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Roll No : 20P-0180

Section: BCS-5B

Course Name: Computer Networks LAB

Submitted to : Mam Hurmat Hidayat

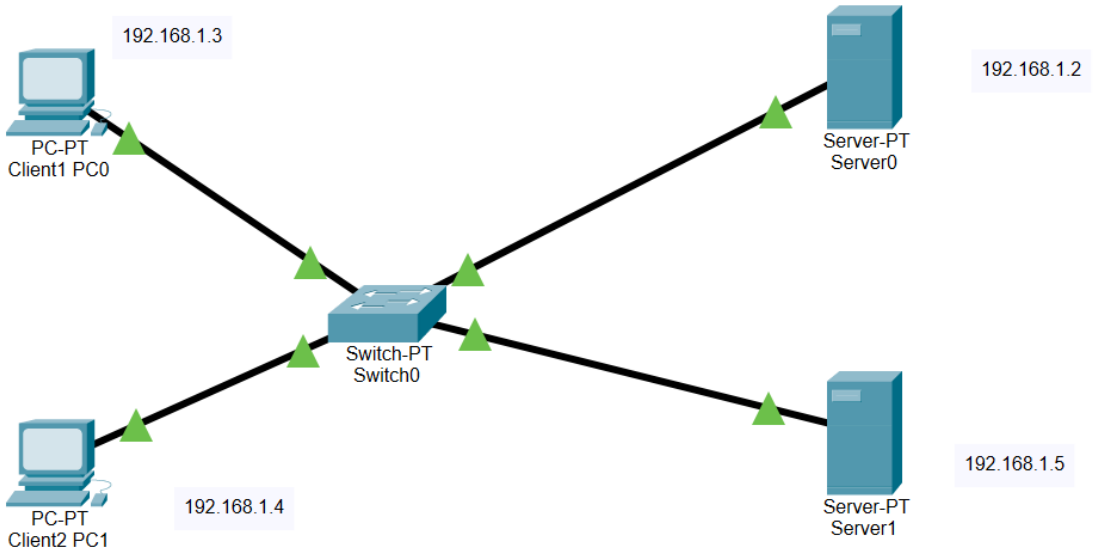
Submitted on : 10/05/2022

LAB 06

TASK 1:

Step 1:

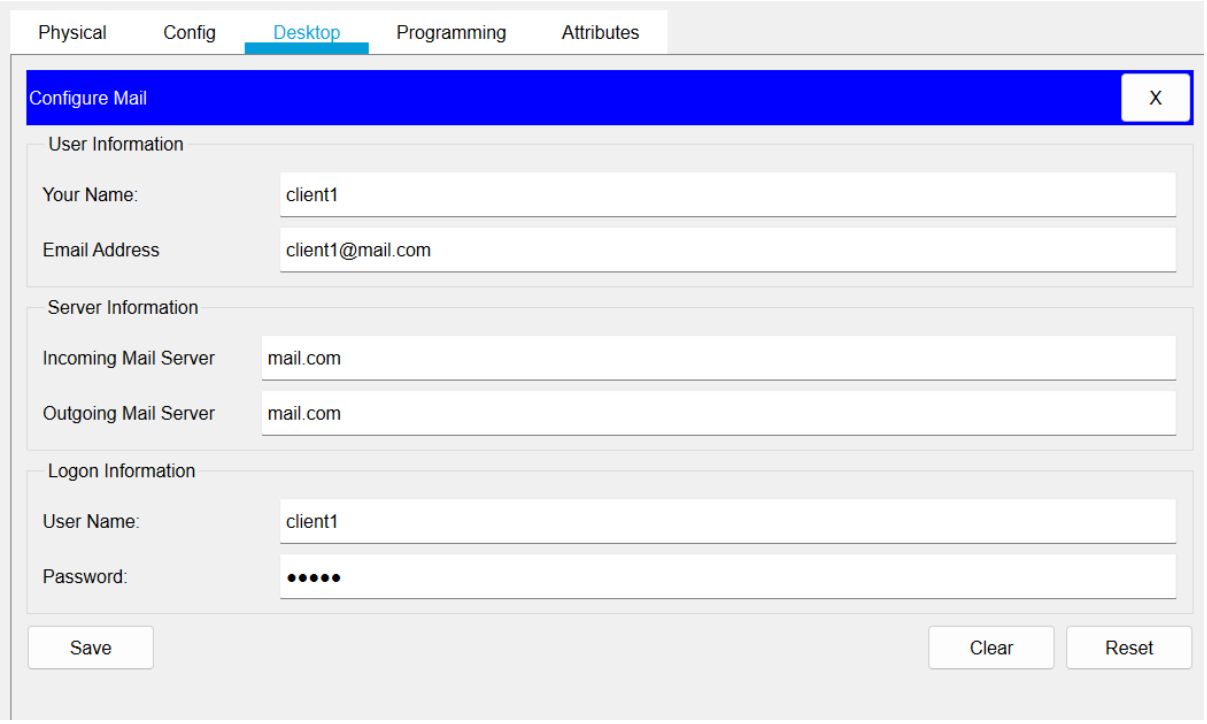
Build a network topology.

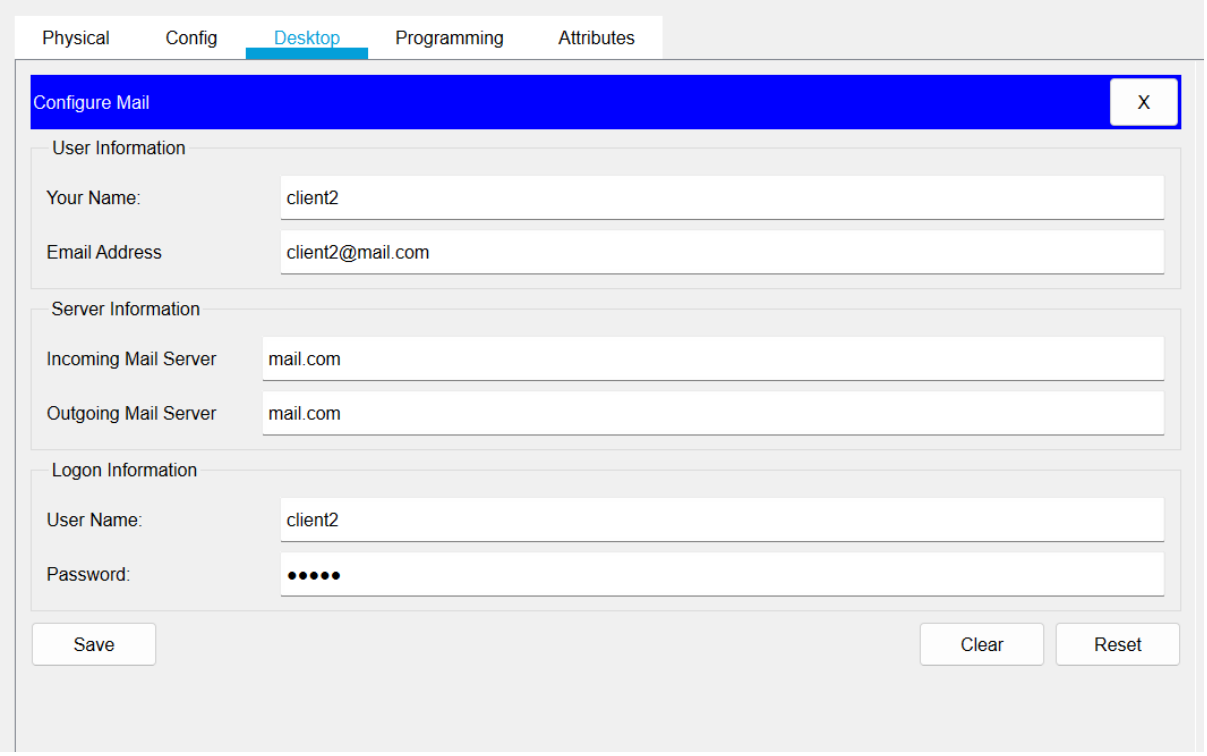


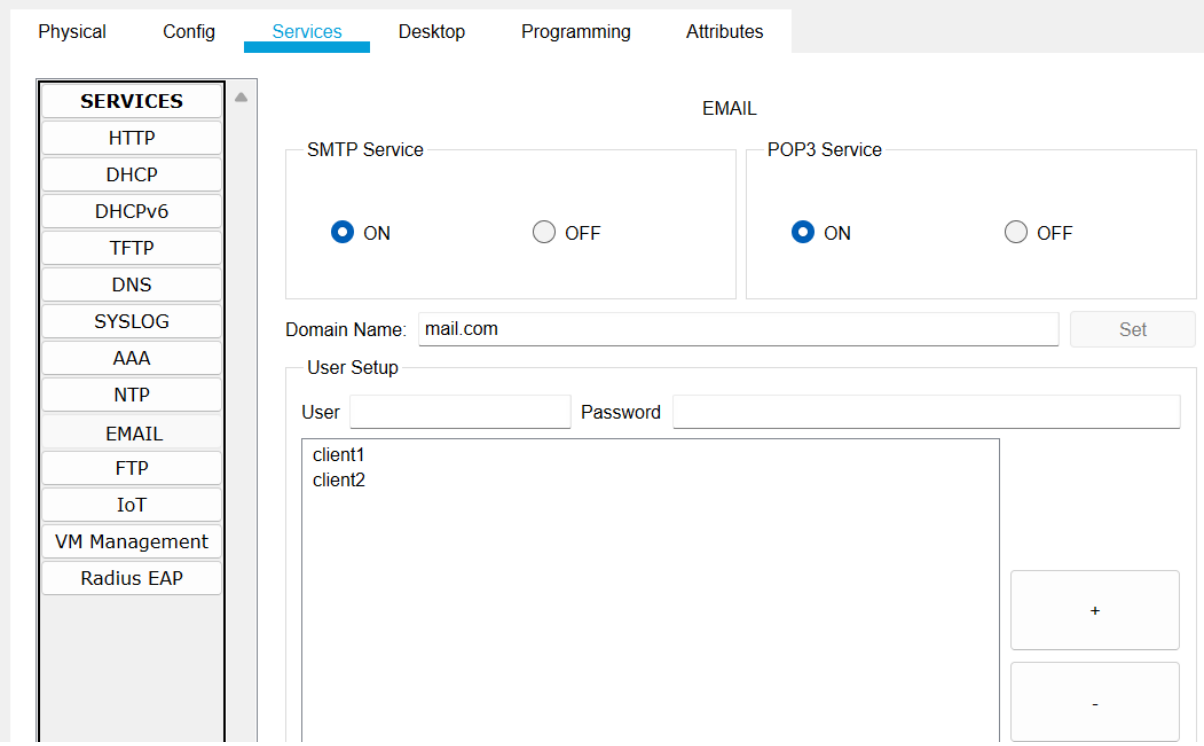
Step 2: Configure IP addresses on the PCs, DNS Server and the Mail Server.

- Mail Server IP address: 192.168.1.2
- PC0 IP address: 192.168.1.4
- PC1 IP address: 192.168.1.3
- DNS server IP address: 192.168.1.5

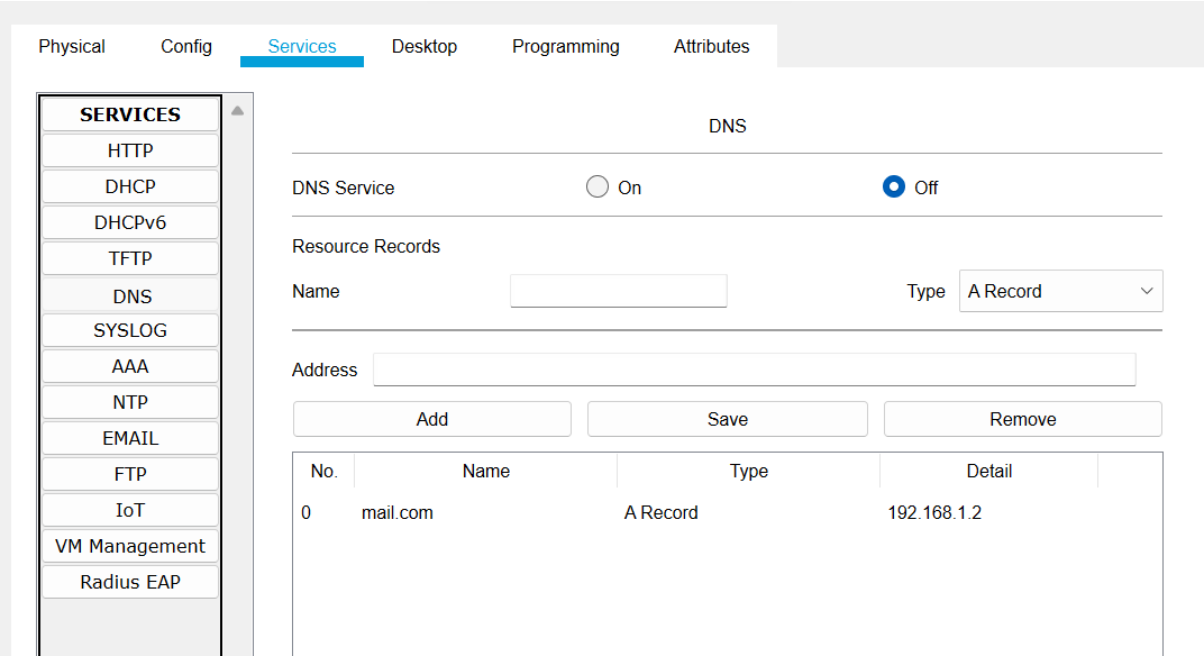
Step 3: Configure mail clients on the PCs and mail service on the generic server.





