

# **Computer Networks**

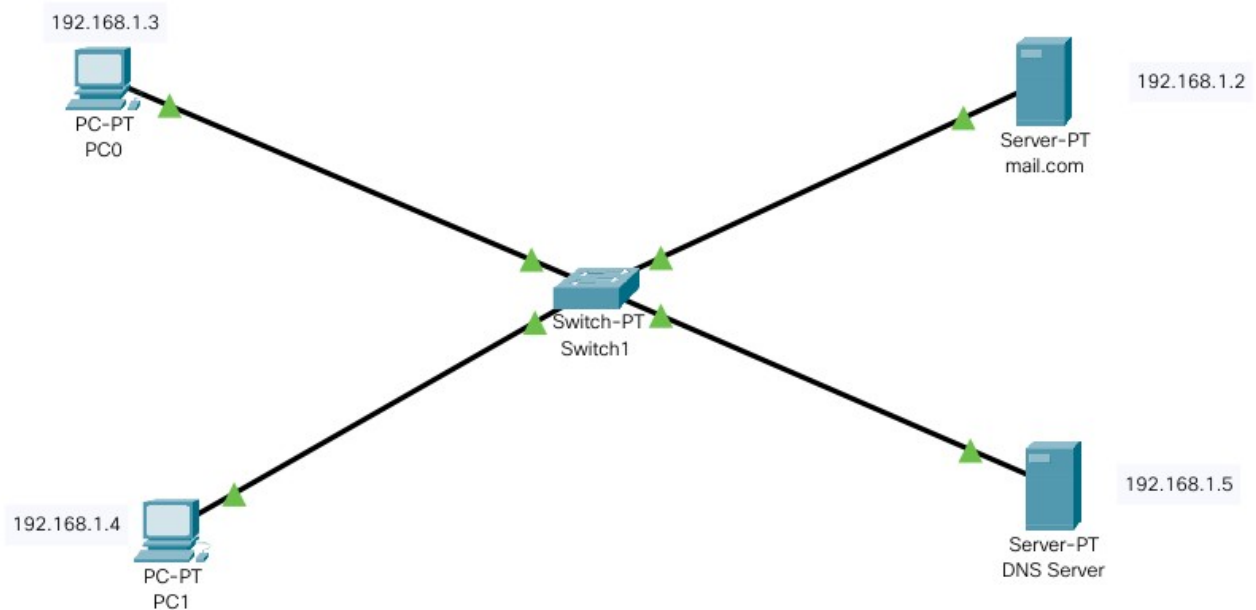
## **Lab 06**

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## Lab Work:

### Steps:

- Make this protocol by drag and drop two PCs, two servers and a switch.
- Then assign IPs to all of them.



- Now configure mail server, PCs and DNS servers

The screenshot shows the "mail.com" configuration window with the "Desktop" tab selected. The "IP Configuration" section is expanded, showing the following settings:

- IP Configuration:**
  - ☐ DHCP
  - ☒ Static
  - IPv4 Address: 192.168.1.2
  - Subnet Mask: 255.255.255.0
  - Default Gateway: 0.0.0.0
  - DNS Server: 192.168.1.5
- IPv6 Configuration:**
  - ☐ Automatic
  - ☒ Static
  - IPv6 Address: [empty] / [empty]
  - Link Local Address: FE80::2E0:8FFF:FE9A:7846
  - Default Gateway: [empty]
  - DNS Server: [empty]
- 802.1X:**
  - ☐ Use 802.1X Security
  - Authentication: MD5

At the bottom, there is a "Top" button.

