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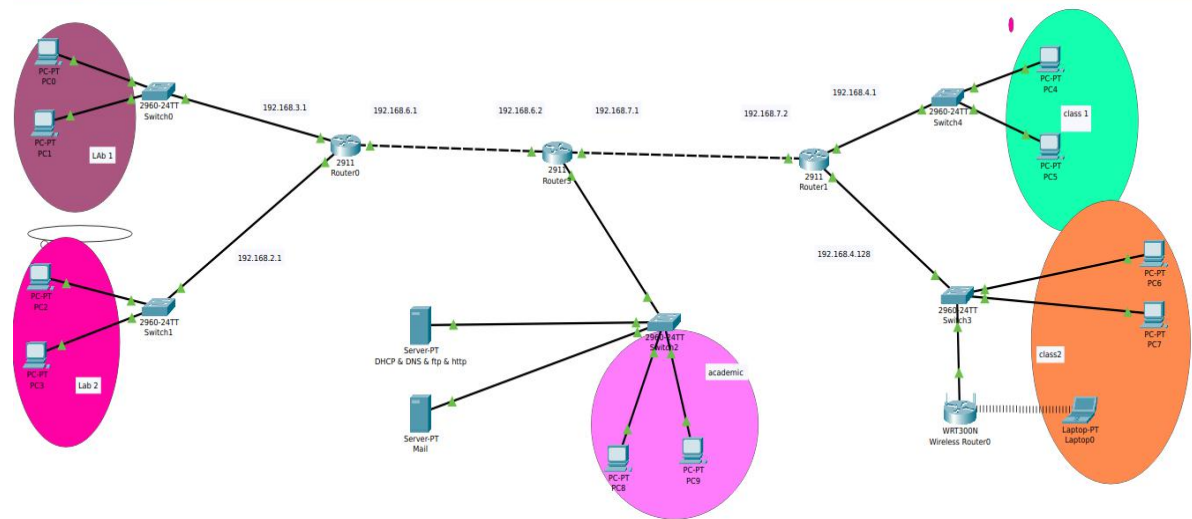
SEC : 5A

Computer Networks

Lab Task 14

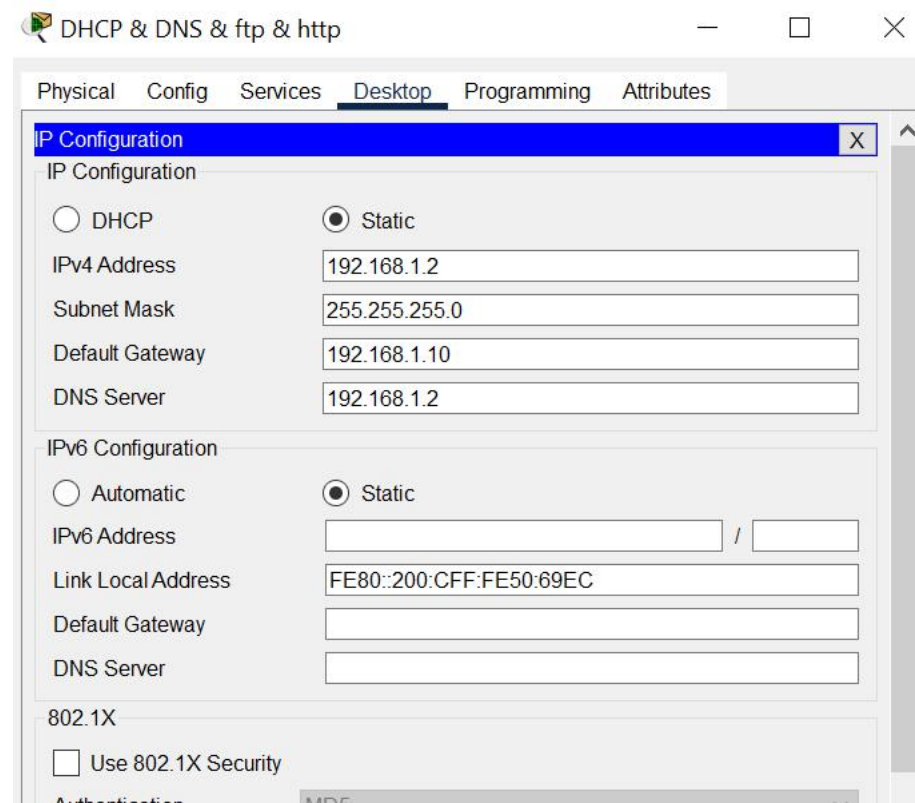


TOPOLOGY



DHCP & DNS SERVER:

First we have make a dhcp pool to give ip address to computer



PC0

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>
C:\>ping 192.168.4.5

Pinging 192.168.4.5 with 32 bytes of data:

Reply from 192.168.4.5: bytes=32 time<1ms TTL=125
Reply from 192.168.4.5: bytes=32 time<1ms TTL=125
Reply from 192.168.4.5: bytes=32 time=2ms TTL=125
Reply from 192.168.4.5: bytes=32 time<1ms TTL=125

Ping statistics for 192.168.4.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\>
```

PC4

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.3.4

Pinging 192.168.3.4 with 32 bytes of data:

Reply from 192.168.3.4: bytes=32 time<1ms TTL=125