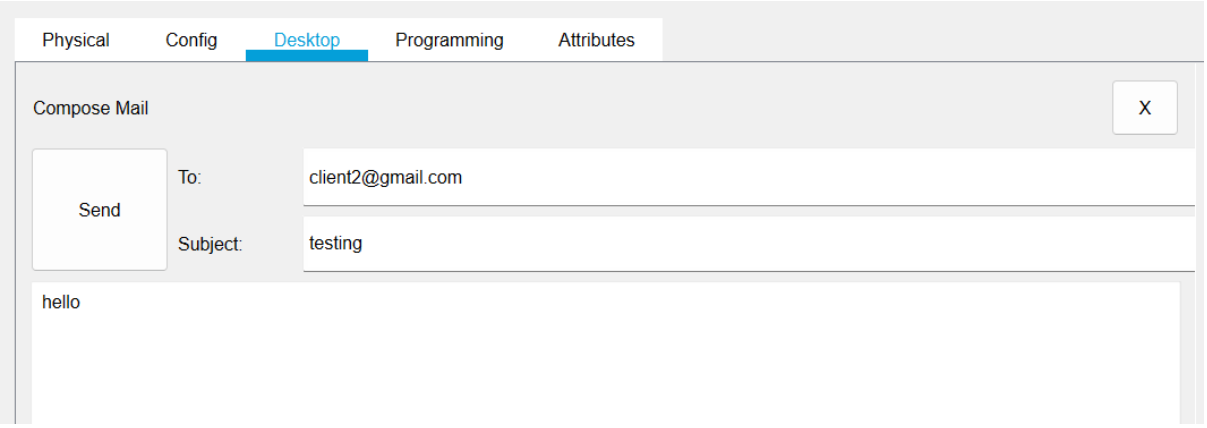


Step 4: Configure the DNS server.

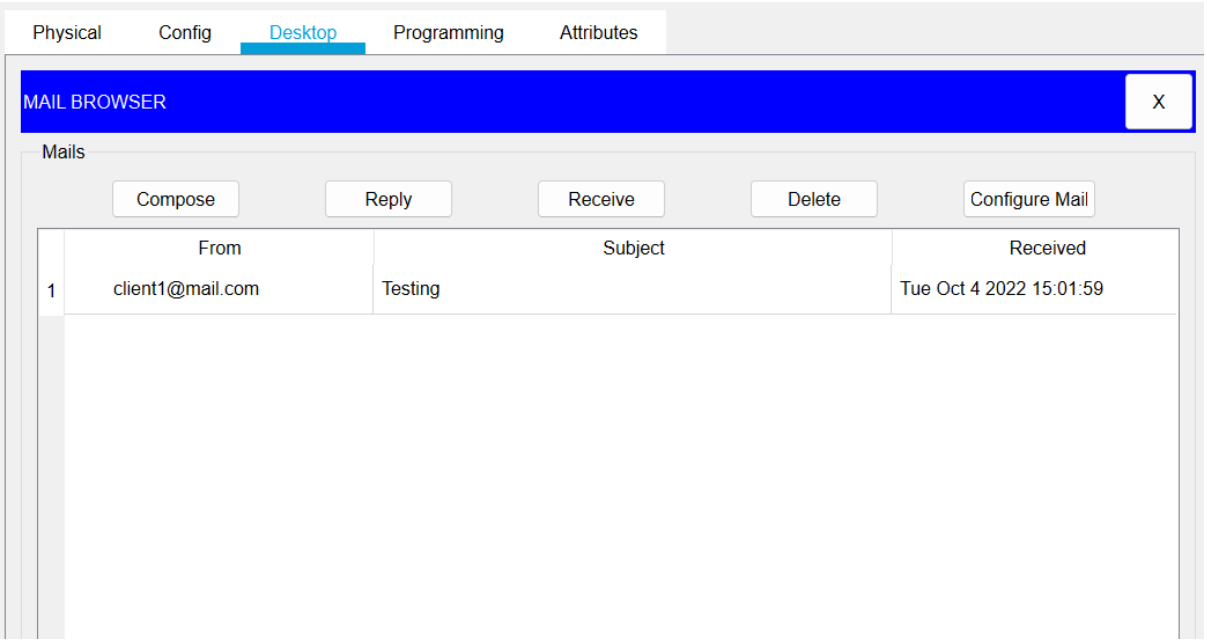


Step 5: Testing the email service.

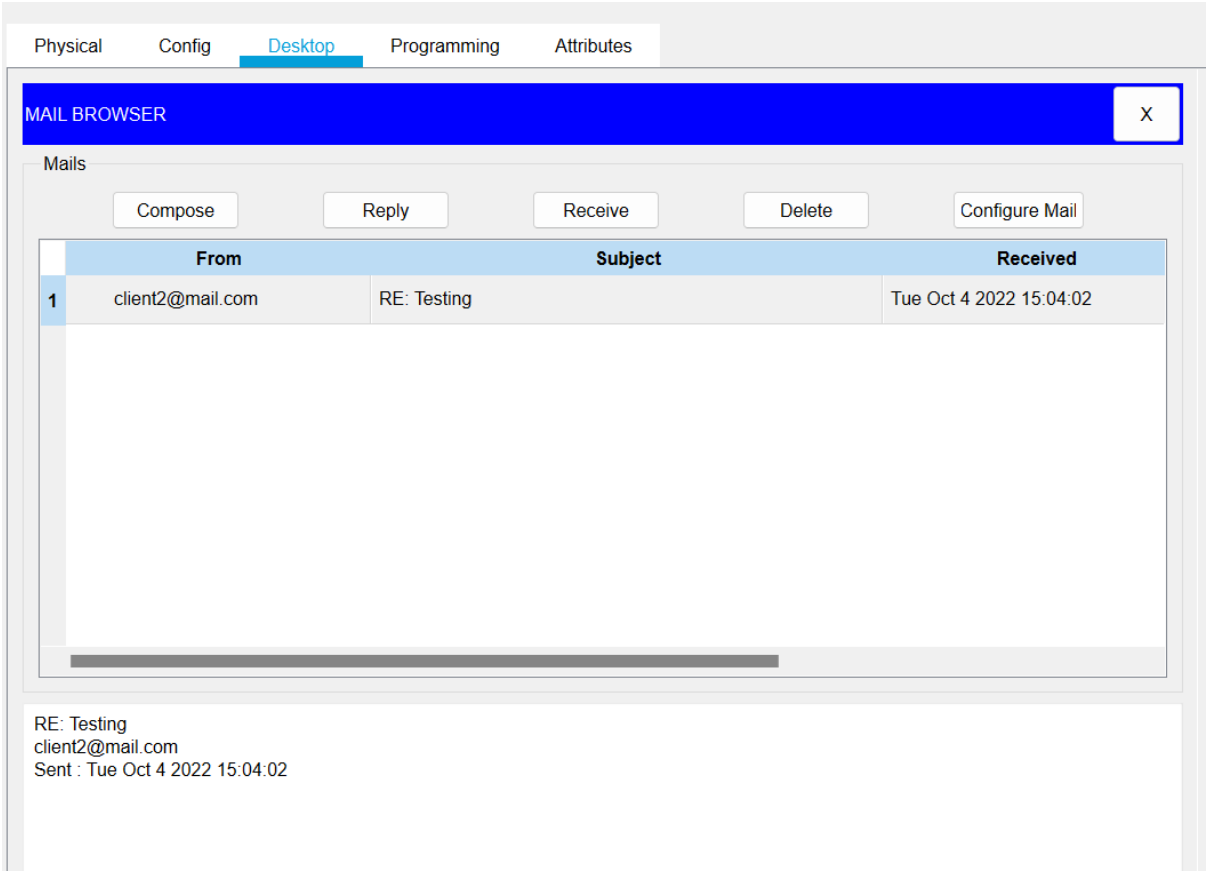
We will to PC0 email client, compose an email and send it to PC1 email address(client2@mail.com).



And then we will check whether the email from PC0 is received on PC1. On the email client of PC1.

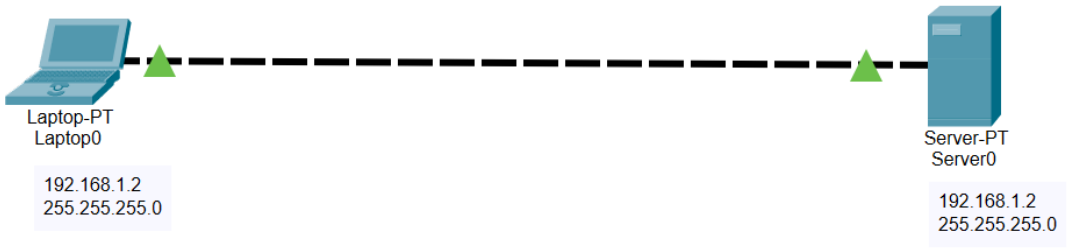


And we will send reply and check weather reply is received from PC1 to PC0.



Task 2: Configure an FTP server in Packet Tracer

Step 1: Build a network topology:

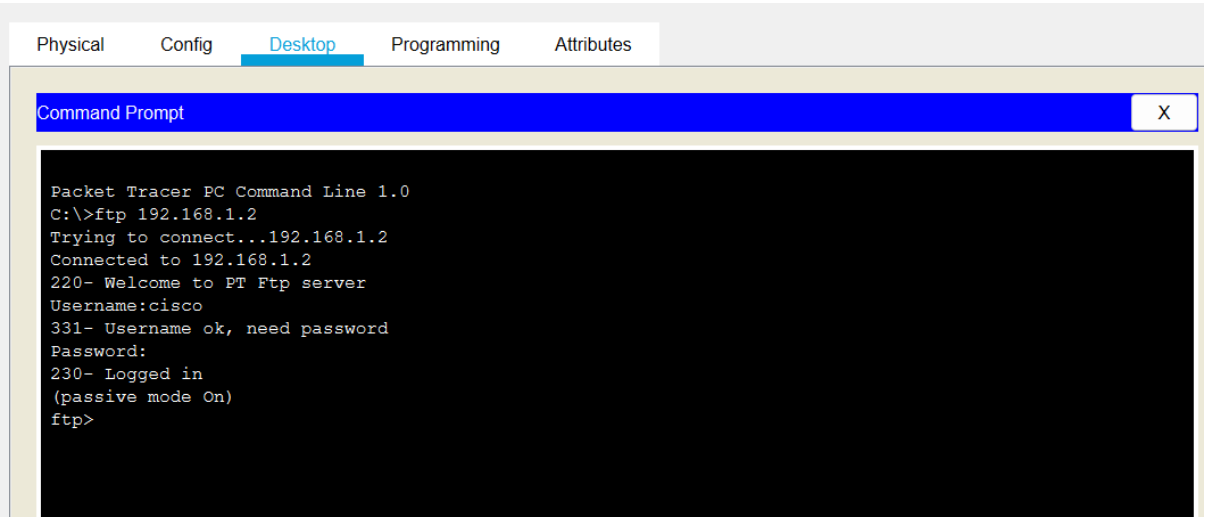


Step 2: Configure static IP addresses on the Laptop and the server.

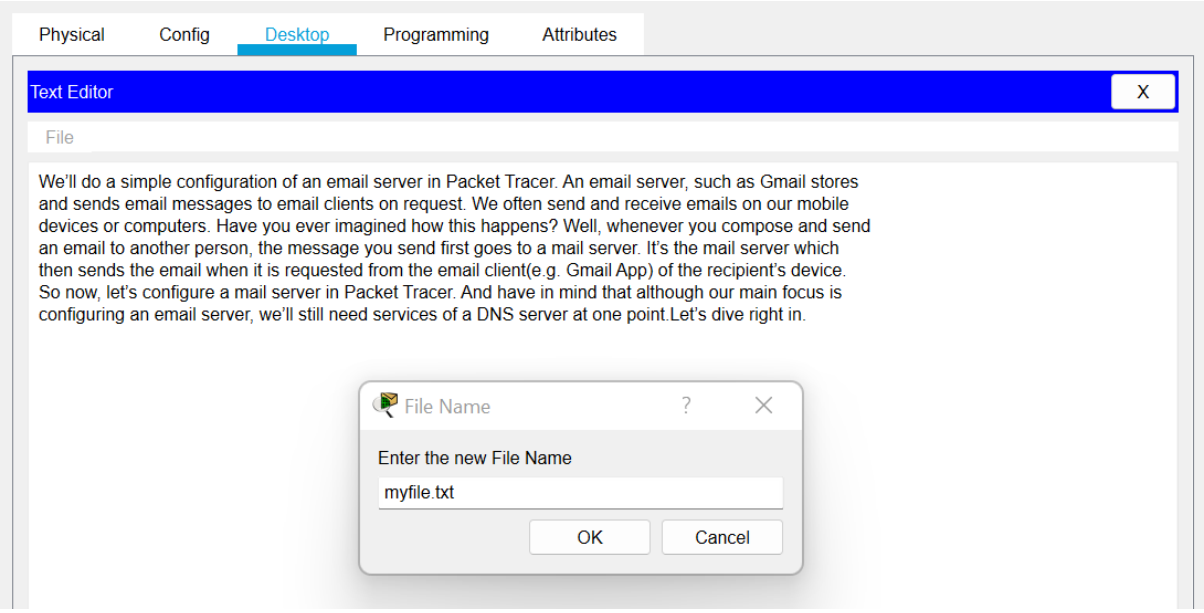
Laptop: IP address: 192.168.1.1 Subnet Mask: 255.255.255.0

Server: IP address: 192.168.1.2 Subnet Mask: 255.255.255.0

Step 3: try using an FTP client built in the Laptop to send files to an FTP server configured in the Server.