PC0

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

FastEthernet0

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.3

Subnet Mask

255.255.255.0

Default Gateway

0.0.0.0

DNS Server

192.168.1.5

IPv6 Configuration

Automatic

Static

IPv6 Address

/

Link Local Address

FE80::2D0:FFFF:FEA6:E040

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Top

DNS Server

Physical

Config

Services

Desktop

Programming

Attributes

SERVICES

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

IoT

VM Management

Radius EAP

DNS

DNS Service

On

Off

Resource Records

Name

Type

A Record

Address

Add

Save

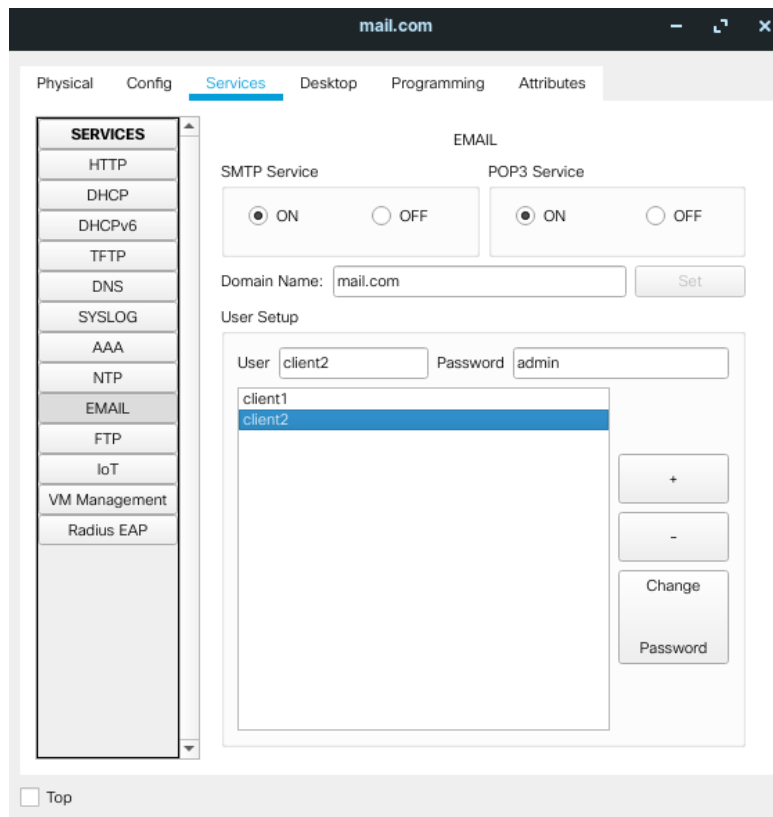
Remove

No.	Name	Type	Detail
0	mail.com	A Record	192.168.1.2

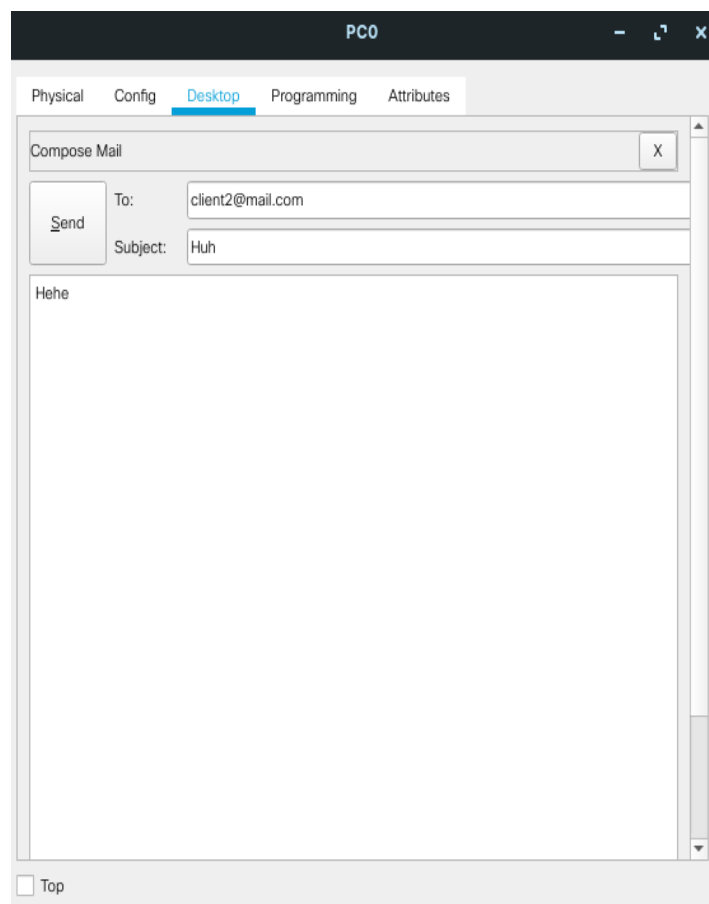
DNS Cache

Top

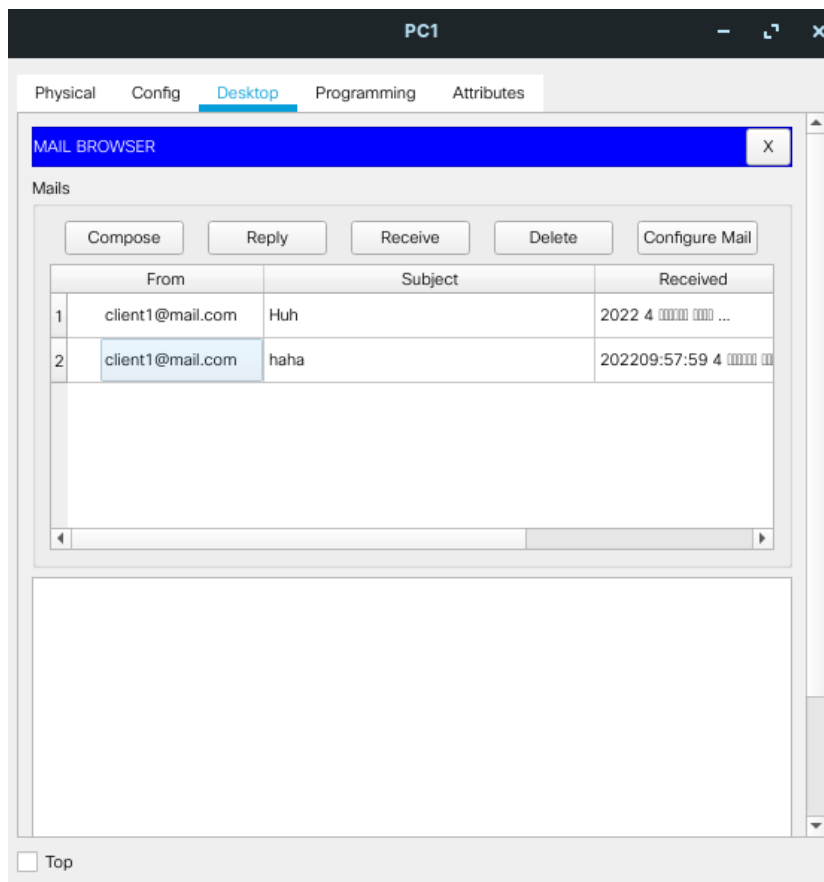
- Add both clients in the mail server.



- Now if you send email to the other PC, it will be able to send it.



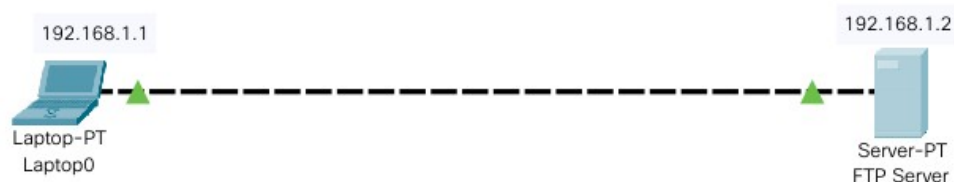
- Now click on receive to the other client PC, you will receive sent email.



## Task 1 – 3 :

### Steps:

- First make this protocol by dragging laptop and server and assign IPs to them and then connect them through cross over.



- Then make file of “flex.html” in Laptop through text editor and save it.
- Then go to command prompt of Laptop and send file to server by following commands.

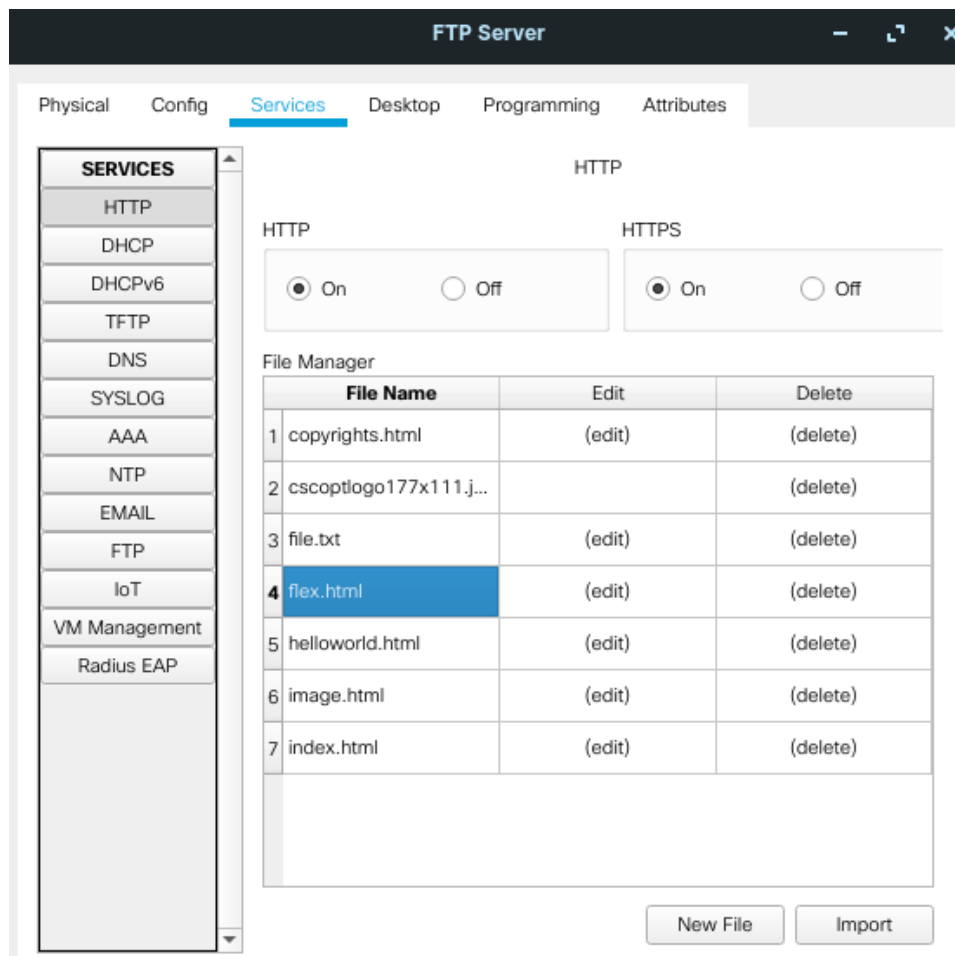
```
ftp>
Working directory changed to /http successfully
ftp>put flex.html

Writing file flex.html to 192.168.1.2:
File transfer in progress...

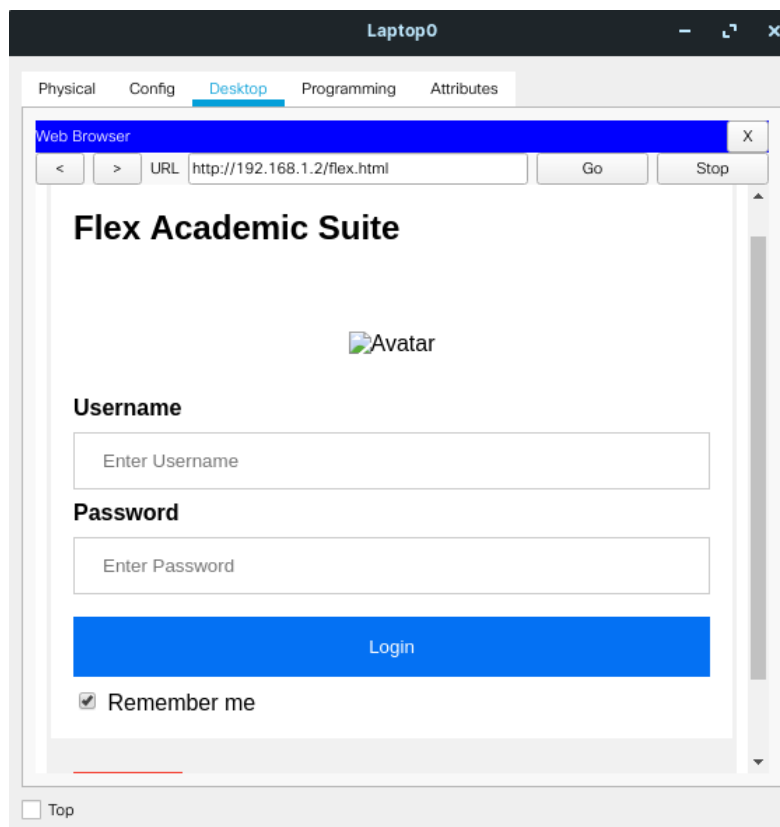
[Transfer complete - 1754 bytes]

1754 bytes copied in 0.028 secs (62642 bytes/sec)
ftp>|
```

- Now you can go to server and check if the file exists?



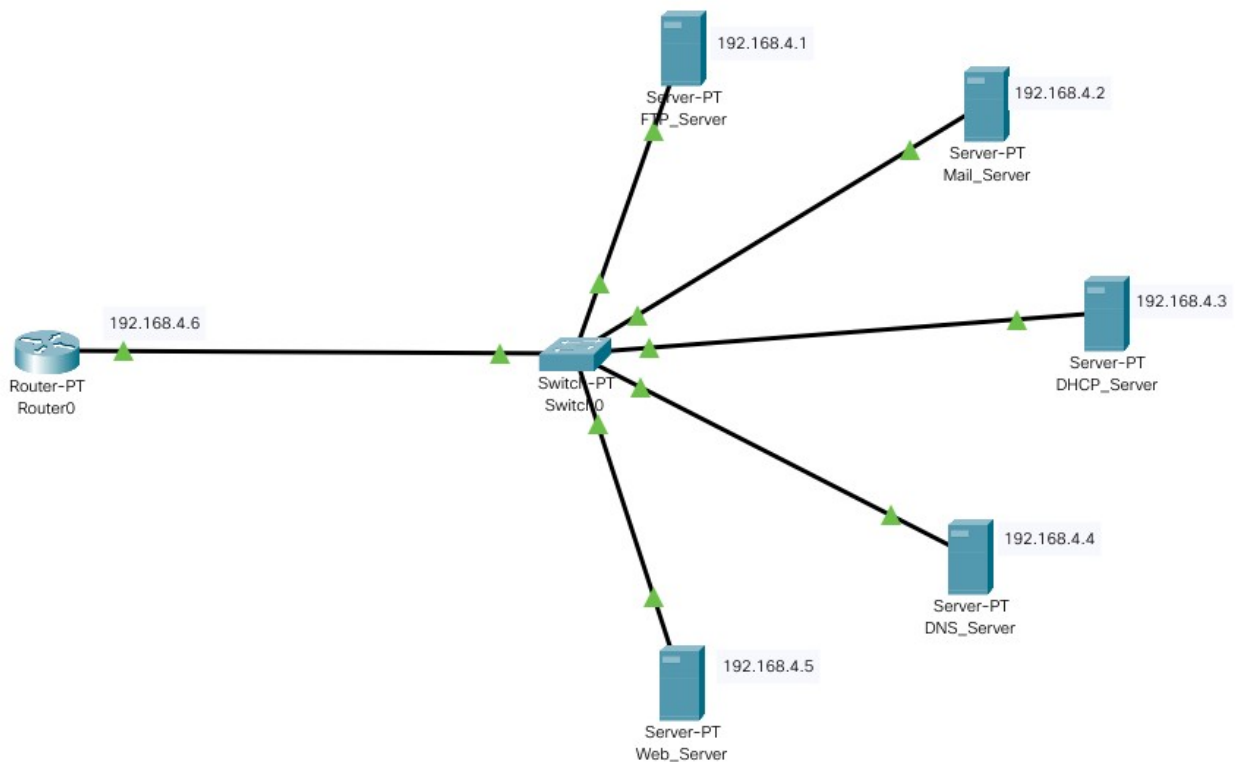
- Now if you want to browse the file you can go to browser of laptop and see the page interface by this URL.



## Task 04:

### Steps:

- Make this protocol by drag and drop the servers, switch and routers.
- Then assign the IPs to them.



- Now configure them.

The screenshot shows the configuration window for the Mail\_Server. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the following settings:

- IP Configuration:**
  - ☐ DHCP
  - ☒ Static
  - IPv4 Address: 192.168.4.2
  - Subnet Mask: 255.255.255.0
  - Default Gateway: 0.0.0.0
  - DNS Server: 192.168.7.1
- IPv6 Configuration:**
  - ☐ Automatic
  - ☒ Static
  - IPv6 Address: [Empty field] / [Empty field]
  - Link Local Address: FE80::2D0:97FF:FEA2:8DA2
  - Default Gateway: [Empty field]
  - DNS Server: [Empty field]
- 802.1X:**
  - ☐ Use 802.1X Security
  - Authentication: MD5

At the bottom, there is a 'Top' button.



**DHCP\_Server**

Physical Config Services **Desktop** Programming Attributes

**IP Configuration**

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.4.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 192.168.7.1

**IPv6 Configuration**

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::201:43FF:FE44:ED58

Default Gateway:

DNS Server:

**802.1X**

☐ Use 802.1X Security

Authentication: MD5

☐ Top

- Now you can create pool for it.

**DHCP\_Server**

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: p1

Default Gateway: 192.168.4.6

DNS Server: 192.168.4.4

Start IP Address: 192 168 4 0

Subnet Mask: 255 255 255 0

Maximum Number of Users: 255

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max Users	TFTP Server	WLC Address
p1	192.1...	192.1...	192.1...	255.2...	2...	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	192.1...	255.2...	2...	0.0.0.0	0.0.0.0

☐ Top