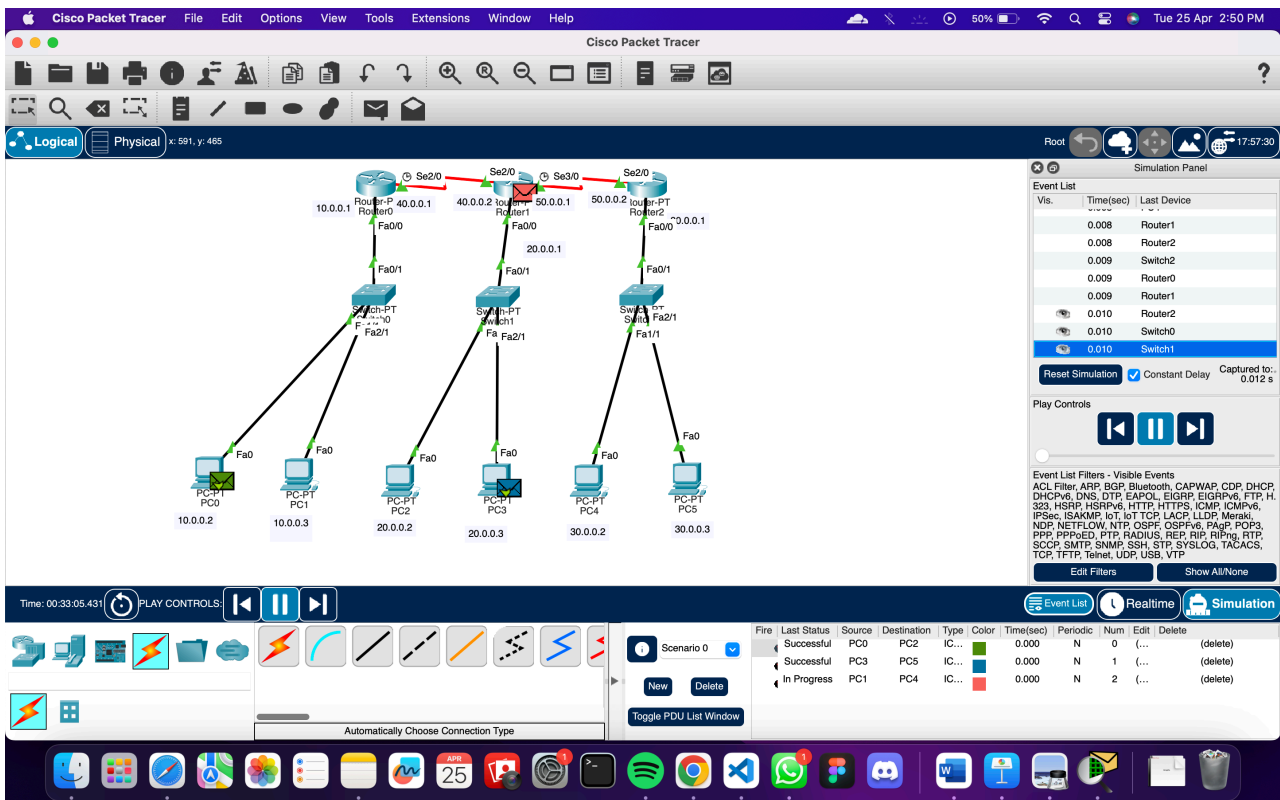


RIMJHIM MITTAL
102103430
LAB EVAL-2
25 APRIL 2023

Design a network using RIP protocol

Objective: Configure a Routing Internet Protocol (RIP).

1. Create a topology as shown in the figure.
2. Configure all the routers.
3. Define loop back interface for each router manually.
3. Implement RIP protocols in the router to configure the network.
4. check connectivity using ping command and verify the network and also show the route of at least one router using command and attach its screenshots also.



