

Lab 1

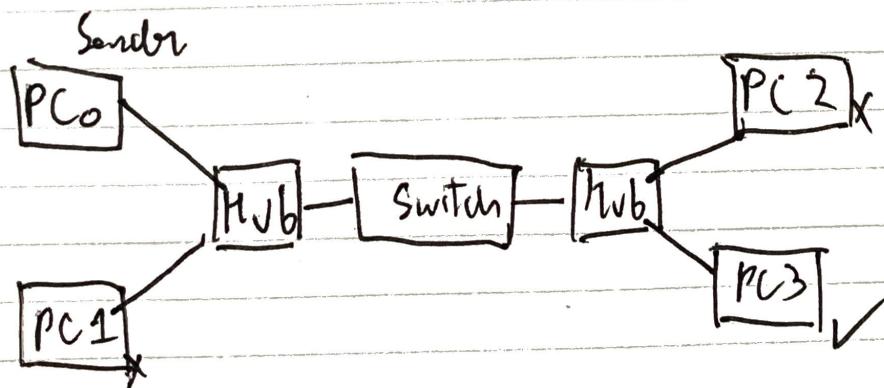
Aim: Creating a topology and simulating a simple PDV from source to destination using hub and switch

Procedure:

1. Place one hub and 2 end devices.
2. Connect them using cables.
3. Set IP address and subnet mask for each device.
4. Repeat for another set.
5. Connect a switch between the two hub
6. Send a message from a device in one hub to another.

Observation:

- i) PC₀ sends the message to Hub 1, which is received and then sent to PC₁, which rejects the message since destination doesn't match.
- ii) Switch transmits the message to Hub 2, which propagates it to PC₂ and PC₃.
- iii) PC₃ accepts the message & PC₂ rejects it.



Topology

Adityya N
13M18CS128

Lab 2

Adithya N
13M18CS128

Aim: To configure IP addresses to router in Packet Tracer

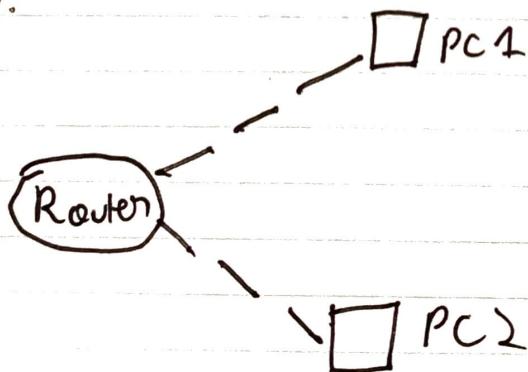
Procedure:

1. Two computers are connected with a router using copper cross-over wires.
2. Fast ethernet IP and default gateway addresses are noted down after config. in PCs.
3. Router's terminal is accessed to configure the connections to each gateway and 'no shutdown' to open the connection.
4. We ping the other computer's IP using the CLI of one.

Observation:

After config., a connection is established.
'show ip' shows the connections. After pinging we can see a timeout initially but we receive a response afterward.

Topology:



CLI

Router > enable

Router # config t → Router (config) # interface FastEthernet 0/0

Router (config): # ip address 10.0.0.10 255.0.0.0

Router (config-if): # no shut

Router (config-if): # show ip route

Connected 10.0.0.0/8 is directly connected, FastEthernet 0/0
" 20.0.0.0/8 " , " , FastEthernet 0/1/0

CMP

C:\ ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data

Reply from 20.0.0.1: bytes=32 time=4ms TTL=127

"
"
"
"

Ping statistics for 20.0.0.1:

Packets: Sent=4 Received=4, Lost=0

Approx. round trip times

Min=4ms, Max=4ms, Avg=4ms

Lab 3

Aim: Configuring default route to router

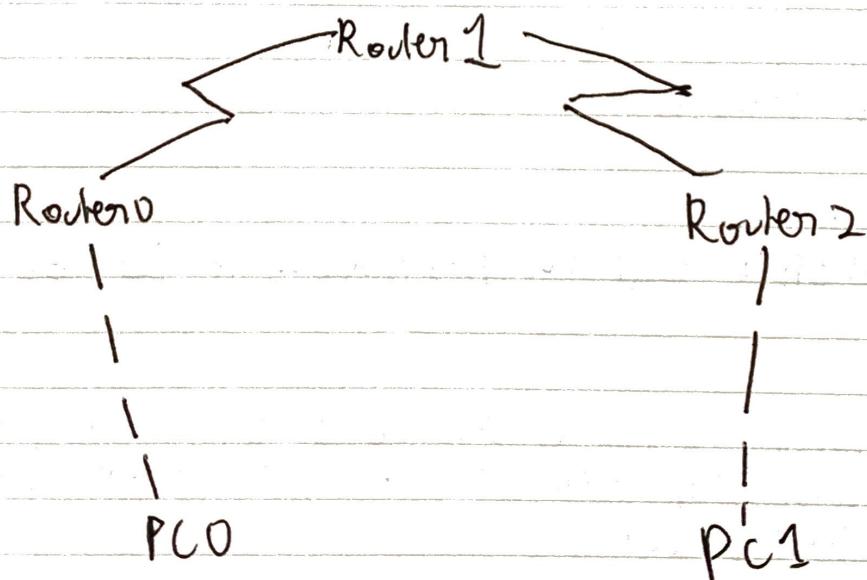
Procedure:

1. 3 routers & 2 PCs are connected as shown in the topology.
2. Pinging PC1 from PC0 shows destination host unreachable.
3. Adding static routes to routers using 'ip route <dest> <subnet mask> <next hop>' in enable config mode.

Observation:

Pinging PC1 from PC0 works as expected.

Topology:



Amit Ray N

1 BM18CS128

PC0 to Router1

Router

> enable

config t

(config) # interface FastEthernet 0/0

(config-if) # ip address 10.0.0.10 255.0.0.0

(config-if) # no shut

Initial Ping

cmd

> ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data

Reply from 10.0.0.10: Destination host unreachable

Request timed out.

Ping statistics:

_packets: Sent = 4, Received = 0, Lost = 4 (100%)

Router 0

Router (config) # ip route 30.0.0.0 255.0.0.0 20.0.0.2

Router (config) # ip route 40.0.0.0 255.0.0.0 20.0.0.2

Router # show ip route

C 10.0.0.0/8 is directly connected, FE 0/0

C 20.0.0.0/8 is directly connected, S2/0

S 30.0.0.0/8 [3/0] via 20.0.0.2

S 40.0.0.0/8 [1/03] via 20.0.0.2

Pinging works as expected

and

→ ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data

Reply from 40.0.0.1: bytes=32 time=18ms TTL=125

"/

"/

"/

Ping statistics for 40.0.0.1:

Packets: Sent=4, received=4, Lost=0 (0%)

Approx round trip times:

Min=2ms, Max=21ms, Avg=9ms