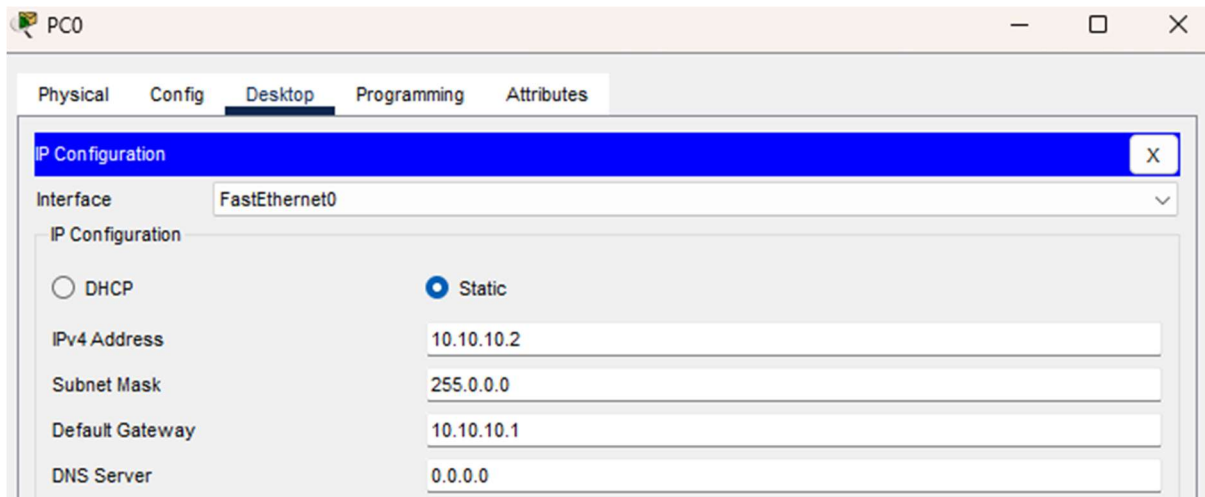


## Implementation :-

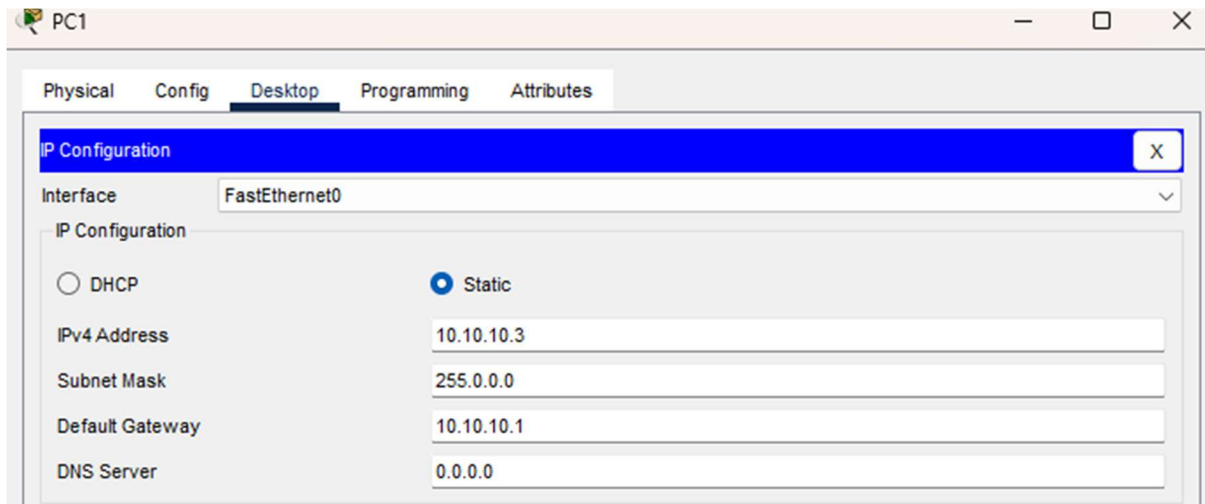
- **Configuring PC0:**



The screenshot shows the configuration window for PC0. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The fields are filled with the following values:

Field	Value
Interface	FastEthernet0
IP Configuration	Static
IPv4 Address	10.10.10.2
Subnet Mask	255.0.0.0
Default Gateway	10.10.10.1
DNS Server	0.0.0.0

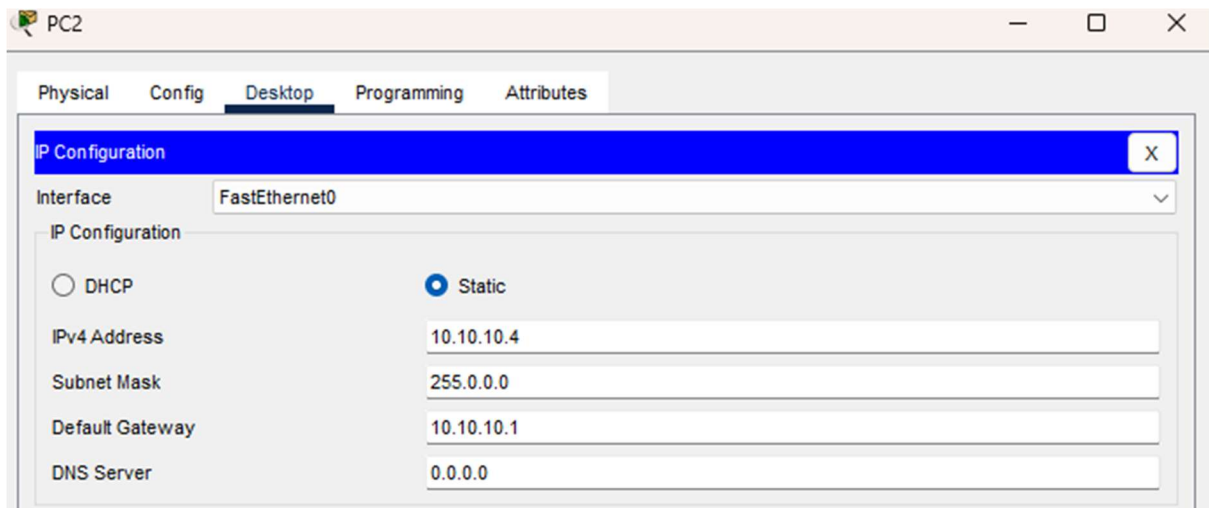
- **Configuring PC1:**



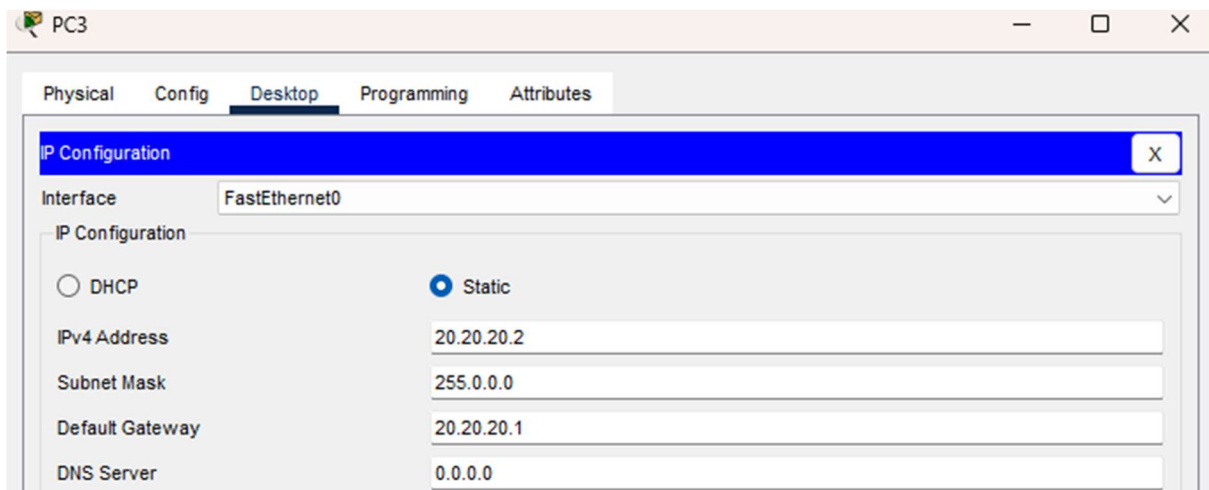
The screenshot shows the configuration window for PC1. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP Configuration. The fields are filled with the following values:

Field	Value
Interface	FastEthernet0
IP Configuration	Static
IPv4 Address	10.10.10.3
Subnet Mask	255.0.0.0
Default Gateway	10.10.10.1
DNS Server	0.0.0.0

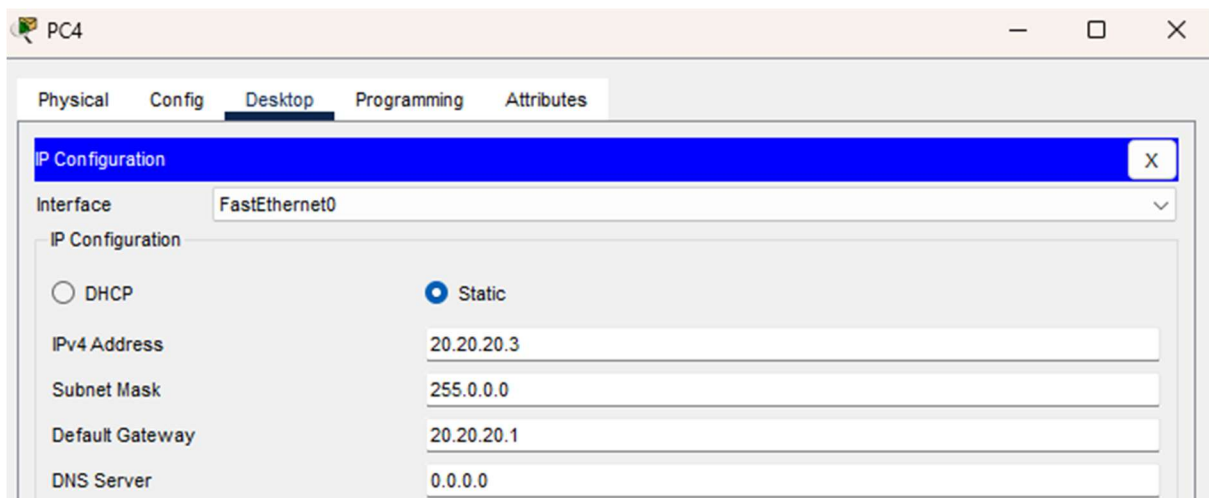
- **Configuring PC2:**



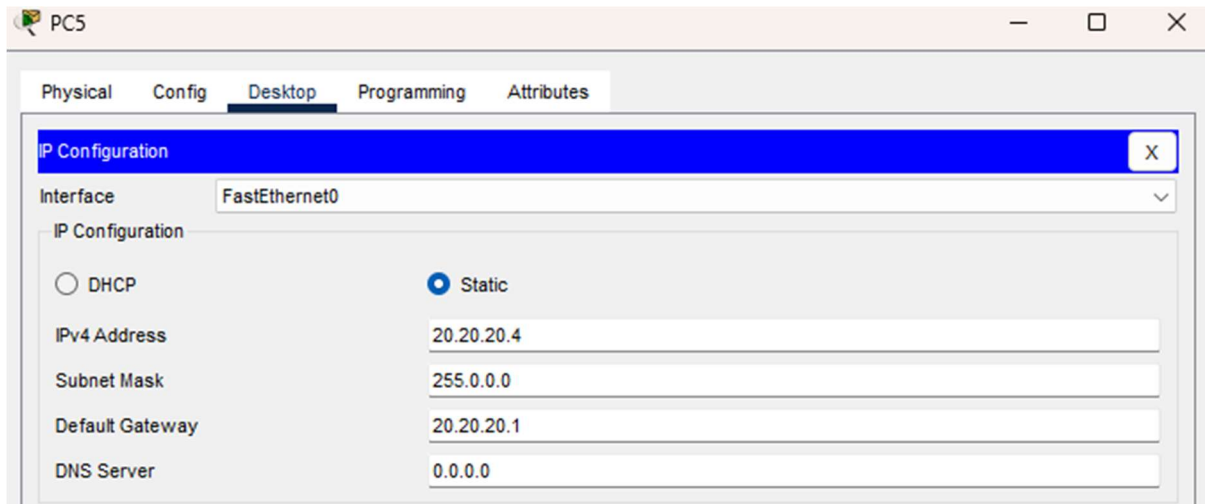
- **Configuring PC3:**



- **Configuring PC4:**



