

COMPUTER NETWORKS ASSIGNMENT 8

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Batch: A1

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Aim: Installation and Configuration of FTP server and access it through FTP Client

Objective: To understand and implement the installation and configuration of FTP server .

Theory:

FTP:

File Transfer Protocol (FTP) is a standard Internet protocol for transmitting files between computers on the Internet over TCP/IP connections. FTP is a client-server protocol where a client will ask for a file, and a local or remote server will provide it.

The end-users machine is typically called the local host machine, which is connected via the internet to the remote host—which is the second machine running the FTP software.

Anonymous FTP is a type of FTP that allows users to access files and other data without needing an ID or password. Some websites will allow visitors to use a guest ID or password- anonymous FTP allows this.

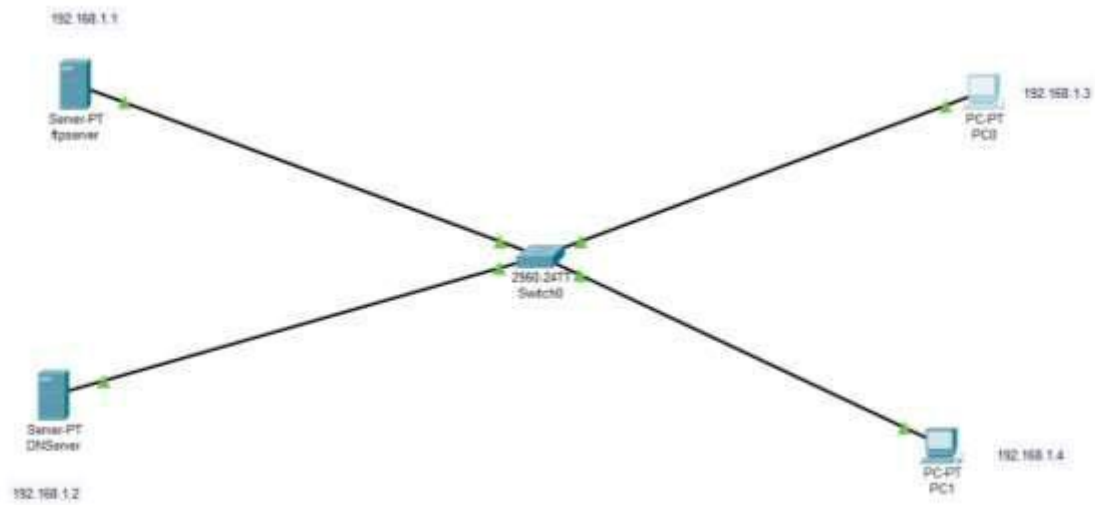
Although a lot of file transfer is now handled using HTTP, FTP is still commonly used to transfer files "behind the scenes" for other applications -- e.g., hidden behind the user interfaces of banking, a service that helps build a website, such as Wix or SquareSpace, or other services. It is also used, via Web browsers, to download new applications

