

Date: 16/07/2025

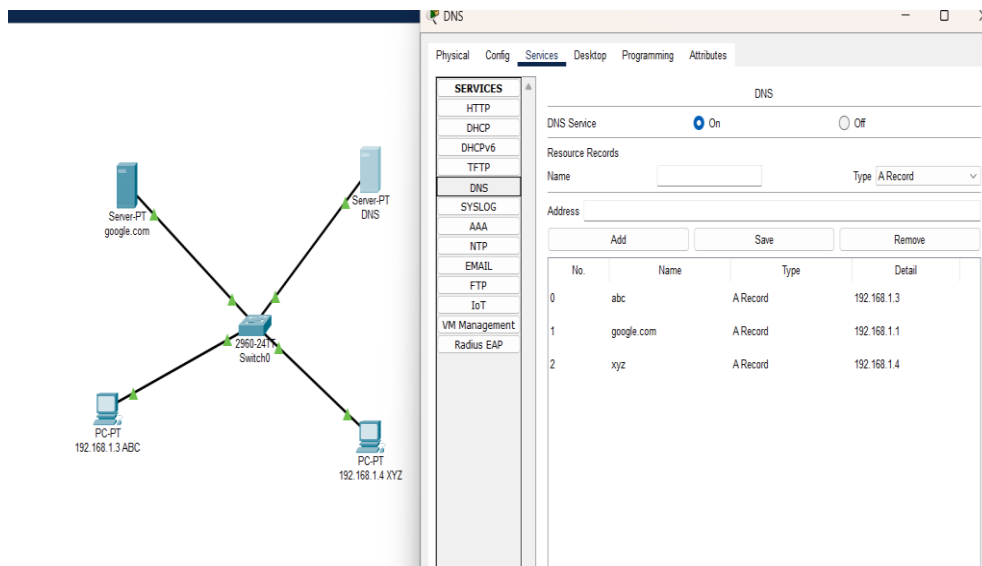
Lab Practical #07:

Study the application layer protocol DNS, DHCP, FTP.

Practical Assignment #07:

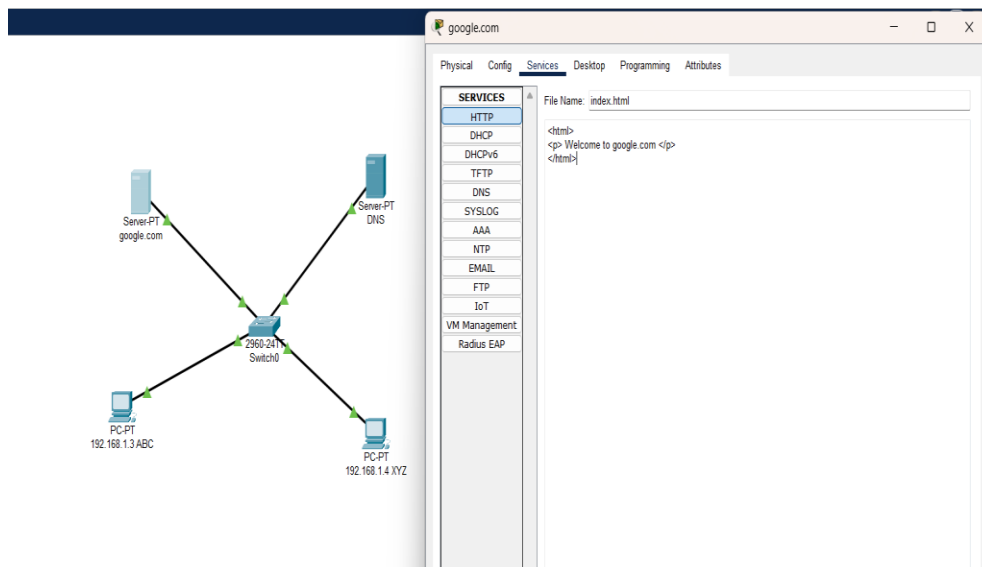
1. Implement the application layer protocol DNS, DHCP, and FTP. Also check connectivity between them using ping command or PDU utility.

