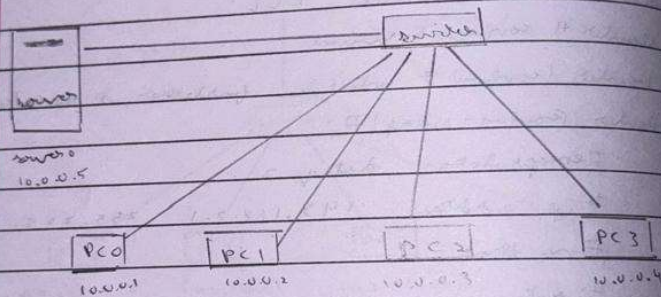


LAB-8

Aim
To configure a simple LAN and understand the concept and operation of address resolution protocol (ARP)

Material used
Switch, server, and devices

TopologyProcedure

- (i) Create a topology of 4 PCs and server and switch as shown above
- (ii) Assign IP addresses as shown above
- (iii) Connect them through a switch
- (iv) Use the inspect tool to click on a PC
see the ARP table.
(the command in CLI for the same is "arp")

(v) Initially
Switch
- show
arp
command
address

(vi) Use the
to go
ARP

show
the
the
state

⑤ Initially ARP table is empty. Also in CLI of
Switch, the command ~~show arp~~ ~~show ip arp~~
- show ip address table can be given as
every translation to see how the switch
handles foreign translations and builds the
address table

⑥ Use the capture button in simulation panel
to go step by step to changes in the
ARP table can be clearly seen.

Observation:

The switch is not as the router update
the ARP table when a new communication
starts.

Logical [Root] New Cluster Move Object Set Titled Background

ARP Table for PC0

IP Address	Hardware Address	Interface
10.0.0.2	0003.E490.6097	FastEthernet0

ARP Table for PC1

IP Address	Hardware Address	Interface
10.0.0.1	0004.9A10.2391	FastEthernet0

ARP Table for PC2

IP Address	Hardware Address	Interface
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ARP Table for Server0

IP Address	Hardware Address	Interface
------------	------------------	-----------

Switch0

IOS Command Line Interface

```
Switch0>show mac address-table
Mac Address Table
-----
Vlan    Mac Address      Type      Ports
----    -
1       0003.e490.6097   DYNAMIC   Fa0/1
1       0004.9A10.2391   DYNAMIC   Fa0/1
1       000A.41B0.B710   DYNAMIC   Fa3/1
Switch0
```

Simulation Panel

Vis.	Time(sec)	Last Device	At Device
0.003	PC1	Switch0	PC0
0.004	Switch0	PC0	PC0
0.005	PC0	Switch0	PC1
0.006	Switch0	PC1	Switch0
0.007	PC1	Switch0	PC0
0.008	Switch0	PC0	Switch0
0.172

Reset Simulation Constant Delay Captured to 0.172

PC1

Physical Config Desktop Custom Interface

Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>arp -a
No ARP Entries Found
PC>
```