

EXPERIMENT -1

Jhanvi Parekh

60009210033

D11

Aim: Peer to Peer Connection using Cisco Packet Tracer

IP Address:

IP Address stands for Internet Protocol Address.

IP Address stands for Internet Protocol Address.

A device attached with IP Address can retrieve by RARP protocol.

Internet Service Provider provides IP Address.

IP Address is the logical address of the computer.

IP Address operates in the network layer.

IP Address identifies the connection of the device on the network.

IP Address modifies with the time and environment.

IP Addresses can be found by a third party.

IPv4 uses 32-bit addresses in dotted notations, whereas IPv6 uses 128-bit addresses in hexadecimal notations.

Example:

IPv4 192.168.1.1

IPv6 FFFF:F200:3204:0B00

In IP address multiple client devices can share the IP address.

The IP address can be used for broadcasting or multicasting.

Mac Address:

MAC Address stands for Media Access Control Address.

MAC Address is a six byte hexadecimal address.

A device attached with MAC Address can retrieve by ARP protocol.

NIC Card's Manufacturer provides the MAC Address.

MAC Address is used to ensure the physical address of a computer.

MAC Address operates in the data link layer.

MAC Address helps in simply identifying the device.

MAC Address of computer cannot be changed with time and environment.

MAC Addresses can't be found easily by a third party.

It is a 48-bit address that contains 6 groups of 2 hexadecimal digits, separated by either hyphens (-) or colons(.).

Example:

00:FF:FF:AB:BB:AA

or

00-FF-FF-AB-BB-AA

MAC Address sharing is not allowed.

MAC address help to solve IP address issue.

Straight-through cables:

Straight-through cables are mainly used for connecting, unlike devices.

It helps you connect a router's WAN port to a cable or DSL modem's LAN port.

You should use straight-through cable when you want to connect two devices of different types.

Straight through cable connects a computer with a cable or DSL modem's LAN port.

You can also connect it to the router's LAN port to a switch/hub's uplink port.

It is one of the most commonly used cable formats for network cables

Crossover cables:

While crossover cables are mostly used for connecting like devices.

You can connect two switches/hubs by using the normal port in both switches/hubs

You should use a crossover cable when you want to connect two devices of the same type.

Crossover cable connects with a router's LAN port with switch/hub normal port.

You can connect it to a router's LAN port to a switch or hub's regular port.

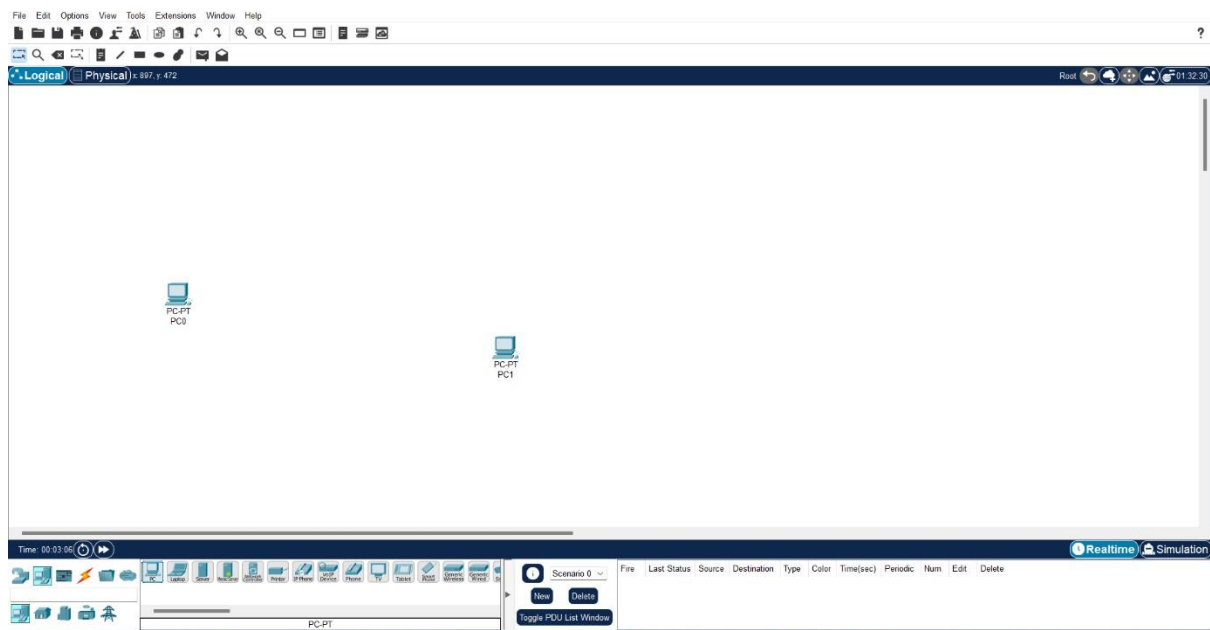
It is used only for certain applications.

