AIM: TO Get the MAC or Physical address of the system using Address Resolution protocol in cisco packet Tracer.

Requirements: 1. Fully installed cisco packet Tracer Application

Description:

Procedure :

Step 1: Firstly I add 3 end devices ie. PC's and 1 server to the network area. and I select a switch and place in between the end devices.

Step 2: I Select the copper straight through wire and connect the all PC's and switches and server and switch

Step 3: Name the PC0 as 192.168.11.1 which is the ip of PC0

PC1 ip 192.168.11.02 Server: 192.168.11.5

PC2 ip 192.168.11.3

PC3 ip 192.168.11.4.

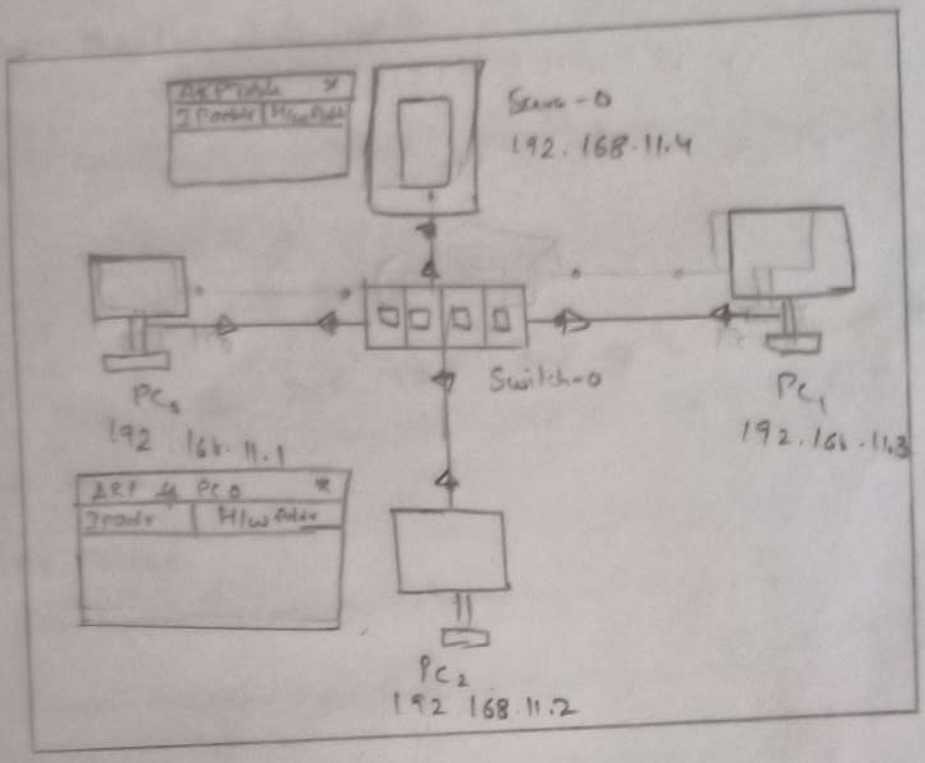
Step 4: Set the ip address by clicking the PC and click desktop tab and click on ip address and configuration and set the ip for every PC and subnet mask will be created automatically when we click on the empty space after assigning ip address

Step 5: TO see the ARP Table :

Click on the input button and Right click on the PC0 and right click on the Server0. then it shows ARP Table tab then click on ARP table

At initial state,

there is no ARP tables



Step Here, the ARP table is Empty. To send the a packet from PC0 to server 0 then we need to fill the ARP Table for PC0 and Server.1.

Step: Click on PC0 and click on Desktop > Command prompt then

type arp -a in command prompt

No values will displayed.

To add the values to ARP Table then use command Ping.

PC0 > ping 192.168.11.4

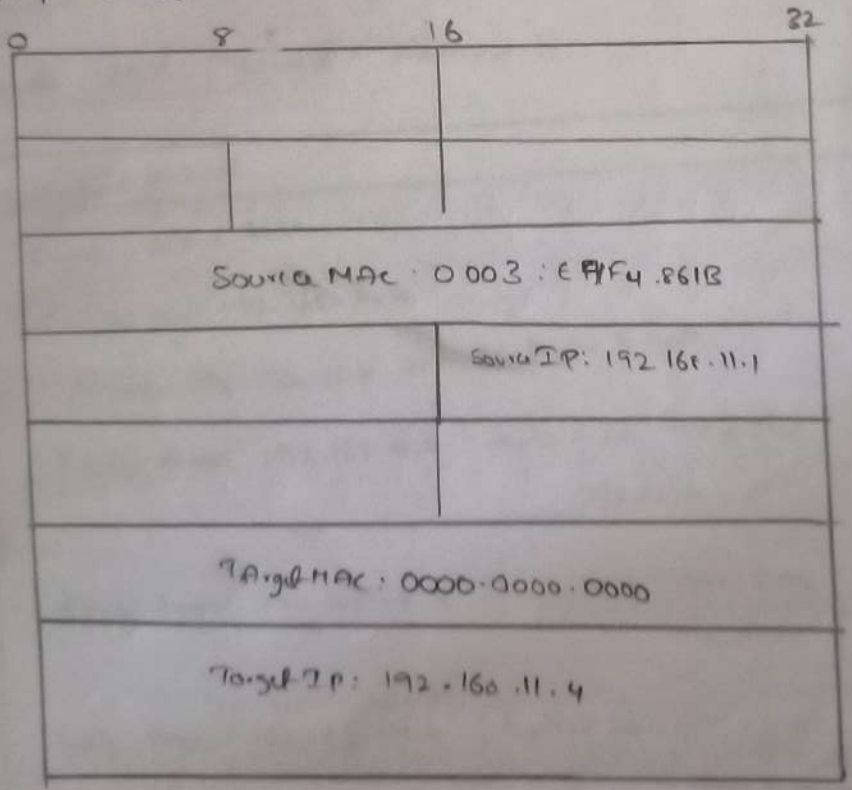
pining 192.168.11.4 with 32 byk Addrss:

Then it creates 2 packets at PC0.

1. ICMP packet
2. ARP Packet

Then click on the ARP Packet and go to outbound PDU Details. It shows

ARP Tables



We don't know the Mac address of Server so, it shown as 0000.0000.0000.

Step 7: When we click the play button at the simulation tab the ARP packet and ICMP packets travels and received successfully by the Server 0 and unsuccessful by the PC_1 and PC_2 (ARP) and successful (ICMP)

Step 8: The Server 0 send the acknowledgment to the PC 0 when it received the packets

Step 9: The ARP table is now filled with respective neighbours ip address and mac address which the data send and recived successfull.

Command prompt

Cisco packet tracer PC

C:\>ping 192.168.11.4

pining 192.168.11.4 with 32 bytes of data:

Reply from 192.168.11.4 : bytes = 32 time = 8ms
TTL = 128

Reply from 192.168.11.4 : bytes = 32 time = 8ms
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Reply from 192.168.11.4 ; bytes = 32 time = 8ms
TTL = 128

Ping Statistics for 192.168.11.4

Packets : sent = 4, Received = 4, Lost = 0 (0% loss)

Output:

Final ARP Table for PC0 (Client) and Server0 (Database)

ARP Table for PC0		
IP Address	MAC Address	Interface
192.168.11.3	0060.5C66.5965	FastEthernet0
192.168.11.4	0009.7CCC.D67C	FastEthernet0

ARP Table for Server0		
IP Address	MAC Address	Interface
192.168.11.1	0002.E4A4.5CCB	FastEthernet