

## Worksheet- 3.1

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**Branch:** B.E. CSE

**Date of Performance:** 30/4/2023

**UID:** 21BCS

**Section/Group:**

**Subject Code:** 21CSH-256

**Subject Name:** Computer Networks

**Semester:** 4<sup>th</sup>

**1. Aim:** Sharing of resources with two connected nodes. Understanding FTP.

**2. Software required:** Cisco Packet Tracer.

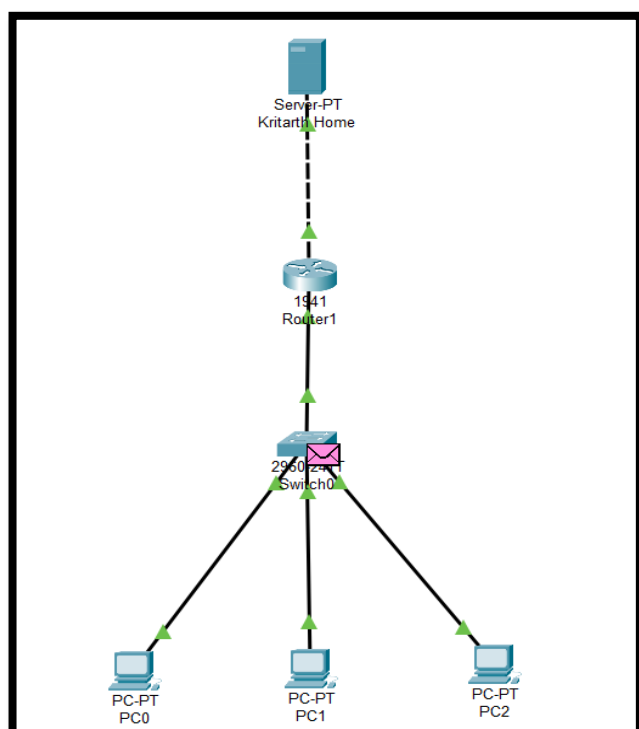
### **Procedure: -**

- Attach PC, 1941 router & Server-PT in the packet tracer software.
- Use copper cross-over wires to connect router to router.
- Connect all the end devices to each other.
- Assign IP address to devices, Configure router as Network address
- Add text in text editor.
- Provide same Gateway IP to all the pc's.
- Use command prompt for sending and downloading file.
- Go to Simulation mode and click capture/Play.

### **Theory: -**

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

### **Input Screenshot:**





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Physical Config **Desktop** Programming Attributes

**IP Configuration**

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address: 190.10.10.2

Subnet Mask: 255.255.0.0

Default Gateway: 190.10.10.1

DNS Server: 0.0.0.0

Kritarth Home

Physical Config **Services** Desktop Programming Attributes

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP

FTP

Service: ☒ On

User Setup

Username: Password:

☐ Write ☐ Read ☐ Delete ☐ Rename

	Username	Password	Permission
1	kritarth1	ved	RWNL

Physical **Config** Services Desktop Programming Attributes

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

Global Settings

Display Name: Kritarth Home

Gateway/DNS IPv4

☐ DHCP ☒ Static

Gateway: 10.10.10.1

DNS Server:

Gateway/DNS IPv6

☐ DHCP ☐ Auto Config ☒ Static

Physical **Config** Desktop Programming Attributes

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

Bluetooth

FastEthernet0

Port Status: ☒ On

Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address: 0060.2FBD.09E3

IP Configuration

☐ DHCP ☒ Static

IP Address: 190.10.10.4

Subnet Mask: 255.255.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address:

Link Local Address: FE80::260:2FFF:FEBD:9E3

```
Physical  Config  Desktop  Programming  Attributes
Command Prompt

C:\>ping 10.10.10.2

Pinging 10.10.10.2 with 32 bytes of data:

Request timed out.
Reply from 10.10.10.2: bytes=32 time=1ms TTL=127
Reply from 10.10.10.2: bytes=32 time=1ms TTL=127
Reply from 10.10.10.2: bytes=32 time=1ms TTL=127

Ping statistics for 10.10.10.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms
```

```
C:\>ftp 10.10.10.2
Trying to connect...10.10.10.2
Connected to 10.10.10.2
220- Welcome to PT Ftp server
Username:kritarth1
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put hello.txt

Writing file hello.txt to 10.10.10.2:
File transfer in progress...

[Transfer complete - 44 bytes]

44 bytes copied in 0.022 secs (2000 bytes/sec)
ftp>
```

## Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ftp 10.10.10.2
Trying to connect...10.10.10.2
Connected to 10.10.10.2
220- Welcome to PT Ftp server
Username:kritarth1
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>get hello.txt

Reading file hello.txt from 10.10.10.2:
File transfer in progress...

[Transfer complete - 44 bytes]

44 bytes copied in 0.009 secs (4888 bytes/sec)
ftp>
```

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.004	--	PC0	ICMP
	0.005	Switch0	PC1	ARP
	0.005	PC0	Switch0	ICMP
	0.005	--	PC1	ICMP
	0.006	PC1	Switch0	ICMP
	0.006	Switch0	PC1	ICMP
	0.007	Switch0	PC2	ICMP
	0.007	PC1	Switch0	ICMP
	0.008	PC2	Switch0	ICMP
	0.008	Switch0	PC0	ICMP
	0.009	Switch0	PC1	ICMP
	0.415	--	Switch0	STP
	0.416	Switch0	PC1	STP
	0.416	Switch0	PC2	STP
	0.416	Switch0	Router1	STP
	0.416	Switch0	PC0	STP

Reset Simulation ☒ Constant Delay Capturing...

Event List Realtime Simulation

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC0	PC1	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC1	PC2	ICMP		0.000	N	1	(edit)	(delete)

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## Learning Outcomes:

1. In this practical, I have learned the basic concepts of File Transfer Protocol (FTP)
2. I have learned how to implement the FTP.
3. Learnt how FTP work in real world scenario and how to send and download the files.