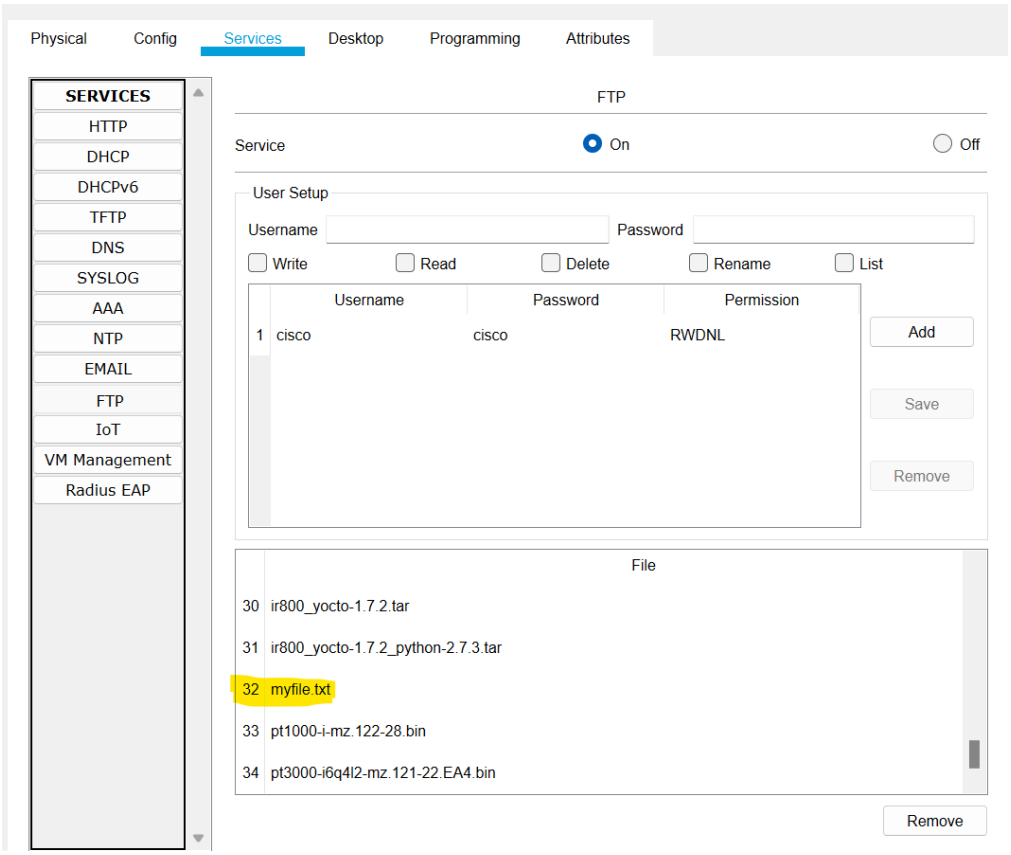
Step 4: Create a file in the Laptop then upload it to the server using FTP.



Now upload the file from the Laptop to the server using FTP.

```
ftp>put myfile.txt to 192.168.1.2

Writing file myfile.txt to 192.168.1.2:
File transfer in progress...

[Transfer complete - 761 bytes]

761 bytes copied in 0.049 secs (15530 bytes/sec)
ftp>
```

Step 5: Go to the Server FTP directory to verify if the file sent has been received



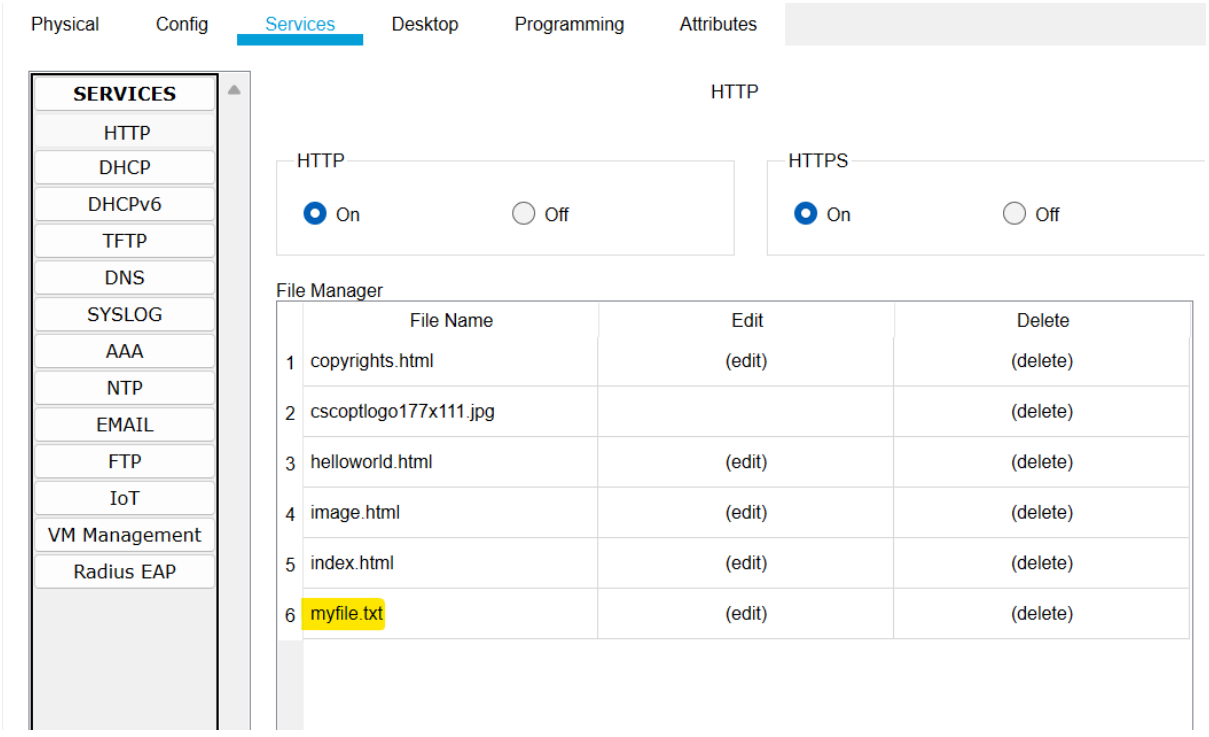
Task 3: **Create and Upload html file to HTTP server directory Using FTP**

We will use the same network topology as we used in our earlier task and will assign same static IP address and subnet mask to ftp server and our laptop.

We will write **ftp** in our CLI and give username and password. And then we will write **cd /http** and then we will write **put <filename> to <server IP>.**

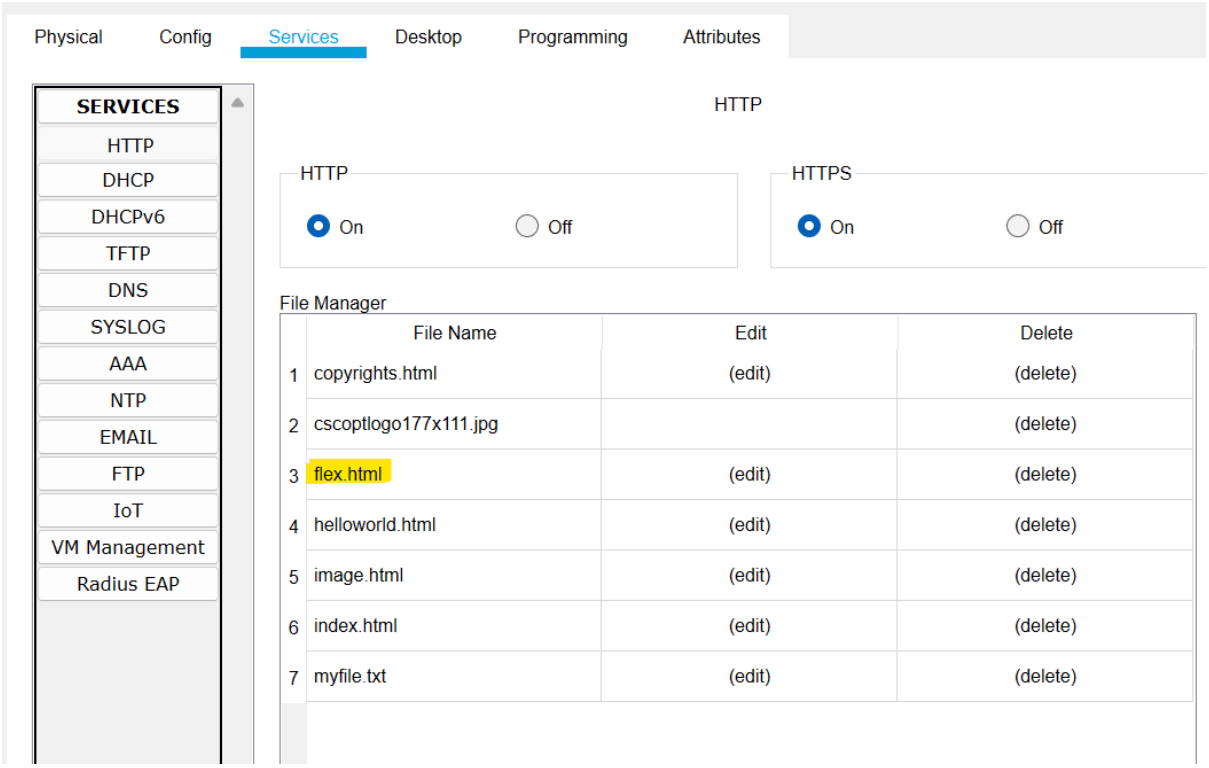
```
ftp>cd /http
ftp>
Working directory changed to /http successfully
ftp>writing file myfile.txt to 192.168.1.2
 Invalid or non supported command.
ftp>put myfile.txt to 192.168.1.2

Writing file myfile.txt to 192.168.1.2:
File transfer in progress...

[Transfer complete - 761 bytes]

761 bytes copied in 0.041 secs (18560 bytes/sec)
ftp>
```

And then we will check up in the **HTTP** directory in the server and verify that the file uploaded from the Laptop.

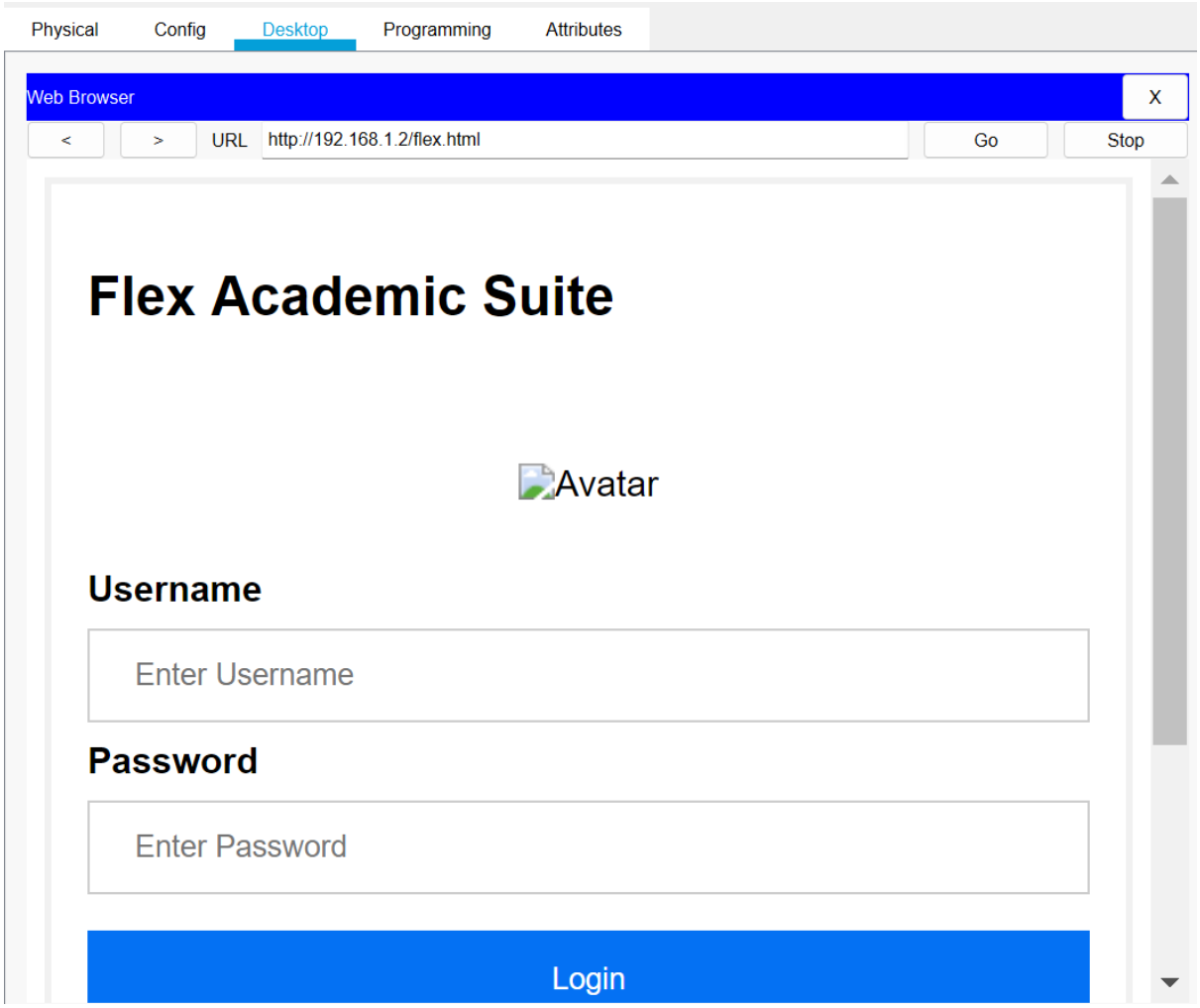


Another example for http file is we have a file for flex login page and we will upload it on http using ftp and then we will see from web browser if its working.

```
C:\>ftp 192.168.1.2
Trying to connect...192.168.1.2
Connected to 192.168.1.2
220- Welcome to PT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>cd /http
ftp>
Working directory changed to /http successfully
ftp>put flex.html to 192.168.1.2

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

[Transfer complete - 1762 bytes]

1762 bytes copied in 0.02 secs (88100 bytes/sec)
ftp>
```

