STUDENT'S ROLL NO. : 3330

Assignment 4

Aim - Configuring FTP Server for File Upload/ Download using Cisco Packet Tracer

1. Introduction of FTP Protocol -

File Transfer Protocol is an application layer protocol that moves files between local and remote file systems. It runs on the top of TCP like HTTP. To transfer a file, 2 TCP connections are used by FTP in parallel: control connection and data connection.

For sending control information like user's identification, password, commands to change remote directory, commands to retrieve and store files, FTP makes use of control connection. The control connection is initiated on port No. 21.

For sending actual ~~data~~ file, FTP makes use of data connection. A data connection is initiated on port No. 20.

2. Significance of Port Numbers Used by FTP Protocol -

In terms of FTP, ports are communication endpoints. Ports allow connection and transfer of data to happen between your computer and a server.

To connect to a specific server, you need to know the server's IP address.
While IP address identifies server, port no.s are numbers which are used at a lower level to specify what application/ service on the server you are trying to communicate with.
FTP has been officially assigned ports 20 and 21.
A data connection is initiated on port number 20. The control connection is initiated on port number 21.

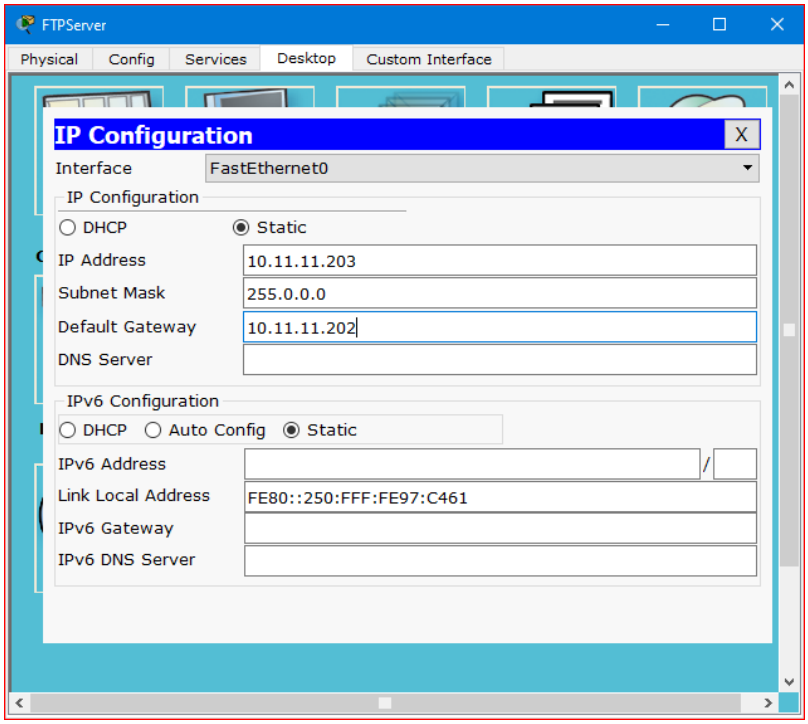
6. Difference between FTP & TFTP Protocol.

FTP	TFTP
Stands for File Transfer Protocol	Stands For Trivial File Transfer Protocol.
Software of FTP is larger than that of TFTP.	Software of TFTP is smaller than that of FTP.
FTP works on 2 ports → 20 and 21.	TFTP works on port 69.
FTP services are provided by TCP.	TFTP services are provided by UDP.

