

Date: 17/09/2024

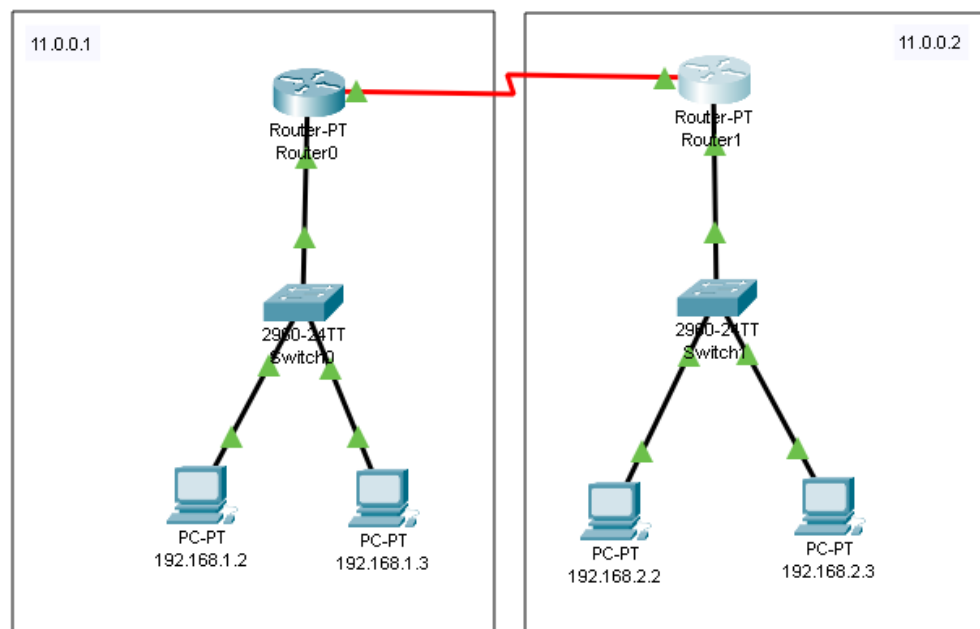
### Lab Practical #10:

Study the concept of routing using packet tracer. (Static Routing)

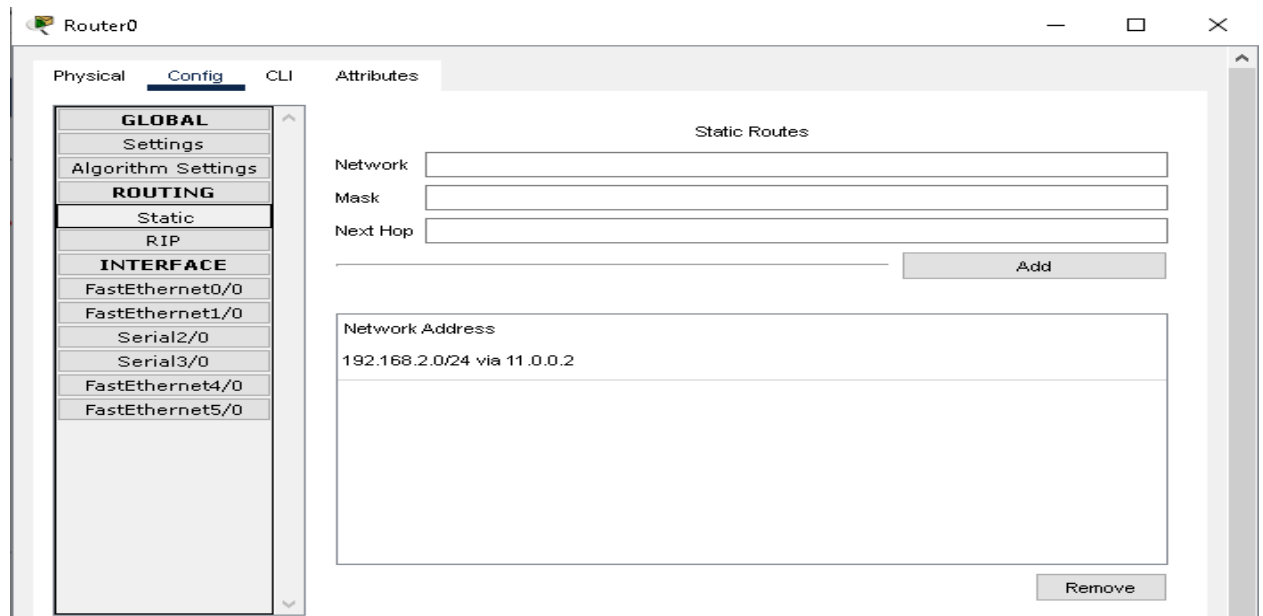
### Practical Assignment #10:

1. Connect the two different networks based on the calculated IP addresses and subnet using a packet tracer.

Router

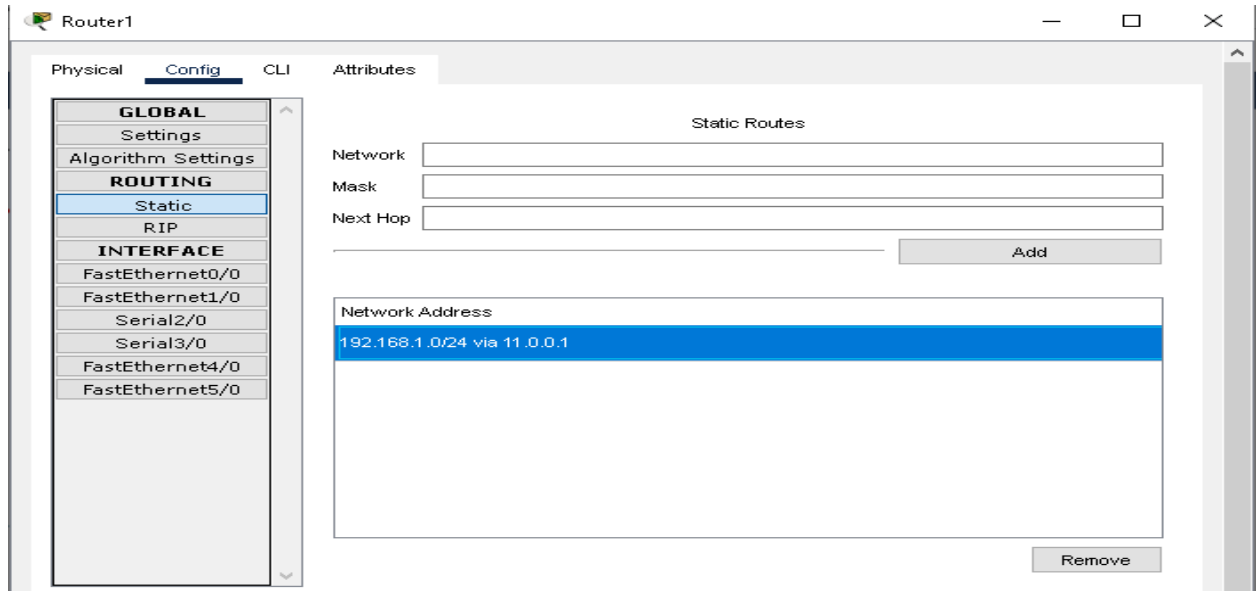


#### • Router0 :



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• **Router1 :**



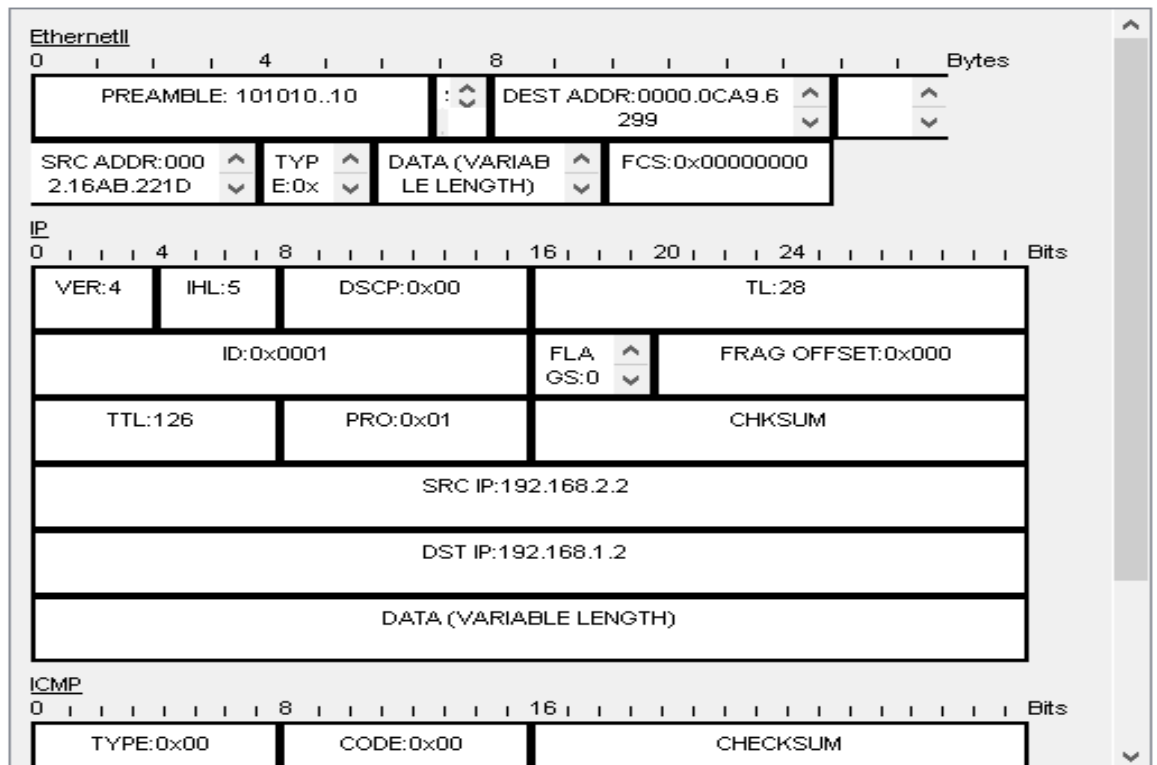
The image shows the 'Router1' configuration window with the 'Config' tab selected. The left sidebar shows a tree view with 'GLOBAL' (Settings, Algorithm Settings), 'ROUTING' (Static, RIP), and 'INTERFACE' (FastEthernet0/0 to FastEthernet5/0). The 'Static Routes' section is active, showing a table with one entry: '192.168.1.0/24 via 11.0.0.1'. The 'Add' button is visible below the table.

