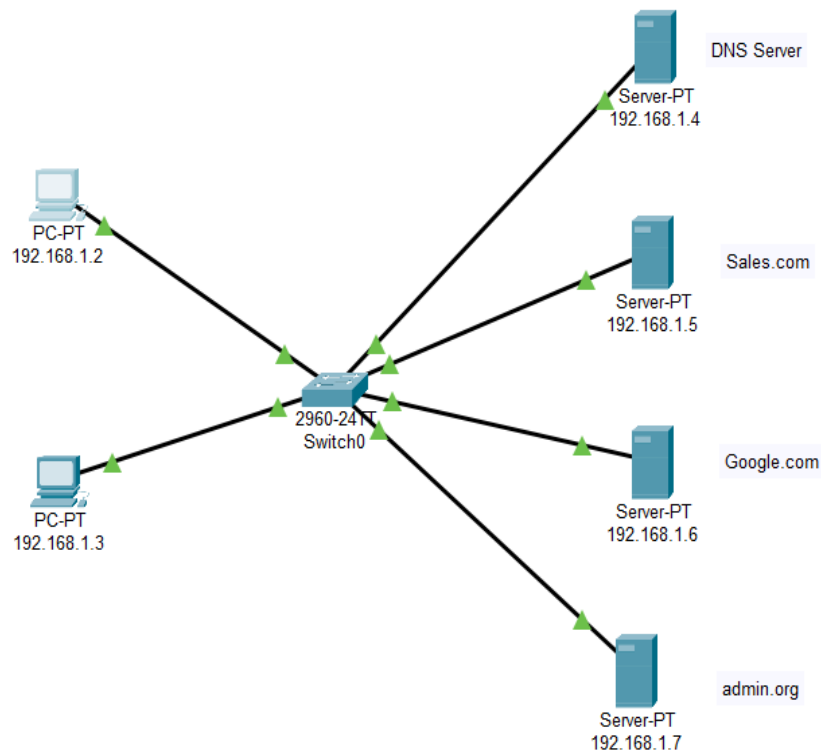


Date: 29/08/2025**Lab Practical #07:**

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.

1) DNS :-



Date: 29/08/2025

192.168.1.4

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DNS

DNS Service ☒ On ☐ Off

Resource Records

Name Type **A Record**

Address

No.	Name	Type	Detail
0	admin.org	A Record	192.168.1.7
1	google.com	A Record	192.168.1.6
2	sales.com	A Record	192.168.1.5

