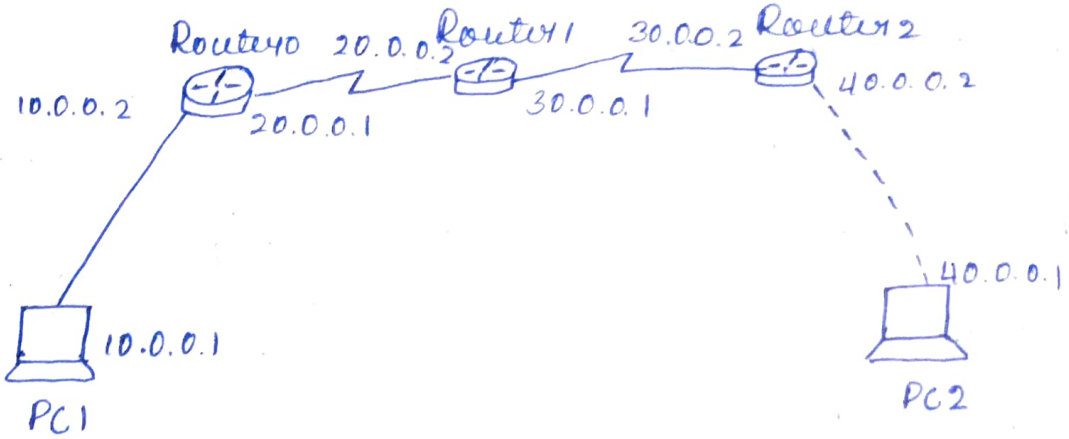
Experiment-04

05-12-2002

Aim: To configure DHCP within a LAN in packet tracer.

Topology:



Procedure:

- Select Generic PC's and Routers and Connect them using appropriate Connection.
- Configure the end points of PC's
- Configure the routers end points.
- While configuring routers serial Connection After IP address has been specified. enter the command - encapsulation PPP.
- Set the clock rate by giving the command as - clock rate 64000. While configure the end point where packets go out. clock rate is not required

Output: [Before Dynamic routing]

Router# show ip route

Gateway of last resort is not set

C 10.0.0.0/8 is directly connected, FastEthernet0

20.0.0.0/8 is variably connected, Serial2/0

C 20.0.0.0/8 is directly connected, Serial2/0
C 20.0.0.2/32 is directly connected, Serial2/0

PC> Ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.
Reply from 10.0.0.2: Destination host unreachable.

Ping statistics for 40.0.0.1:
Packets: Sent=4 Received=0, Lost=4

Pinging is not successful.

Dynamic Routing:

- Select a Router - CLI tab - enter into config terminal mode.
- Enter the command - router RIP [Routing information protocol]
- Configure the router by entering the command - network 30.0.0.0.
- The ip address provided must be the known ip address.

Output: [After dynamic routing]

Router#: show ip route

Gateway of last resort is not set
C 10.0.0.0/8 is directly connected

C 20.0.0.2/32 is directly connected, serial2/0
R 30.0.0.0/8 [120/1] via 20.0.0.2, 0.0.00:09
R 40.0.0.0/8 [120/2] via 20.0.0.2, 0.0.00:09

PC>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1: bytes=32 time=13ms
TTL=125
Reply from 40.0.0.1: bytes=32 time=13ms
TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms
TTL=125.

Ping statistics for 40.0.0.1:
Packets: Sent=4, Received=3, Lost=1

Pinging is successful after dynamic routing.

Router Information protocol:

- RIP is a dynamic routing protocol that finds the optimum path between the source and destination networks by using hop count as a routing metric.
- RIP uses the shortest number of hops to determine the best path to be a remote networks.
- RIP is commonly used in internal networks
- It allows a router to exchange its routing information automatically with other routers and allows it to dynamically adjust its routing tables and adapt to change