CCV

CISCO PACKET TRACER

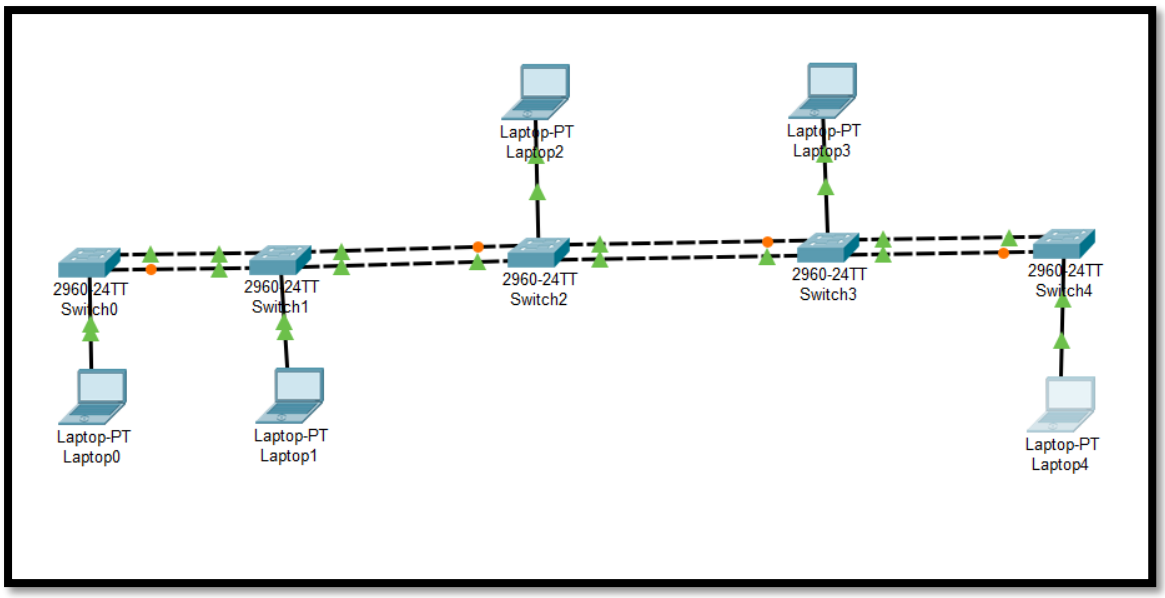
SAURABH PUNDIR

181510028, 28

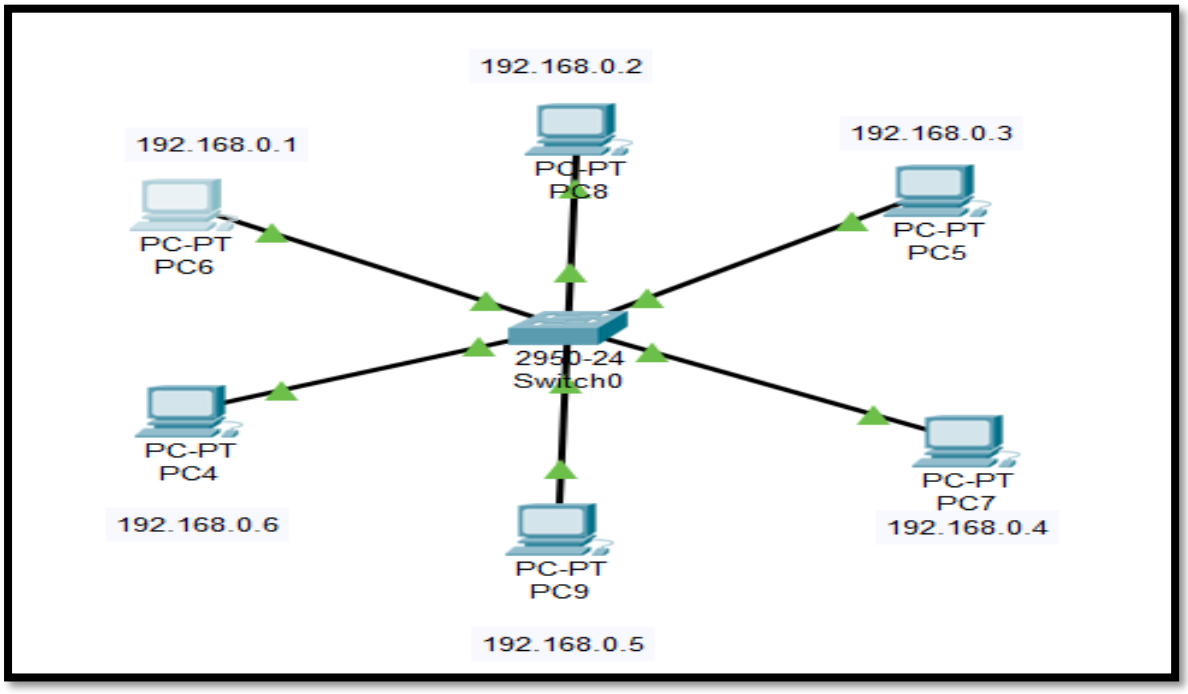
CCV

Activity 1

1. Bus Topology



2. Star Topology



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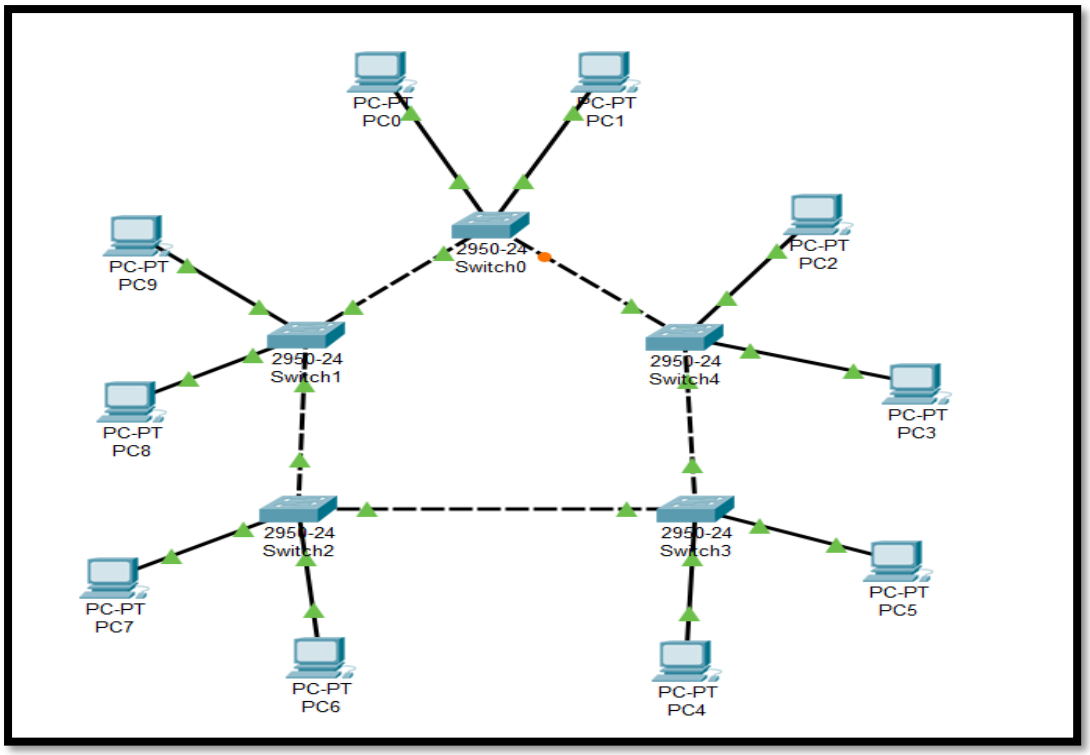
3. Ring Topology



Step 1: Set up the network topology

a. Add many generic PCs, Switches (as per required to make the topology).

b. Connect each PC to switches using ethernet cables as shown in above figures.

c. Connect Switches to Switches wherever required.

