

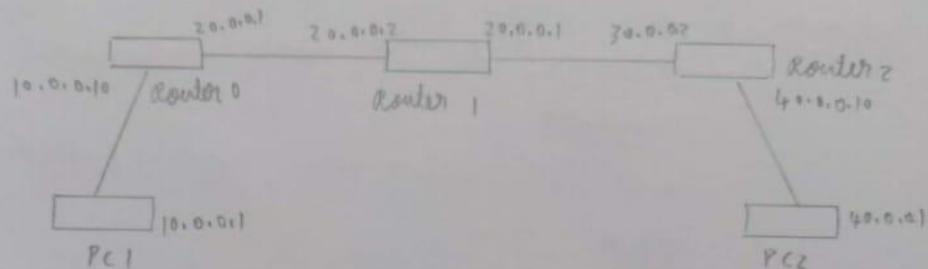
EXP-3

VENKATA KRISHNA GIRI KONERU  
1BM18CS123

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 PC
- 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

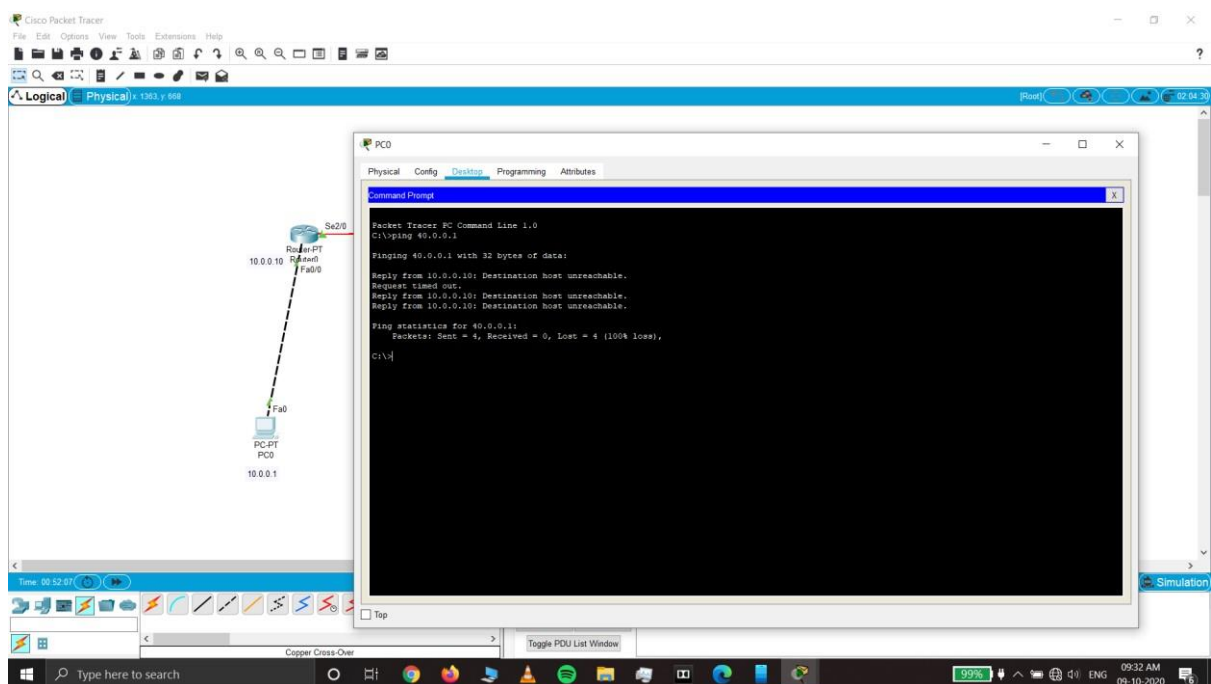
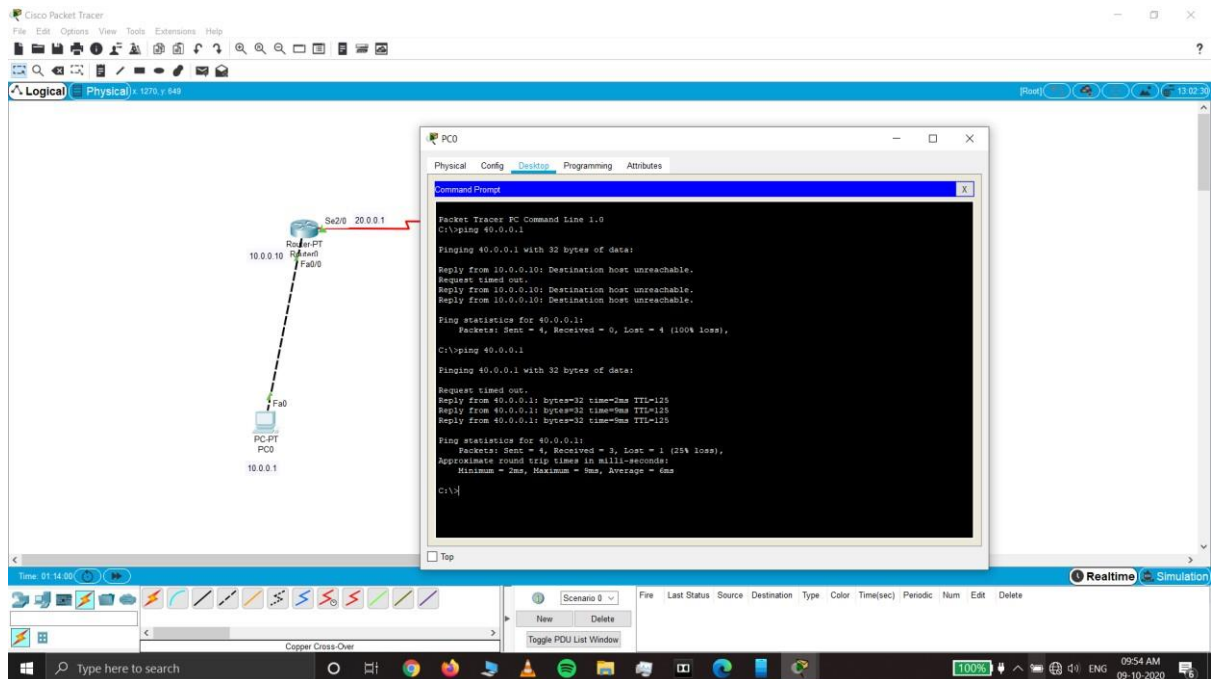
9) show ip route