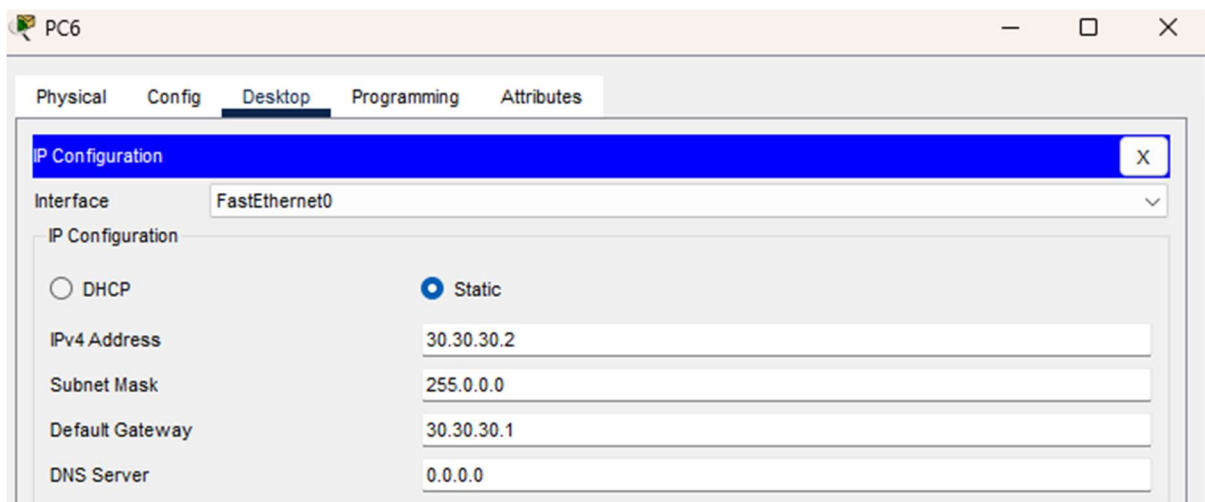
- **Configuring PC5:**



The screenshot shows the configuration window for PC5. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP configuration. The fields are filled with the following values:

Field	Value
IPv4 Address	20.20.20.4
Subnet Mask	255.0.0.0
Default Gateway	20.20.20.1
DNS Server	0.0.0.0

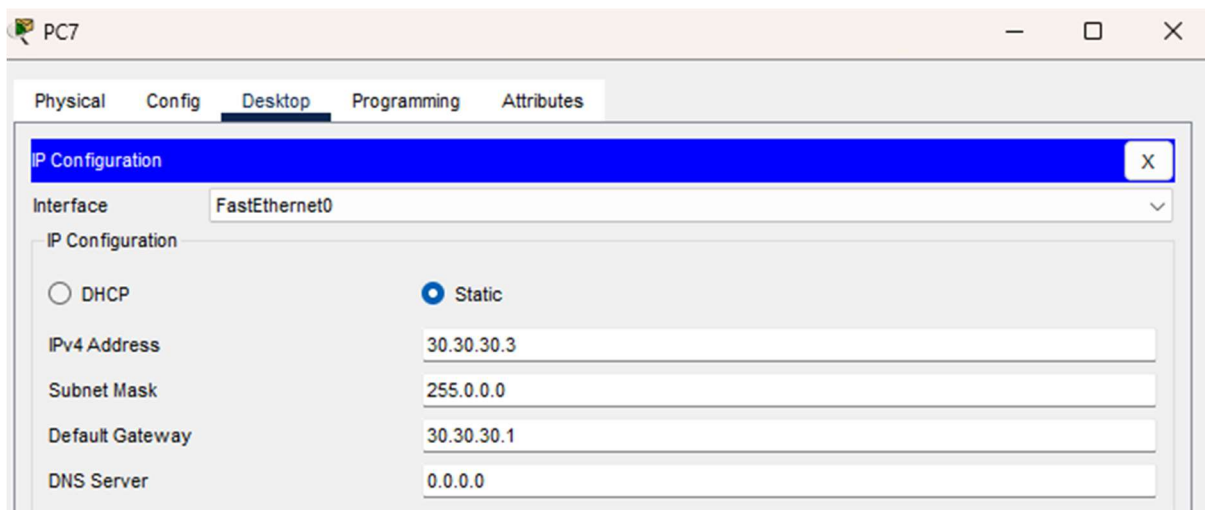
- **Configuring PC6:**



The screenshot shows the configuration window for PC6. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP configuration. The fields are filled with the following values:

Field	Value
IPv4 Address	30.30.30.2
Subnet Mask	255.0.0.0
Default Gateway	30.30.30.1
DNS Server	0.0.0.0

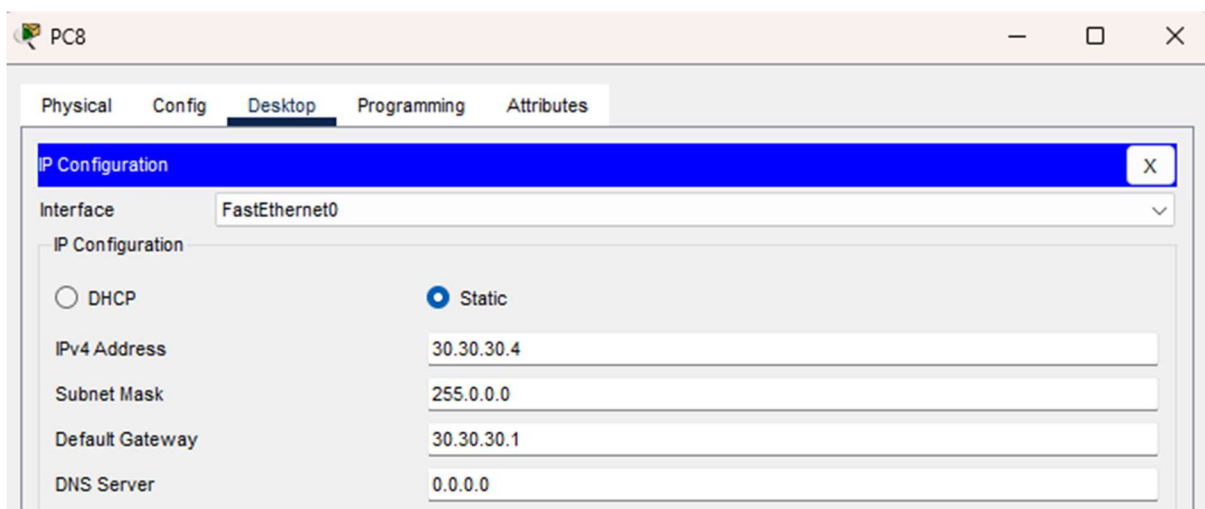
- **Configuring PC7:**



The screenshot shows the configuration window for PC7. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP configuration. The fields are filled with the following values:

Field	Value
IPv4 Address	30.30.30.3
Subnet Mask	255.0.0.0
Default Gateway	30.30.30.1
DNS Server	0.0.0.0

- **Configuring PC8:**



The screenshot shows the configuration window for PC8. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for IP configuration. The fields are filled with the following values:

Field	Value
IPv4 Address	30.30.30.4
Subnet Mask	255.0.0.0
Default Gateway	30.30.30.1
DNS Server	0.0.0.0

- **Set Serial Interface (HWIC-2T Port) For All Routers:-**


Physical Config CLI Attributes

Physical Device View

Zoom In Original Size Zoom Out


MODULES

- HWIC-1GE-SFP
- HWIC-2T
- HWIC-4ESW
- HWIC-8A
- WIC-Cover
- GLC-LH-SMD





The HWIC-2T is a Cisco 2-Port Serial High-Speed WAN Interface Card, providing 2 serial ports.

