

# Step-by-Step Procedure for OSPF Configuration in Packet Tracer

## 1) Place network devices

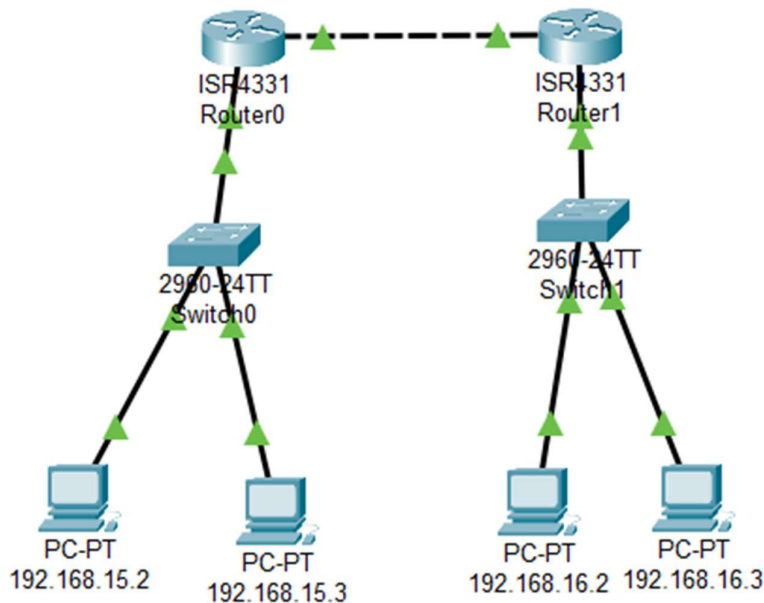
- From the End Devices menu, drag 4 PCs (rename them as C1, C2, C3, C4).
- From the Switches menu, drag 2 switches (rename them Switch1, Switch2).
- From the Routers menu, drag 2 routers (e.g. 4331) — name them Router1 and Router2.

## 2) Connect devices with cables

- Select the **Connections (lightning bolt icon)** tool → choose **Automatically choose connection type**.

- **Connect:**

- C1 → Switch1
- C2 → Switch1
- C3 → Switch2
- C4 → Switch2
- Switch1 → Router1 (GigabitEthernet0/0)
- Switch2 → Router2 (GigabitEthernet0/0)
- Router1 (GigabitEthernet0/1) → Router2 (GigabitEthernet0/1)



### 3) Assign IP addresses to PCs

a. For each PC:

Click the PC → **Desktop tab** → **IP Configuration**.

b. Enter details:

- **C1:** IP = 192.168.15.2, Subnet = 255.255.255.0, Gateway = 192.168.15.1
- **C2:** IP = 192.168.15.3, Subnet = 255.255.255.0, Gateway = 192.168.15.1
- **C3:** IP = 192.168.16.2, Subnet = 255.255.255.0, Gateway = 192.168.16.1
- **C4:** IP = 192.168.16.3, Subnet = 255.255.255.0, Gateway = 192.168.16.1

192.168.15.2

Physical Config **Desktop** Programming Attributes

**IP Configuration**

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.15.2

Subnet Mask 255.255.255.0

Default Gateway 192.168.15.1

DNS Server 0.0.0.0

192.168.15.3

Physical Config **Desktop** Programming Attributes

**IP Configuration**

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.15.3

Subnet Mask 255.255.255.0

Default Gateway 192.168.15.1

DNS Server 0.0.0.0

192.168.16.2

Physical Config **Desktop** Programming Attributes

**IP Configuration**

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.16.2

Subnet Mask 255.255.255.0

Default Gateway 192.168.16.1

DNS Server 0.0.0.0

192.168.16.3

Physical Config **Desktop** Programming Attributes

**IP Configuration**

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.16.3

Subnet Mask 255.255.255.0

Default Gateway 192.168.16.1

DNS Server 0.0.0.0

#### 4) Configure Router1 interfaces

Click the PC → Desktop tab → IP Configuration tab → CLI

```
Router1(config)#  
Router(config)#router bgp 65001  
Router(config-router)#neighbor 10.0.0.2 remote-as 65002  
Router(config-router)#network 192.168.15.0 mask 255.255.255.0  
Router(config-router)#exit  
Router(config)#exit  
Router#  
%SYS-5-CONFIG_I: Configured from console by console  
%BGP-5-ADJCHANGE: neighbor 10.0.0.2 Up
```

The screenshot shows the configuration window for Router0, specifically for the GigabitEthernet0/0/0 interface. The window has tabs for Physical, Config, CLI, and Attributes. The Config tab is active. On the left, there is a sidebar with categories: GLOBAL, ROUTING, SWITCHING, and INTERFACE. Under the INTERFACE category, GigabitEthernet0/0/0 is selected. The main area displays the configuration for this interface. The Port Status is set to On. Bandwidth is set to 100 Mbps. Duplex is set to Full Duplex. The MAC Address is 0003.E4DE.1B01. The IP Configuration section shows the IPv4 Address as 192.168.15.1 and the Subnet Mask as 255.255.255.0. The Tx Ring Limit is set to 10.

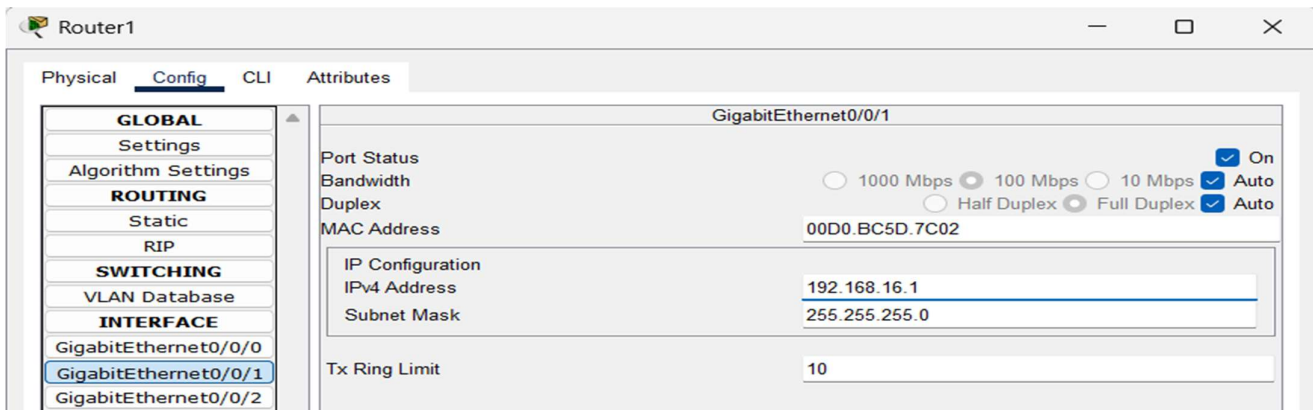
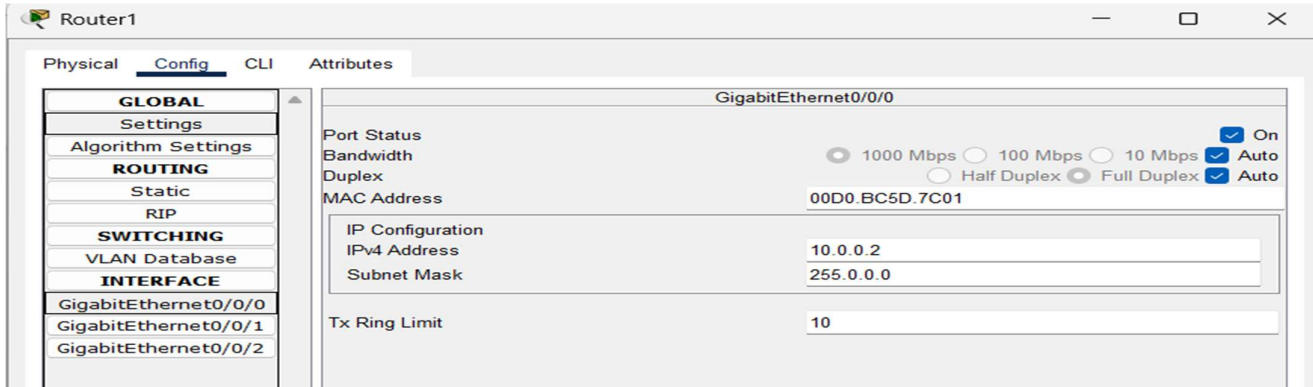
GigabitEthernet0/0/0	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input type="radio"/> 1000 Mbps <input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	0003.E4DE.1B01
IP Configuration	
IPv4 Address	192.168.15.1
Subnet Mask	255.255.255.0
Tx Ring Limit	10

The screenshot shows the configuration window for Router0, specifically for the GigabitEthernet0/0/1 interface. The window has tabs for Physical, Config, CLI, and Attributes. The Config tab is active. On the left, there is a sidebar with categories: GLOBAL, ROUTING, SWITCHING, and INTERFACE. Under the INTERFACE category, GigabitEthernet0/0/1 is selected. The main area displays the configuration for this interface. The Port Status is set to On. Bandwidth is set to 1000 Mbps. Duplex is set to Full Duplex. The MAC Address is 0003.E4DE.1B02. The IP Configuration section shows the IPv4 Address as 10.0.0.1 and the Subnet Mask as 255.0.0.0. The Tx Ring Limit is set to 10.

