

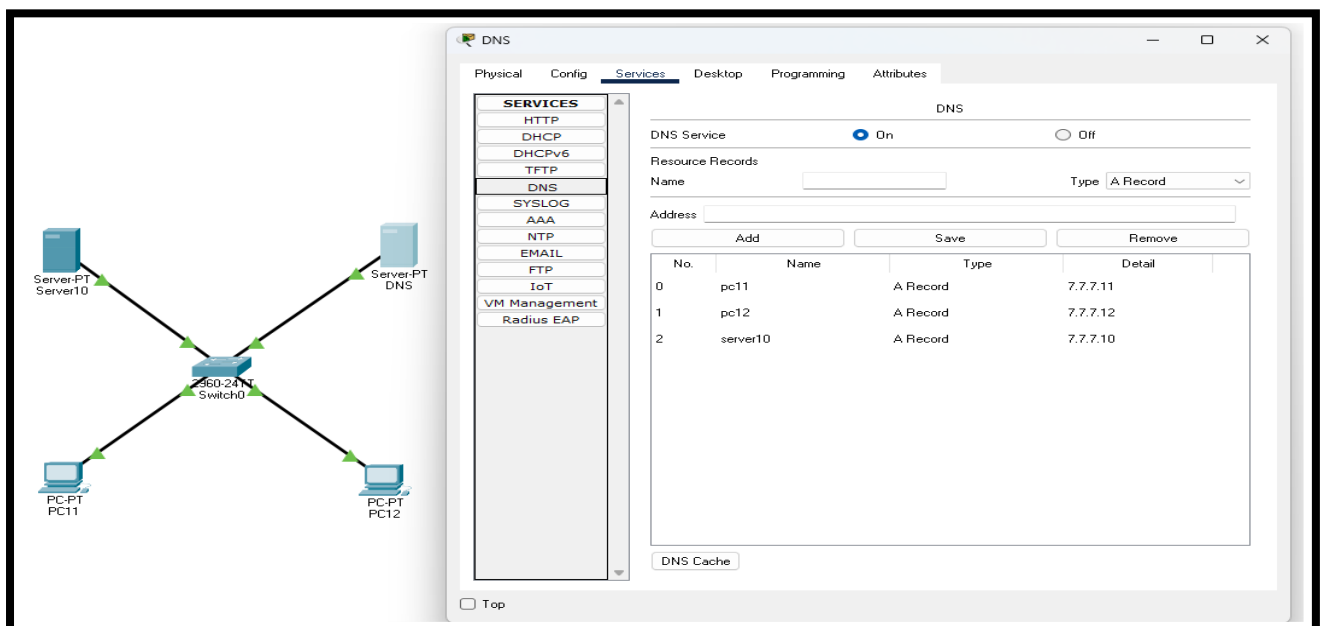
Date: 8/29/2025

Practical Assignment #07:

Study the application layer protocol DNS, DHCP, FTP.

