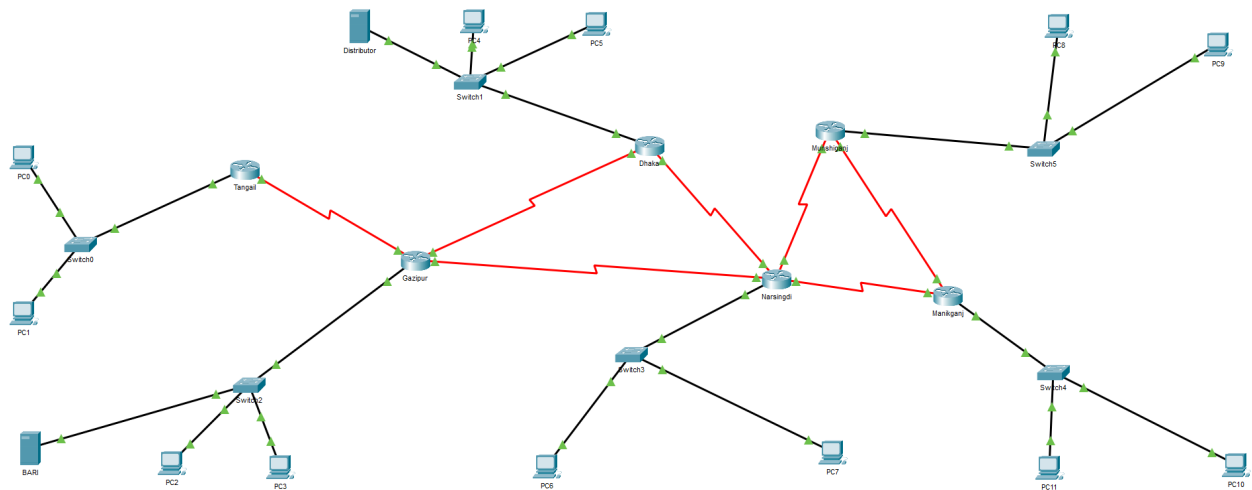


Topology Diagram:



VLSM Table:

Network	Host Req	IP Req	Network Add/Prefix Mask
Dhaka	2050	4096	69.42.0.0/19
Munshiganj	1026	2048	69.42.32.0/20
Tangail	258	512	69.42.48.0/22
Gazipur	130	256	69.42.52.0/23
Manikganj	66	128	69.42.54.0/24
Narsingdi	34	64	69.42.55.0/25
TG	4	4	69.42.55.128/29
GD	4	4	69.42.55.136/29
GN	4	4	69.42.55.144/29
DN	4	4	69.42.55.152/29
NMu	4	4	69.42.55.160/29
NMa	4	4	69.42.55.168/29
MuMa	4	4	69.42.55.176/29

IP Address Table:

Device Name		IP Address	Subnet Mask	Default Gateway
PC0		69.42.48.2	255.255.252.0	69.42.48.1
PC1		69.42.48.3	255.255.252.0	69.42.48.1
Tangail	Fa8/0	69.42.48.1	255.255.252.0	N/A
	Se7/0	69.42.55.129	255.255.255.248	N/A
BARI Server		69.42.52.2	255.255.254.0	69.42.52.1
PC2		69.42.52.3	255.255.254.0	69.42.52.1
PC3		69.42.52.4	255.255.254.0	69.42.52.1
Gazipur	Fa7/0	69.42.52.1	255.255.254.0	N/A
	Se4/0	69.42.55.137	255.255.255.248	N/A
	Se5/0	69.42.55.130	255.255.255.248	N/A
	Se6/0	69.42.55.145	255.255.255.248	N/A
Distributor Server		69.42.0.2	255.255.224.0	69.42.0.1
PC4		Auto		
PC5(not DHCP)		69.42.0.5	255.255.224.0	69.42.0.1
Dhaka	Fa9/0	69.42.0.1	255.255.224.0	N/A
	Se5/0	69.42.55.153	255.255.255.248	N/A
	Se6/0	69.42.55.138	255.255.255.248	N/A
PC6		69.42.55.3	255.255.255.128	69.42.55.1
PC7		69.42.55.2	255.255.255.128	69.42.55.1
Narsingdi	Fa9/0	69.42.55.1	255.255.255.128	N/A
	Se4/0	69.42.55.169	255.255.255.248	N/A
	Se5/0	69.42.55.161	255.255.255.248	N/A
	Se6/0	69.42.55.146	255.255.255.248	N/A
	Se7/0	69.42.55.154	255.255.255.248	N/A