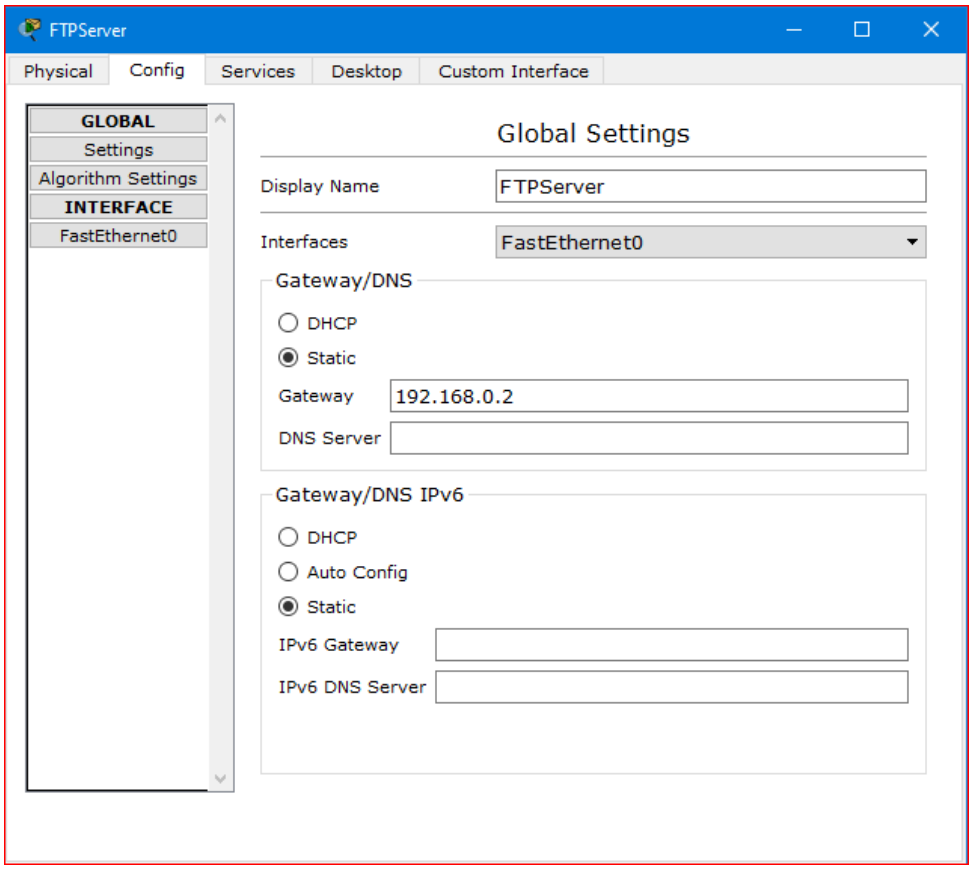
	FTP	TFTP
→	Complexity is higher than TFTP.	Complexity is lower than that of FTP.
→	There are many commands / messages in FTP.	There are only 5 messages in TFTP.
→	Needs authentication for communication	Does not need authentication for communication.
→	Generally used for uploading & downloading of files by remote users.	Mainly used for transmission of configurations to & from network devices.

3.Steps for configuring FTP server

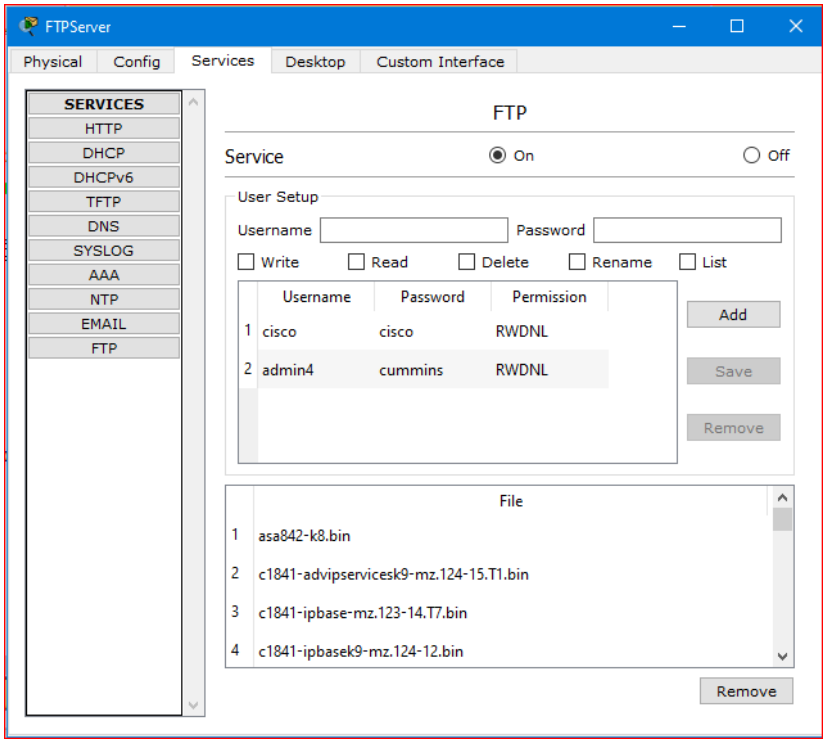
Server Configurations



You can change the display name of the server

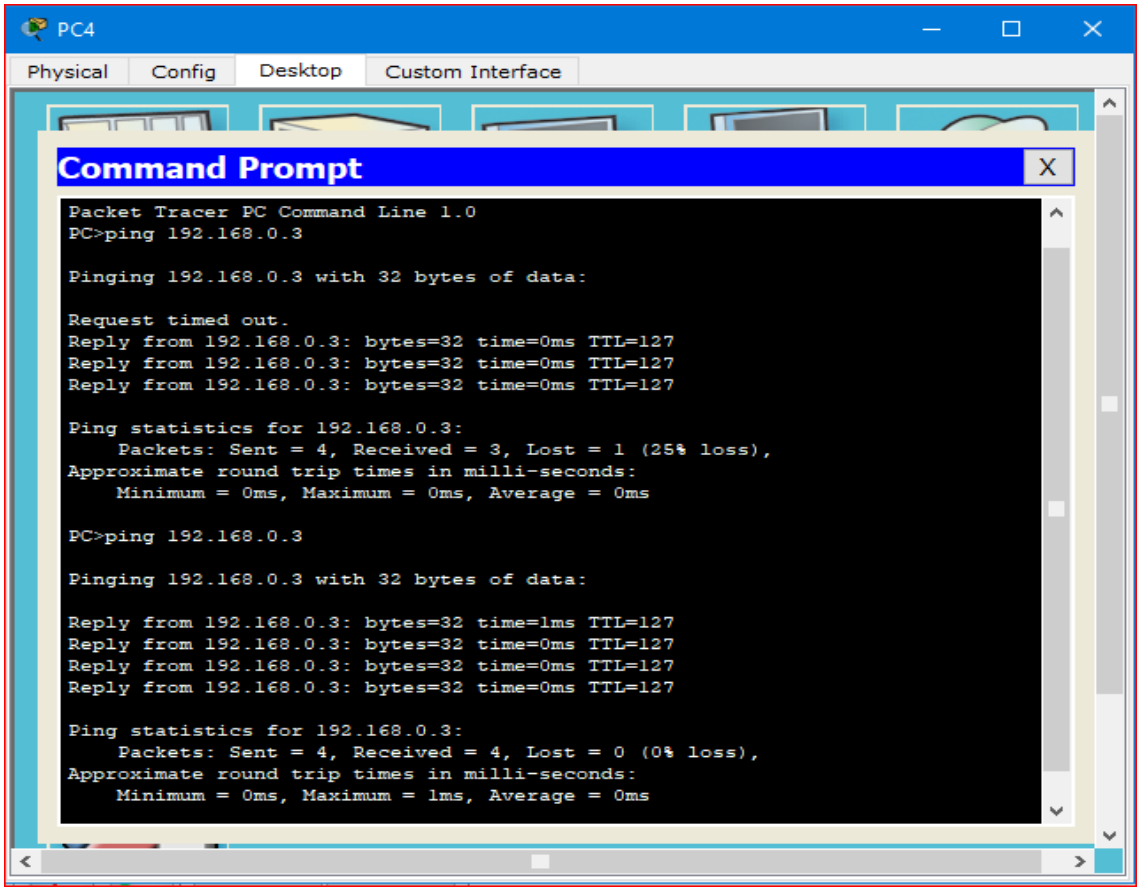


Add username:admin4 and Password:cummins



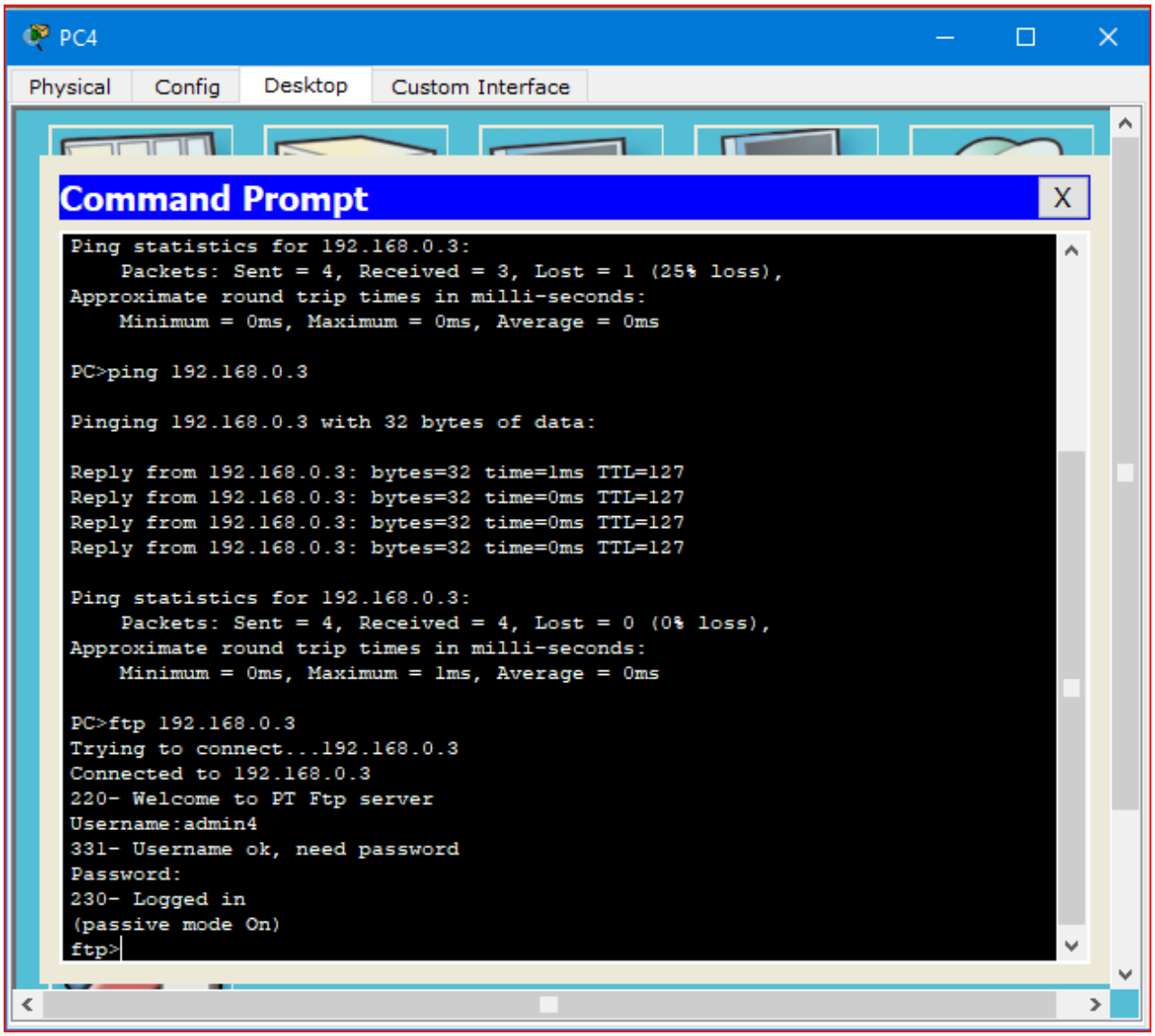
4.Steps to connect to FTP server

Ping server from PC4



use command ftp serverIPAdress

