LAB ASSIGNMENT-8

CSN-361
Computer Networks Laboratory

Submitted by - Prateek Mali
Enrollment no. - 17114059 (CSE)

Q-1

Problem Statement

Use the CISCO packet tracer to create a network topology as shown in Figure and configure the network with Open Shortest Path First (OSPF) protocol.

Structure

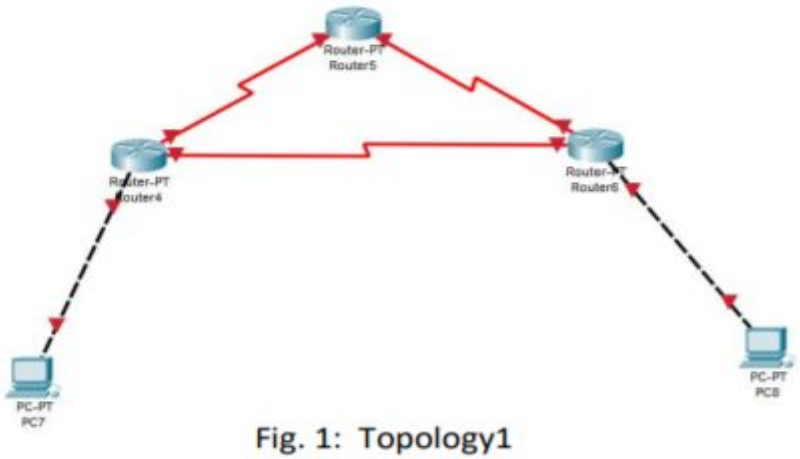
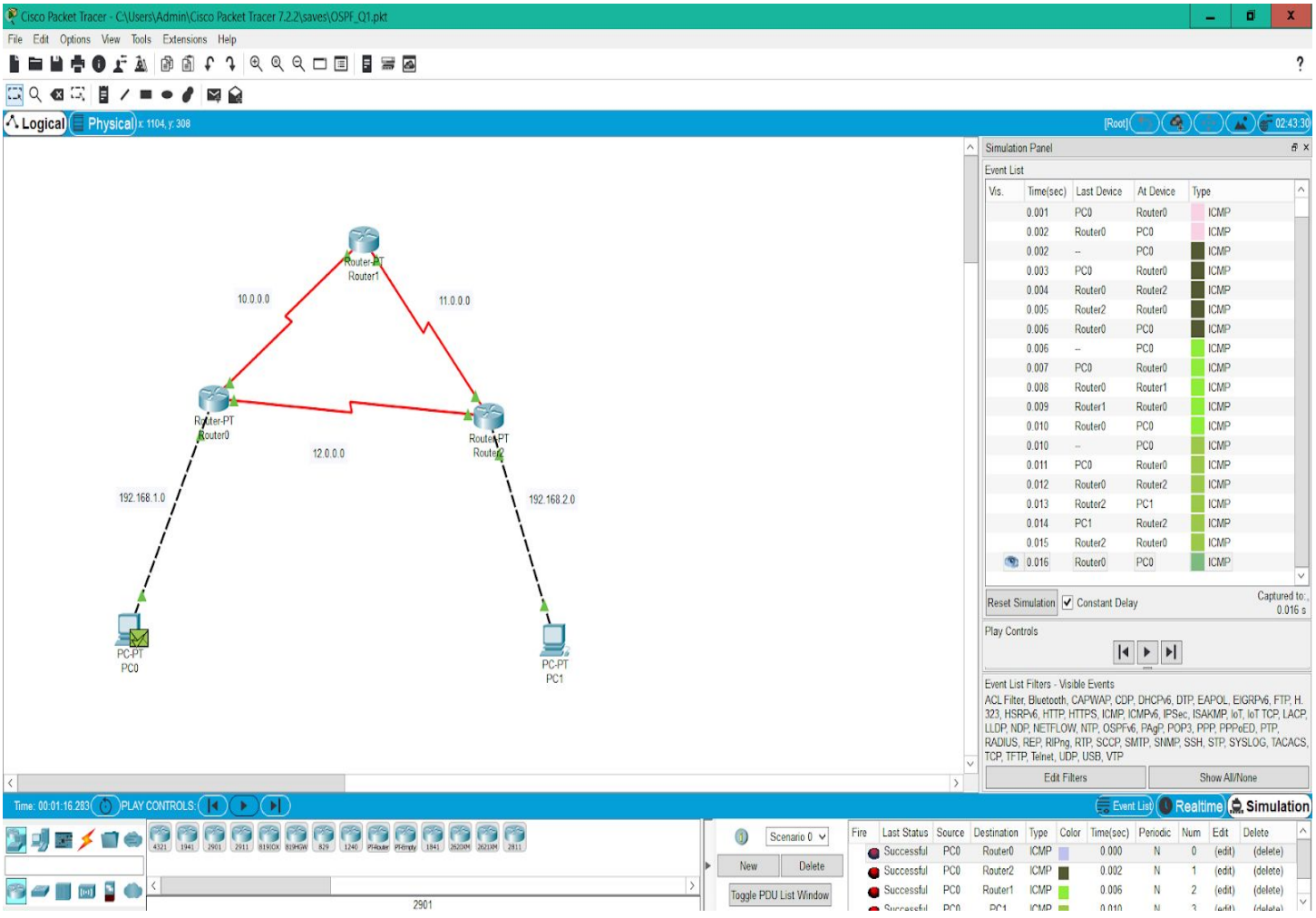