Commands:

```
Router>enable
```

```
Router#
```

```
Router#configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Router(config)#interface FastEthernet0/0
```

```
Router(config-if)#ip address 10.0.0.1 255.0.0.0
```

```
Router(config-if)#
```

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

```
Router(config)#interface Serial2/0
```

```
Router(config-if)#ip address 40.0.0.1 255.0.0.0
```

```
Router(config-if)#
```

```
Router(config-if)#
```

```
Router(config-if)#
```

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

```
Router(config)#interface FastEthernet0/0
```

```
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)#exit
```

```
Router(config)#interface FastEthernet1/0
```

```
Router(config-if)#
```

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

```
Router(config)#interface Serial2/0
```

```
Router(config-if)#no shutdown
```

```
Router(config-if)#
```

```
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
```

```
Router(config-if)#
```

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

```
Router(config)#router rip
```

```
Router(config-router)#network 10.0.0.0
```

```
Router(config-router)#
```

```
Router(config-router)#
```

```
Router(config-router)#end
```

```
Router#configure terminal
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

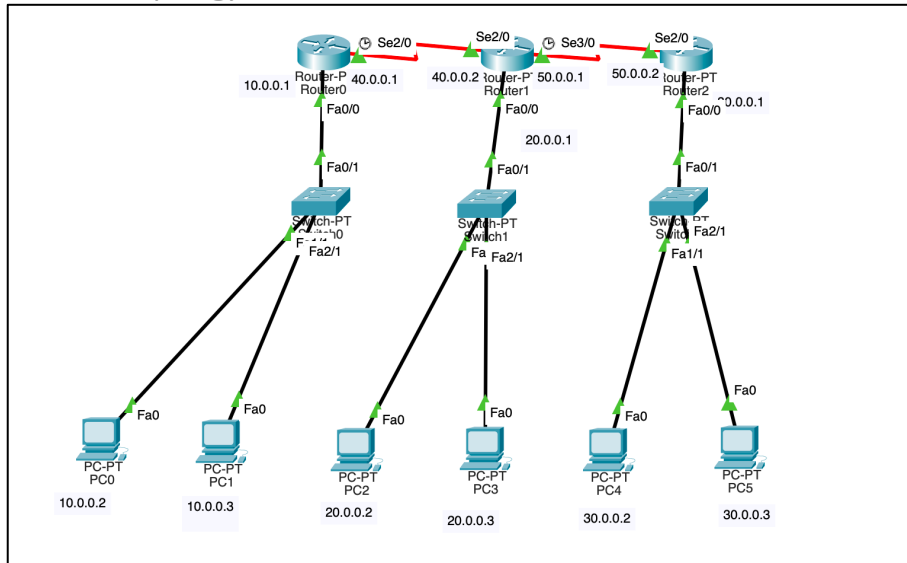
```
Router(config)#router rip
Router(config-router)#
%SYS-5-CONFIG_I: Configured from console by console
network 40.0.0.0
Router(config-router)#
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
%SYS-5-CONFIG_I: Configured from console by console
```

```
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router(config)#
```

Network topology:



Configuration for second Router:

Router1

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet0/0

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0060.70E0.43C9

IP Configuration

IPv4 Address 20.0.0.1

Subnet Mask 255.0.0.0

Tx Ring Limit 10

Equivalent IOS Commands

```

Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#

```

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Implement RIP protocols in the router to configure the network.

Router1

Physical **Config** CLI Attributes

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
20.0.0.0
40.0.0.0
50.0.0.0

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
```

Checking connectivity using ping command:

PC0

Physical Config **Desktop** Programming Attributes

Command Prompt

Cisco Packet Tracer PC Command Line 1.0

C:\>ping 30.0.0.2

Pinging 30.0.0.2 with 32 bytes of data:

Reply from 30.0.0.2: bytes=32 time=4ms TTL=125

Reply from 30.0.0.2: bytes=32 time=2ms TTL=125

Reply from 30.0.0.2: bytes=32 time=2ms TTL=125

Reply from 30.0.0.2: bytes=32 time=65ms TTL=125

Ping statistics for 30.0.0.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 2ms, Maximum = 65ms, Average = 28ms

C:\>ping 20.0.0.3

Pinging 20.0.0.3 with 32 bytes of data:

Reply from 20.0.0.3: bytes=32 time=10ms TTL=126

Reply from 20.0.0.3: bytes=32 time=10ms TTL=126

Reply from 20.0.0.3: bytes=32 time=10ms TTL=126

Reply from 20.0.0.3: bytes=32 time=10ms TTL=126

Ping statistics for 20.0.0.3:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 10ms, Maximum = 10ms, Average = 10ms

C:\>

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