EXP-3

VENKATA KRISHNA GIRI KONERU

1BM18CS123

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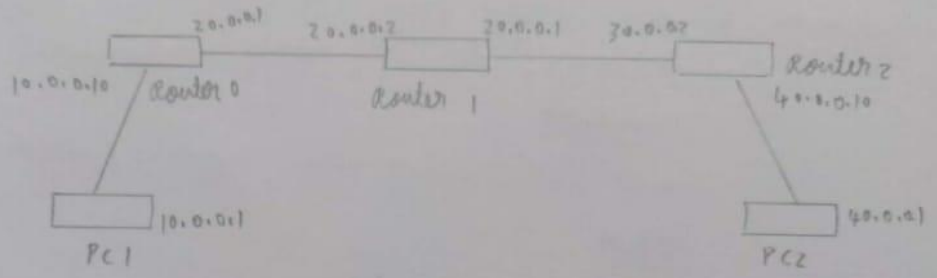
QUESTION: Demonstrate IP routing using 3 routers

AIM: convert 2 different networks using 3 routers

TOPOLOGY:



PROCEDURE:

1) connect the PCs to routers as shown above.
2) set IP and default gateway for each PCs
3) connect the router to each other using serial interface.
4) configure IP routing of each router.

CLI commands:

1) enable
2) config t
3) interface fastethernet 0/0
4) IP address 10.0.0.10 255.0.0.0
5) no shut
6) interface serial 2/0