Network	Mask	Next Hop
192.168.1.0/24	255.255.255.0	11.0.0.1

PDU Information at Device: 192.168.1.2

OSI Model [Inbound PDU Details](#)

PDU Formats



The image shows the 'PDU Formats' window with the 'EthernetII' tab selected. It displays the structure of an Ethernet II frame, an IP packet, and an ICMP message. The Ethernet II frame is 14 bytes long, the IP packet is 20 bytes long, and the ICMP message is 8 bytes long.

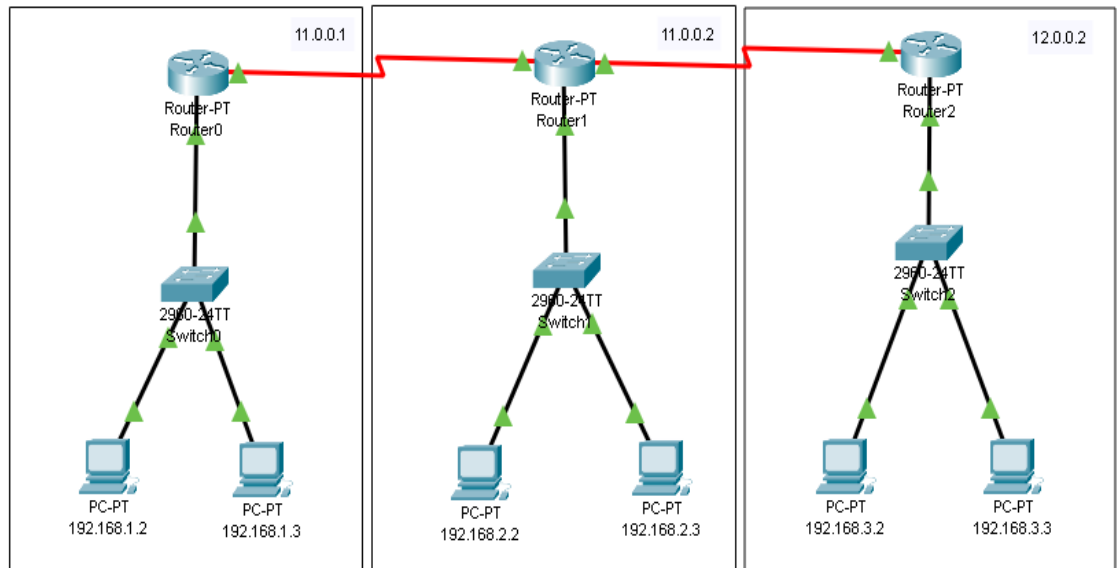
EthernetII	
0	14
PREAMBLE: 101010...10	DEST ADDR: 0000.0CA9.6299
SRC ADDR: 0002.16AB.221D	TYP: E:0x
DATA (VARIABLE LENGTH)	FCS: 0x00000000

