a/6/23

classmate
Date
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LAB - 1

① LAN -

A local area network (LAN) is a network contained within a small geographical area usually within the same building.

② WAN -

A wide-area network (WAN) is the technology that connects your offices, datacenters etc. It spans beyond a single building or large campus to include multiple buildings.

③ ETHERNET -

It is a traditional technology for connecting devices in a wired local area network (LAN) or wide area network (WAN). It enables devices to communicate with each other.

④ IP ADDRESS -

It is a unique address that identifies the device on the internet or a local network. IP stands for "internet protocol" which is the set of rules governing the format of data sent via the internet.

⑤ HUB -

it is a physical layer networking device which is used to connect multiple devices in a network generally used in LAN.

⑥ SWITCH -

A network switch connects devices in a network to each other, enabling them to communicate, by exchanging data packets.

⑦ SERVER -

A piece of computer hardware or software that provides functionality for other programs / devices called 'clients'.

⑧ END DEVICE -

A Source / destination device in a networked system.

⑨ NODES -

Network nodes can be defined as the connection point among network devices such as routers, pointers, switches that can send / recieve data from one end point to another.

CREATING A FIRST NETWORK

① Select the end devices. Add a generic PC and a server.

② Select a copper cross over table from connections and connect the PC with server.

③ Click on PC, select config and change the display name to client and DNS server to 192.168.0.105

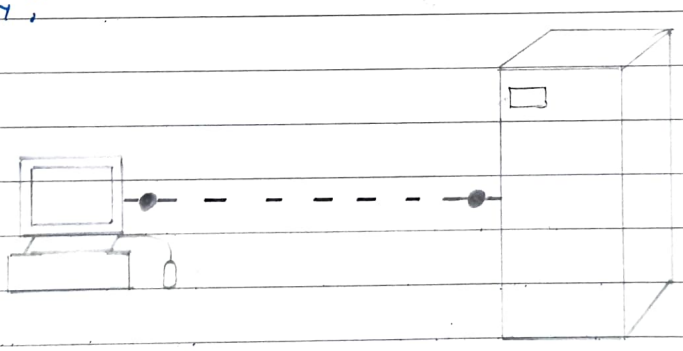
④ Select fast ethernet under interface and set the IP address to 10.0.0.1

⑤ Apply the same for the 'server'.

⑥ Add simple PDU tool to send a simple one time ping msg

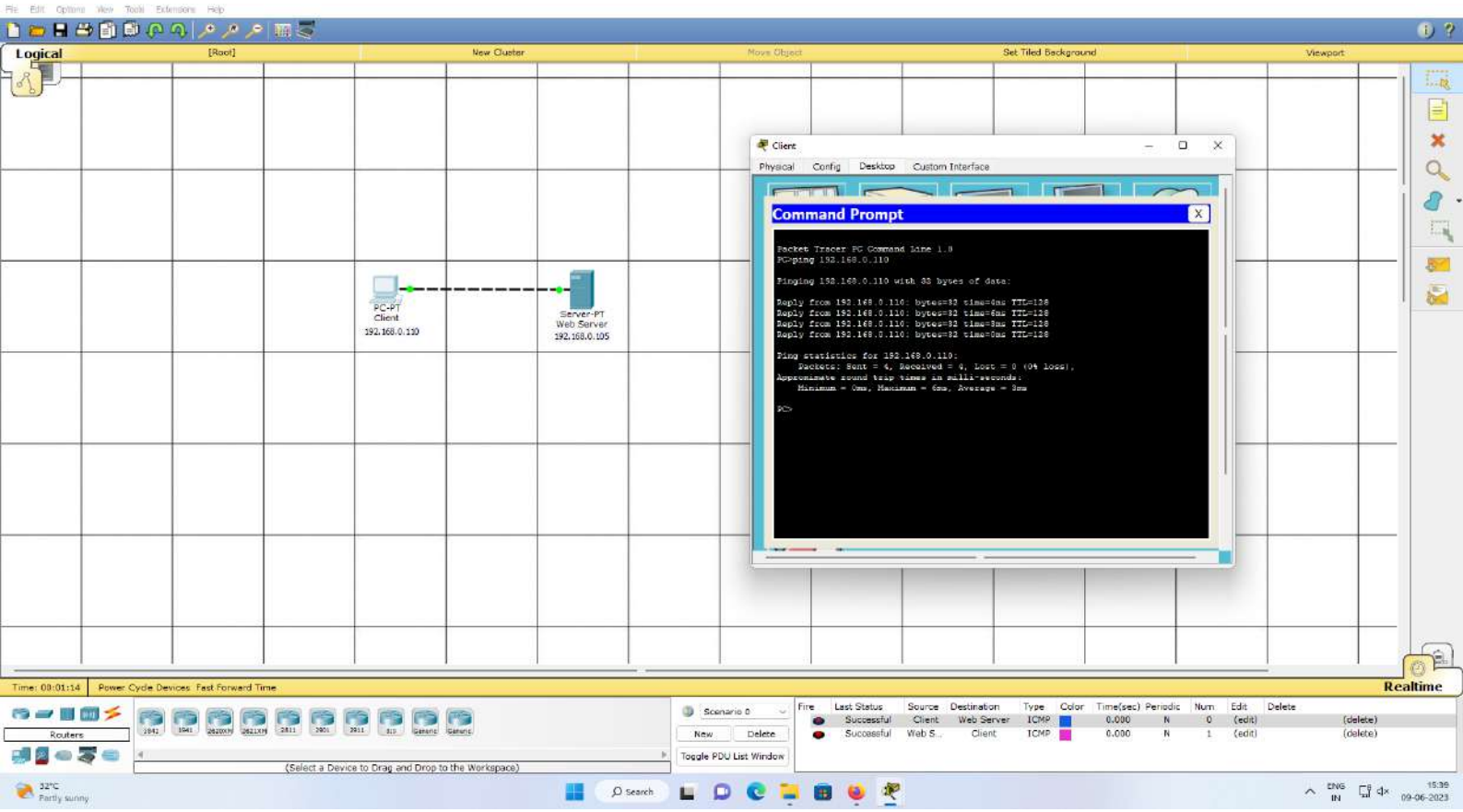
⑦ Select cmd from desktop and type "Ping 'IP ADDRESS'".
> Reply from 10.0.0.1 : bytes = 32 time = 1ms TTL = 128

TOPOLOGY:



PC-PT (client)
192.168.0.110

Server-PT (Web server)
192.168.0.105


Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Client
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
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=4ms TTL=128
Reply from 192.168.0.110: bytes=32 time=5ms TTL=128
Reply from 192.168.0.110: bytes=32 time=5ms TTL=128
Reply from 192.168.0.110: bytes=32 time=5ms TTL=128
Ping statistics for 192.168.0.110:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 5ms, Average = 3ms
PC>
PC-PT
Client
192.168.0.110
Server-PT
Web Server
192.168.0.105
Time: 00:01:14
Power Cycle Devices
Fast Forward Time
Realtime
Routers
(Select a Device to Drag and Drop to the Workspace)
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Successful
Client
Web Server
ICMP
0.000
N
0
(edit)
(delete)
Successful
Web S...
Client
ICMP
0.000
N
1
(edit)
(delete)