

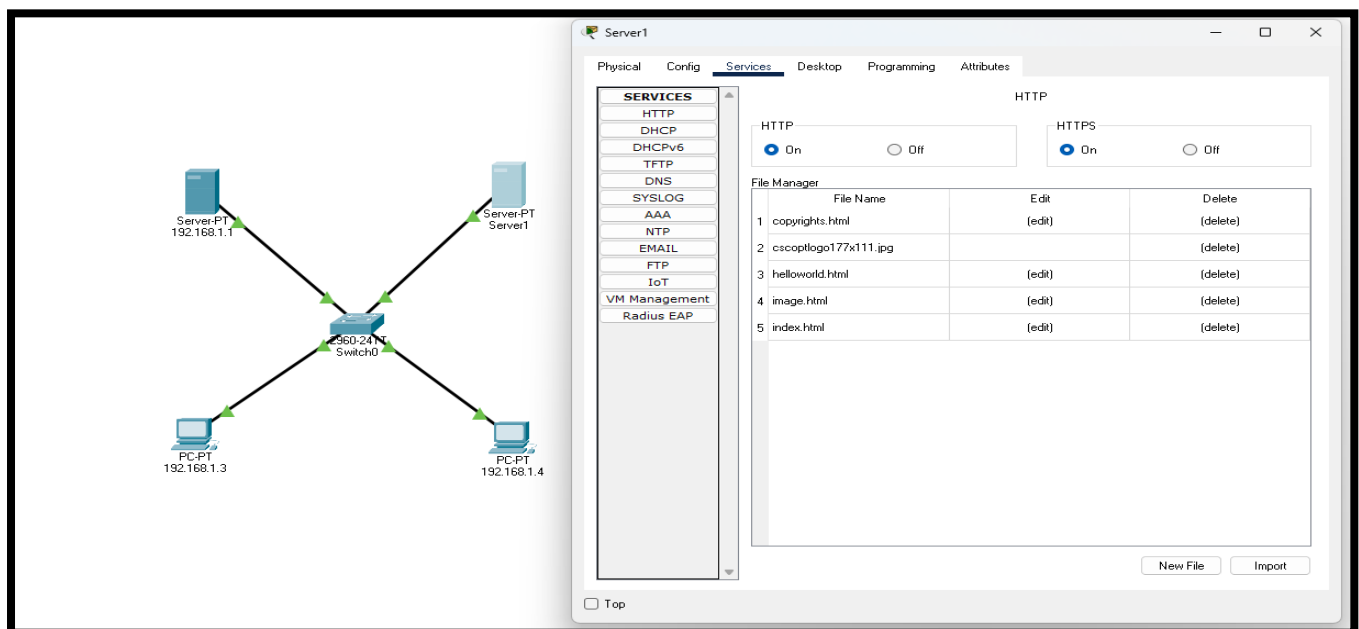
Date: 8/29/2025

# Practical Assignment #07:

Study the application layer protocol DNS, DHCP, FTP.