Reply from 192.168.3.4: bytes=32 time<1ms TTL=125
Reply from 192.168.3.4: bytes=32 time<1ms TTL=125
Reply from 192.168.3.4: bytes=32 time<1ms TTL=125

Ping statistics for 192.168.3.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

DHCP & DNS & ftp & http

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: 0.0.0.0

DNS Server: 0.0.0.0

Start IP Address: 192.168.1.0

Subnet Mask: 255.255.255.0

Maximum Number of Users: 255

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

	Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
p4		192.168.4.1	192.168.1.2	192.168.4.3	255.255.255.128	125	0.0.0.0	0.0.0.0
p5		192.168.4.128	192.168.1.2	192.168.4.130	255.255.255.128	1	0.0.0.0	0.0.0.0
p3		192.168.3.1	192.168.1.2	192.168.3.3	255.255.255.0	253	0.0.0.0	0.0.0.0
p2		192.168.2.1	192.168.1.2	192.168.2.0	255.255.255.0	255	0.0.0.0	0.0.0.0
p1		192.168.1.10	192.168.1.2	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0
serverPool		0.0.0.0	0.0.0.0	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0

PC0

Physical Config Desktop Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.3.4

Subnet Mask 255.255.255.0

Default Gateway 192.168.3.1

DNS Server 192.168.1.2

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::2D0:58FF:FE8E:3B3A

Default Gateway

PC2

Physical Config Desktop Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.2.2

Subnet Mask 255.255.255.0

Default Gateway 192.168.2.1

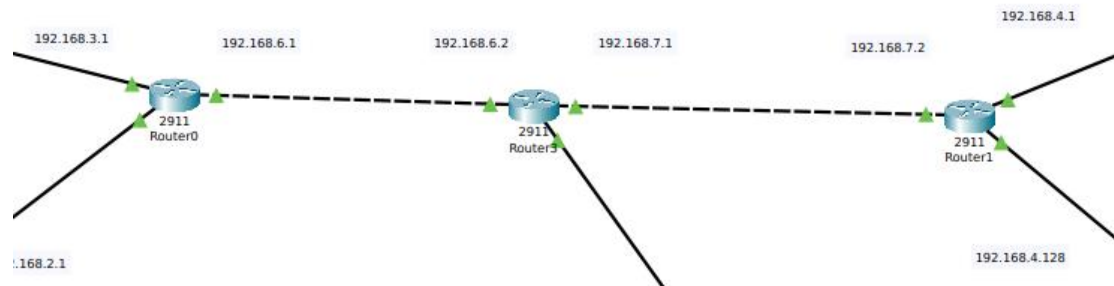
DNS Server 192.168.1.2

IPv6 Configuration

☐ Automatic ☒ Static

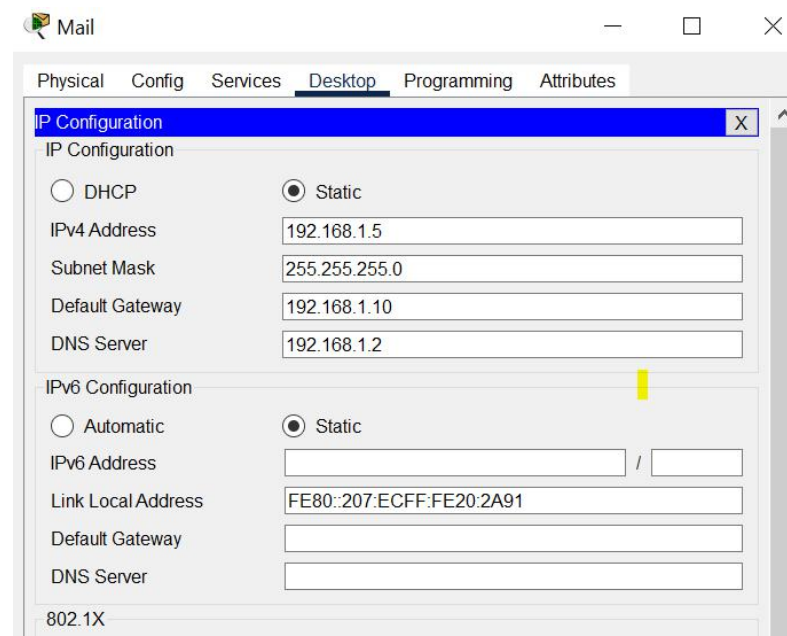
HOPING:

Now we will make hope in router through static so in this way your path will connect to each other router and your dhcp server will then assign ip to each other and then you can do other things such as email sending and receiving, ftp, http etc.



MAIL SERVER:

In this we have taken a server of email and given an IP address to it and connected the server to the DNS server by adding the DNS IP to the email server. Then we will open PC and go to desktop and select email in which we will make the user name and give password to them and then we will go to the email server and open services in which we will go to mail and add user in them.



Mail

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:

User Setup

User Password

pc1
pc2
pc4
pc5

DHCP & DNS & ftp & http

Physical Config **Services** Desktop Programming Attributes

SERVICES

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

DNS

DNS Service: ☒ On ☐ Off

Resource Records

Name Type

Address

No.	Name	Type	Detail
0	mail.com	ARecord	192.168.1.5

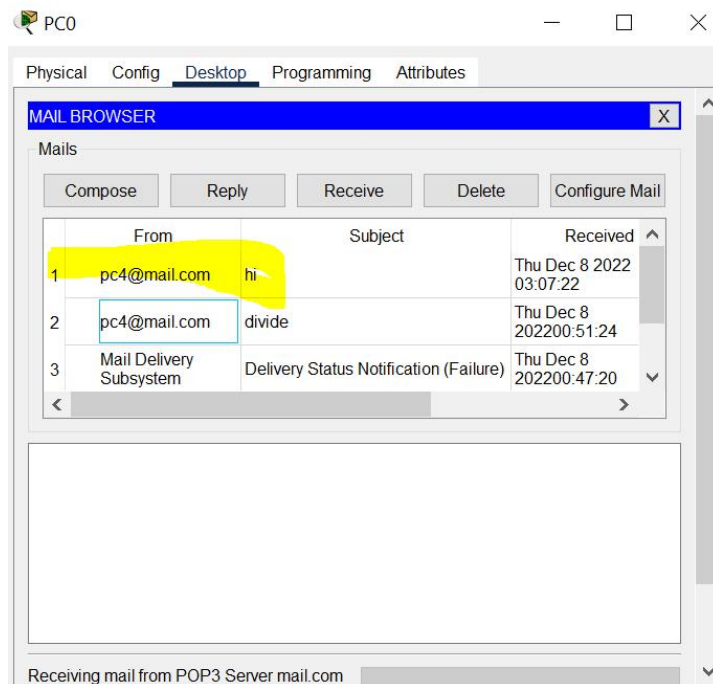
PC4

Physical Config **Desktop** Programming Attributes

Mails

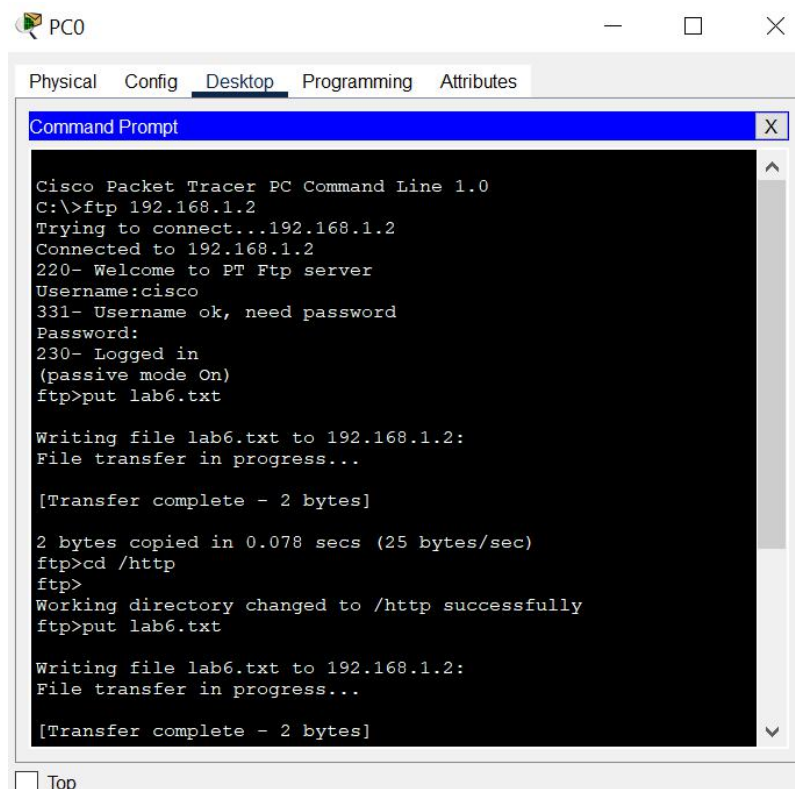
From	Subject	Received

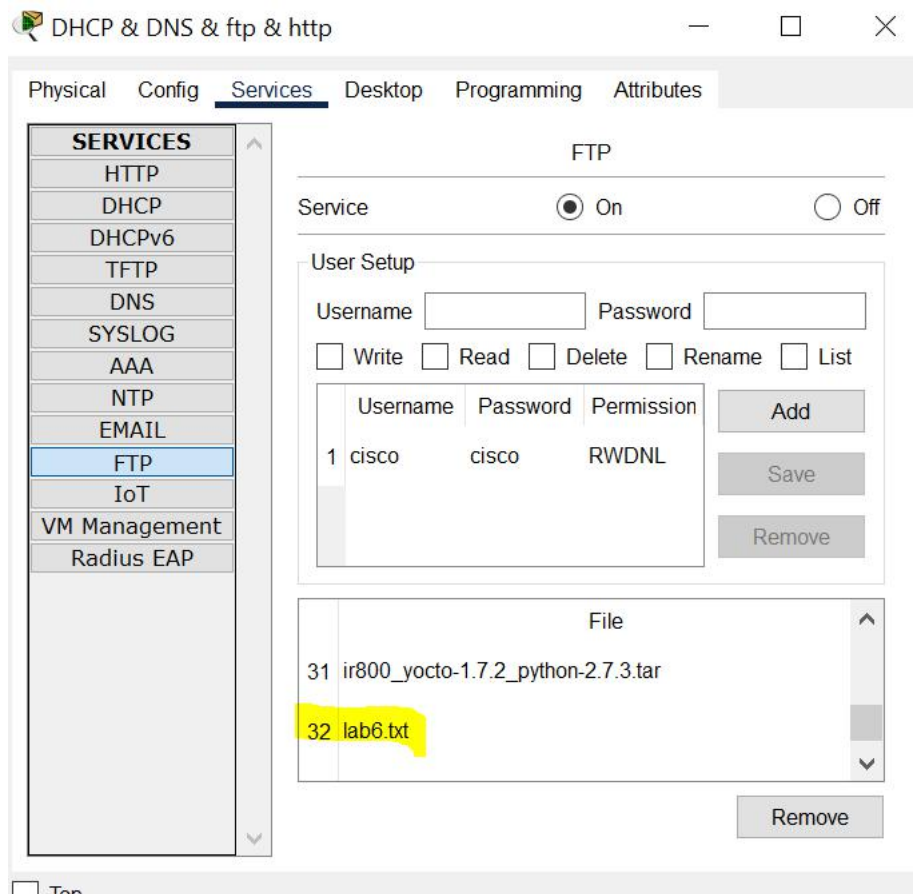
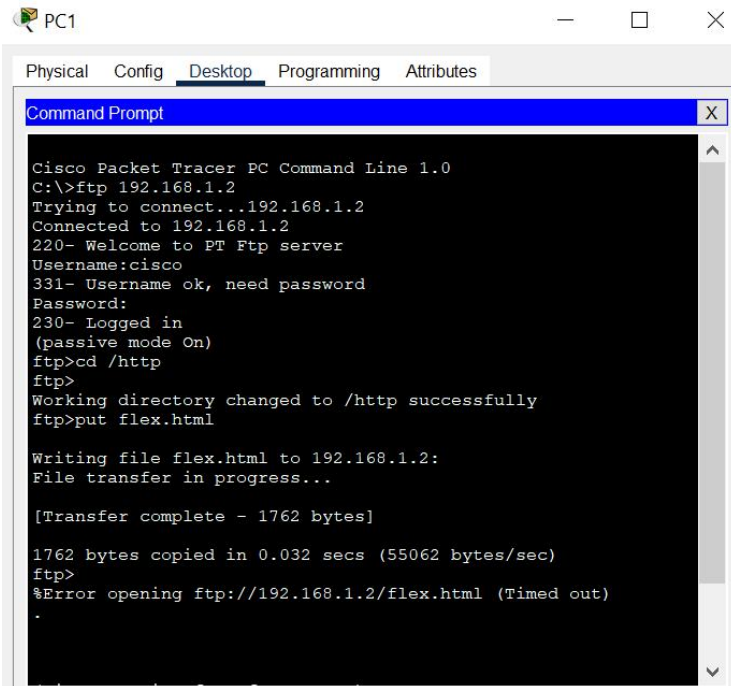
Sending mail to pc1@mail.com , with
subject : hi . Mail Server: mail.com
DNS resolving. Resolving name: mail.com



FTP & HTTP:

First we will on the ftp and http on the server and then we will go on pc and make a text file for ftp and .html file for the http and then we will open a pc command and first we will connect ftp and then we will put file in ftp and then change the directory to http and simmilary for html we will open ftp and drectly put a file to http and then we will edit the index file and open flex.