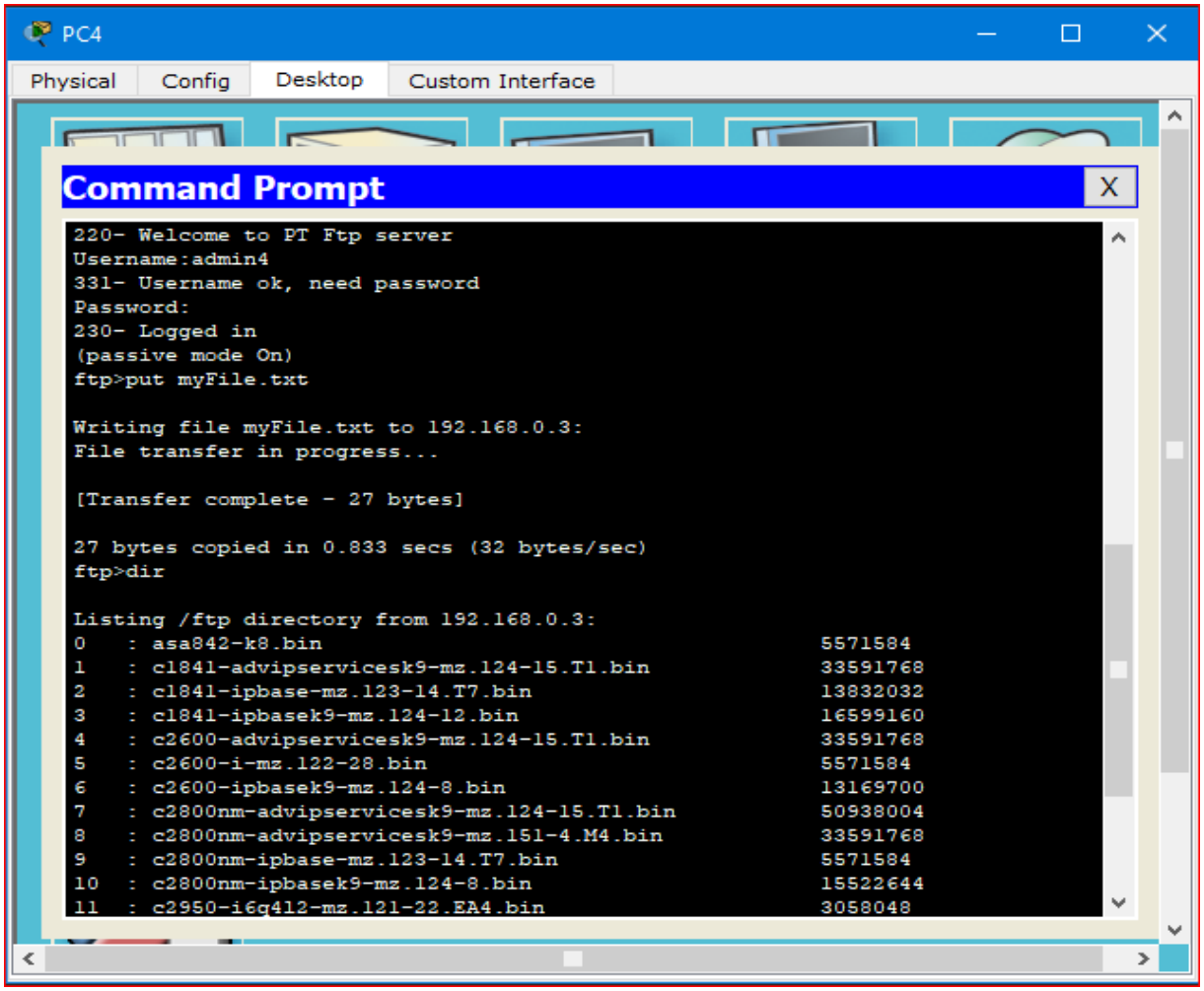
then enter username and password

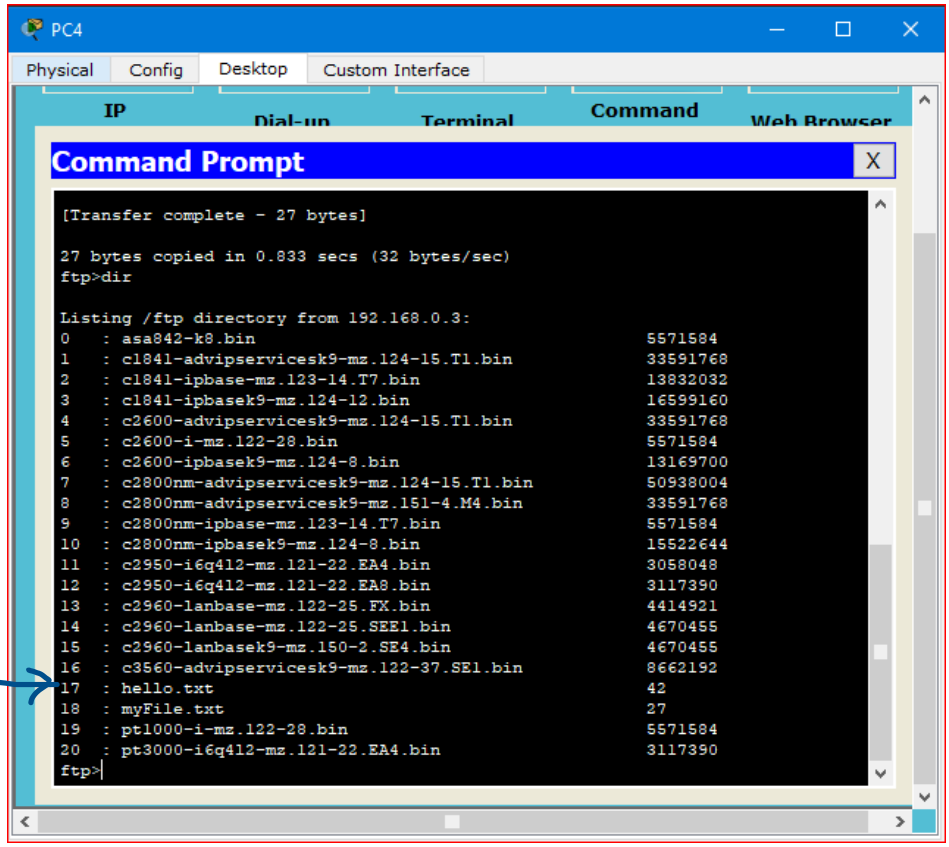


5.FTP commands for uploading and downloading files

Use command put to upload file myFile.txt from PC4 To Server

Check if file is uploaded using dir


PC4
Physical
Config
Desktop
Custom Interface
Command Prompt
X
220- Welcome to PT Ftp server
Username:admin4
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put myFile.txt
Writing file myFile.txt to 192.168.0.3:
File transfer in progress...
[Transfer complete - 27 bytes]
27 bytes copied in 0.833 secs (32 bytes/sec)
ftp>dir
Listing /ftp directory from 192.168.0.3:
0 : asa842-k8.bin 5571584
1 : c1841-advipservicesk9-mz.124-15.T1.bin 33591768
2 : c1841-ipbase-mz.123-14.T7.bin 13832032
3 : c1841-ipbasek9-mz.124-12.bin 16599160
4 : c2600-advipservicesk9-mz.124-15.T1.bin 33591768
5 : c2600-i-mz.122-28.bin 5571584
6 : c2600-ipbasek9-mz.124-8.bin 13169700
7 : c2800nm-advipservicesk9-mz.124-15.T1.bin 50938004
8 : c2800nm-advipservicesk9-mz.151-4.M4.bin 33591768
9 : c2800nm-ipbase-mz.123-14.T7.bin 5571584
10 : c2800nm-ipbasek9-mz.124-8.bin 15522644
11 : c2950-i6q412-mz.121-22.EA4.bin 3058048