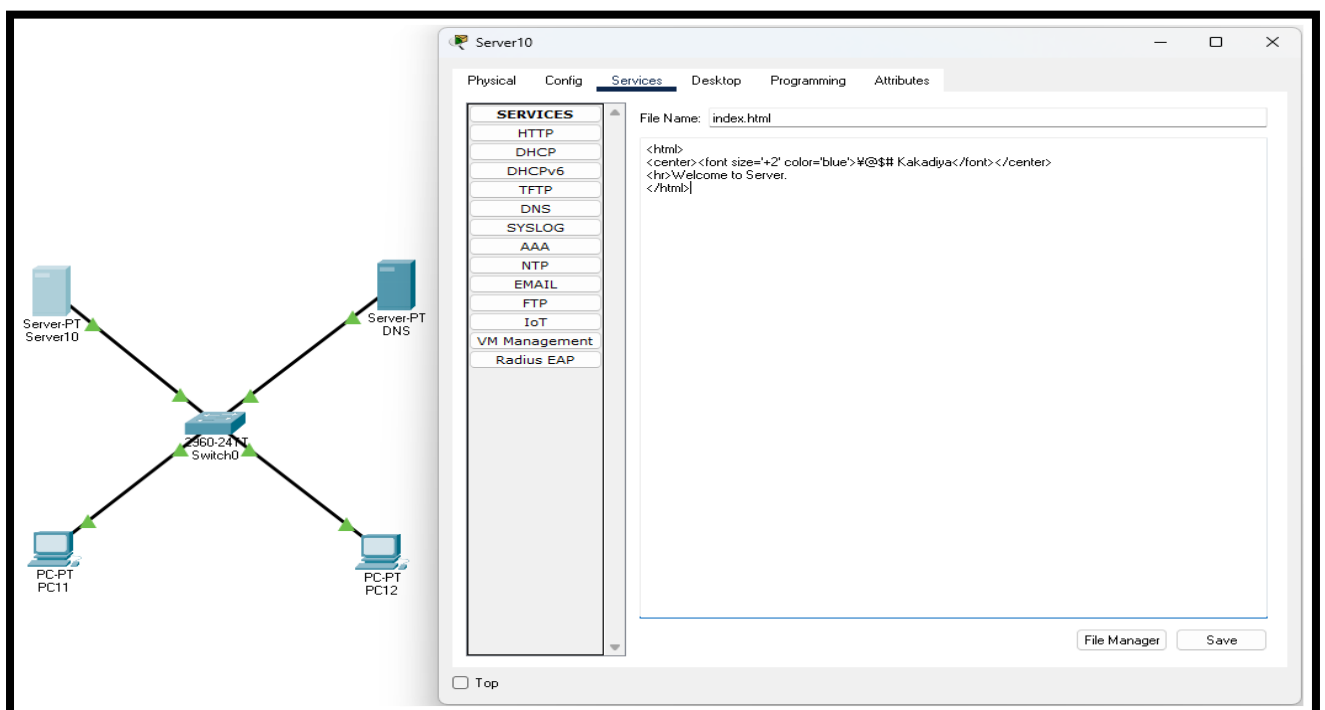
1. Implement the application layer protocol DNS, DHCP, and FTP. Also check connectivity between them using ping command or PDU utility.

a. DNS :



The network diagram shows a central 2960-24-T Switch0 connected to four devices: Server-PT Server10, Server-PT DNS, PC-PT PC11, and PC-PT PC12. The DNS configuration window for Server10 is shown with the following details:

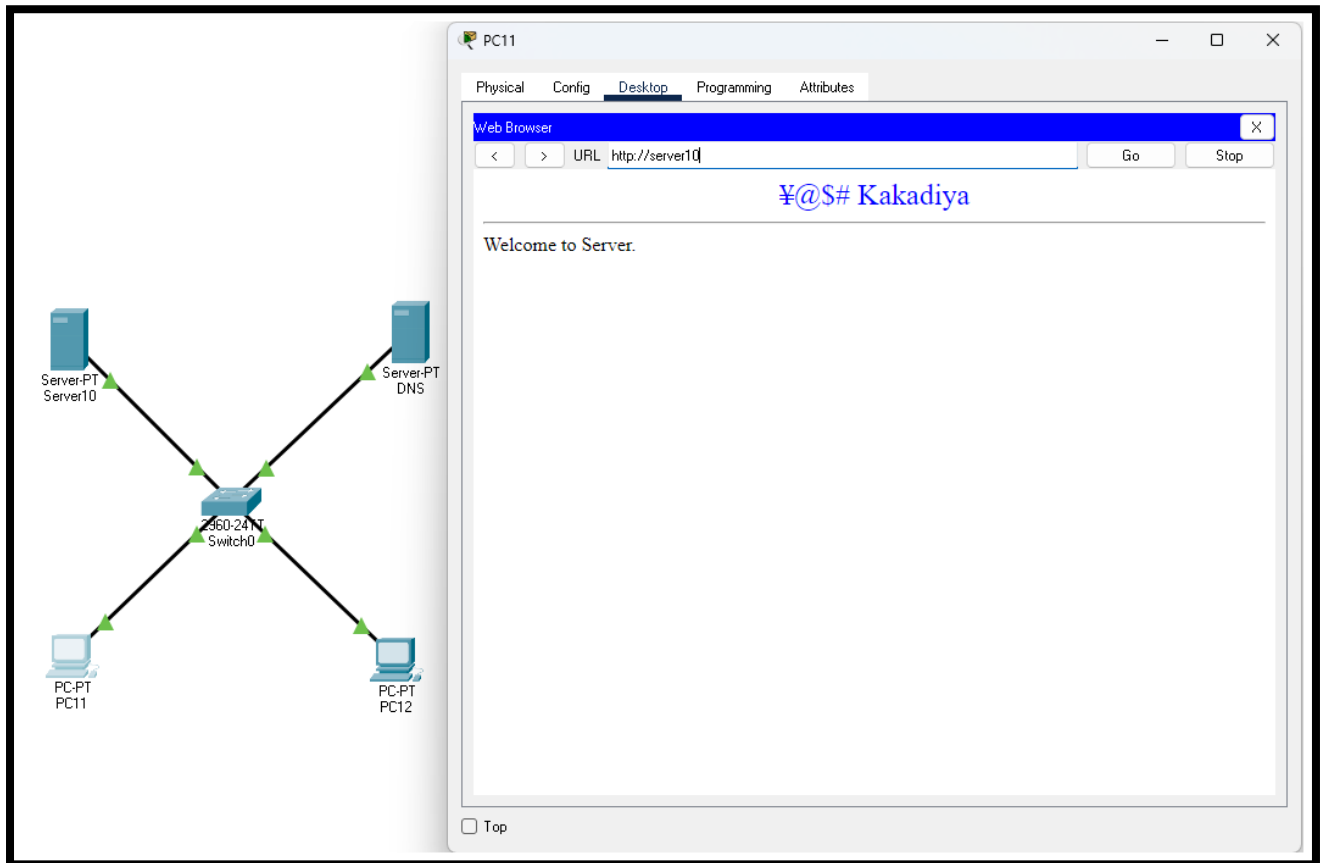
No.	Name	Type	Detail
0	pc11	A Record	7.7.7.11
1	pc12	A Record	7.7.7.12
2	server10	A Record	7.7.7.10