GigabitEthernet0/0/1	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input checked="" type="radio"/> 1000 Mbps <input 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	0003.E4DE.1B02
IP Configuration	
IPv4 Address	10.0.0.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

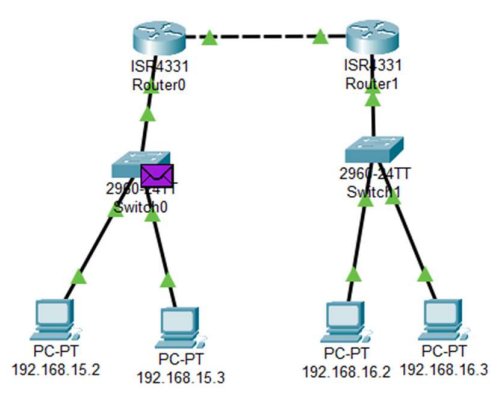
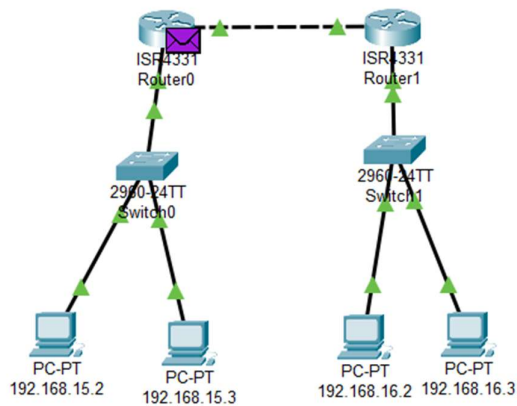
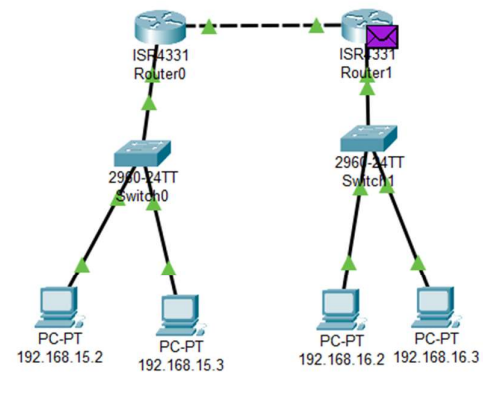
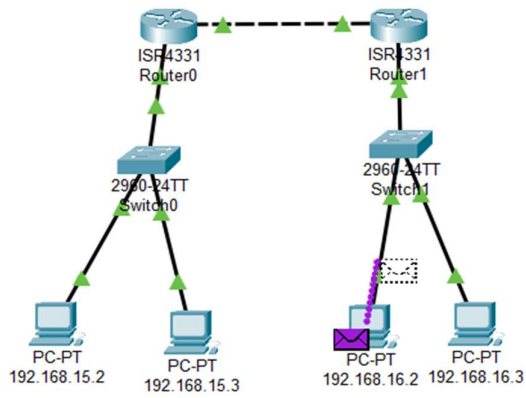
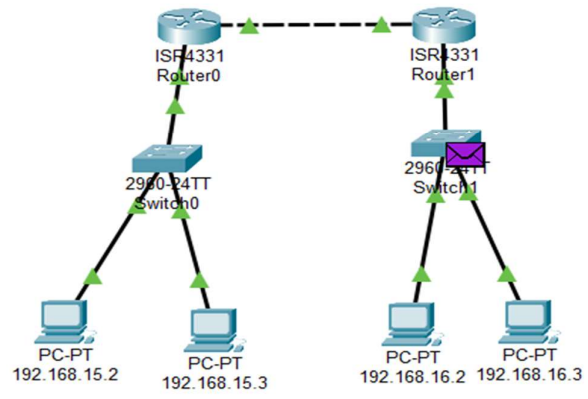
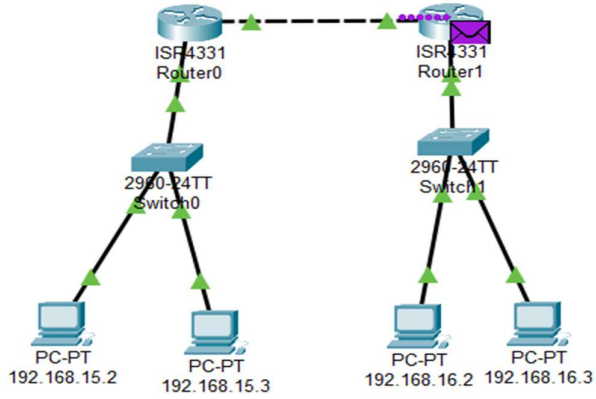
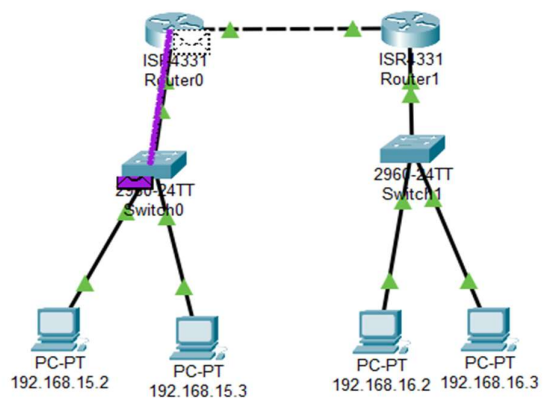
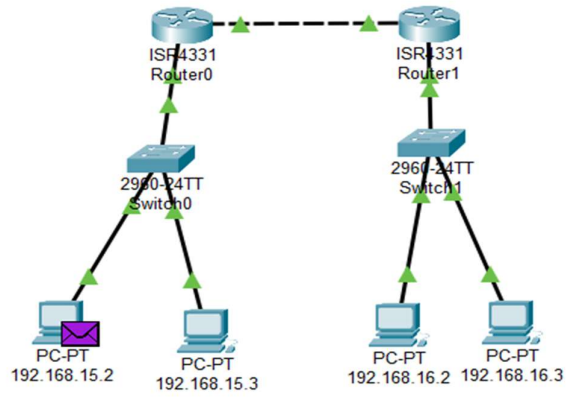
## 5) Configure Router2 interfaces