Fig. 1: Topology1

Simulation result (Overall)

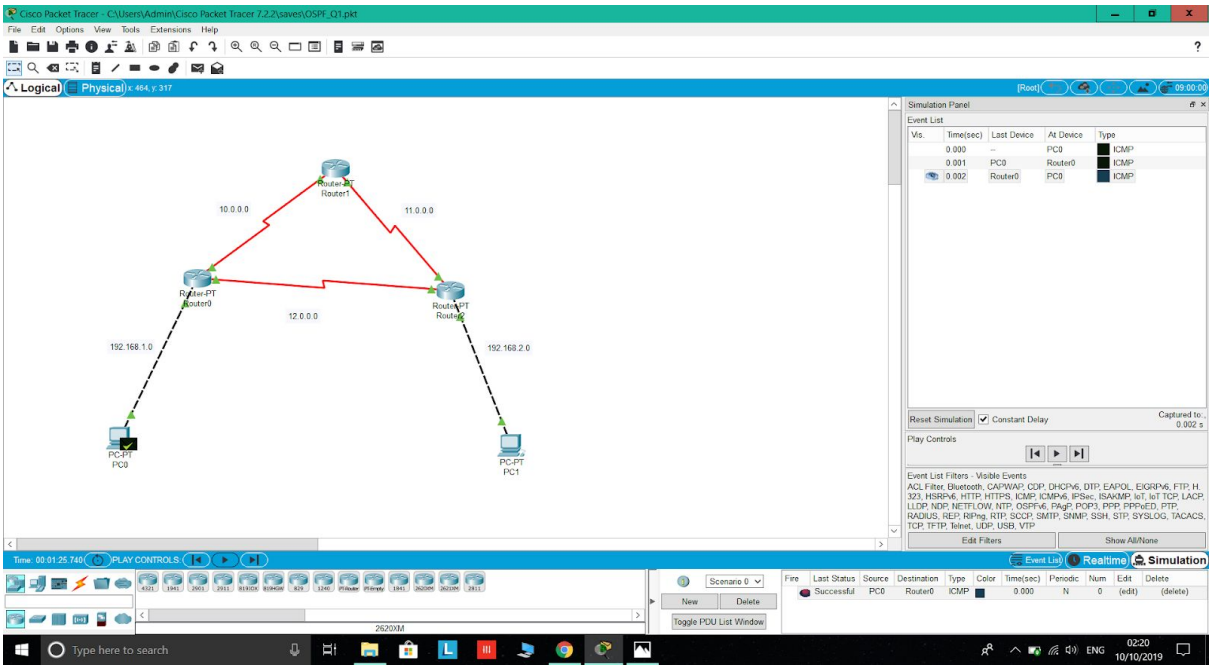


Explanation

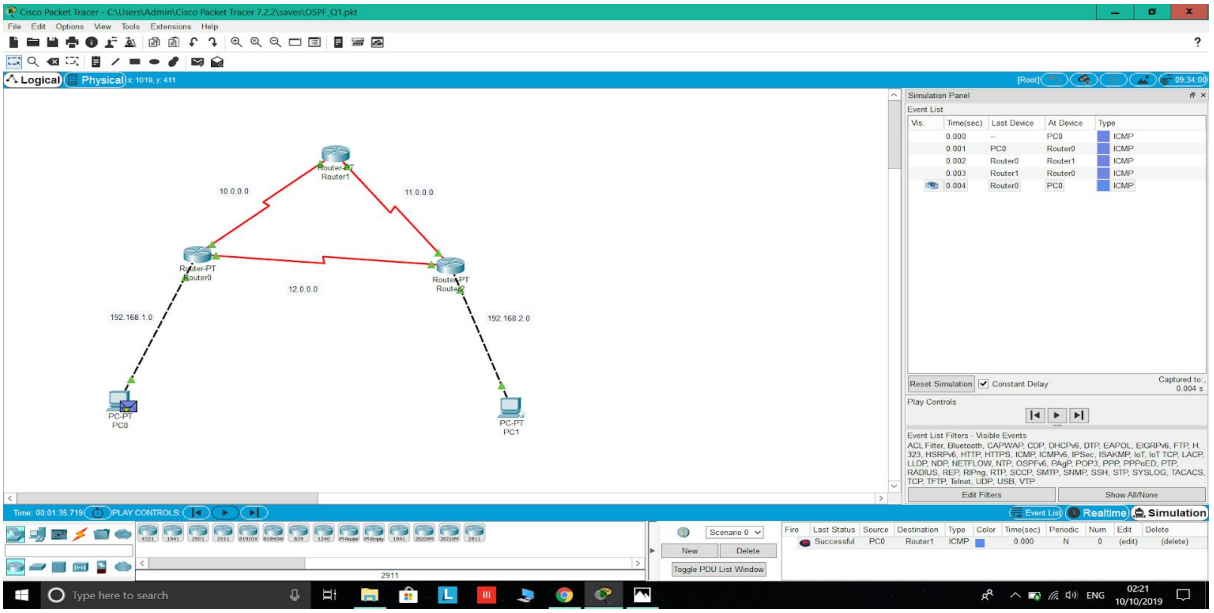
- The packet transfer is successful from PC0 to Router0, Router1, Router2 and PC1, Which can be seen at the bottom right corner of the above screenshot.

- OSPF protocol has been used for this question.