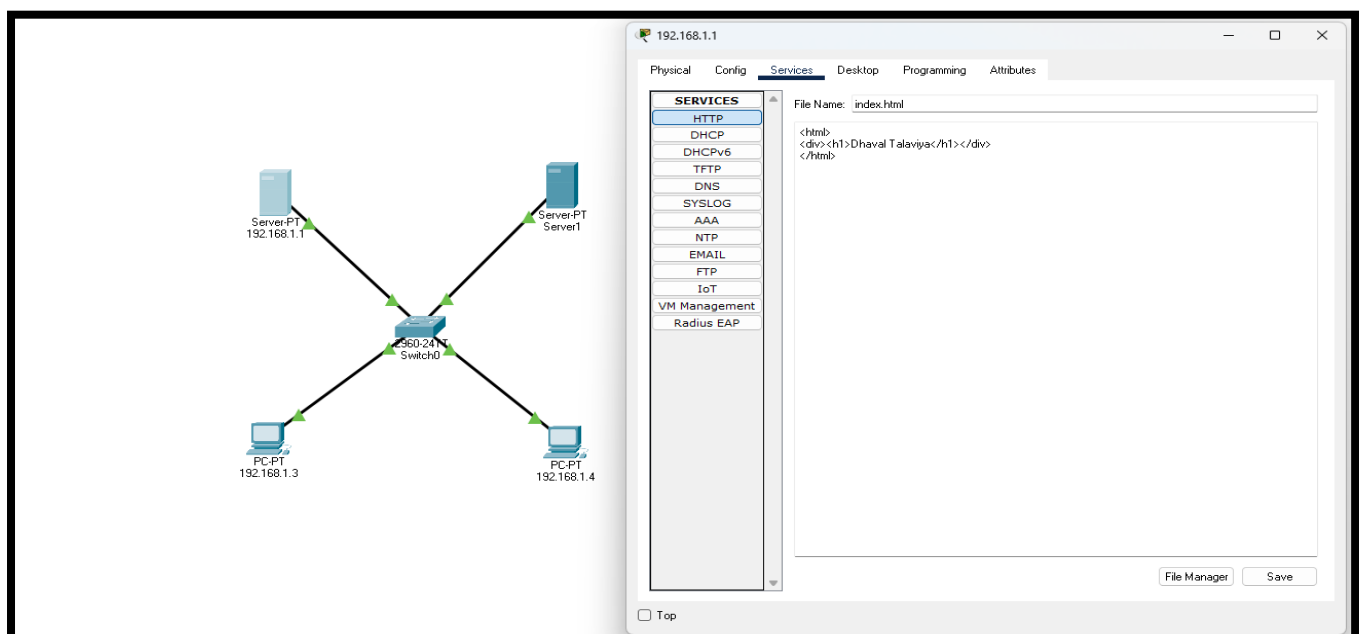
**1. Implement the application layer protocol DNS, DHCP, and FTP. Also check connectivity between them using ping command or PDU utility.**

## a. DNS :



The network diagram shows a central 2960-24T Switch0 connected to four devices: Server-PT 192.168.1.1, Server-PT Server1, PC-PT 192.168.1.3, and PC-PT 192.168.1.4. The Server1 configuration window is open, showing the Services tab. The SERVICES list includes HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, and Radius EAP. The HTTP service is configured with the following settings:

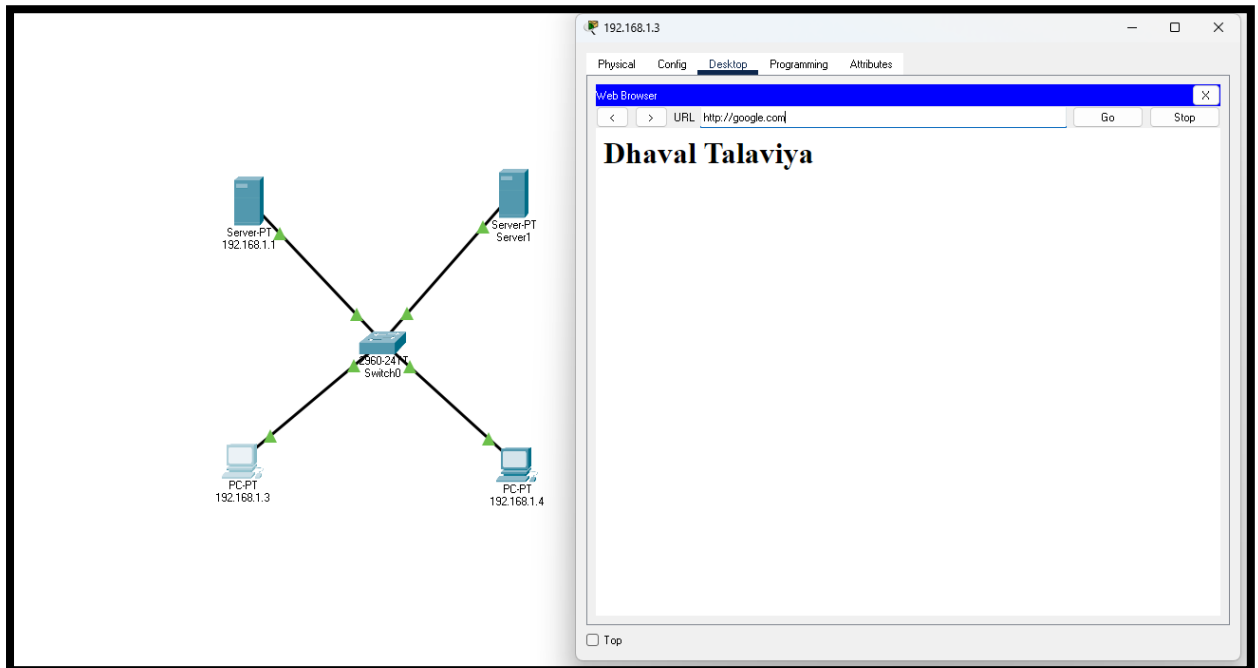
File Name	Edit	Delete
1 copyrights.html	(edit)	(delete)
2 cscoplogo177x111.jpg		(delete)
3 helloworld.html	(edit)	(delete)
4 image.html	(edit)	(delete)
5 index.html	(edit)	(delete)



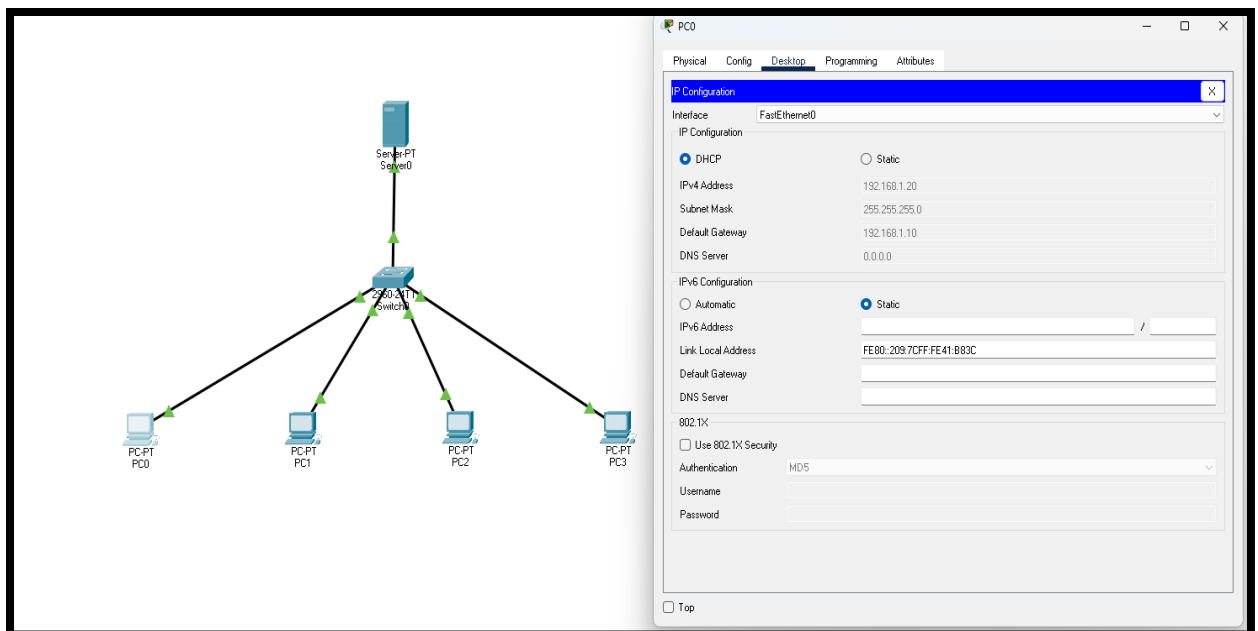
The network diagram is the same as above. The configuration window for 192.168.1.1 is open, showing the Services tab. The SERVICES list includes HTTP, DHCP, DHCPv6, TFTP, DNS, SYSLOG, AAA, NTP, EMAIL, FTP, IoT, VM Management, and Radius EAP. The HTTP service is configured with the following settings:

File Name	Edit	Delete
index.html		

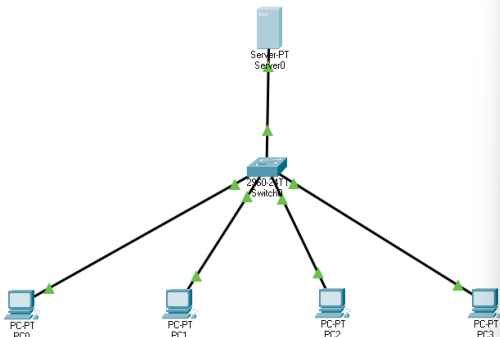
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**b. DHCP :**



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Server0

2500-24T1 Switch

PC-PT PC0

PC-PT PC1

PC-PT PC2

PC-PT PC3

Server0 Configuration Window:

Physical Config Services Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 192.168.1.10

DNS Server: 0.0.0.0

Start IP Address: 192.168.1.20

Subnet Mask: 255.255.255.0

Maximum Number of Users: 236

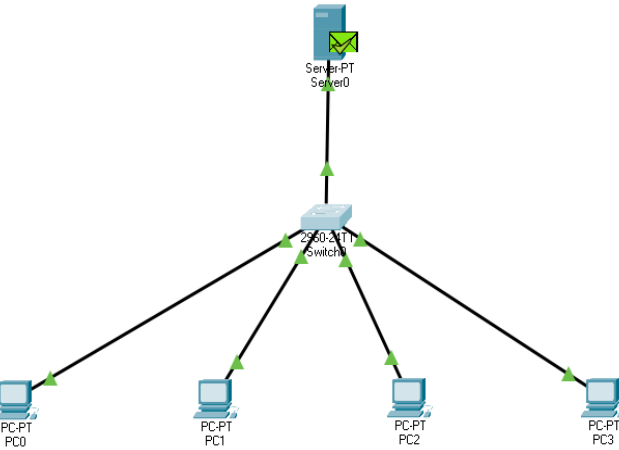
TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Buttons: Add, Save, Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	192.168.1.10	0.0.0.0	192.168.1.20	255.255.255.0	236	0.0.0.0	0.0.0.0

Top



Server0

2500-24T1 Switch

PC-PT PC0

PC-PT PC1

PC-PT PC2

PC-PT PC3

PDU Information at Device: Server0

OSI Model Inbound PDU Details

At Device: Server0  
Source: Server0  
Destination: PC1

In Layers

- Layer7
- Layer6
- Layer5
- Layer4

Out Layers

- Layer7
- Layer6
- Layer5
- Layer4
- Layer3
- Layer2
- Layer1

Layer 3: IP Header Src. IP: 192.168.1.21, Dest. IP: 192.168.1.10  
ICMP Message Type: 0

