PAK AUSTRIA FACHHOCHSCHULE: INSTITUTE OF APPLIED SCIENCES AND TECHNOLOGY
DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEEING

Computer Networks

COMP-352L

LAB TASK 9

School of Computing Sciences

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HTTP Server Implementation

Overview:

What is Hyper Text Transfer Protocol (HTTP)?

In today's digital world, web servers play a crucial role in delivering content over the internet. Understanding how to configure and manage an HTTP server is an essential skill for networking professionals. Cisco Packet Tracer is a powerful network simulation tool that allows users to visualize and experiment with network configurations without the need for physical hardware. This lab manual guides you through the process of setting up an HTTP server in Cisco Packet Tracer, enabling you to understand the fundamental concepts of server configuration and web services.

Objectives:

The primary objectives of this lab are:

- To understand the basic concepts of HTTP and web servers.
- To configure an HTTP server in Cisco Packet Tracer.
- To establish network connectivity between devices.
- To access the HTTP server using a web browser from a client PC.
- To troubleshoot common configuration issues.

Scope:

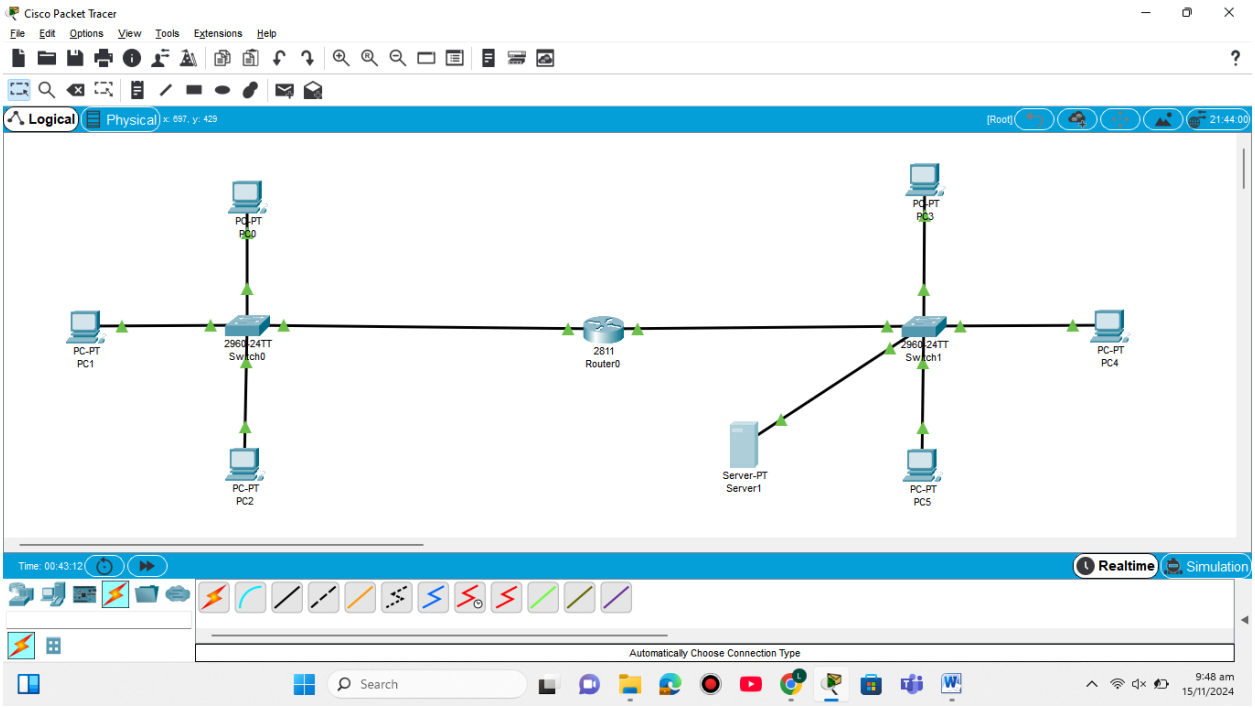
This lab focuses on:

- Basic networking concepts and configurations.
- Setting up an HTTP server and configuring its settings.
- Establishing connectivity using routers and switches.
- Accessing the server from a client PC.
- Basic troubleshooting techniques for network connectivity.