- DNS



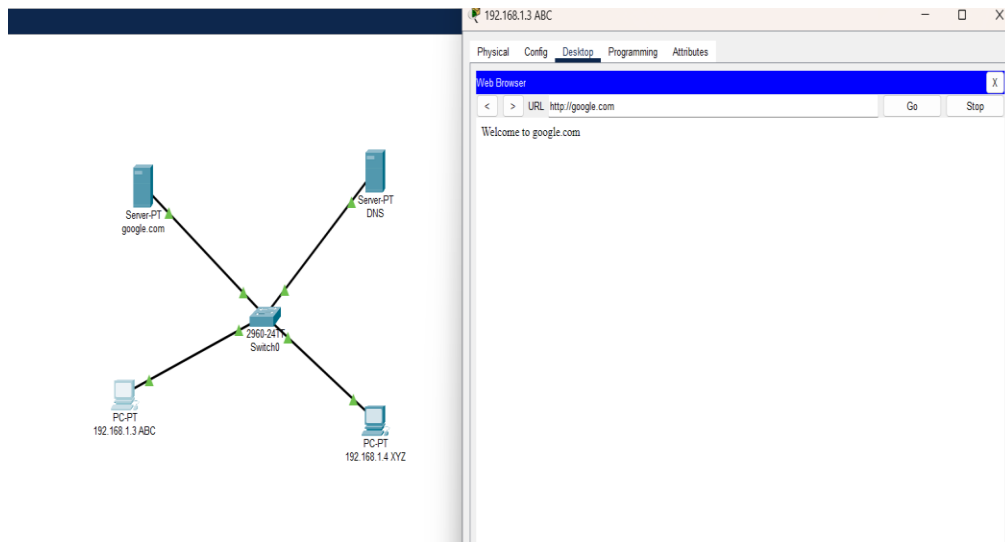
The network diagram shows a central 2960-24T Switch0 connected to four devices: Server-PT google.com, Server-PT DNS, PC-PT 192.168.1.3 ABC, and PC-PT 192.168.1.4 XYZ. The DNS configuration window is open, showing the DNS Service is On. The Resource Records table is as follows:

No.	Name	Type	Detail
0	abc	A Record	192.168.1.3
1	google.com	A Record	192.168.1.1
2	xyz	A Record	192.168.1.4

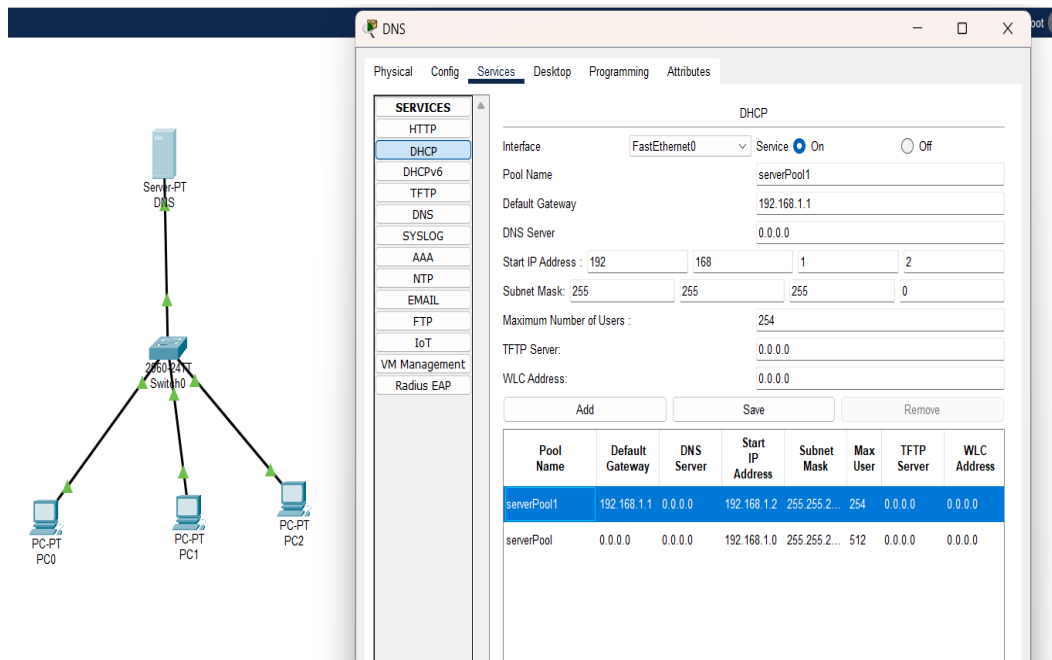


The network diagram is the same as above. The HTTP configuration window is open, showing the File Name: index.html and the content: <html><p> Welcome to google.com </p></html>.