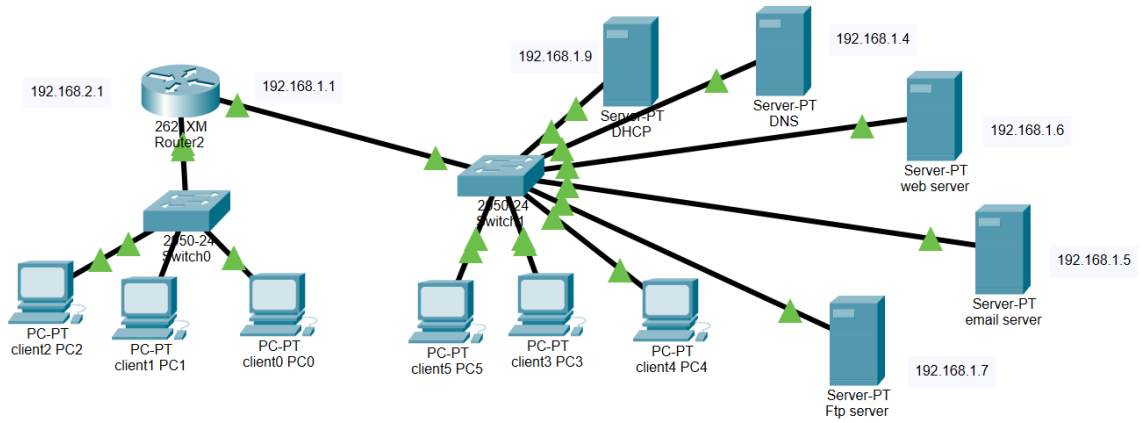



Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.1.2
Go
Stop
Cisco Packet Tracer
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
Quick Links:
A small page
Copyrights
Image page
Image
Flex Login


Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.1.2/flex.html
Go
Stop
Flex Academic Suite
Avatar
Username
Enter Username
Password
Enter Password
Login

Task 4: Configure Mail server, Ftp Server, DHCP Server, DNS Server and web Server in a single topology, use router and switch.

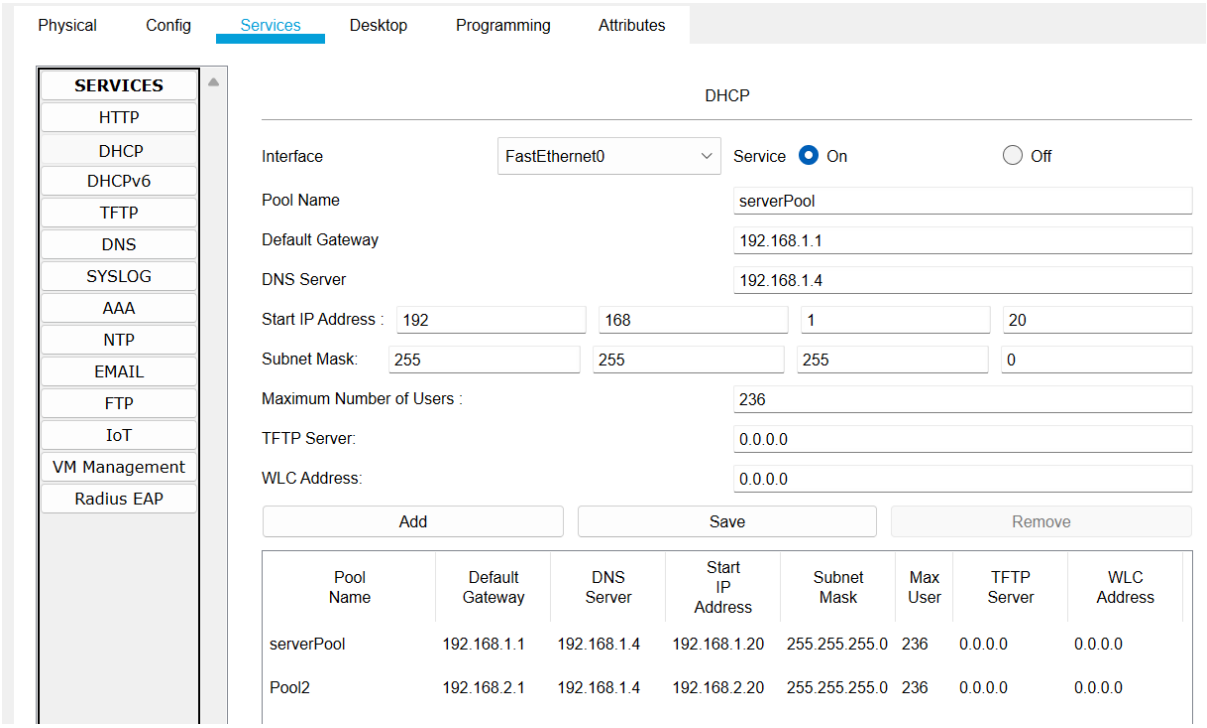
Step1: build the network topology.



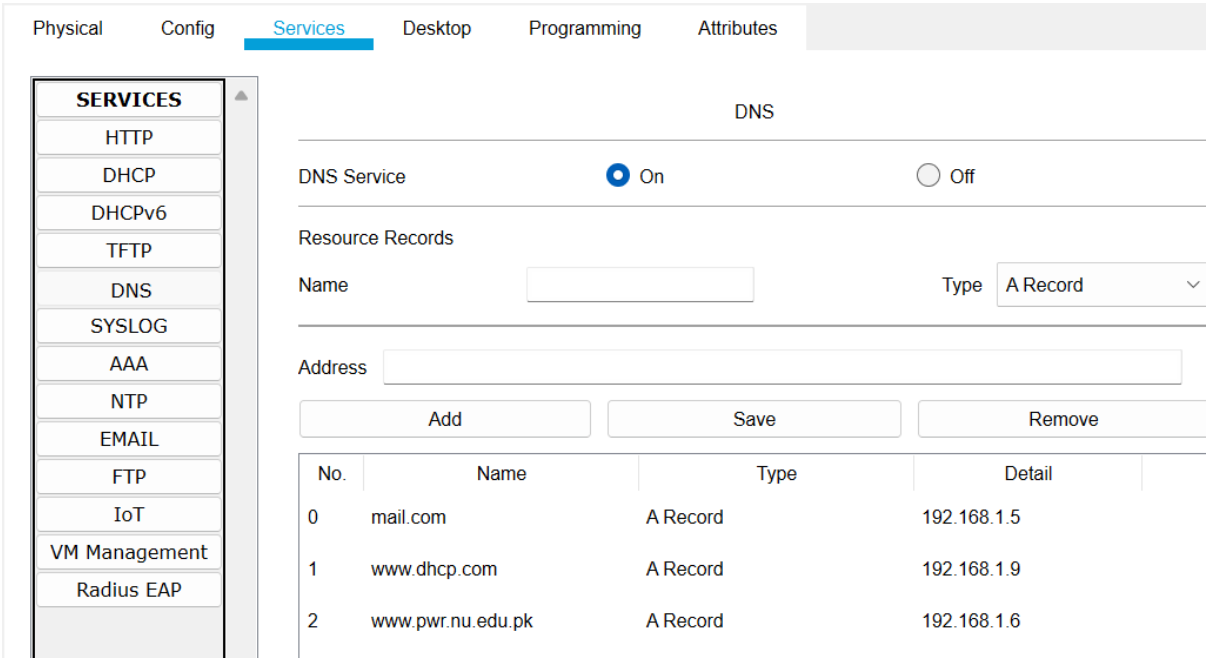
Step 2: Configure IP addresses on the PCs, router, DNS Server, DHCP server, Web server, ftp server and the Mail Server.

- Mail Server IP address: 192.168.1.5
- DNS server IP address: 192.168.1.2
- DHCP server IP address: 192.168.1.9
- web server IP address: 192.168.1.6
- ftp server IP address: 192.168.1.7
- PC5 IP address: 192.168.1.3
- router interface fa0/0 IP address: 192.168.2.1
- router interface fa0/1 IP address: 192.168.1.1

Step 3: configure services of DHCP and make IP pool.

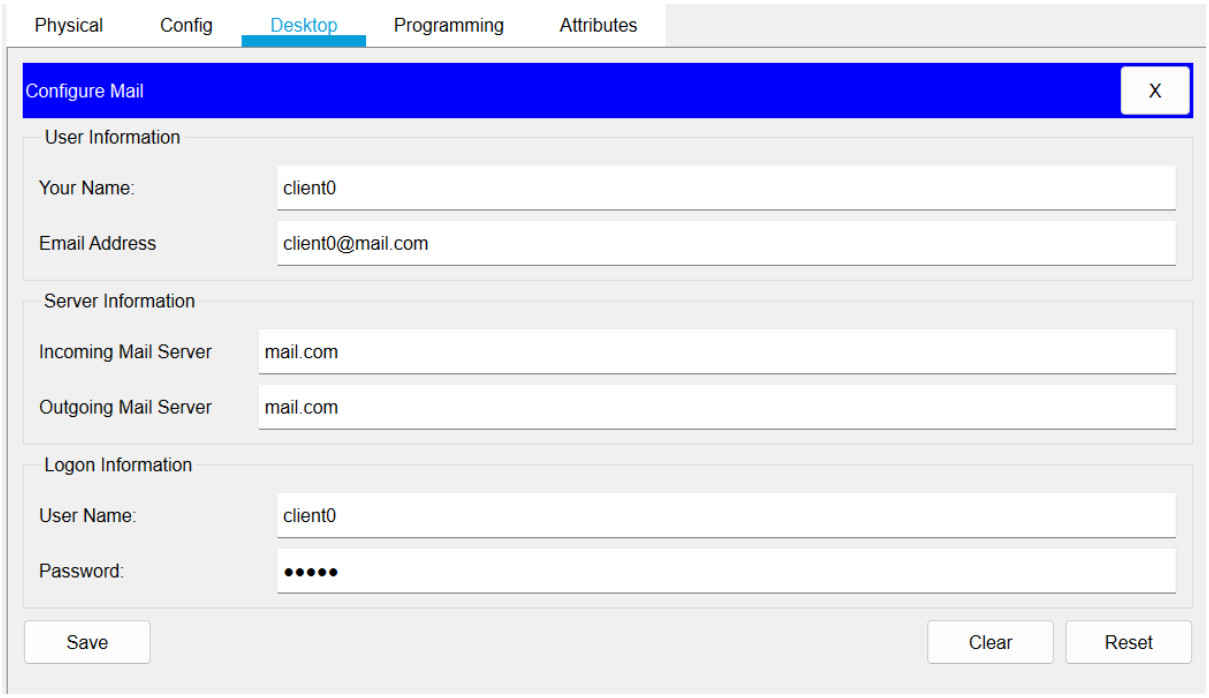


Step 4: Add Domain name in DNS server for other servers.

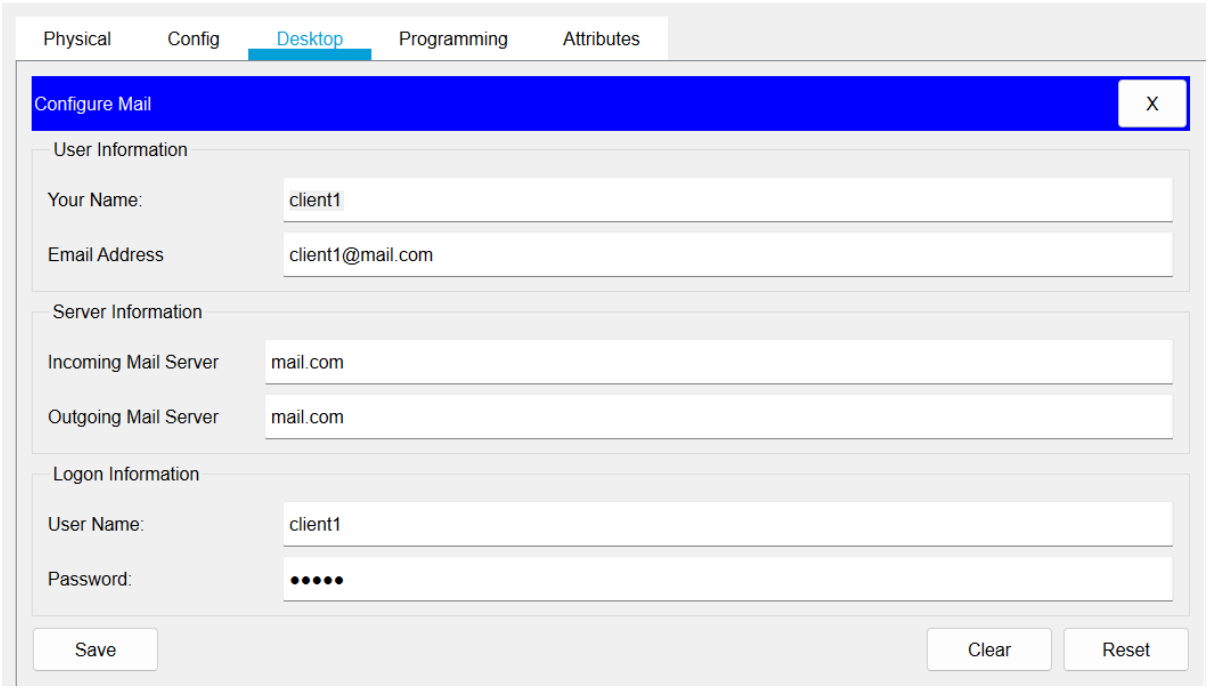


Step 5: Configure mail clients on the PCs.