Steps:

Step 1: Set up the network topology

1. Add Devices:
    - 1 Routers from network devices.
    - 2 Switch from network devices.
    - 6 PCs from end devices.
    - 1 Server from end devices.
2. Connect Devices:
    - Use straight-through cables to connect PC1, PC2, and PC3 to the switch1
    - Use straight-through cables to connect PC4, PC5, PC6 to switch2.
    - Connect the switch1 to Router's FastEthernet0/0 using a straight-through cable.
    - Connect the switch2 to Router's FastEthernet0/1 using a straight-through cable.
    - After IP Configuration of all other devices, connect Server to switch2.



Step 2: Configure IP addresses on PCs connected to Switch1.

- Open the Desktop tab of each PC, click on IP Configuration, and assign the following IP addresses
  - **PC1:**
    - IP: 192.168.1.2
    - Subnet Mask: 255.255.255.0
    - Gateway: 192.168.2.1
  - **PC2:**
    - IP: 191.168.1.3
    - Subnet Mask: 255.255.255.0
    - Gateway: 192.168.2.1
  - **PC3:**
    - IP: 192.168.1.4
    - Subnet Mask: 255.255.255.0
    - Gateway: 192.168.2.1

Step 3: Configure IP addresses on PCs connected to Switch2.

- Open the Desktop tab of each PC, click on IP Configuration, and assign the following IP addresses
  - **PC4:**
    - IP: 192.168.2.2
    - Subnet Mask: 255.255.255.0
    - Gateway: 192.168.2.1
  - **PC5:**
    - IP: 192.168.2.3
    - Subnet Mask:255.255.255.0
    - Gateway: 192.168.2.1
  - **PC6:**
    - IP: 192.168.2.4
    - Subnet Mask: 255.255.255.0
    - Gateway: 192.168.2.1

Step 4: Configure IP addresses on Router

- Open the Config tab, click on FastEthernet0/0 and assign:
  IP Address: 192.168.1.1
  Subnet Mask: 255.255.255.0
- Click on FastEthernet0/1 and assign:
  IP Address: 192.168.2.1
  Subnet Mask: 255.255.255.0

Step 5: Configure IP address of Server

- Open Desktop tab and click on IP configuration and assign:
  IP Address: 192.168.2.10

Subnet Mask: 255.255.255.0
Default Gateway: 192.168.2.1

Step 6: Configure HTTP services on Server

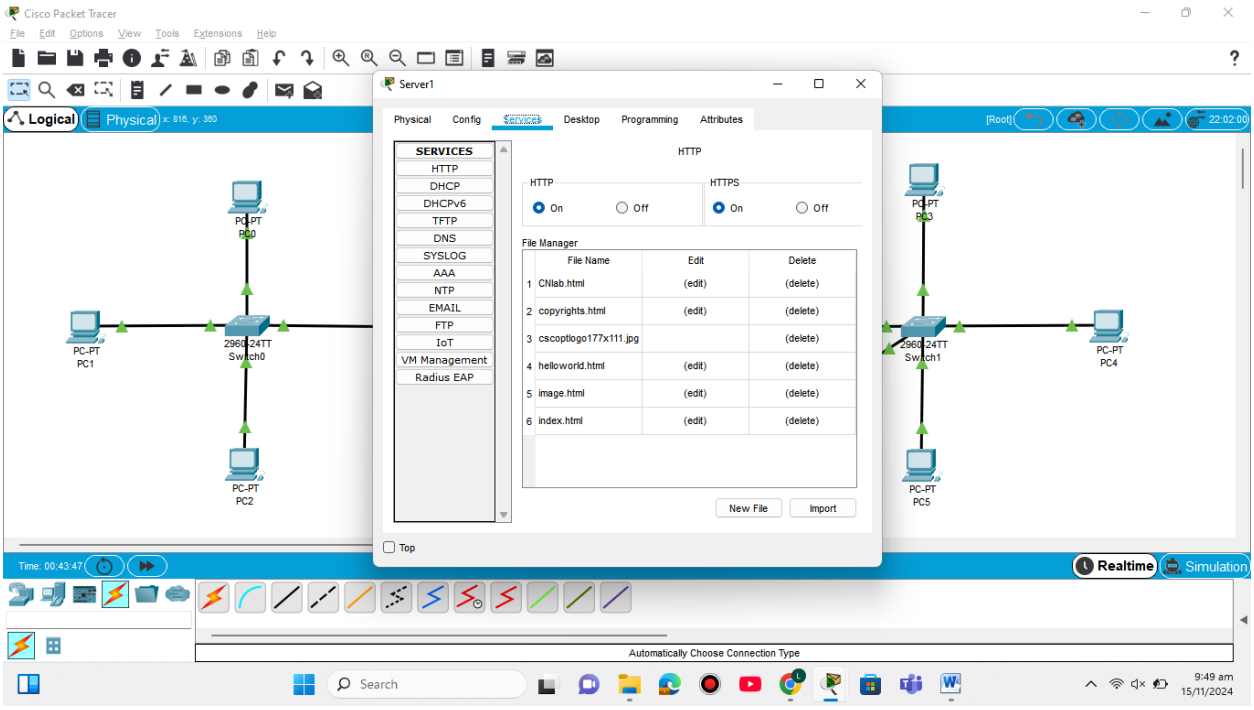
- Open Services tab, click on HTTP from side bar, make sure both HTTP and HTTPs services are switched ON.

Step 7: Verifying the HTTP service

- To check whether http service or not , click on any PC and open its Desktop tab then open the Web Browser
- Enter the Server IP address as url and click Go.
- An interface with different hyperlinks with appeared.

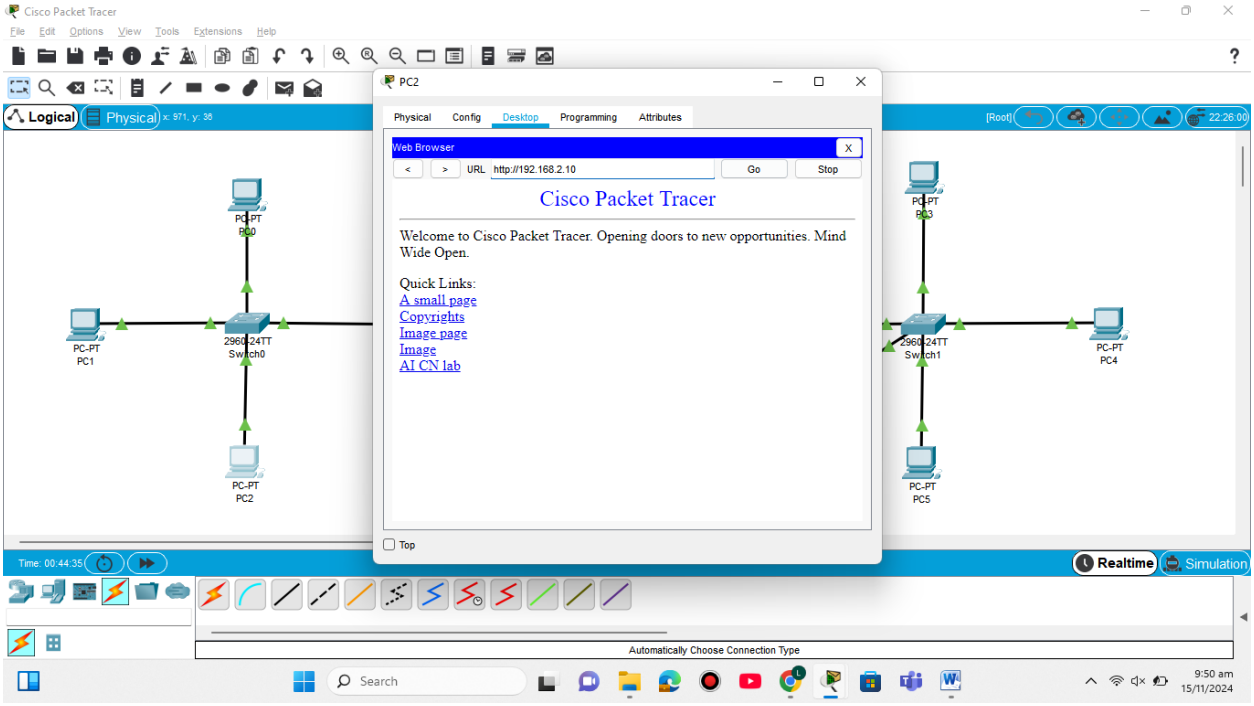
Step 8: Creating new File in server to access

- Now go to Services tab of server and open HTTP
- Open helloworld.html file by clicking on edit and copy the format from it or you can write by yourself.
- Click on New File and paste the text copied or write by yourself and change the body of html file and give a name like CNlab.html and save.
- Then click on HTTP and the file name will appear in the list below.
- Now to make that file appear on main page:
    - Click on edit of index.html file and write a line of code to add newly created file as hyperlink.
    - You can also change the color of heading from index.html file and also can change image present there.
    - For image, you have to change the image from Cisco folder created in your PC.



Step 9: Verifying Connectivity and HTTP service

- Click on PC and then its Desktop tab and then open Web browser
- Enter Server IP as url and click Go
- New interface after updates will appear.



TASK:

You have to add screen shots of each step in the same file and also change color and image of File.