How FTP works

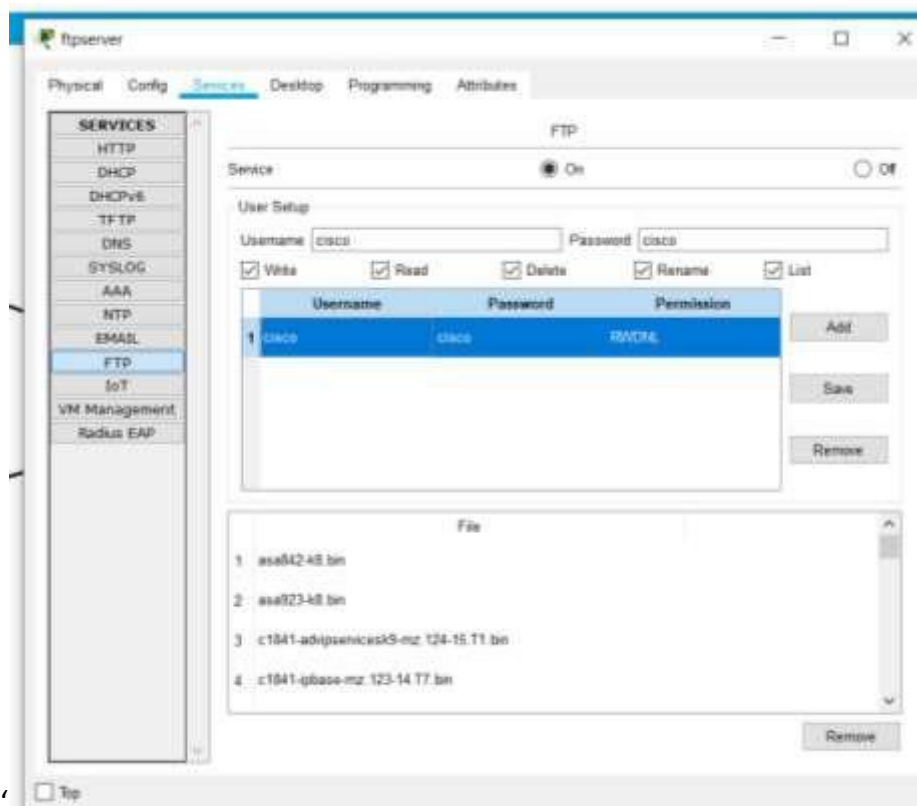
FTP is a client-server protocol that relies on two communications channels between client and server: a command channel for controlling the conversation and a data channel for transmitting file content. Clients initiate conversations with servers by requesting to download a file. Using FTP, a client can upload, download, delete, rename, move and copy files on a server. A user typically needs to log on to the FTP server, although some servers make some or all of their content available without login, known as anonymous FTP.

FTP sessions work in passive or active modes.

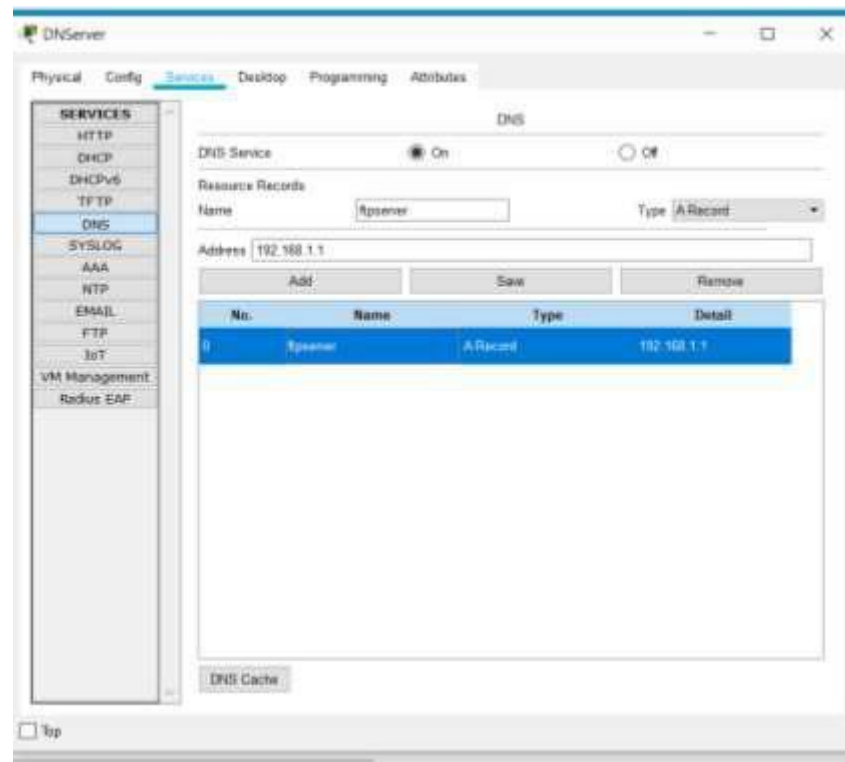
Network Diagram:



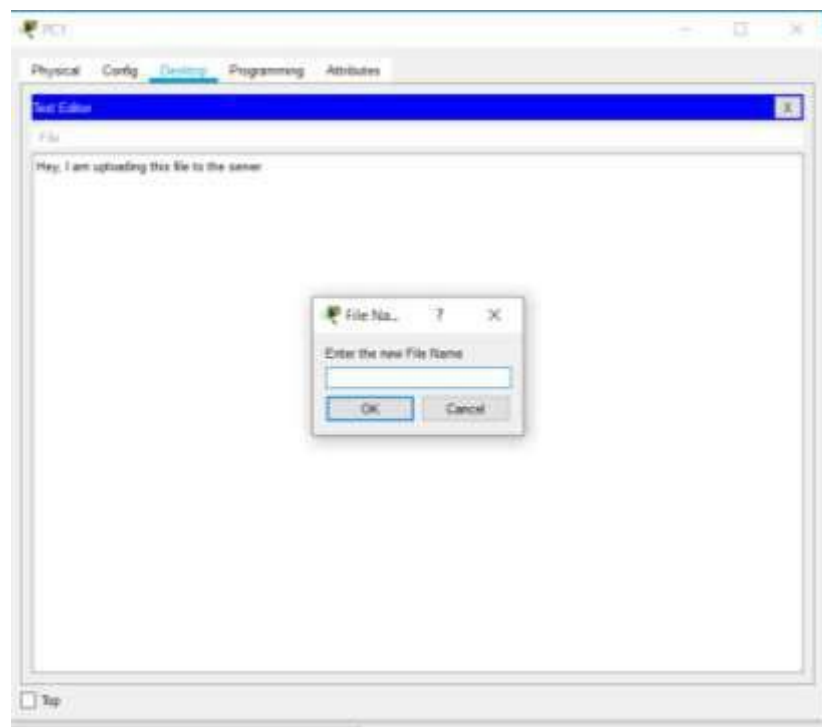
Setting up FTP server:



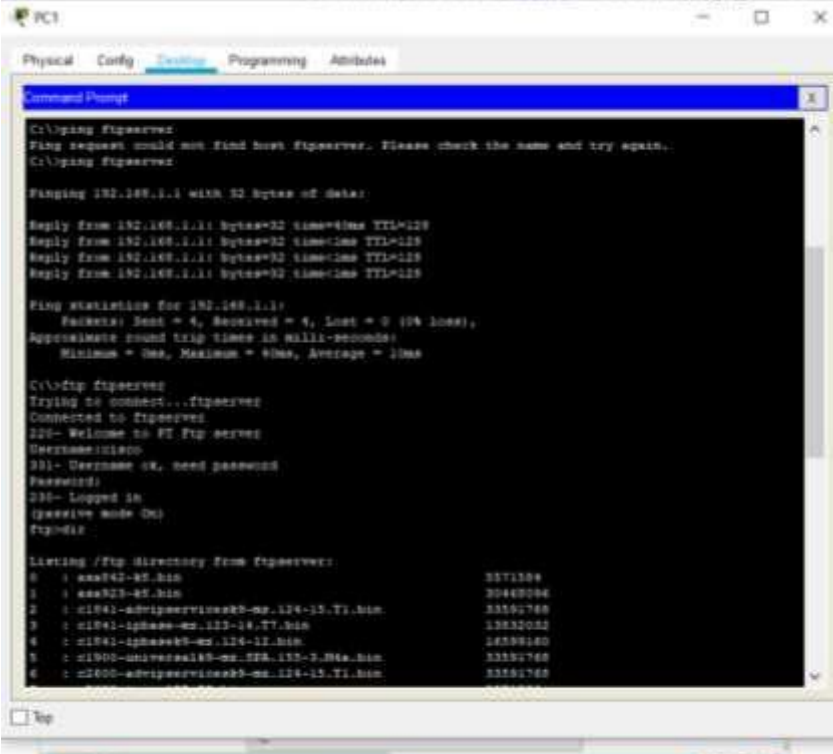
Setting up DNS server:



Saving File on client side:



Uploading File to the Server:



```
PC1
Physical Config Terminal Programming Attributes

Command Prompt

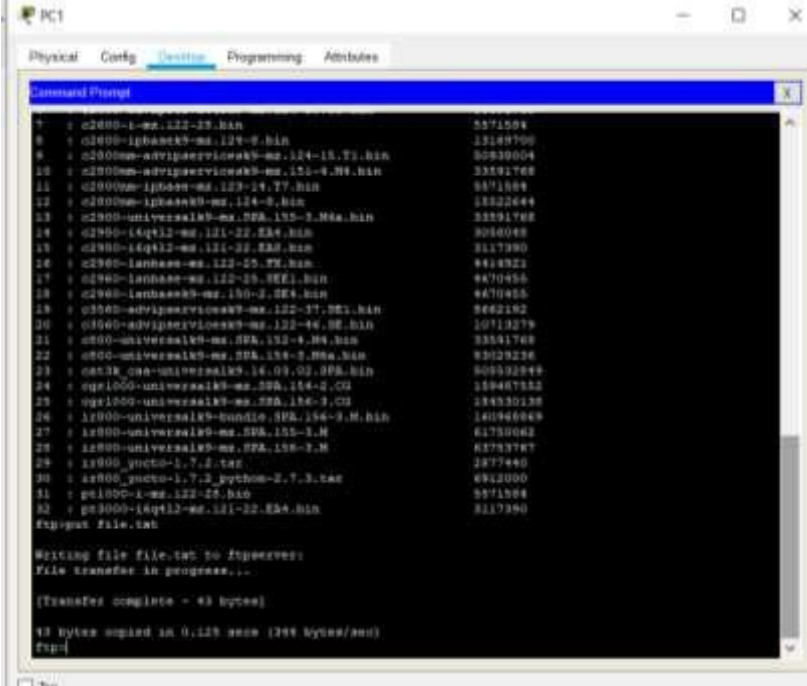
C:\>ping ftpserver
Pinging ftpserver [192.168.1.1] with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=40ms TTL=125
Reply from 192.168.1.1: bytes=32 time=40ms TTL=125
Reply from 192.168.1.1: bytes=32 time=40ms TTL=125
Reply from 192.168.1.1: bytes=32 time=40ms TTL=125

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 40ms, Maximum = 40ms, Average = 40ms

C:\>ftp ftpserver
Trying to connect...ftpserver
Connected to ftpserver.
220- Welcome to FT Ftp server
Username:miso00
331- Username ok, need password
Password:
230- Logged in
(guest mode On)
ftp>ls

Listing /ftp directory from ftpserver:
  0  : aax842-25.bin                3371384
  1  : aax823-25.bin                20443096
  2  : c1841-advipaervices9-mx.124-15.T1.bin  3356768
  3  : c1841-igbase-mx.123-14.T7.bin  13832032
  4  : c1841-igbase9-mx.124-11.bin  14588160
  5  : c1900-universalk9-mx.SPA.155-3.M4a.bin  3356768
  6  : c2000-advipaervices9-mx.124-15.T1.bin  3356768
```

File uploaded to the server:



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PC1
Physical Config Terminal Programming Attributes

Command Prompt

7  : c2000-1-mx.122-13.bin          5571584
8  : c2000-igbase9-mx.124-9.bin     13148700
9  : c2000m-advipaervices9-mx.124-15.T1.bin  30930004
10 : c2000m-advipaervices9-mx.151-4.N4.bin  33591768
11 : c2000m-igbase-mx.123-14.T7.bin  5571584
12 : c2000m-igbase9-mx.124-9.bin    13322644
13 : c2000-universalk9-mx.SPA.155-3.M4a.bin  33591768
14 : c2000-14qtl2-mx.121-22.EAa.bin  2050048
15 : c2000-14qtl2-mx.121-22.EAa.bin  2117390
16 : c2000-1annae9-mx.122-15.TX.bin  4418323
17 : c1940-1annae9-mx.122-15.XE1.bin  4470456
18 : c1940-1annae9-mx.150-3.XE4.bin  4470456
19 : c1840-advipaervices9-mx.122-17.SB1.bin  9662192
20 : c1840-advipaervices9-mx.122-16.SB1.bin  10713276
21 : c800-universalk9-mx.SPA.154-3.M4a.bin  3356768
22 : c800-universalk9-mx.SPA.154-3.M4a.bin  3356768
23 : c800k_9a-universalk9.14.03.02.SPA.bin  80633244
24 : c91000-universalk9-mx.SPA.154-2.CO  189487552
25 : c91000-universalk9-mx.SPA.154-3.CO  184330128
26 : 1x900-universalk9-bundle.SPA.154-3.M4a.bin  140946048
27 : 1x900-universalk9-mx.SPA.155-1.M  61750082
28 : 1x900-universalk9-mx.SPA.155-1.M  61753767
29 : 1x900_gueto-1.7.1.tar          2877440
30 : 1x900_gueto-1.7.3_python-2.7.3.tar  4912000
31 : ps1800-1-mx.122-23.bin         5571584
32 : ps3000-14qtl2-mx.121-22.EAa.bin  2117390

