

Experiment No: 8

RIP Configuration and Stimulation using Packet Tracer.

Aim: To understand RIP Configuration and implement Stimulation using Packet Tracer.

Theory:

The Routing Information Protocol (RIP) is a protocol used for routing data in computer networks. It operates by sharing routing information between routers in a network, allowing them to determine the most efficient path for data to travel.

In order to configure RIP on a network, routers must be configured with specific settings, such as the routing metric, network addresses, and the type of RIP protocol to use. These settings can be configured using a command-line interface or a graphical user interface, depending on the specific router being used.

Packet Tracer is a network simulation tool that allows users to design, configure, and test network topologies. It can be used to simulate the configuration of RIP on a network, allowing users to test and troubleshoot network routing without the need for physical hardware.

To implement RIP stimulation using Packet Tracer, users must first design a network topology that includes multiple routers and network segments. They can then configure RIP on each router, specifying the necessary settings to enable the protocol.

Once RIP has been configured, users can stimulate network traffic by sending packets between devices on the network. This will allow them to test the effectiveness of the RIP configuration, identifying any issues or areas for improvement.

By implementing RIP stimulation using Packet Tracer, users can gain valuable experience with network routing protocols and improve their understanding of how to configure and optimize network routing in real-world scenarios.

Stimulation code:**Router 0:**

```
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)#ip address 10.0.0.1 255.0.0.0
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 Serial2/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

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

Router 1:

```
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 30.0.0.1 255.0.0.0
Router(config-if)#ip address 30.0.0.1 255.0.0.0
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 Serial2/0
Router(config-if)#ip address 20.0.0.2 255.0.0.0
Router(config-if)#ip address 20.0.0.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

```

```

Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#

```

Output:

