

1. Write an experiment to configure a LAN using a Cisco 2960 switch.

Aim:

To configure a LAN using a Cisco 2960 switch .

Algorithm:

1. Drag 1 Cisco 2960 switch and 3 PCs .

2. IP configuration :

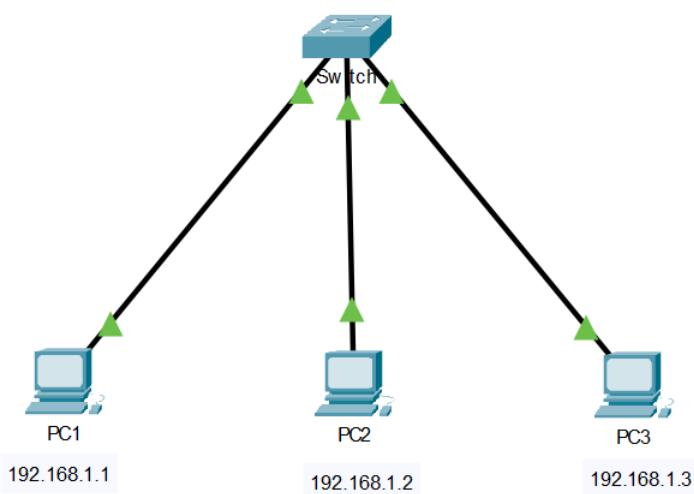
PC1 : 192.168.1.1

PC2 : 192.168.1.2

PC3 : 192.168.1.3

3. In PC 1 - ping 192.168.1.3

Diagram :



Output :

Ping statistics for 192.168.1.3 :

Packets : Sent = 4 , Received = 4 , Lost = 0

2. Write an experiment to configure a WAN using a Cisco 1841 router.

Aim:

To configure a WAN using a Cisco 1841 router.

Algorithm :

1. Drag 1 Cisco 1841 router , 2 Cisco 2960 switch , 4 PCs.

2. IP configuration:

Device	Port	IP Address
Router	Fa0/0	192.168.1.254
Router	Fa0/1	192.168.2.254
PC1	Fa0/0	192.168.1.1
PC2	Fa0/0	192.168.1.2
PC3	Fa0/0	192.168.2.1
PC4	Fa0/0	192.168.2.2

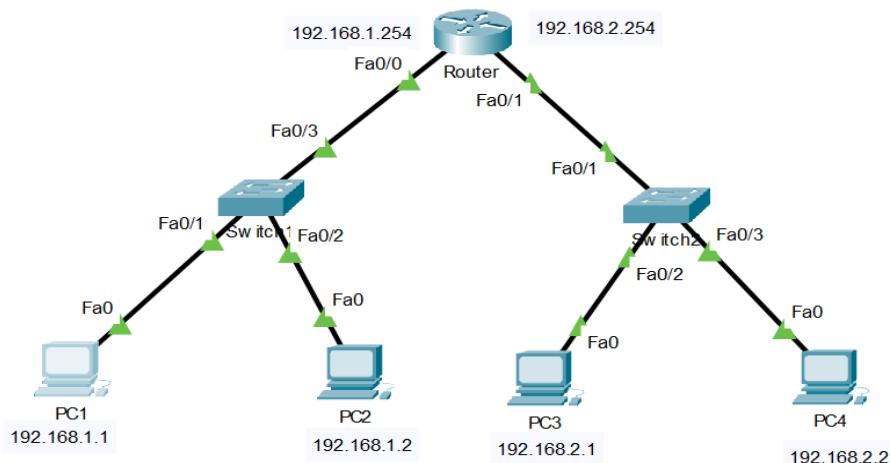
3. Default Gateway :

PC1 , PC2 – 192.168.1.254

PC3 , PC4 – 192.168.2.254

4. In PC 1 - ping 192.168.2.1

Diagram:



Output :

Ping statistics for 192.168.2.1 :

Packets : Sent = 4 , Received = 4 , Lost = 0

3. Write an experiment to configure Network Address Translation (NAT).

Aim:

To configure Network Address Translation (NAT).

