

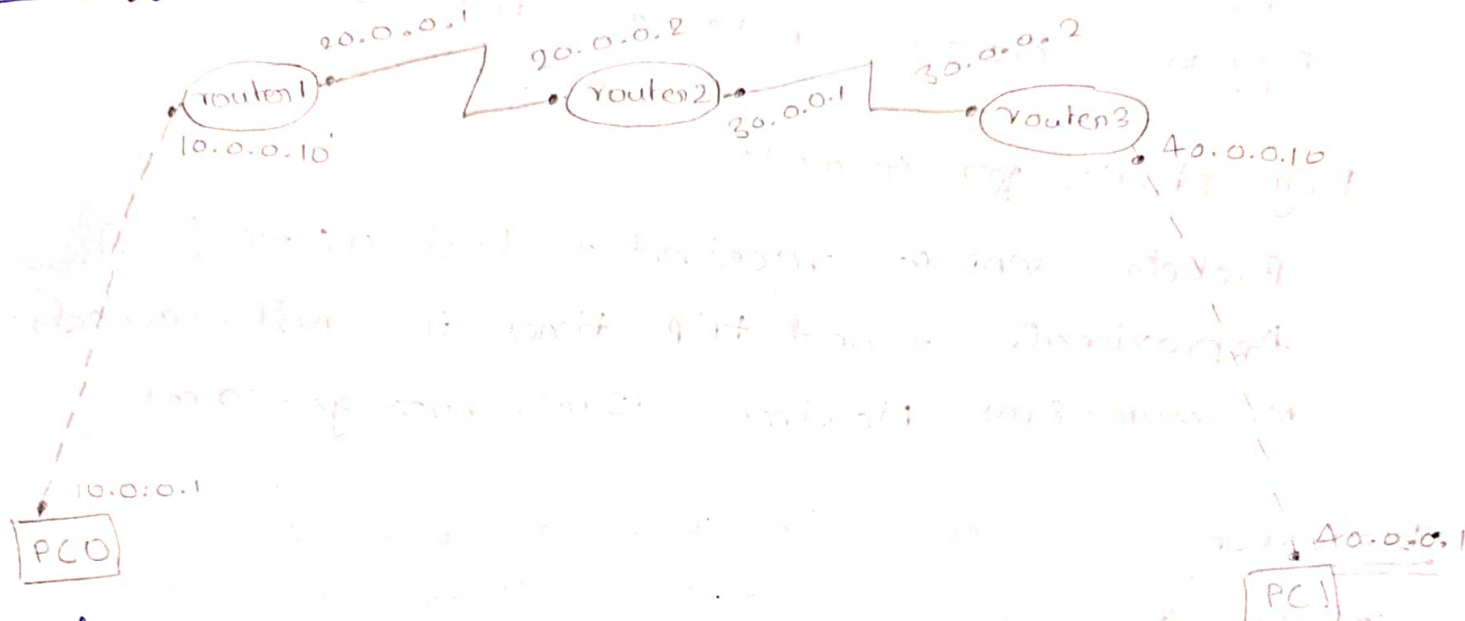
Experiment - 3

Name of the experiment:

Default routing

Aim: To configure IP address to routers and default routing

Topology:



Procedure:

- Configure 2 PCs IP address and gateway
- Configure Routers IP addresses through giving commands in CLI
- Default routing for router 1 →
router(config)# ip route 0.0.0.0 0.0.0.0 20.0.0.2
router 3 →
router(config)# ip route 0.0.0.0 0.0.0.0 30.0.0.1

Static routing is done for router 2.

- Simple PDA is sent from PC1 to PC0 and

a ping message from PC0 to PC1

Result:

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 = 10 ms	TTL = 125
Reply from 40.0.0.1: bytes = 32	time = 10 ms	TTL = 125
Reply from 40.0.0.1: bytes = 32	time = 8 ms	TTL = 125
Reply from 40.0.0.1: bytes = 32	time = 15 ms	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 = 8 ms, Maximum = 15 ms, Average = 10 ms

Observation:

- A default route is the route which takes effect when no other route is available for an IP address destination.
- If a packet is received, the device first checks the IP destination address, if the IP destination address is not local the device checks its routing table.
- If the remote destination ^{net}sub~~net~~ is not listed then the packet is forwarded to the next hop towards the destination using the default route.
- The process repeats until the packet is delivered.

Cisco Packet Tracer Student

FileEditOptionsViewToolsExtensionsHelp

Logical

[Root]

New Cluster

Move Object

Set Tiled Background

Viewport

Router0

Router1

Router2

PC0

Se2/0

Se2/0

Se3/0

Se2/0

Fa0/0

Fa0/0

Fa0/0

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
	0.000	--	PC1	ICMP	
	0.001	PC1	Router2	ICMP	
	0.002	Router2	Router1	ICMP	
	0.003	Router1	Router0	ICMP	
	0.004	Router0	PC0	ICMP	

Reset Simulation

☒ Constant Delay

Captured to: 0.004 s

Play Controls

Back

Auto Capture / Play

Capture / Forward

Event List Filters - Visible Events

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

Edit Filters

Show All/None

Time: 00:41:00.365

Power Cycle Devices

PLAY CONTROLS:

Back

Auto Capture / Play

Capture / Forward

Scenario 0

New

Delete

Toggle PDU List Window

Connections

Automatically Choose Connection Type

Fire

Last Status

Source

Destination

Type

Color

Time(sec)

Periodic

Num

Simulation

04:37

13-07-2023

Cisco Packet Tracer Student

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

Time: 00:41:54 Power Cycle Devices Fast Forward Time

Connections

Automatically Choose Connection Type

Toggle PDU List Window

PC0

Physical Config Desktop Custom Interface

Command Prompt

```
Packet Tracer PC Command Line 1.0
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=10ms TTL=125
Reply from 40.0.0.1: bytes=32 time=10ms TTL=125
Reply from 40.0.0.1: bytes=32 time=8ms TTL=125
Reply from 40.0.0.1: bytes=32 time=15ms 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 = 8ms, Maximum = 15ms, Average = 10ms

PC>
```

Realtime

Destination	Type	Color	Time(sec)	Periodic	Num
PC0	ICMP		0.000	N	0

04:38 13-07-2023