Procedure:

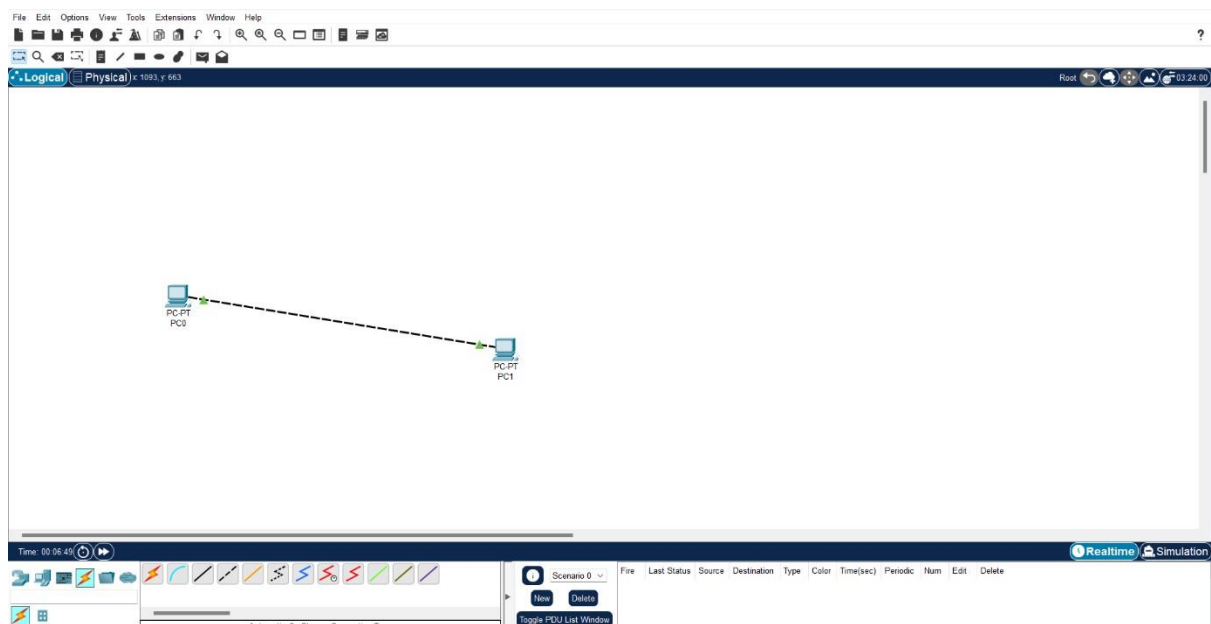
Step 1 : Download and Install Cisco packet Tracer of PC from Google.

Step 2: After complete installation we will get one white screen (i.e home screen).

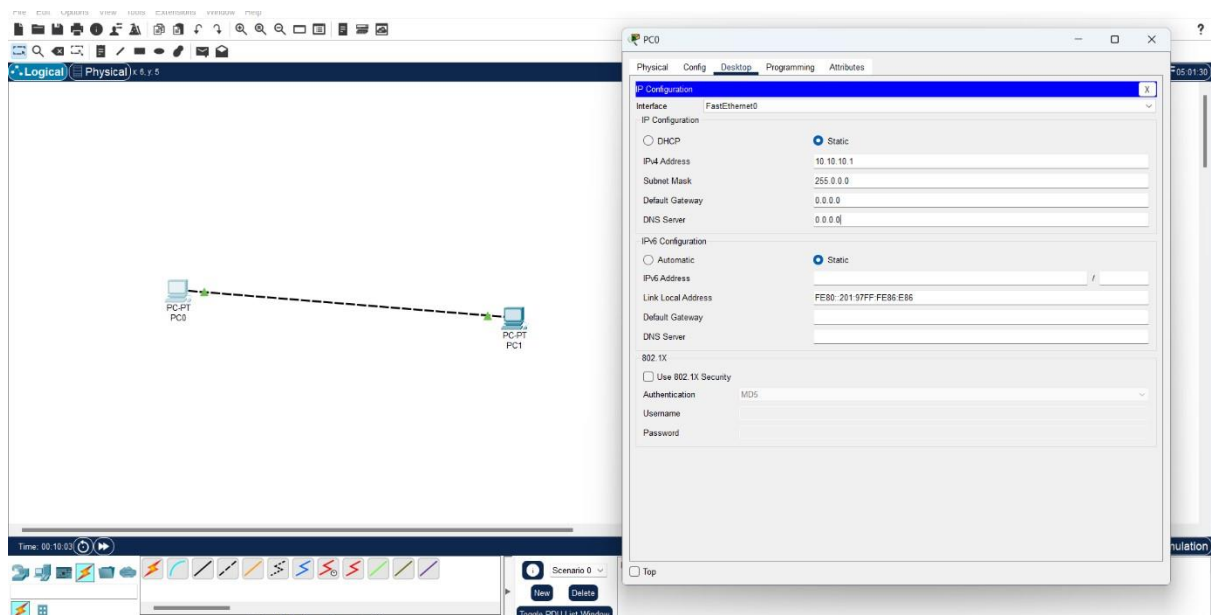
Step 3 : Take two PC from component section on the white screen. Take 2 devices



