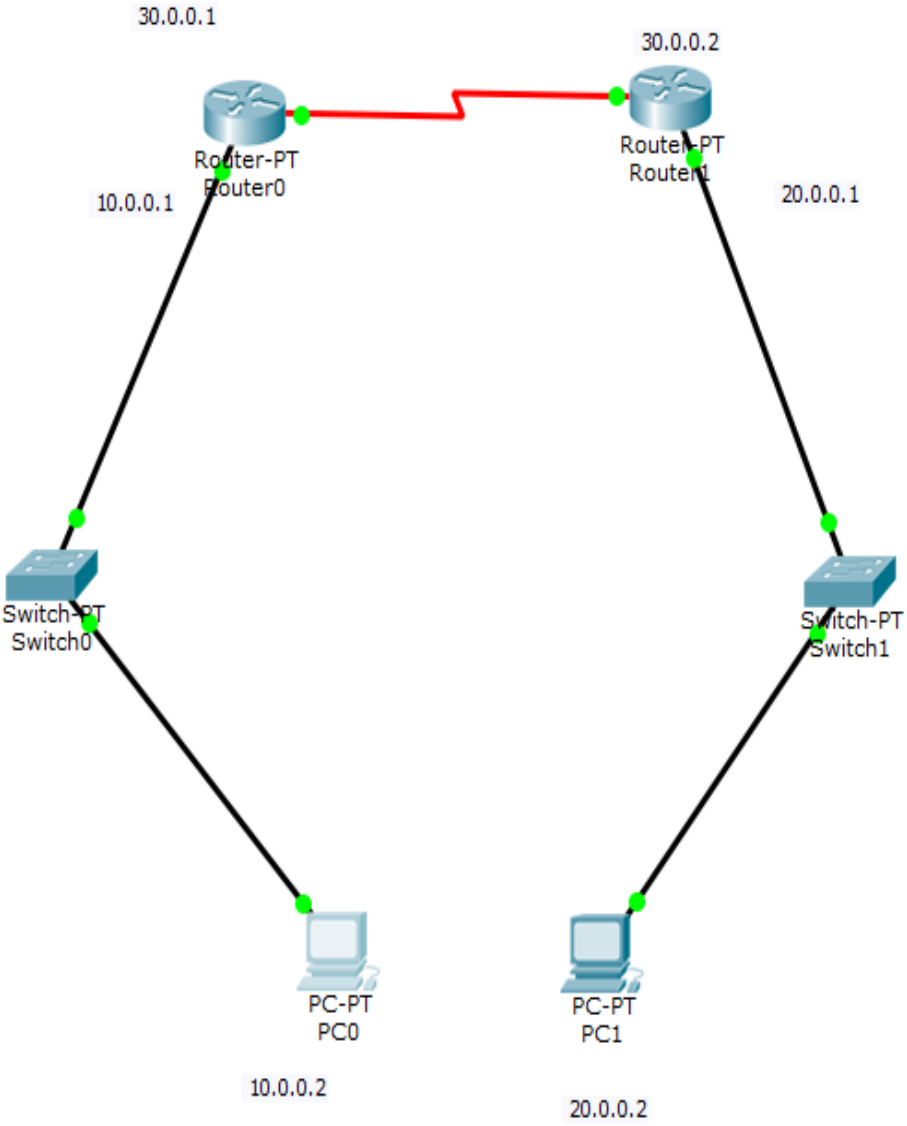
LAB-6

6.1:=Config RIP routing protocal in Routers

Daigram:=using switch



Output :=

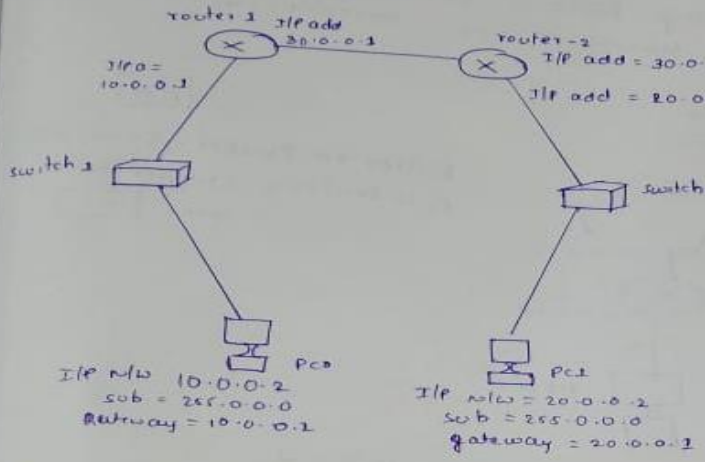
```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255

Ping statistics for 10.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>ping 310.0.0.1
Ping request could not find host 310.0.0.1. Please check the name and try agai
PC>ping 30.0.0.1

Pinging 30.0.0.1 with 32 bytes of data:

Reply from 30.0.0.1: bytes=32 time=0ms TTL=255
Reply from 30.0.0.1: bytes=32 time=0ms TTL=255
Reply from 30.0.0.1: bytes=32 time=0ms TTL=255
Reply from 30.0.0.1: bytes=32 time=0ms TTL=255

Ping statistics for 30.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>ping 30.0.0.2

Pinging 30.0.0.2 with 32 bytes of data:

Reply from 30.0.0.2: bytes=32 time=4ms TTL=254
Reply from 30.0.0.2: bytes=32 time=1ms TTL=254
Reply from 30.0.0.2: bytes=32 time=2ms TTL=254
Reply from 30.0.0.2: bytes=32 time=4ms TTL=254

Ping statistics for 30.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 4ms, Average = 2ms

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=1ms TTL=254
Reply from 20.0.0.1: bytes=32 time=3ms TTL=254
Reply from 20.0.0.1: bytes=32 time=3ms TTL=254
Reply from 20.0.0.1: bytes=32 time=3ms TTL=254

Ping statistics for 20.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 3ms, Average = 2ms
```

```
