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## EXPERIMENT-9

Aim: To construct simple LAN and understand the concept and operation of Address Resolution Protocol (ARP)

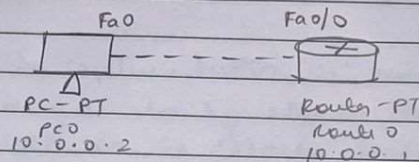
Topology , Procedure and Observation:

### Experiment 9:

Q To understand the operation of TELNET

Aim: To understand the operation of TELNET by accessing the router in server room from a PC in IT office

### Topology:



A router connected to a single PC via a fastethernet interface with copper cross-over cable

### Procedure:

1. open CPT and drag PC & router
2. connect the PC to router via fastethernet interface with a copper cross-over cable.
3. Assign the IP address to the PC - 10.0.0.2 with gateway as 10.0.0.1

enable

conf t

hostname r1

enable secret p1

interface fastethernet 0/0

ip address 10.0.0.1 255.0.0.0

no shut

line vty 0 5

```
login
password po
exit
enable
ctrl
```

```
in cmd
ping 10.0.0.1
```

password for user authentication is po  
password for enable is P

### Observations:

Telnet is a protocol for remote access to servers. It allows end-line comm over a network.

This pc is able to send the data to the router and indicates that the gateway is available & connects.

✓  
✓  
✓

The screenshot displays the Packet Tracer interface with a central network topology and several configuration windows.

**Network Topology:**

- A central **Switch0** (Switch) is connected to three **PCs** (PC-PT) and one **Server-PT** (Server0).
- The PCs are labeled **PC0**, **PC1**, and **PC2**, with IP addresses **10.0.0.1**, **10.0.0.2**, and **10.0.0.3** respectively.
- The Server is labeled **Server-PT Server0** with IP address **10.0.0.4**.

**Configuration Windows:**

- ASP Table for PC0:**

IP Address:	Hardware Address	Interface
10.0.0.2	0003.6490.6097	FastEthernet0
- ASP Table for PC1:**

IP Address:	Hardware Address	Interface
10.0.0.1	0004.9410.2391	FastEthernet0
- ASP Table for PC2:**

IP Address:	Hardware Address	Interface
- ASP Table for Server0:**

IP Address:	Hardware Address	Interface
- ASP Table for Switch0:**

IP Address:	Hardware Address	Interface
- Switch0 - IOS Command Line Interface:**

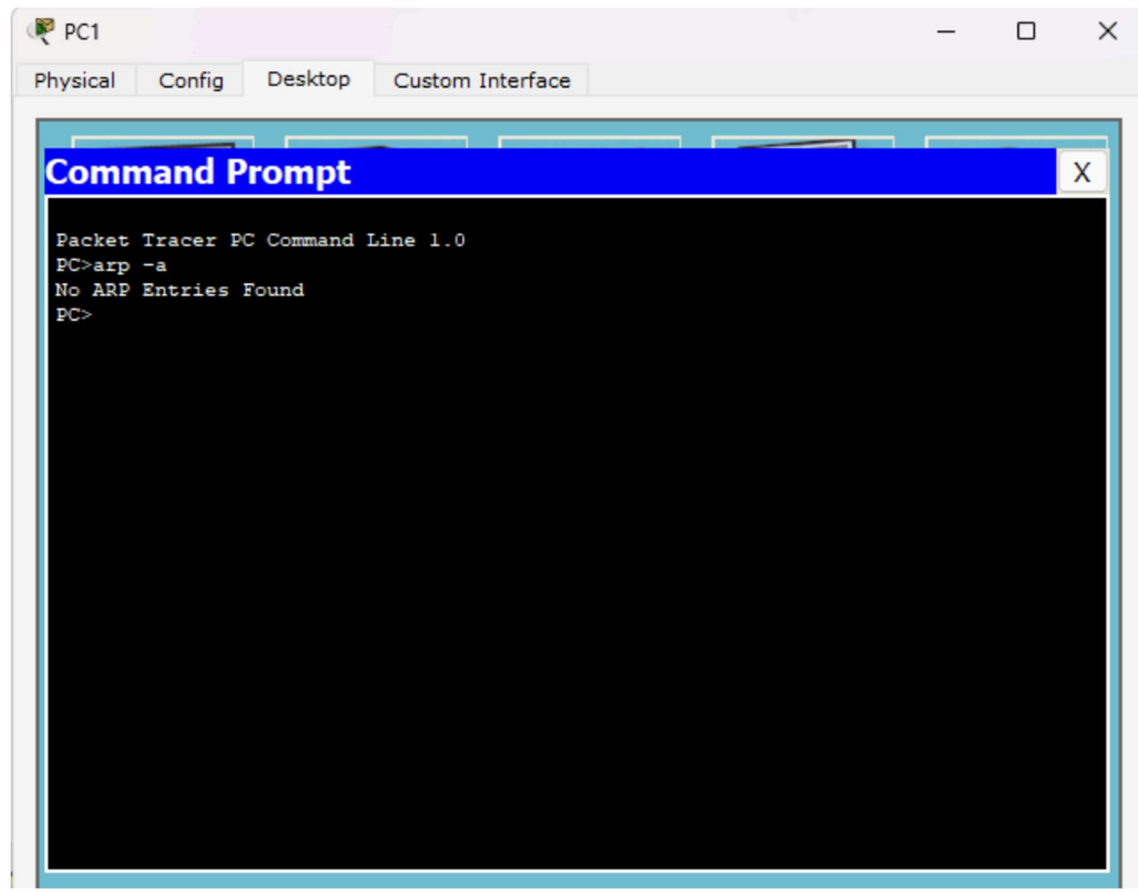
```

Switch0> enable
Switch0# configure terminal
Switch0(config)# interface FastEthernet0/1
Switch0(config-if)# ip address 10.0.0.1 255.255.255.0
Switch0(config-if)# no shutdown
Switch0(config-if)# exit
Switch0(config)# interface FastEthernet0/2
Switch0(config-if)# ip address 10.0.0.2 255.255.255.0
Switch0(config-if)# no shutdown
Switch0(config-if)# exit
Switch0(config)# interface FastEthernet0/3
Switch0(config-if)# ip address 10.0.0.3 255.255.255.0
Switch0(config-if)# no shutdown
Switch0(config-if)# exit
Switch0(config)# interface FastEthernet0/4
Switch0(config-if)# ip address 10.0.0.4 255.255.255.0
Switch0(config-if)# no shutdown
Switch0(config-if)# exit
Switch0(config)# end
Switch0# show mac address-table
          Mac Address Table
-----
Vlan    Mac Address       Type      Ports
----    -
1       0009.4b10.4057    DYNAMIC   Fa0/1
1       0004.9410.2391    DYNAMIC   Fa0/1
1       0004.43b0.b710    DYNAMIC   Fa0/1
Switch0#

```
- Event List:**

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

The interface also includes a top menu bar with options like **Logical**, **Physical**, **Simulation**, and **CLI**, and a bottom status bar showing **Copy** and **Paste** buttons.



## Switch:

```
Switch>
Switch>show mac address-table
      Mac Address Table
-----
Vlan  Mac Address      Type      Ports
----  -
1      0009.7c3c.0719      DYNAMIC   Fa2/1
1      000c.cfd7.6dc7      DYNAMIC   Fa3/1
1      0090.2b9d.194b      DYNAMIC   Fa0/1
1      00d0.d33c.c6ae      DYNAMIC   Fa1/1
Switch>
```

Copy

Paste