Design and Configuring WAN using three Routers with Static Routing
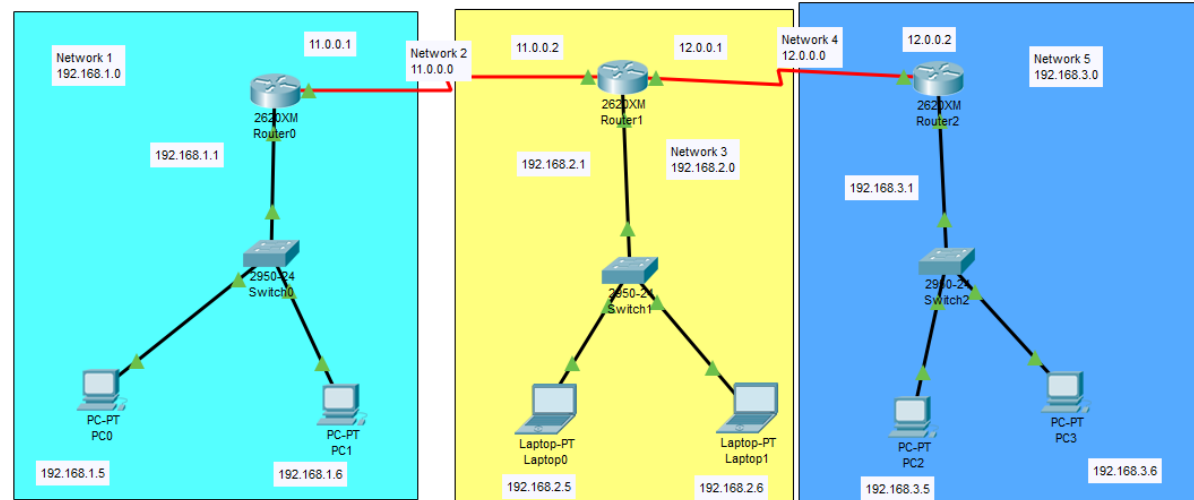

Addressing Table:

Device	Interface	IP Address	Subnet Mask
PC1	NIC	192.168.1.5	255.255.255.0
PC2	NIC	192.168.1.6	255.255.255.0
PC3	NIC	192.168.2.5	255.255.255.0
PC4	NIC	192.168.2.6	255.255.255.0
PC5	NIC	192.168.3.5	255.255.255.0
PC6	NIC	192.168.3.6	255.255.255.0
Router 1 FastEthernet 0/0	NIC	192.168.1.1	255.255.255.0
Router 1 Serial 0/0	INC	11.0.0.1	255.0.0.0
Router 2 Serial 0/0	INC	11.0.0.2	255.0.0.0
Router 2 Serial 0/1	INC	12.0.0.1	255.0.0.0
Router 2 FastEthernet 0/0	INC	192.168.2.1	255.255.255.0
Router 3 Serial 0/0	INC	12.0.0.2	255.0.0.0
Router 3 FastEthernet 0/0	INC	192.168.3.1	255.255.255.0

Objectives:
1. Design a WAN network using three router, three switch and 6 PCs
2. Configure 3 Routers with static routing
3. Verify the connectivity by simulation

Static Routing Table:

Router 1				
Network	192.168.2.0	11.0.0.0	192.168.3.0	12.0.0.0
Musk	255.255.255.0	255.0.0.0	255.255.255.0	255.0.0.0
Next hop	11.0.0.2	11.0.0.2	11.0.0.2	11.0.0.2
Router 2				
Network	192.168.1.0	11.0.0.0	192.168.3.0	12.0.0.0
Musk	255.255.255.0	255.0.0.0	255.255.255.0	255.0.0.0
Next hop	11.0.0.1	11.0.0.1	12.0.0.2	12.0.0.2
Router 2				
Network	192.168.1.0	11.0.0.0	12.0.0.0	192.168.2.0
Musk	255.255.255.0	255.0.0.0	255.0.0.0	255.255.255.0
Next hop	12.0.0.1	12.0.0.1	12.0.0.1	12.0.0.1

Router Configuration:

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
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 Serial0/0
Router(config-if)#ip address 11.0.0.1 255.0.0.0
Router(config-if)#ip address 11.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
Router(config-if)#exit
Router(config)#
Router(config)#ip route 192.168.2.0 255.255.255.0 11.0.0.2
Router(config)#ip route 11.0.0.0 255.0.0.0 11.0.0.2
Router(config)#ip route 192.168.3.0 255.255.255.0 11.0.0.2
Router(config)#ip route 12.0.0.0 255.255.255.0 11.0.0.2
Router(config)#no ip route 12.0.0.0 255.255.255.0 11.0.0.2
Router(config)#ip route 12.0.0.0 255.0.0.0 11.0.0.2
Router(config)#
%LINK-5-CHANGED: Interface Serial0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up