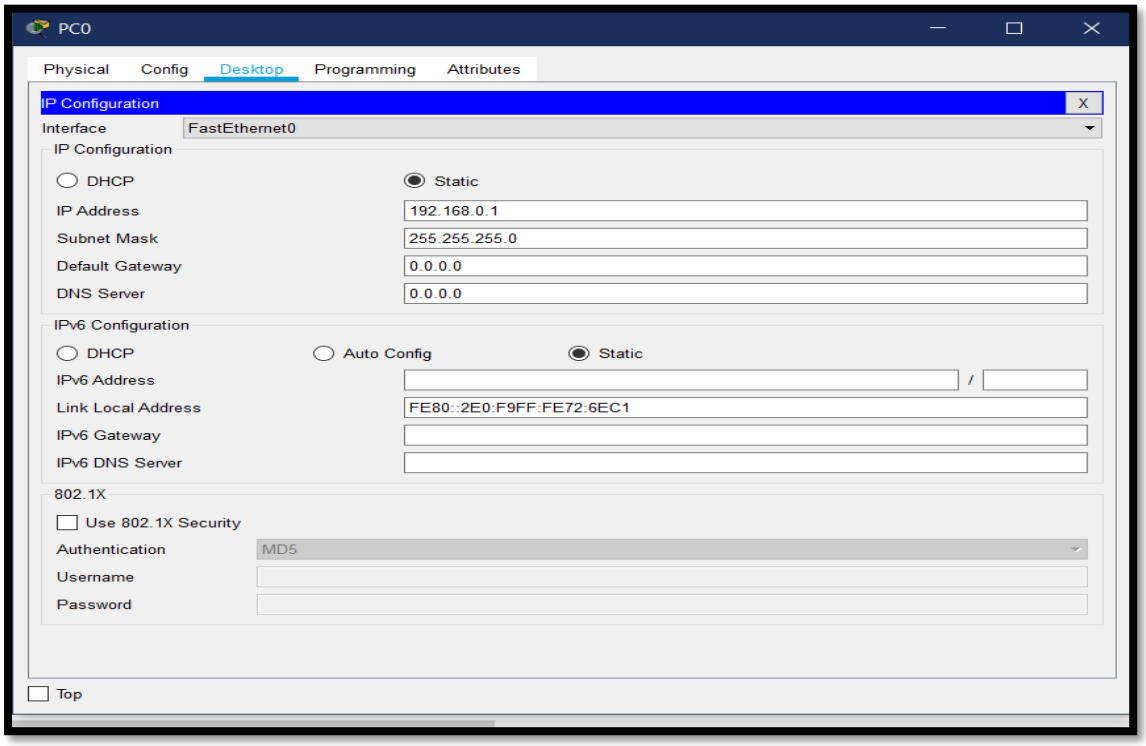
d. Double Click on any Laptop/Desktop, in order to configure the network parameters.

e. Enter the IP address for each PC:

f. Go to Desktop Tab

g. Enter the IP Configurations Setting.

h. Enter the IP address, Subnet Mask and Default-Gateway.



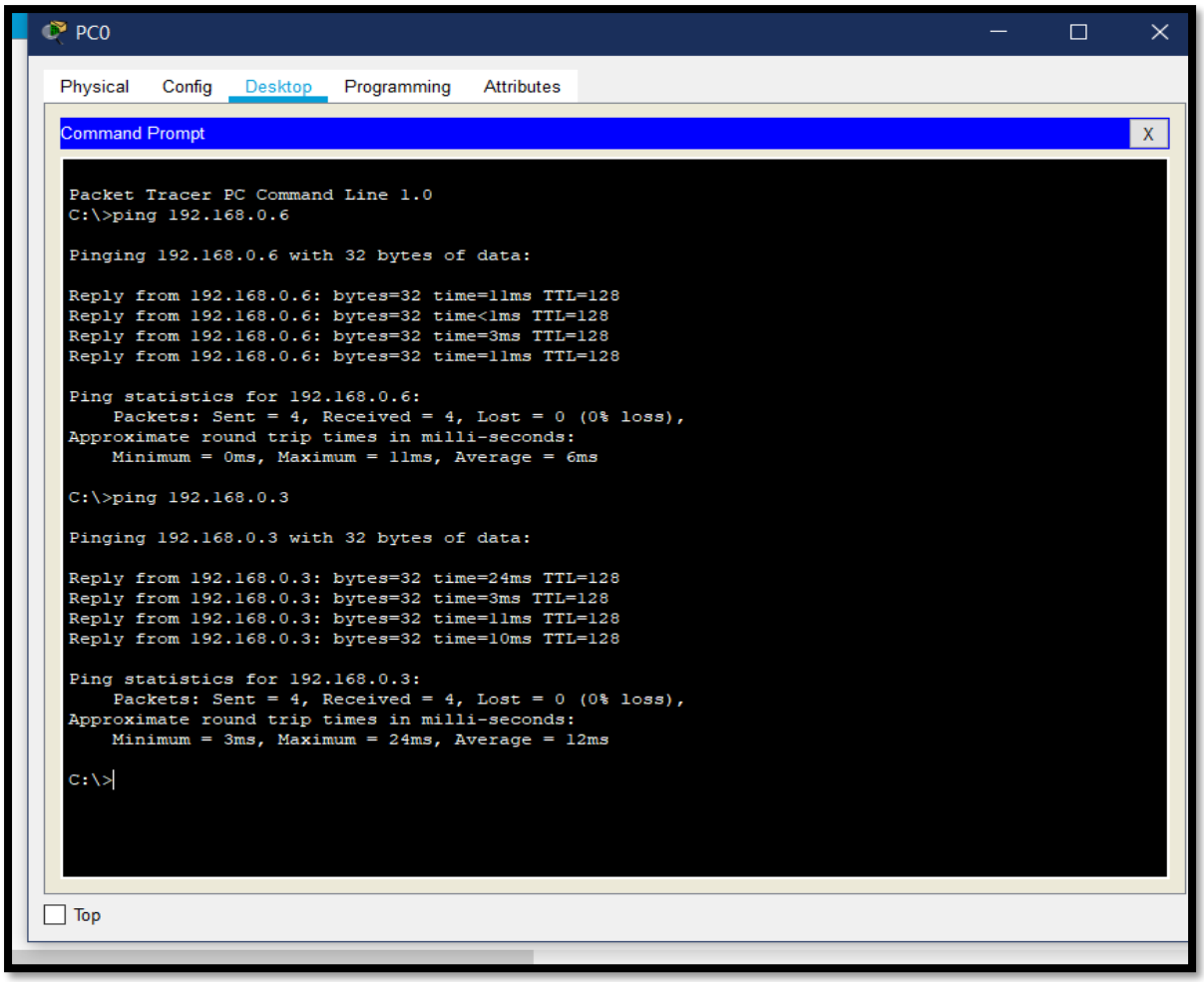
Step 2: Verify connectivity

a. Click any PC and select the Desktop tab.

b. Select Command Prompt.

c. Type ipconfig at the prompt to view the IP configuration.

