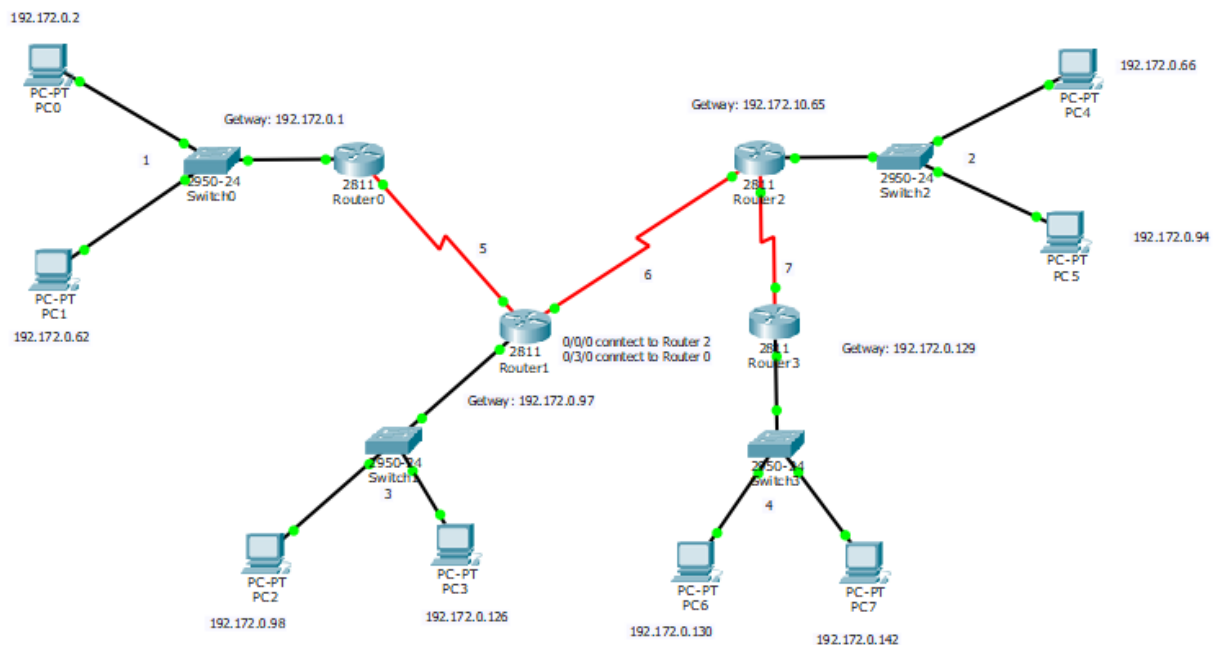


Project Name: VLSM (Variable Length Subnetting Mask) Implementation and Create a Network Using VLSM from 192.172.0.0/24 IP Address.

VLSM Table

Network No	Network Address	1 st Usable Address	2 nd Usable Address	Last Usable Address	Broadcast Address	Subnet Mask
1	192.172.0.0/26	192.172.0.1	192.172.0.2	192.172.0.62	192.172.0.63	255.255.255.192
2	192.172.0.64/26	192.172.0.65	192.172.0.66	192.172.0.94	192.172.0.95	255.255.255.224
3	192.172.0.96/26	192.172.0.97	192.172.0.98	192.172.0.126	192.172.0.127	255.255.255.224
4	192.172.0.128/26	192.172.0.129	192.172.0.130	192.172.0.142	192.172.0.143	255.255.255.240
5	192.172.0.144/26	192.172.0.145	192.172.0.146	192.172.0.146	192.172.0.147	255.255.255.252
6	192.172.0.148/26	192.172.0.149	192.172.0.150	192.172.0.150	192.172.0.151	255.255.255.252
7	192.172.0.152/26	192.172.0.153	192.172.0.154	192.172.0.154	192.172.0.155	255.255.255.252

Connection Diagram of Network



PC Configuration

The screenshot shows a window titled "PC0" with tabs for "Physical", "Config", "Desktop", and "Custom Interface". The "Config" tab is active, displaying the "IP Configuration" dialog. In the "IP Configuration" section, "Static" is selected. The fields are filled with: IP Address: 192.172.0.2, Subnet Mask: 255.255.255.192, Default Gateway: 192.172.0.1, and DNS Server: (empty). The "IPv6 Configuration" section has "Static" selected, with fields for IPv6 Address, Link Local Address (FE80::201:43FF:FEC5:13C1), IPv6 Gateway, and IPv6 DNS Server.

