Experiment - 3

Aim: Configure default route, static route to the Router
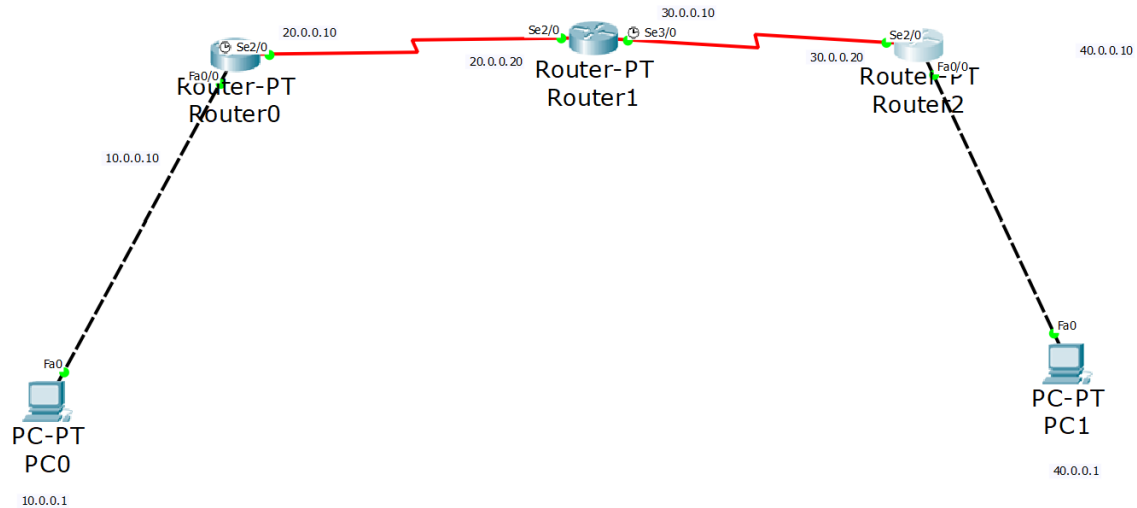
```
Router0                                                    ─  □  ✕

 Physical    Config    CLI

                    IOS Command Line Interface

Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.0.0.10 255.0.0.0
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 20.0.0.10 255.0.0.0
Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
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)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#ip address 0.0.0.0 0.0.0.0 20.0.0.20
          ^
% Invalid input detected at '^' marker.

Router#enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip address 0.0.0.0 0.0.0.0 20.0.0.20
                ^
% Invalid input detected at '^' marker.

Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#exit

                                                Copy         Paste
```

IOS Command Line Interface

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#no ip address
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 20.0.0.20 255.0.0.0
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)#exit
Router(config)#interface Serial3/0
Router(config-if)#ip address 30.0.0.10 255.0.0.0
Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Router(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router(config-if)#ip route 10.0.0.0 255.0.0.0 20.0.0.0
Router(config)#ip route 40.0.0.0 255.0.0.0 30.0.0.0
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#ip route 10.0.0.0 255.0.0.0 20.0.0.10
Router(config)#ip route 40.0.0.0 255.0.0.0 30.0.0.20
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Copy   Paste

```
        --- System Configuration Dialog ---

Continue with configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface Serial2/0
Router(config-if)#ip address 30.0.0.20 255.0.0.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
ip address 40.0.0.10 255.0.0.0
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)#ip route 0.0.0.0 0.0.0.0 30.0.0.10
```

Copy   Paste

PC0

Physical   Config   Desktop   Custom Interface

Command Prompt   X

```
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.1: bytes=32 time=13ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125
Reply from 40.0.0.1: bytes=32 time=20ms TTL=125

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 20ms, Average = 11ms

PC>
```
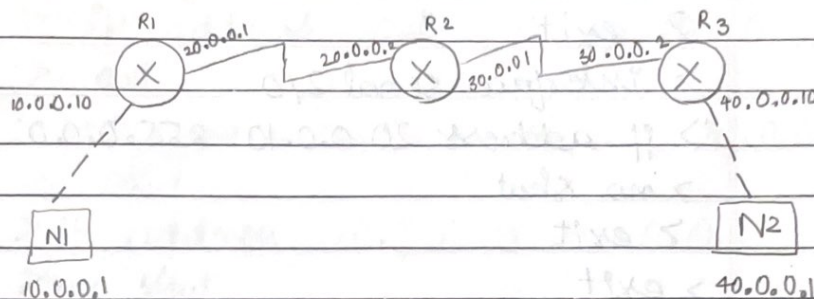
DEFAULT ROUTER.

Aim : Configure default route, static route to the Router.

Topology:

Configuration of default route

Procedure :

- Place 2 PC-PT and 3 router - PT's on the logical interface
- connect them with appropriate cable. use copper crossover to connect PC-PT to routers and the serial DCE to connect the routers
- Type the IP address & gateway to all the devices in config.
- In CLI of each device and configure the IP address as well as "no shut" command to enable to interface and allow the gateway to communicate which results in green light.

Once all gateways and routes are green, the route can be set in each route to config the unknown network ID's which will help in routing the packets. This can be

easily nominating or checked using the
" show ip address route"
> eanable
> config t
> interface of fastethernet 0/0
> ip address 10.0.0.10
> no shut
> exit
> interface serial 2/0
> ip address 20.0.0.10 255.0.0.0
> no shut
> exit
> exit
> ip route 0.0.0.0 0.0.0.0 20.0.0.20

Commands for router 1
> enable
> config t
> interface serial 2/0
> ip address 20.0.0.20 255.0.0.0
> no shut
> exit
> interface serial 3/0
> ip address 30.0.0.10 255.0.0.0
> no shut
> exit
> exit
> ip route 10.0.0.0 255.0.0.0 20.0.0.
> ip route 40.0.0.0 255.0.0.0 30.0.0.
> exit

Commands for Router 2

> enable
> config t
> interface fastethernet 0/0
> ip address 40.0.0.10 255.0.0.0
> exit
> interface serial 2/0
> ip address 30.0.0.20 255.0.0.0
> exit
> ip route 0.0.0.0 0.0.0.0 30.0.0.10
> exit
> ip address 20.0.0.10 255.0.0.0
> no shut
> exit
> exit
> ip address 20.0.0.10 255.0.0.0
> no shut
> exit
> exit
> ip route 0.0.0.

Output :

Ping 40.0.0.1

pinging 40.0.0.1 with 32 bytes of data

Request timed out.
Reply from 40.0.0.1 : bytes = 32 times = 20 ms TTL=125
Reply from 40.0.0.1 : bytes = 32 temes = 9 ms TTL=125
Reply from 40.0.0.1 bytes = 32 time = 21 ms TTL=125

Ping statistics for 40.0.0.1:
    Packets sent = 4   received = 3, lost = 1 (25/...
Approximate round trip times in milliseconds:
    min = 9ms , max = 21 ms , Avg = 16 ms

10/10

N
10/7/23