Q. Demonstrate FTP Server in Packet Tracer.

Aim: To configure an FTP server and test file transfer between server and clients in the network.
Devices Needed:
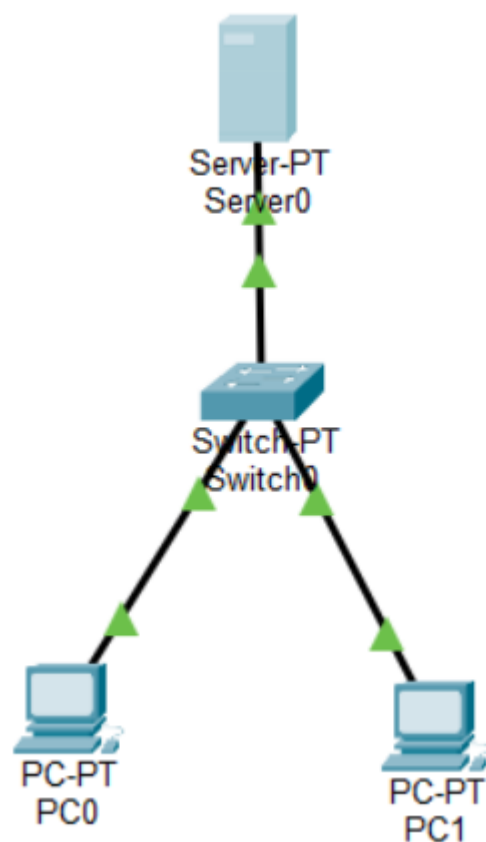1 Server (FTP Server)
1 Switch
2 PCs (FTP Clients)
Connection :
Connect all devices to the switch using copper straight-through cables

Topology:

Code:
Server Configuration (FTP):
1.Click on Server → Services tab → FTP
2.FTP Server Settings:
oFTP Service: ON

3.Add User Account:
oUsername: admin
oPassword: cisco

oCheck all permissions: Read/Write/List/Delete/Rename

oClick Add
Server IP Configuration:
IP Address: 192.168.1.5
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.1
PC1 Configuration:

IP Address: 192.168.1.10
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.1
PC2 Configuration:
IP Address: 192.168.1.11
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.1
 Create Test File on PC1
1.Click on PC1 → Desktop tab → Text Editor
2.Type: This is a test file for FTP transfer
3.Save as: upload_test.txt
Verification: In PC Command Prompt
PC1 FTP Commands:
C:\>ftp 192.168.1.5
Username: admin
Password: cisco
ftp> dir
ftp> put upload_test.txt
ftp> dir
ftp> get welcome.txt
ftp> delete notes.txt
ftp> quit

PC2 FTP Commands:
C:\>ftp 192.168.1.5
Username: admin
Password: cisco
ftp> dir
ftp> get upload_test.txt
ftp> rename upload_test.txt downloaded_file.txt
ftp> dir
ftp> quit
Ping Test (Both PCs):
C:\>ping 192.168.1.5

PC1 FTP Session:

Output:

```
C:\>ftp 192.168.1.5
Trying to connect...192.168.1.5
Connected to 192.168.1.5
220- Welcome to PT Ftp server
Username:admin
331- Username ok, need password
Password:*****
230- Logged in
(passive mode On)
ftp>dir
```

```
33  : notes_text.txt                              24
34  : pt1000-i-mz.122-28.bin                       5571584
35  : pt3000-i6q4l2-mz.121-22.EA4.bin              3117390
36  : upload_text.txt                             37
37  : welcome_text.txt                            26
```

```
ftp>put upload_text.txt

Writing file upload_text.txt to 192.168.1.5:
File transfer in progress...

[Transfer complete - 36 bytes]

36 bytes copied in 0.021 secs (1714 bytes/sec)
ftp>put welcome.txt
```

```
ftp>dir

Listing /ftp directory from 192.168.1.5:
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.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   : ie9k_iosxe.17.09.04.SPA.bin                  596133776
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   : ir8340-mono-universalk9_iot.17.08.01a.SPA.pkg  685645824
33   : notes_text.txt                               24
34   : pt1000-i-mz.122-28.bin                       5571584
35   : pt3000-i6q4l2-mz.121-22.EA4.bin              3117390
36   : upload_text.txt                              36
37   : welcome.txt                                  25
38   : welcome_text.txt                             26
```

```
ftp>get welcome.txt

Reading file welcome.txt from 192.168.1.5:
File transfer in progress...

[Transfer complete - 25 bytes]

25 bytes copied in 0 secs
```

```
ftp>delete notes.txt

Deleting file notes.txt from 192.168.1.5: ftp>
[Deleted file notes.txt successfully ]
```

```
ftp>quit

221- Service closing control connection.
```

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Ping Test Results:

```
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time=1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

PC2 FTP Session:

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```
C:\>ftp 192.168.1.5
Trying to connect...192.168.1.5
Connected to 192.168.1.5
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Username:admin
331- Username ok, need password
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230- Logged in
(passive mode On)
ftp>dir

Listing /ftp directory from 192.168.1.5:
```

```
31  : ir800_yocto-1.7.2_python-2.7.3.tar              6912000
32  : ir8340-mono-universalk9_iot.17.08.01a.SPA.pkg   685645824
33  : notes_text.txt                                  24
34  : pt1000-i-mz.122-28.bin                          5571584
35  : pt3000-i6q4l2-mz.121-22.EA4.bin                 3117390
36  : upload_text.txt                                 36
37  : welcome.txt                                     25
38  : welcome_text.txt                                26
```

```
ftp>get upload_text.txt

Reading file upload_text.txt from 192.168.1.5:
File transfer in progress...

[Transfer complete - 37 bytes]

37 bytes copied in 0 secs
```

```
ftp>rename upload_text.txt downloaded_text.txt

Renaming upload_text.txt
ftp>
[OK Renamed file successfully from upload_text.txt to downloaded_text.txt]
```

```
ftp>dir

Listing /ftp directory from 192.168.1.5:
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1   : asa923-k8.bin                           30468096
2   : c1841-advipservicesk9-mz.124-15.T1.bin  33591768
3   : c1841-ipbase-mz.123-14.T7.bin           13832032
```

```
25  : cgr1000-universalk9-mz.SPA.156-3.CG             184530138
26  : downloaded_text.txt                            37
27  : ie9k_iosxe.17.09.04.SPA.bin                     596133776
28  : ir800-universalk9-bundle.SPA.156-3.M.bin        160968869
29  : ir800-universalk9-mz.SPA.155-3.M                61750062
30  : ir800-universalk9-mz.SPA.156-3.M                63753767
31  : ir800_yocto-1.7.2.tar                           2877440
32  : ir800_yocto-1.7.2_python-2.7.3.tar              6912000
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34  : notes_text.txt                                  24
35  : pt1000-i-mz.122-28.bin                          5571584
36  : pt3000-i6q4l2-mz.121-22.EA4.bin                 3117390
37  : welcome.txt                                     25
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```
ftp>quit

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Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

Conclusion: The FTP server has been configured successfully

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