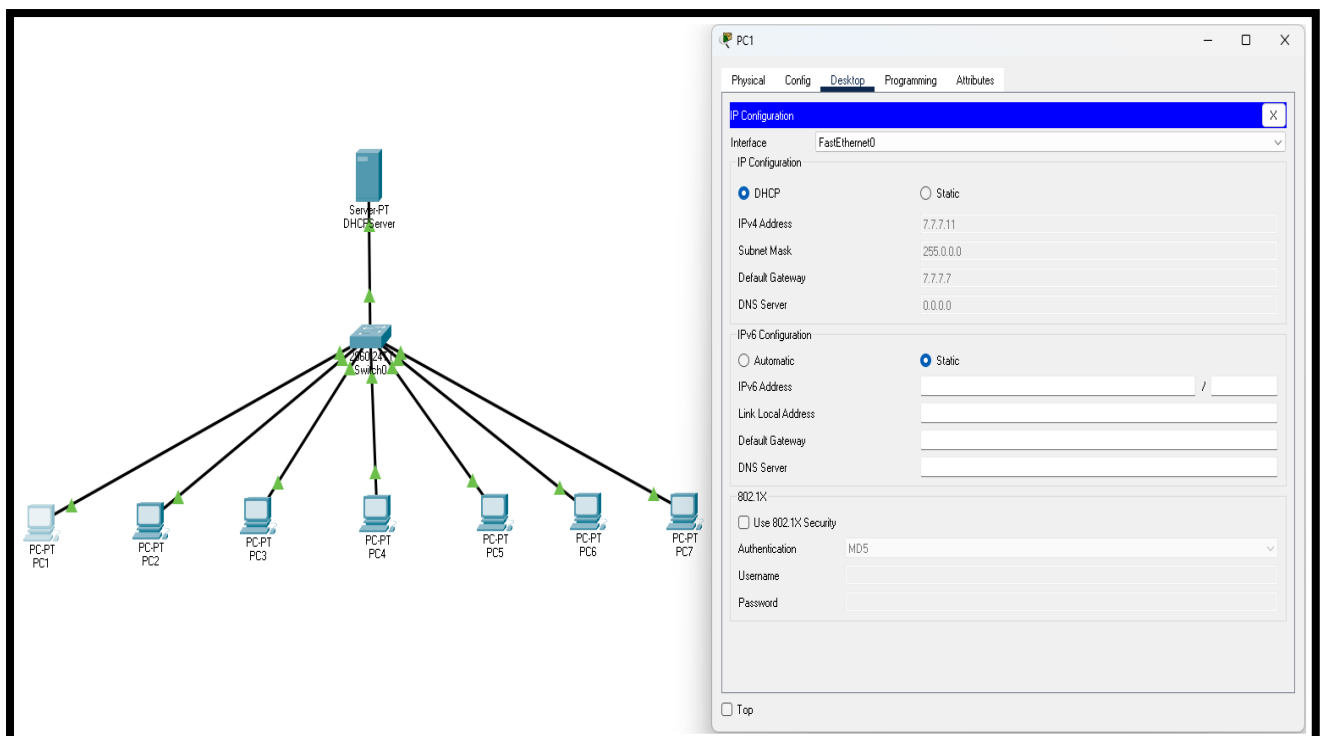
The network diagram is the same as above. The FTP configuration window for Server10 is shown with the following details:

```
<html>
<center><font size="+2" color="blue">Kakadiya</font></center>
<hr>Welcome to Server.
</html>
```

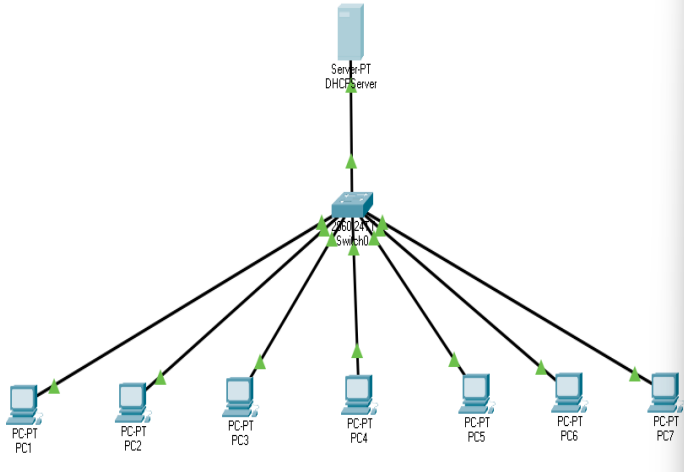
Date: 8/29/2025

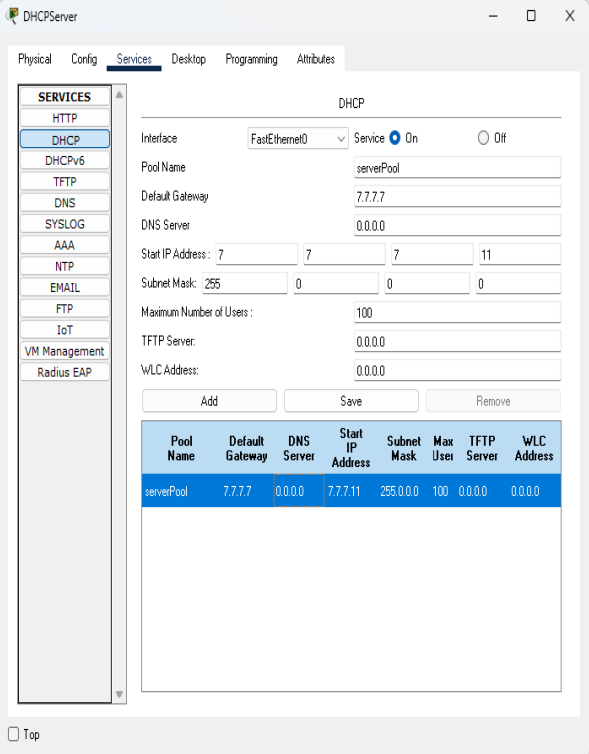


b. DHCP :