PC>ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data:

Reply from 20.0.0.2: bytes=32 time=3ms TTL=126
Reply from 20.0.0.2: bytes=32 time=1ms TTL=126
Reply from 20.0.0.2: bytes=32 time=2ms TTL=126
Reply from 20.0.0.2: bytes=32 time=3ms TTL=126

Ping statistics for 20.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 3ms, Average = 2ms

PC>
```

LAB-6

19/11/2024

config RIP routing protocal in Routers - using switch



step1 = assign IP address for both Pc as 10.0.0.2 20.0.0.2 and DNS server as 10.0.0.1 20.0.0.1 and subnet Mask will be 255.0.0.0

step2 = click on first router in fast ethernet 0/0 enter IP address as 10.0.0.1 and subnet Mask as 255.0.0.0 and on the Router In serial 2/0 Enter IP address as 30.0.0.1 and subnet Mask as 255.0.0.0 and click on Button

step3 - same for router another one → IP FE - IP address = 20.0.0.1 and subnet Mask as 255.0.0.0 in se2/0 30.0.0.2 and subnet 255.0.0.0

step4 - click on Router 1 in ~~Iproute~~ Rip add 2 network and click on add option

① 10.0.0.0 ② 30.0.0.0

step5 - go to the setting In that router only click on save button and wait for some minute

step6 = click on Router 2 in Rip add 2 n/w = 30.0.0.0 and 30.0.0.0 and click on add option

step7 = same router on setting click on save option wait for some minute

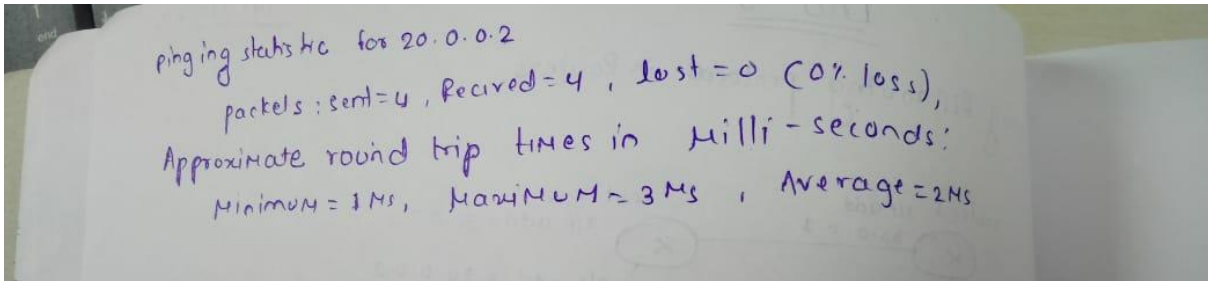
step8 = ping from pc0 to pc1 or pdu from PC to PC1