PC4
Physical
Config
Desktop
Custom Interface
IP
Dial-up
Terminal
Command
Web Browser
Command Prompt
X
[Transfer complete - 27 bytes]
27 bytes copied in 0.833 secs (32 bytes/sec)
ftp>dir
Listing /ftp directory from 192.168.0.3:
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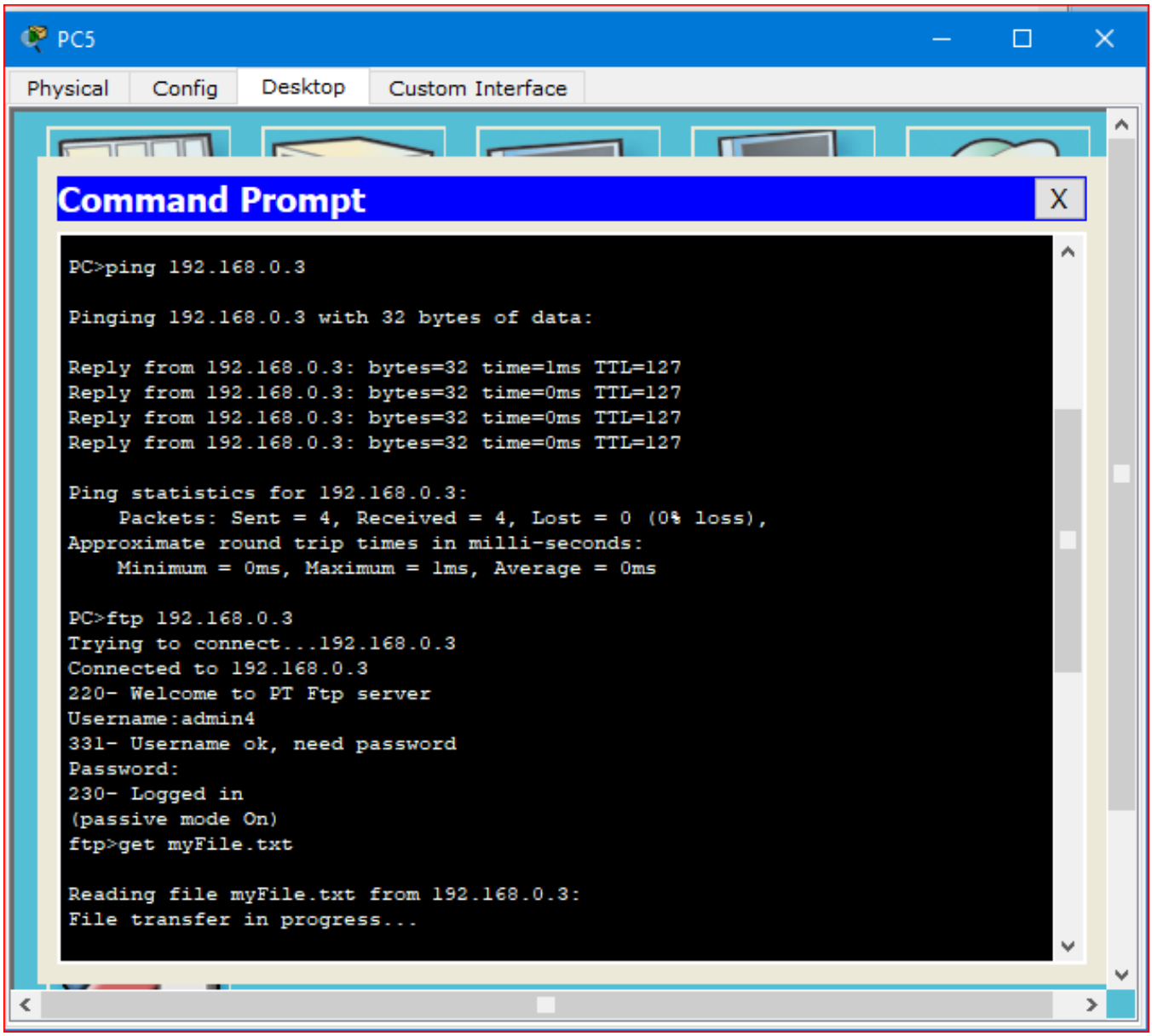
10 : c2800nm-ipbasek9-mz.124-8.bin 15522644
11 : c2950-i6q412-mz.121-22.EA4.bin 3058048
12 : c2950-i6q412-mz.121-22.EA8.bin 3117390
13 : c2960-lanbase-mz.122-25.FX.bin 4414921
14 : c2960-lanbase-mz.122-25.SEE1.bin 4670455
15 : c2960-lanbasek9-mz.150-2.SE4.bin 4670455
16 : c3560-advipservicesk9-mz.122-37.SE1.bin 8662192
17 : hello.txt 42
18 : myFile.txt 27
19 : pt1000-i-mz.122-28.bin 5571584
20 : pt3000-i6q412-mz.121-22.EA4.bin 3117390
ftp>

To download file from Server on PC5 use get myFile.txt



6. Topology Diagram