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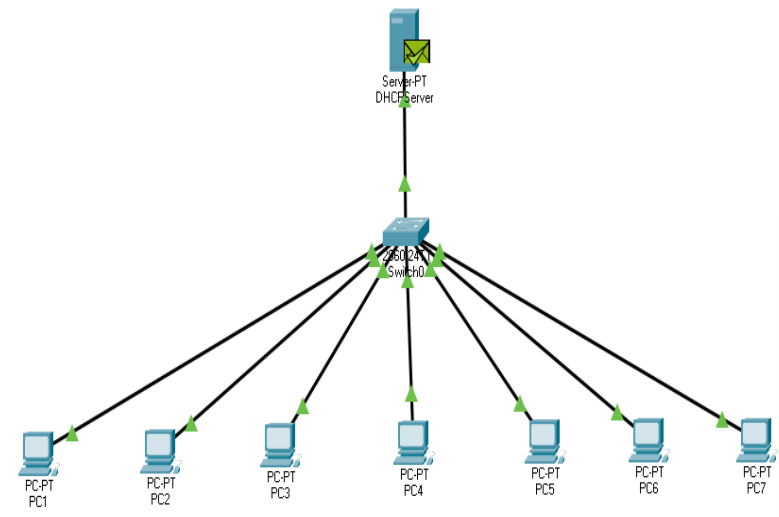


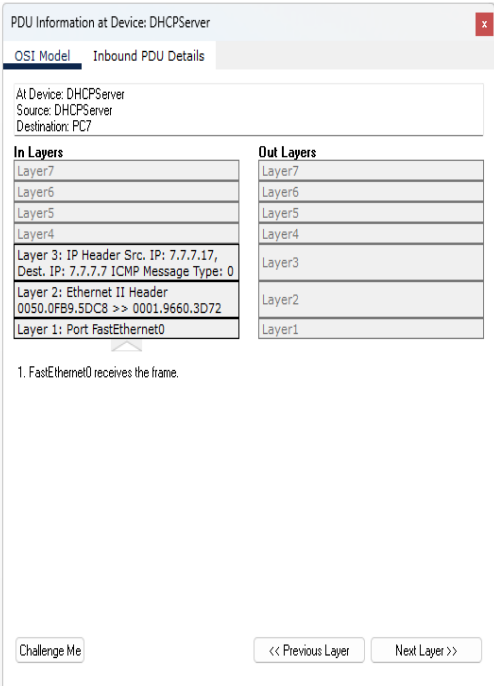


The DHCP Server configuration window shows the following settings:

- Interface:** FastEthernet0
- Service:** On
- Pool Name:** serverPool
- Default Gateway:** 7.7.7.7
- DNS Server:** 0.0.0.0
- Start IP Address:** 7.7.7.11
- Subnet Mask:** 255.0.0.0
- Maximum Number of Users:** 100
- TFTP Server:** 0.0.0.0
- WLC Address:** 0.0.0.0

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	7.7.7.7	0.0.0.0	7.7.7.11	255.0.0.0	100	0.0.0.0	0.0.0.0





The PDU Information window shows the following details:

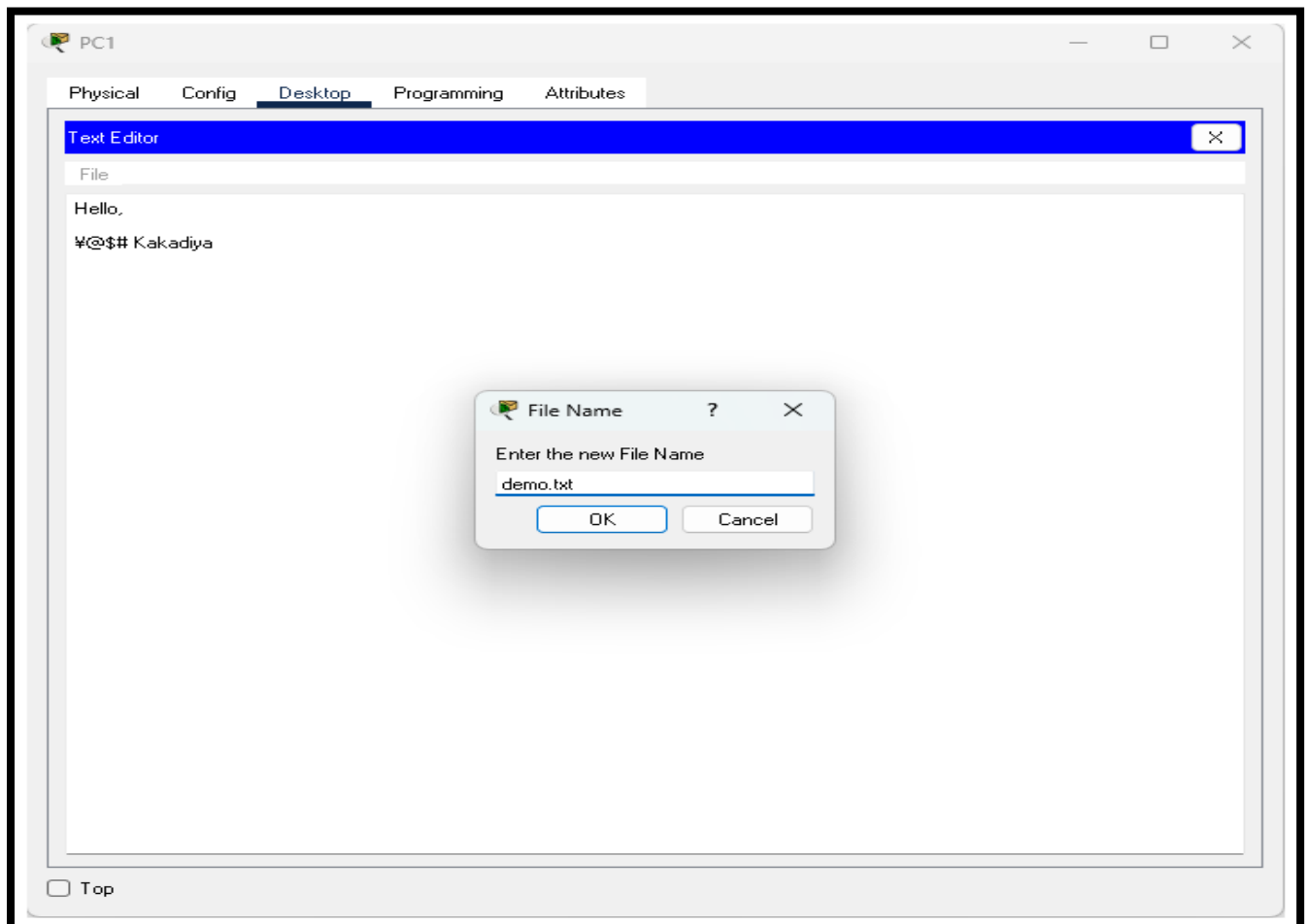
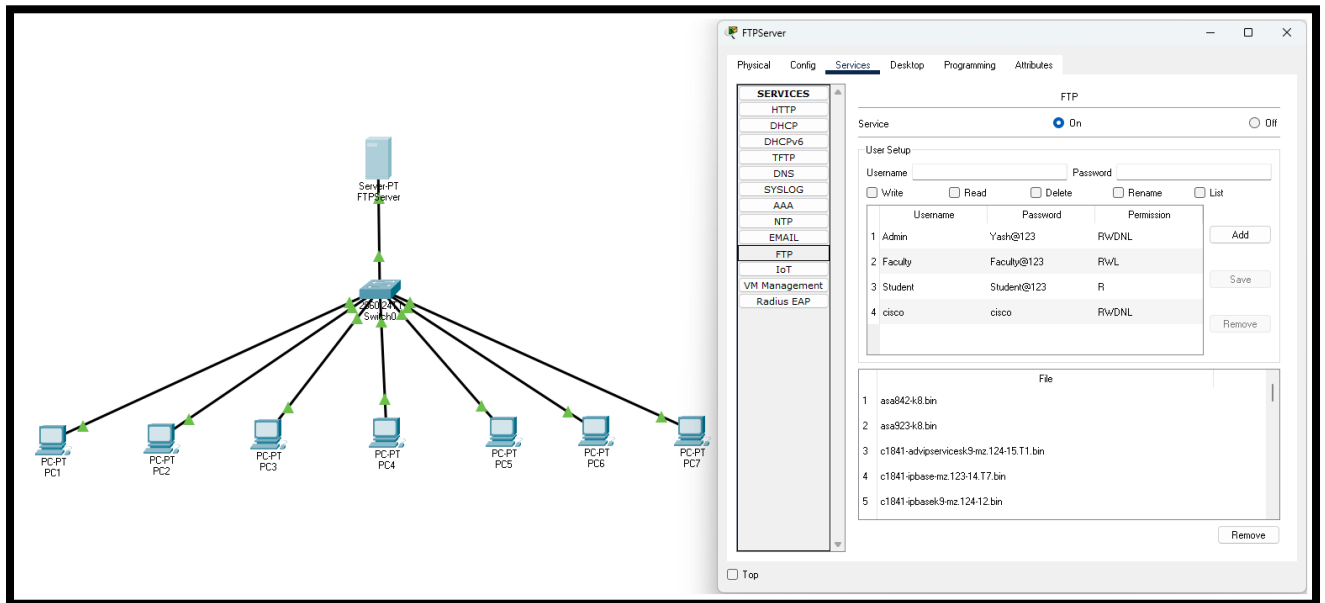
- At Device:** DHCP Server
- Source:** DHCP Server
- Destination:** PC7