7) IP address 20.0.0.1 255.0.0.0

8) no shut

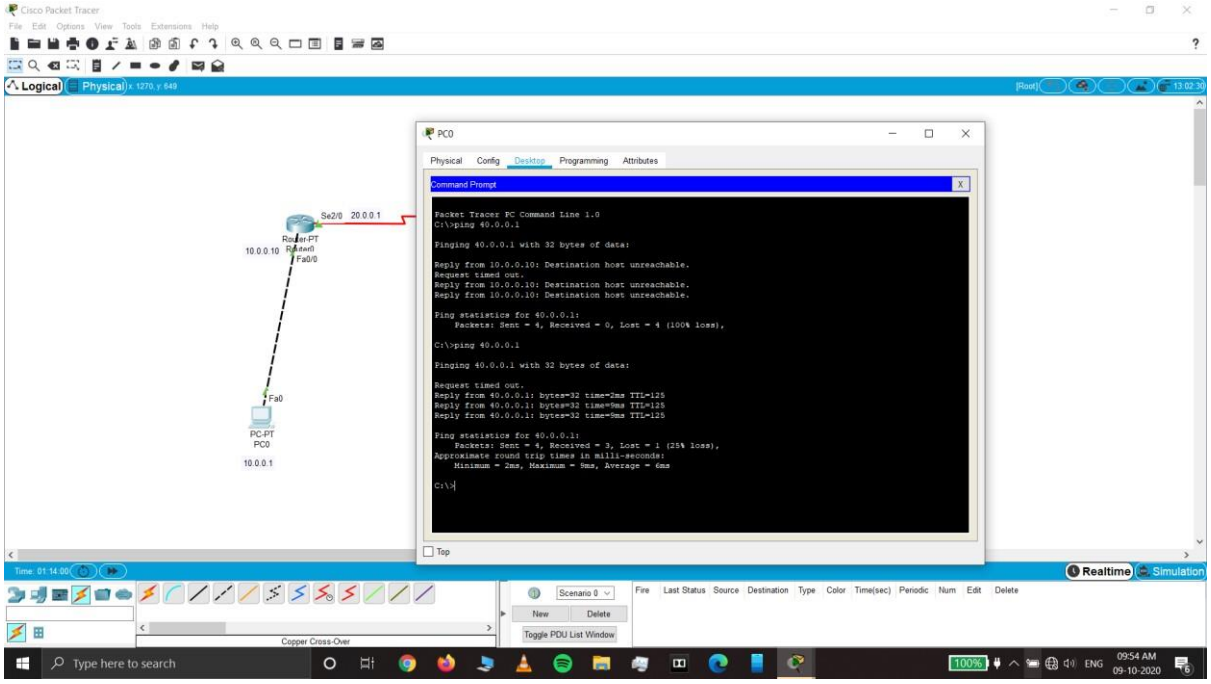
9) show ip route

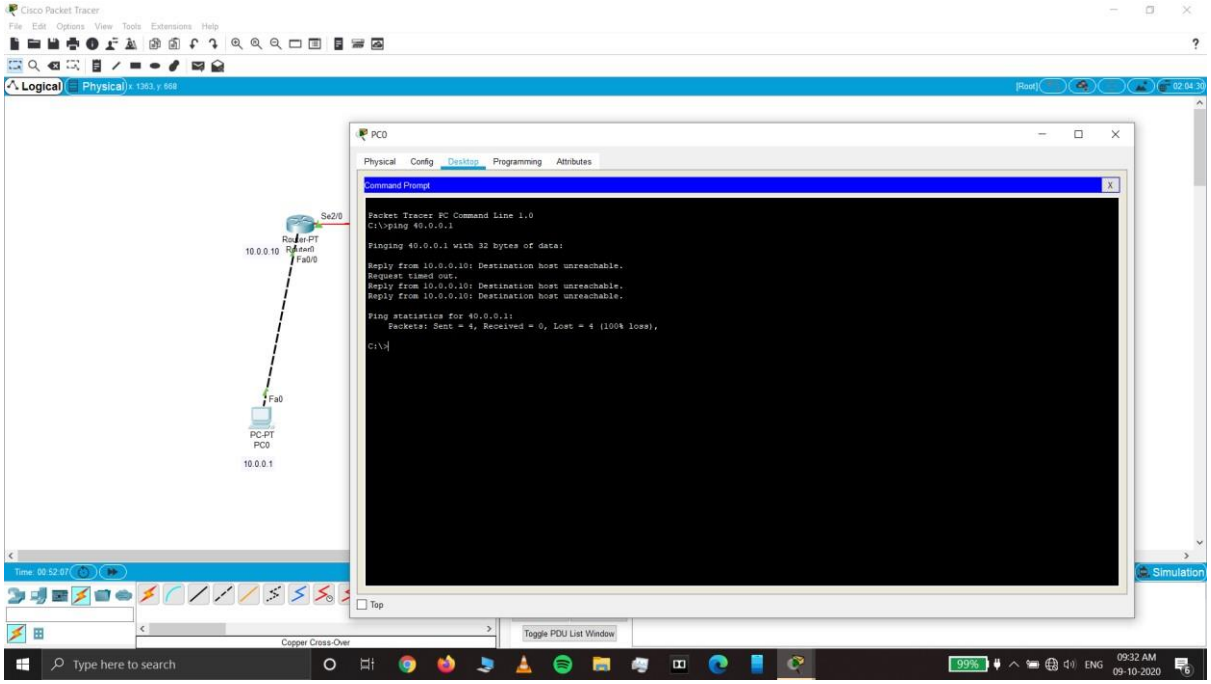
10) IP route 30.0.0.0 255.0.0.0 20.0.0.2

observation: 1) when ping from PC1 to PC2 without configuring the ip route, destination host unreachable.

2) After ip routing the above problem solved.

SCREEN SHOTS:





Router0

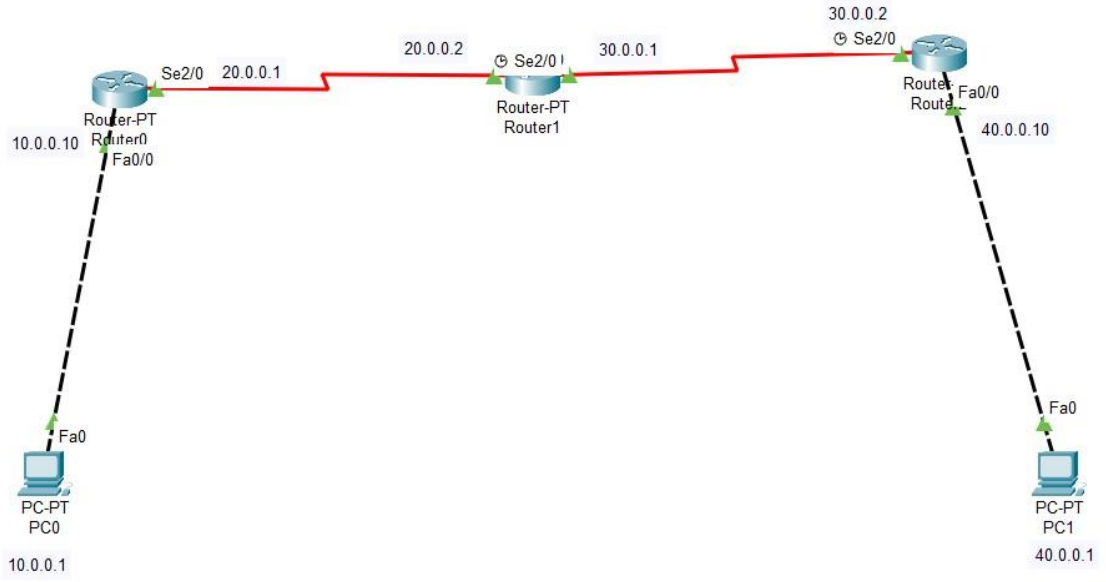
Physical Config CLI Attributes

IOS Command Line Int

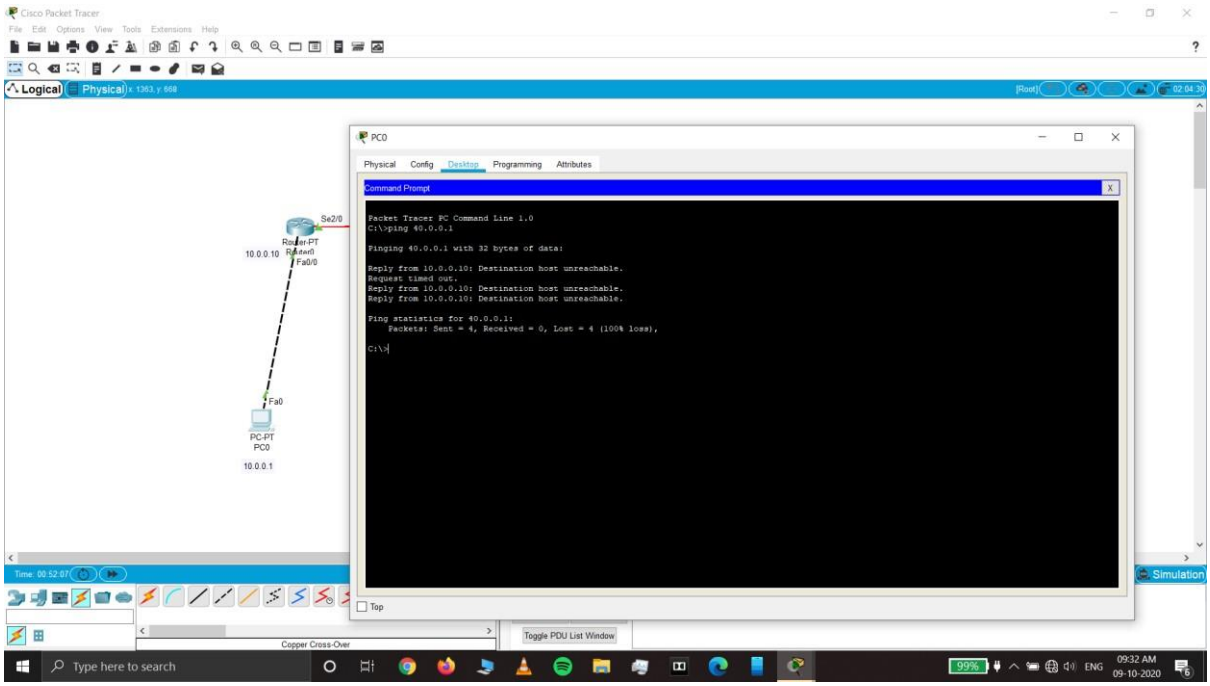
```
          cisco Systems, Inc.
          170 West Tasman Drive
          San Jose, California 95134-1706



Cisco Internetwork Operating System Software
IOS (tm) PT1000 Software (PT1000-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2005 by cisco Systems, Inc.
Compiled Wed 27-Apr-04 19:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
.
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

Press RETURN to get started!


%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

%LINK-5-CHANGED: Interface Serial2/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up


Router>
Router>enable
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    20.0.0.0/8 is directly connected, Serial2/0
S    30.0.0.0/8 [1/0] via 20.0.0.2
S    40.0.0.0/8 [1/0] via 20.0.0.2

Router#
```

