

EXPERIMENT-3

Q)Configure default route, static route to the Router

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LAB-4

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

Topology:

Procedure:

- ① Drag and drop 2 PC's and 3 Routers from the end devices. Connect the 1 router for each of the PC's (PC0 and PC1) And connect the 3rd Router to the other two Routers as shown in the topology.
- ② Set the IP address of PC0 as 10.0.0.1 and IP address of PC1 as 20.0.0.1, set the gateway as 10.0.0.2 and 20.0.0.2 for two PC's respectively.



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- ② Now config the ip address of ports in Router 0 & Router 1 using the following commands

```
Router>enable
```

```
Router#config t
```

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

```
Router (config-if)#ip address 10.0.0.2 255.0.0.0
```

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

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

```
Router (config)#interface Serial 2/0
```

```
Router (config-if)#ip address 30.0.0.1 255.0.0.0
```

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

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

```
&
```

These are the commands for Router 0. Similarly Router 1 and Router 2 need to be configured.

- ③ As Router 0 and Router 1 are connected to each other side we perform default static routing using following CLI commands.

For router 0

```
Router>enable
```

```
Router#config t
```

```
Router (config)#ip route 0.0.0.0 0.0.0.0 30.0.0.1
```

For router 1

```
Router#config t
```

```
Router (config)#ip route 0.0.0.0 0.0.0.0 10.0.0.2
```

Now, Do the static Routing for the Router 2 using commands.

Router #config

Router (config) #ip route 10.0.0.0 255.0.0.0 30.0.0.2

Router (config) #ip route 20.0.0.0 255.0.0.0 40.0.0.2

Router (config) #exit

Router #

④

⑤ Now, check the routing information

For router 0

Router #show ip route

C - connected S - static * - candidate default
gateway of last resort is 30.0.0.2 to network 0.0.0.0

C 10.0.0.0/8 is directly connected, FastEthernet 0/0

C 30.0.0.0/8 is directly connected, Serial 2/0

S* 0.0.0.0/0 [1/0] via 30.0.0.2

Router 2

Router #show ip route

C - connected S - static * - candidate default

S 10.0.0.0/8 [1/0] via 30.0.0.1

S 20.0.0.0/8 [1/0] via 40.0.0.1

C 20.0.0.0/8 is directly connected, Serial 2/0

C 40.0.0.0/8 is directly connected, Serial 3/0

Ping commands (output):

⌋

PC>ping 20.0.0.1

Pinging 20.0.0.1 with 32 byte of data

Reply from 20.0.0.1: bytes = 32 time = 176 ms



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Reply from 20.0.0.1: bytes = 32 time = 18ms TTL=125

Reply from 20.0.0.1: bytes = 32 time = 17ms TTL=125

Reply from 20.0.0.1: bytes = 32 time = 25ms TTL=125

Ping statistics for 20.0.0.1:

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

Approximate round trip times in millie seconds

Minimum = 16ms, Maximum = 25ms, Average
16ms

TOPOLOGY & OUTPUT