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3: IP Header Src: IP: 7.7.7.17, Dest: IP: 7.7.7.7 ICMP Message Type: 0	Layer3
Layer2: Ethernet II Header 0050.0FB9.5DC8 >> 0001.9660.3D72	Layer2
Layer1: Port FastEthernet0	Layer1

1. FastEthernet0 receives the frame.

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c. FTP :



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```
C:\>ftp 7.7.7.7
Trying to connect...7.7.7.7
Connected to 7.7.7.7
220- Welcome to FT Ftp server
Username:Admin
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir

Listing /ftp directory from 7.7.7.7:
 0  : asa842-k8.bin                      5571584
 1  : asa923-k8.bin                      30468096
 2  : cl841-advipservicesk9-mz.124-15.T1.bin  33591768
 3  : cl841-ipbase-mz.123-14.T7.bin        13832032
 4  : cl841-ipbasek9-mz.124-12.bin        16599160
 5  : cl900-universalk9-mz.SPA.155-3.M4a.bin  33591768
 6  : c2600-advipservicesk9-mz.124-15.T1.bin  33591768
 7  : c2600-i-mz.122-28.bin              5571584
 8  : c2600-ipbasek9-mz.124-8.bin        13168700
 9  : c2800nm-advipservicesk9-mz.124-15.T1.bin  50938004
10  : c2800nm-advipservicesk9-mz.151-4.M4.bin  33591768
11  : c2800nm-ipbase-mz.123-14.T7.bin      5571584
12  : c2800nm-ipbasek9-mz.124-8.bin        15522644
13  : c2900-universalk9-mz.SPA.155-3.M4a.bin  33591768
14  : c2950-16q412-mz.121-22.EA4.bin      3058048
15  : c2950-16q412-mz.121-22.EA8.bin      3117390
16  : c2960-lanbase-mz.122-25.FX.bin       4414921
17  : c2960-lanbase-mz.122-25.SEE1.bin     4670455
18  : c2960-lanbasek9-mz.150-2.SE4.bin     4670455
19  : c3560-advipservicesk9-mz.122-37.SE1.bin  8662192
20  : c3560-advipservicesk9-mz.122-46.SE.bin  10713279
21  : c800-universalk9-mz.SPA.152-4.M4.bin  33591768
22  : c800-universalk9-mz.SPA.154-3.M6a.bin  83029236
23  : cat3k_caa-universalk9.16.03.02.SPA.bin  505532849
24  : cgr1000-universalk9-mz.SPA.154-2.CG  159487552
25  : cgr1000-universalk9-mz.SPA.156-3.CG  184530138
26  : hello.txt                          19
27  : ir800-universalk9-bundle.SPA.156-3.M.bin  160968869
28  : ir800-universalk9-mz.SPA.155-3.M      61750062
29  : ir800-universalk9-mz.SPA.156-3.M      63753767
30  : ir800_yocto-1.7.2.tar              2877440
31  : ir800_yocto-1.7.2_python-2.7.3.tar  6912000
32  : pt1000-i-mz.122-28.bin              5571584
33  : pt3000-16q412-mz.121-22.EA4.bin      3117390
ftp>put demo.txt

Writing file demo.txt to 7.7.7.7:
File transfer in progress...

[Transfer complete - 23 bytes]

23 bytes copied in 0.083 secs (277 bytes/sec)
ftp>|
```

```
C:\>ftp 7.7.7.7
Trying to connect...7.7.7.7
Connected to 7.7.7.7
220- Welcome to FT Ftp server
Username:Admin
331- Username ok, need password
Password:
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19  : c3560-advipservicesk9-mz.122-37.SE1.bin  8662192
20  : c3560-advipservicesk9-mz.122-46.SE.bin  10713279
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