Sample program

Computer Network Laboratory 9/06/2023

Sample program

Definitions:

LAN (Local Area Network):

A LAN is a collection of devices connected together in one physical location such as building, office or home.

WAN (Wide Area Network):

A WAN is a large network of information that is not tied to a single location.

Ethernet:

Ethernet is the traditional technology for connecting devices in a wired local area network or wide area network.

IP address:

An Internet Protocol (IP) address is a unique numerical identifier for every device or network that connects to the internet.

Hub:

Hub is the central part of a circular object.

Switch:

Switch is a high-speed device that receives incoming data packets and redirects them to their destination on a local area network.

Server:

A server is a computer program or device that provides a service to another computer program and its user, also known as client.

End devices:

End devices are either the source or destination of data transmitted over the network.

Nodes:

A node is a point of intersection/connection within a data communication network.

Steps involved

Step 1: Drag and drop the PC and Server to workspace.

Step 2: Firstly, Copper straight-through cable was selected and connected the devices with it. If red lights are shown, remove that and copper cross-over cable is selected, and green lights are shown.

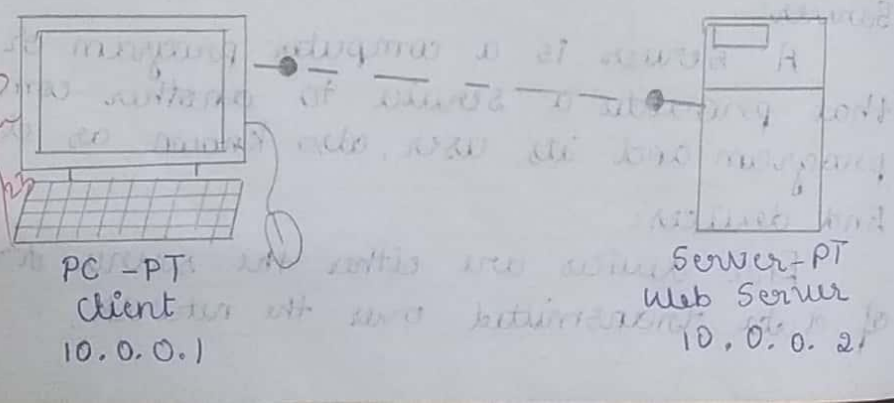
Step 3: Click on the PC. While paying attention to the link lights, turn the power on, off and on. Same step is followed for server.

Step 4: Open PC configuration window, set the display name as client and DNS server to 10.0.0.2. Under Interface, click fastethernet and set the IP address as 10.0.0.1

Step 5: Open server configuration window, change the display name to web server and under interface, click fastethernet and set the IP address as 10.0.0.2.

Step 6: Open server service, click DNS and set the domain name as www.firstlab.com. Set the IP address as 10.0.0.2 and click add.

Step 7: Save the work using the file > save as option.



Realtime [In command Prompt]

ping 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time=0ms TTL=128
Reply from 10.0.0.1: bytes=32 time=1ms TTL=128
Reply from 10.0.0.1: bytes=32 time=5ms TTL=128
Reply from 10.0.0.1: bytes=32 time=3ms TTL=128

Ping statistics for 10.0.0.1:
Packets: Sent=4, Received=4, Lost=0 (0% loss)
Approximate round trip times in milli-seconds:
Minimum=0ms, Maximum=5ms, Average=2ms

ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.0.0.3:
Packets: Sent=4, Received=0, Lost=4 (100% loss)