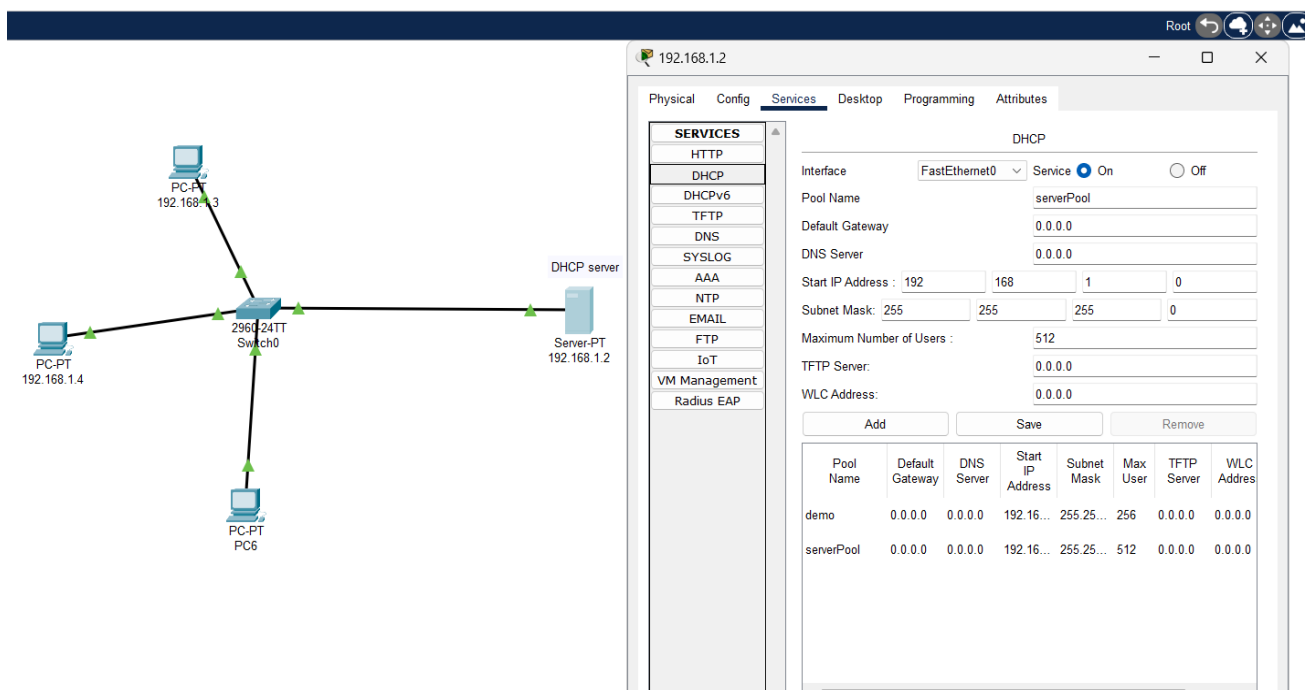
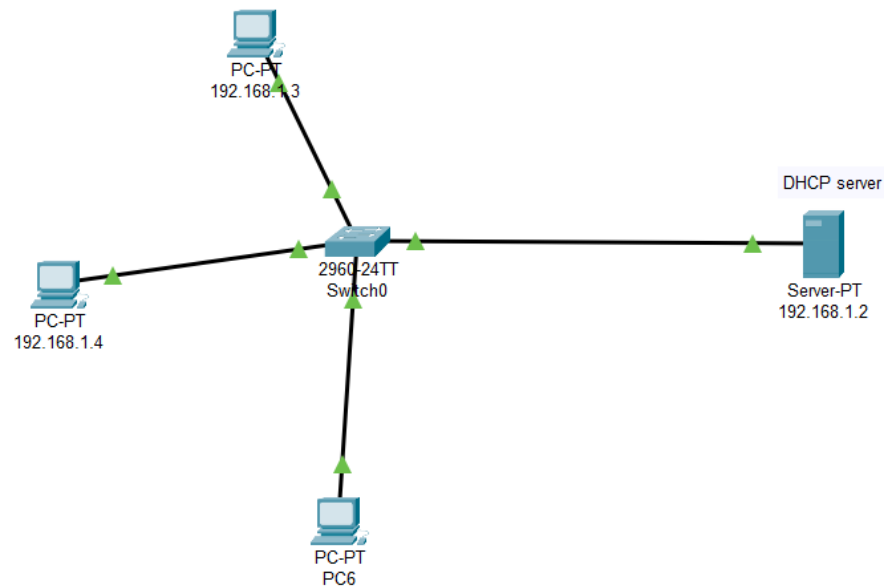
192.168.1.2

Physical Config **Desktop** Programming Attributes

Web Browser

< > URL

Hello from google

Date: 29/08/2025**2) DHCP :-**

The screenshot displays the DHCP configuration window for the 'serverPool' on the DHCP server (192.168.1.2). The configuration is as follows:

Interface	Service
FastEthernet0	On

Pool Name: serverPool

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

Start IP Address: 192.168.1.0

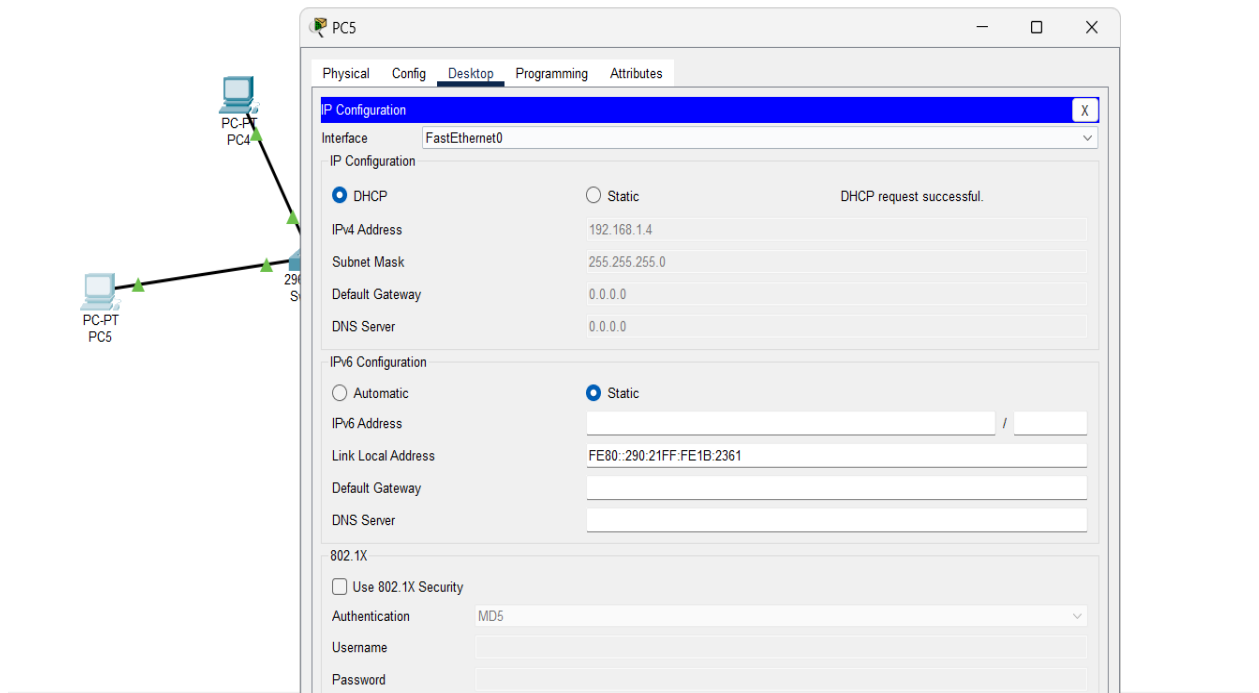
Subnet Mask: 255.255.255.0

Maximum Number of Users: 512

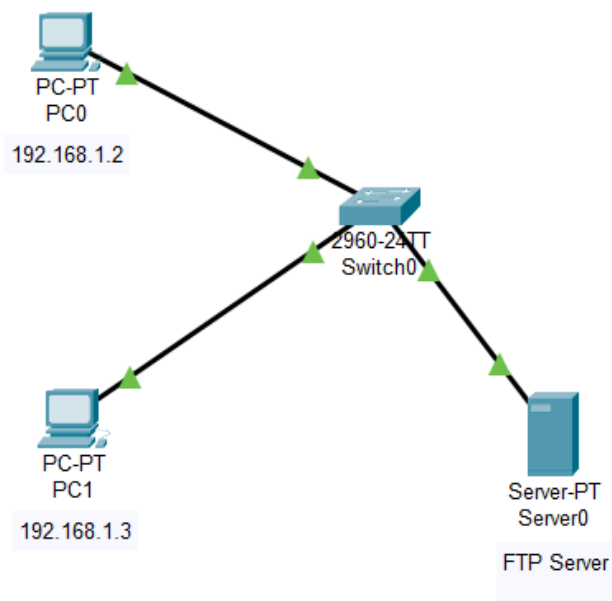
TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

