

## EXPERIMENT-8

Aim: Configure Web Server, DNS within a LAN.

Topology, Procedure and Observation:

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Experiment-8: To construct a simple LAN & understand concept & operation of ARP  
Aim: construct a simple LAN simulate operation of address resolution protocol.

1. switch connected to 3 PCs and a server via three fastethernet interfaces & one ethernet interface respectively.

2. All connections made use copper ethernet - through cable

Procedure:

1. open CPT and drag the following switch & server. 3 PC's each connected to switch & server. place 1 server & connect it to switch &
2. Assign an IP address & subnet mask to all the devices then connect them via a switch
3. Use the packet tool ('a'), click on a PC to view

### ARP Table

3. display the ARP Table of all devices
4. Initially ARP is empty for all
5. Also in CLI of switch, the command `show mac address-table` can be given on every transaction to see how the switch learns from transceiver to build the address table.
6. Use the capture button in the emulation panel to go step by step so that changes in ARP can be clearly noted
7. Observe the switch as well as nodes update the ARP table as and when new communications start.

### Observation:

- As the message travels from one device to its destination host the ARP table of all devices get updated.

ARP maps an IP address to a MAC address. It enables communication within a local network.

### ARP Table for PC0 (source):

Ip address	Hardware address	unknown
10.0.0.3	0000.2F29.2C88	Fast Ethernet0/24

### ARP

IP 0

10.0.0.

ARP Table for PC2 (deekzalta)

IP address	hardware address	interface
10.0.0.1	0000.p302.96pp	FastEthernet 0

**Screenshots:**

