Terna Engineering College

Computer Engineering Department

Program: Sem V

Course: Computer Network Lab

Faculty: Umesh B Mantale, D V Thombre and Ramesh Shahabade

LAB Manual

PART A

(PART A: TO BE REFERRED BY STUDENTS)

Experiment No. 10

A.1 Objective:

A. Configure FTP Services on Servers
B. Upload a File to the FTP Server
C. Download a File from the FTP Server

A.2 Prerequisite:

→ Knowledge about LAN, MAN and WAN and NW Elements.
→ Linux NW Commands
→ HW and IP Address concepts.
→ Concept of Port, Socket, Localhost, Client and Server,
→ Client and Server
→ Application Layer protocols and application servers
→ NW libraries.

A.3 Outcome:

After successful completion of this experiment students will be able to -

→ Ability to configure FTP server
→ Ability to establish connection with server
→ Ability to upload a file on the FTP server
→ Ability to Download the File from FTP server

PART B

(PART B: TO BE COMPLETED BY STUDENTS)

(Students must submit the soft copy as per following segments within two hours of the practical. The soft copy must be uploaded on the Blackboard or emailed to the concerned lab in charge faculties at the end of the practical in case the there is no Blackboard access available)

Roll No. 50	Name: Amey Thakur
Class: TE-Comps B	Batch: B3
Date of Experiment: 20/10/2020	Date of Submission: 20/10/2020
Grade :	

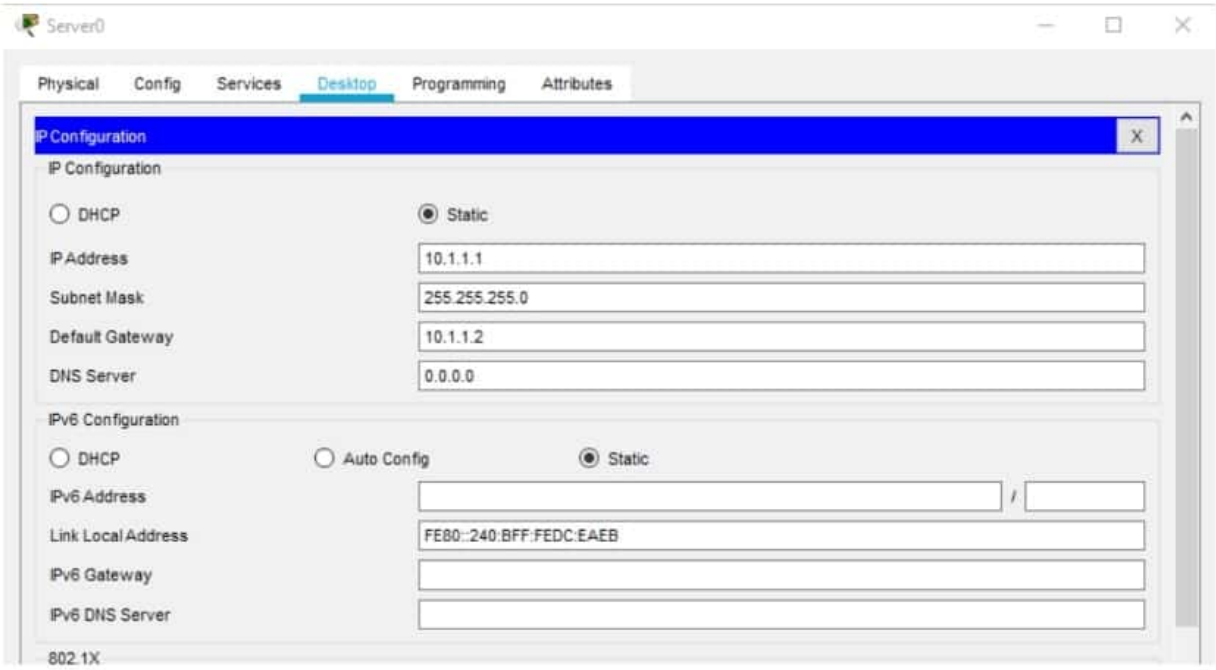
B.1 Document created by the student:

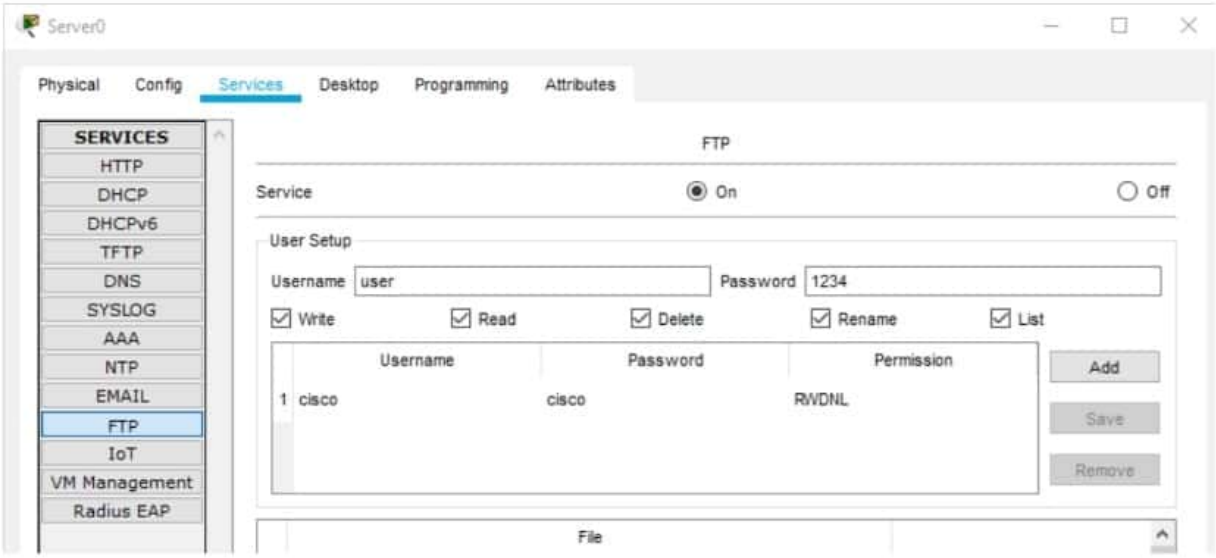
(Write the answers to the questions given in section 5.1 during the 2 hours of practice in the lab here)

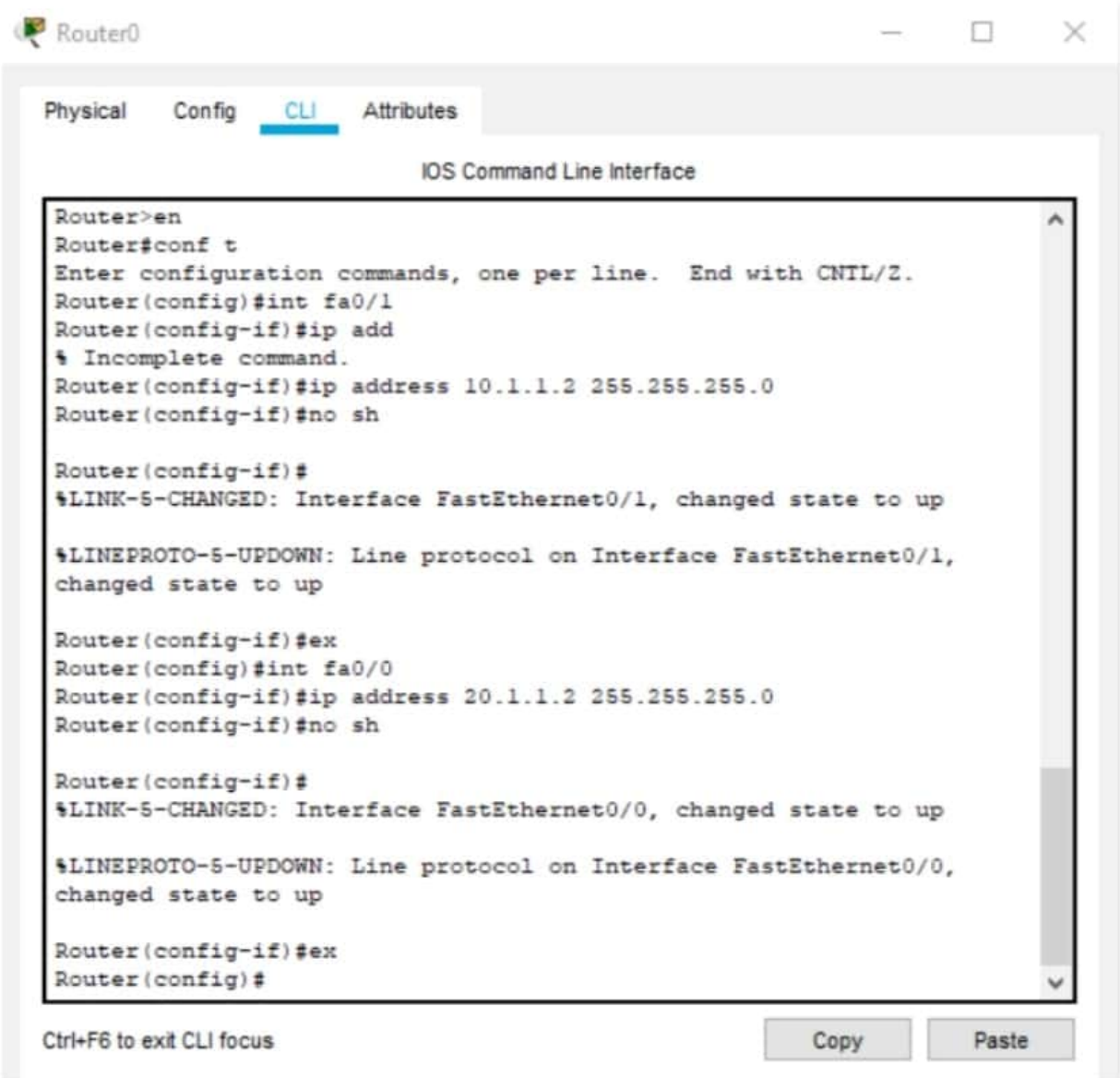
Refer B.5

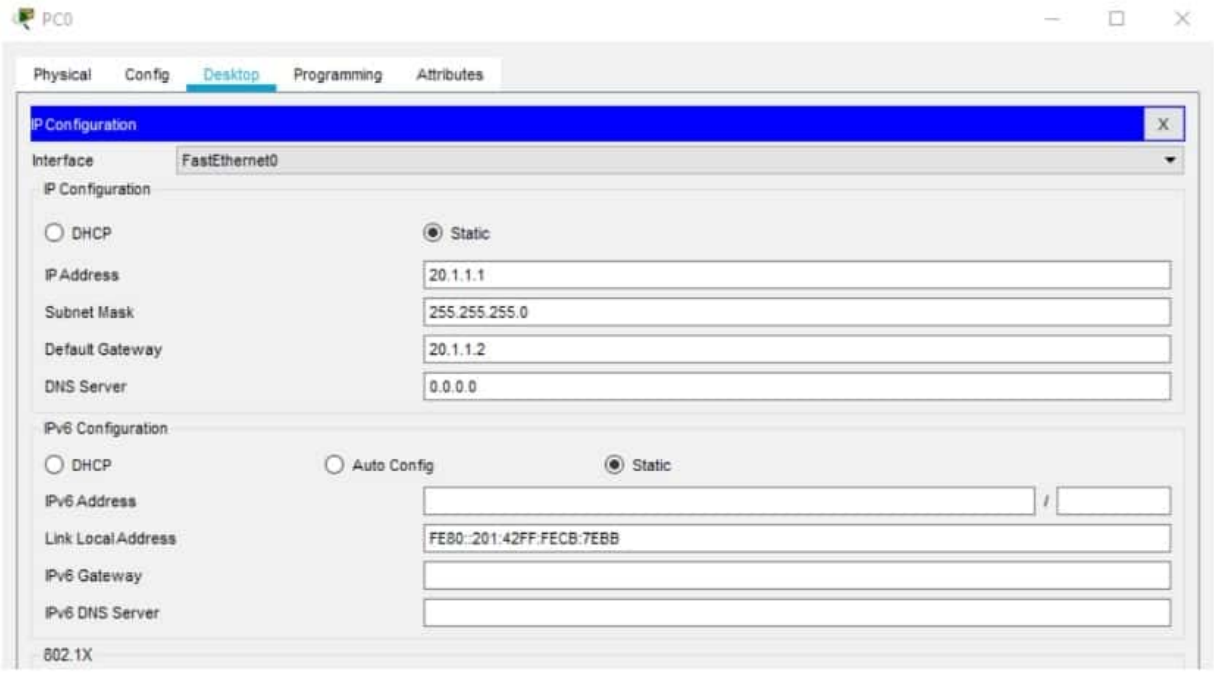
B.3 Observations and learning:

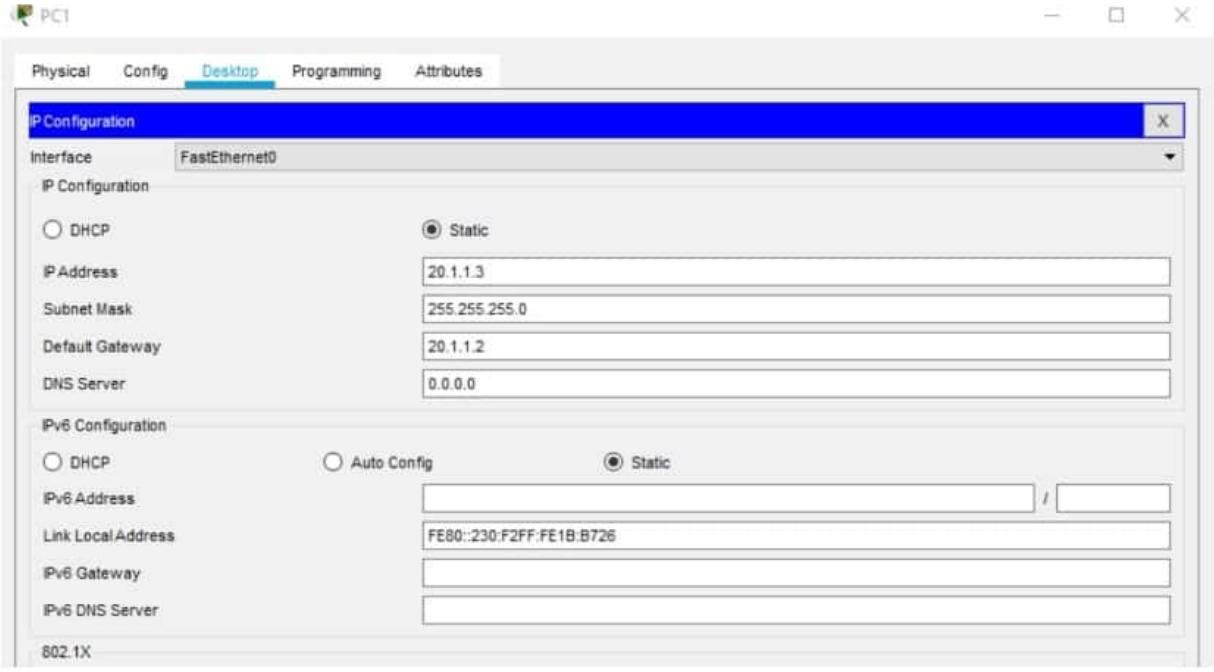
(Students are expected to understand the selected topic. Have to list out the components & functionality. Prepare a flow of the algorithm defined in the paper. List the performance metrics that are used)


Server0
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IP Address
10.1.1.1
Subnet Mask
255.255.255.0
Default Gateway
10.1.1.2
DNS Server
0.0.0.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
/
Link Local Address
FE80::240:BFF:FEDC:EAEB
IPv6 Gateway
IPv6 DNS Server
802.1X

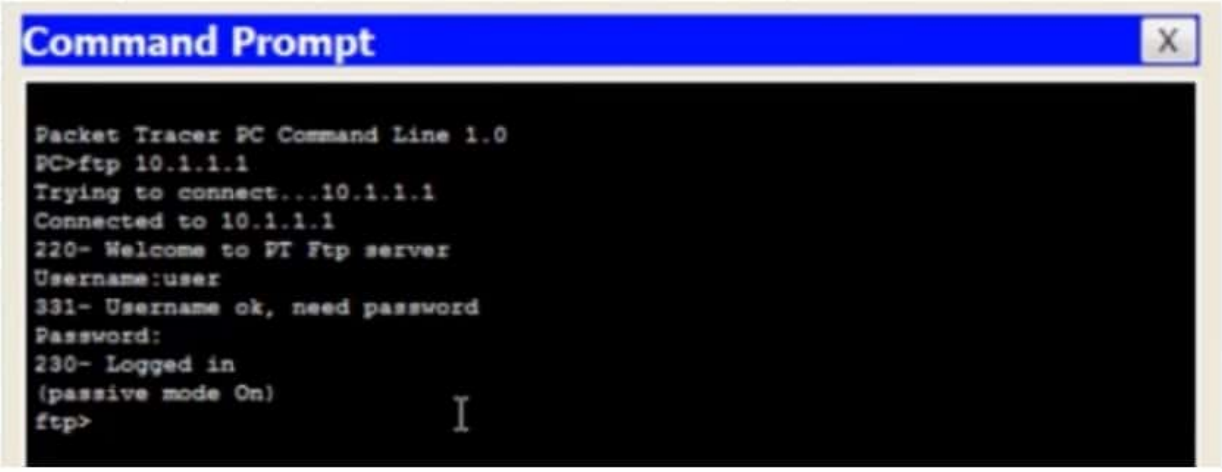

Server0
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
FTP
Service
On
Off
User Setup
Username
user
Password
1234
Write
Read
Delete
Rename
List
Username
Password
Permission
1
cisco
cisco
RWDNL
Add
Save
Remove
File

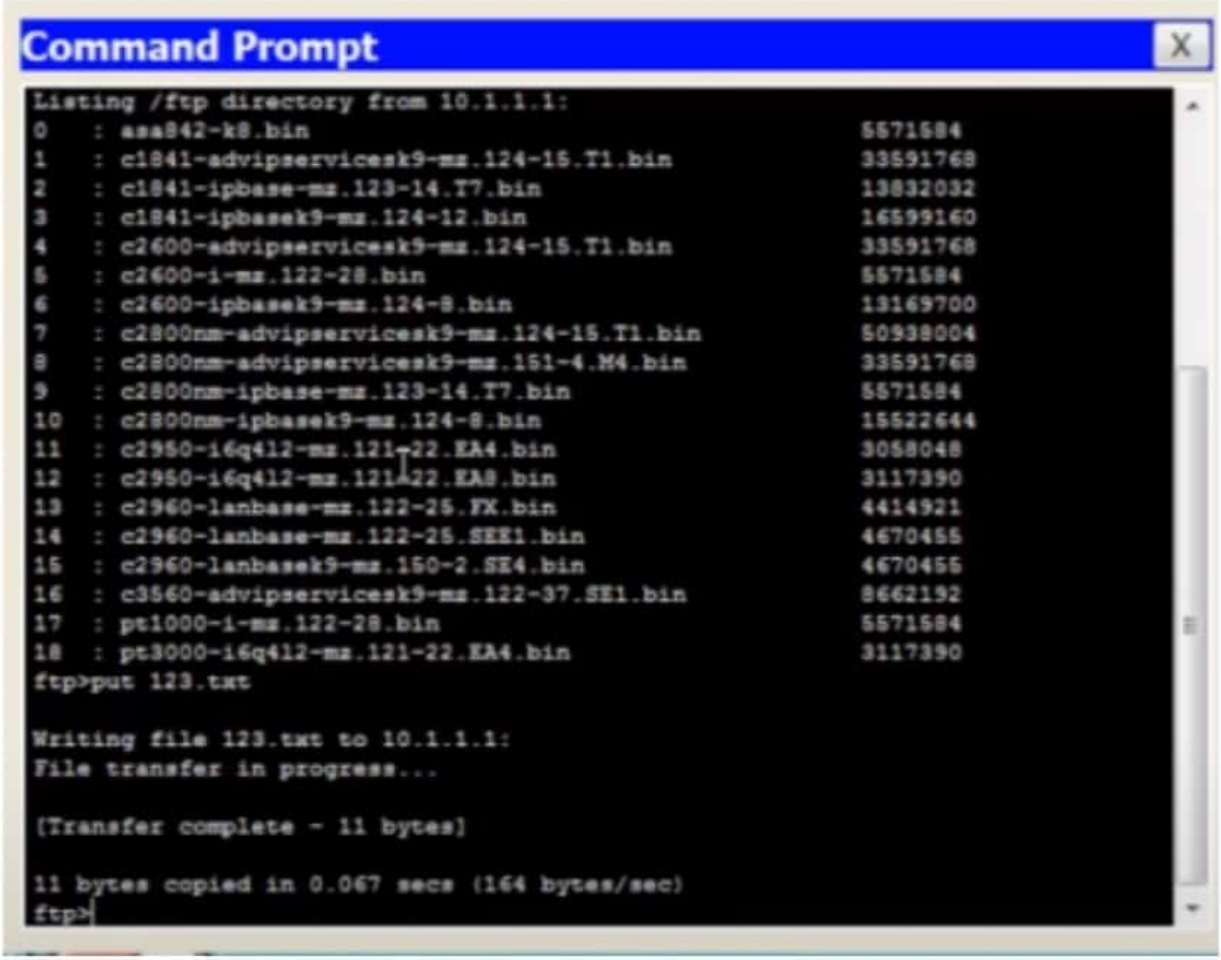

Router0
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/1
Router(config-if)#ip add
% Incomplete command.
Router(config-if)#ip address 10.1.1.2 255.255.255.0
Router(config-if)#no sh
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up
Router(config-if)#ex
Router(config)#int fa0/0
Router(config-if)#ip address 20.1.1.2 255.255.255.0
Router(config-if)#no sh
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
changed state to up
Router(config-if)#ex
Router(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste

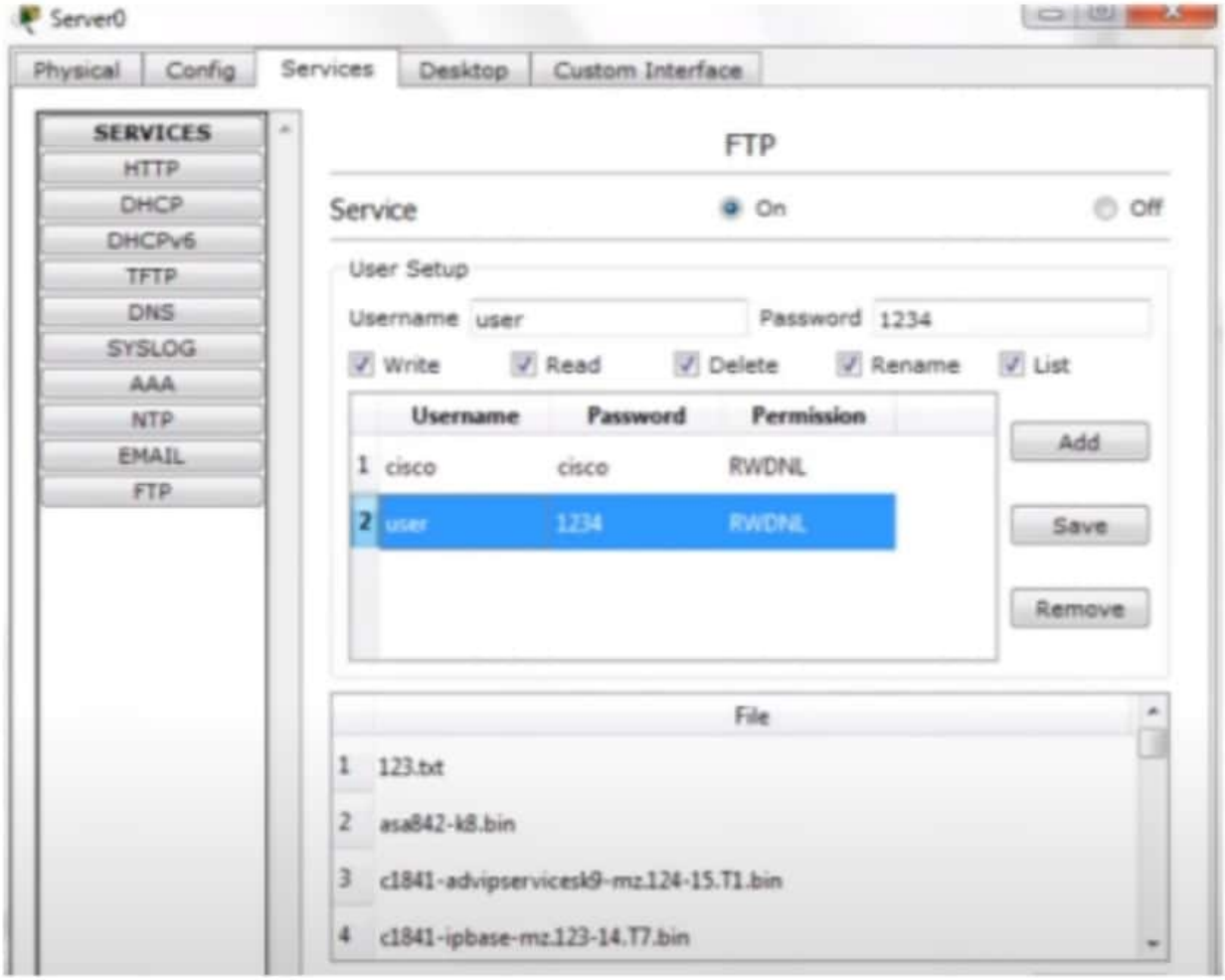

PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
20.1.1.1
Subnet Mask
255.255.255.0
Default Gateway
20.1.1.2
DNS Server
0.0.0.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::201:42FF:FECB:7EBB
IPv6 Gateway
IPv6 DNS Server
802.1X

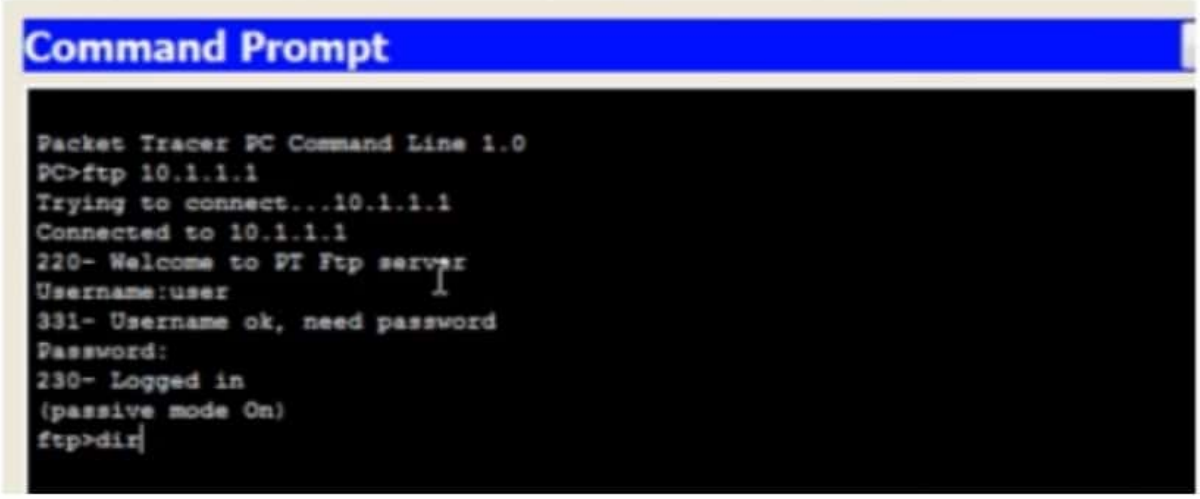

PC1
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
20.1.1.3
Subnet Mask
255.255.255.0
Default Gateway
20.1.1.2
DNS Server
0.0.0.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::230:F2FF:FE1B:B726
IPv6 Gateway
IPv6 DNS Server
802.1X

