Steps and commands

- 1. We have set up IP addresses, subnet masks, and default gateways for all PCs.
- 2. Then we have set up the IP address of all the interfaces of the routers using the following commands.

Khulna:

enable

config terminal

On fastethernet 0/0 interface:

interface fastethernet 0/0

ip address 192.168.32.1 255.255.255.252

no shutdown

exit

On serial 2/0 interface:

interface serial 2/0

ip address 192.168.39.1 255.255.255.252

clock rate 64000

no shutdown

exit

Rajshahi:

enable

config terminal

On interface fastethernet 0/0:

interface fastethernet 0/0

ip address 192.168.16.1 255.255.248.0

no shutdown

exit

On interface serial 2/0:

interface serial 2/0

ip address 192.168.39.2 255.255.255.252

no shutdown

exit

On interface serial 3/0:

interface serial 3/0

ip address 192.168.39.5 255.255.255.252

clock rate 64000

no shutdown

exit

Rangpur:

enable

config terminal

On interface fastethernet 0/0:

interface fastethernet 0/0

ip address 192.168.38.1 255.255.255.0

no shutdown

exit

On interface serial 2/0:

interface serial 2/0

ip address 192.168.39.6 255.255.255.252

no shutdown

exit

On interface serial 3/0:

interface serial 3/0

ip address 192.168.39.9 255.255.255.252

no shutdown

exit

On interface serial 6/0:

interface serial 6/0

ip address 192.168.39.13 255.255.255.252

clock rate 64000

no shutdown

exit

Dhaka:

enable

config t

On interface fastethernet 0/0:

interface fastethernet 0/0

ip address 192.168.0.1 255.255.240.0

no shutdown

exit

On interface serial 2/0:

interface serial 2/0

ip address 192.168.39.10 255.255.255.252

clock rate 64000

no shutdown

exit

On interface serial 3/0:

interface serial 3/0

ip address 192.168.39.17 255.255.255.252

no shutdown

exit

Chittagong

enable

config t

On interface fastethernet 0/0:

interface fastethernet 0/0

ip address 192.168.24.1 255.255.248.0

no shutdown

exit

On interface serial 2/0:

interface serial 2/0

ip address 192.168.39.22 255.255.255.252

no shutdown

exit

Sylhet:

enable

config t

On interface fastethernet 0/0:

interface fastethernet 0/0

ip address 192.168.36.1 255.255.254.0

no shutdown

exit

On interface serial 2/0:

interface serial 2/0

ip address 192.168.39.21 255.255.255.252
no shutdown
exit
On interface serial 3/0:

interface serial 3/0

ip address 192.168.39.18 255.255.255.252

clock rate 64000

no shutdown

exit

On interface serial 6/0:

interface serial 6/0

ip address 192.168.39.14 255.255.255.252

no shutdown

exit

3. As Khulna-Rajshahi and Rajshahi- Rangpur should be connected with each other manually, So we should use the following commands:

Khulna:

en

conf t

ip route 192.168.16.0 255.255.248.0 serial 2/0 //Rajshahi
ip route 192.168.38.0 255.255.255.0 serial 2/0 //Rangpur
ip route 192.168.0.0 255.255.240.0 serial 2/0 //Dhaka

Rangpur:

en

config t

ip route 192.168.16.0 255.255.248.0 serial 2/0 //Rajshahi

ip route 192.168.32.0 255.255.252.0 serial 2/0

//khulna

ip route 192.168.24.0 255.255.248.0 serial 3/0

//Chittagong

ip route 192.168.36.0 255.255.254.0 serial 3/0

//Sylhet

ip route 192.168.0.0 255.255.240.0 serial 3/0

//Dhaka

Rajshahi:

en

config t

ip route 192.168.32.0 255.255.252.0 serial 2/0

//khulna

ip route 192.168.38.0 255.255.255.0 serial 3/0

//Rangpur

ip route 192.168.0.0 255.255.240.0 serial 3/0

//Dhaka

Dhaka:

ip route 192.168.16.0 255.255.248.0 serial 2/0

//Rajshahi

ip route 192.168.32.0 255.255.255.0 serial 2/0

//khulna

ip route 192.168.38.0 255.255.255.0 serial 2/0

//Rangpur

4. As Sylhet and Ctg should be connected with each other without human intervention, so we should use the following commands:

For Router Chittagong

Router#en

Router#conf t

Router(config)#router rip

Router(config-router)#version 2

Router(config-router)#network 192.168.24.0 Router(config-router)#network 192.168.39.20 //own lan

//Sylhet-Chittagong wan link

Router(config-router)#exit Router(config)#exit Router#

For Router Sylhet

Router#en

Router#conf t

Router(config)#router rip

Router(config-router)#version 2

Router(config-router)#network 192.168.36.0

Router(config-router)#network 192.168.39.20

Router(config-router)#network 192.168.39.16

Router(config-router)#network 192.168.39.12

Router(config-router)#exit

Router(config)#exit

Router#

//Sylhet-Chittagong wan link //Dhaka-Sylhet wan link //Rangpur- Sylhet WAN Link

//Own LAN

For Router Dhaka:

Router#en

Router#conf t

Router(config)#router rip

Router(config-router)#version 2

Router(config-router)#network 192.168.0.0

Router(config-router)#network 192.168.39.8

Router(config-router)#network 192.168.39.16

Router(config-router)#exit

Router(config)#exit

Router#

//Own lan //Rangpur-Dhaka wan link

//Dhaka-sylhet wan link

5. We have to set default static routing to Dhaka by using the following commands:

Khulna:

ip route 0.0.0.0 0.0.0.0 serial 2/0

Rajshahi:

ip route 0.0.0.0 0.0.0.0 serial 3/0

Rangpur:

ip route 0.0.0.0 0.0.0.0 serial 3/0

Sylhet:

ip route 0.0.0.0 0.0.0.0 serial 3/0

Chittagong:

ip route 0.0.0.0 0.0.0.0 serial 2/0

6. We have to set a floating static route between Sylhet and Rangpur, so we should use the following commands:

Rangpur:

ip route 192.168.0.0 255.255.240.0 serial 3/0 ip route 192.168.36.0 255.255.254.0 serial 6/0 200

Sylhet:

ip route 192.168.0.0 255.255.240.0 serial 3/0 ip route 192.168.38.0 255.255.255.0 serial 6/0 200

7. While assigning IP addresses to Dhaka, we need to create a Server named "Amar Iccha" which will assign IP addresses to host devices dynamically.