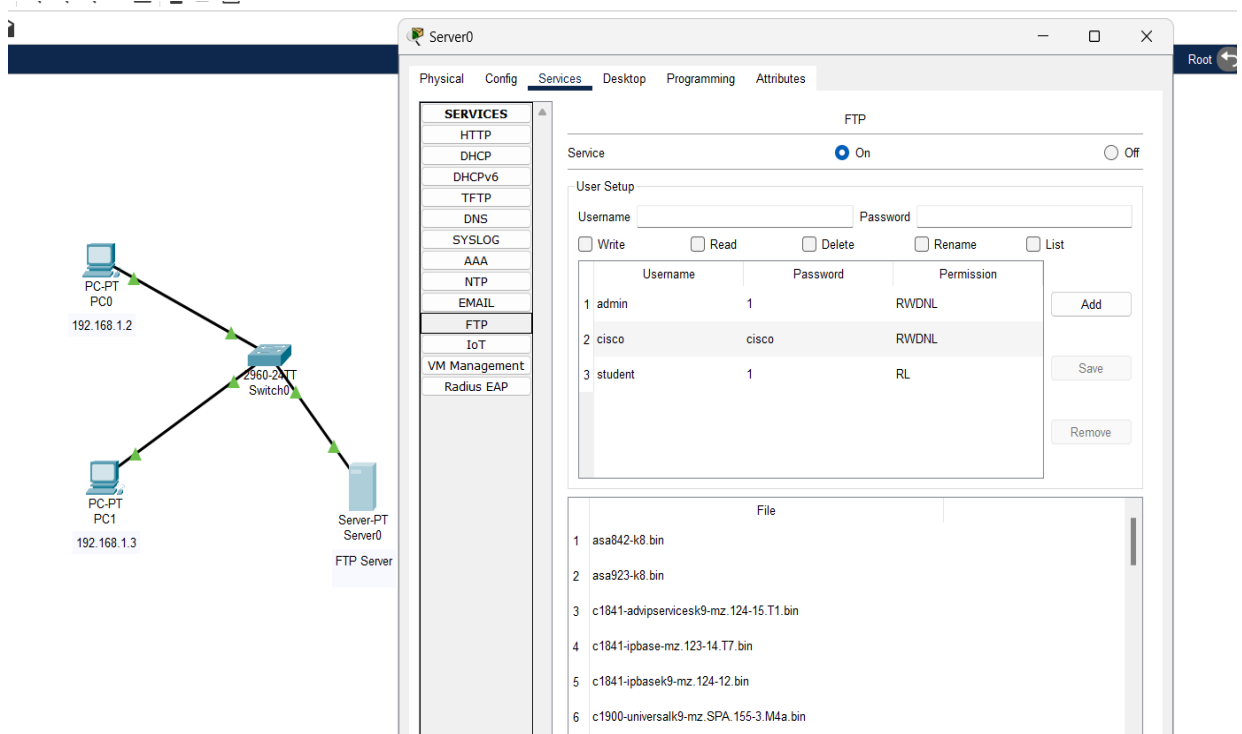
Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
demo	0.0.0.0	0.0.0.0	192.16...	255.25...	256	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	192.16...	255.25...	512	0.0.0.0	0.0.0.0

Date: 29/08/2025

3) FTP :-



Date: 29/08/2025



The image shows a network diagram on the left and the configuration of a Cisco IOS Server (Server0) on the right.

Network Diagram:

- PC-PT PC0 (192.168.1.2) is connected to a 2960-24TT Switch.
- PC-PT PC1 (192.168.1.3) is connected to the same switch.
- The switch is connected to Server-PT Server0.
- Server0 is configured as an FTP Server.

Server0 Configuration (Services Tab):

The **SERVICES** list includes: HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, EMAIL, **FTP**, IoT, VM Management, and Radius EAP.

The **FTP** service is set to **On**.

User Setup:

Username	Password	Permission
1 admin	1	RWDNL
2 cisco	cisco	RWDNL
3 student	1	RL

File List:

- 1 asa842-k8.bin
- 2 asa923-k8.bin
- 3 c1841-advipservicesk9-mz.124-15.T1.bin
- 4 c1841-ipbase-mz.123-14.T7.bin
- 5 c1841-ipbasek9-mz.124-12.bin
- 6 c1900-universalk9-mz.SPA.155-3.M4a.bin

```
ftp>dir
Listing /ftp directory from 192.168.1.8:
 0  : asa842-k8.bin                    5571584
 1  : asa923-k8.bin                    30468096
 2  : c1841-advipservicesk9-mz.124-15.T1.bin  33591768
 3  : c1841-ipbase-mz.123-14.T7.bin    13832032
 4  : c1841-ipbasek9-mz.124-12.bin    16599160
 5  : c1900-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      13169700
 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-i6q4l2-mz.121-22.EA4.bin   3058048
15  : c2950-i6q4l2-mz.121-22.EA8.bin   3117390
16  : c2960-lanbase-mz.122-25.FX.bin    4414921
17  : c2960-lanbase-mz.122-25.SE1.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.SE1.bin  10713279
21  : c8000-universalk9-mz.SPA.152-4.M4.bin  33591768
22  : c8000-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  : ir800-universalk9-bundle.SPA.156-3.M.bin  160968869
27  : ir800-universalk9-mz.SPA.155-3.M    61750062
28  : ir800-universalk9-mz.SPA.156-3.M    63753767
29  : ir800-yocto-1.7.2.tar             2877440
30  : ir800-yocto-1.7.2.python-2.7.3.tar  6912000
31  : pt1000-i-mz.122-28.bin            5571584
32  : pt3000-i6q4l2-mz.121-22.EA4.bin    3117390
ftp>put demo.txt
Writing file demo.txt to 192.168.1.8:
File transfer in progress...
[Transfer complete - 9 bytes]
9 bytes copied in 0.047 secs (191 bytes/sec)
ftp>
```

Date: 29/08/2025