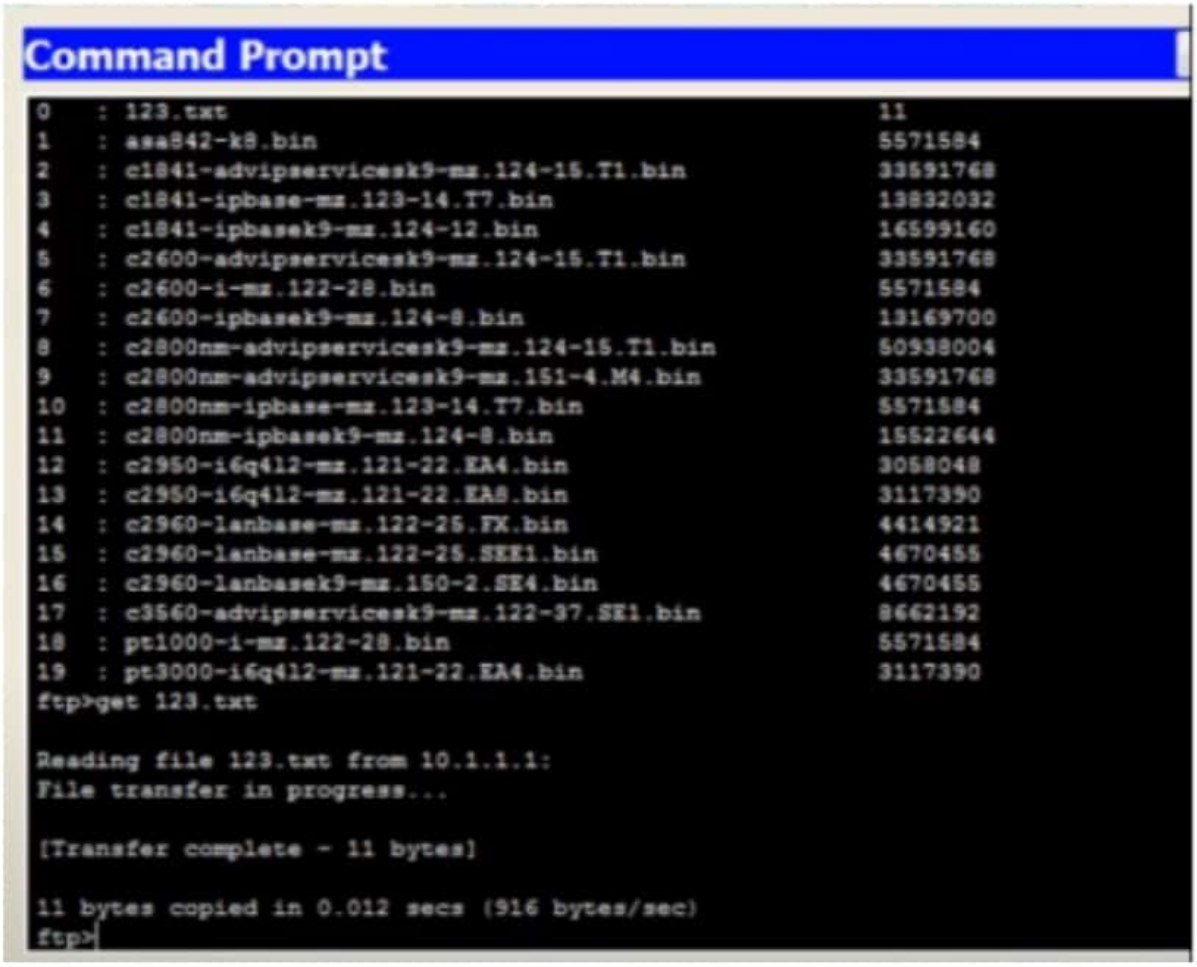

PC0
Physical
Config
Desktop
Programming
Attributes
Text Editor
X
File
hello world


Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ftp 10.1.1.1
Trying to connect...10.1.1.1
Connected to 10.1.1.1
220- Welcome to PT Ftp server
Username:user
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>


Command Prompt
X
Listing /ftp directory from 10.1.1.1:
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
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 : pt1000-i-mz.122-28.bin 5571584
18 : pt3000-i6q412-mz.121-22.EA4.bin 3117390
ftp>put 123.txt
Writing file 123.txt to 10.1.1.1:
File transfer in progress...
[Transfer complete - 11 bytes]
11 bytes copied in 0.067 secs (164 bytes/sec)
ftp>


Server0
Physical
Config
Services
Desktop
Custom Interface
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
FTP
Service
On
Off
User Setup
Username user
Password 1234
Write
Read
Delete
Rename
List
Username
Password
Permission
1 cisco cisco RWDNL
2 user 1234 RWDNL
Add
Save
Remove
File
1 123.txt
2 asa842-k8.bin
3 c1841-advipservicesk9-mz.124-15.T1.bin
4 c1841-ipbase-mz.123-14.T7.bin


Command Prompt
Packet Tracer PC Command Line 1.0
PC>ftp 10.1.1.1
Trying to connect...10.1.1.1
Connected to 10.1.1.1
220- Welcome to PT Ftp server
Username:user
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir



B.4 Conclusion:

(Students must write the conclusion as per the attainment of individual outcome listed above and learning/observation noted in section B.3)

After the successful completion of this experiment, we have learned how to

Configure FTP Services on Servers, upload a File to the FTP Server and

Download a File from the FTP Server.

B.5 Question of Curiosity

(To be answered by the student based on the practical performed and learning/observations)

Questions to answer:

1. Write the different protocols used in the Application layer.
2. What are the ports used for FTP?
3. Examples of FTP applications?
4. Which transport layer protocol is used by FTP? Give reason
5. What are DNS, TELNET, DHCP and HTTP protocols?
6. What is SMTP? Where this protocol is used?

Q.1. Write the different protocols used in Application layer.

Ans:

- ① Telnet
  ② FTP
  ③ TFTP
  ④ NFS
  ⑤ SMTP
  ⑥ LPD
  ⑦ X Window
  ⑧ SNMP
  ⑨ DNS
  ⑩ DHCP

Q.2. What are the ports used for FTP?

Ans:

- The FTP typically uses port 21 as its main means of communication.

Q.3. Examples of FTP application.

Ans:

- ① Transmit
  ② Cyberduck
  ③ Filezilla
  ④ Win SCP
  ⑤ Coda

Q.4. Which transport layer protocol is used by FTP? Give reason.

Ans:

- FTP itself uses the TCP transport protocol.
- FTP uses and relies on TCP to ensure all the packets of data are sent correctly and to proper destination

Q.5. What are DNS, TELNET, DHCP and HTTP protocols?

Ans:

① DNS: (Domain Name System)

- A DNS service must translate the name into the corresponding IP address.

② TELNET: (Telecommunication Network)

- It allows the TELNET client to access the resources of the telnet server.
- It is used for managing the files on the internet.

③ DHCP: (Dynamic Host Configuration Protocol)

- It is a network management protocol used to automate the process of configuring devices on IP networks, thus allowing them to use network services.

④ HTTP: (Hypertext Transfer Protocol)

- It is an application layer protocol for transmitting hypermedia documents such as HTML.
- It was designed for communication between web browsers and web servers.

Q.6. What is SMTP? Where this protocol is used?

Ans:

- It stands for Simple Mail Transfer Protocol.
- It moves your email on and across networks.
- SMTP servers commonly use the TCP on port 25.
- It is used for sending message to mail server for relaying and typically submit outgoing email to the mail server.