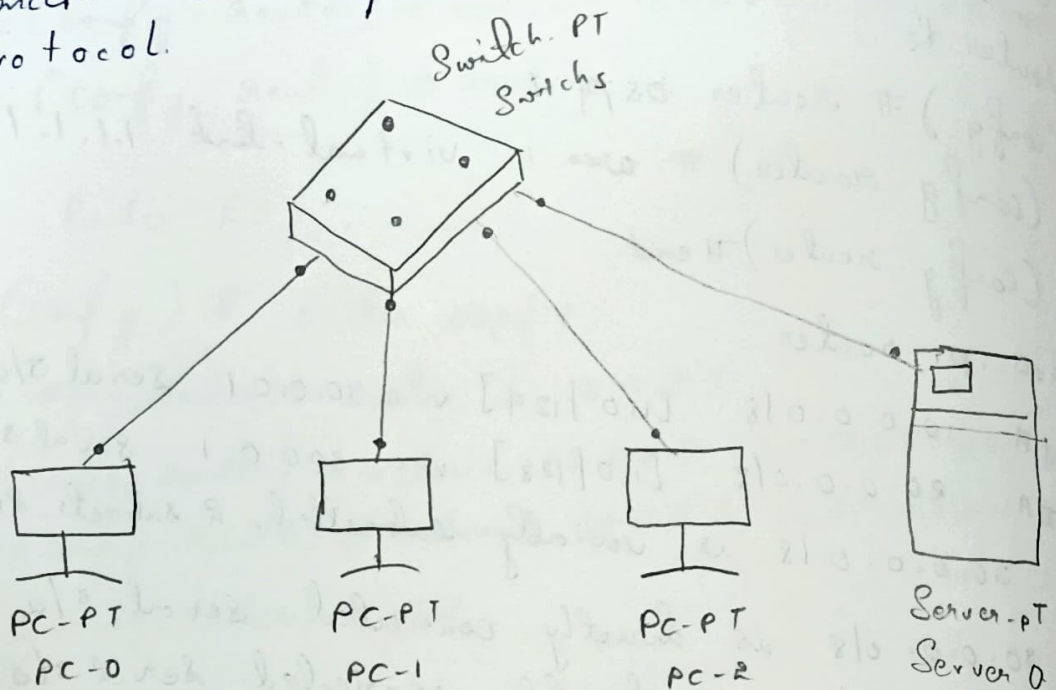


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## Lab - 7

## ARP

To Construct Simple LAN and understand the concept and operation of Address Resolution Protocol.



## Procedure :

- \* Create a topology of 4 PC's & a Server
- \* Set IP address to all of them
- \* Connect the PC's through a switch
- \* Use the inspect tool to click on a PC to see the ARP protocol
- \* Initially ARP table will be empty
- \* Use the capture button in the simulation panel to go step by step so that the changes in ARP protocol can be clearly noted
- \* go to the search button in the panel to get ARP tables of all the end devices
- \* Observe the switch as well the nodes updates the ARP table as and when a new connection starts.

## Ping output

PC > arp -a

PC > ping 10.0.0.2

PC > ping 10.0.0.3

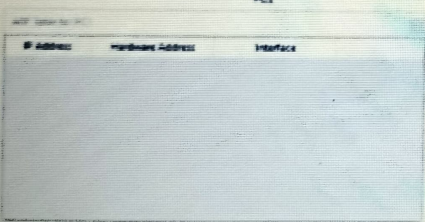
PC > ping 10.0.0.4

Internet address	Physical address	Type
10.0.0.2	00cd.bd.15.3a.18	dynamic
10.0.0.3	0000.0657.b7e8	dynamic
10.0.0.4	00d0.bc57.aa38	dynamic

## Observation

We observe the changes when we capture every time when we do in all the PC's ARP tables will have values empty at the starting & values will be formed whenever we ping each PC in the ping.