DHCP & DNS & ftp & http

Physical Config **Services** Desktop Programming Attributes

SERVICES

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

HTTP

HTTP ☒ On ☐ Off

HTTPS ☒ On ☐ Off

File Manager

	File Name	Edit	Delete
1	copyrights.html	(edit)	(delete)
2	cscoptlogo177x1...		(delete)
3	flex.html	(edit)	(delete)
4	helloworld.html	(edit)	(delete)
5	image.html	(edit)	(delete)
6	index.html	(edit)	(delete)
7	lab6.txt	(edit)	(delete)

New File Import

☐ Top

PC0

Physical Config **Desktop** Programming Attributes

Web Browser X

< > URL Go Stop

Flex Academic Suite

Avatar

Username

Password

Login

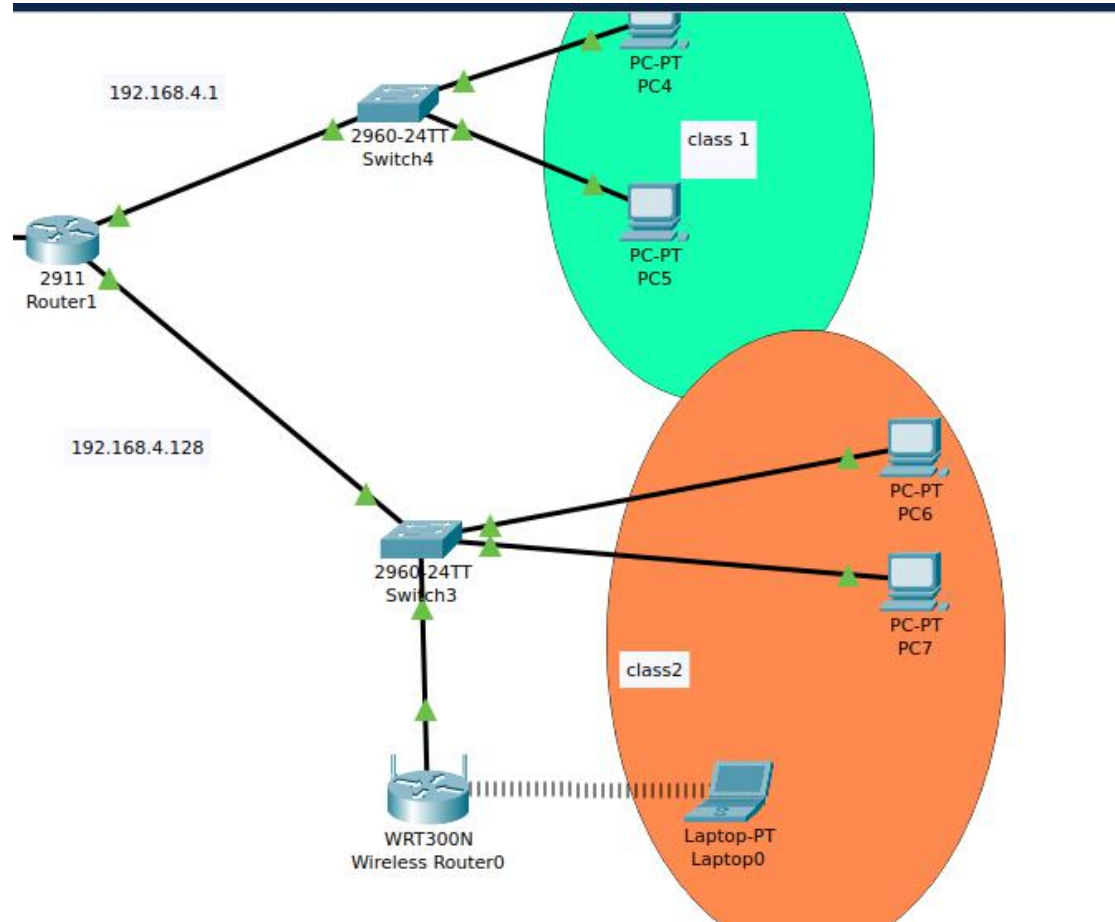
☒ Remember me

Cancel Forgot [password?](#)

☐ Top

SUBNETTING :

IN this we have use subnetting by making router



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: p4

Default Gateway: 192.168.4.1

DNS Server: 192.168.1.2

Start IP Address: 192 168 4 3

Subnet Mask: 255 255 255 128

Maximum Number of Users: 125

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
p5	192.168.4.1	192.168.1.2	192.168.4.130	255.255.255.128	125	0.0.0.0	0.0.0.0
p4	192.168.4.1	192.168.1.2	192.168.4.3	255.255.255.128	125	0.0.0.0	0.0.0.0
p3	192.168.3.1	192.168.1.2	192.168.3.3	255.255.255.0	253	0.0.0.0	0.0.0.0
p2	192.168.2.1	192.168.1.2	192.168.2.0	255.255.255.0	255	0.0.0.0	0.0.0.0
p1	192.168.1.10	192.168.1.2	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0

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: p5

Default Gateway: 192.168.4.1

DNS Server: 192.168.1.2

Start IP Address: 192 168 4 130

Subnet Mask: 255 255 255 128

Maximum Number of Users: 125

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
p5	192.168.4.1	192.168.1.2	192.168.4.130	255.255.255.128	125	0.0.0.0	0.0.0.0
p4	192.168.4.1	192.168.1.2	192.168.4.3	255.255.255.128	125	0.0.0.0	0.0.0.0
p3	192.168.3.1	192.168.1.2	192.168.3.3	255.255.255.0	253	0.0.0.0	0.0.0.0
p2	192.168.2.1	192.168.1.2	192.168.2.0	255.255.255.0	255	0.0.0.0	0.0.0.0
p1	192.168.1.10	192.168.1.2	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	192.168.1.0	255.255.255.0	255	0.0.0.0	0.0.0.0

Router1

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

GigabitEthernet0/2

GigabitEthernet0/0

Port Status ☒

Bandwidth ☐ 1000 Mbps ☒ 100 Mbps ☐ 10 Mbps ☒

Duplex ☐ Half Duplex ☒ Full Duplex ☒

MAC Address 0000.0CA0.5001

IP Configuration

IPv4 Address 192.168.4.1

Subnet Mask 255.255.255.128

Tx Ring Limit 10

Router1

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

GigabitEthernet0/2

GigabitEthernet0/1

Port Status ☒ On

Bandwidth ☐ 1000 Mbps ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0000.0CA0.5002

IP Configuration

IPv4 Address 192.168.4.129

Subnet Mask 255.255.255.128

Tx Ring Limit 10

PC4

Physical Config Desktop Programming Attributes

IP Configuration

Interface FastEthernet0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.4.5

Subnet Mask 255.255.255.128

Default Gateway 192.168.4.1

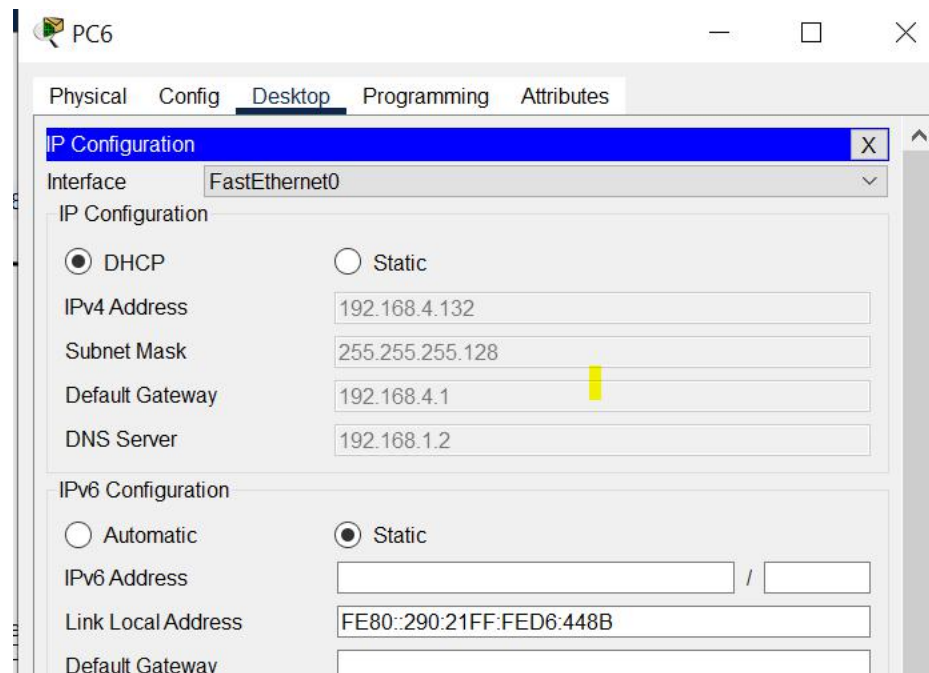
DNS Server 192.168.1.2

IPv6 Configuration

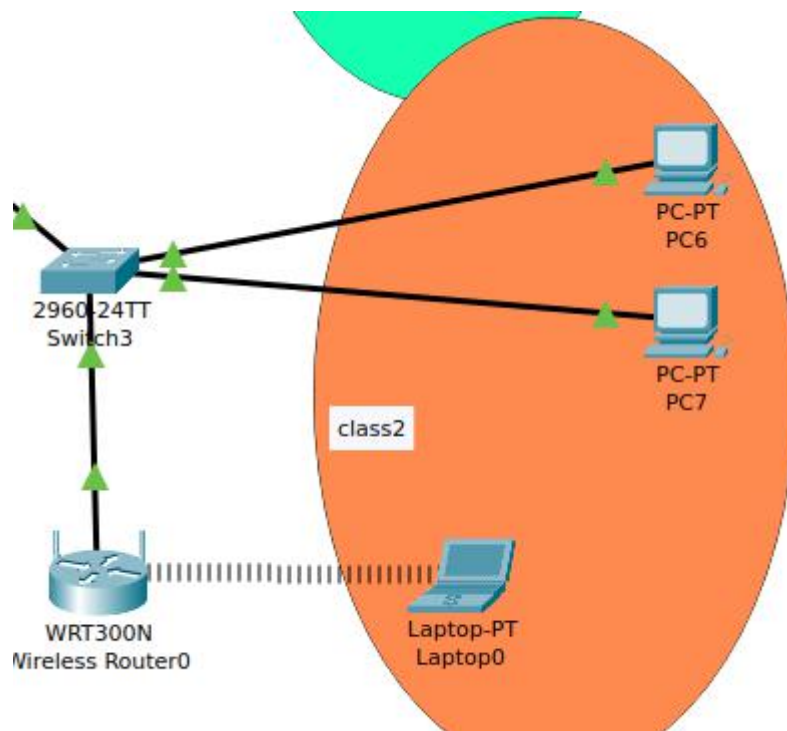
☐ Automatic ☒ Static

IPv6 Address /

Link Local Address FE80::2D0:97FF:FE23:579



WIRELESS ROUTER:



Wireless Router0

Physical Config **GUI** Attributes

Optional Settings (required by some internet service providers)

DNS 3 (Optional): 0 . 0 . 0 . 0

Host Name:

Domain Name:

MTU: Size: 1500

Network Setup

Router IP

IP Address: 192 . 168 . 4 . 5

Subnet Mask: 255.255.255.0

DHCP Server Settings

DHCP Server: ☒ Enabled ☐ Disabled

Start IP Address: 192.168.4.100

Maximum number of Users: 50

IP Address Range: 192.168.4.100 - 149

Client Lease Time: 0 minutes (0 means one day)

Static DNS 1: 0 . 0 . 0 . 0

Static DNS 2: 0 . 0 . 0 . 0

Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router

Firmware Version: v0.93.3

Wireless Setup Wireless Security Access Restrictions Applications & Gaming Administration Status

Basic Wireless Settings Wireless Security Guest Network Wireless MAC Filter Advanced Wireless Settings

Wireless Security

Security Mode: WPA Personal

Encryption: AES

Passphrase: talha012

Key Renewal: 3600 seconds

[Help...](#)

☐ Top

Laptop0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface: Wireless0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address: 192.168.4.103

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.4.5

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::210:11FF:FEC1:A953

Default Gateway:

DNS Server:

