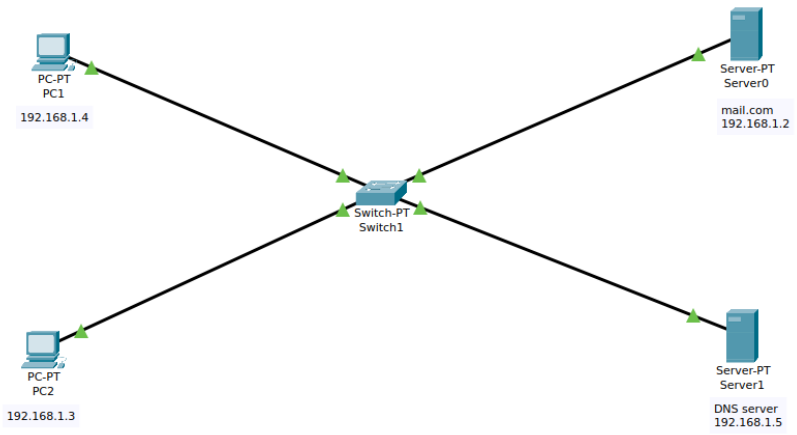
Computer Networks
Lab Task #6
Saad Ahmad
20P-0051

Task#1

Add 2x PCs, 1x Switch and 2x Server.

Connect them with cables.



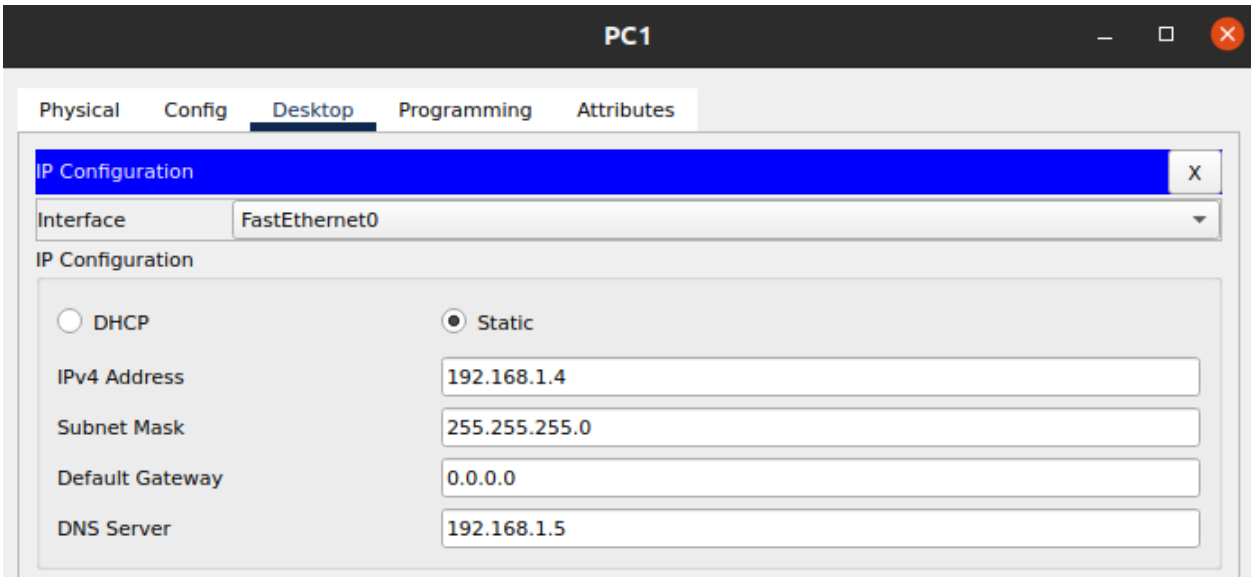
Now assign the static IPs to the PCs

PC1

IP: 192.168.1.4

Subnet mask: 255.255.255.0

DNS Server: 192.168.1.5

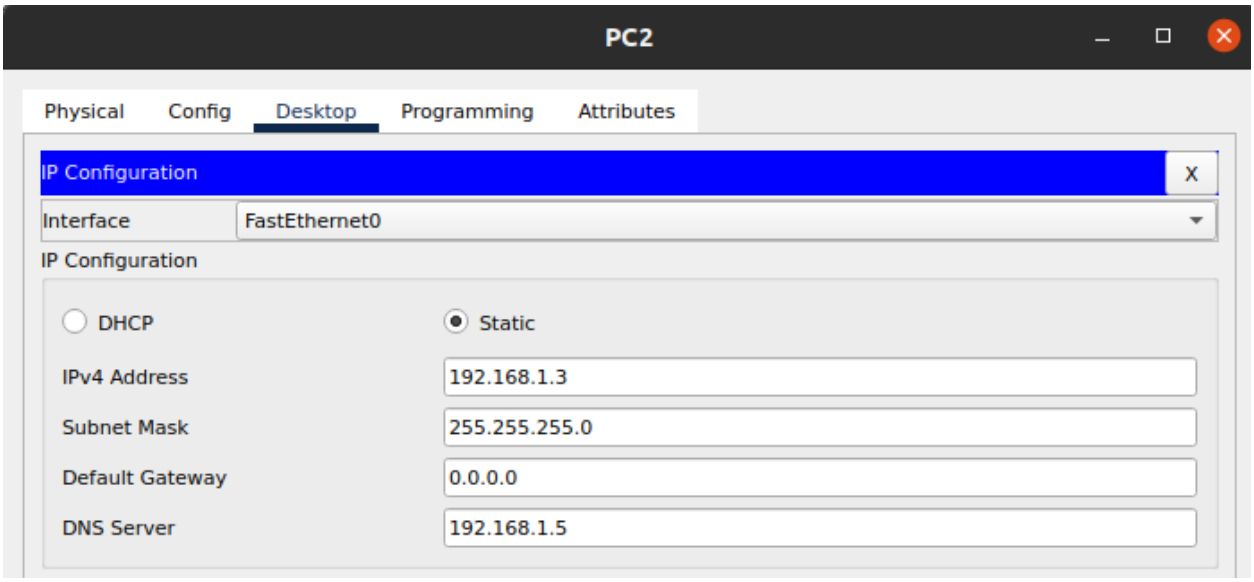


PC2

IP: 192.168.1.3

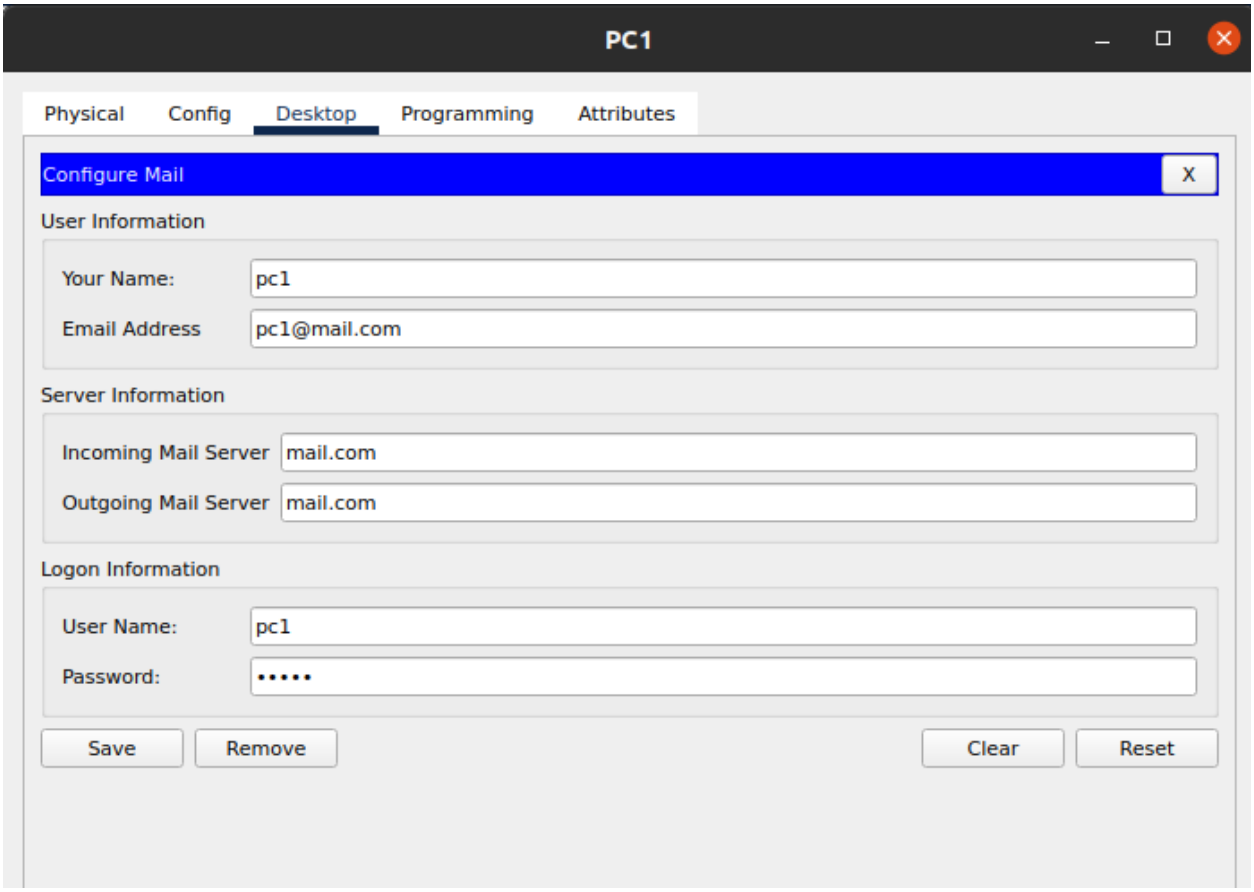
Subnet mask: 255.255.255.0

DNS Server: 192.168.1.5

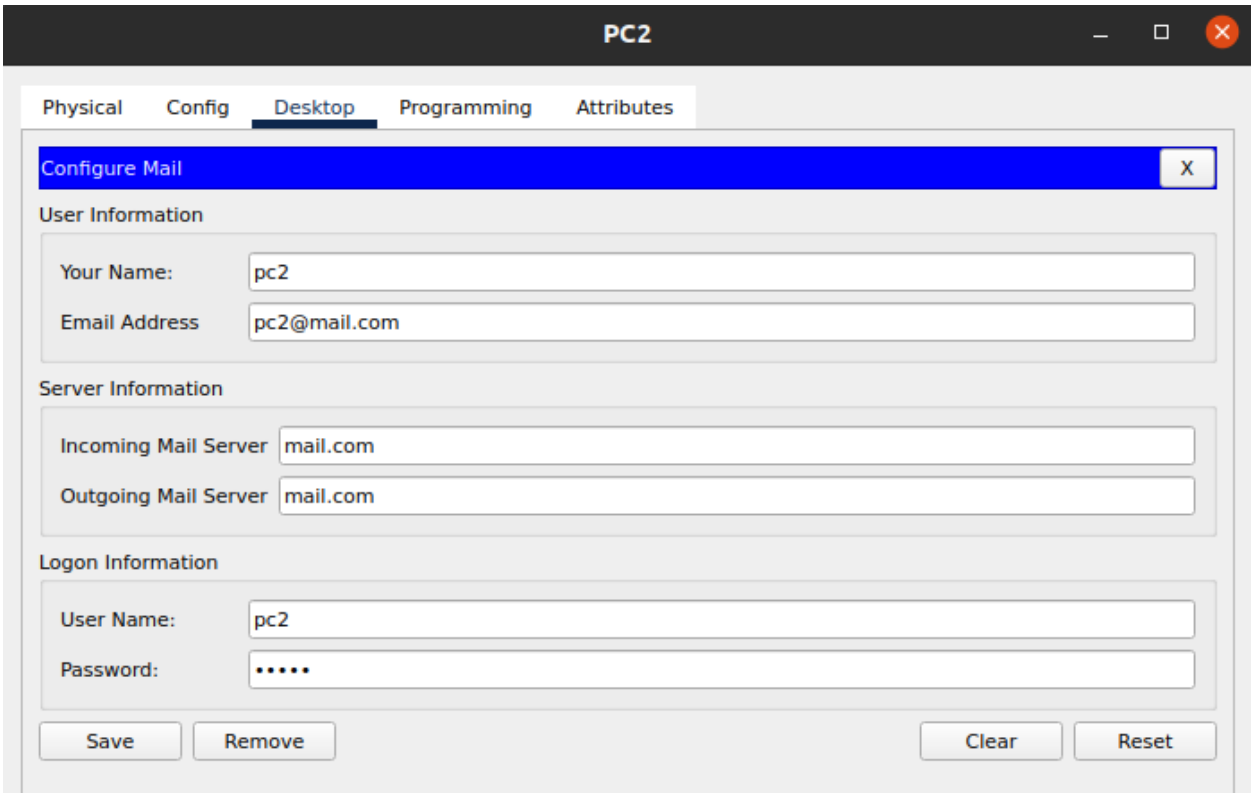


And now configure the emails on both PCs

PC1:


PC1
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
pc1
Email Address
pc1@mail.com
Server Information
Incoming Mail Server
mail.com
Outgoing Mail Server
mail.com
Logon Information
User Name:
pc1
Password:
•••••
Save
Remove
Clear
Reset

PC2

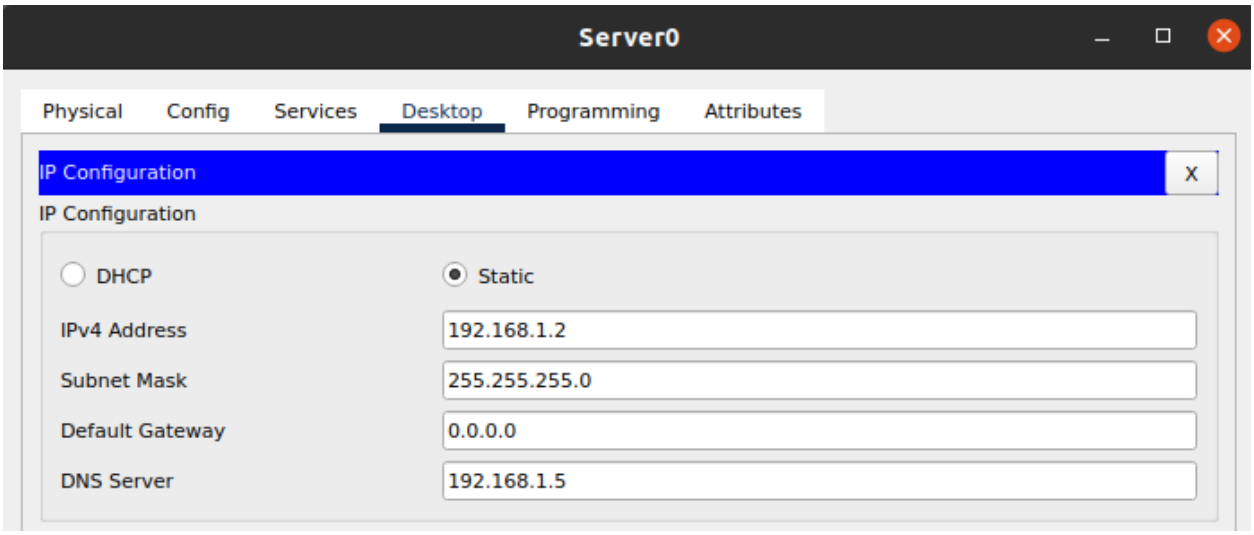


Now assign the static IP to the server

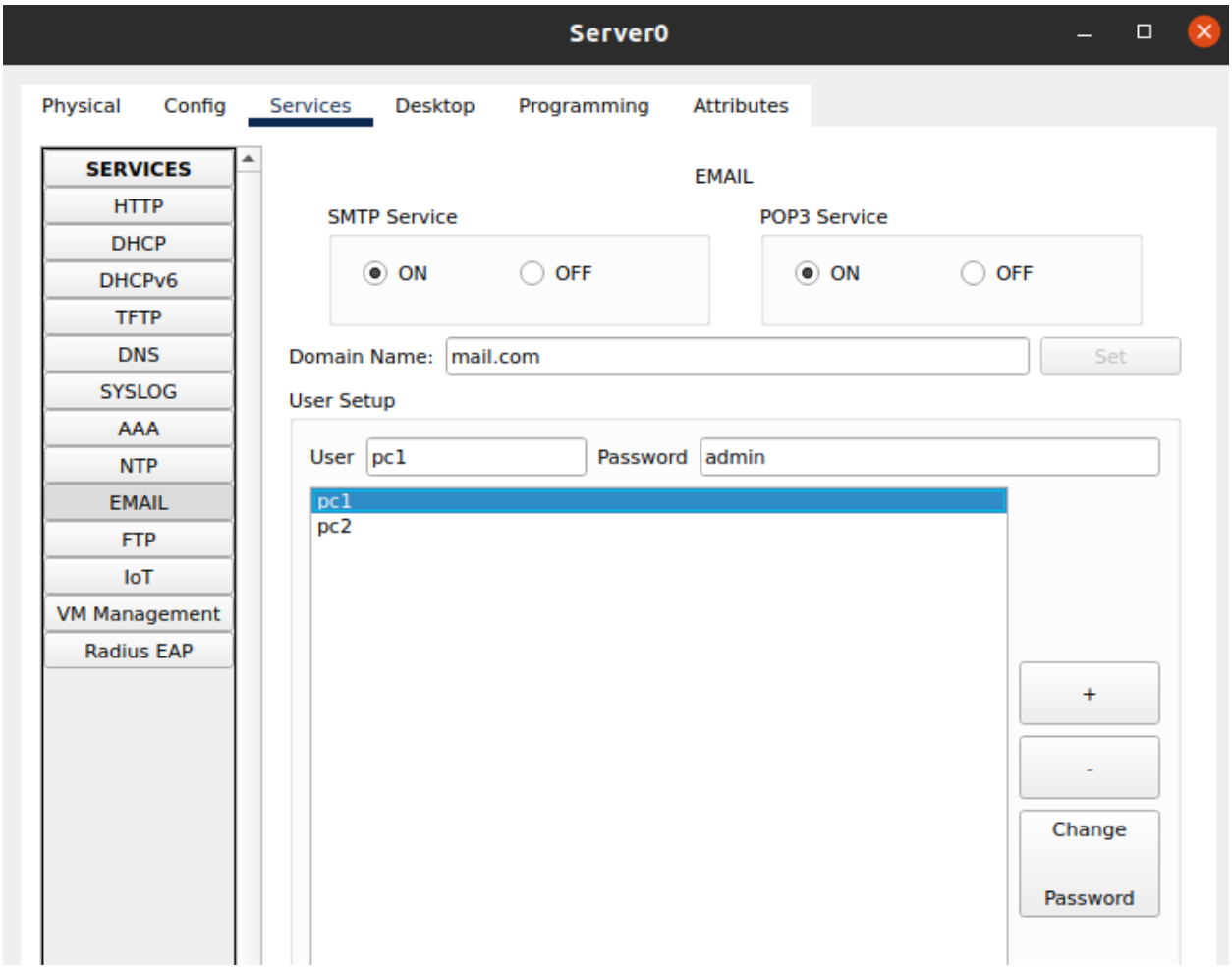
IP: 192.168.1.2

Subnet mask: 255.255.255.0

DNS Server: 192.168.1.5



And now add the details of the clients in the server under the email tab.

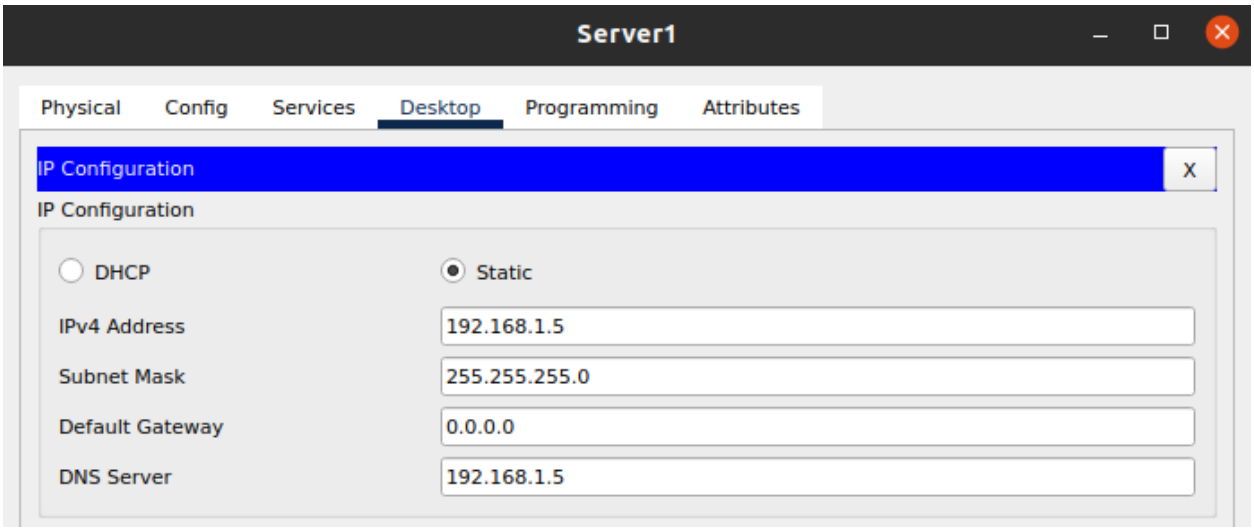


Now assign the static IP to the DNS Server.

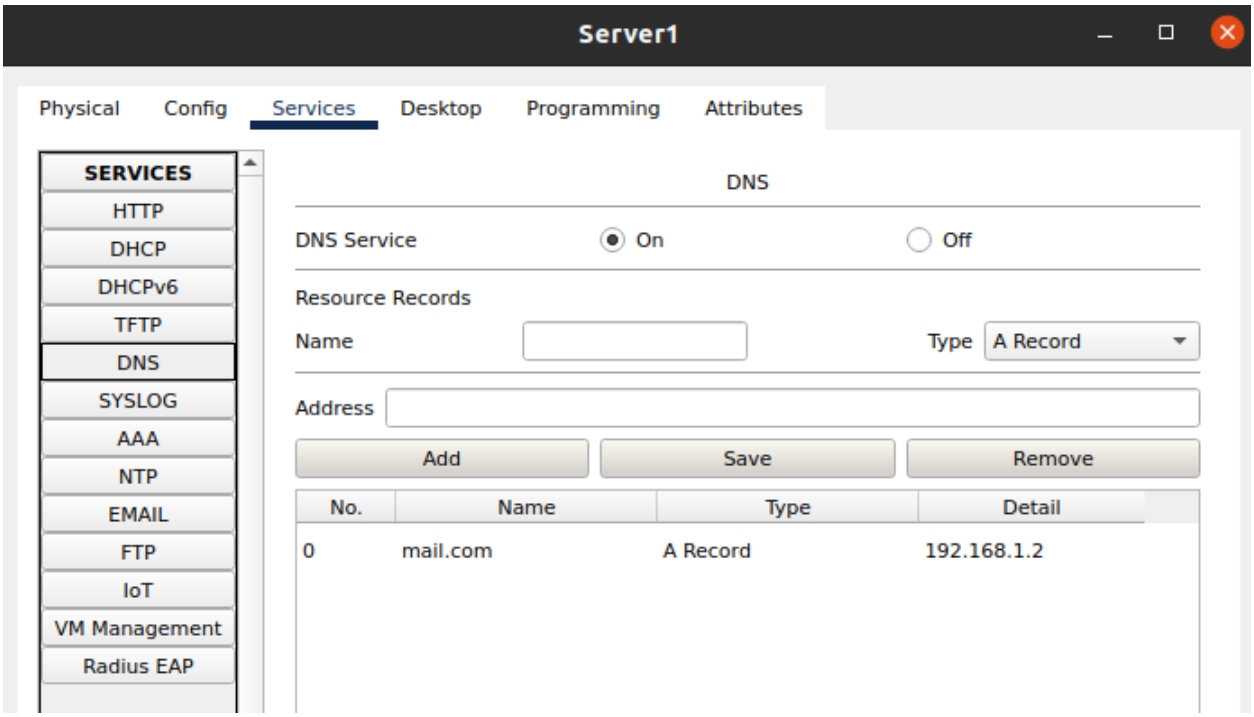
IP: 192.168.1.5

Subnet mask: 255.255.255.0

DNS Server: 192.168.1.5

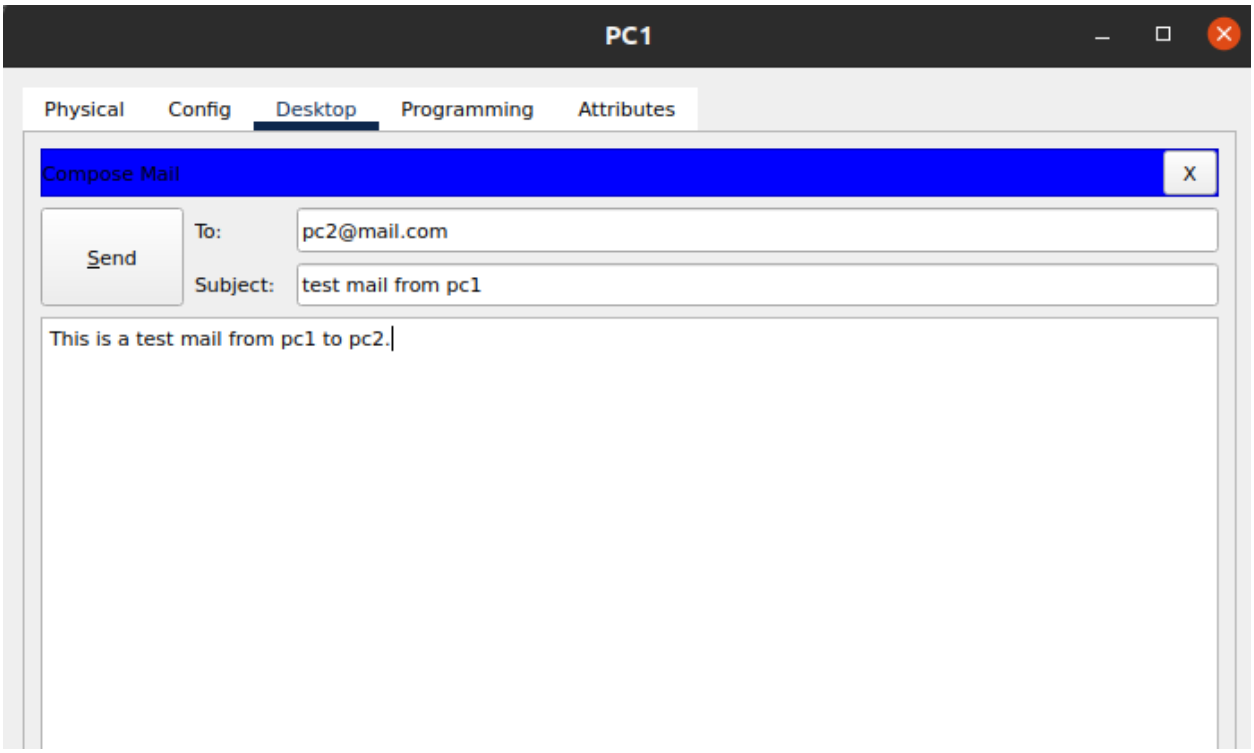


now add the “mail.com” to the DNS server.

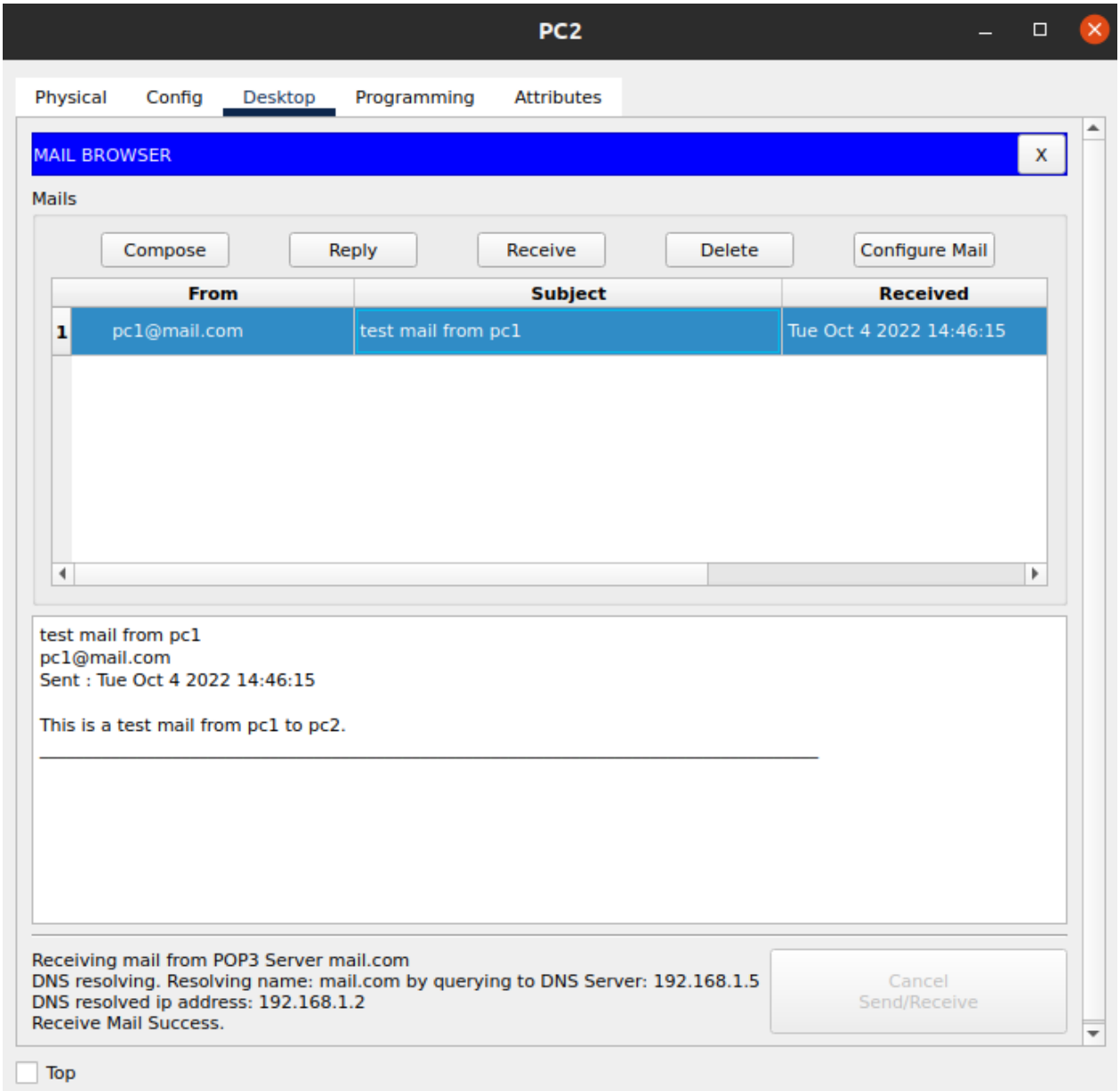


Results:

Sending the mail form PC1 to PC2.



Receiving the mail from PC1 on PC2

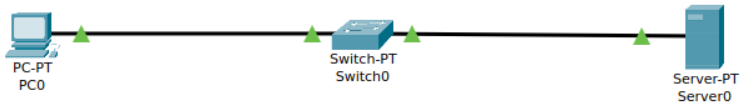


Task #2

File Transfer Protocol (FTP)

Add 1x PCs, 1x Switches and 1x Server.

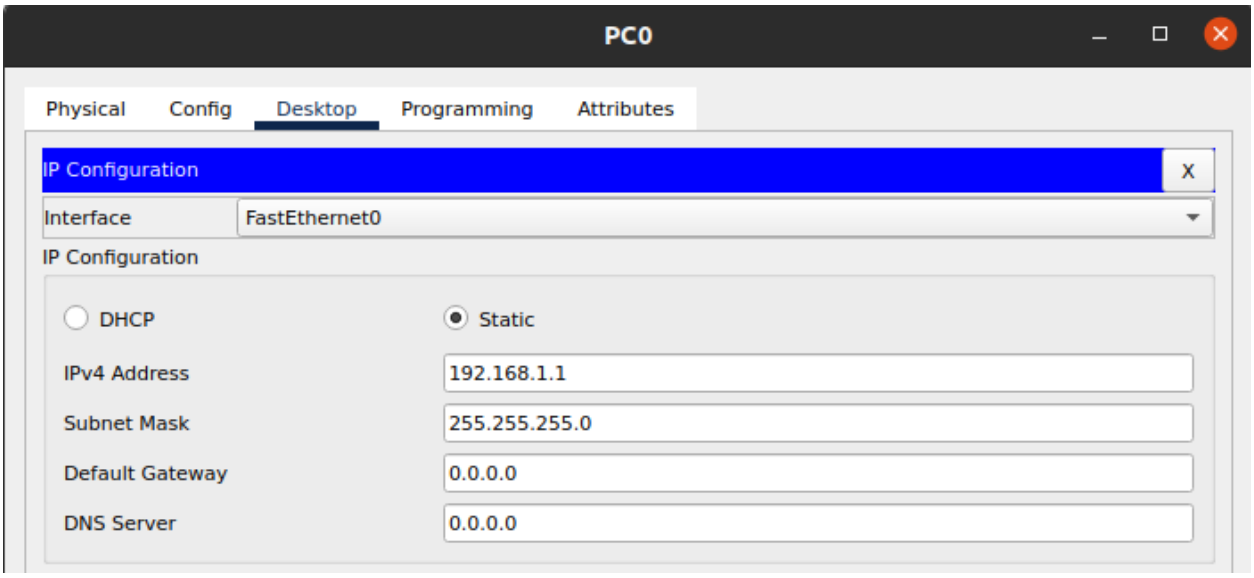
And connect them with cables.



Now assign the static IP to the PC Sever

IP: 192.168.1.1

Subnet mask: 255.255.255.0

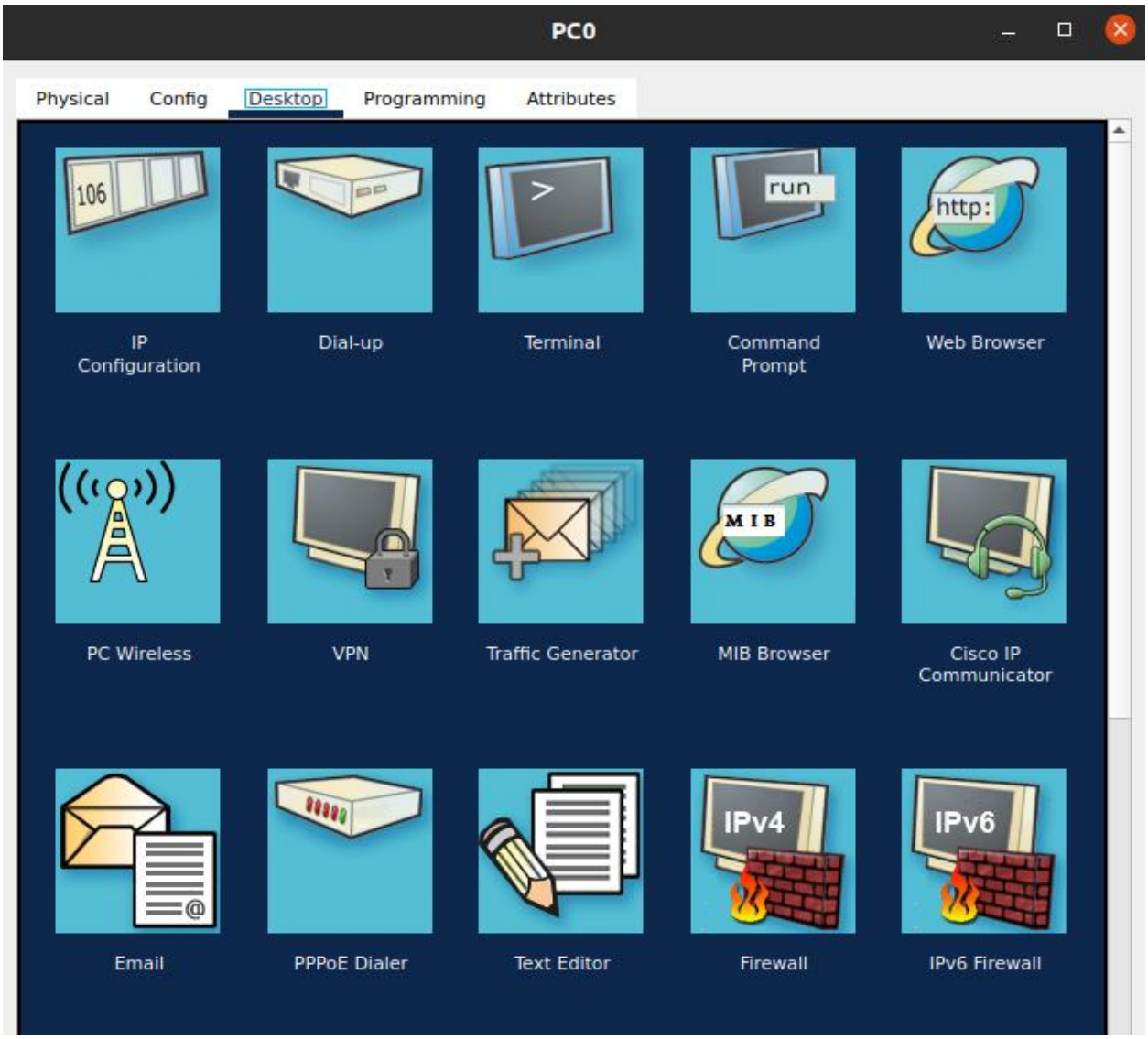


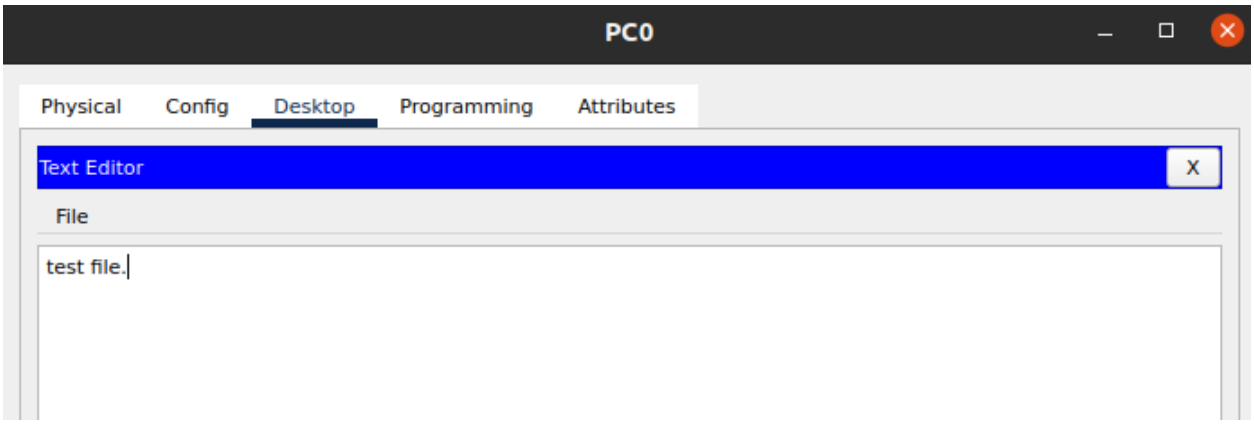
and now we will assign the static IP to the sever.

IP: 192.168.1.2

Subnet Mask: 255.255.255.0

Now create a txt file on your system.


PC0
Physical
Config
Desktop
Programming
Attributes
106
IP Configuration
Dial-up
Terminal
run
Command Prompt
http:
Web Browser
PC Wireless
VPN
Traffic Generator
MIB
MIB Browser
Cisco IP Communicator
Email
PPPoE Dialer
Text Editor
IPv4
Firewall
IPv6
IPv6 Firewall



And save the file.

Now open the command prompt on your PC and type the following command.

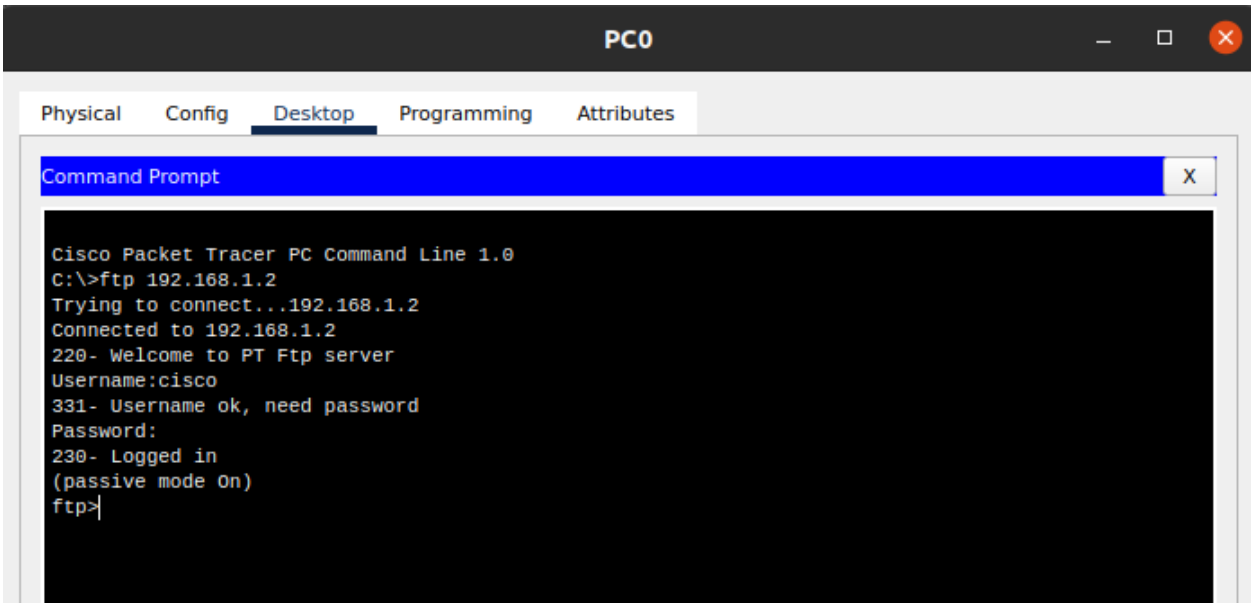
Ftp <ip of the server>

ftp 192.168.1.2

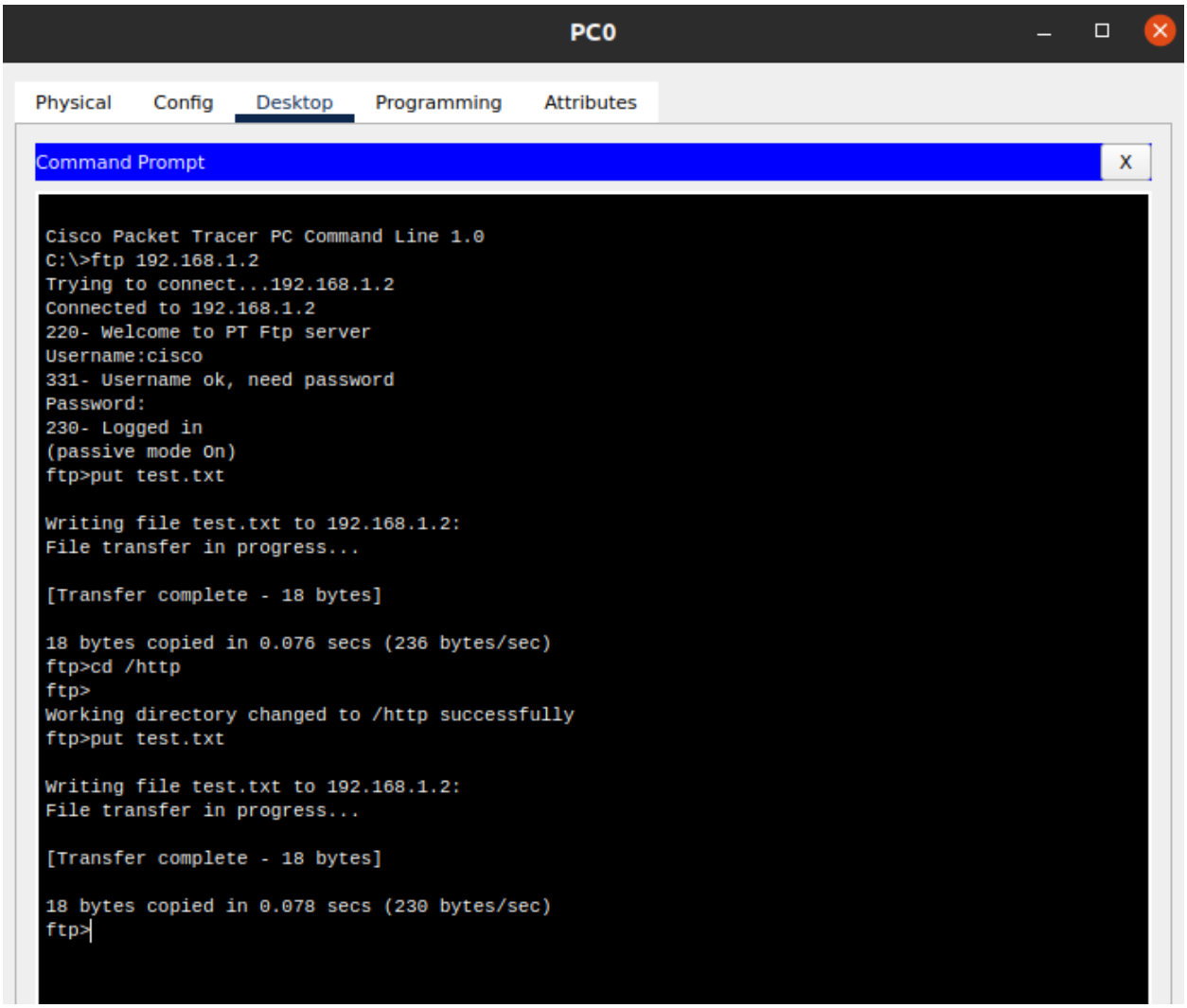
enter the username and the password

username = cisco

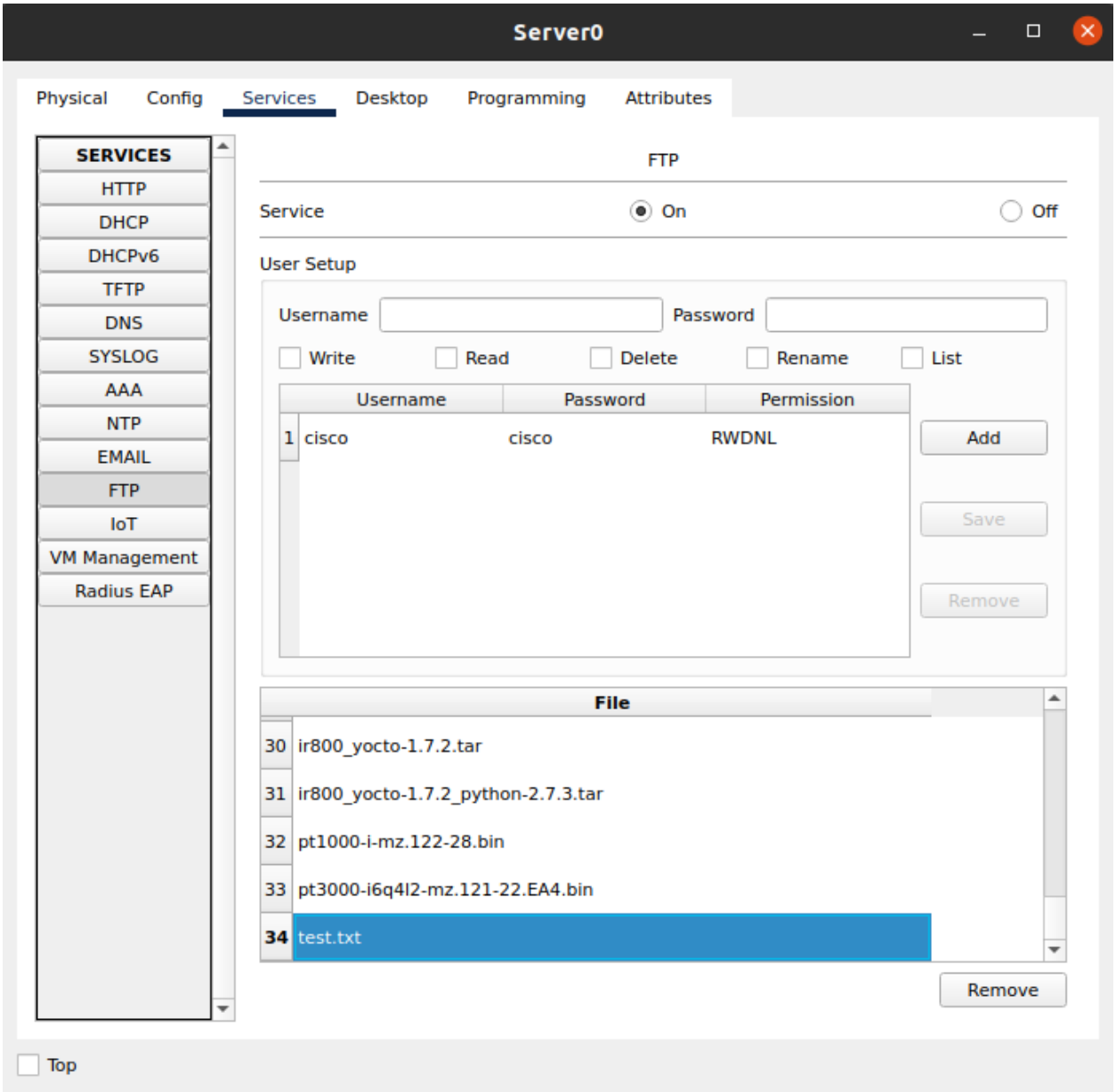
password = cisco

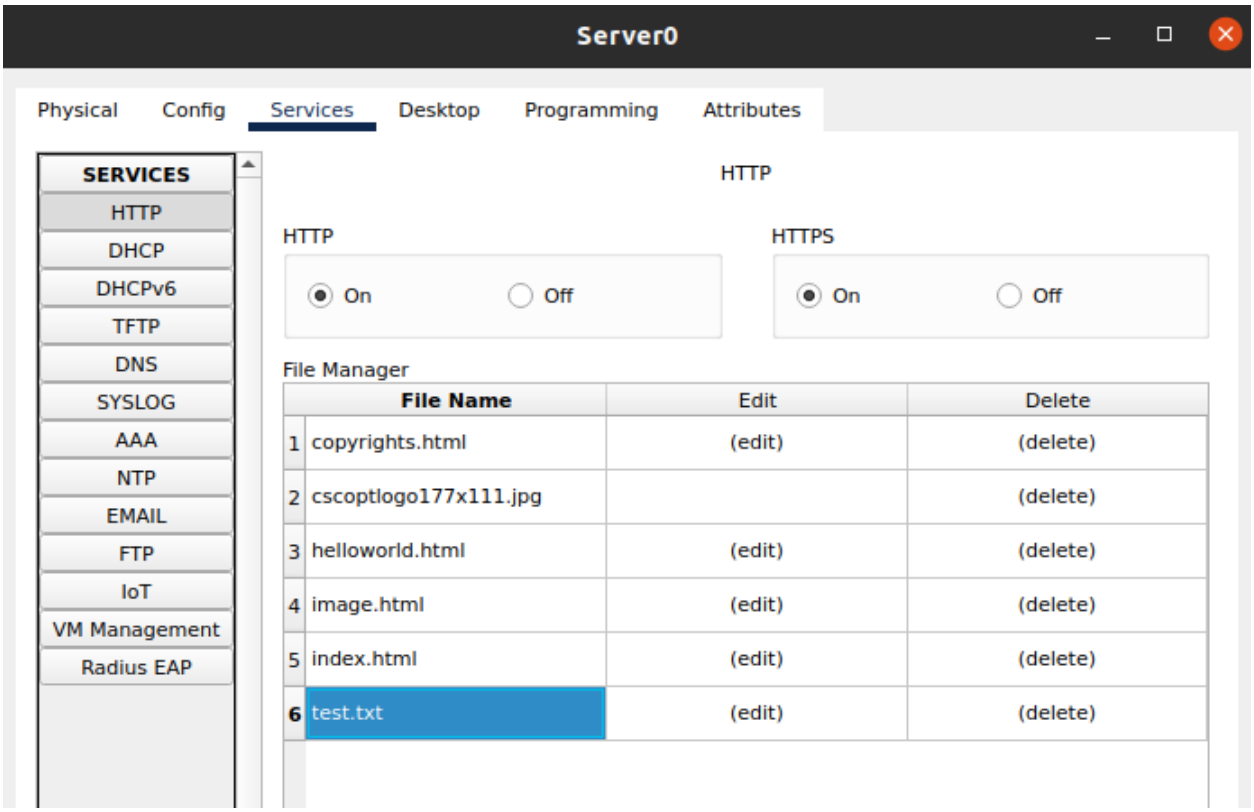


And now put the file on the server.


PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Cisco Packet Tracer PC Command Line 1.0
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>put test.txt
Writing file test.txt to 192.168.1.2:
File transfer in progress...
[Transfer complete - 18 bytes]
18 bytes copied in 0.076 secs (236 bytes/sec)
ftp>cd /http
ftp>
Working directory changed to /http successfully
ftp>put test.txt
Writing file test.txt to 192.168.1.2:
File transfer in progress...
[Transfer complete - 18 bytes]
18 bytes copied in 0.078 secs (230 bytes/sec)
ftp>

Result:

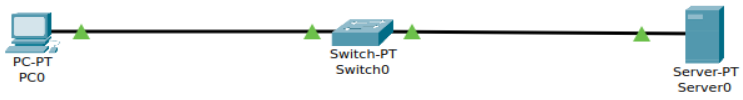

Server0
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
FTP
Service
On
Off
User Setup
Username
Password
Write
Read
Delete
Rename
List
Username
Password
Permission
1 cisco cisco RWDNL
Add
Save
Remove
File
30 ir800_yocto-1.7.2.tar
31 ir800_yocto-1.7.2_python-2.7.3.tar
32 pt1000-i-mz.122-28.bin
33 pt3000-i6q4l2-mz.121-22.EA4.bin
34 test.txt
Remove
Top



Task #3

Add 1x PCs, 1x Switches and 1x Server.

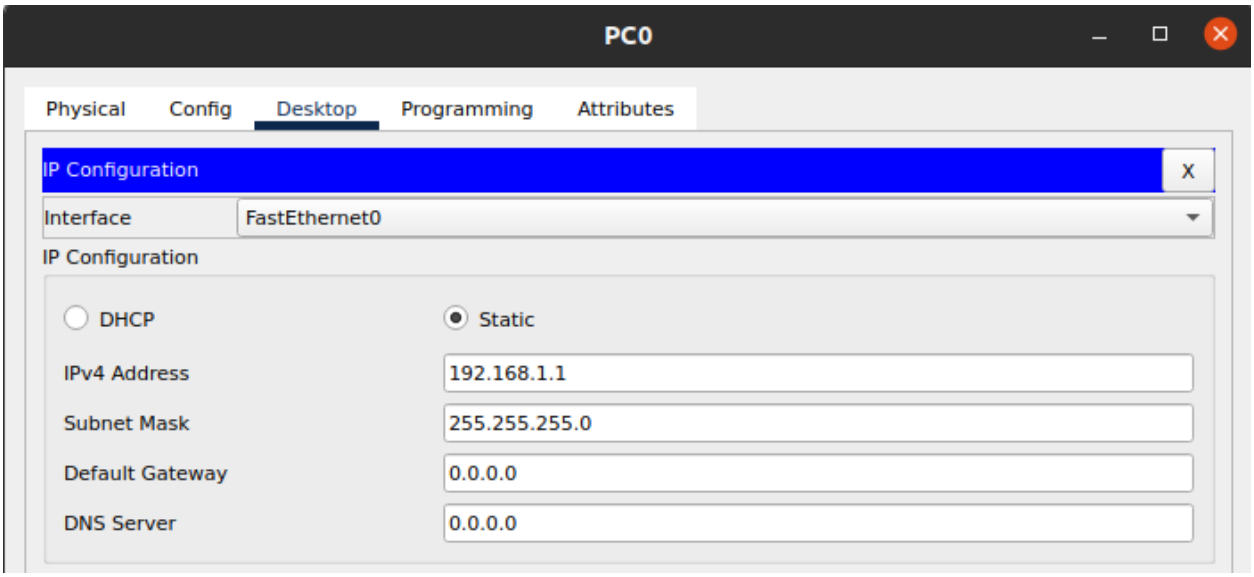
And connect them with cables.



Now assign the static IP to the PC Sever

IP: 192.168.1.1

Subnet mask: 255.255.255.0

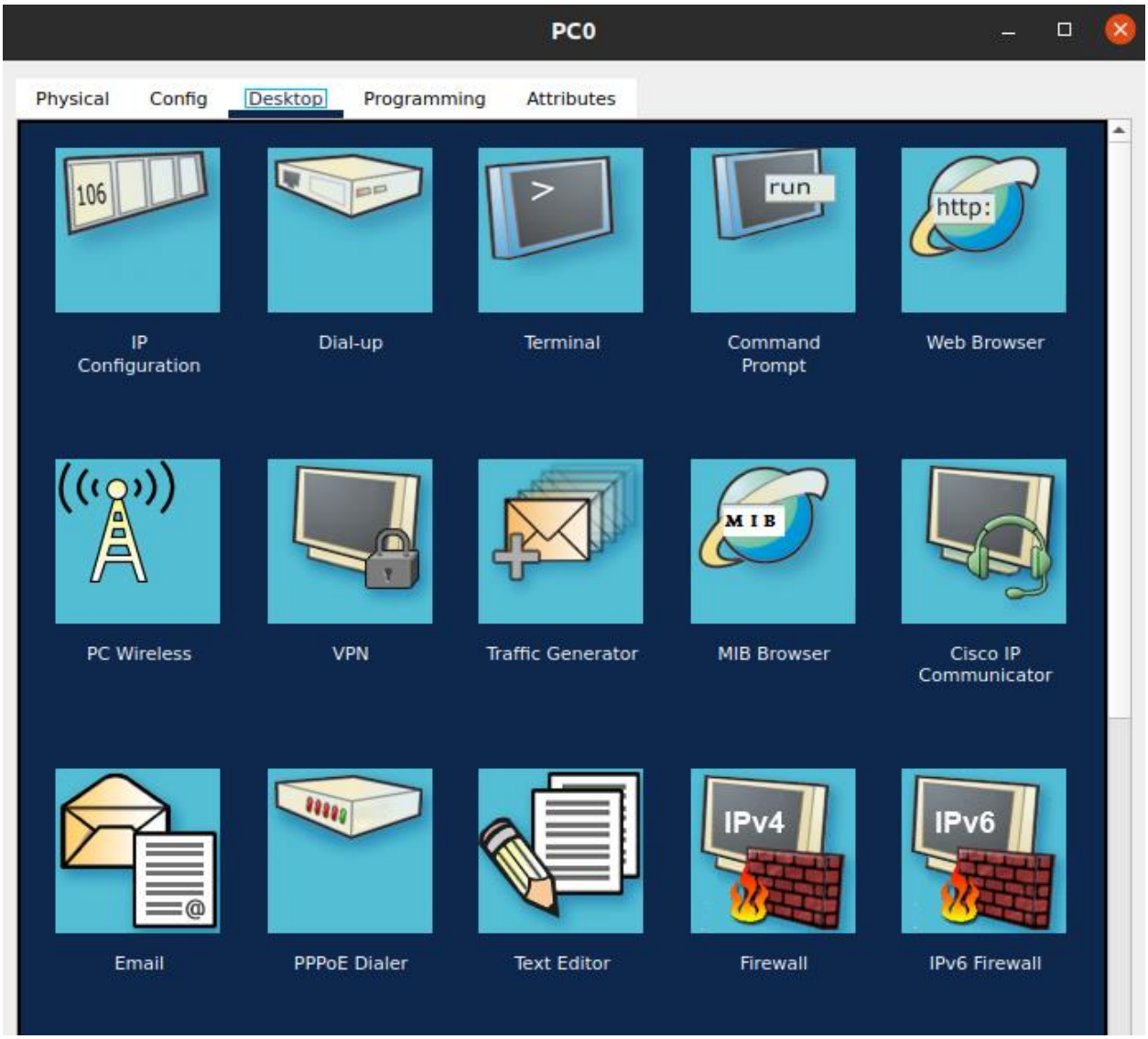


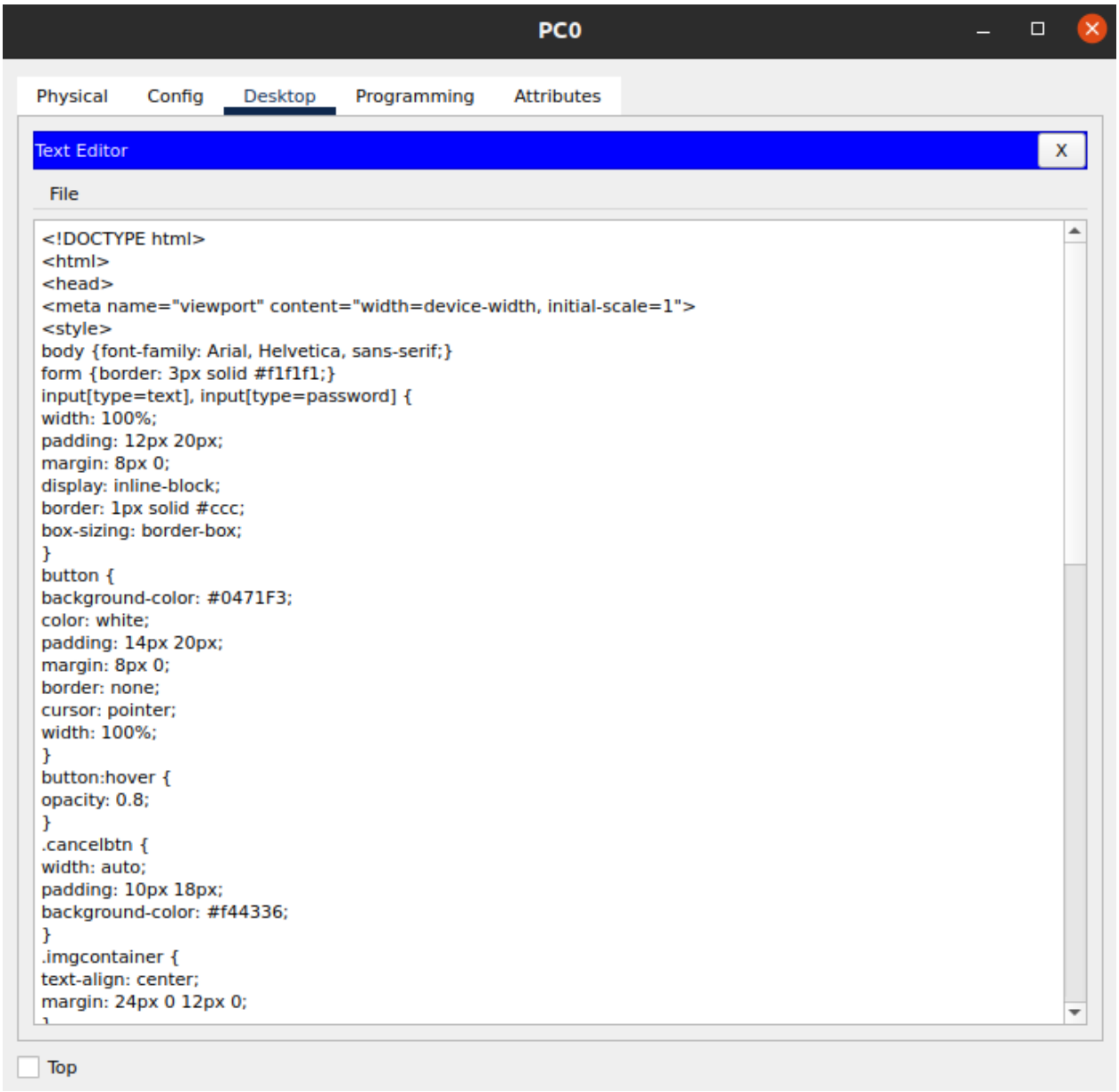
and now we will assign the static IP to the sever.

IP: 192.168.1.2

Subnet Mask: 255.255.255.0

Now create a html file on your system.


PC0
Physical
Config
Desktop
Programming
Attributes
106
IP Configuration
Dial-up
Terminal
run
Command Prompt
http:
Web Browser
PC Wireless
VPN
Traffic Generator
MIB
MIB Browser
Cisco IP Communicator
Email
PPPoE Dialer
Text Editor
IPv4
Firewall
IPv6
IPv6 Firewall



And save the file.

Now open the command prompt on your PC and type the following command.

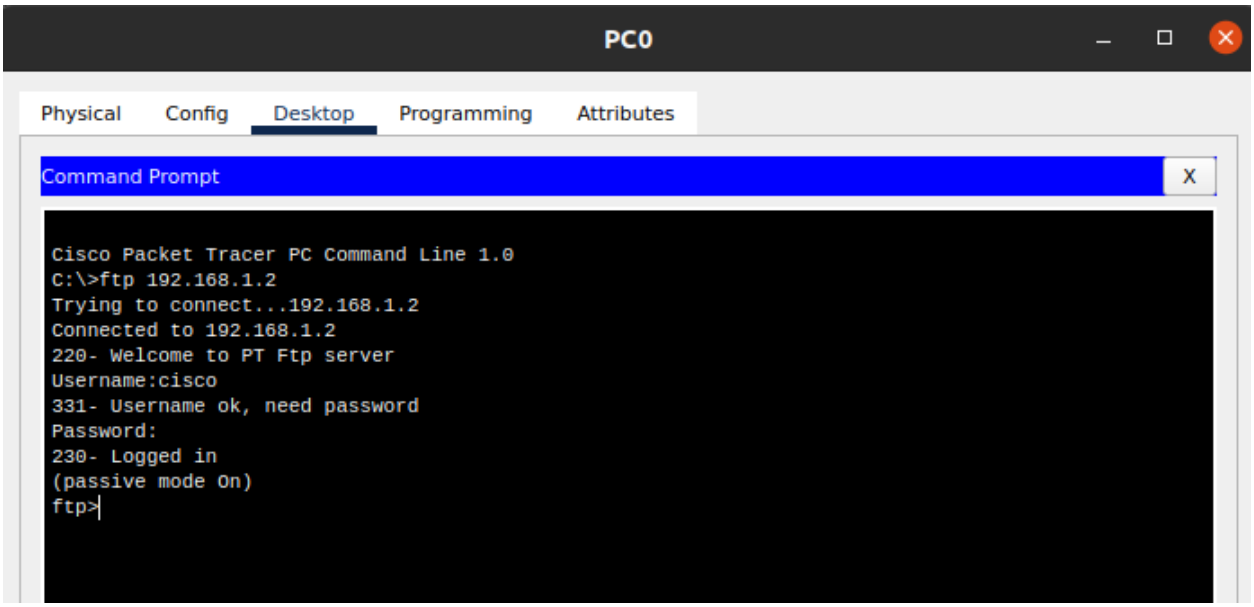
Ftp <ip of the server>

ftp 192.168.1.2

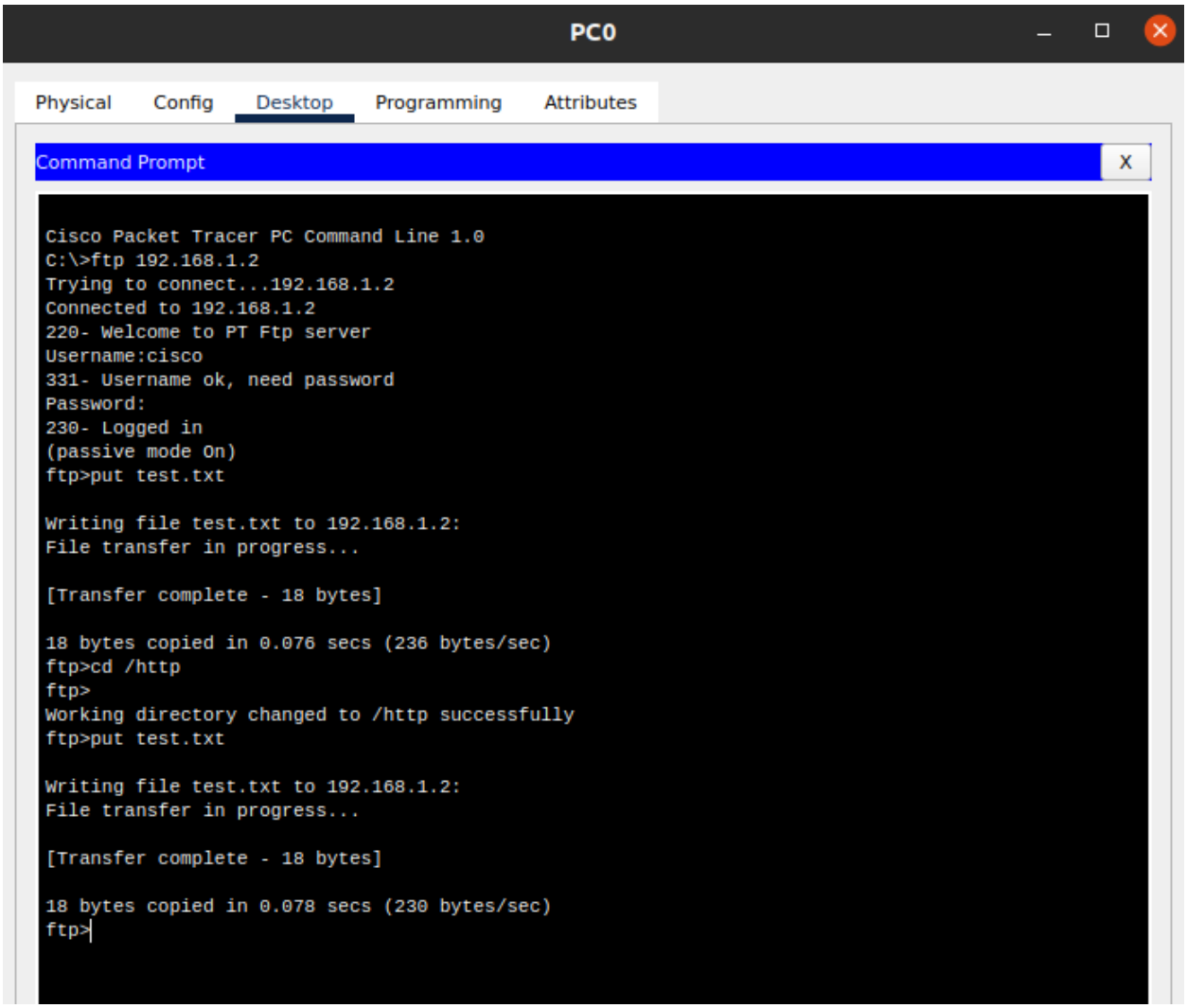
enter the username and the password

username = cisco

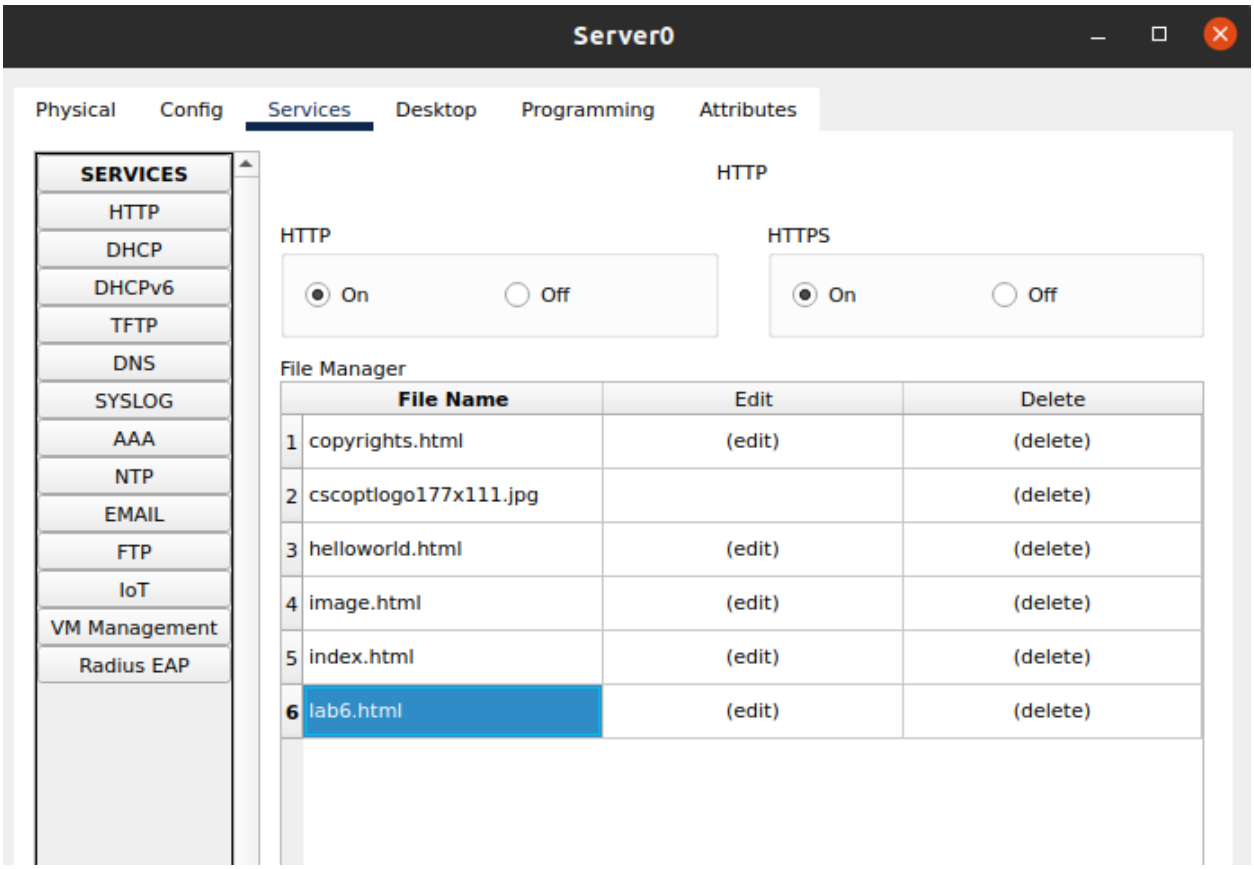
password = cisco



And now put the file on the server and in the http directory

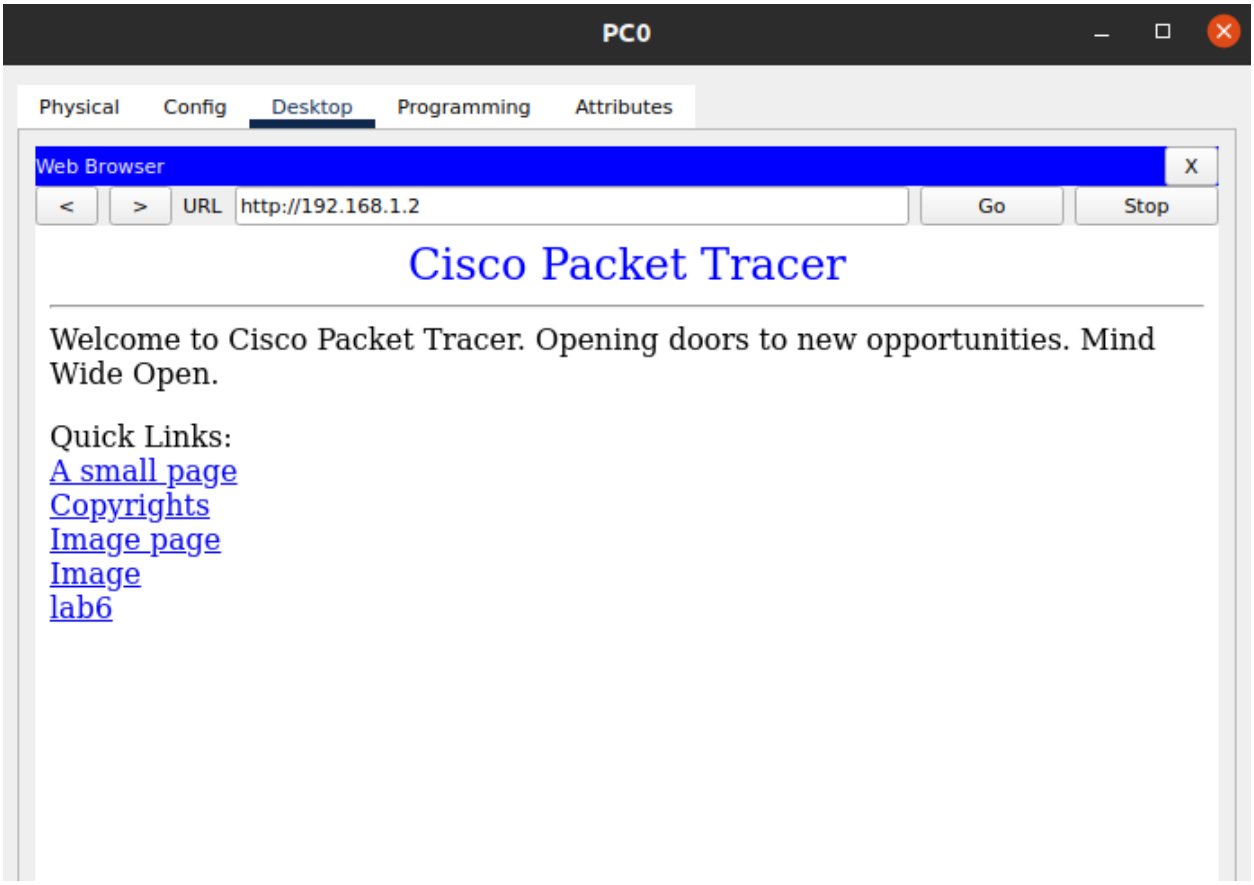


Now check the file.

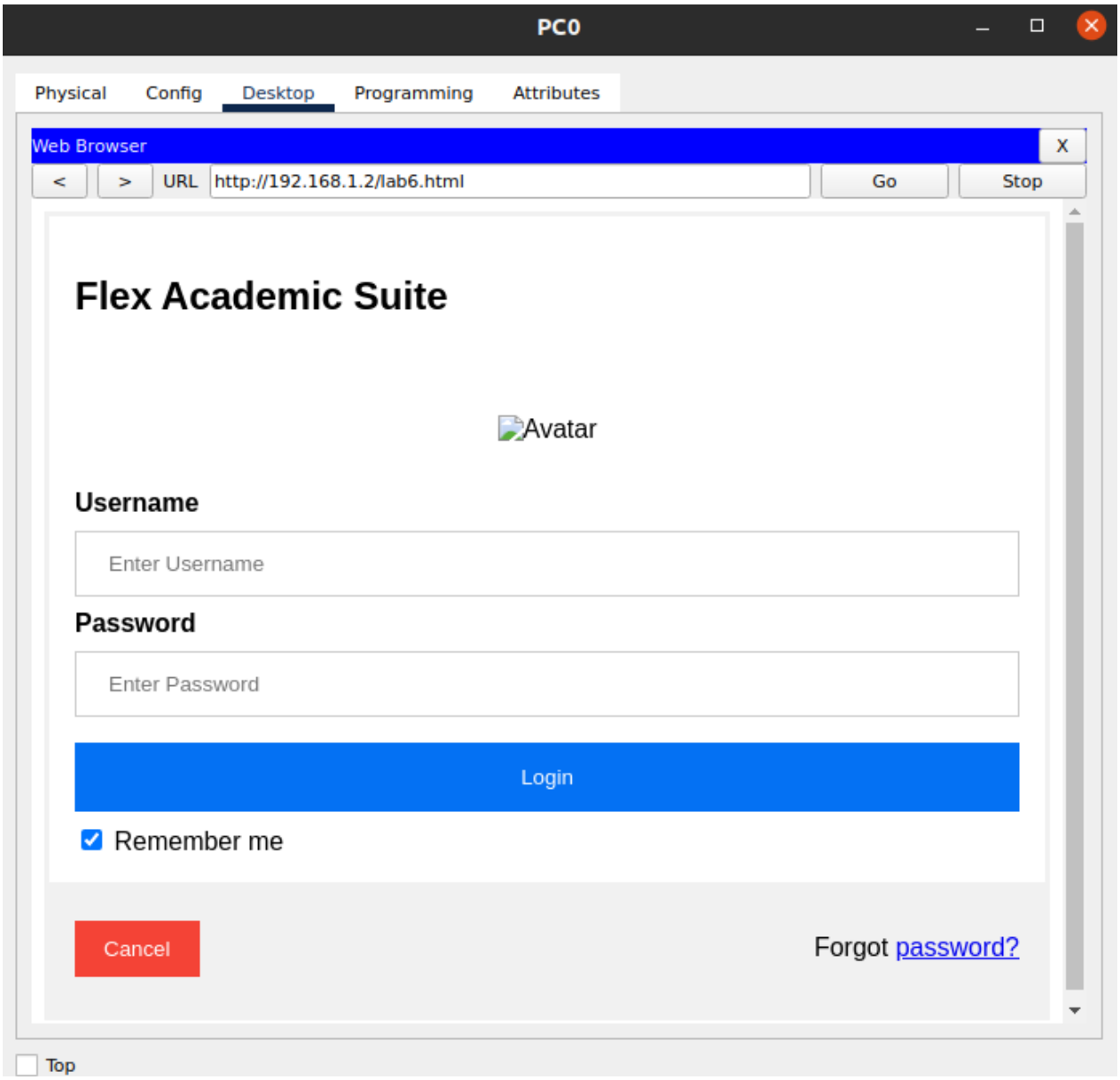


Now open the browser in your PC and run the following IP in the address bar

http://192.168.1.2

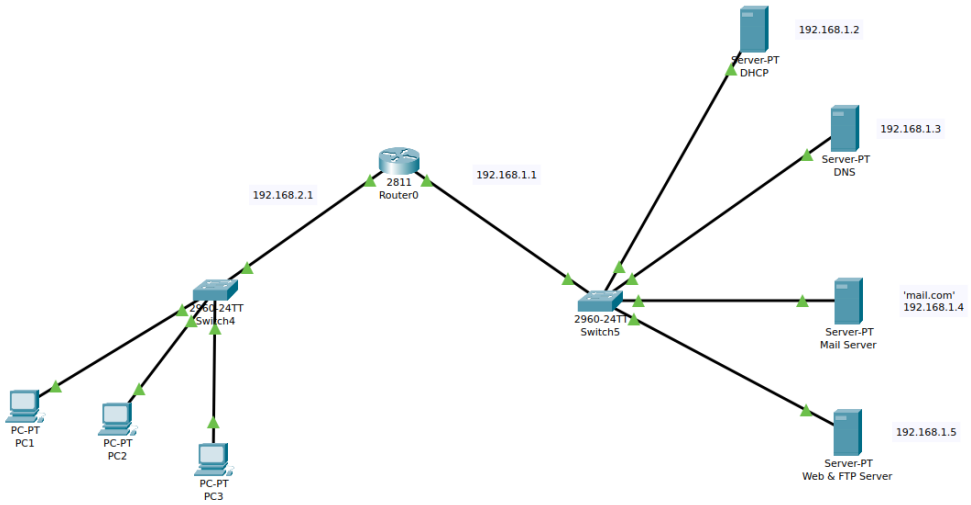

PC0
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.1.2
Go
Stop
Cisco Packet Tracer
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
Quick Links:
A small page
Copyrights
Image page
Image
lab6