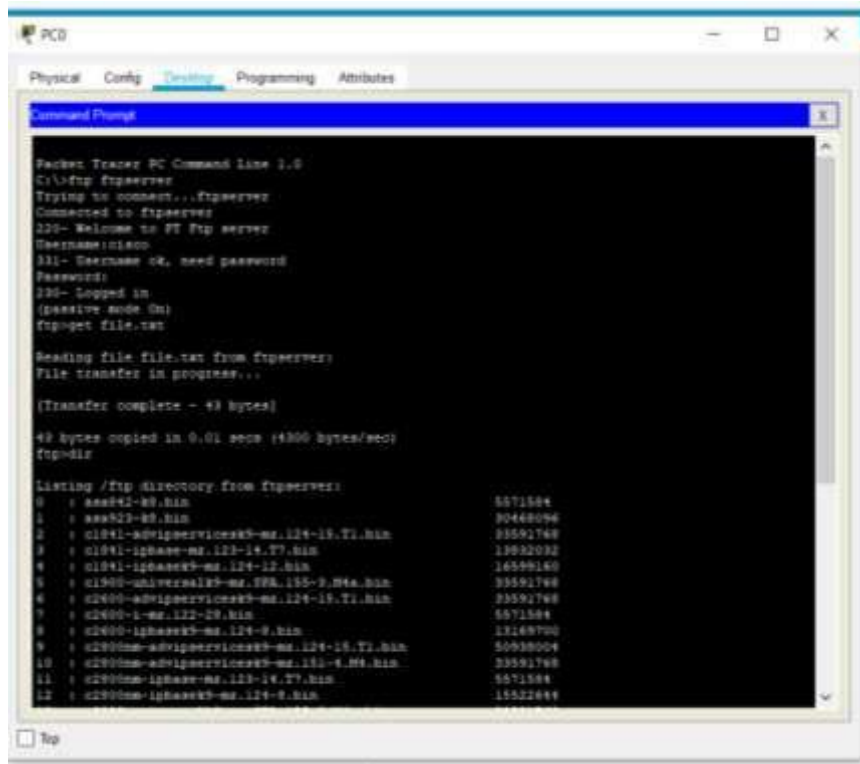
ftp>put file.txt

Writing file file.txt to ftpserver:
File transfer in progress...

[Transfer complete - 43 bytes]

43 bytes copied in 0.125 secs (344 bytes/sec)
ftp>
```

File downloaded by the client



The screenshot shows a PC window titled "PC0" with tabs for Physical, Config, **Desktop**, Programming, and Attributes. A "Command Prompt" window is open, displaying the following text:

```
Packet Tracer PC Command Line 1.0
C:\>ftp ftpserver
Trying to connect...ftpserver
Connected to ftpserver
120- Welcome to FT ftp server
Username:dliao
131- Username ok, need password
Password:
130- Logged in
(passive mode on)
ftp>get file.txt

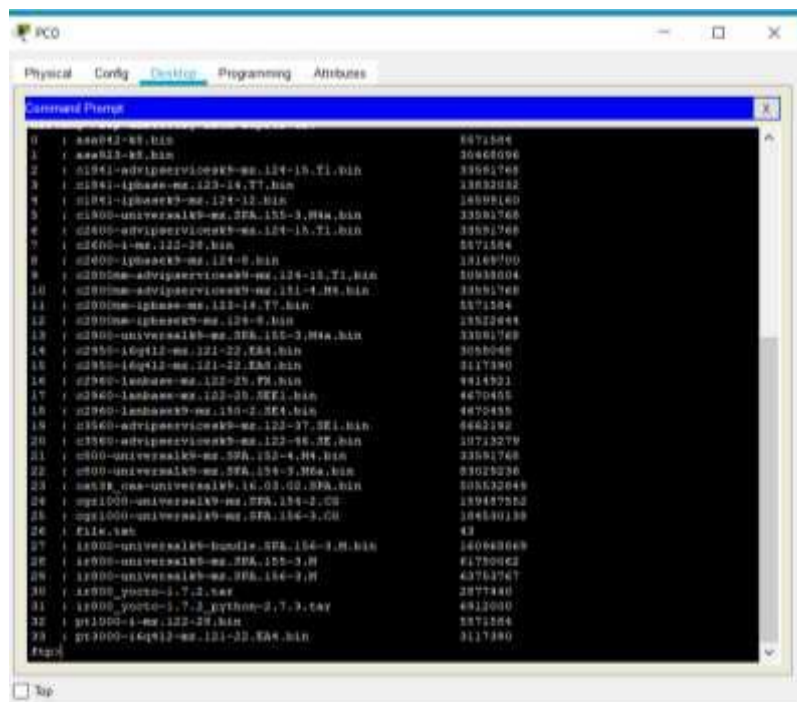
Reading file file.txt from ftpserver:
File transfer in progress...