Customize Icon in Physical View



Customize Icon in Logical View

- Router0 Configuration With PC0,PC1,PC2:

Router0

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

GigabitEthernet0/0

GigabitEthernet0/1

Serial0/1/0

Serial0/1/1

**GigabitEthernet0/0**

Port Status ☒ On

Bandwidth ☐ 1000 Mbps ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0030.F21C.0801

IP Configuration

IPv4 Address 10.10.10.1

Subnet Mask 255.0.0.0

Tx Ring Limit 10

- Router1 Configuration With PC3,PC4,PC5:

Router1

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

GigabitEthernet0/0

GigabitEthernet0/1

Serial0/1/0

Serial0/1/1

**GigabitEthernet0/0**

Port Status ☒ On

Bandwidth ☐ 1000 Mbps ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0090.2176.C901

IP Configuration

IPv4 Address 20.20.20.1

Subnet Mask 255.0.0.0

Tx Ring Limit 10

- Router2 Configuration With PC6,PC7,PC8:

The screenshot shows the 'Router2' configuration window with the 'Config' tab selected. The left sidebar contains a tree view with categories: GLOBAL, ROUTING, SWITCHING, and INTERFACE. Under the INTERFACE category, 'GigabitEthernet0/0' is selected. The main panel displays the configuration for 'GigabitEthernet0/0'. The 'Port Status' is checked 'On'. 'Bandwidth' is set to '100 Mbps' (selected from 1000, 100, and 10 Mbps). 'Duplex' is set to 'Full Duplex' (selected from Half and Full). 'Auto' is checked for both Bandwidth and Duplex. The 'MAC Address' is '0002.1695.D701'. The 'IP Configuration' section shows 'IPv4 Address' as '30.30.30.1' and 'Subnet Mask' as '255.0.0.0'. The 'Tx Ring Limit' is set to '10'.

GigabitEthernet0/0	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input type="radio"/> 1000 Mbps <input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	0002.1695.D701
IP Configuration	
IPv4 Address	30.30.30.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- Router0 Configuration With Router1:

Router0

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

GigabitEthernet0/0

GigabitEthernet0/1

**Serial0/1/0**

Serial0/1/1

Serial0/1/0

Port Status ☒ On

Duplex ☐ Full Duplex

Clock Rate 2000000

IP Configuration

IPv4 Address 40.40.40.1

Subnet Mask 255.0.0.0

Tx Ring Limit 10

- Router1 Configuration With Router0:

Router1

Physical **Config** CLI Attributes

**GLOBAL**

Settings

Algorithm Settings

**ROUTING**

Static

RIP

**SWITCHING**

VLAN Database

**INTERFACE**

GigabitEthernet0/0

GigabitEthernet0/1

**Serial0/1/0**

Serial0/1/1

Serial0/1/0

Port Status ☒ On

Duplex ☐ Full Duplex

Clock Rate 1200

IP Configuration

IPv4 Address 40.40.40.2

Subnet Mask 255.0.0.0

Tx Ring Limit 10

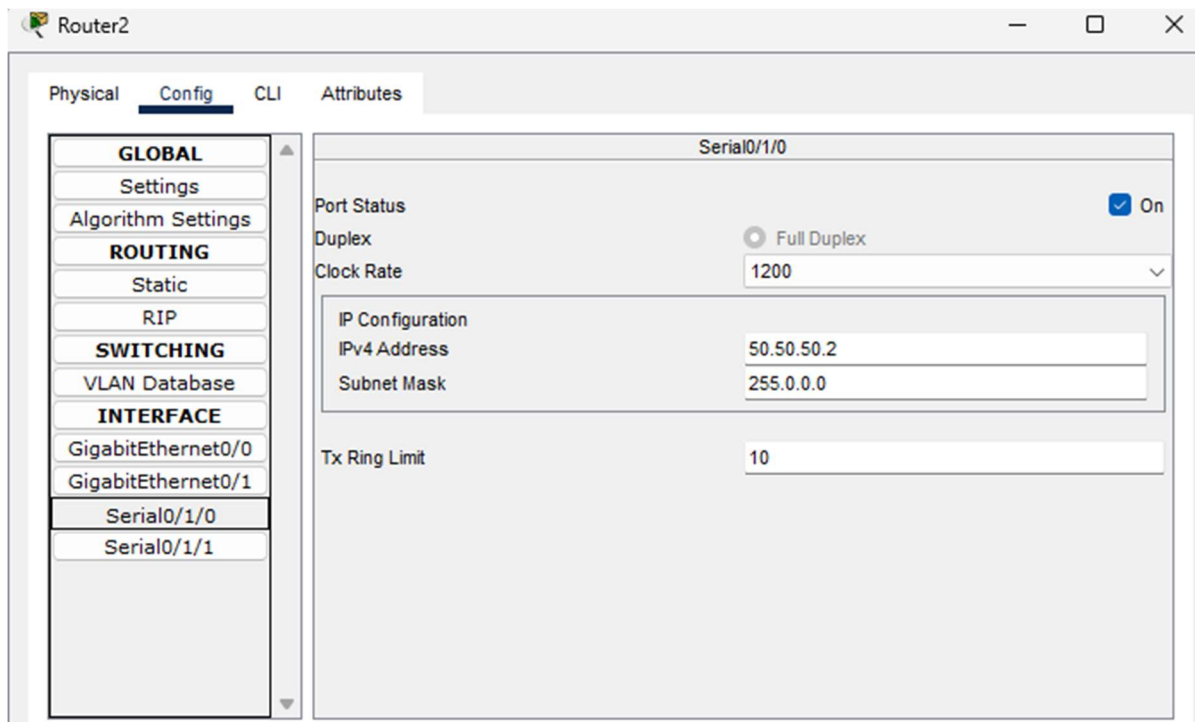


- **Router1 Configuration With Router2:**

The screenshot shows the configuration window for Router1. The 'Config' tab is active, and the 'Serial0/1/1' interface is selected in the left sidebar. The main configuration area displays the following settings:

Serial0/1/1	
Port Status	<input checked="" type="checkbox"/> On
Duplex	<input type="radio"/> Full Duplex
Clock Rate	2000000
IP Configuration	
IPv4 Address	50.50.50.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- **Router2 Configuration With Router1:**



- **Configuring Router0 for RIPv2 as version 2 in the CLI**

```
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#network 50.0.0.0
Router(config-router)#
Router(config-router)#
Router(config-router)#end
Router#
```

- **Configuring Router1 for RIPv2 as version 2 in the CLI**

```
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#network 50.0.0.0
Router(config-router)#
Router(config-router)#
Router(config-router)#end
Router#
```

- **Configuring Router2 for RIPv2 as version 2 in the CLI**

```
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#version 2
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#network 50.0.0.0
Router(config-router)#
Router(config-router)#
Router(config-router)#end
Router#
```