Result:


PC0
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.1.2/lab6.html
Go
Stop
Flex Academic Suite
Avatar
Username
Enter Username
Password
Enter Password
Login
Remember me
Cancel
Forgot password?
Top

Task #4

Add 3x PCs, 2x switches, 1x router and 4x servers and connect them with cables



Now we will assign the static IPs to the servers

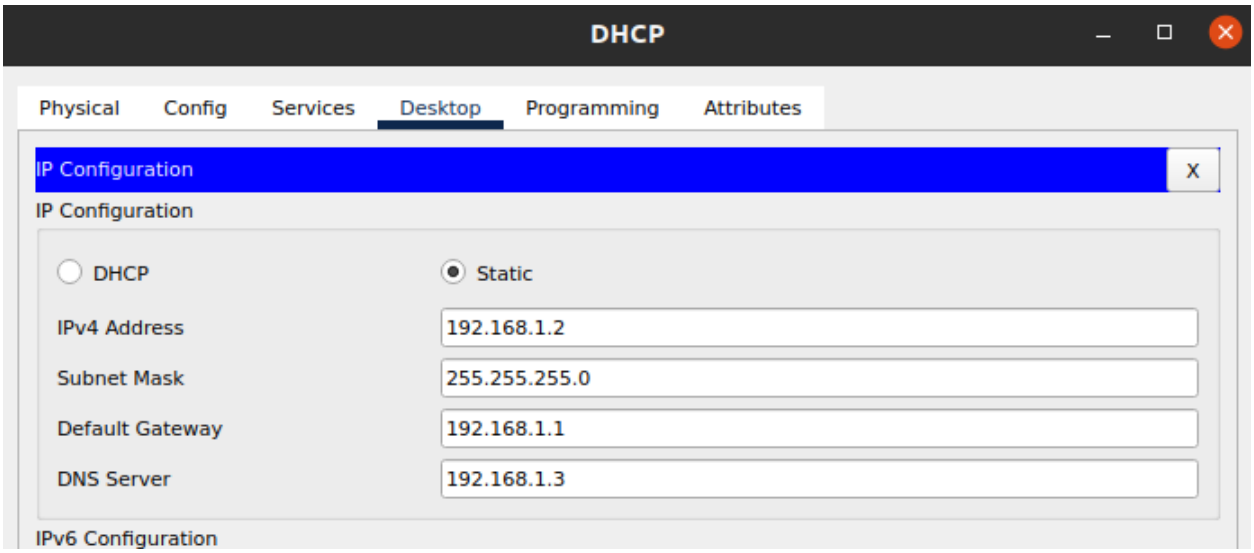
DHCP:

IP: 192.168.1.2

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS: 192.168.1.3



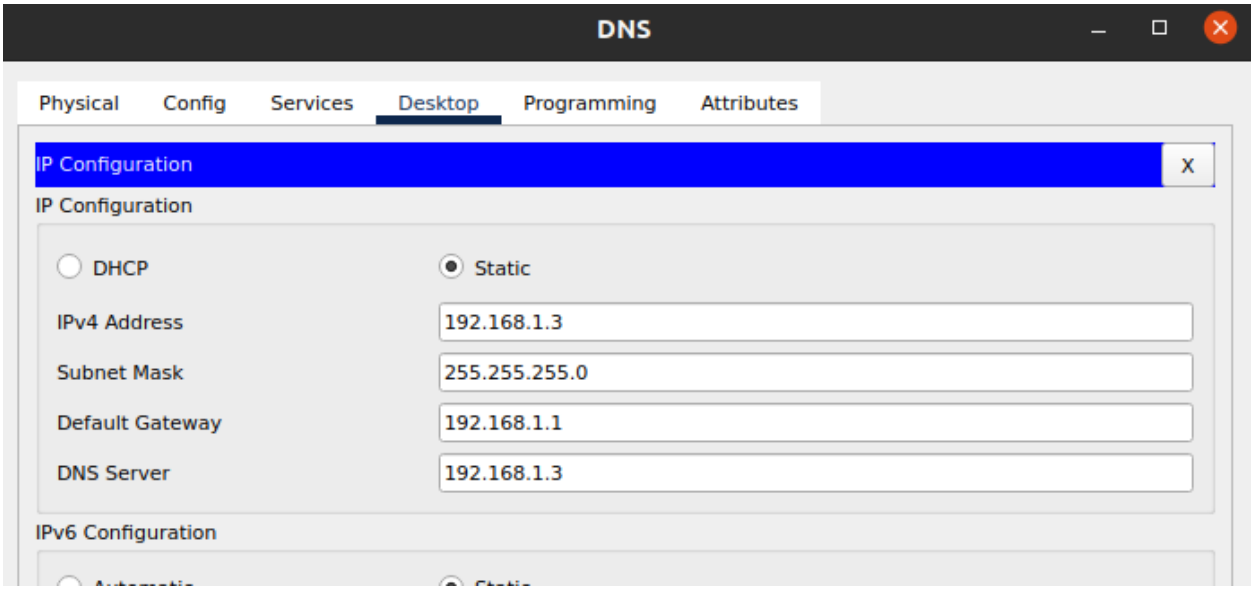
DNS:

IP: 192.168.1.3

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS: 192.168.1.3



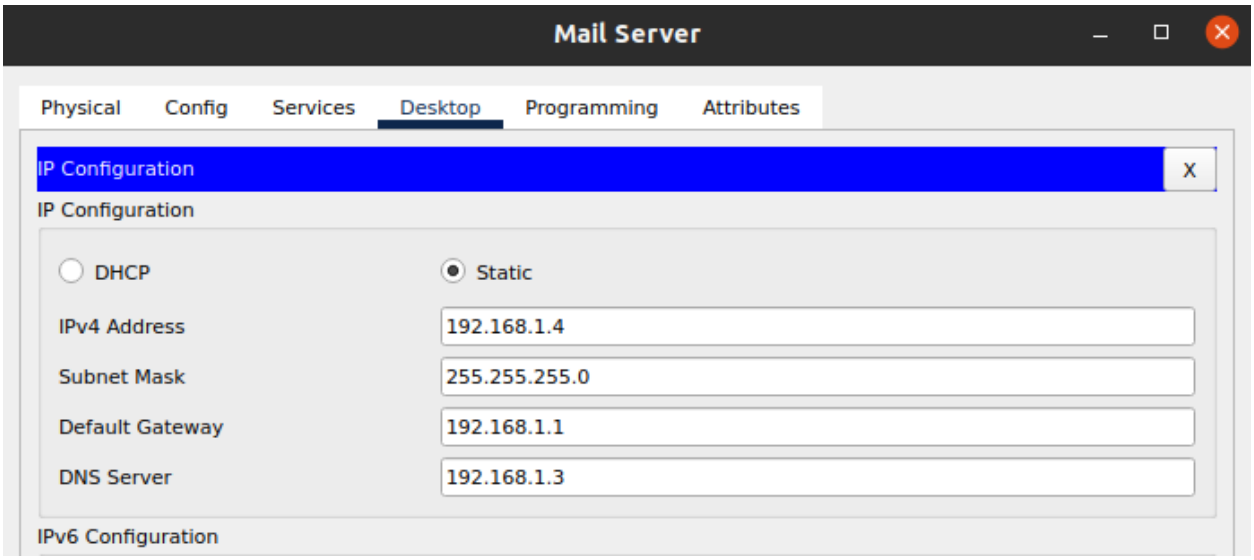
Mail Server:

IP: 192.168.1.4

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS: 192.168.1.3



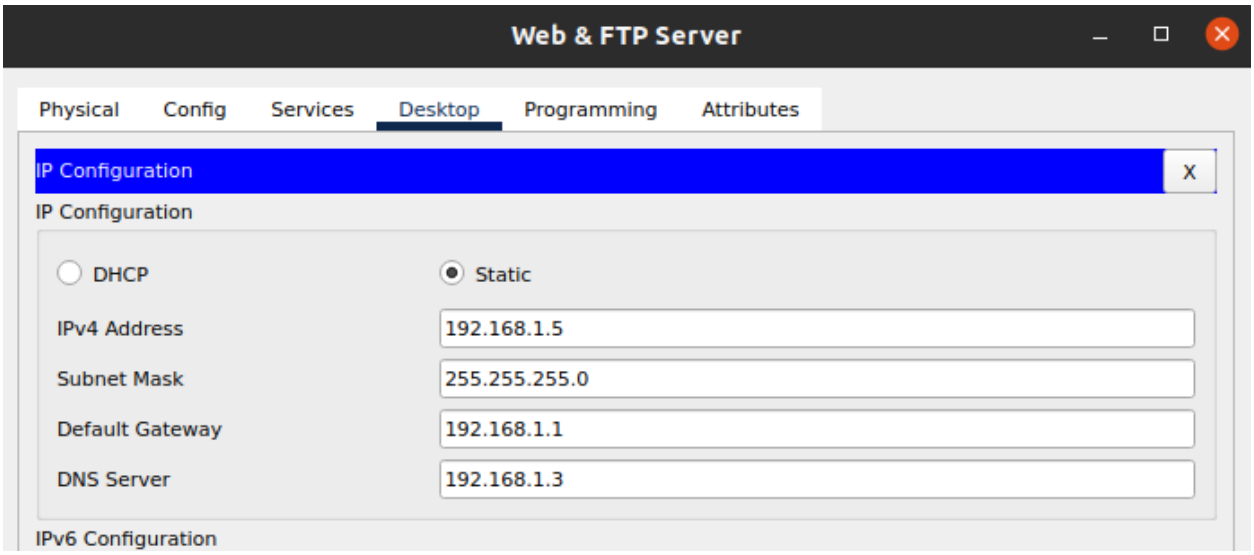
Web & FTP Server:

IP: 192.168.1.5

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS: 192.168.1.3



Now we will configure the router.

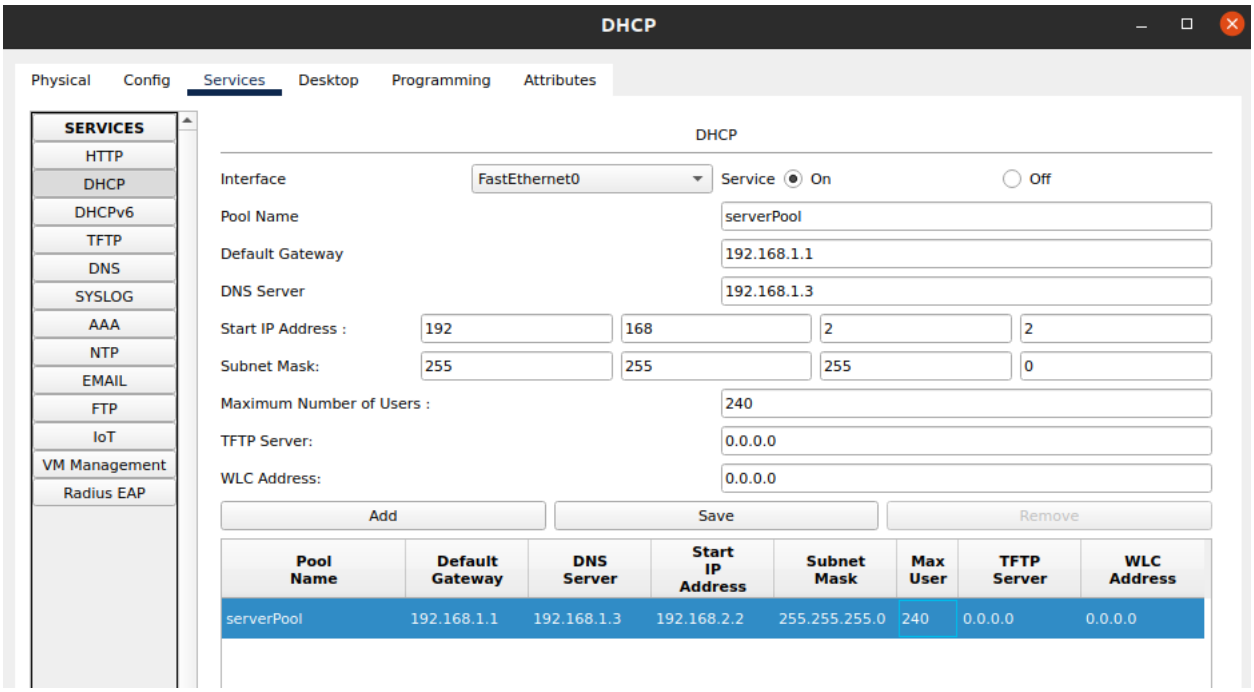
```
Router>
Router>
Router>
Router>ena
Router>enable
Router#conf
Router#configure ter
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int
Router(config)#interface fas
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip add
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no sh
Router(config-if)#no shutdown

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)#exi
Router(config-if)#exit
Router(config)#inter
Router(config)#interface fas
Router(config)#interface fastEthernet 0/1
Router(config-if)#ip addre
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no sh
Router(config-if)#no shutdown

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)#
Router(config-if)#exi
Router(config-if)#exit
Router(config)#inter
Router(config)#interface fas
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip he
Router(config-if)#ip help
Router(config-if)#ip helper-address 192.168.1.2
Router(config-if)#exi
Router(config-if)#exit
Router(config)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
```

And now just assign the IPs to the PCs using DHCP.

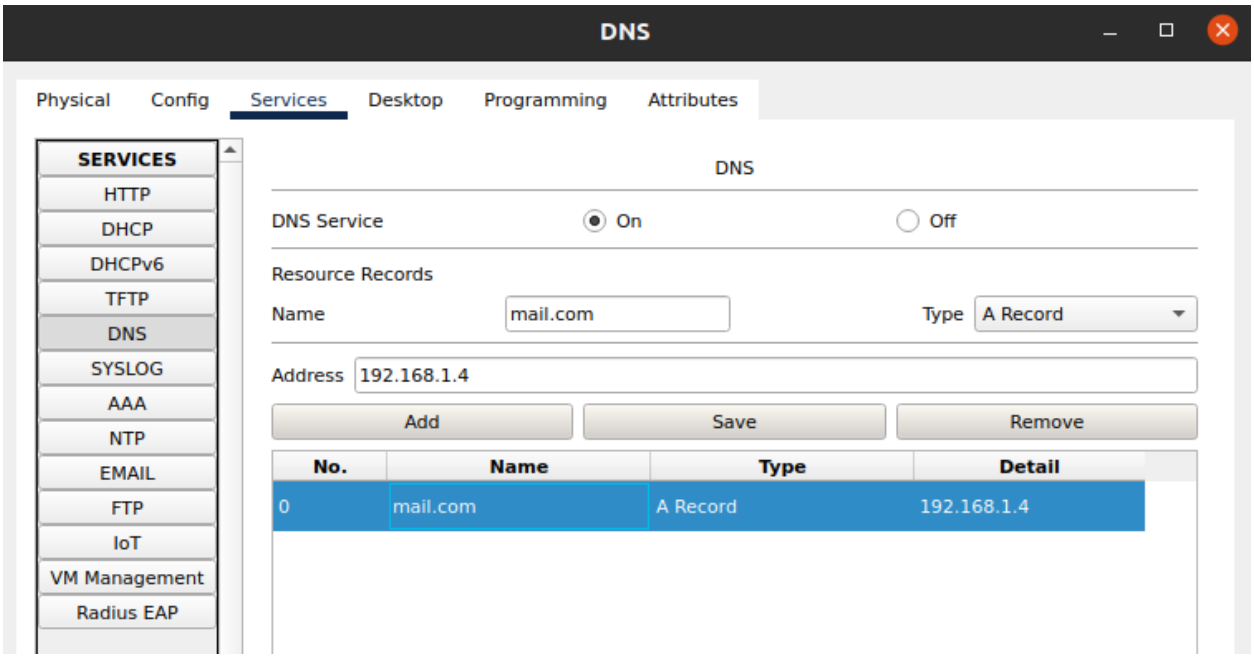
Configuring the severs more.

DHCP:

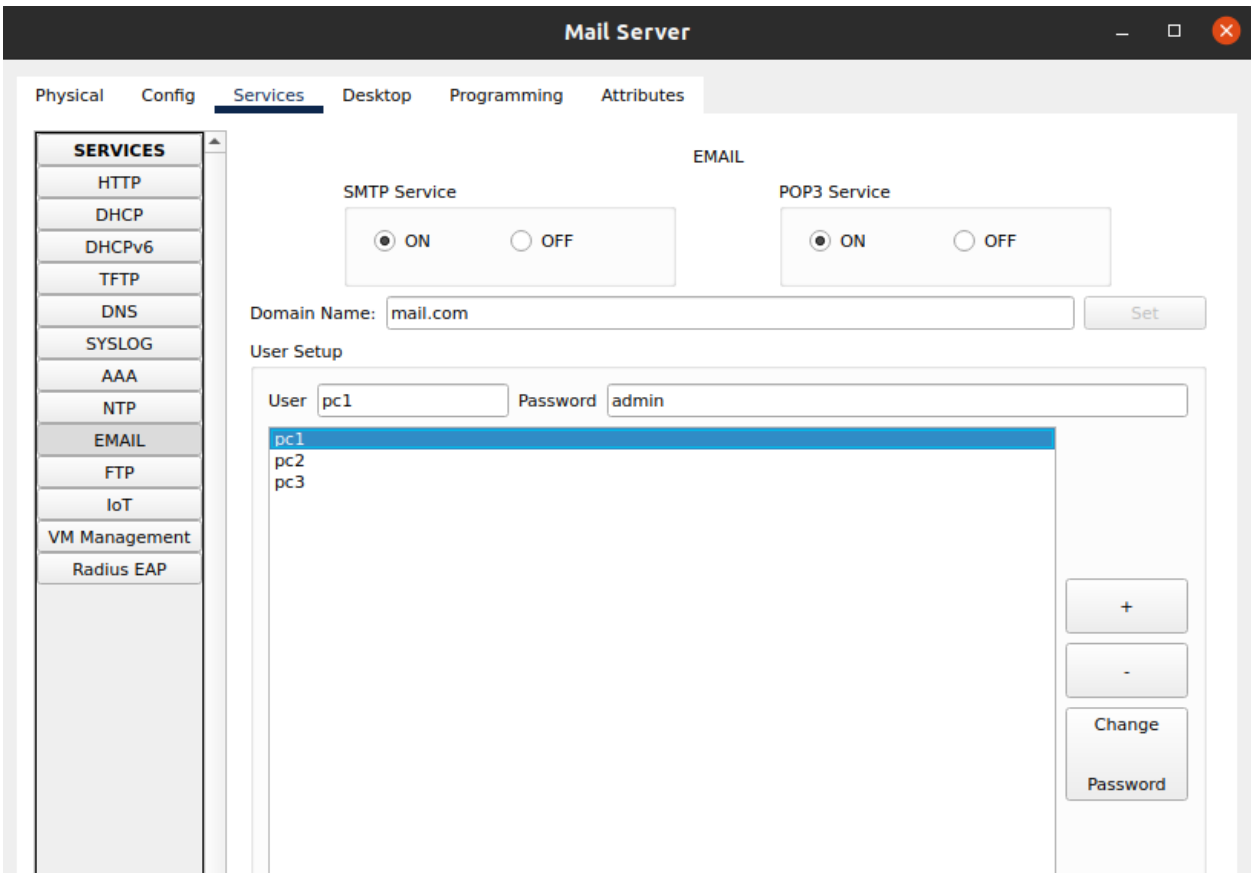
Create a pool for assigning the IPs



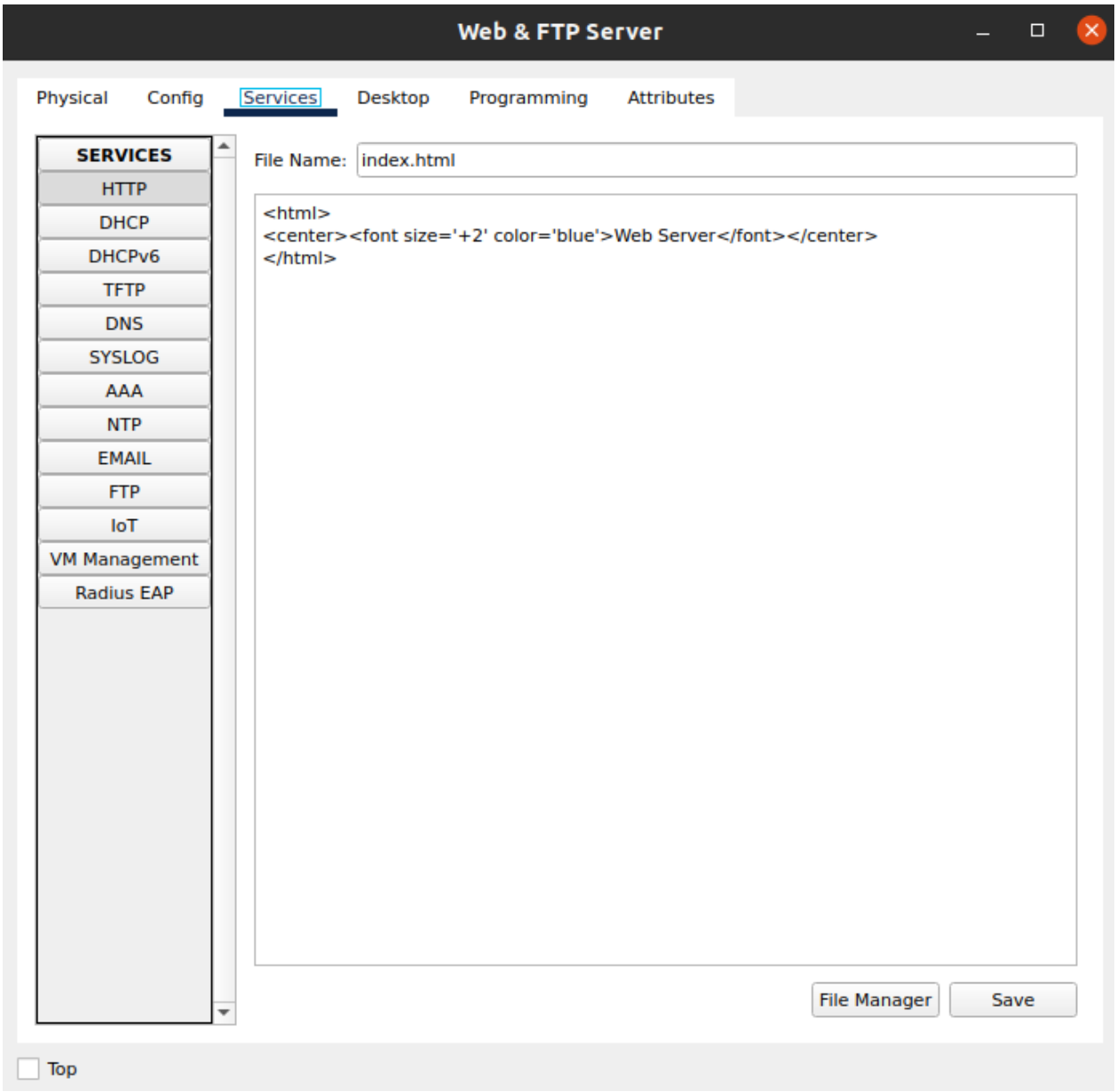
DNS:

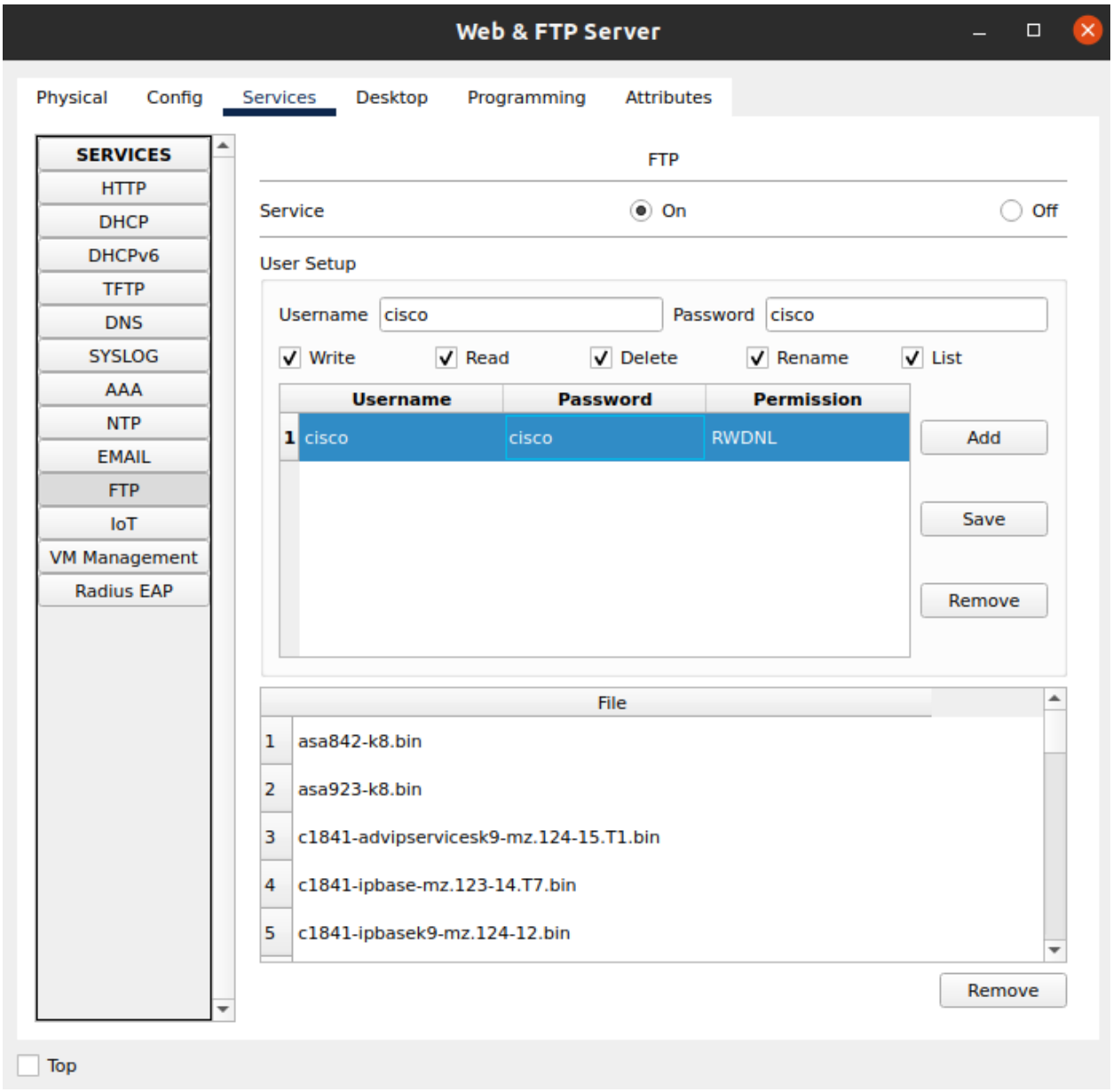

DNS
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
DNS
DNS Service
On
Off
Resource Records
Name
mail.com
Type
A Record
Address
192.168.1.4
Add
Save
Remove
No.
Name
Type
Detail
0
mail.com
A Record
192.168.1.4

Mail sever:


Mail Server
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
EMAIL
SMTP Service
ON
OFF
POP3 Service
ON
OFF
Domain Name:
mail.com
Set
User Setup
User
pc1
Password
admin
pc1
pc2
pc3
+
-
Change
Password

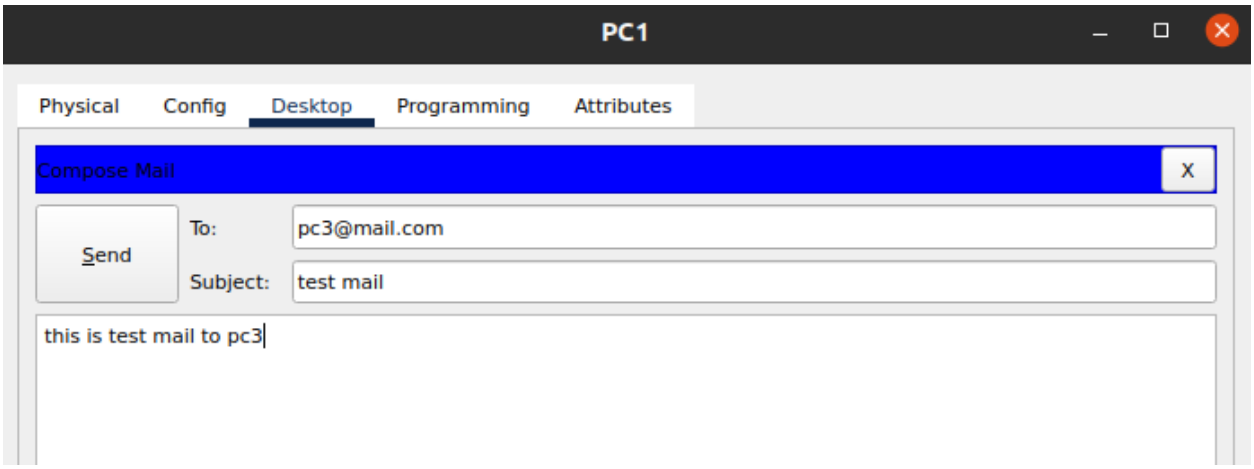
Web & FTP Server:

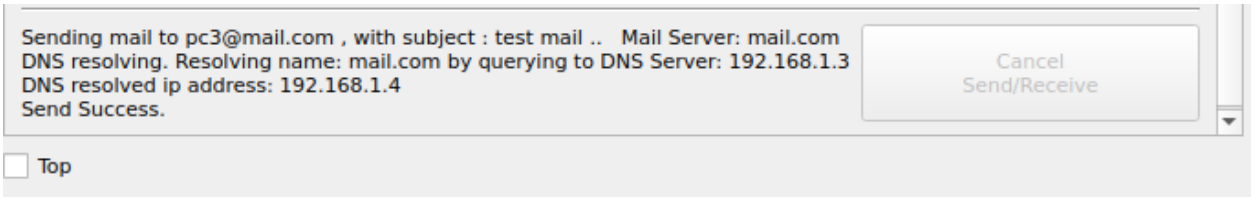




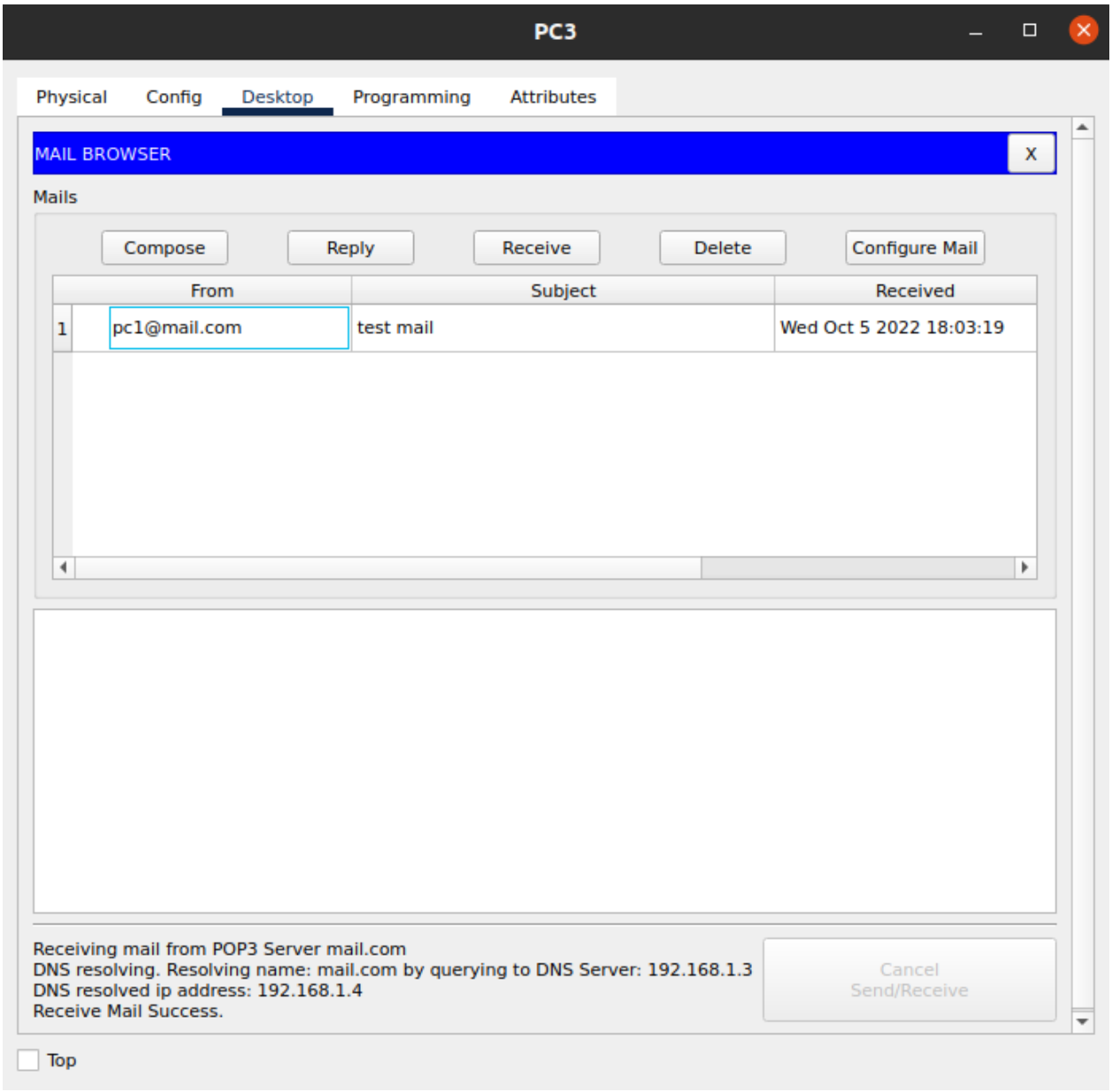
Now we will send an email from pc1 to pc3:

from pc1:

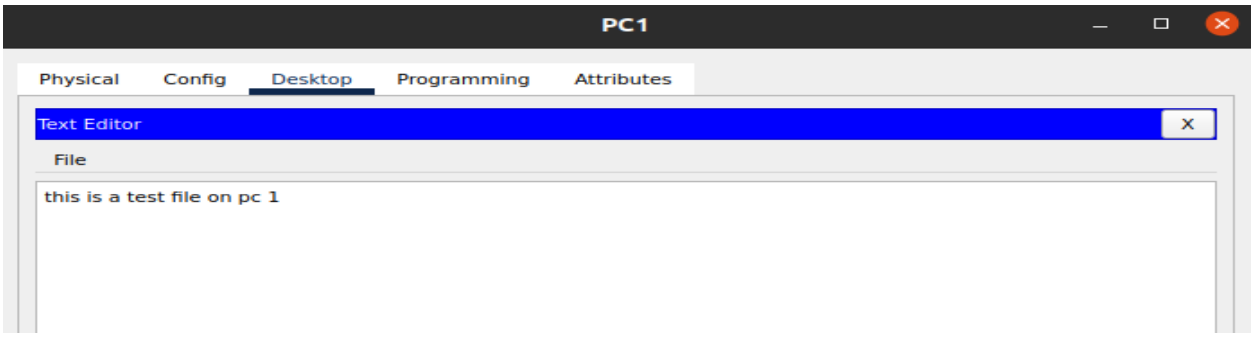

PC1
Physical
Config
Desktop
Programming
Attributes
Compose Mail
X
Send
To:
pc3@mail.com
Subject:
test mail
this is test mail to pc3

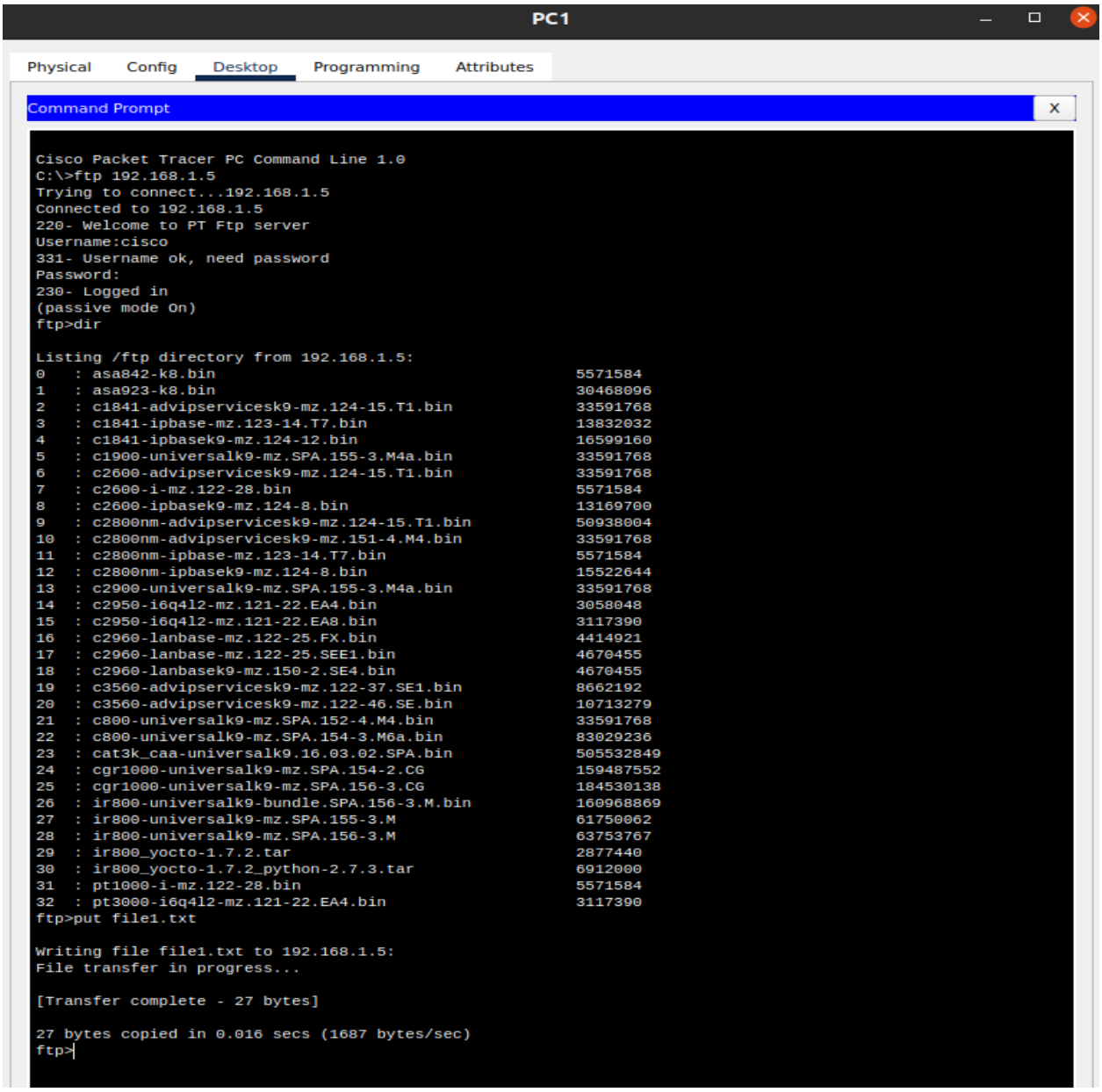

Sending mail to pc3@mail.com , with subject : test mail .. Mail Server: mail.com
DNS resolving. Resolving name: mail.com by querying to DNS Server: 192.168.1.3
DNS resolved ip address: 192.168.1.4
Send Success.
Cancel
Send/Receive
Top

to pc3:

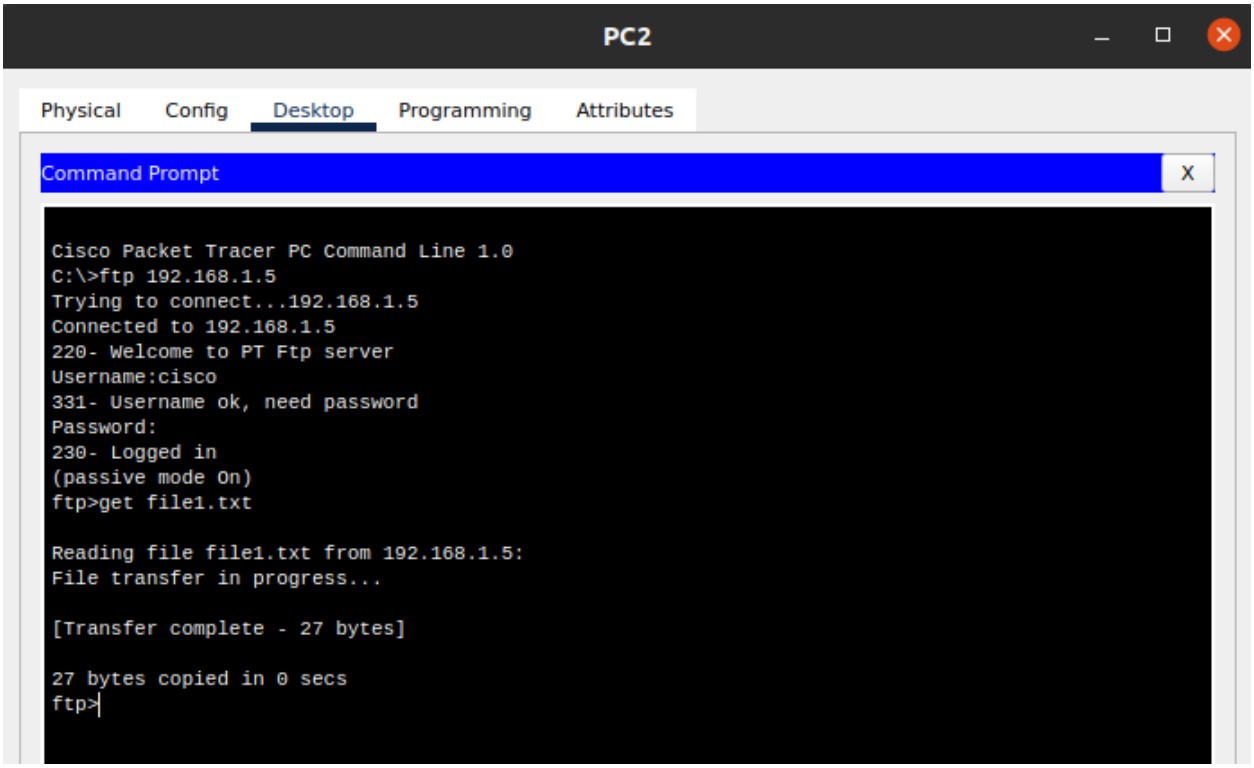


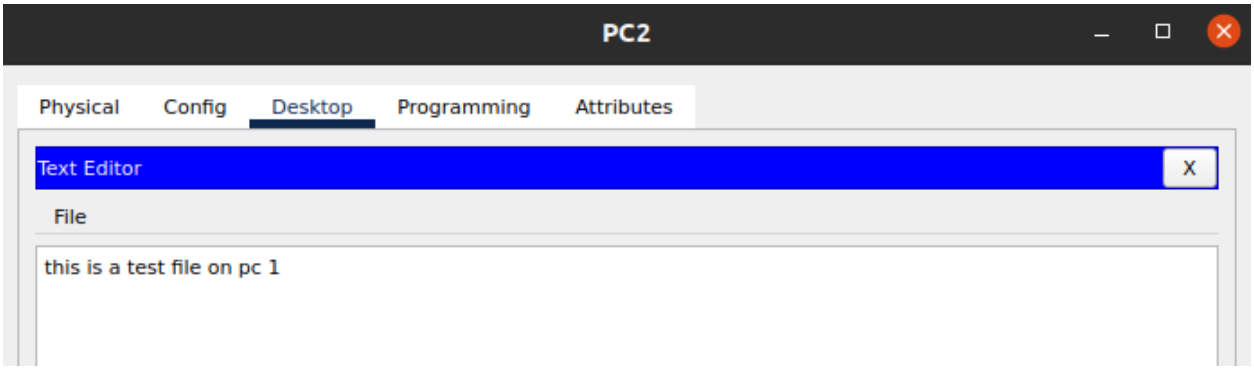
Sending the file to the sever:


PC1
Physical
Config
Desktop
Programming
Attributes
Text Editor
File
this is a test file on pc 1

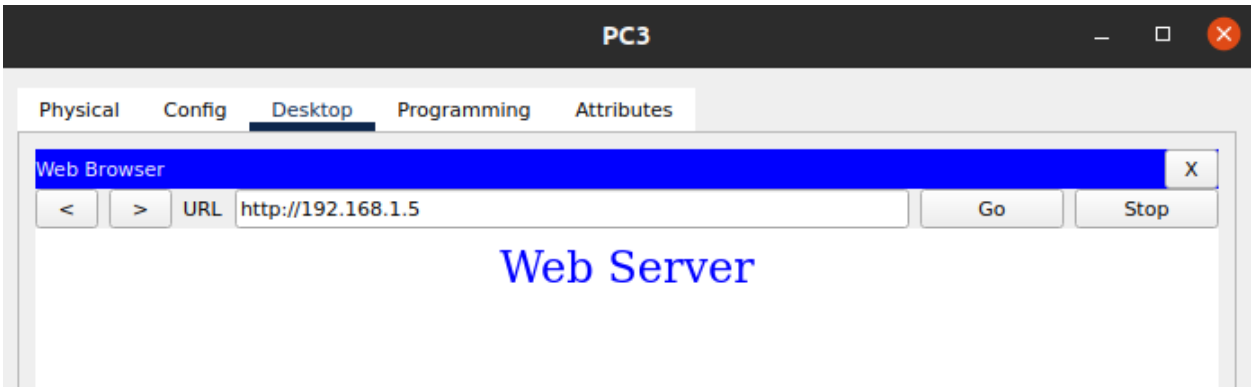

PC1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ftp 192.168.1.5
Trying to connect...192.168.1.5
Connected to 192.168.1.5
220- Welcome to PT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir
Listing /ftp directory from 192.168.1.5:
0 : asa842-k8.bin 5571584
1 : asa923-k8.bin 30468096
2 : c1841-advipservicesk9-mz.124-15.T1.bin 33591768
3 : c1841-ipbase-mz.123-14.T7.bin 13832032
4 : c1841-ipbasek9-mz.124-12.bin 16599160
5 : c1900-universalk9-mz.SPA.155-3.M4a.bin 33591768
6 : c2600-advipservicesk9-mz.124-15.T1.bin 33591768
7 : c2600-i-mz.122-28.bin 5571584
8 : c2600-ipbasek9-mz.124-8.bin 13169700
9 : c2800nm-advipservicesk9-mz.124-15.T1.bin 50938004
10 : c2800nm-advipservicesk9-mz.151-4.M4.bin 33591768
11 : c2800nm-ipbase-mz.123-14.T7.bin 5571584
12 : c2800nm-ipbasek9-mz.124-8.bin 15522644
13 : c2900-universalk9-mz.SPA.155-3.M4a.bin 33591768
14 : c2950-i6q4l2-mz.121-22.EA4.bin 3058048
15 : c2950-i6q4l2-mz.121-22.EA8.bin 3117390
16 : c2960-lanbase-mz.122-25.FX.bin 4414921
17 : c2960-lanbase-mz.122-25.SEE1.bin 4670455
18 : c2960-lanbasek9-mz.150-2.SE4.bin 4670455
19 : c3560-advipservicesk9-mz.122-37.SE1.bin 8662192
20 : c3560-advipservicesk9-mz.122-46.SE.bin 10713279
21 : c800-universalk9-mz.SPA.152-4.M4.bin 33591768
22 : c800-universalk9-mz.SPA.154-3.M6a.bin 83029236
23 : cat3k_caa-universalk9.16.03.02.SPA.bin 505532849
24 : cgr1000-universalk9-mz.SPA.154-2.CG 159487552
25 : cgr1000-universalk9-mz.SPA.156-3.CG 184530138
26 : ir800-universalk9-bundle.SPA.156-3.M.bin 160968869
27 : ir800-universalk9-mz.SPA.155-3.M 61750062
28 : ir800-universalk9-mz.SPA.156-3.M 63753767
29 : ir800_yocto-1.7.2.tar 2877440
30 : ir800_yocto-1.7.2_python-2.7.3.tar 6912000
31 : pt1000-i-mz.122-28.bin 5571584
32 : pt3000-i6q4l2-mz.121-22.EA4.bin 3117390
ftp>put file1.txt
Writing file file1.txt to 192.168.1.5:
File transfer in progress...
[Transfer complete - 27 bytes]
27 bytes copied in 0.016 secs (1687 bytes/sec)
ftp>

Downloading the file form the sever to the pc2





Accessing the web server from pc 3:


PC3
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.1.5
Go
Stop
Web Server