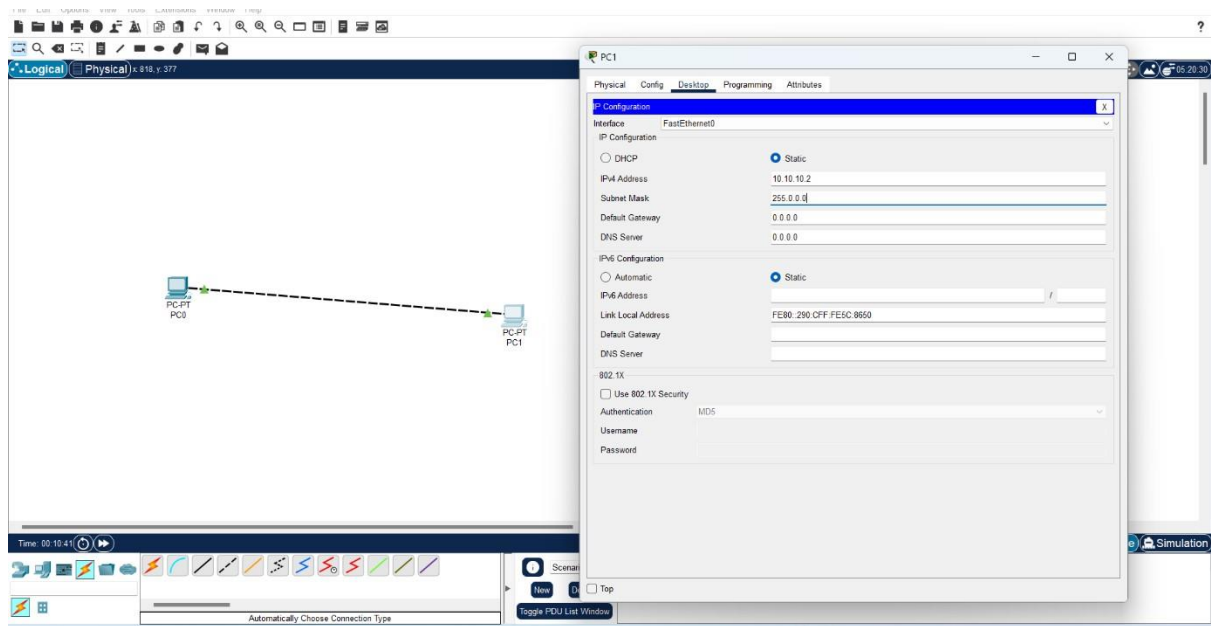
Step 4: Join the devices with wire



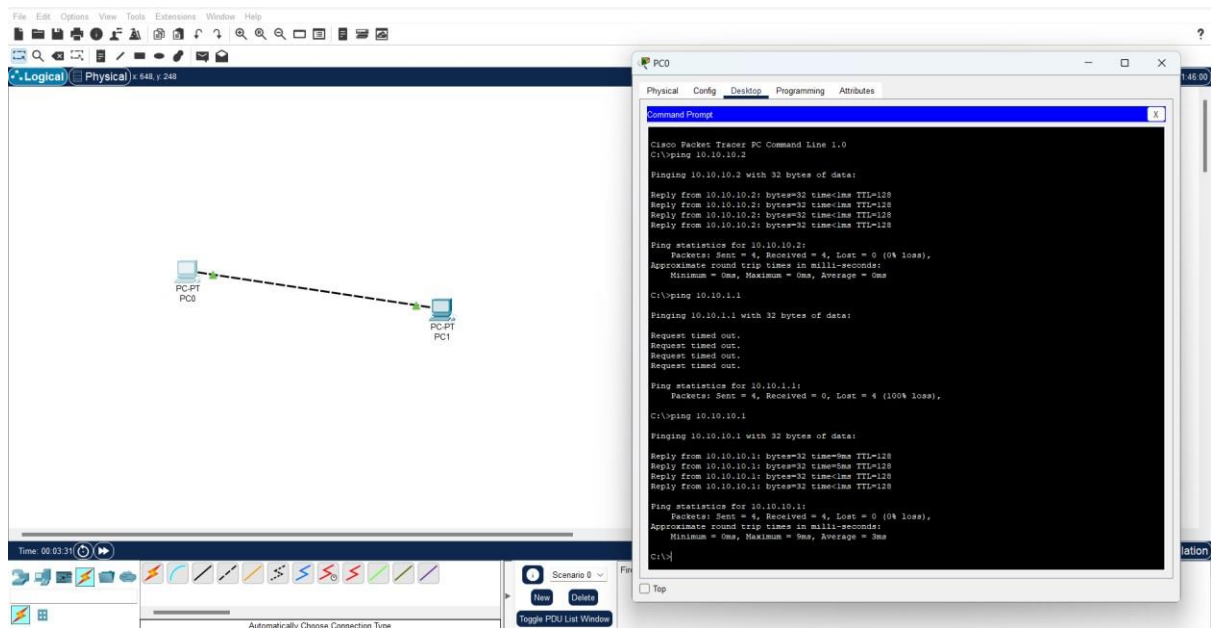
Step 5: put Ip address. After establishing the connection, we change the IP configuration of both the PCs. The prescribed format for the IP configuration is (X.X.X.X), where X can range from 0-255. The below are the changed IP configuration of both the PC



Now After changing the IP configurations, we click on PC (any one) then open Desktop section and select the Command Prompt option. Now in the terminal we write the command 'ping 10.10.10.2' (i.e the IP address of the second connected PC).



Step 6: In command prompt write ping and ip address of opposite address. Step 6 : On doing this we get response from the second PC which means that the connection is successfully established and we are receiving the response too.



File Edit Options View Tools Extensions Window Help

Logical Physical x:371, y:16

Root

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
0.000	---	---
0.000	---	---
0.000	---	---
0.000	---	---
0.000	---	---

Reset Simulation Constant Delay Captured to: 0.000 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H, 323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IRT, IST, TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, RARP, POP3, PPP, PPPoE, FTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:34:23.845 PLAY CONTROLS

Scenario 0

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
In Progress	PC0	PC1	IC...	0.000	N	0	(e...)			
In Progress	PC0	PC1	IC...	0.000	N	1	(e...)			
In Progress	PC0	PC1	IC...	0.000	N	2	(e...)			

File Edit Options View Tools Extensions Window Help

Logical Physical x:1403, y:164

Root

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
0.000	---	---
0.000	---	---
0.000	---	---
0.000	---	---
0.000	---	---

Reset Simulation Constant Delay Captured to: 0.000 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H, 323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IRT, IST, TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, RARP, POP3, PPP, PPPoE, FTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:34:33.823 PLAY CONTROLS

Scenario 0

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
In Progress	PC0	PC1	IC...	0.000	N	0	(e...)			
In Progress	PC0	PC1	IC...	0.000	N	1	(e...)			
In Progress	PC0	PC1	IC...	0.000	N	2	(e...)			

File Edit Options View Tools Extensions Window Help

File Edit Options View Tools Extensions Window Help

Root 10:29:30

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
0.000	--	
0.000	--	
0.000	--	
0.000	--	
0.000	--	
0.001	PC0	

Reset Simulation Constant Delay Captured 0.001 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, ISAT, LACP, LACPv6, LLDP, Meraki, NTP, NETFLOW, NTP, OSPF, OSPFv6, RARP, POP3, PPP, PPPoE, PPTP, RADIUS, RFP, RFPv6, RSTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:34:33.024 PLAY CONTROLS

Scenario 0

File	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
In Progress	PC0	PC1	IC...	0.000	N	0	(e...	(delete)		
In Progress	PC0	PC1	IC...	0.000	N	1	(e...	(delete)		
In Progress	PC0	PC1	IC...	0.000	N	2	(e...	(delete)		