Algorithm:

1. Drag 2 PT-Router , 1 PT-Switch , 1 Server , 3 PCs

2. IP Configuration :

Device	Port	IP Address
R1	Fa0/0	10.0.0.254
R1	Se2/0	100.0.0.1
R2	Fa0/0	192.168.1.254
R2	Se2/0	100.0.0.2
PC1	Fa0/0	10.0.0.1
PC2	Fa0/0	10.0.0.2
PC3	Fa0/0	10.0.0.3
Server	Fa0/0	192.168.1.1

3. Default Gateway:

1. PC1, PC2, PC3 – 10.0.0.254

2. Server – 192.168.1.254

4. R1 NAT Configuration :

```
R1(config)#ip nat inside source static 10.0.0.1 50.0.0.1
```

```
R1(config)#ip nat inside source static 10.0.0.2 50.0.0.2
```

```
R1(config)#ip nat inside source static 10.0.0.3 50.0.0.3
```

```
R1(config)#interface FastEthernet 0/0
```

```
R1(config-if)#ip nat inside
```

```
R1(config-if)#exit
```

```
R1(config)#interface Serial 2/0
```

```
R1(config-if)#ip nat outside
```

```
R1(config-if)#exit
```

5. R2 NAT Configuration

```
R2(config)#ip nat inside source static 192.168.1.1 200.0.0.1
```

```
R2(config)#interface FastEthernet 0/0
```

```
R2(config-if)#ip nat inside
```

```
R2(config-if)#exit
```

```
R2(config)#

```

```
R2(config)#interface Serial 2/0
```

```
R2(config-if)#ip nat outside
```

```
R2(config-if)#exit
```

6. Configure static routing in R1

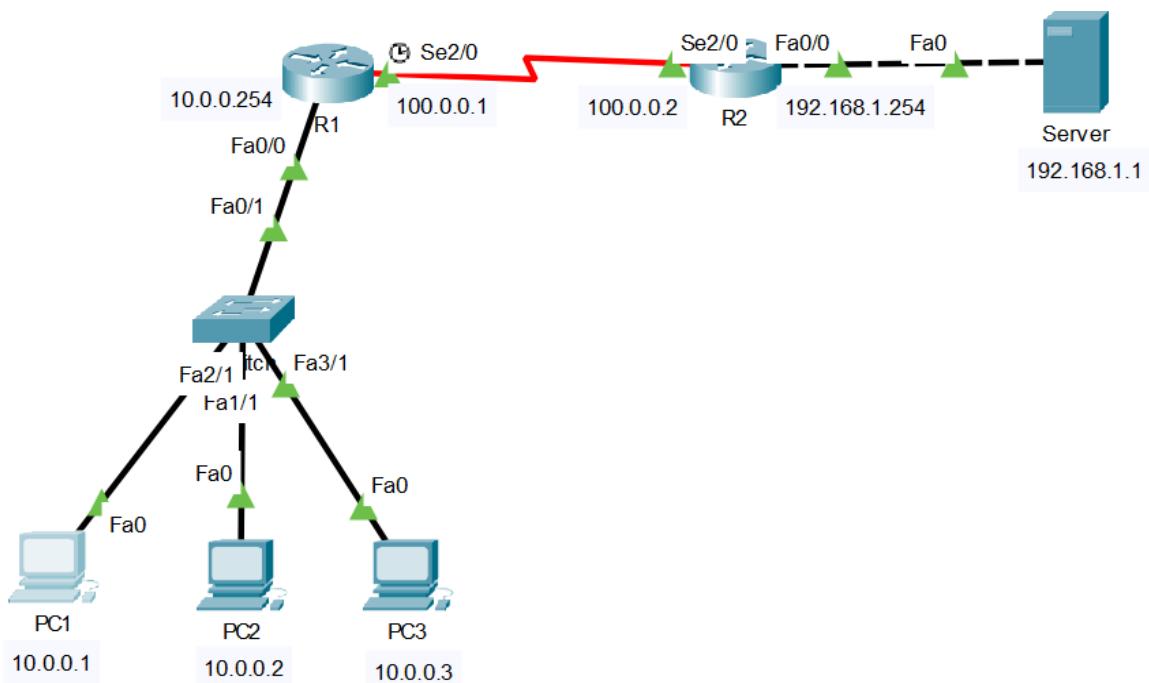
```
R1(config)#ip route 200.0.0.0 255.255.255.0 100.0.0.2
```