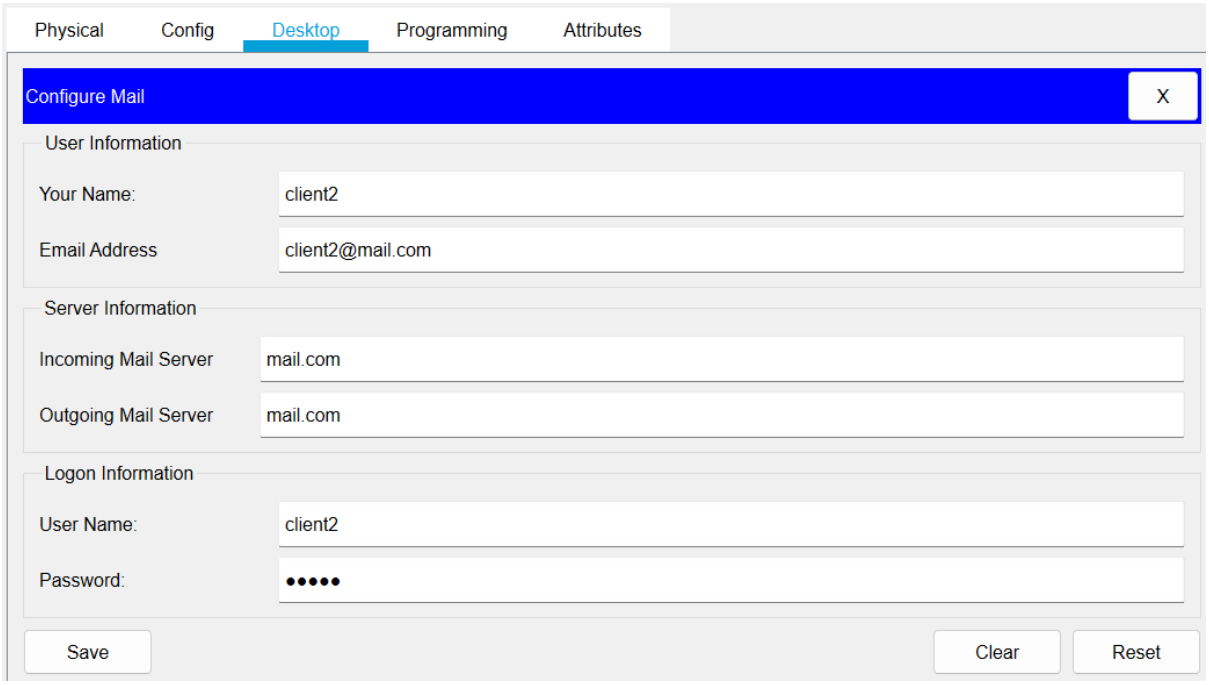
PC(0)



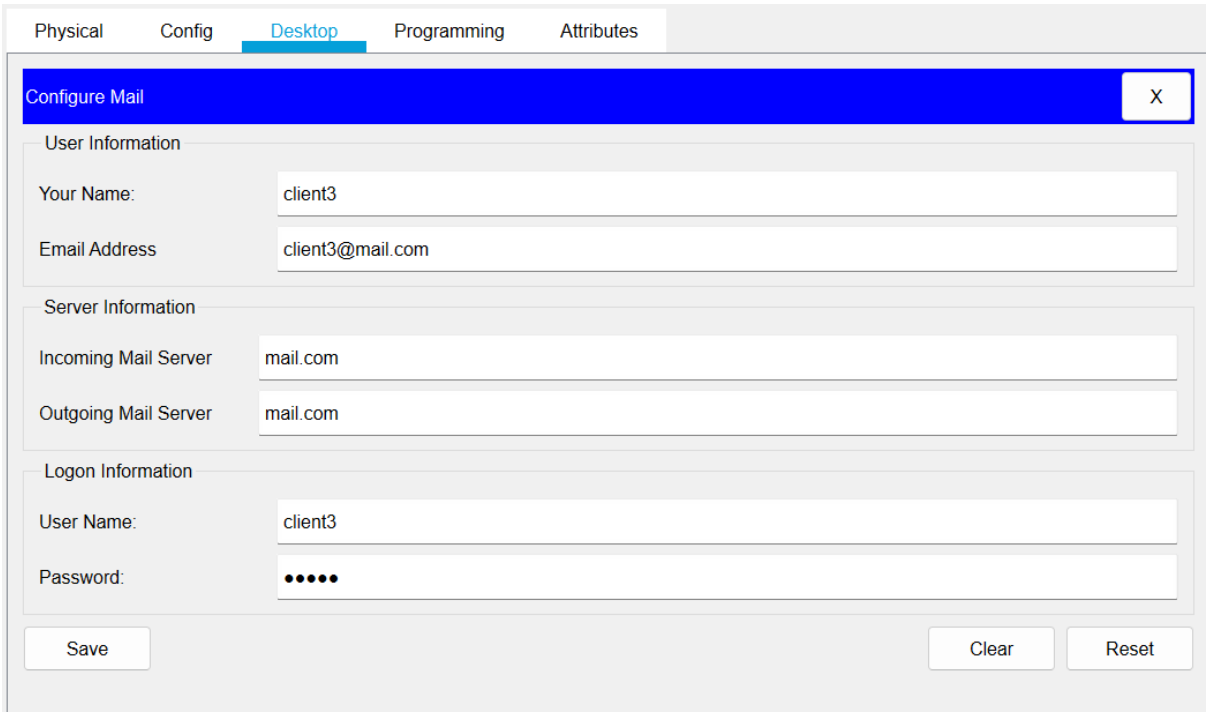
PC(1)



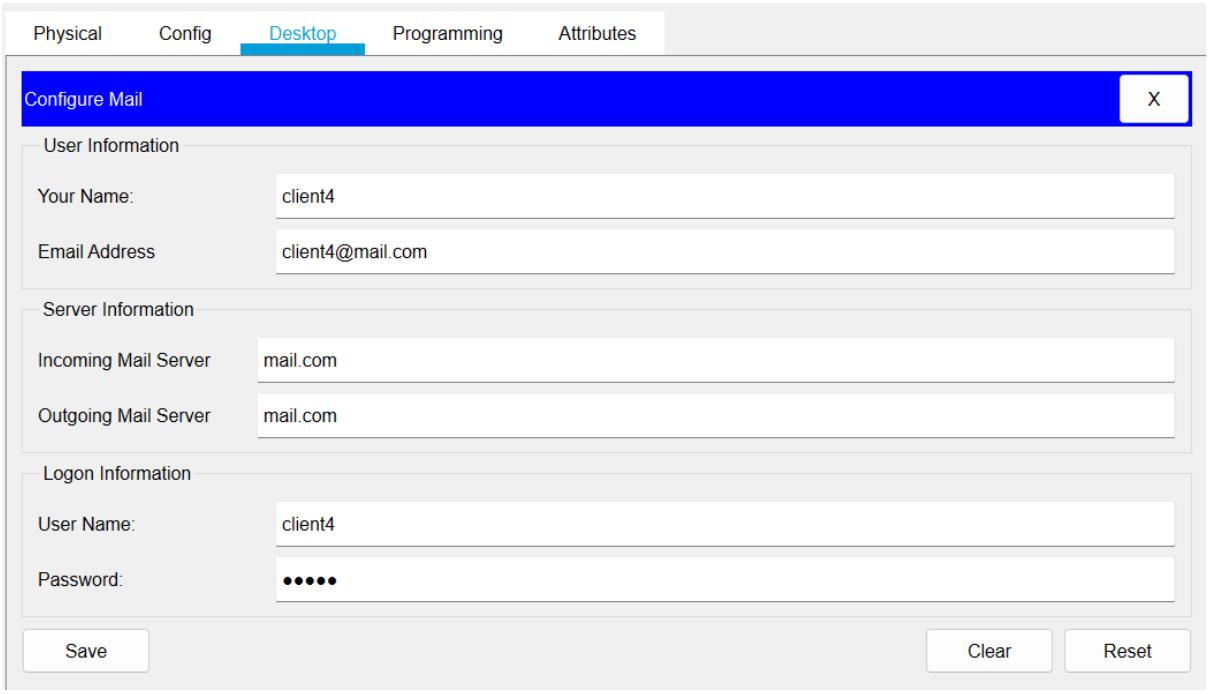
PC(2)


Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
client2
Email Address
client2@mail.com
Server Information
Incoming Mail Server
mail.com
Outgoing Mail Server
mail.com
Logon Information
User Name:
client2
Password:
Save
Clear
Reset

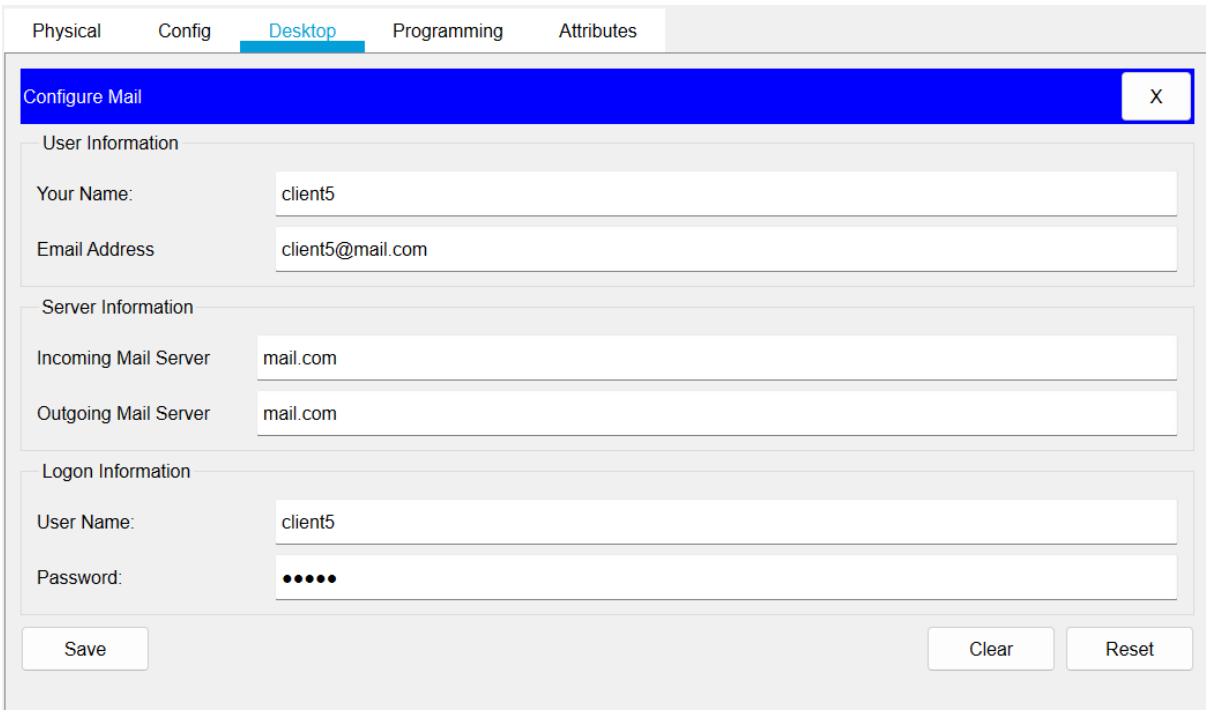
PC(3)


Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
client3
Email Address
client3@mail.com
Server Information
Incoming Mail Server
mail.com
Outgoing Mail Server
mail.com
Logon Information
User Name:
client3
Password:
Save
Clear
Reset

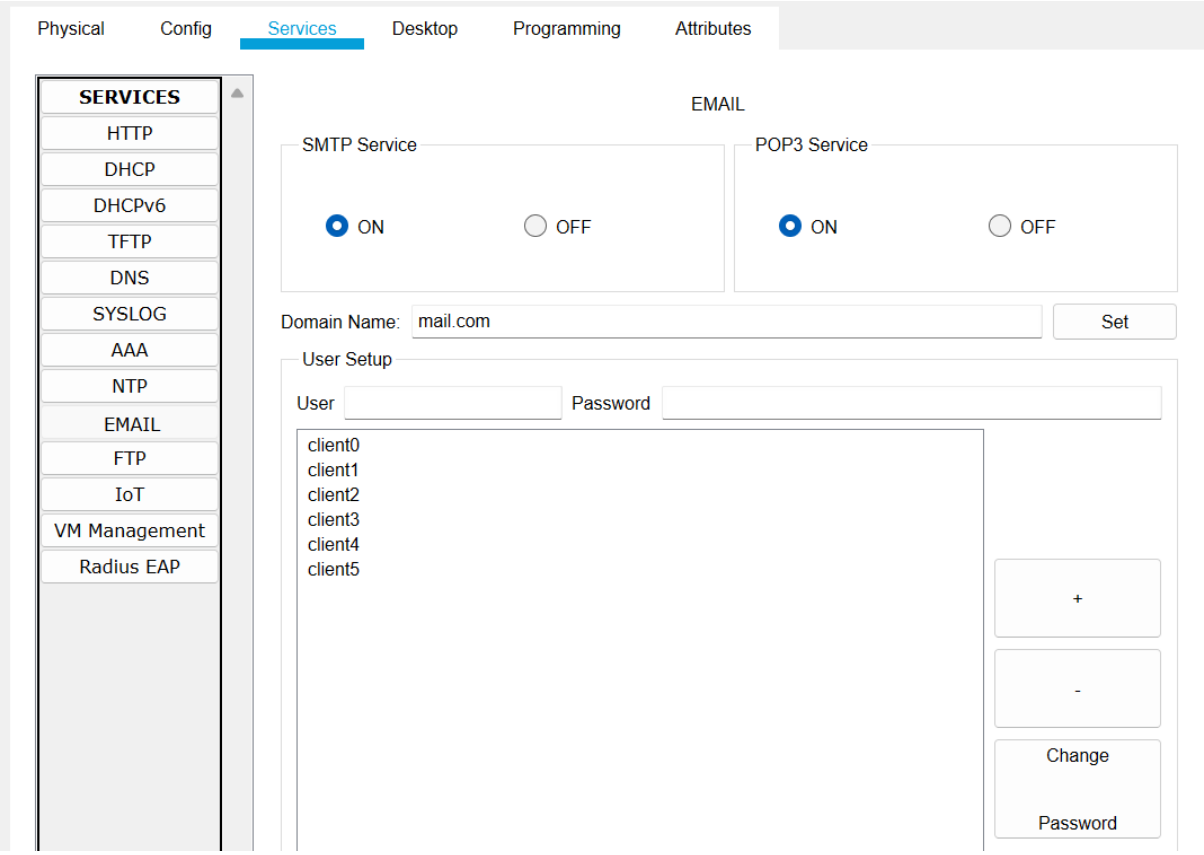
PC(4)


Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
client4
Email Address
client4@mail.com
Server Information
Incoming Mail Server
mail.com
Outgoing Mail Server
mail.com
Logon Information
User Name:
client4
Password:
Save
Clear
Reset

PC(5)

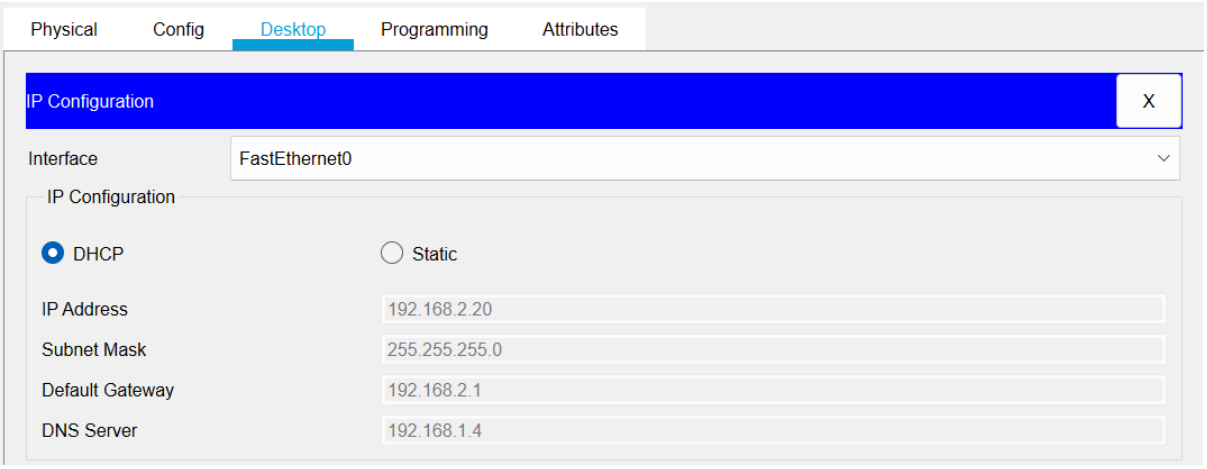

Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
client5
Email Address
client5@mail.com
Server Information
Incoming Mail Server
mail.com
Outgoing Mail Server
mail.com
Logon Information
User Name:
client5
Password:
Save
Clear
Reset

Step 6: Now we will configure the email server.

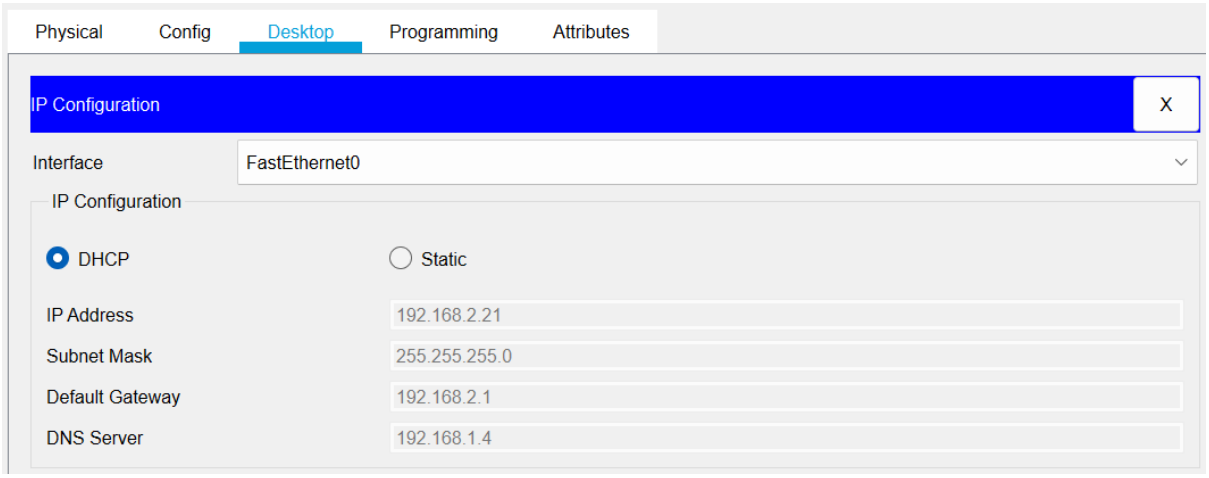


Step 7: Now we will assign Dynamic IP addresses to PCs

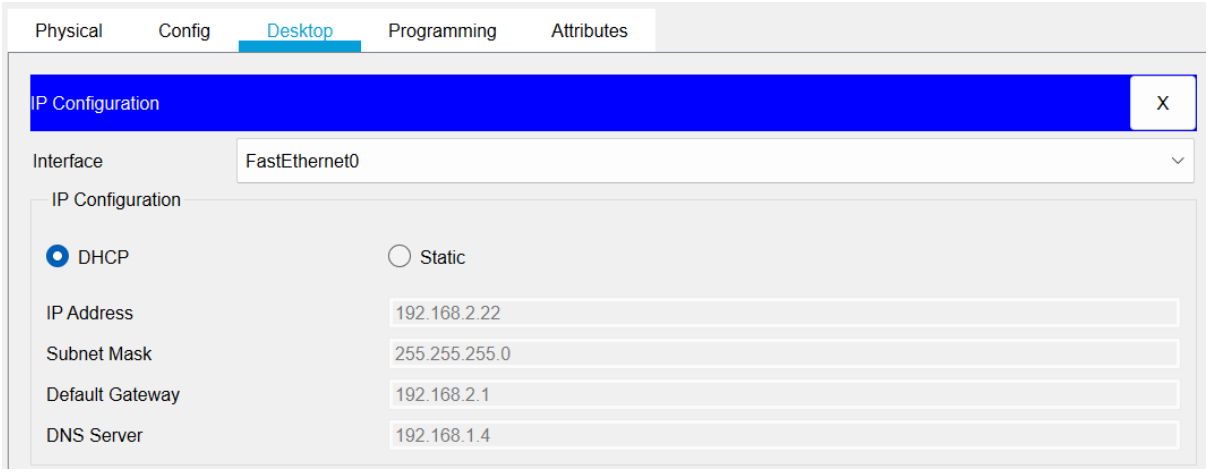
PC(0)



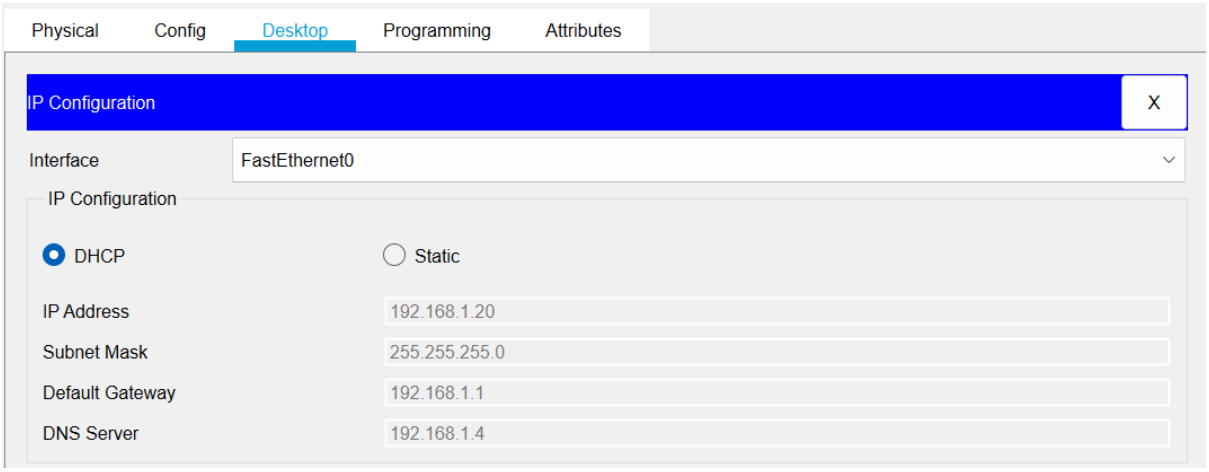
PC(1)


Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
192.168.2.21
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
192.168.1.4

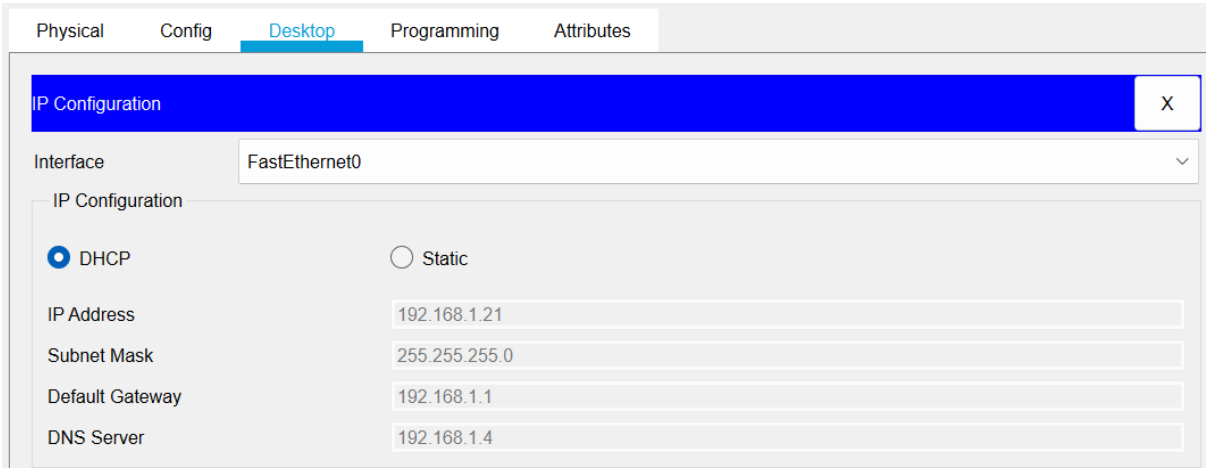
PC(2)


Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
192.168.2.22
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
192.168.1.4

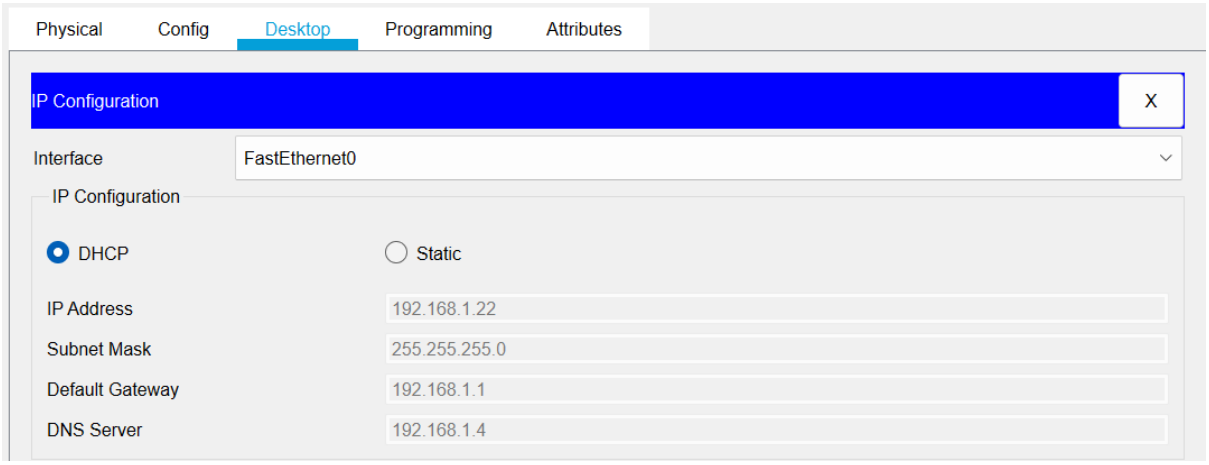
PC(3)


Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
192.168.1.20
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
192.168.1.4