Observation →

> Ping 20.0.0.2

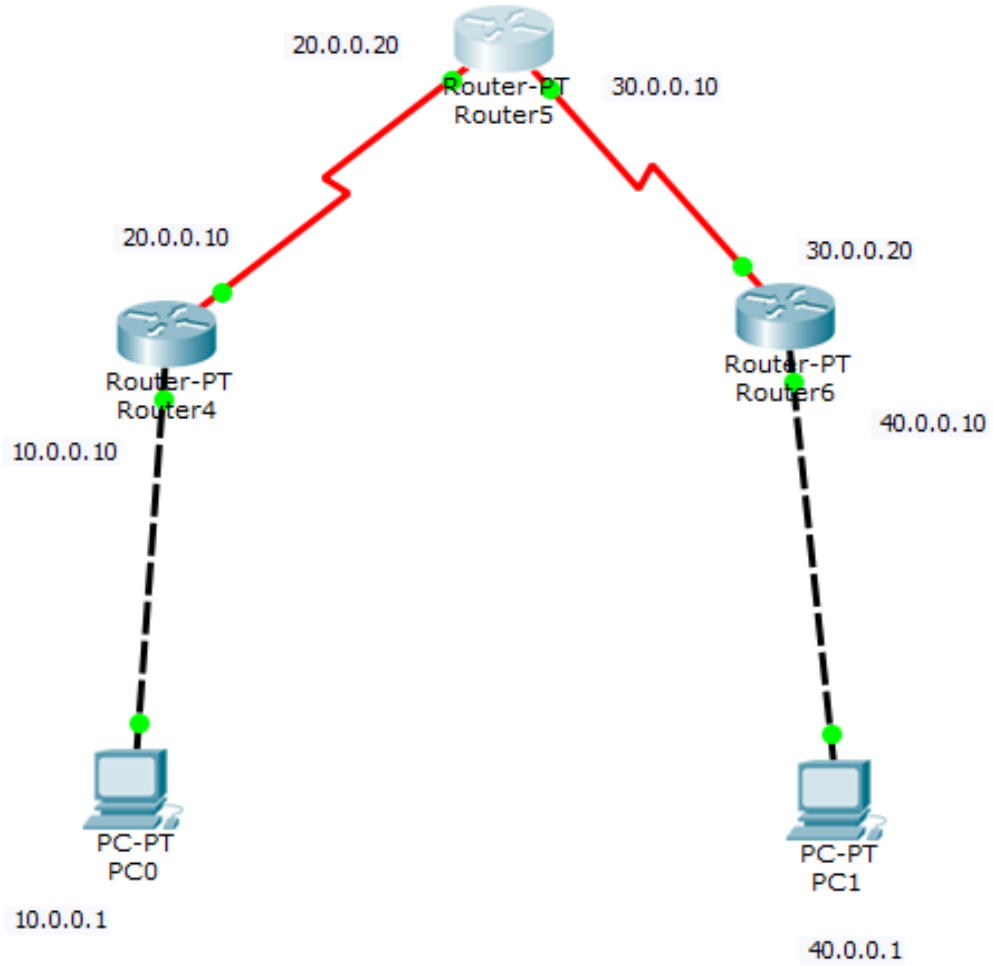
Pinging 20.0.0.2 with 32 bytes of Data:

Reply from 20.0.0.2; bytes = 32 time = 1MS TTL = 254
" " " " " 3MS TTL = 254
" " " " " 3MS TTL = 254
" " " " " 3MS TTL = 254