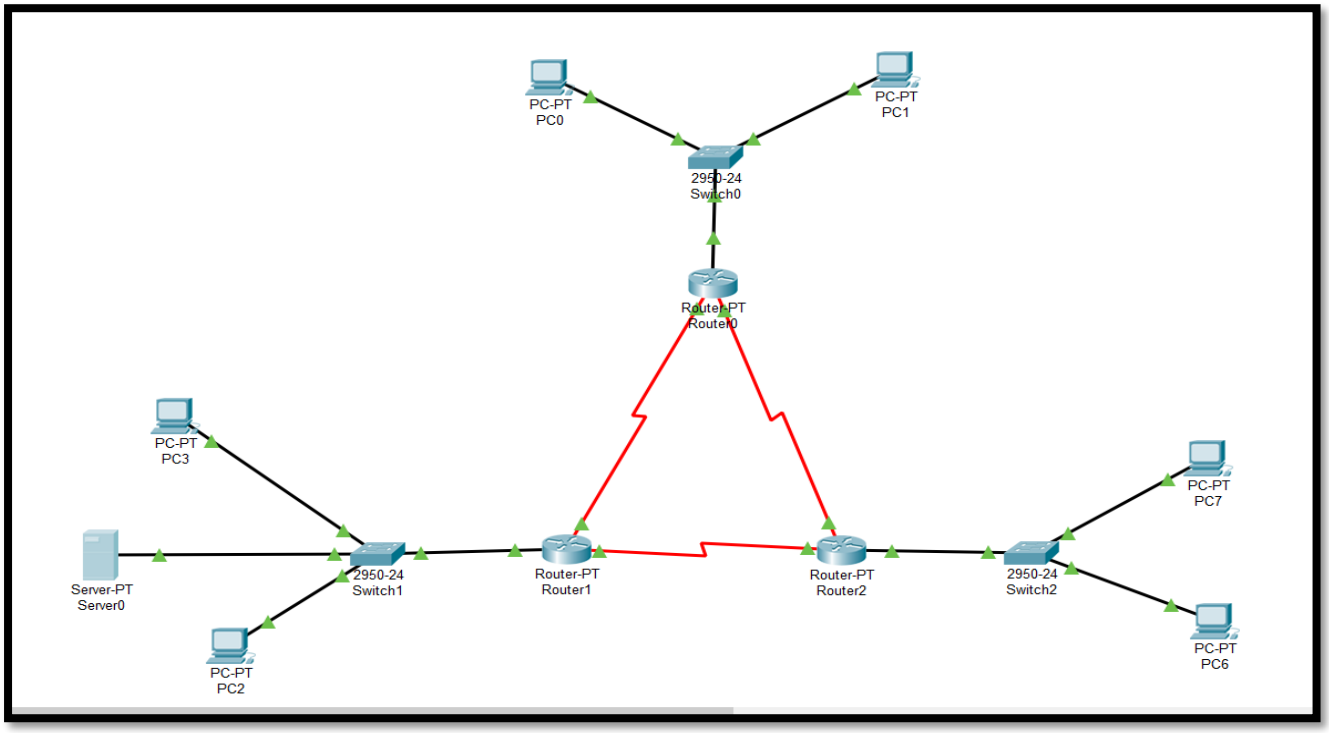
d. Type ping 192.168.X.X to ping the from any device to 192.168.X.X.



The pings to all devices should be successful.

Activity 2

Topology:



AIM:

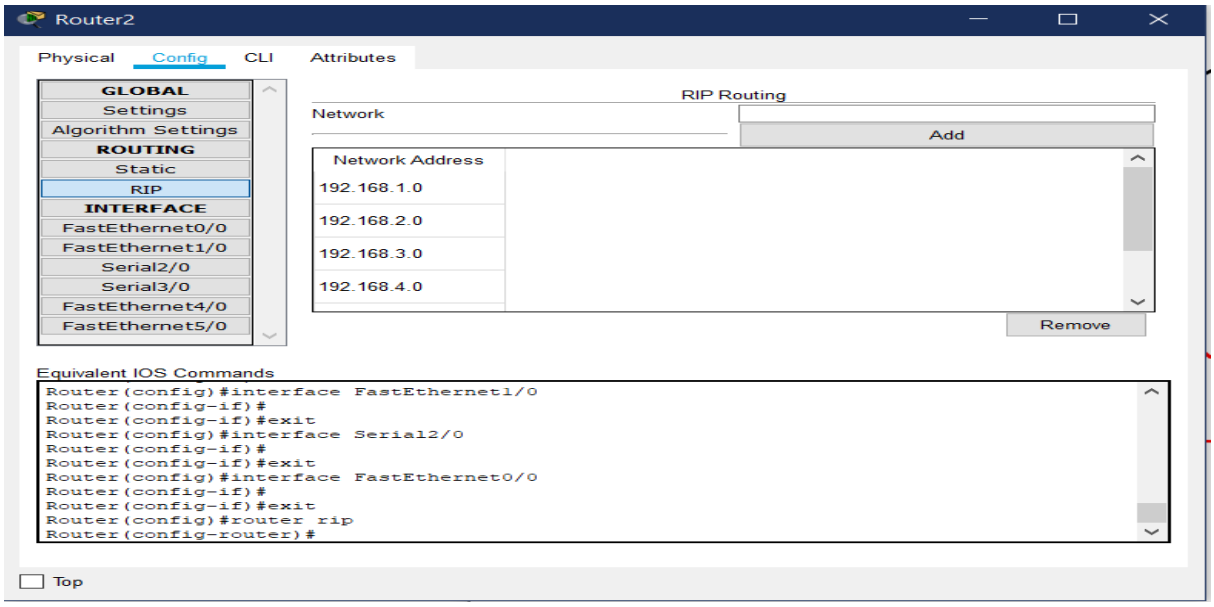
- Configure 3 routers.
- Configure DHCP.
- Configure DNS.

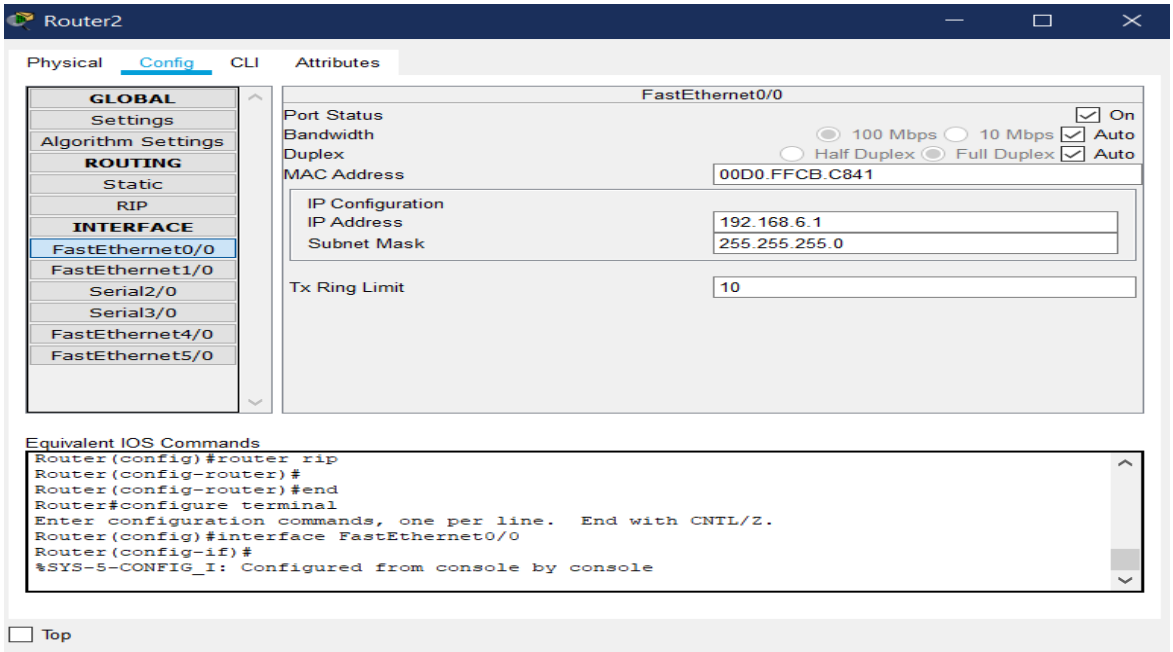
Steps:

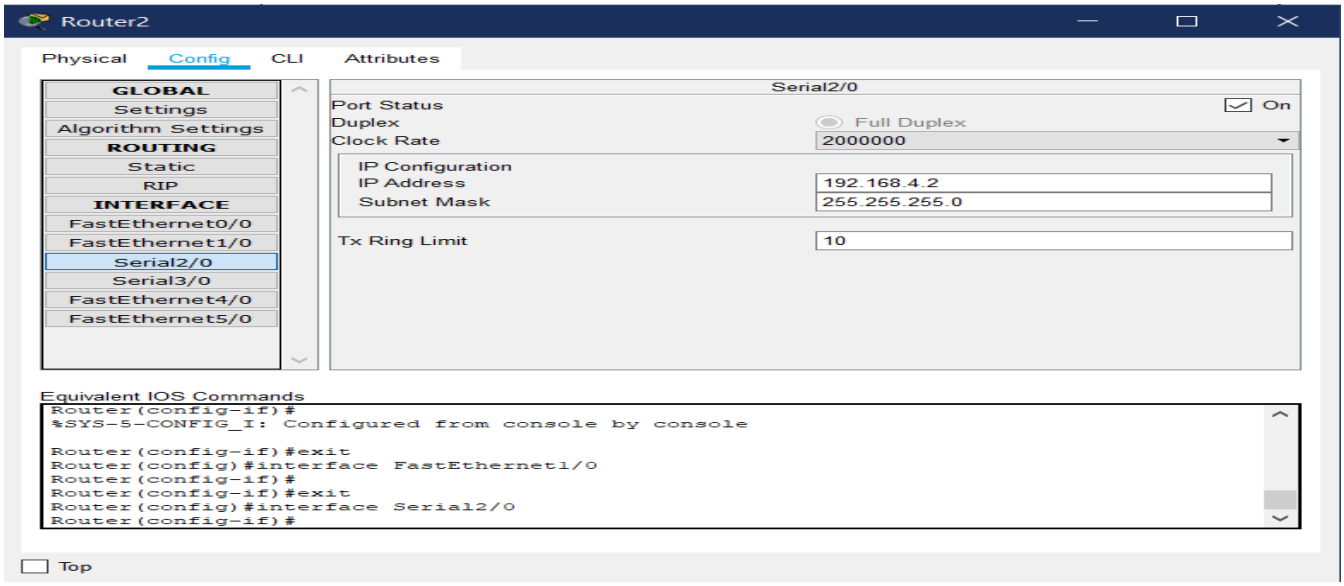
Set up the network topology

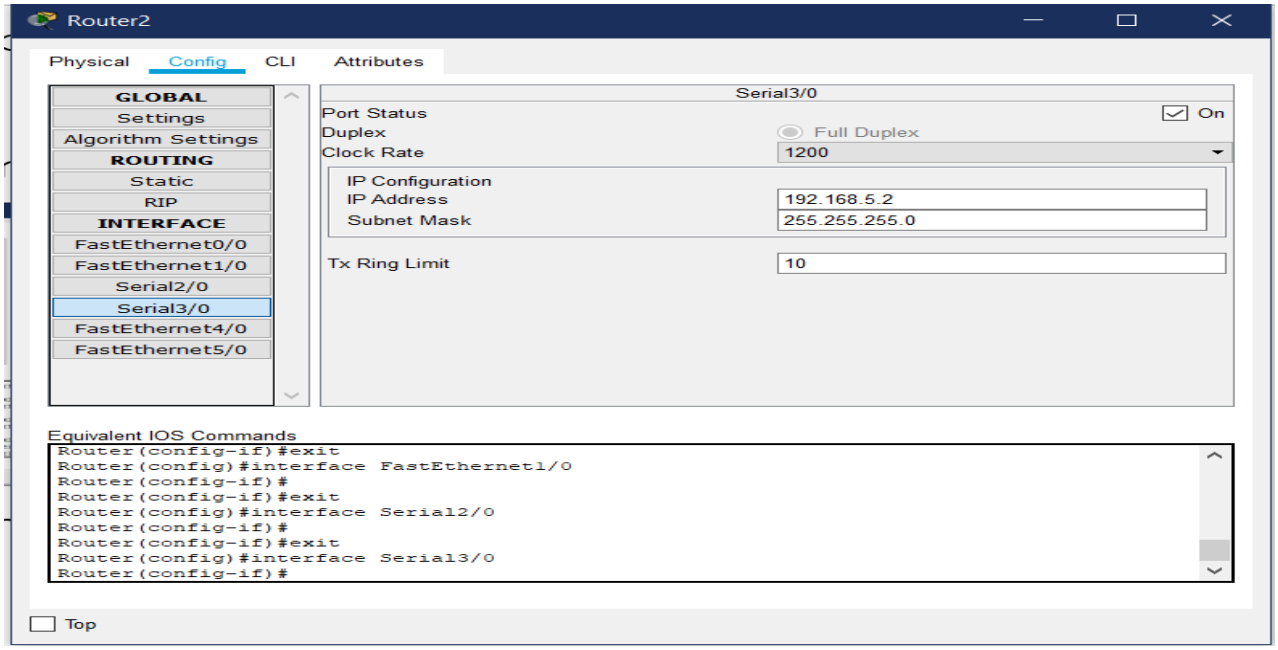
a. Setup the Topology as Shown.

b. Configure routers.