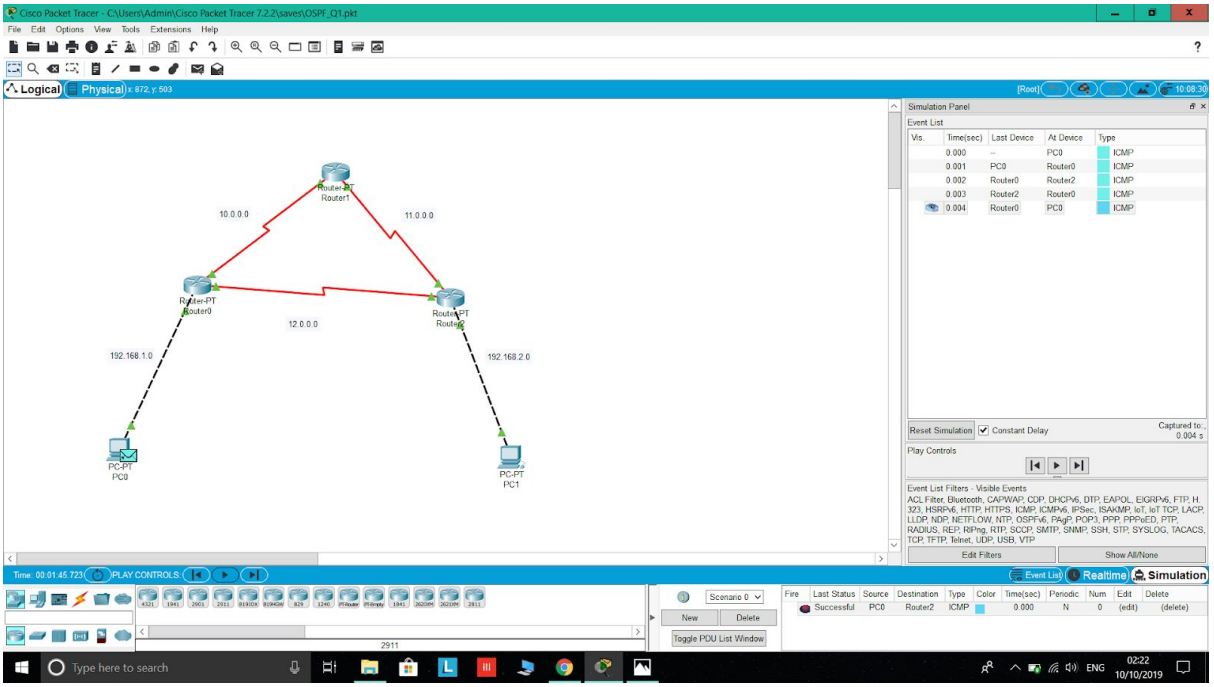
PC0 to Router0



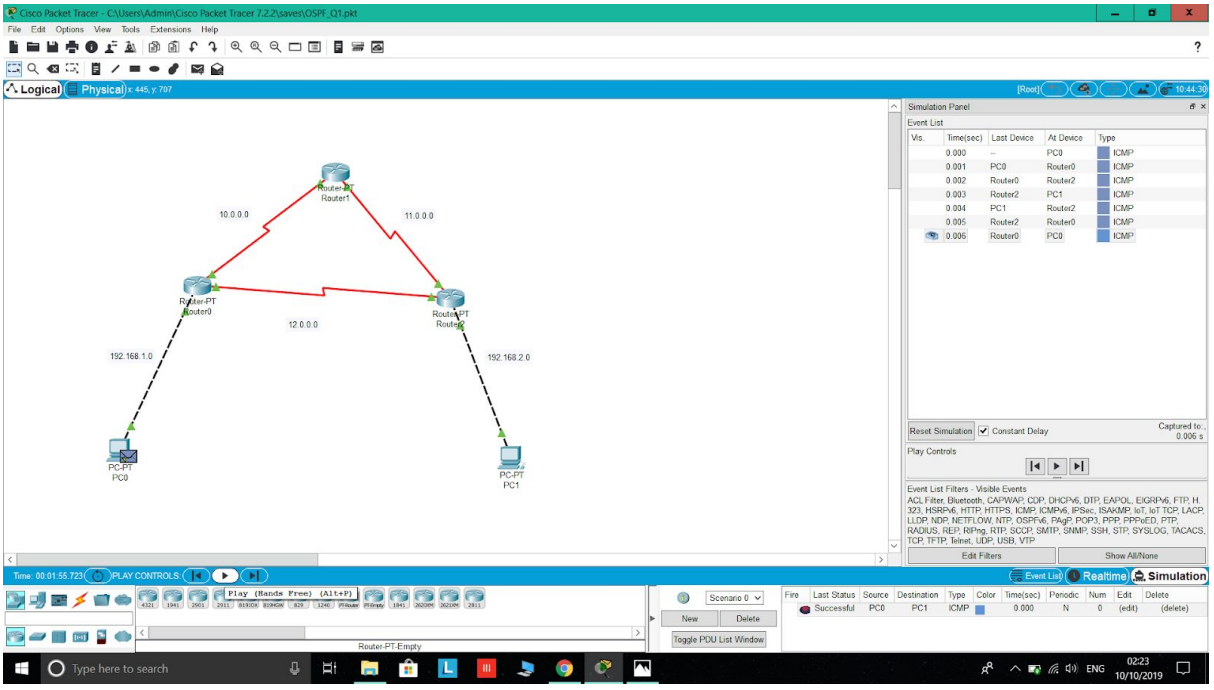
PC0 to Router1



PC0 to Router2



PC0 to PC1



Q-2

Problem Statement

Use CISCO packet tracer to demonstrate Address Resolution Protocol (ARP) in a ring topology as shown in Figure.