IP	
0	20
VER: 4	IHL: 5
DSCP: 0x00	TL: 28
ID: 0x0001	FLA GS: 0
FRAG OFFSET: 0x0000	
TTL: 126	PRO: 0x01
CHKSUM	
SRC IP: 192.168.2.2	
DST IP: 192.168.1.2	
DATA (VARIABLE LENGTH)	

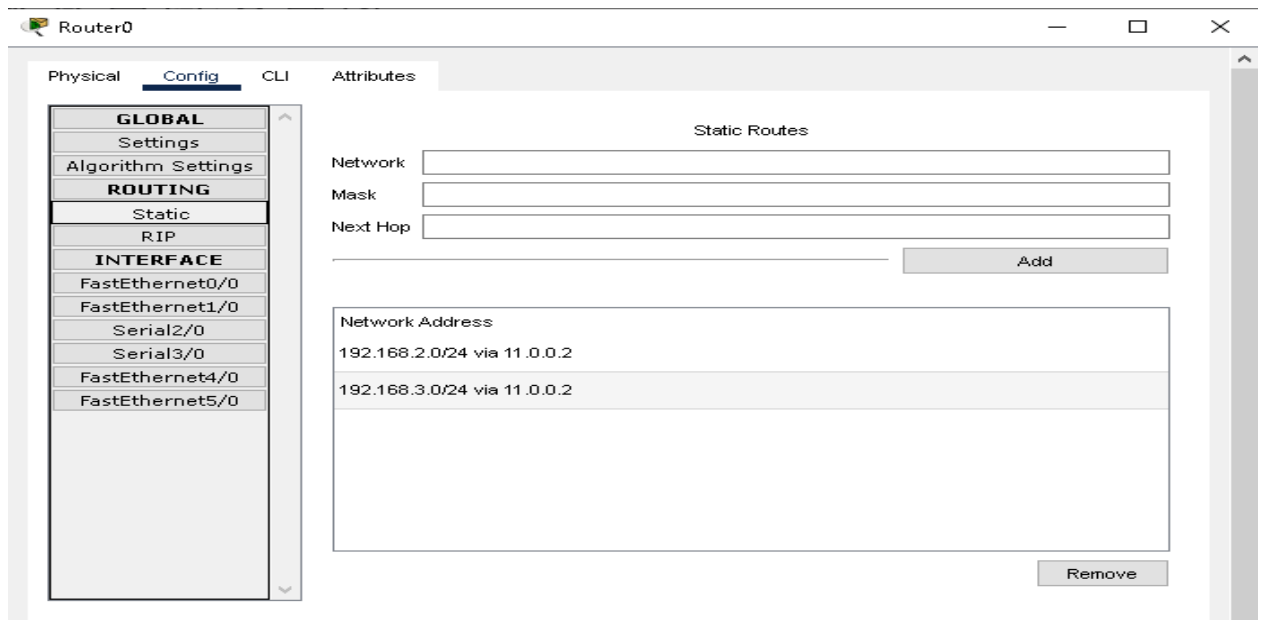
ICMP	
0	8
TYPE: 0x00	CODE: 0x00
CHECKSUM	

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2. Connect the three different networks based on the calculated IP addresses and subnet using a packet tracer.



• **Router0 :**



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• **Router1 :**

Router1

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

Static Routes

Network

Mask

Next Hop

Add

Network Address

192.168.1.0/24 via 11.0.0.1

192.168.3.0/24 via 12.0.0.1

Remove

• **Router2:**

Router2

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**INTERFACE**

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

Static Routes

Network

Mask

Next Hop

Add

Network Address

192.168.2.0/24 via 12.0.0.1

192.168.1.0/24 via 12.0.0.1

Remove

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PDU Information at Device: 192.168.1.2

OSI Model

Inbound PDU Details

PDU Formats

EthernetII															
0 4 8 Bytes															
PREAMBLE: 101010..10								: ↕		DEST ADDR: 000B.BE29.B1A5				↕	
SRC ADDR: 0002.4A.14.739D				TYP E: 0x		DATA (VARIABLE LENGTH)				FCS: 0x00000000					

IP															
0 4 8 16 20 24 Bits															
VER: 4				IHL: 5				DSCP: 0x00				TL: 28			
ID: 0x0002								FLA GS: 0		FRAG OFFSET: 0x000					
TTL: 125				PRO: 0x01				CHKSUM							
SRC IP: 192.168.3.2															
DST IP: 192.168.1.2															
DATA (VARIABLE LENGTH)															

ICMP															
0 8 16 Bits															
TYPE: 0x00				CODE: 0x00				CHECKSUM							