Fig. IP Configuration for PC0

Router Configuration

The screenshot shows a window titled "Router0" with tabs for "Physical", "Config", and "CLI". The "Config" tab is active, displaying the configuration for "FastEthernet0/0". The "Port Status" is "On". "Bandwidth" is set to "100 Mbps". "Duplex" is set to "Full Duplex". "MAC Address" is "0030.F21B.CA01". "IP Configuration" shows "IP Address" as "192.172.0.1" and "Subnet Mask" as "255.255.255.192". "Tx Ring Limit" is "10". A sidebar on the left lists configuration categories: GLOBAL, ROUTING, SWITCHING, and INTERFACE, with "FastEthernet0/0" selected under INTERFACE. At the bottom, a text box shows the equivalent IOS commands:

```
Router(config)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/3/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

Fig. Router Configuration for Network 1

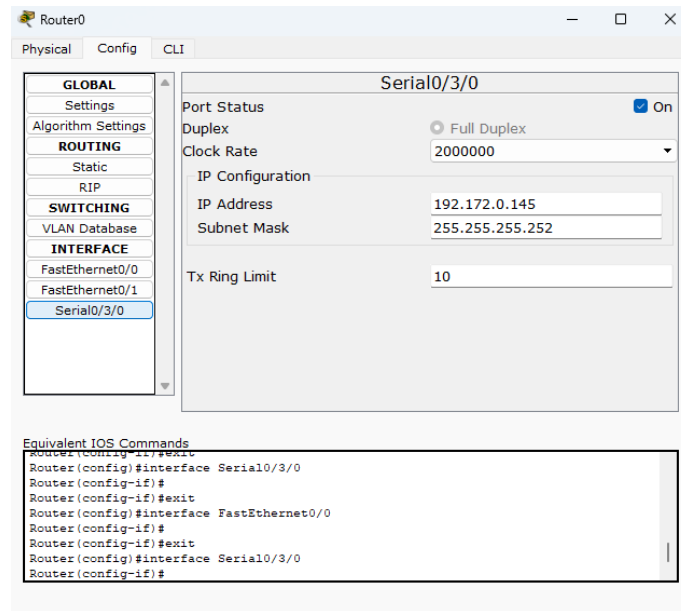


Fig. Router Configuration for Network 5

RIP Configuration

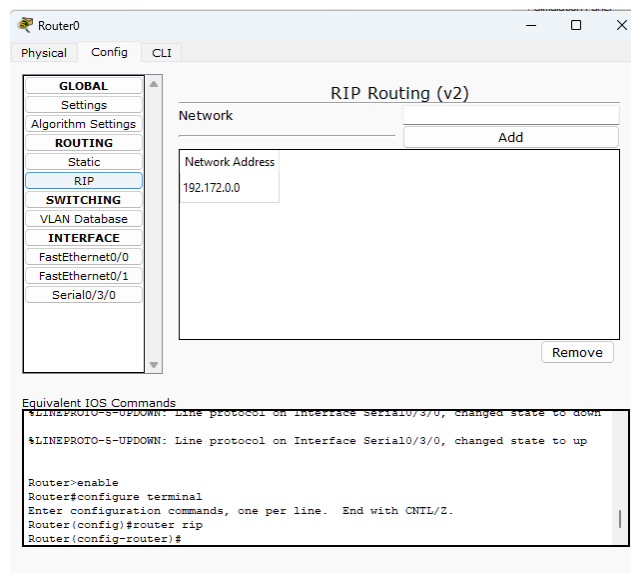


Fig. RIP Configuration for Router0

Verifying the network by pinging the IP address

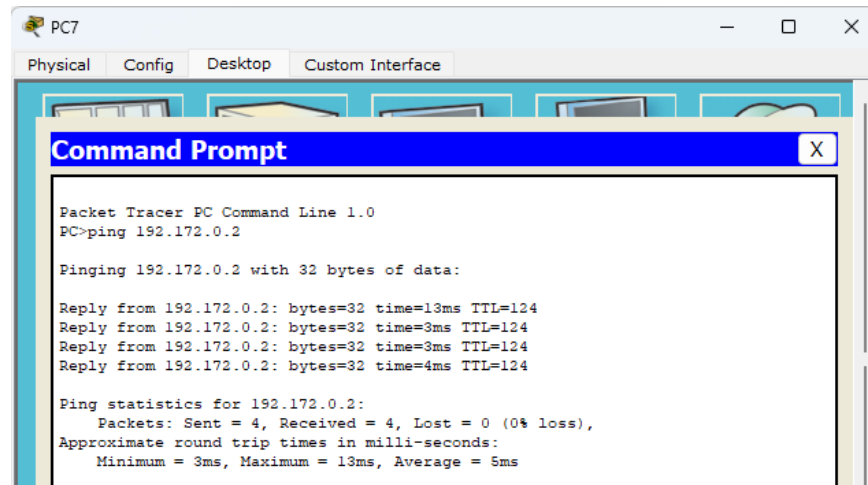




Fig. Ping between PC0 and PC7

Simulation Result

Event List									Simulation
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	
	Successful	PC0	PC5	ICMP		0.000	N	0	