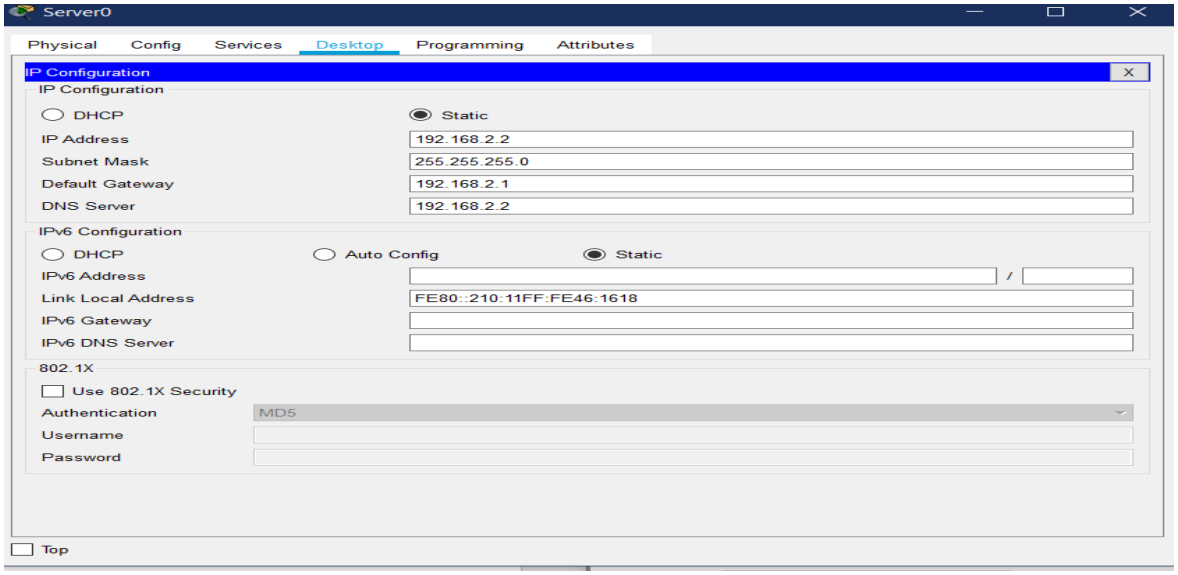


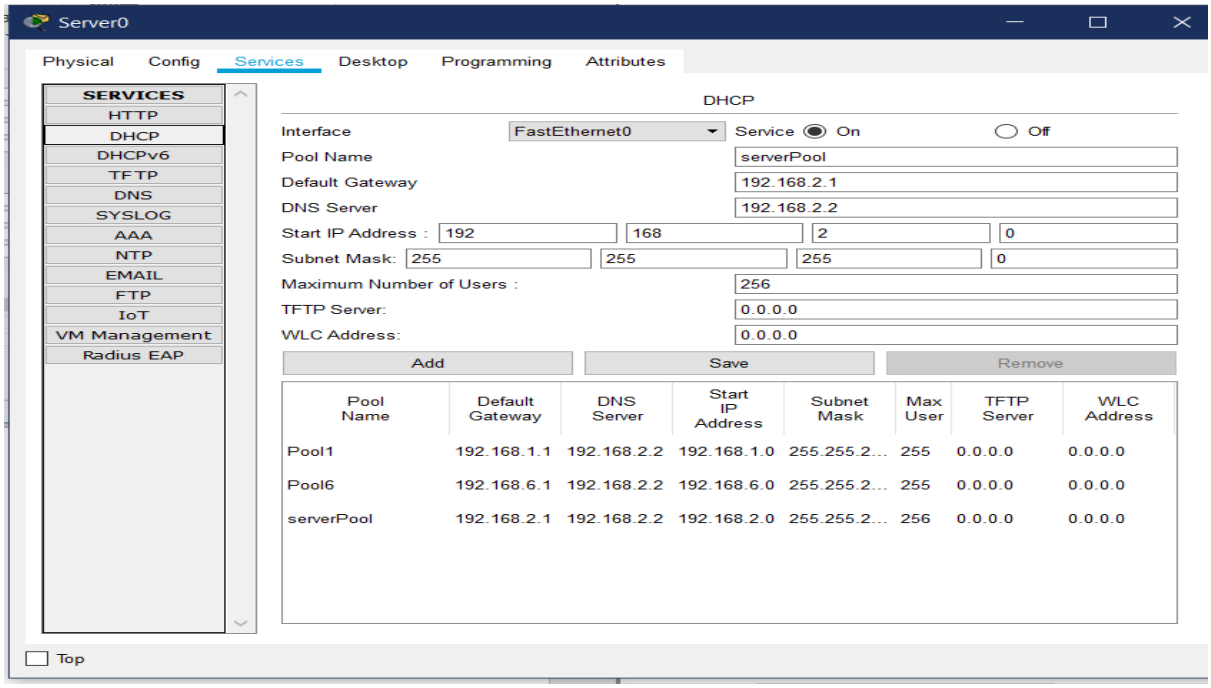


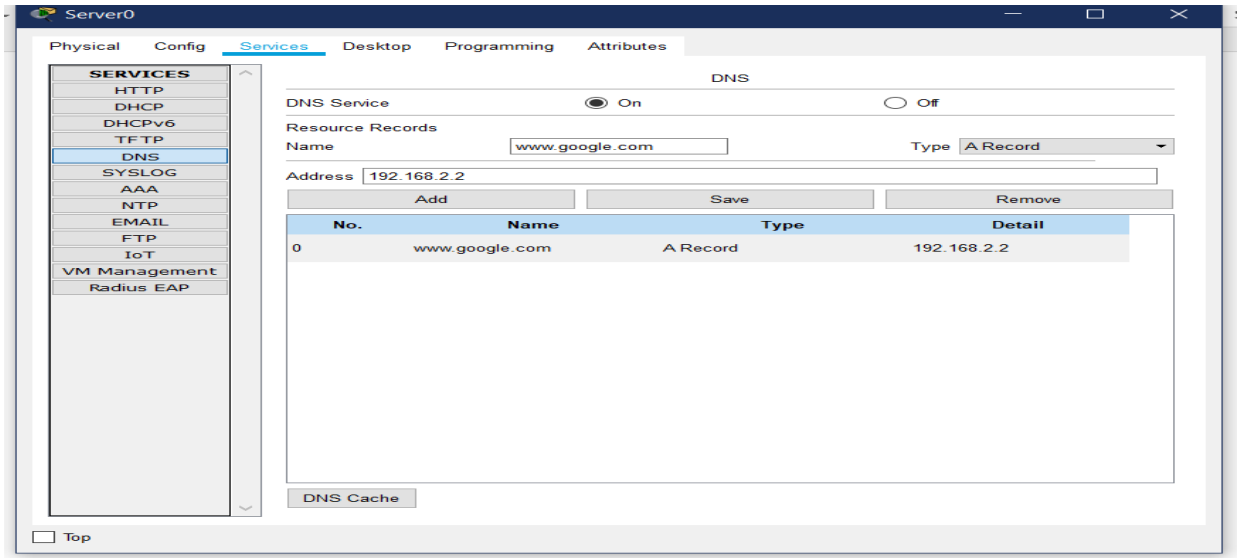




c. Configure DHCP and DNS Server as:


Server0
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
IP Configuration
DHCP
Static
IP Address
192.168.2.2
Subnet Mask
255.255.255.0
Default Gateway
192.168.2.1
DNS Server
192.168.2.2
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::210:11FF:FE46:1618
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top


Server0
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
192.168.2.1
DNS Server
192.168.2.2
Start IP Address :
192
168
2
0
Subnet Mask:
255
255
255
0
Maximum Number of Users :
256
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 User
TFTP Server
WLC Address
Pool1
192.168.1.1
192.168.2.2
192.168.1.0
255.255.2...
255
0.0.0.0
0.0.0.0
Pool6
192.168.6.1
192.168.2.2
192.168.6.0
255.255.2...
255
0.0.0.0
0.0.0.0
serverPool
192.168.2.1
192.168.2.2
192.168.2.0
255.255.2...
256
0.0.0.0
0.0.0.0
Top


Server0
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
www.google.com
Type
A Record
Address
192.168.2.2
Add
Save
Remove
No.
Name
Type
Detail
0
www.google.com
A Record
192.168.2.2
DNS Cache
Top

d. Most Important:

Go to each router and run following commands:

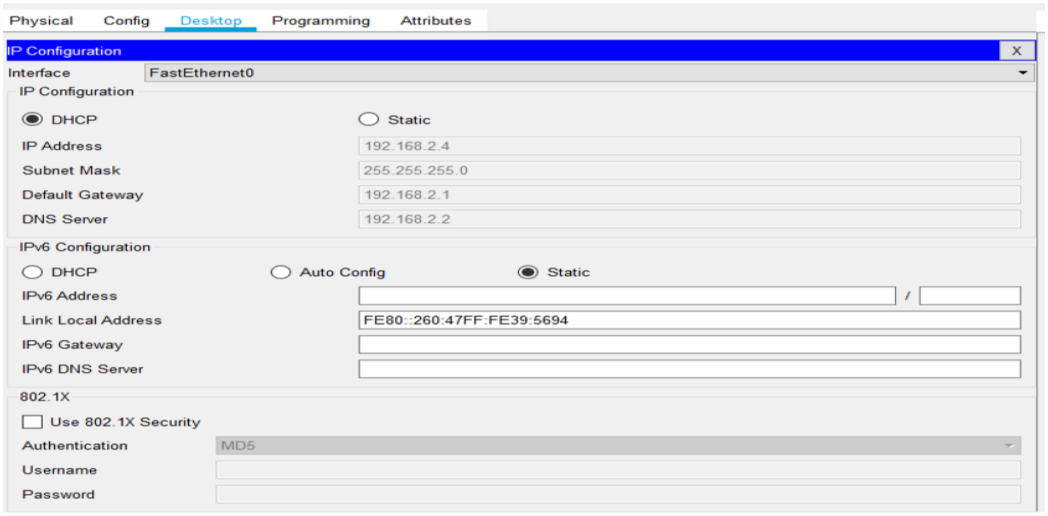
enable

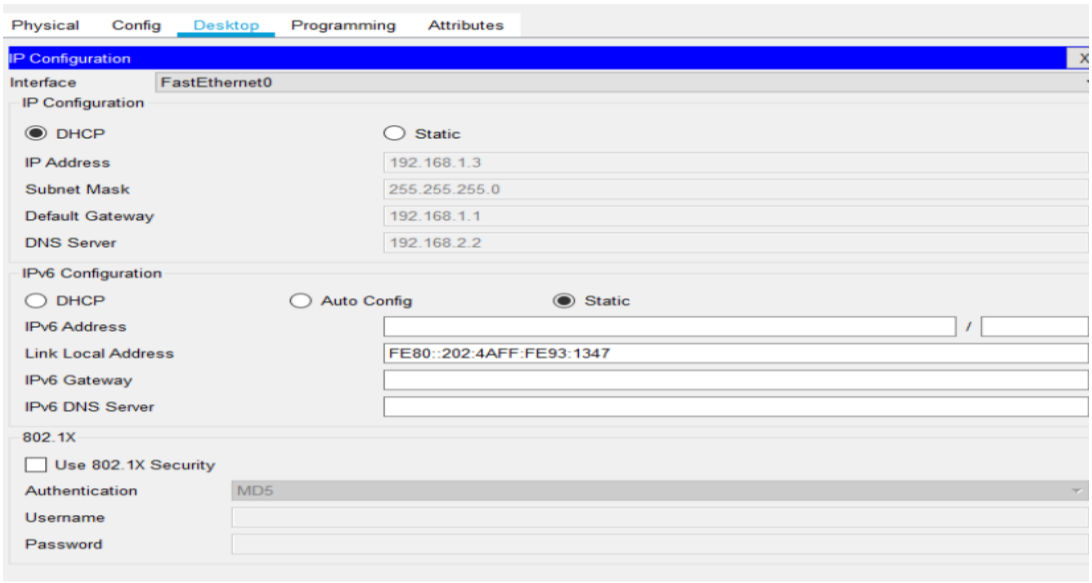
configure terminal

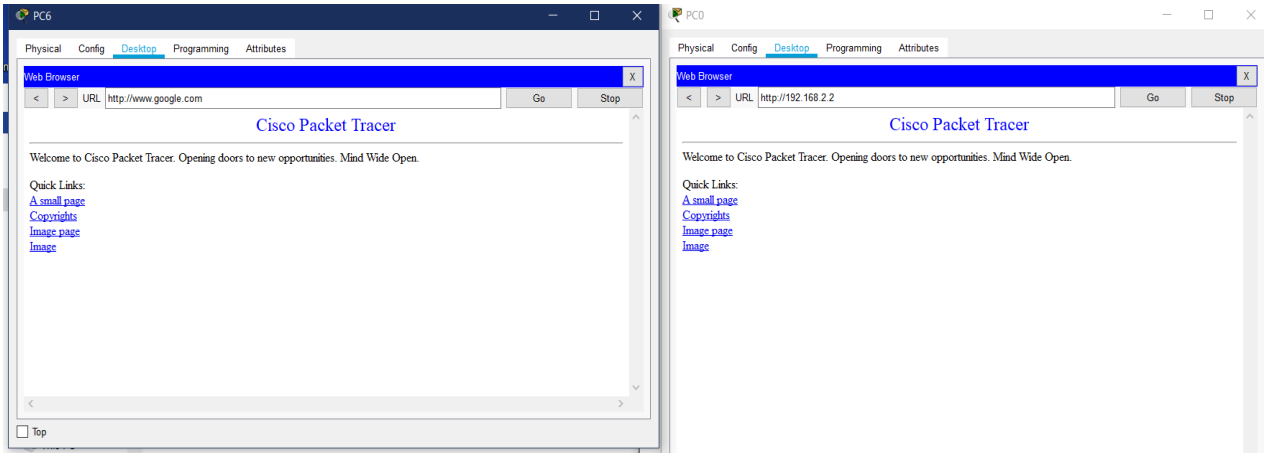
interface FastEthernet0/0

ip helper-address 192.168.2.2

e. Set IP assignment to DHCP for every host. IPs will be automatically assigned as:

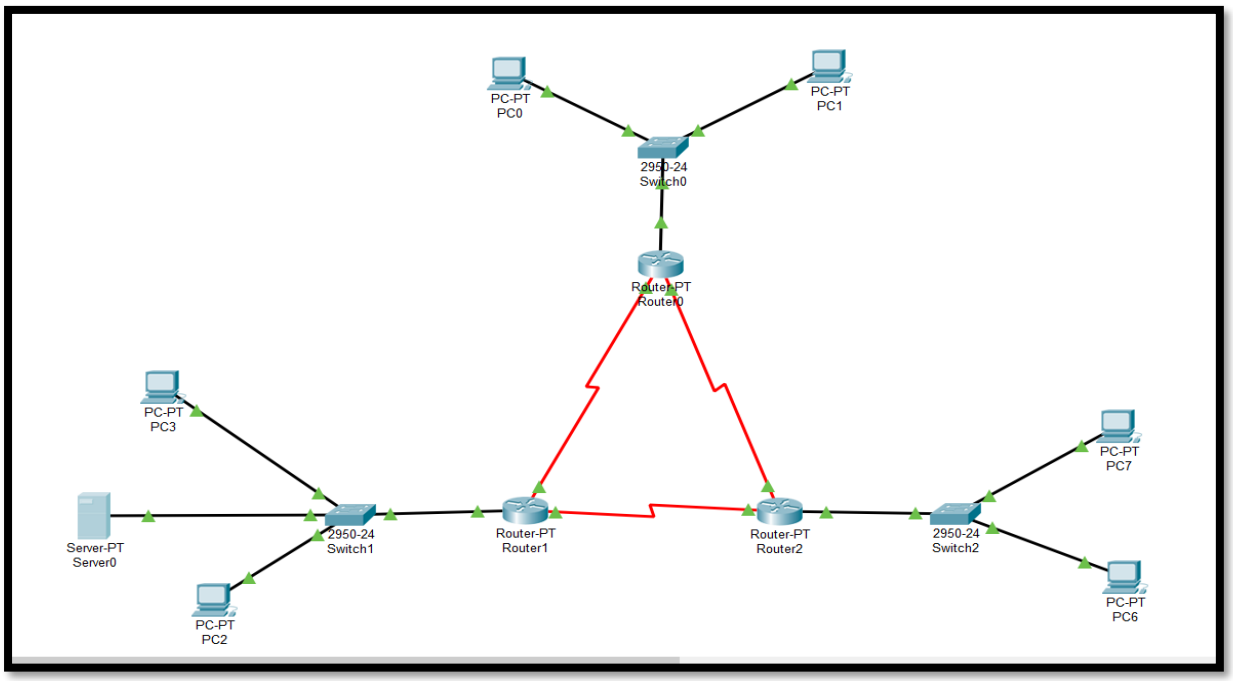






Activity 3

Topology:



AIM

- Send Mails.
- Access FTP.
- Access HTTP(Browser).

Steps:

Set up the network topology

a. Setup same topology as Activity 3.

b. Configure Mail Server.

c. Setup Domain name.

d. Add 2 users with username and password.

e. Setup Desktop/Mail on 2 hosts and login with the accounts.

f. Send mail from one to another.

g. Configure FTP Server.

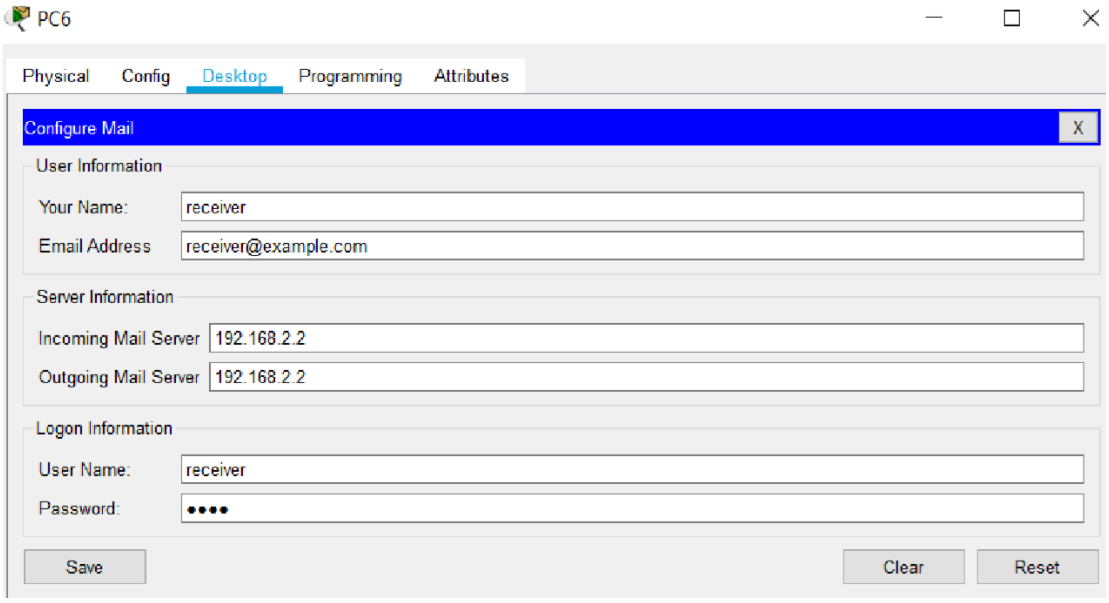
h. Add account as earlier.