(Transfer complete - 49 bytes)

49 bytes copied in 0.01 secs (4900 bytes/sec)
ftp>dir

Listing /ftp directory from ftpserver:
 0  : aa0412-05.bin                5571584
 1  : aa0413-05.bin                30468096
 2  : c1841-advipservices-ms.124-15.T1.bin 33581760
 3  : c1841-igbaset-ms.123-14.T7.bin  13832032
 4  : c1841-igbaset-ms.124-12.bin  16558160
 5  : c1900-universalk9-ms.3PA.155-3.H4a.bin 33581760
 6  : c2400-advipservices-ms.124-15.T1.bin 33581760
 7  : c2400-l-ms.122-29.bin         5571584
 8  : c2400-igbaset-ms.124-9.bin    13168700
 9  : c2900ms-advipservices-ms.124-15.T1.bin 50938004
10  : c2900ms-advipservices-ms.121-4.H4a.bin 33581760
11  : c2900ms-igbaset-ms.123-14.T7.bin  5571584
12  : c2900ms-igbaset-ms.124-9.bin    15522644
```

File seen on the client side



The screenshot shows a PC window titled "PC0" with tabs for Physical, Config, **Desktop**, Programming, and Attributes. A "Command Prompt" window is open, displaying a directory listing from an FTP server:

```
0  : aa0412-05.bin                5571584
1  : aa0413-05.bin                30468096
2  : c1841-advipservices-ms.124-15.T1.bin 33581760
3  : c1841-igbaset-ms.123-14.T7.bin  13832032
4  : c1841-igbaset-ms.124-12.bin  16558160
5  : c1900-universalk9-ms.3PA.155-3.H4a.bin 33581760
6  : c2400-advipservices-ms.124-15.T1.bin 33581760
7  : c2400-l-ms.122-29.bin         5571584
8  : c2400-igbaset-ms.124-9.bin    13168700
9  : c2900ms-advipservices-ms.124-15.T1.bin 50938004
10 : c2900ms-advipservices-ms.121-4.H4a.bin 33581760
11 : c2900ms-igbaset-ms.123-14.T7.bin  5571584
12 : c2900ms-igbaset-ms.124-9.bin    15522644
13 : c2900-universalk9-ms.3PA.155-3.H4a.bin 33581760
14 : c2950-16q412-ms.121-22.EA4.bin  3058048
15 : c2950-16q412-ms.121-22.EA5.bin  3117390
16 : c2960-lanbase-ms.122-25.FH.bin  4414921
17 : c2960-lanbase-ms.122-25.SF4.bin  4670405
18 : c2960-lanbase-ms.130-2.SF4.bin  4670435
19 : c3560-advipservices-ms.123-37.SF1.bin 8662192
20 : c3560-advipservices-ms.123-36.SF1.bin 1073279
21 : c360-universalk9-ms.3PA.155-4.H4a.bin 33581760
22 : c360-universalk9-ms.3PA.155-3.H4a.bin 33053236
23 : ca539-asa-universalk9.ic.03.02.3PA.bin 108532648
24 : cpa1000-universalk9-ms.3PA.134-2.G2 130487552
25 : cpa1000-universalk9-ms.3PA.134-3.G2 136830136
26 : file.txt                      43
27 : i1900-universalk9-bundle-3PA.154-9.H4a.bin 140843069
28 : i1900-universalk9-ms.3PA.155-3.H  61780462
29 : i1900-universalk9-ms.3PA.154-3.H  63763767
30 : i1900_yocto-1.7.2.tar          2877840
31 : i1900_yocto-1.7.2_python-2.7.3.tar 4812000
32 : pt1000-l-ms.122-29.bin         5571584
33 : pt3000-16q412-ms.121-22.EA4.bin  3117390
ftp>
```

Conclusion:

Hence, we have successfully implemented and configured FTP server and client.