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.

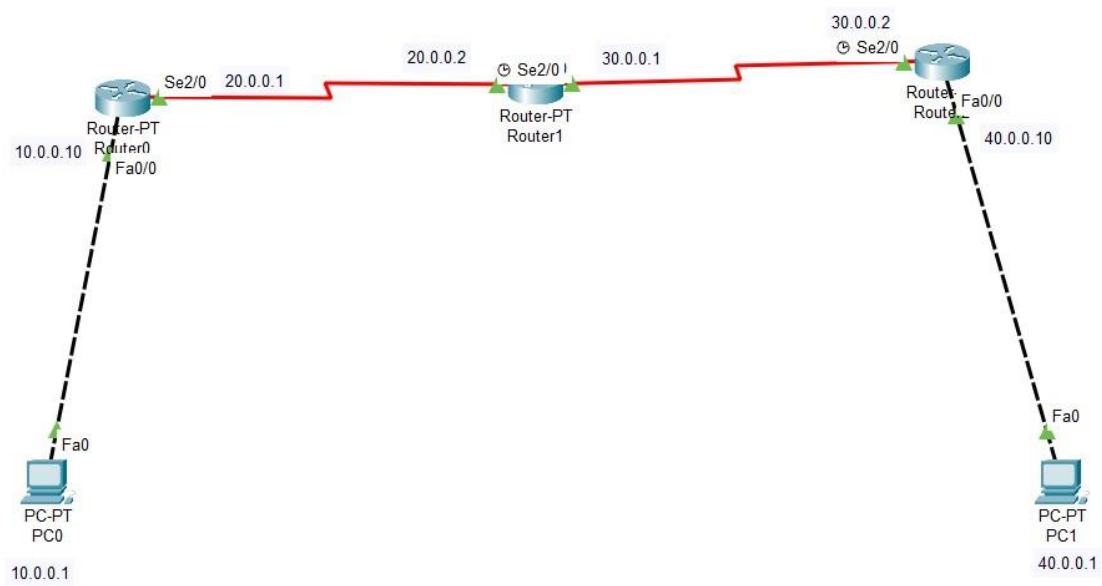
## SCREEN SHOTS:



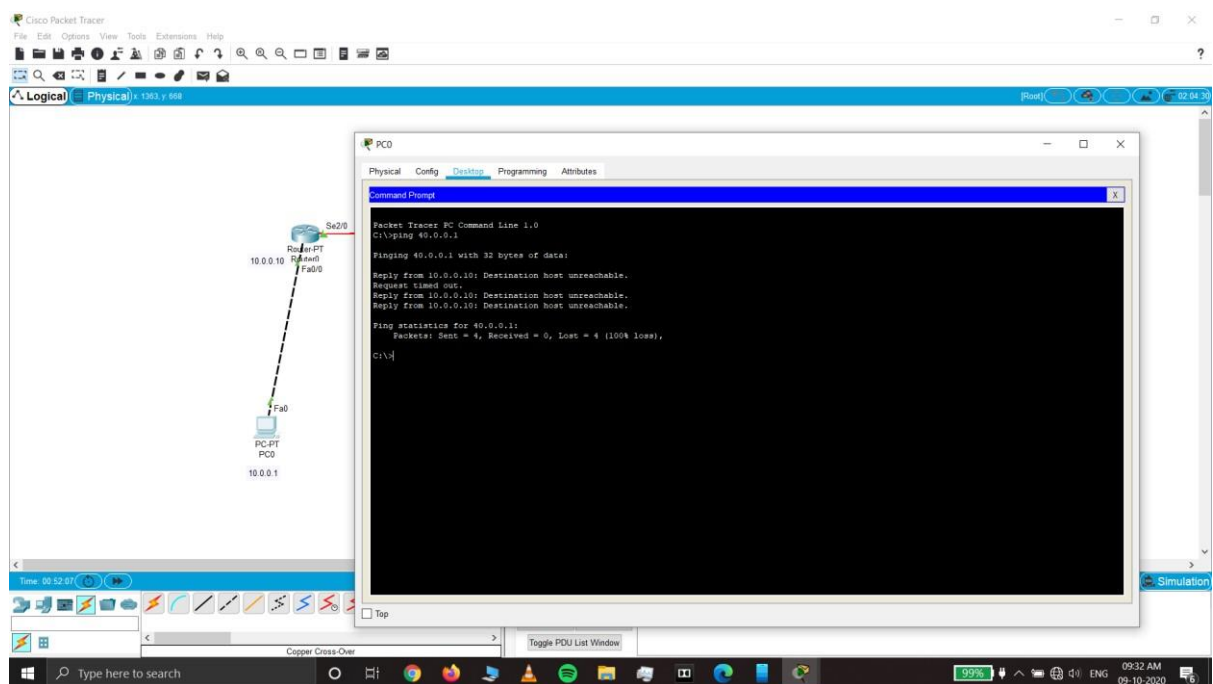
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cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, California 95134-1706  
  
Cisco Internetwork Operating System Software  
IOS (tm) PT1000 Software (PT1000-I-M), Version 12.2(28), RELEASE SOFTWARE (fc5)  
Technical Support: http://www.cisco.com/techsupport  
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:

