WEEK - 3

Q. Configure default route, static route to router.

Sol^{n}: STEPS:

1. Add 2 PCs & connect them to a generic Router.
2. Configure the PCs by setting their IP addresses to 10.0.0.1 & 20.0.0.1 respectively.
3. Set the gateways as 10.0.0.2 & 20.0.0.2 respectively.
4. Go to the Cmd Line Interface in the router and enter 'no' for 'continue with configuration dialogue'.
5. Type 'config terminal' & enter twice.
6. Type 'interface fastEthernet 0/0' & enter.
7. Type 'ip address 10.0.0.2 255.0.0.0'
8. Type 'no shut' & the connection is now established.
9. Repeat steps 4 to 8 for the other PC 20.00.1.
10. Repeat steps 1 to 9 for PC 3 & PC 4.
11. Connect router 1 & router 2 via a router 3.
12. All route to router connections via Serial DTE & PC to route via Copper cross-over.
13. Go to the Router 1 CLI & type the following:

```
enable ↵
config t ↵
interface Serial2/0 ↵
ip address 50.0.0.2 255.0.0.0 ↵
no shut ↵
```

14. Go to the Router 3 CLI & type:

```
enable ↵
config t ↵
interface Serial2/0 ↵
ip address 50.0.0.1 255.0.0.0 ↵
no shut ↵
```

The connection b/w @ Router 1 & 3 is green now.

(15) Repeat steps (13) & (14) for Router 2 to 3 similarly.

(16) Go to Router 1 CLI & type
show ip route.
It shows only the direct connections.

(17) We statically connect routers to the PCs by typing following in the CLI: (For router 1):
ip route 30.0.0.0 255.0.0.0 50.0.0.1 ↵
ip route 40.0.0.0 255.0.0.0 40.0.0.1 ↵

(For router 2):
ip route 10.0.0.0 255.0.0.0 60.0.0.1 ↵
ip route 20.0.0.0 255.0.0.0 60.0.0.2 ↵

(For router 3):

ip	route	10.0.0.0	255.0.0.0	50.0.0.1
"	"	20.0.0.0	"	"
"	"	30.0.0.0	"	60.0.0.1
"	"	40.0.0.0	"	"

(18) Now data transfer b/w PCs is successful.

(19) Before statically connecting routers pinging b/w PCs NOT directly connected was unsuccessful.

PC> Ping 30.0.0.1

Pinging 30.0.0.1 with 32 bytes of data:

Reply from 20.0.0.2: Destination host unreachable
" " " " " "
" " " " " "
" " " " " "

Ping statistics for 30.0.0.1:
Packets: Sent = 4, Received = 0, Lost = 4 (100% Loss)

After statically defining the route:

PC> ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Pinging ...

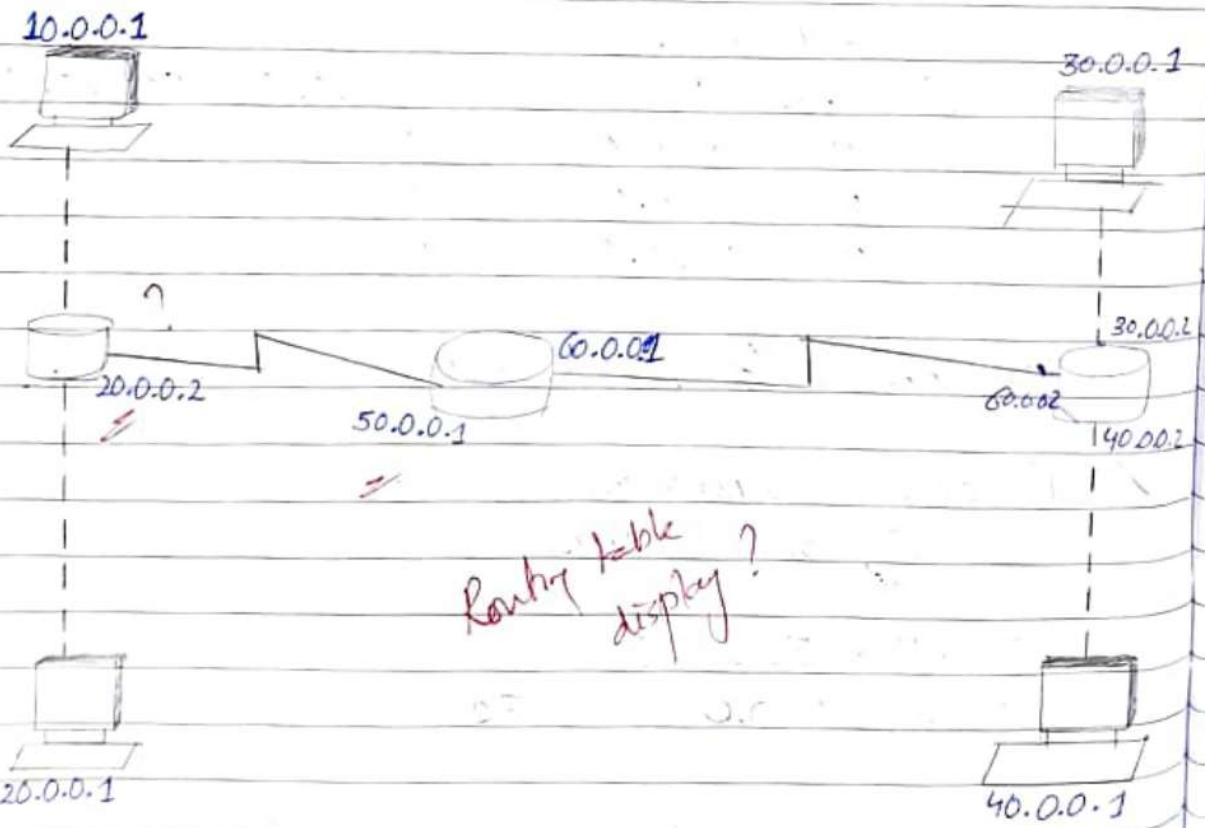
from 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1: bytes = 32 times = 2ms TTL = 125

" " " " " " " " "

" " " " " " " " "

" " " " " " " " "



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Routing table display?

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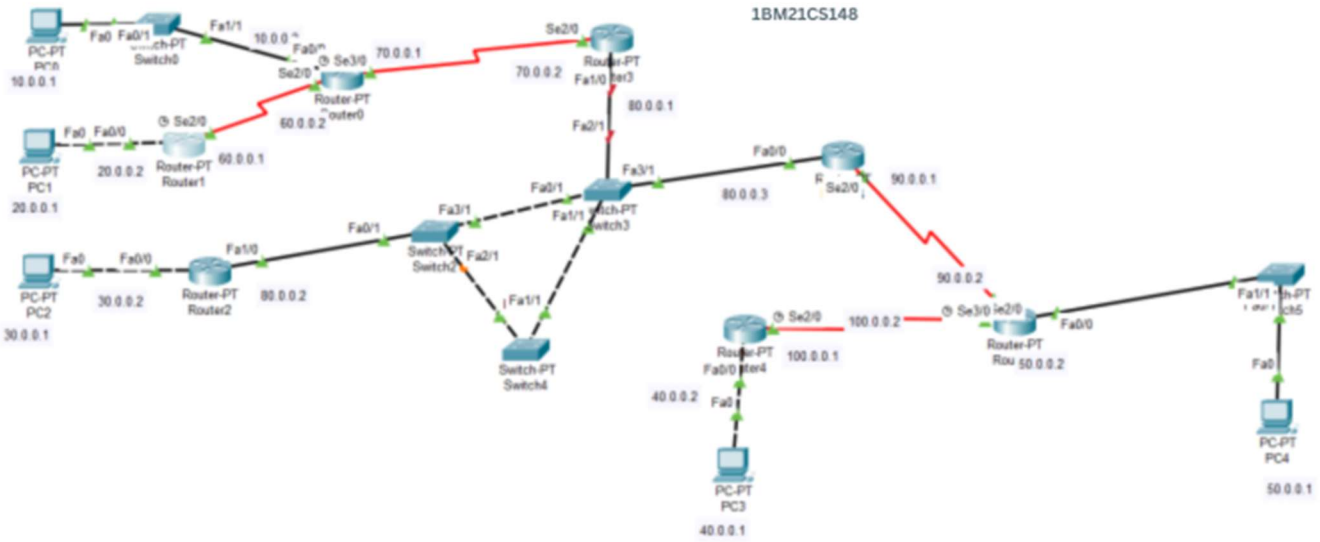

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ping 90.0.0.2

Pinging 90.0.0.2 with 32 bytes of data:

Reply from 90.0.0.2: bytes=32 time=12ms TTL=252
Reply from 90.0.0.2: bytes=32 time=2ms TTL=252
Reply from 90.0.0.2: bytes=32 time=10ms TTL=252
Reply from 90.0.0.2: bytes=32 time=2ms TTL=252

Ping statistics for 90.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 12ms, Average = 6ms

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=123
Reply from 40.0.0.1: bytes=32 time=3ms TTL=123
Reply from 40.0.0.1: bytes=32 time=3ms TTL=123

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 3ms, Average = 3ms

C:\>ping 50.0.0.1

Pinging 50.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 50.0.0.1: bytes=32 time=3ms TTL=124
Reply from 50.0.0.1: bytes=32 time=6ms TTL=124
Reply from 50.0.0.1: bytes=32 time=2ms TTL=124

Ping statistics for 50.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 6ms, Average = 3ms

C:\>
```