Structure

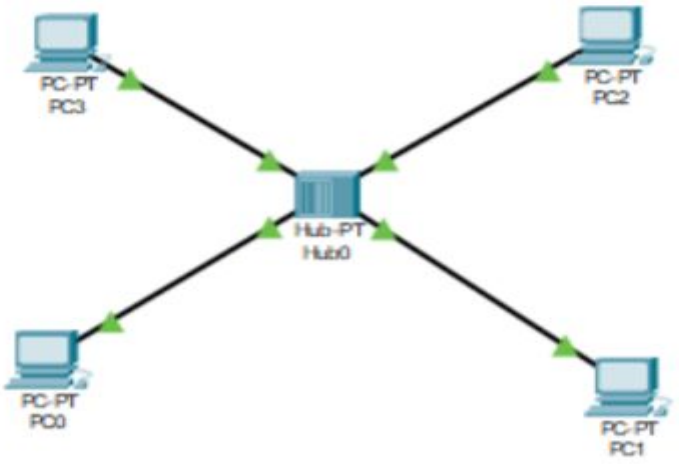


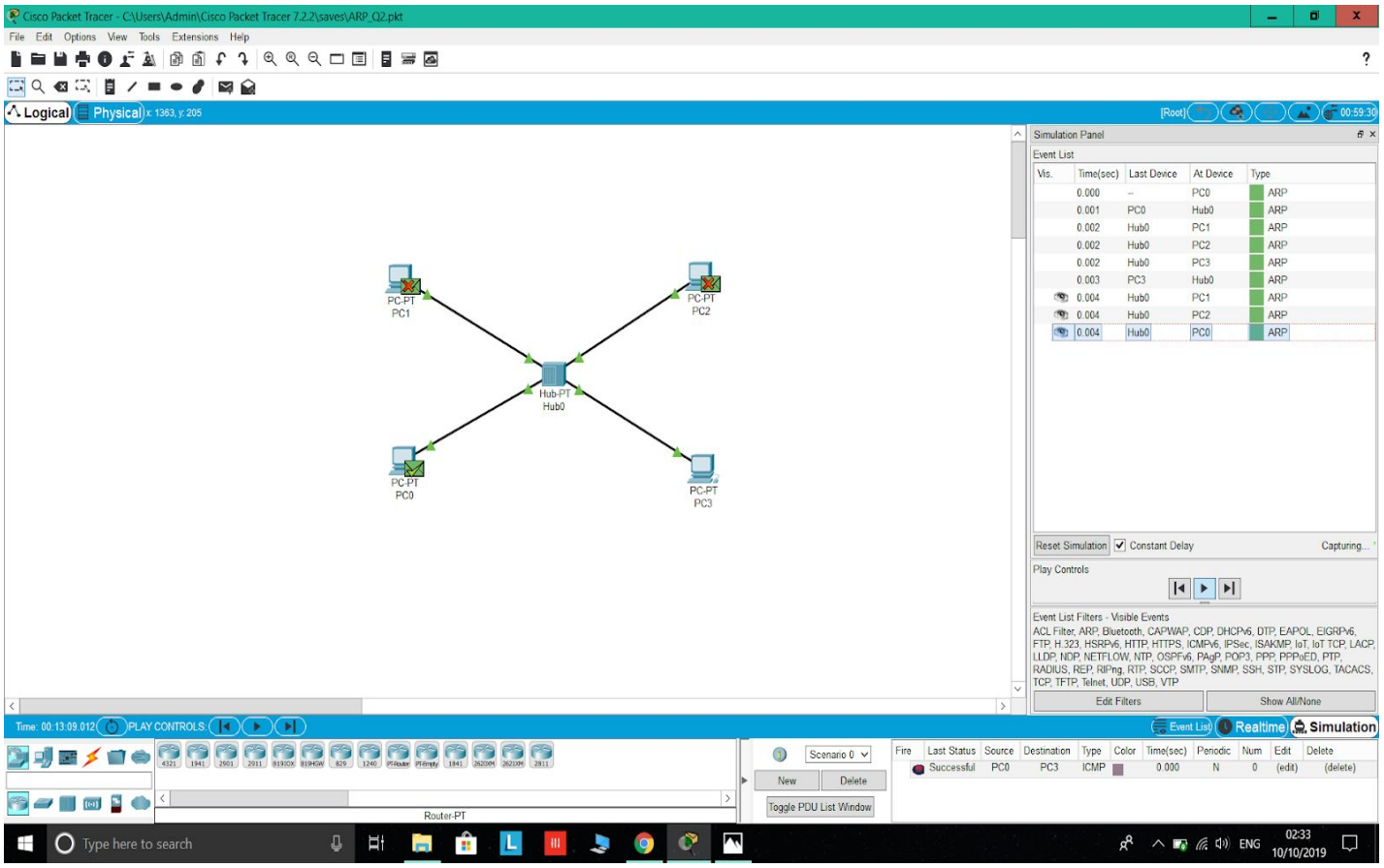
Fig. 2: Ring Topology

Explanation

PC0 is sending a packet to PC3 via the hub. Hub after receiving packet from PC0 sends it to PC1, PC2, and PC3 but only PC3 accepts it as the addresses match in that case. Then the same thing in a reverse manner happens while sending the acknowledgment from PC3 to PC0.

Simulation result

- ARP protocol has been used in this question.
- The packet transfer from PC0 to PC3 is successful and it can be seen at the bottom right corner of the below screenshot.


Cisco Packet Tracer - C:\Users\Admin\Cisco Packet Tracer 7.2.2\saves\ARP_Q2.pkt
File Edit Options View Tools Extensions Help
Logical Physical
PC-PT PC1
PC-PT PC2
Hub-PT Hub0
PC-PT PC0
PC-PT PC3
Simulation Panel
Event List
Vis. Time(sec) Last Device At Device Type
0.000 -- PC0 ARP
0.001 PC0 Hub0 ARP
0.002 Hub0 PC1 ARP
0.002 Hub0 PC2 ARP
0.002 Hub0 PC3 ARP
0.003 PC3 Hub0 ARP
0.004 Hub0 PC1 ARP
0.004 Hub0 PC2 ARP
0.004 Hub0 PC0 ARP
Reset Simulation
Constant Delay
Capturing...
Play Controls
Event List Filters - Visible Events
ACL Filter, ARP, Bluetooth, CAPWAP, CDP, DHCPv6, DTP, EAPOL, EIGRPv6, FTP, H.323, HSRPv6, HTTP, HTTPS, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPFv6, PAgP, POP3, PPP, PPPoED, PTP, RADIUS, REP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP
Edit Filters
Show All/None
Time: 00:13:09.012
PLAY CONTROLS:
Event List
Realtime
Simulation
Router-PT
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete
Successful PC0 PC3 ICMP 0.000 N 0 (edit) (delete)
Type here to search
ENG
02:33
10/10/2019