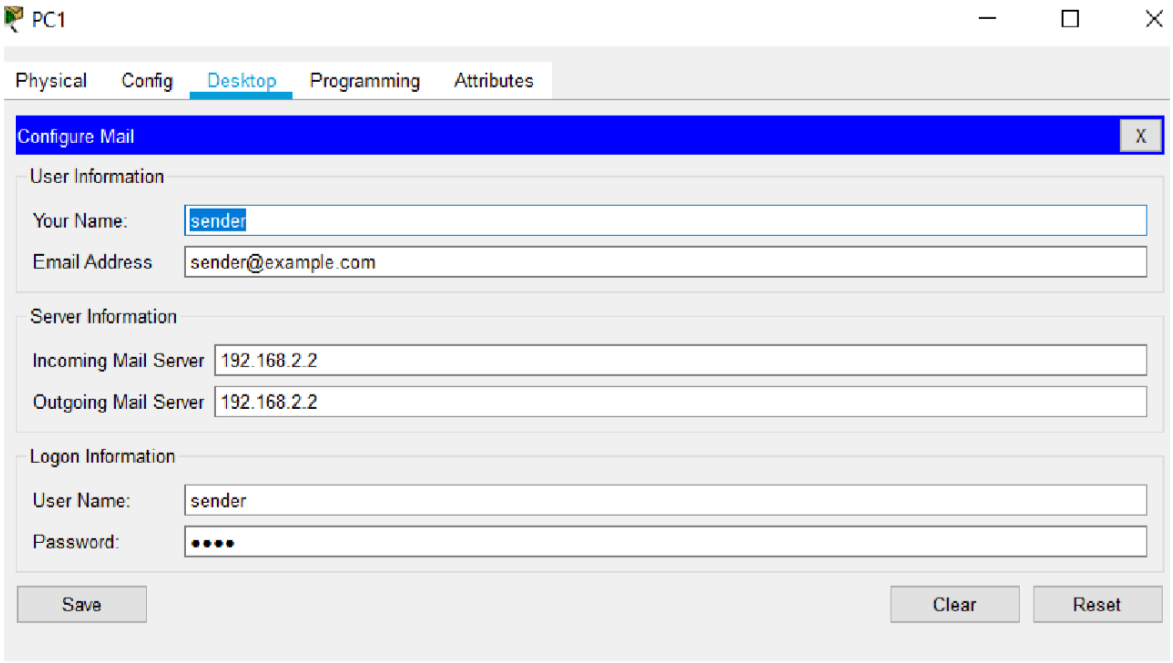
i. Go to any host/Desktop/Command Prompt.

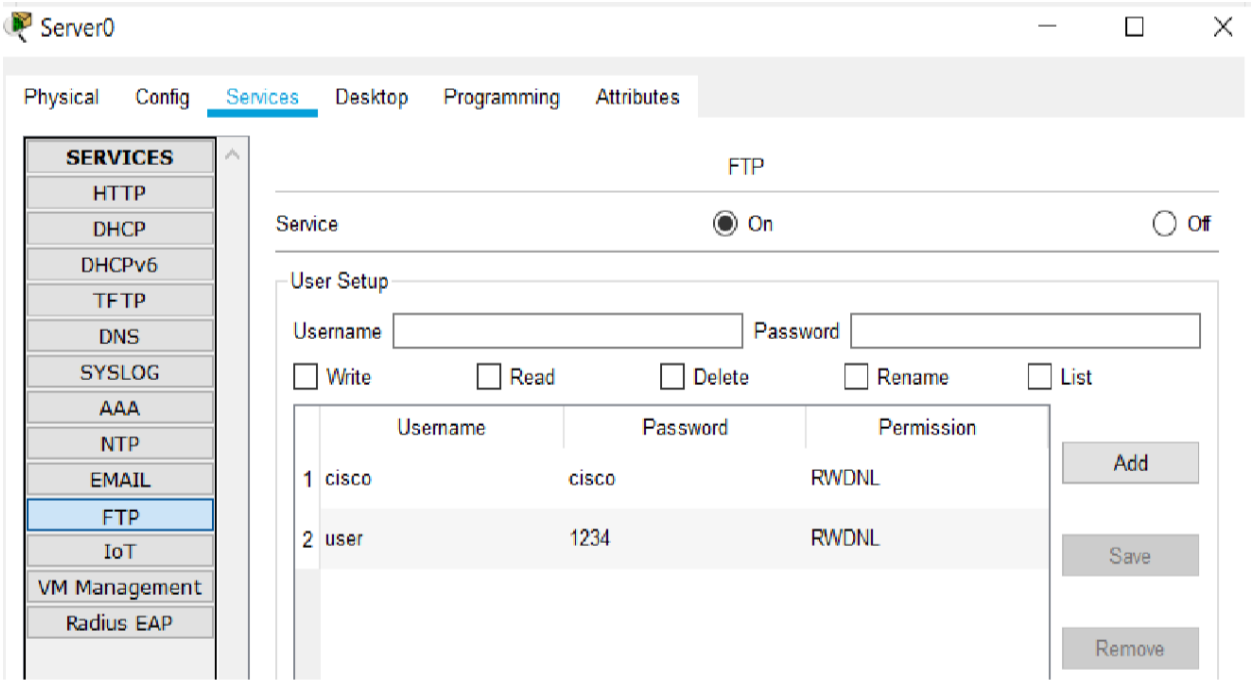
ftp 192.168.2.2

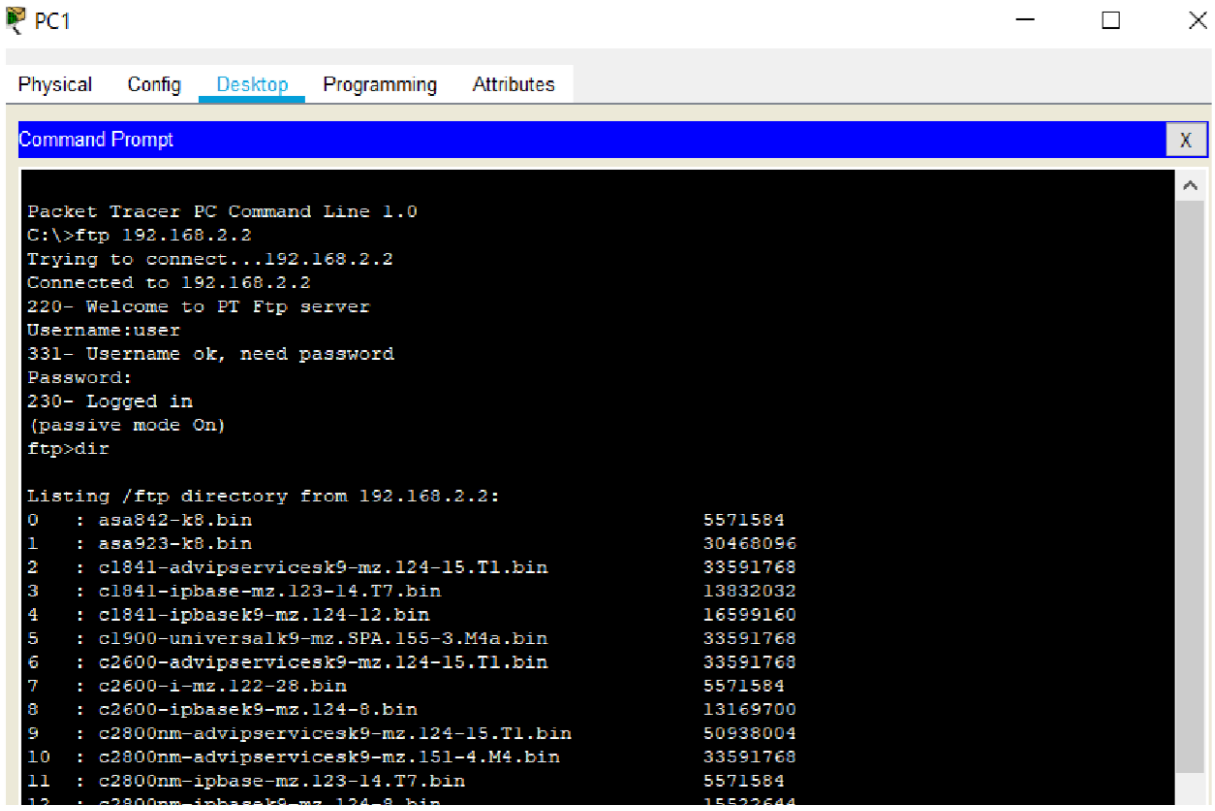
enter username and password

use command dir


PC6
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
receiver
Email Address
receiver@example.com
Server Information
Incoming Mail Server
192.168.2.2
Outgoing Mail Server
192.168.2.2
Logon Information
User Name:
receiver
Password:
Save
Clear
Reset