Ctrl+F6 to exit CLI focus

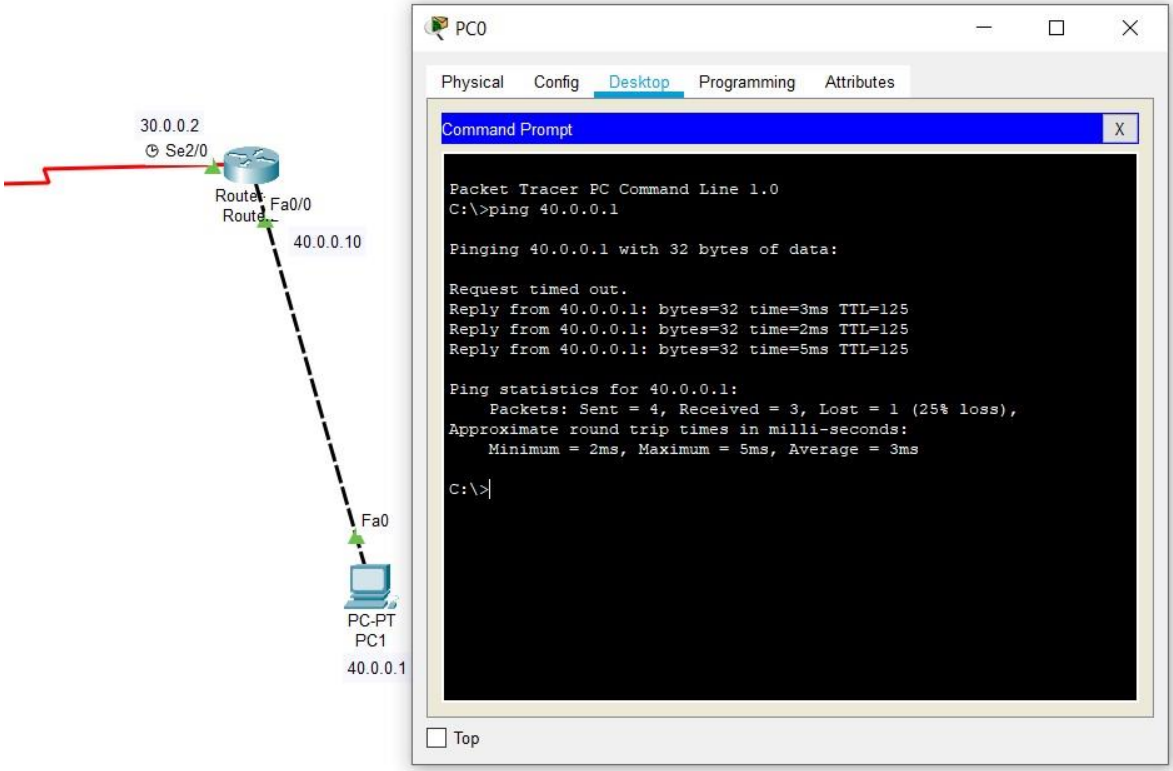
TOPOLOGY:



PING:



RESULTS:


30.0.0.2
Se2/0
Router
Router
Fa0/0
40.0.0.10
Fa0
PC-PT
PC1
40.0.0.1
PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Packet Tracer PC Command Line 1.0
C:\>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=3ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125
Reply from 40.0.0.1: bytes=32 time=5ms 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 = 2ms, Maximum = 5ms, Average = 3ms
C:\>
Top