PC8		69.42.32.2	255.255.240.0	69.42.32.1
PC9		69.42.32.3	255.255.240.0	69.42.32.1
Munshiganj	Fa8/0	69.42.32.1	255.255.240.0	N/A
	Se6/0	69.42.55.177	255.255.255.248	N/A
	Se7/0	69.42.55.162	255.255.255.248	N/A
PC11		69.42.54.3	255.255.255.0	69.42.54.1
PC10		69.42.54.2	255.255.255.0	69.42.54.1
Manikganj	Fa8/0	69.42.54.1	255.255.255.0	N/A
	Se6/0	69.42.55.178	255.255.255.248	N/A
	Se7/0	69.42.55.170	255.255.255.248	N/A

Configuration Code

Tangail

1. Connecting Fa8/0 to the Switch of Tangail LAN

Tangail>en

Tangail#config t

Enter configuration commands, one per line. End with CNTL/Z.

Tangail(config)#interface fastEthernet 8/0

Tangail(config-if)#ip address 69.42.48.1 255.255.252.0

Tangail(config-if)#no shut

Tangail(config-if)#

%LINK-5-CHANGED: Interface FastEthernet8/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet8/0, changed state to up

Tangail(config-if)#exit

2. Connecting with Tangail through s7/0

```
Tangail(config)#interface serial 7/0
Tangail(config-if)#ip address 69.42.55.129 255.255.255.248
Tangail(config-if)#no shut

%LINK-5-CHANGED: Interface Serial7/0, changed state to down
Tangail(config-if)#end
Tangail#
%SYS-5-CONFIG_I: Configured from console by console
```

3. Dynamic Routing

```
Tangail>en
Tangail#config t
Enter configuration commands, one per line. End with CNTL/Z.
Tangail(config)#ip route 0.0.0.0 0.0.0.0 serial 7/0
Tangail(config)#router rip
Tangail(config-router)#version 2
Tangail(config-router)#no auto-summary
Tangail(config-router)#network 69.42.48.0
Tangail(config-router)#network 69.42.55.128
Tangail(config-router)#passive-interface fastEthernet 8/0
Tangail(config-router)#redistribute static
Tangail(config-router)#end
```

4. Saving new configuration

```
Tangail#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
```

Gazipur

1. Changing name

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Gazipur
```

2. Connecting with Gazipur through s5/0

```
Gazipur(config)#interface serial 5/0
Gazipur(config-if)#ip address 69.42.55.130 255.255.255.248
Gazipur(config-if)#clock rate 64000
Gazipur(config-if)#no shut
```

```
Gazipur(config-if)#
%LINK-5-CHANGED: Interface Serial5/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial5/0, changed state to up
```

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

3. Connecting Fa7/0 to the Switch of Gazipur LAN

```
Gazipur(config)#interface fastEthernet 7/0
Gazipur(config-if)#ip address 69.42.52.1 255.255.254.0
Gazipur(config-if)#no shut
```

```
Gazipur(config-if)#
%LINK-5-CHANGED: Interface FastEthernet7/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet7/0, changed state to up
```

```
Gazipur(config-if)#end
```

4. Connecting with Dhaka through s4/0

```
Gazipur#config t
Enter configuration commands, one per line. End with CNTL/Z.
Gazipur(config)#interface serial 4/0
Gazipur(config-if)#ip address 69.42.55.137 255.255.255.248
Gazipur(config-if)#clock rate 64000
Gazipur(config-if)#no shut
Gazipur(config-if)#end
```

5. Connecting with Narsingdi through s6/0

```
Gazipur#config t
Enter configuration commands, one per line. End with CNTL/Z.
Gazipur(config)#interface serial 6/0
Gazipur(config-if)#ip address 69.42.55.145 255.255.255.248
Gazipur(config-if)#clock rate 64000
Gazipur(config-if)#no shut
```

%LINK-5-CHANGED: Interface Serial6/0, changed state to down
Gazipur(config-if)#

Gazipur(config-if)#end

Gazipur#

%SYS-5-CONFIG_I: Configured from console by console

6. Dynamic+Static Routing

Gazipur#config t

Enter configuration commands, one per line. End with CNTL/Z.

Gazipur(config)#ip route 0.0.0.0 0.0.0.0 serial 4/0

Gazipur(config)#ip route 69.42.55.0 255.255.255.128 s4/0

Gazipur(config)#ip route 69.42.55.0 255.255.255.128 s6/0 5

Gazipur(config)#router rip

Gazipur(config-router)#version 2

Gazipur(config-router)#no auto-summary

Gazipur(config-router)#network 69.42.52.0

Gazipur(config-router)#network 69.42.55.128

Gazipur(config-router)#passive-interface fastEthernet 7/0

Gazipur(config-router)#redistribute static

Gazipur(config-router)#end

Gazipur#

7. Saving new configuration

Gazipur#copy run start

Destination filename [startup-config]?

Building configuration...

[OK]

Gazipur#

Dhaka

1. Naming

Router>

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#hostname Dhaka

Dhaka(config)#interface fa

2. Connecting Fa9/0 to the Switch of Dhaka LAN

```
Dhaka(config)#interface fastEthernet 9/0
Dhaka(config-if)#ip address 69.42.0.1 255.255.224.0
Dhaka(config-if)#no shut
```

```
Dhaka(config-if)#
%LINK-5-CHANGED: Interface FastEthernet9/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/0, changed state to up
```

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

3. Connecting with Gazipur through s6/0

```
Dhaka(config)#interface serial 6/0
Dhaka(config-if)#ip address 69.42.55.138 255.255.255.248
Dhaka(config-if)#no shut
```

```
Dhaka(config-if)#
%LINK-5-CHANGED: Interface Serial6/0, changed state to up
```

```
Dhaka(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial6/0, changed state to up
```

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

4. Connecting with Narsingdi through s5/0

```
Dhaka(config)#interface serial 5/0
Dhaka(config-if)#ip address 69.42.55.153 255.255.255.248
Dhaka(config-if)#clock rate 64000
Dhaka(config-if)#no shut
```

```
%LINK-5-CHANGED: Interface Serial5/0, changed state to down
```

```
Dhaka(config-if)#end
```

```
Dhaka#
```

```
%SYS-5-CONFIG_I: Configured from console by console
```

5. Directly Attached Routing configuration

```
Dhaka>en
```

```
Dhaka#config t
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Dhaka(config)#ip route 69.42.48.0 255.255.252.0 serial 4/0
%Invalid interface type and number
Dhaka(config)#ip route 69.42.48.0 255.255.252.0 serial 6/0
Dhaka(config)#ip route 69.42.52.0 255.255.254.0 serial 6/0
Dhaka(config)#ip route 69.42.55.128 255.255.255.248 serial 6/0
Dhaka(config)#ip route 69.42.55.0 255.255.255.128 serial 5/0
Dhaka(config)#ip route 69.42.32.0 255.255.240.0 serial 5/0
Dhaka(config)#ip route 69.42.54.0 255.255.255.0 serial 5/0
Dhaka(config)#ip route 69.42.55.160 255.255.255.248 serial 5/0
Dhaka(config)#ip route 69.42.55.168 255.255.255.248 serial 5/0
Dhaka(config)#ip route 69.42.55.176 255.255.255.248 serial 5/0
Dhaka(config)#end
```

```
Dhaka#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Dhaka#
```

Narsingdi

1. Rename and Connecting to its own LAN

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Norsingdi
Norsingdi(config)#
Norsingdi(config)#hostname Narsingdi
Narsingdi(config)#interface fa
Narsingdi(config)#interface fastEthernet 9/0
*Narsingdi(config-if)#ip address 69.42.55.1 255.255.255.128
Narsingdi(config-if)#no shut

Narsingdi(config-if)#
%LINK-5-CHANGED: Interface FastEthernet9/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet9/0, changed state to up

Narsingdi(config-if)#exit
```


2. To Gazipur

```
Narsingdi(config)#int  
Narsingdi(config)#interface serial 7/0  
Narsingdi(config-if)#ip address 69.42.55.154 255.255.255.248  
Narsingdi(config-if)#no shut
```

```
Narsingdi(config-if)#  
%LINK-5-CHANGED: Interface Serial7/0, changed state to up
```

```
Narsingdi(config-if)#  
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial7/0, changed state to up
```

3. To Dhaka

```
Narsingdi(config-if)#interface serial 6/0  
Narsingdi(config-if)#interface serial 6/0  
Narsingdi(config-if)#exit  
Narsingdi(config)#interface serial 6/0  
Narsingdi(config-if)#ip address 69.42.55.145 255.255.255.248  
Narsingdi(config-if)#ip address 69.42.55.146 255.255.255.248  
Narsingdi(config-if)#no shut
```

```
Narsingdi(config-if)#  
%LINK-5-CHANGED: Interface Serial6/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial6/0, changed state to up
```

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

4. To Munshiganj

```
Narsingdi(config)#interface serial 5/0  
Narsingdi(config-if)#ip address 69.42.55.161 255.255.255.248  
Narsingdi(config-if)#clock rate 64000  
Narsingdi(config-if)#no shut
```

```
%LINK-5-CHANGED: Interface Serial5/0, changed state to down  
Narsingdi(config-if)#exit
```

5. To Manikganj

```
Narsingdi(config)#interface serial 4/0
```

```
Narsingdi(config-if)#ip address 69.42.55.169 255.255.255.248
Narsingdi(config-if)#clock rate 64000
Narsingdi(config-if)#no shut
```

```
%LINK-5-CHANGED: Interface Serial4/0, changed state to down
Narsingdi(config-if)#exit
Narsingdi(config)#
```

6. Routing

```
Narsingdi>en
Narsingdi#config t
Enter configuration commands, one per line. End with CNTL/Z.
Narsingdi(config)#ip route 69.42.32.0 255.255.240.0 serial 5/0
Narsingdi(config)#ip route 69.42.54.0 255.255.255.0 serial 4/0
Narsingdi(config)#ip route 0.0.0.0 0.0.0.0 serial 7/0
Narsingdi(config)#ip route 69.42.52.0 255.255.254.0 serial 7/0
Narsingdi(config)#ip route 69.42.52.0 255.255.254.0 serial 6/0 5
Narsingdi(config)#exit
Narsingdi#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Narsingdi#
```

Munshiganj

1. Rename and Connecting to its own LAN

```
Munshiganj>enable
Munshiganj#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Munshiganj(config)#
Munshiganj(config)#hostname Munshiganj

Munshiganj(config)#interface fastEthernet 8/0
Munshiganj(config-if)#ip address 69.42.32.1 255.255.240.0
Munshiganj(config-if)#no shut
```

2. Connect to Narsingdi

```
Munshiganj(config)#interface serial 7/0
Munshiganj(config-if)#ip address 69.42.55.162 255.255.255.248
Munshiganj(config-if)#no shut
```

3. Connect to Manikganj

```
Munshiganj>en
Munshiganj#config t
Enter configuration commands, one per line. End with CNTL/Z.
Munshiganj(config)#interface serial 6/0
Munshiganj(config-if)#ip address 69.42.55.177 255.255.255.248
Munshiganj(config-if)#clock rate 64000
Munshiganj(config-if)#no shut

%LINK-5-CHANGED: Interface Serial6/0, changed state to down
Munshiganj(config-if)#end
Munshiganj#
%SYS-5-CONFIG_I: Configured from console by console
```

4. Routing

```
Munshiganj>en
Munshiganj#config t
Enter configuration commands, one per line. End with CNTL/Z.
Munshiganj(config)#ip route 69.42.55.0 255.255.255.128 serial 7/0
Munshiganj(config)#ip route 69.42.54.0 255.255.255.0 serial 6/0
Munshiganj(config)#ip route 0.0.0.0 0.0.0.0 serial 7/0
Munshiganj(config)#exit
```

```
Munshiganj#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Munshiganj#
```

Manikganj

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
```

Router(config)#hostname Manikganj

1. Connect to its own LAN

```
Manikganj(config)#interface fastEthernet 8/0
Manikganj(config-if)#ip address 69.42.54.1 255.255.255.0
Manikganj(config-if)#no shut
```

```
Manikganj(config-if)#
%LINK-5-CHANGED: Interface FastEthernet8/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet8/0, changed state to up
```

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

2. Connect to Narsingdi

```
Manikganj(config)#interface serial 7/0
Manikganj(config-if)#ip address 69.42.55.170 255.255.255.248
Manikganj(config-if)#no shut
```

```
Manikganj(config-if)#
%LINK-5-CHANGED: Interface Serial7/0, changed state to up
```

```
Manikganj(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial7/0, changed state to up
```

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

3. Connect to Munshiganj

```
Manikganj(config)#interface serial 6/0
Manikganj(config-if)#ip address 69.42.55.178 255.255.255.248
Manikganj(config-if)#no shut
```

```
Manikganj(config-if)#
%LINK-5-CHANGED: Interface Serial6/0, changed state to up
```

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial6/0, changed state to up
```

```
Manikganj(config-if)#exit
Manikganj(config)#end
Manikganj#
%SYS-5-CONFIG_I: Configured from console by console
```

4. Routing

```
Manikganj>en
Manikganj#config t
Enter configuration commands, one per line. End with CNTL/Z.
Manikganj(config)#ip route 69.42.32.0 255.255.240.0 serial 6/0
Manikganj(config)#ip route 69.42.55.0 255.255.255.128 serial 7/0
Manikganj(config)#ip route 0.0.0.0 0.0.0.0 serial 7/0
Manikganj(config)#exit
```

```
Manikganj#copy run start
Destination filename [startup-config]?
Building configuration...
[OK]
Manikganj#
```