

**AIM:** TO CONFIGURE RIP ROUTING PROTOCOL IN ROUTERS.

**OBSERVATION:**

Lab-07  
Configure RIP routing protocol in Routers

\* Routing Information Protocol [RIP] is a distance vector routing protocol that manages router information in small networks, such as corporate LANs or private WANs.

\* RIP uses hop count to determine the best route to a destination. A router broadcasts its routing table to its directly connected network every 30 seconds, and receives updates from neighboring routers every 30 seconds.

Steps

- \* Add all the generic devices like PC, router & switches
- \* Go to PC0 → desktop → IP configuration  
Add, IP address = 192.168.1.2  
Subnet mask = 255.255.255.0  
Default gateway = 192.168.1.1

Bafna Gold  
Date: \_\_\_\_\_ Page: \_\_\_\_\_

- \* Go to PC1 → desktop → IP configuration  
Add, IP address = 192.168.2.2  
Subnet mask = 255.255.255.0  
Default gateway = 192.168.2.1
- \* Go to Router 0 → Config → fastEthernet 0/0  
Add, IP Address = 192.168.1.1  
Subnet mask = 255.255.255.0  
Set port status ☒ ON
- Continue with Router 0 → Serial 2/0  
Port status: ☒ ON  
Clock Rate: 64000  
IP Address: 10.0.0.2  
Subnet mask: 255.0.0.0
- \* Continue to Global → Settings  
NVRAM click on [Save]

Now, similarly configure Router 1.

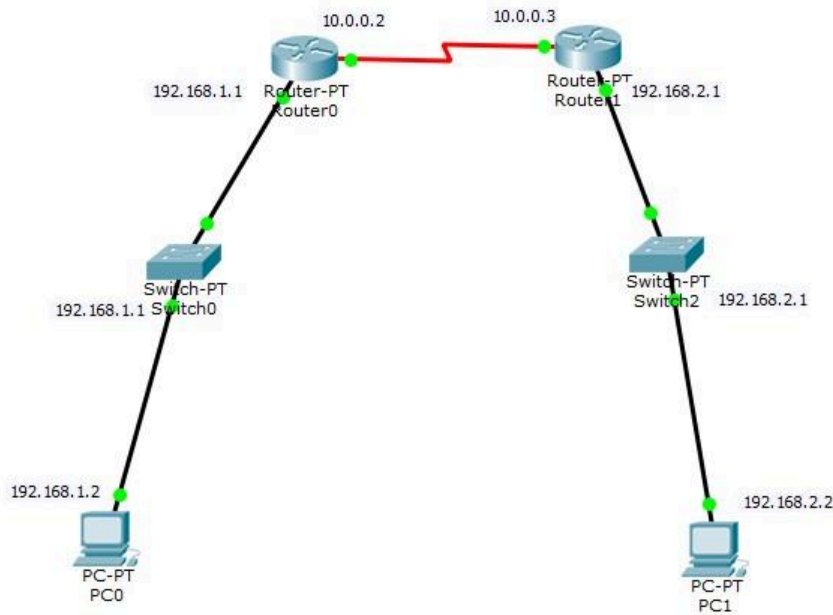
- \* Set RIP for Router 0.  
Add network Address 10.0.0.0, 192.168.1.0
- \* Go to Router 1 → Config → fastEthernet 0/0  
Add, IP Address = 192.168.2.1  
Subnet mask = 255.255.255.0  
Set port status: ☒ ON  
In Serial 2/0 interface.  
Clock Rate: Not set  
IP Address = 10.0.0.3  
Subnet mask = 255.0.0.0  
Port status: ☒ ON

Now, the topology is configured & ready to ping message from PC to PC.

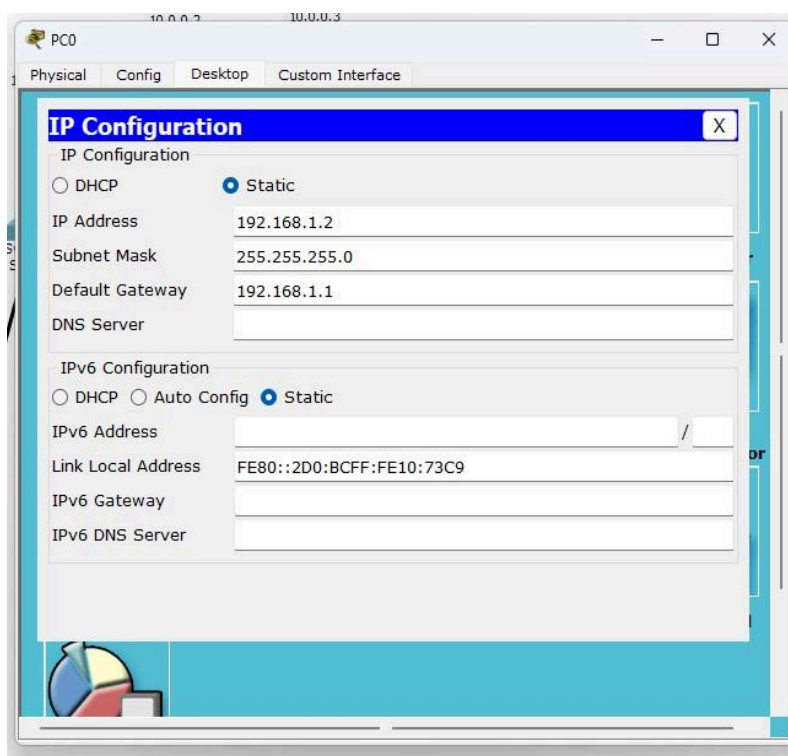
→ Observation:

- \* ping message from PC0 to PC1  
CLI status: Successful
- \* ping 192.168.2.2  
pinging 192.168.2.2 with 32 bytes of data:  
Reply from 192.168.2.2: bytes=32 time=1ms
- Ping statistics for 192.168.2.2:  
Packets: Sent = 4, Received = 4, Lost = 0

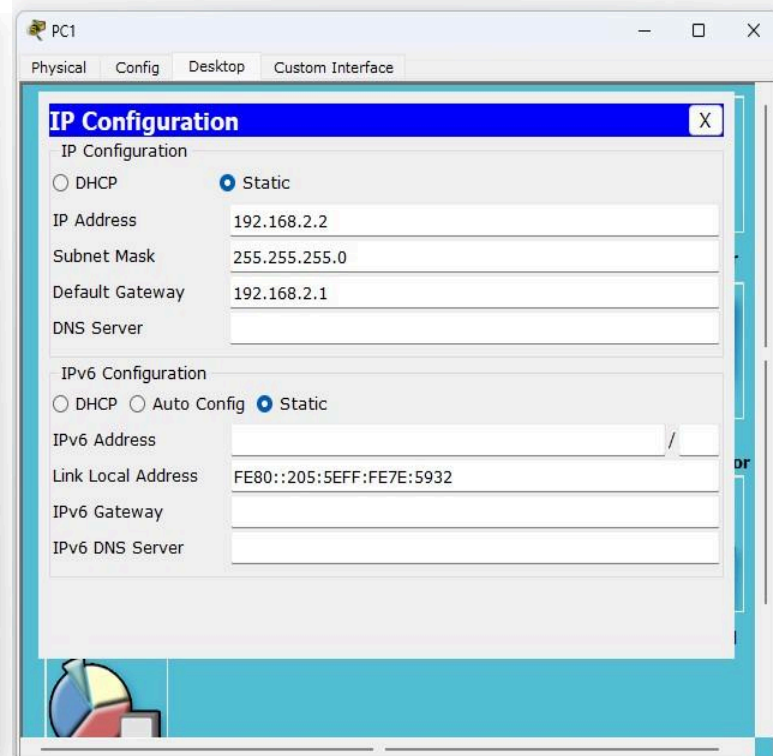
## TOPOLOGY:



## PC\_0 CONFIGURATION:



## PC\_1 CONFIGURATION:



## ROUTER\_0 CONFIGURATION:

Router0

Physical Config CLI

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

**FastEthernet0/0**

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.F7A9.CAE5

IP Configuration

IP Address 192.168.1.1

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

Router0

Physical Config CLI

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

**Serial2/0**

Port Status ☒ On

Duplex ☒ Full Duplex

Clock Rate 64000

IP Configuration

IP Address 10.0.0.2

Subnet Mask 255.0.0.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
Router(config-router)#exit
Router(config)#interface Serial2/0
Router(config-if)#
```

Router0

Physical Config CLI

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

**RIP Routing**

Network

Network Address

10.0.0.0

192.168.1.0

Add


Remove

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
Router(config-router)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
```



## ROUTER\_1 CONFIGURATION:



Router1

Physical Config CLI

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

**FastEthernet0/0**

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0090.21E9.B3AA

IP Configuration


IP Address 192.168.2.1

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```



Router1

Physical Config CLI

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

**Serial2/0**

Port Status ☒ On

Duplex ☐ Full Duplex

Clock Rate Not Set

IP Configuration


IP Address 10.0.0.3

Subnet Mask 255.0.0.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
```



Router1

Physical Config CLI

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

**RIP Routing**

Network

Network Address

10.0.0.0

192.168.2.0

Add

Remove

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
Router(config-router)#exit
Router(config)#router rip
Router(config-router)#
```

## Packet transfer / ping