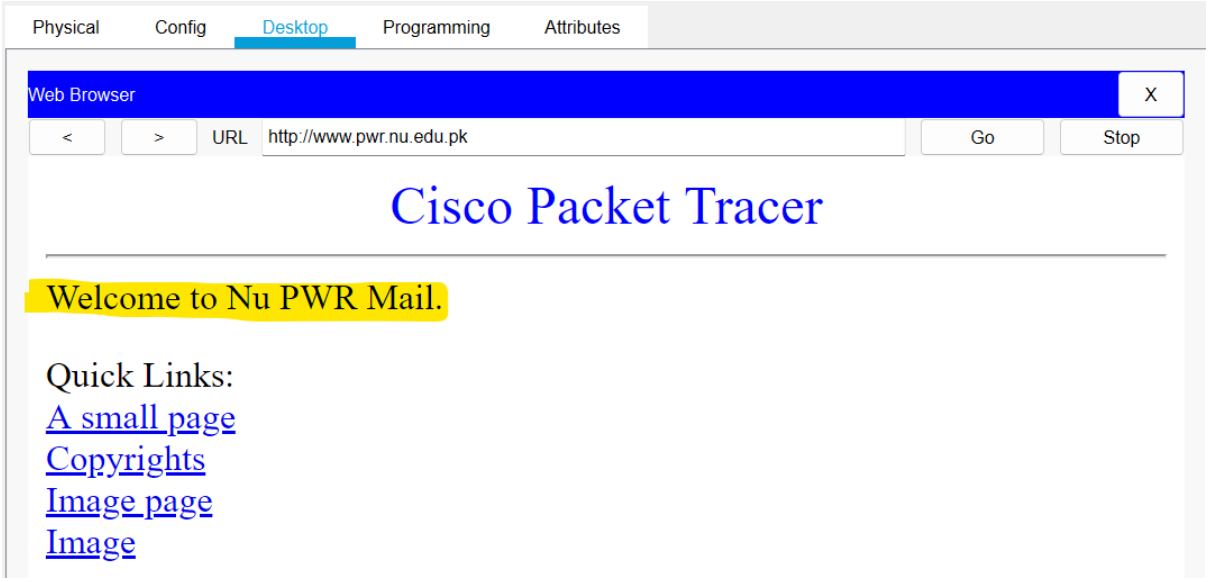
PC(4)


Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
192.168.1.21
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
192.168.1.4

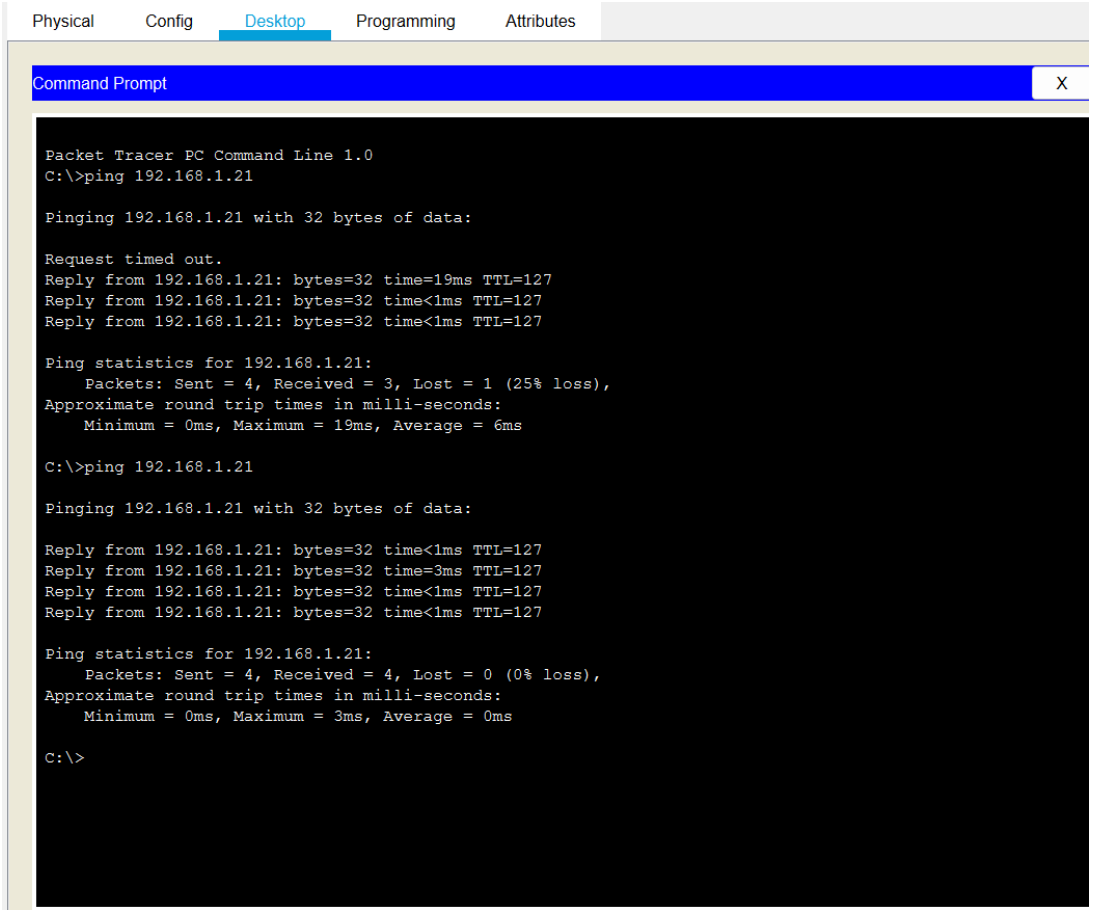
PC(5)


Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
192.168.1.22
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.1
DNS Server
192.168.1.4

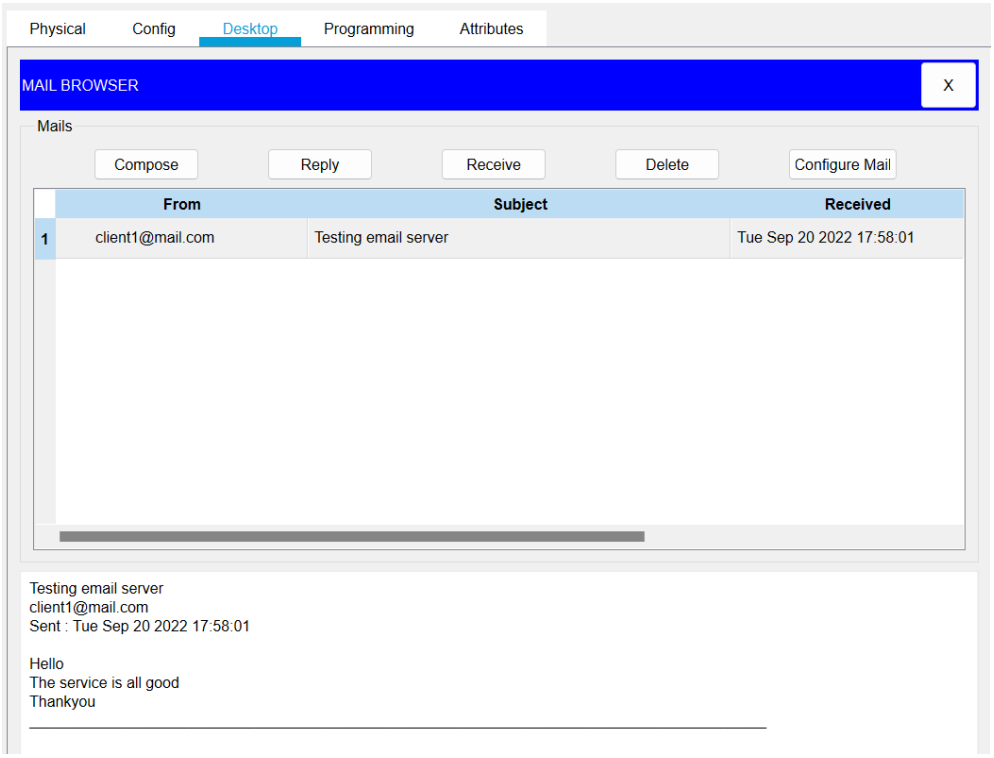
Step 8: we will check DNS server by searching a website on pc.

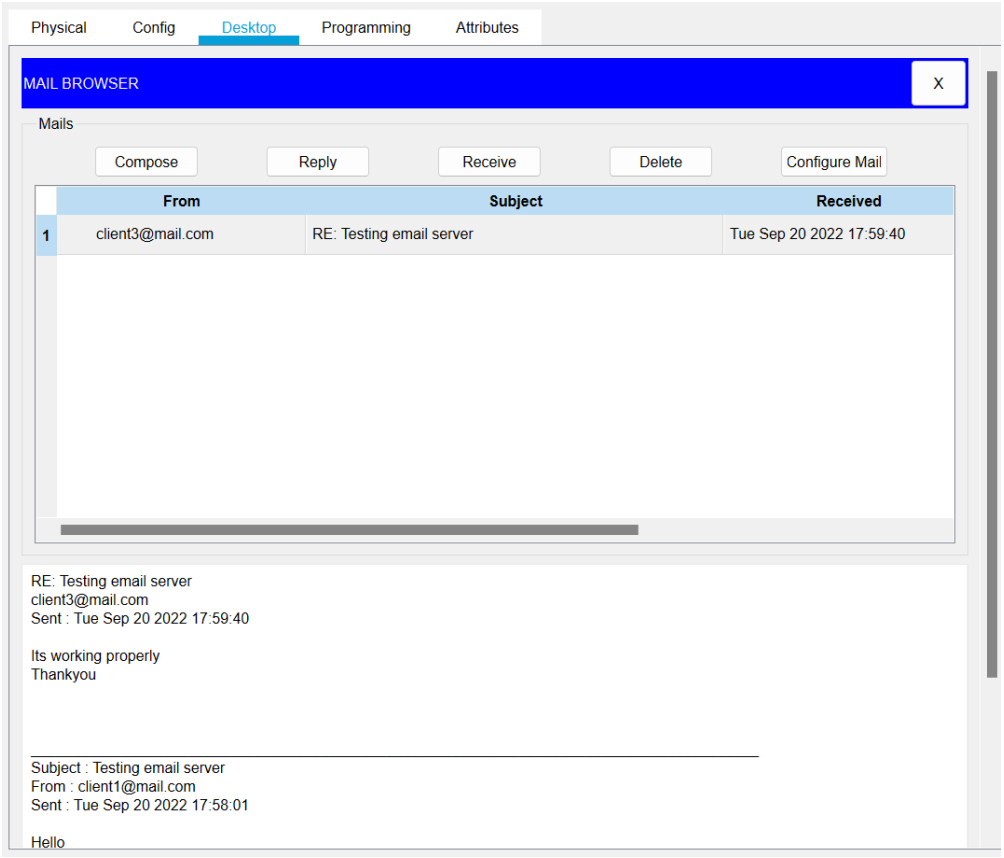


Step 9: we will check connection by pinging the pcs.



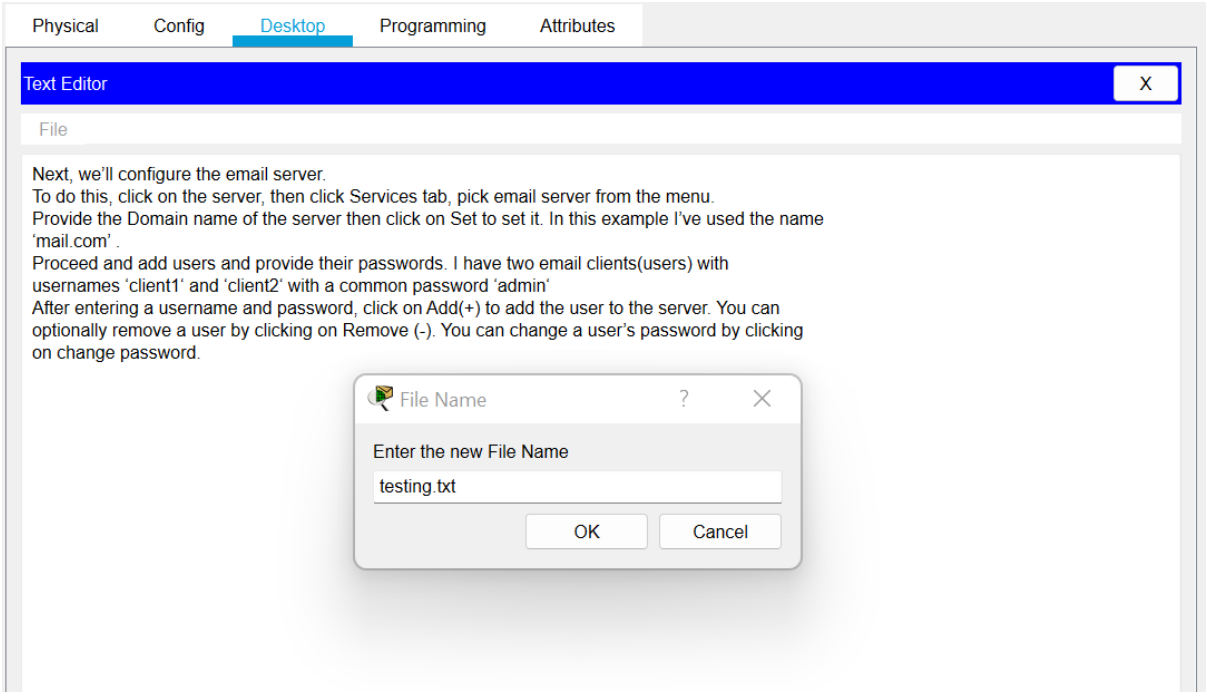
Step 10: we will check email server by sending an email from client1 to client3 and then we will send reply as well



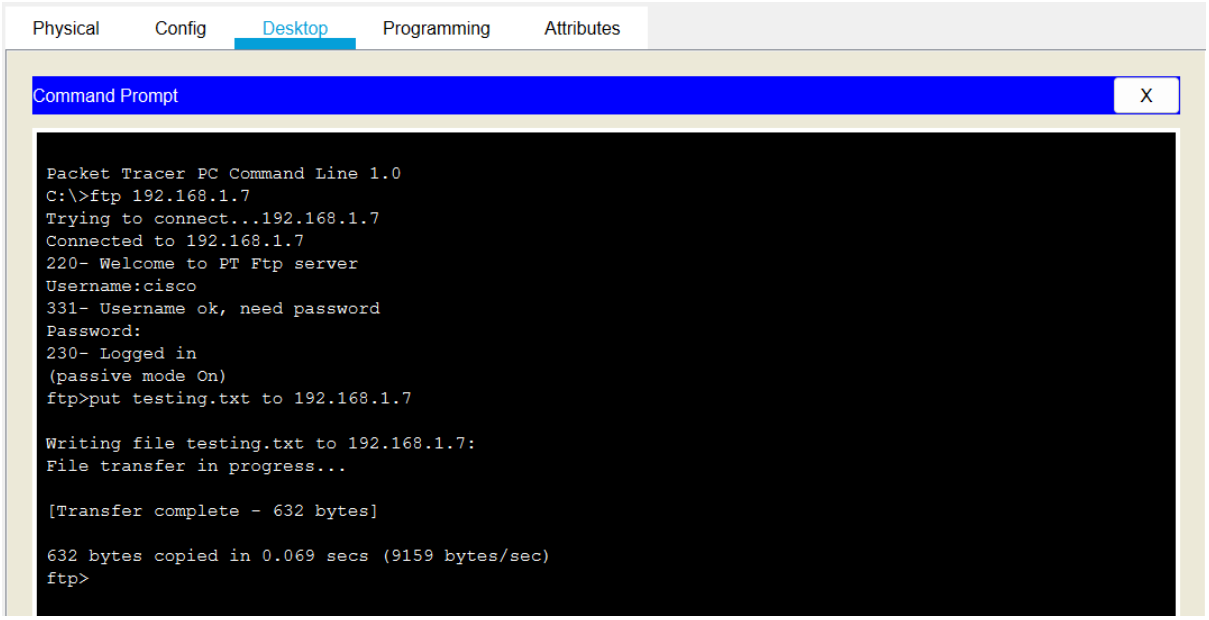


Step 11: we will use an FTP client built in the Laptop to send files to an FTP server configured in the Server.

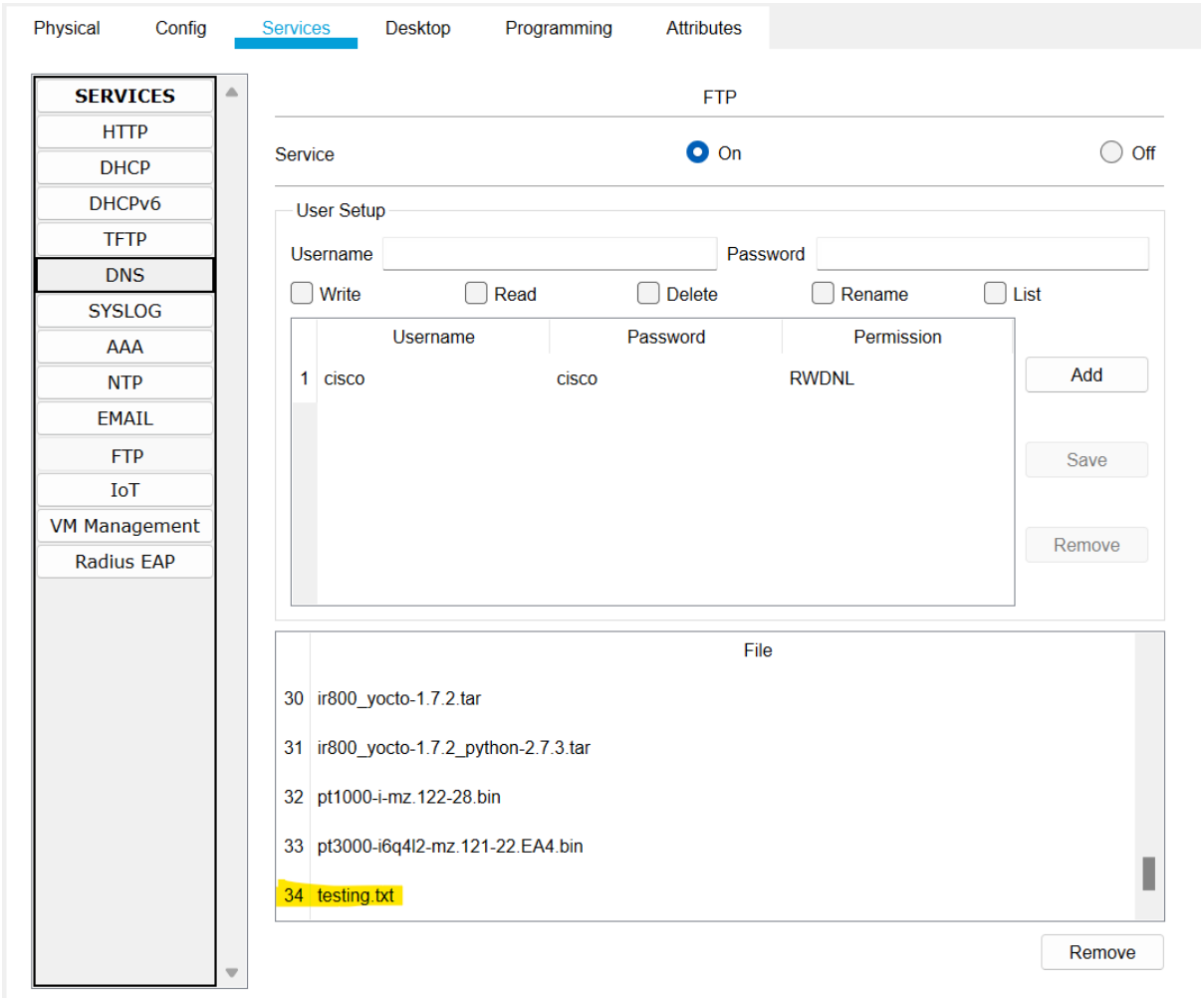
=>First of all we will write and save a txt file.



=>Then we will send the file to ftp server.

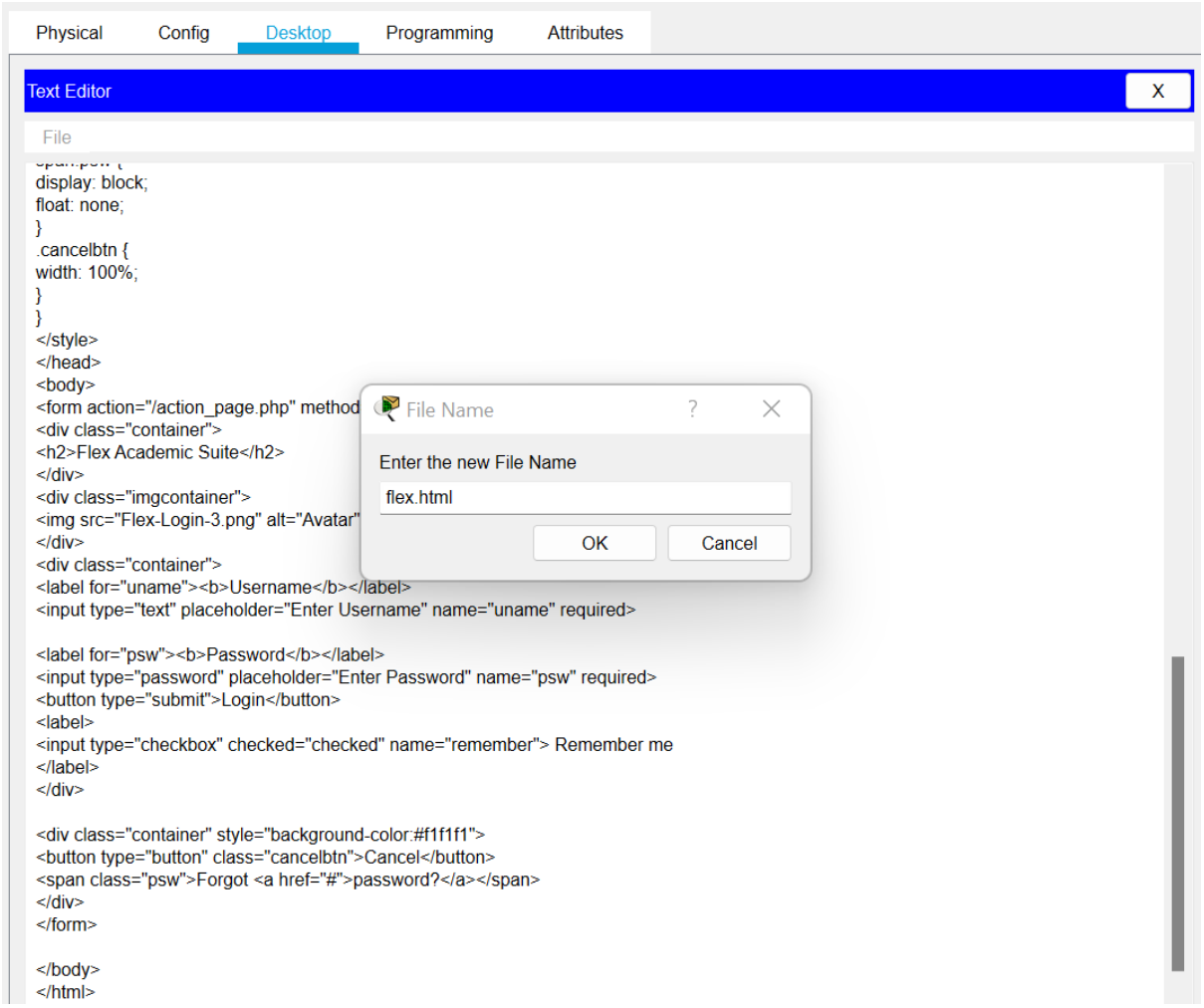


=>And then we will check the file in ftp server.

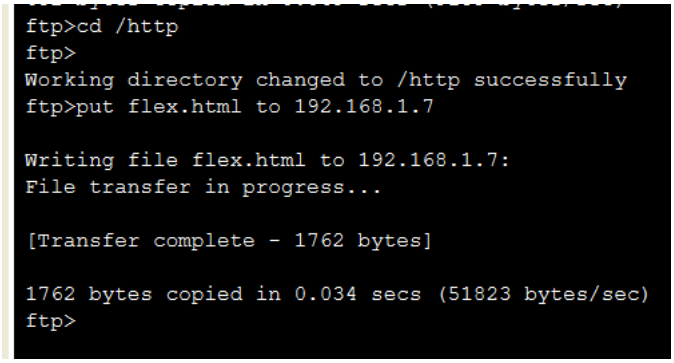


Step 12: **Create and Upload html file to HTTP server directory Using FTP.**

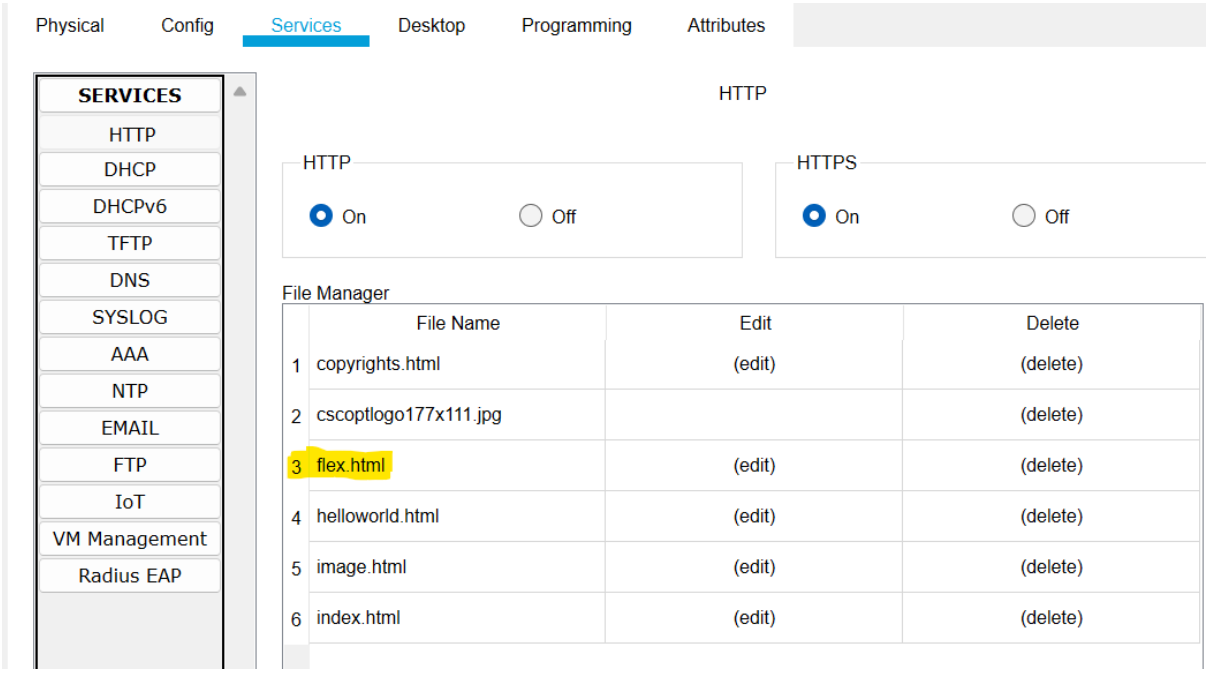
First we will create a .html file and save it.



Then we will send it to http directory using ftp.



And then we will check it in http directory.



The file we saved had html code of flex login page so we will check it on web browser also.