7. Configure static routing in R2

```
R2(config)#ip route 50.0.0.0 255.0.0.0 100.0.0.1
```

8. In PC1 - ping 200.0.0.1

Diagram :



Output:

Ping statistics for 200.0.0.1 :

Packets : Sent = 4 , Received = 4 , Lost = 0

4. Write an experiment to configure Routing Information Protocol (RIP).

Aim:

To configure Routing Information Protocol (RIP).

Algorithm:

1. Drag 2 PT-Router, 2 PT-Switch, 4 PCs.

2. IP configuration:

Device	Port	IP Address
R1	Fa0/0	192.168.1.254
R1	Se2/0	192.168.3.1
R2	Fa0/0	192.168.2.254
R2	Se2/0	192.168.3.2
PC1	Fa0/0	192.168.1.1
PC2	Fa0/0	192.168.1.2
PC3	Fa0/0	192.168.2.1
PC4	Fa0/0	192.168.2.2

3. Default Gateway:

1. PC1, PC2 - 192.168.1.254

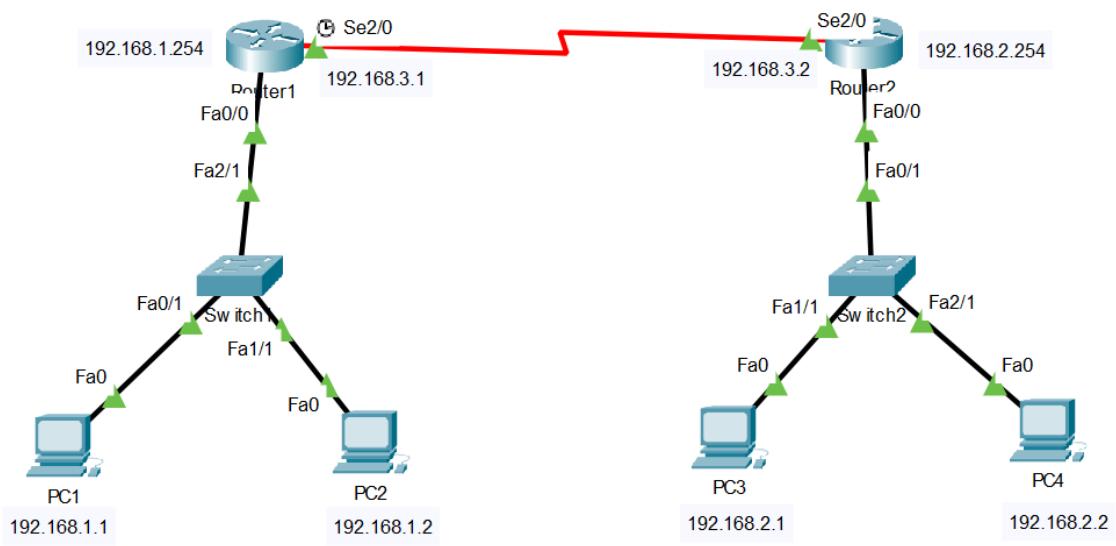
2. PC3, PC4 – 192.168.2.254

4. In R1 RIP adding network 192.168.1.0 and 192.168.3.0

5. In R2 RIP adding network 192.168.2.0 and 192.168.3.0

6. In PC1 – ping 192.168.2.1

Diagram:



Output:

Ping statistics for 192.168.2.1 :

 Packets : Sent = 4 , Received = 4 , Lost = 0