

Lab-1  
Cisco Packet Tracer

- 1) LAN = Local area network is a collection of devices connected together in one physical location, such as a building, office or home. It can be small or large, ranging from home network.
- 2) WAN = Wide area network, a network that connects separate machines over a wide area, for example in different countries, using telecommunication systems.
- 3) Ethernet = It is a traditional technology for connecting devices in WAN (or) LAN. It enables devices to communicate with each other via a protocol, which is a set of rules (or) common network language.
- 4) IP-address = Internet protocol, unique address that identifies a device on Internet or a local network. They contain location information and make devices accessible for communication.
- 5) HUB = It is a physical layer networking device which is used to connect multiple devices in a network.
- 6) Switch = Switch is a device in a computer network that connects other devices together. ←
- 7) Server = It is a computer program or device that provides a service to another program and its user.



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8) End Device = It is either a source or destination of data transmitted over the network

a) Nodes = It is the connection point among network devices such as routers or printers that can receive and send data from one endpoint to other

### Creating a Flat Network

Step 1: Open the Cisco Packet Tracer student version.

Step 2: Click on Logical at the left-top corner and Simulation at right-down corner.

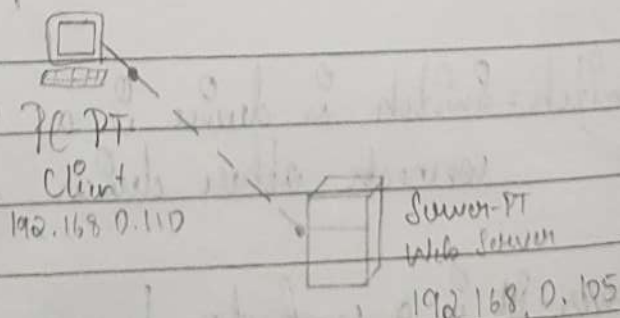
Step 3: Go to End devices and add Generic PC and a generic Server.

Step 4: Under connections, select Copper - Cross-over cable.

Step 5: Now check if the lights are green, if not the connection

Step 6: Click the Server table, set the display name as Client and the DNS server as 192.168.0.105 and IP address as 192.168.0.110.

Step 7: Click on Server table and change Web server and IP address as 192.168.0.105. Make sure Port Status is ON. Load a background image and save the file.



Step 8: Under connection, select Copper-Straight-through cable and connect it. The red lights indicate connection is not working. Hence ad. conned Copper-cross-over cable.

Step 9: Go to realtime and select PC table and go to desktop and select Command prompt. In that type ping 192.168.0.110

Output:

Command Prompt:

PC> ping 192.168.0.110

Pinging 192.168.0.110 with 32 bytes of data:

Reply from 192.168.0.110: bytes=32 time=0ms TTL=128

Reply from 192.168.0.110: bytes=32 time=0ms TTL=128

Reply from 192.168.0.110: bytes=32 time=0ms TTL=128

Reply from 192.168.0.110: bytes=32 time=20ms TTL=128

Ping statistics for 192.168.0.110

Packets: sent=4, received=4, lost=0 (0% loss)

Approx round trip times in milliseconds

Minimum=0ms, Maximum=20ms, Avg=5ms

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PC> ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data

Request timed out

Request timed out

Request timed out

Request timed out

Packets: Sent: 4, received: 0, lost: 4 (100% loss)



Logical [Root] New Cluster Move Object Set Tiled Background Viewport

PC-PT Client  
192.168.0.110

Server-PT Web Server  
192.168.0.105

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
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Reset Simulation ☒ Constant Delay Captured for: (no captures)

Play Controls

Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events

ACL Filter: ARP, RDP, SCP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NTP, NETFLOW, NTP, OSPF, OSPFv6, PAPI, POP3, RADIUS, RDP, RDPv6, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TFTP, Telnet, UDP, VTP

Bit Filters Show All/None

Time: 09:16:50.290 Power Cycle Devices: PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Connections

Copper Cross-Over

Scenario 0

New Delete

Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

21°C Sunny

ENG IN dx 15:01 09-06-2023

