repeat these steps for the other 2 routers with appropriate IP addresses

• Go to command prompt available on the Config tab of the PC. Type ping message to send packets to the destination address

Output:

Output-1

PC > Ping 40.0.0.1

Ping 40.0.0.1 with 32 bytes of data

Reply from 40.0.0.10: Destination host unreachable

Reply from 40.0.0.10: Destination host unreachable

Reply from 40.0.0.10: Destination host unreachable

Request timed out
 Ping statistics for 10.0.0.1
 Packets: Sent = 4, Received = 0, lost = 4 (100% loss)

Output - 2

PC > Ping 10.0.0.1
 Pinging 10.0.0.1 with 32 bytes of data:
 Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
 Reply from 10.0.0.1: bytes=32 time=8ms TTL=125
 Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
 Reply from 10.0.0.1: bytes=32 time=9ms TTL=125

Ping statistics for 10.0.0.1
 Packets: Sent = 4, Received = 4, lost = 0 (0% loss)
 Approximate round trip times in milliseconds
 Minimum = 2ms Maximum = 8ms Average = 3ms.

Observation

- In program 2.1 when we ping the destination address we get allocated with 32 bytes of data. In this first 8 bytes are used to learn about the route and other packets. Rest are used to send packets to destination address. If we ping again then all bytes are used for sending message and there will be no timed out message.
- In program 2.2 when the router didn't know about the remaining address and we ping the message we get stuck unreachable message. When the routers have access or knowledge, the message will be sent successfully.

TOPOLOGY & OUTPUT

PROGRAM 2.1

Simulation Panel

Vis.	Time(sec)	Last De	At De	Type	Info
	0.001	PC0	Rout...	ARP	
	0.002	Router1	PC0	ARP	
	0.002	--	PC0	ICMP	
	0.003	PC0	Rout...	ICMP	
	0.003	--	Rout...	ARP	

Event List Filters - Visible Events

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

Command Prompt

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Packet Tracer PC Command Line 1.0
PC>PING 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data:

Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=0ms TTL=127
Reply from 20.0.0.1: bytes=32 time=2ms TTL=127

Ping statistics for 20.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

PC>
```

PROGRAM 2.2

Simulation Panel

Vis.	Time(sec)	Last De	At De	Type	Info
	0.000	--	PC0	ARP	
	0.001	PC0	Rout...	ARP	
	0.002	Router0	PC0	ARP	
	0.002	--	PC0	ICMP	
	0.003	PC0	Rout...	ICMP	

Event List Filters - Visible Events

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

```
Packet Tracer PC Command Line 1.0
PC>40.0.0.1
Invalid Command.

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=11ms TTL=125
Reply from 40.0.0.1: bytes=32 time=6ms TTL=125
Reply from 40.0.0.1: bytes=32 time=8ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 11ms, Average = 6ms

PC>|
```