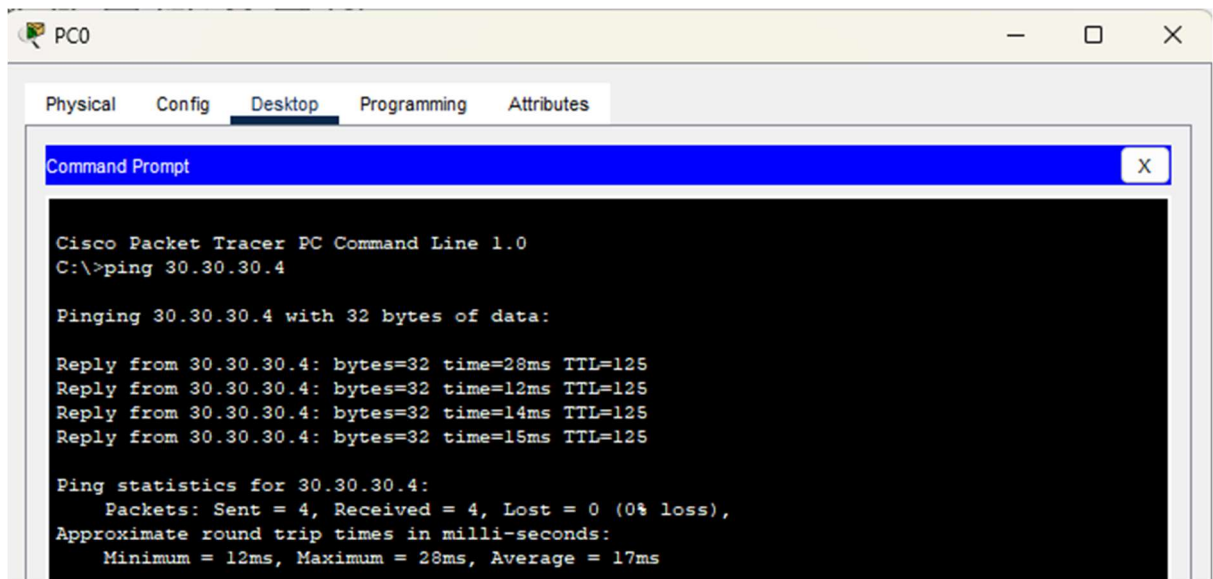
Therefore For All Routers :-

The screenshot shows a network configuration interface with a sidebar on the left and a main content area on the right. The sidebar has tabs for Physical, Config (selected), CLI, and Attributes. Under the Config tab, there are sections for GLOBAL, ROUTING, SWITCHING, and INTERFACE. The ROUTING section is expanded, showing options for Static and RIP (selected). The main content area is titled 'RIP Routing (v2)' and contains a 'Network' input field, an 'Add' button, and a table of network addresses.

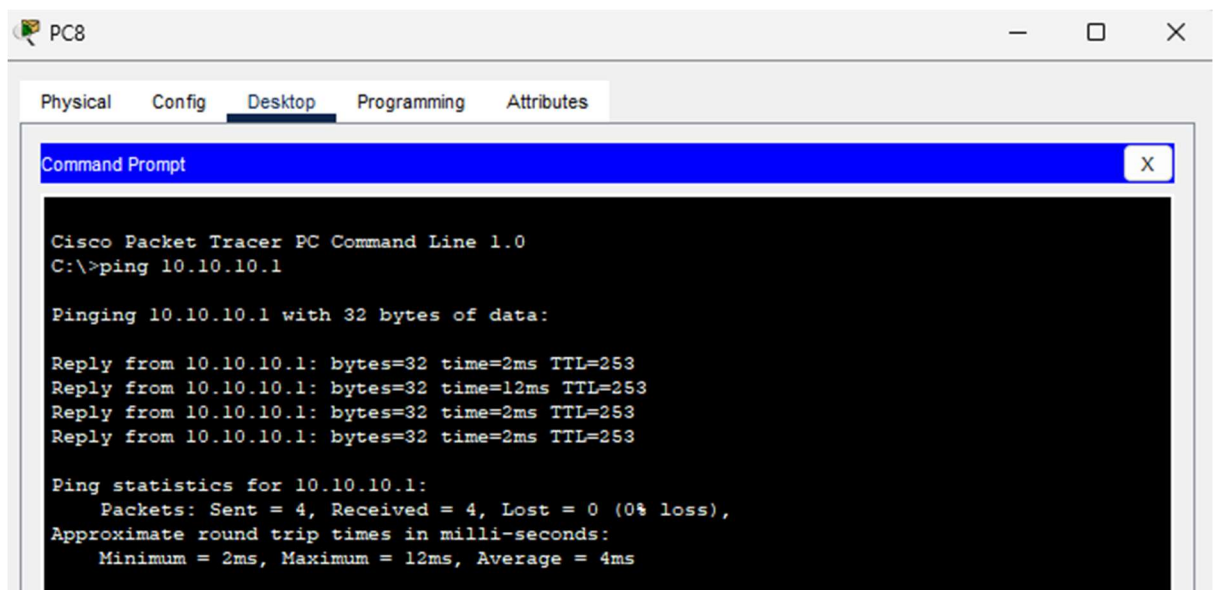
Network Address
10.0.0.0
20.0.0.0
30.0.0.0
40.0.0.0
50.0.0.0

- **Checking the connectivity by using the ping command**

i) Pinging PC8 (IP address 30.30.30.4) from PC0



ii) Pinging PC0 (IP address 10.10.10.1) from PC8



## **Result:-**

Hence the RIPv2 has been studied and verified through the given network.