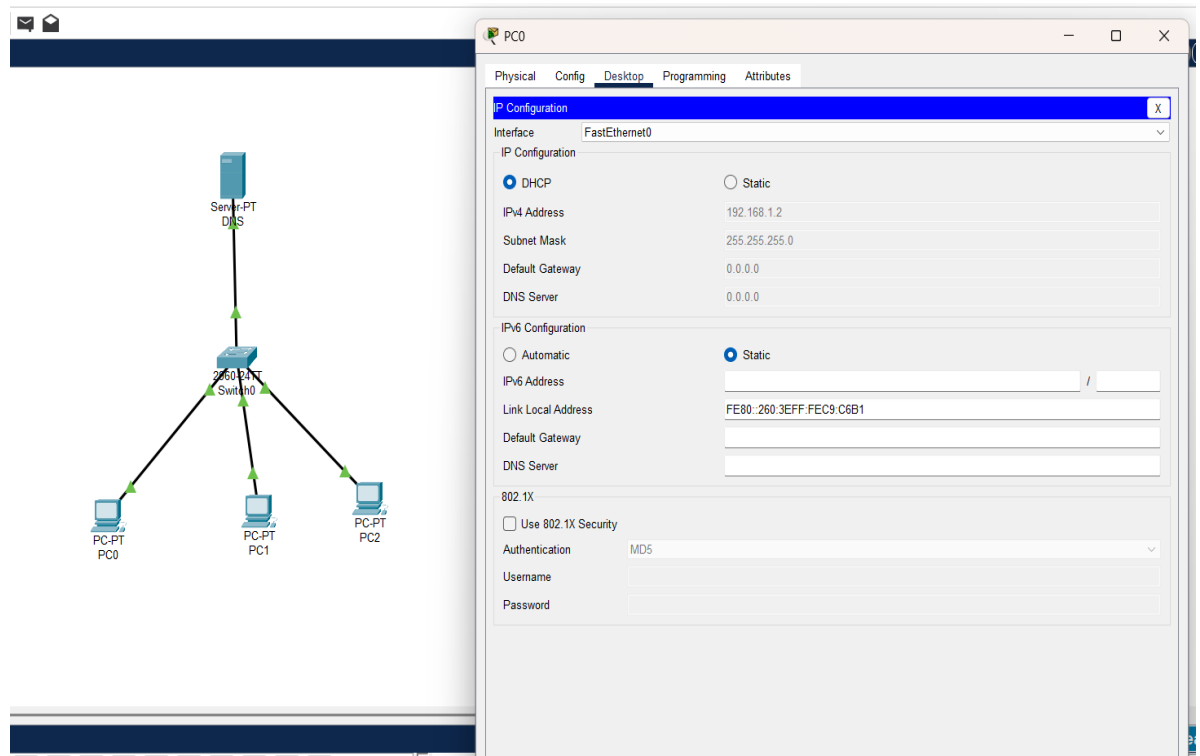
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- DHCP:

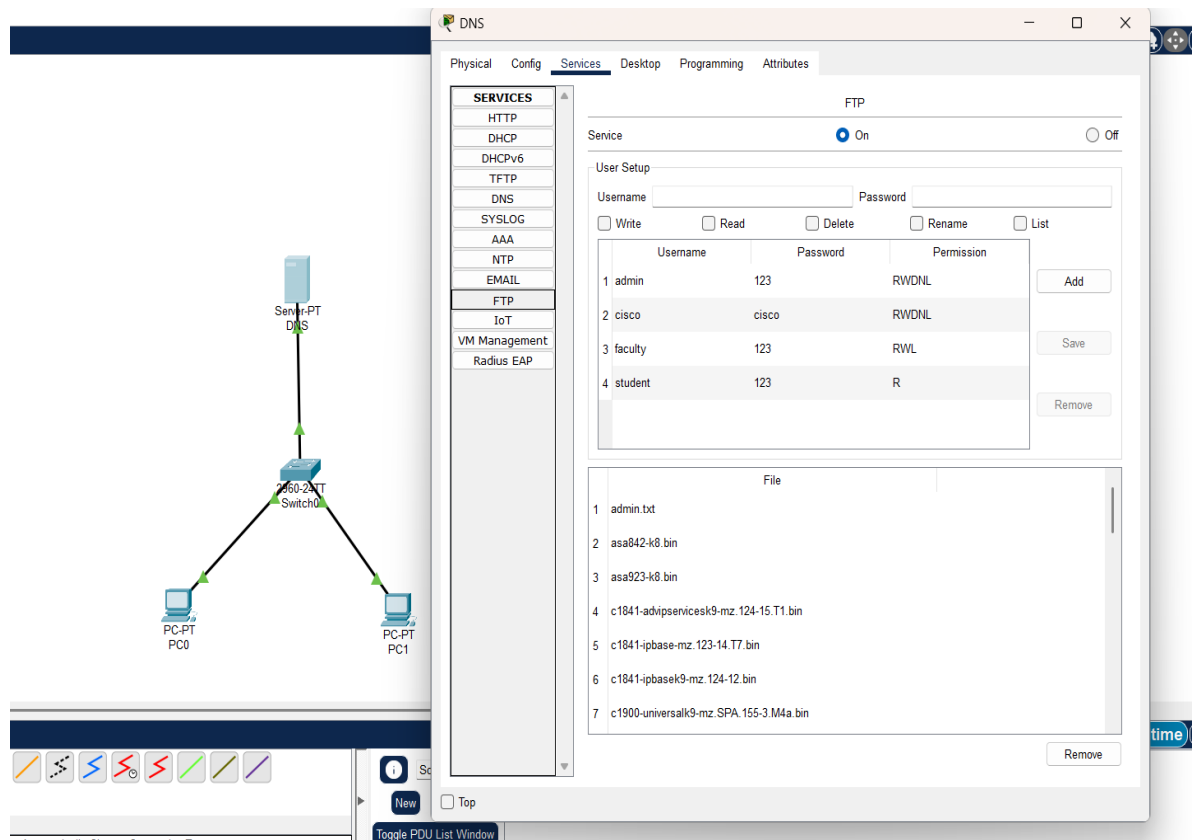


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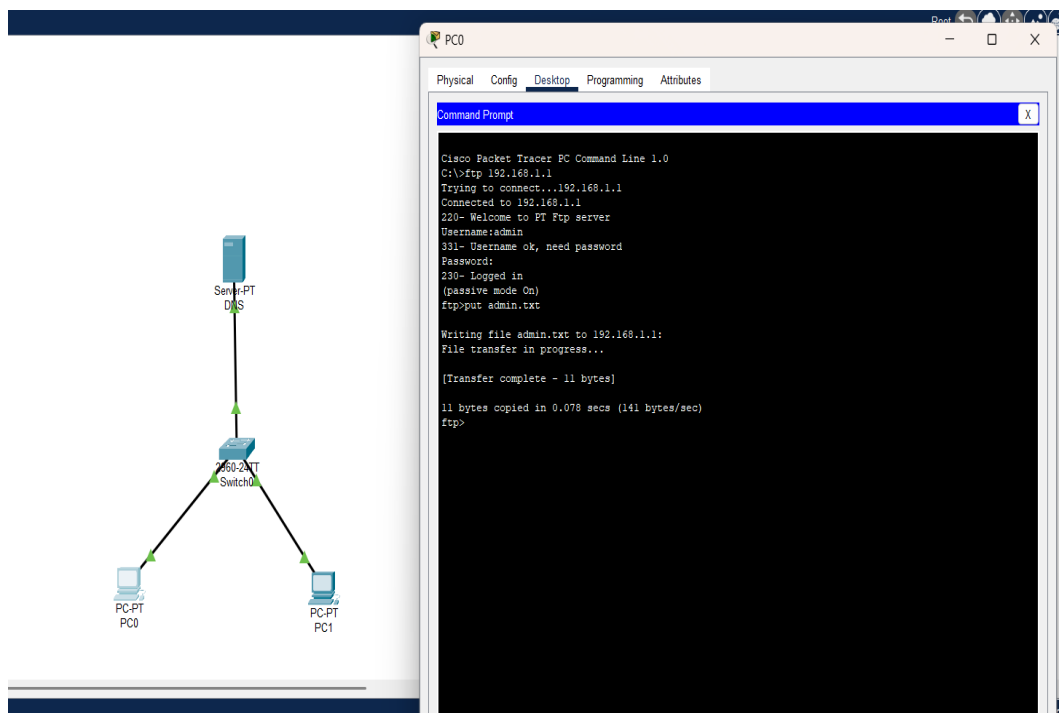
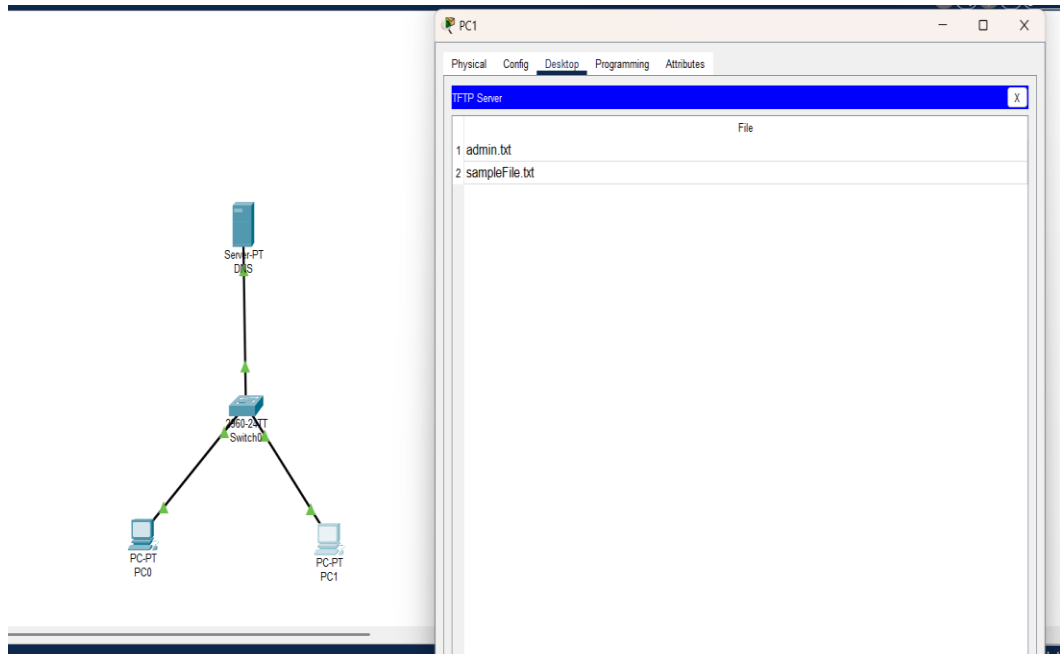
The image shows a network diagram on the left and the configuration window for PC0 on the right. The network diagram illustrates a central 260-24T Switch0 connected to a Server-PT DNS and three PC-PT devices (PC0, PC1, PC2). The PC0 configuration window is open to the 'Config' tab, specifically the 'IP Configuration' section for the FastEthernet0 interface. The IP Configuration is set to DHCP, with an IPv4 Address of 192.168.1.2, Subnet Mask of 255.255.255.0, Default Gateway of 0.0.0.0, and DNS Server of 0.0.0.0. The IPv6 Configuration is set to Static, with an IPv6 Address of FE80::260:3EFF:FE09:C6B1, Link Local Address of FE80::260:3EFF:FE09:C6B1, and Default Gateway of 0.0.0.0. The 802.1X Security section is also visible, with 'Use 802.1X Security' unchecked, Authentication set to MD5, and Username and Password fields empty.

- FTP:



The image shows a network diagram on the left and the configuration window for the DNS service on the right. The network diagram is identical to the one above, showing a central 260-24T Switch0 connected to a Server-PT DNS and three PC-PT devices (PC0, PC1, PC2). The DNS configuration window is open to the 'Services' tab, showing the 'FTP' service. The 'FTP' service is set to 'On'. The 'User Setup' section is visible, showing a table of users and their permissions. The table has columns for Username, Password, and Permission. The users listed are: 1 admin (password 123, permission RWDNL), 2 cisco (password cisco, permission RWDNL), 3 faculty (password 123, permission RWL), and 4 student (password 123, permission R). The 'File' section below the table lists several files, including admin.txt, asa842-k8.bin, asa923-k8.bin, c1841-advipservicesk9-mz.124-15.T1.bin, c1841-ipbase-mz.123-14.T7.bin, c1841-ipbasek9-mz.124-12.bin, and c1900-universalk9-mz.SPA.155-3.M4a.bin. The 'Remove' button is visible at the bottom right of the file list.

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