Layer 2: Ethernet II Header 0003.E44E.2500 >> 0007.ECEB.120B

Layer 1: Port FastEthernet0

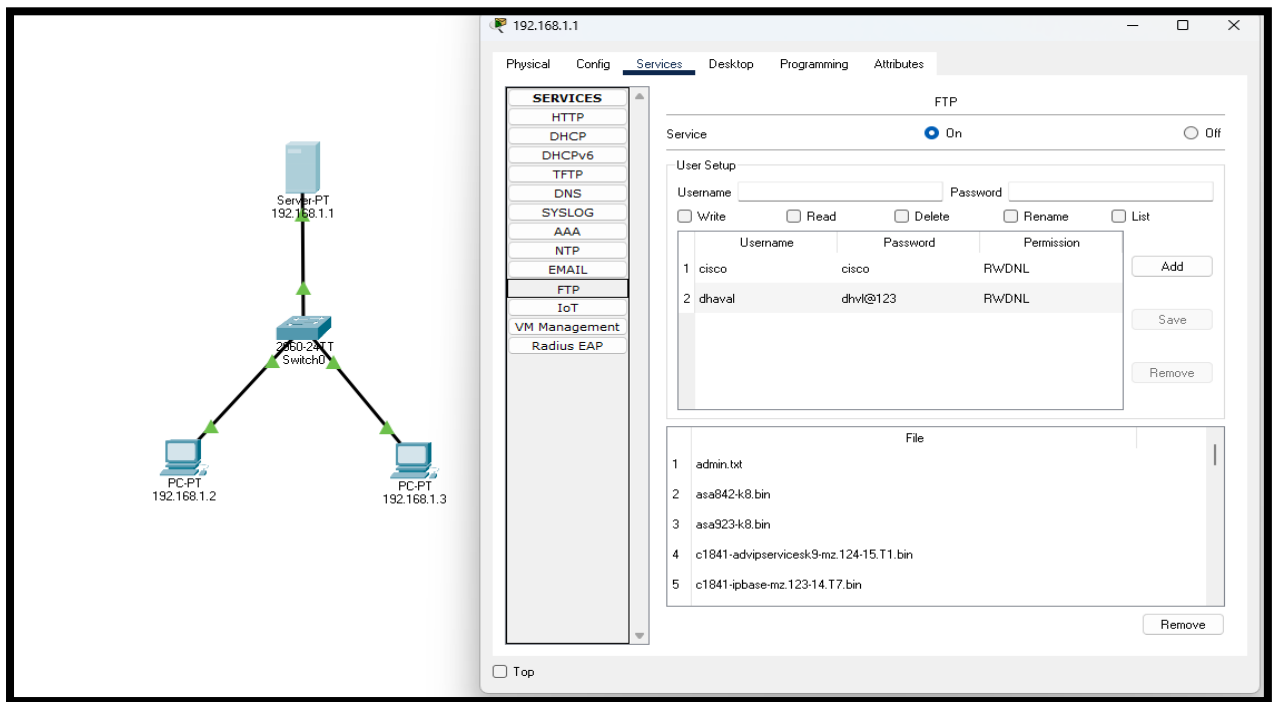
1. FastEthernet0 receives the frame.

Challenge Me

<< Previous Layer Next Layer >>

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**c. FTP :**



The image shows a network diagram on the left and the Packet Tracer configuration for a Server-PT on the right.

**Network Diagram:**

- Server-PT (192.168.1.1) is connected to a 2950-24TT Switch0.
- Switch0 is connected to two PC-PTs: 192.168.1.2 and 192.168.1.3.

**Packet Tracer Configuration (Server-PT 192.168.1.1):**

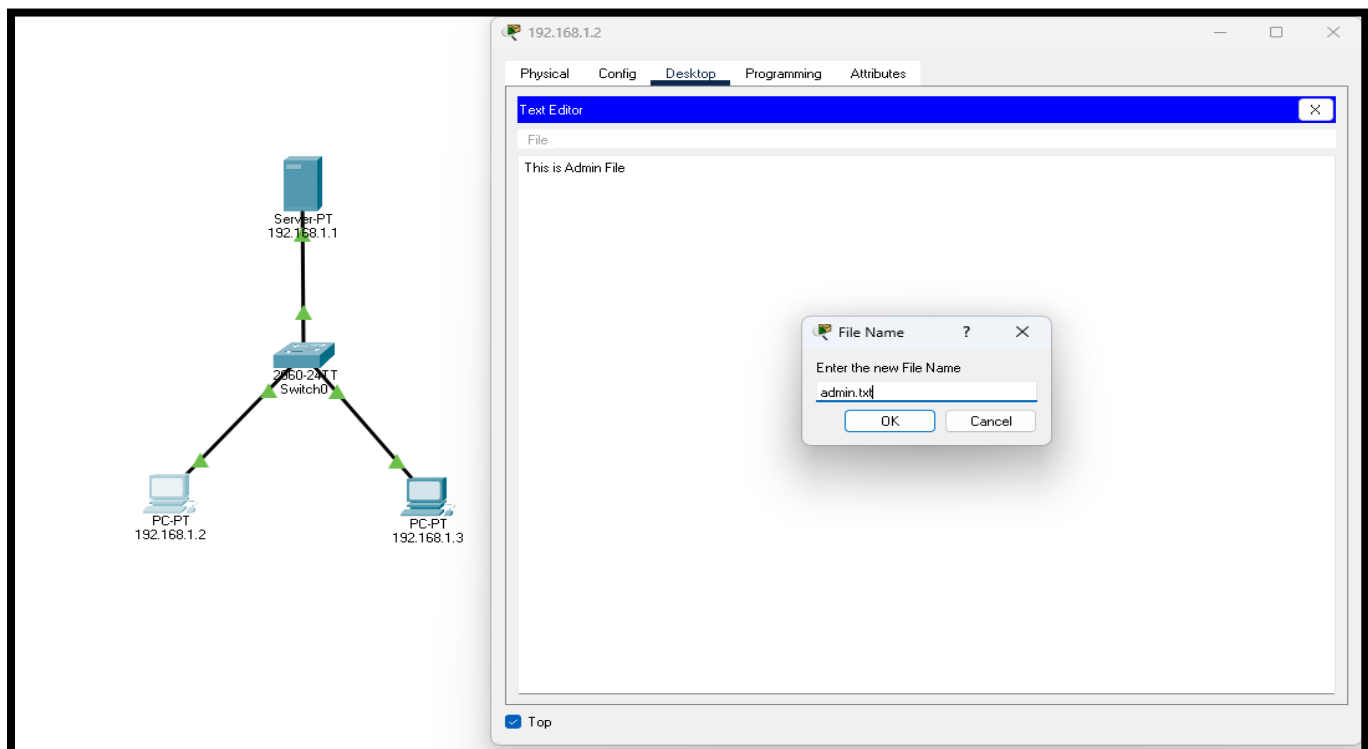
The **SERVICES** tab is selected. The **FTP** service is enabled (On).

**User Setup:**

	Username	Password	Permission
1	cisco	cisco	RWDNL
2	dhaval	dhv@123	RWDNL

**File List:**

File
1 admin.txt
2 asa842-k8.bin
3 asa923-k8.bin
4 c1841-advipservicesk9-mz.124-15.T1.bin
5 c1841-ipbase-mz.123-14.T7.bin



The image shows the same network diagram on the left and the Packet Tracer configuration for a PC-PT on the right.

**Network Diagram:**

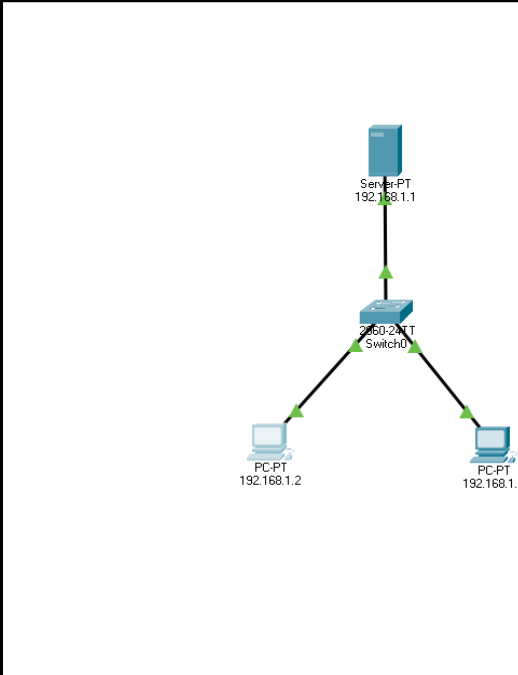
- Server-PT (192.168.1.1) is connected to a 2950-24TT Switch0.
- Switch0 is connected to two PC-PTs: 192.168.1.2 and 192.168.1.3.

**Packet Tracer Configuration (PC-PT 192.168.1.2):**

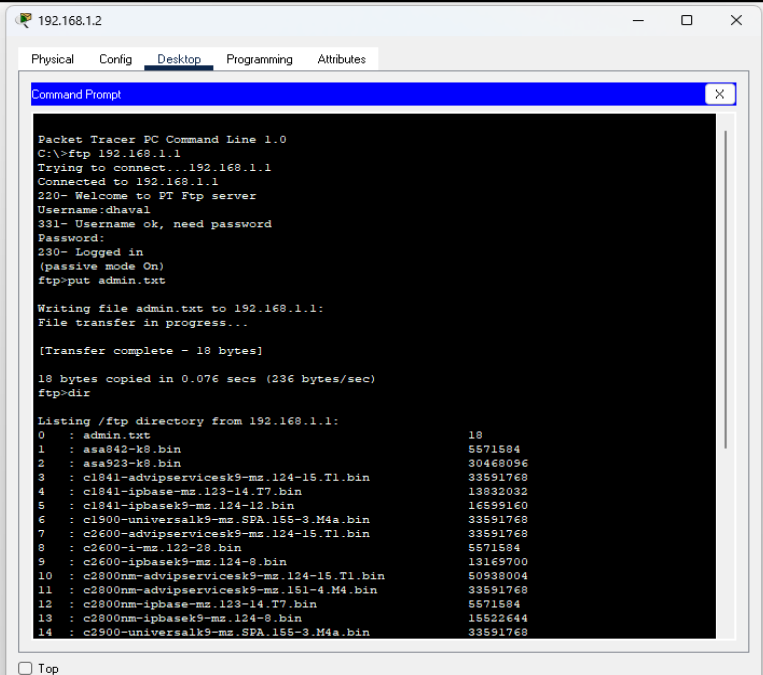
The **Desktop** tab is selected. A **Text Editor** window is open, displaying "This is Admin File".

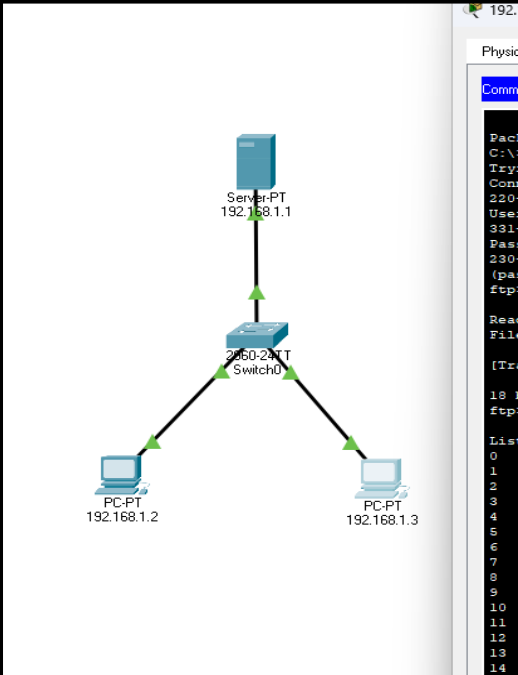
A **File Name** dialog box is shown, prompting for a new file name. The text "admin.txt" is entered in the field.

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192.168.1.2





192.168.1.3