Lab 6.2) 6.1:=Config RIP routing protocal in Routers

Daigram:=using Router



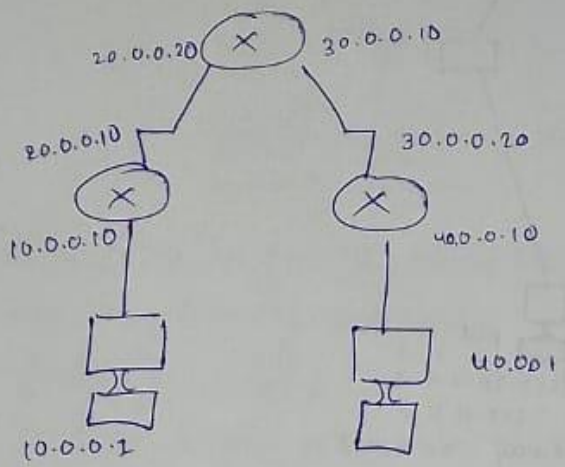
Output:=

```
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

R    10.0.0.0/8 [120/1] via 20.0.0.10, 00:00:10, Serial2/0
C    20.0.0.0/8 is directly connected, Serial2/0
C    30.0.0.0/8 is directly connected, Serial3/0
R    40.0.0.0/8 [120/1] via 30.0.0.20, 00:00:10, Serial3/0
Router#show ip protocal
                    ^
% Invalid input detected at '^' marker.

Router#show ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 16 seconds
Invalid after 180 seconds, hold down 180, flushed after 240
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Redistributing: rip
Default version control: send version 1, receive any version
  Interface             Send  Recv  Triggered RIP  Key-chain
  Serial3/0             1     2 1
  Serial2/0             1     2 1
Automatic network summarization is in effect
Maximum path: 4
Routing for Networks:
           20.0.0.0
           30.0.0.0
Passive Interface(s):
Routing Information Sources:
           Gateway         Distance      Last Update
           20.0.0.10             120      00:00:14
           30.0.0.20             120      00:00:16
Distance: (default is 120)
Router#
```

```
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=4ms TTL=125
Reply from 40.0.0.1: bytes=32 time=6ms TTL=125
Reply from 40.0.0.1: bytes=32 time=6ms TTL=125
Reply from 40.0.0.1: bytes=32 time=7ms 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 = 4ms, Maximum = 7ms, Average = 5ms
```

Observation:=

6.2) RIP using 3 Routers →



Router to Router - Serial DCE
Pc to Router = cropper cross over

step 1 = click on first PC0 put I/p address = 10.0.0.1
subnet Masks = 255.0.0.0
gateway = 10.0.0.10

PC1 = I/p address = 40.0.0.1
S.M = 255.0.0.0
gateways = 40.0.0.10

click on Router 0 =
FastEther 0/0 = 10.0.0.10 255.0.0.0
serial 2/0 = 20.0.0.10 255.0.0.0

click on Router 1 =
fastEthernet 0/0 = 40.0.0.10 255.0.0.0
serial 2/0 = 30.0.0.20 255.0.0.0

click on Router 1 =
~~EE 0/0~~
serial 2/0 = 40.0.0.20 255.0.0.0
serial 3/0 = 30.0.0.10 255.0.0.0

In first Router 0 = add Router Nw in RIP → 10.0.0.0 & setting save option
20.0.0.0

In second Router 1 = add Router Nw in RIP = 20.0.0.0 & setting save option
30.0.0.0

In Third Router 2 = add Route Nw in RIP =
40.0.0.0 & setting save option
30.0.0.0

Observation

Router# show ip route

codes = C= connected S-static I-IGRP R-RIP

Gateway of last resort is not set

R 10.0.0.0/8 [120/1] via 20.0.0.10 00:00:10 serial2/0
C 20.0.0.0/8 is directly connected serial2/0
C 30.0.0.0/8 is directly connected serial3/0
R 40.0.0.0/8 [120/1] via 30.0.0.20 00:00:10, serial3/0

Router# show ip protocols →

Routing Protocol is rip
Sending updates every 30 seconds, next due in 16 seconds
Invalid after 180 seconds, hold down 180, flushed after 240
outgoing update filter list for all interface is not set
Incoming update filter list for all IIf is not set
Redistributing: Rip

Default version control: send version 1, recive any version

IIf	send	Rev	Triggered RIP
Serial 3/0	1	2 1	key chain
serial 2/0		2 1	

Automatic n/w summarization is in effect
Max path: 4
Routing for N/w
20.0.0.0
30.0.0.0

Passive IIf

RIS =

gateway	Distance	Last update
20.0.0.10	120	00:00:14
30.0.0.20	120	00:00:16

Distance Default is 120

Pc0 > ping 40.0.0.1

Ping 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1 bytes 32 time 4MS TTL=125
" " " " " 6MS " 125
" " " " " 6MS "
" " " " " 7MS "
"

Ping statistic for 40.0.0.1
Packets sent=4, reared=4 lost=0
Approximate round trip time in milli seconds:
MINIMUM = 4MS, MAXIMUM = 7MS, Avg = 5MS

LB
19/4/24