ARP Entry for 192.168.1.1		
IP Address	Hardware Address	Interface
192.168.1.1	00:0C:29:00:00:00	eth0
192.168.1.2	00:0C:29:00:00:01	eth0
192.168.1.3	00:0C:29:00:00:02	eth0
192.168.1.4	00:0C:29:00:00:03	eth0
192.168.1.5	00:0C:29:00:00:04	eth0
192.168.1.6	00:0C:29:00:00:05	eth0
192.168.1.7	00:0C:29:00:00:06	eth0
192.168.1.8	00:0C:29:00:00:07	eth0
192.168.1.9	00:0C:29:00:00:08	eth0
192.168.1.10	00:0C:29:00:00:09	eth0
192.168.1.11	00:0C:29:00:00:0A	eth0
192.168.1.12	00:0C:29:00:00:0B	eth0
192.168.1.13	00:0C:29:00:00:0C	eth0
192.168.1.14	00:0C:29:00:00:0D	eth0
192.168.1.15	00:0C:29:00:00:0E	eth0
192.168.1.16	00:0C:29:00:00:0F	eth0
192.168.1.17	00:0C:29:00:00:10	eth0
192.168.1.18	00:0C:29:00:00:11	eth0
192.168.1.19	00:0C:29:00:00:12	eth0
192.168.1.20	00:0C:29:00:00:13	eth0
192.168.1.21	00:0C:29:00:00:14	eth0
192.168.1.22	00:0C:29:00:00:15	eth0
192.168.1.23	00:0C:29:00:00:16	eth0
192.168.1.24	00:0C:29:00:00:17	eth0
192.168.1.25	00:0C:29:00:00:18	eth0
192.168.1.26	00:0C:29:00:00:19	eth0
192.168.1.27	00:0C:29:00:00:1A	eth0
192.168.1.28	00:0C:29:00:00:1B	eth0
192.168.1.29	00:0C:29:00:00:1C	eth0
192.168.1.30	00:0C:29:00:00:1D	eth0
192.168.1.31	00:0C:29:00:00:1E	eth0
192.168.1.32	00:0C:29:00:00:1F	eth0
192.168.1.33	00:0C:29:00:00:20	eth0
192.168.1.34	00:0C:29:00:00:21	eth0
192.168.1.35	00:0C:29:00:00:22	eth0
192.168.1.36	00:0C:29:00:00:23	eth0
192.168.1.37	00:0C:29:00:00:24	eth0
192.168.1.38	00:0C:29:00:00:25	eth0
192.168.1.39	00:0C:29:00:00:26	eth0
192.168.1.40	00:0C:29:00:00:27	eth0
192.168.1.41	00:0C:29:00:00:28	eth0
192.168.1.42	00:0C:29:00:00:29	eth0
192.168.1.43	00:0C:29:00:00:2A	eth0
192.168.1.44	00:0C:29:00:00:2B	eth0
192.168.1.45	00:0C:29:00:00:2C	eth0
192.168.1.46	00:0C:29:00:00:2D	eth0
192.168.1.47	00:0C:29:00:00:2E	eth0
192.168.1.48	00:0C:29:00:00:2F	eth0
192.168.1.49	00:0C:29:00:00:30	eth0
192.168.1.50	00:0C:29:00:00:31	eth0
192.168.1.51	00:0C:29:00:00:32	eth0
192.168.1.52	00:0C:29:00:00:33	eth0
192.168.1.53	00:0C:29:00:00:34	eth0
192.168.1.54	00:0C:29:00:00:35	eth0
192.168.1.55	00:0C:29:00:00:36	eth0
192.168.1.56	00:0C:29:00:00:37	eth0
192.168.1.57	00:0C:29:00:00:38	eth0
192.168.1.58	00:0C:29:00:00:39	eth0
192.168.1.59	00:0C:29:00:00:3A	eth0
192.168.1.60	00:0C:29:00:00:3B	eth0
192.168.1.61	00:0C:29:00:00:3C	eth0
192.168.1.62	00:0C:29:00:00:3D	eth0
192.168.1.63	00:0C:29:00:00:3E	eth0
192.168.1.64	00:0C:29:00:00:3F	eth0
192.168.1.65	00:0C:29:00:00:40	eth0
192.168.1.66	00:0C:29:00:00:41	eth0
192.168.1.67	00:0C:29:00:00:42	eth0
192.168.1.68	00:0C:29:00:00:43	eth0
192.168.1.69	00:0C:29:00:00:44	eth0
192.168.1.70	00:0C:29:00:00:45	eth0
192.168.1.71	00:0C:29:00:00:46	eth0
192.168.1.72	00:0C:29:00:00:47	eth0
192.168.1.73	00:0	

Seq.	Transaction	Last Balance	At Balance	Type	Info
0000	--	PCB	CRD		
0001	PCB	Interest	CRD		
0002	Interest	Interest	CRD		
0003	Interest	Interest	CRD		
0004	Interest	PCB	CRD		



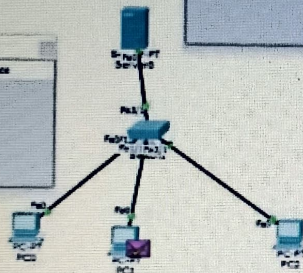
 Connect to  
 your course at  
[www.mhhe.com](http://www.mhhe.com)

Play Controls		
Stop	Auto Capture / Play	Capture / Forward

[illegible]

IP Address	Hardware Address	Interface
192.168.1.1	00:0C:29:14:00:00	Ethernet0/0

IP Address	Hardware Address	Interface
192.168.1.1	00:0C:29:00:00:00	Ethernet0



IP Address	Hardware Address	Interface
10.0.0.3	0005 7C19 7260	FastEthernet0

IP Address	Hardware Address	Interface
192.168.1.1	00:0A:00:00:00:00	FastEthernet0/0

File	Transfer	Last Device	Alt Device	Type	Info
0.006	Switch1	PC2	ASP		
0.006	Switch1	Server0	ASP		
0.007	PC2	Switch1	ASP		
0.008	Switch1	PC1	ASP		
0.008		PC1	ICAP		
0.009	PC1	Switch1	ICAP		
0.010	Switch1	PC2	ICAP		
0.011	PC2	Switch1	ICAP		
0.012	Switch1	PC1	ICAP		

Report Simulation ☒ Constant Delay Controlled by: 0.012 s

Play Controls		
Back	Auto Capture / Play	Capture / Forward

[illegible]