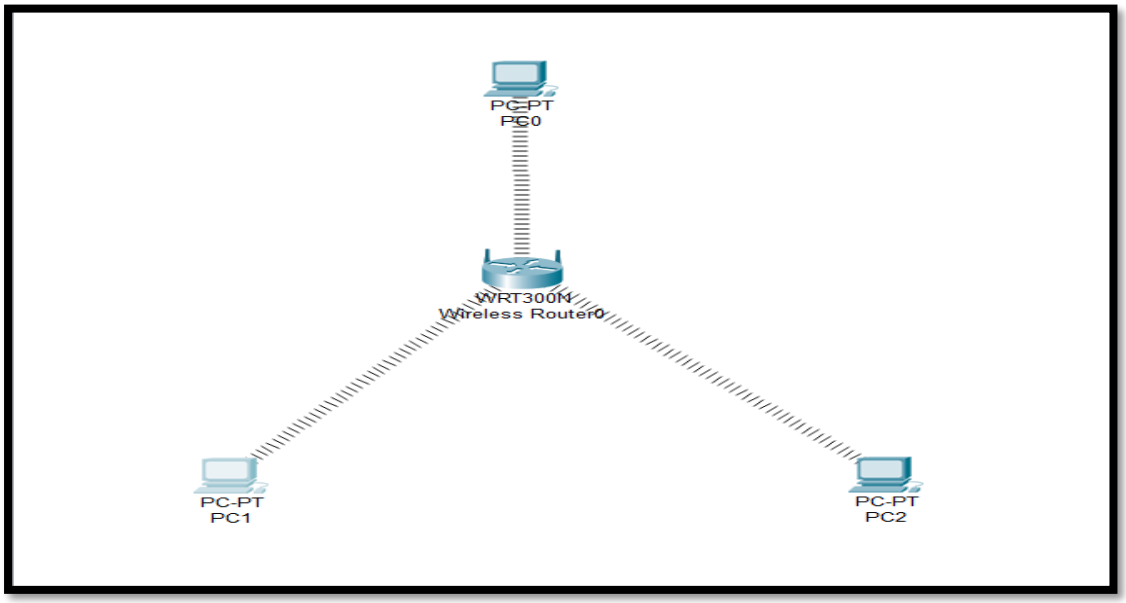

PC1
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
sender
Email Address
sender@example.com
Server Information
Incoming Mail Server
192.168.2.2
Outgoing Mail Server
192.168.2.2
Logon Information
User Name:
sender
Password:
Save
Clear
Reset


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
2 user 1234 RWDNL
Add
Save
Remove


PC1
Physical
Config
Desktop
Programming
Attributes
Command Prompt
X
Packet Tracer PC Command Line 1.0
C:\>ftp 192.168.2.2
Trying to connect...192.168.2.2
Connected to 192.168.2.2
220- Welcome to PT Ftp server
Username:user
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>dir
Listing /ftp directory from 192.168.2.2:
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

Activity 4

Topology:



AIM:

• Connect 3 PCs to a wireless router •

Change the DHCP setting to a specific network range

• Configure the clients to obtain their address via DHCP.

Background / Scenario

A home user wants to use a wireless router to connect 3 PCs.

All 3 PCs should obtain their address automatically from the wireless router.

Step 1: Set up the network topology

i. Add three generic PCs.

ii. Connect each PC to an Ethernet port to the wireless router using straight-through cables.

Step 2: Observe the default DHCP settings

a. After the amber lights have turned green, click PC0. Click the Desktop tab. Select IP Configuration. Select DHCP to receive an IP address from DHCP Enabled Router.

Record the IP address of the default gateway: 192.168.0.1

b. Close the IP Configuration window.

c. Open a Web Browser.

d. Enter the IP address of the default gateway recorded earlier into the URL field. When prompted, enter the username admin and password admin.

e. Scroll through the Basic Setup page to view default settings, including the default IP address of the wireless router. Notice that DHCP is enabled, the starting address of the DHCP range and the range of addresses available to clients.

Step 3: Change the default IP address of the wireless router.

a. Within the Router IP Settings section, change the IP address to: 192.168.0.1.

b. Scroll to the bottom of the page and click Save Settings.

c. If it is done correctly, the web page will display an error message. Close the web browser.

d. Click IP Configuration to renew the assigned IP address. Click Static. Click DHCP to receive new IP address information from the wireless router.

e. Open the web browser, enter the IP address 192.168.0.1 in the URL field. When prompted, enter the username admin and password admin.

Step 4: Change the default DHCP range of addresses.

a. Notice the DHCP Server Start IP Address is updated to the same network as the Router IP.

b. Starting IP Address 192.168.0.100.

c. Maximum Number of Users to 50.

d. Scroll to the bottom of the page and click Save Settings. Click Continue.

e. Scroll back up to the DHCP Settings to ensure the change is made.

f. Close the web browser.

g. Select Command Prompt. Enter ipconfig. Record the IP address for PC0: 192.168.0.103

Step 5: Enable DHCP on the other PCs.

a. Click PC1.

b. Select Desktop tab.

c. Select IP Configuration.

d. Click DHCP. Record the IP address for PC1: 192.168.0.101

e. Close the configuration window.

f. Enable DHCP on PC2 following the steps for PC1.

Step 6: Verify connectivity

j. Click PC2 and select the Desktop tab.

k. Select Command Prompt.

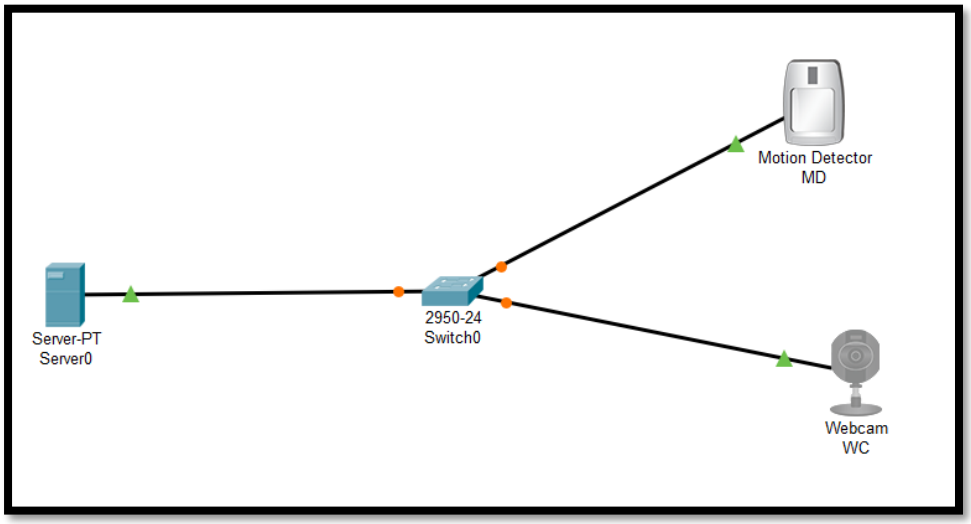
l. Type ipconfig at the prompt to view the IP configuration.

m. Type ping 192.168.0.1 to ping the wireless router. Type ping 192.168.0.103 to ping PC0. Type ping 192.168.0.101 to ping PC1.

The pings to all devices should be successful.

Activity 5

Topology:



Aim:

- Connect various IOT devices.
- Trigger IOT Events.

Steps: Topology

a. Connect devices as shown.

b. Assign static IP addresses to all devices.

c. Turn on registration server from IOT service section.

d. Double click on IOT devices and select remote server.

e. Enter server IP address.

f. Enter username and password as:

Username=admin

Password=cisco

g. Got to the web browser on the server, enter IP address of server.

h. Login with same username password.

i. You can now configure devices and also make events.