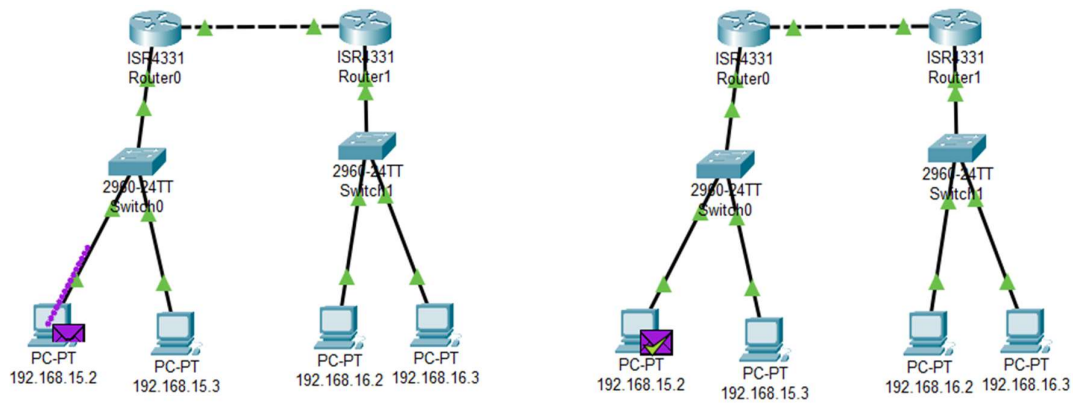
```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router bgp 65002
Router(config-router)#neighbor 10.0.0.1 remote-as 65001
Router(config-router)#network 192.168.16.0 mask 255.255.255.0
Router(config-router)#
Router(config-router)#
Router(config-router)#exit
Router(config)#exit
```



## 6) Real-Time and Simulation Mode:

- Go to Simulation Mode:
- Use "Add Simple PDU" tool.  
Click on sender PC and receiver PC to send a packet.
- Run the simulation.





### Simulation Panel

#### Event List

Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	192.168.15.2	ICMP
	0.001	192.168.15.2	Switch0	ICMP
	0.002	Switch0	Router0	ICMP
	0.003	Router0	Router1	ICMP
	0.004	Router1	Switch1	ICMP
	0.005	Switch1	192.168.16.2	ICMP
	0.006	192.168.16.2	Switch1	ICMP
	0.007	Switch1	Router1	ICMP
	0.008	Router1	Router0	ICMP
	0.009	Router0	Switch0	ICMP
	0.010	Switch0	192.168.15.2	ICMP
Visible	0.995	--	Router0	RIPv1
Visible	0.995	--	Router0	RIPv1
	0.996	Router0	Switch0	RIPv1
	0.996	Router0	Router1	RIPv1
	0.997	Switch0	192.168.15.2	RIPv1

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	192.168.15.2	192.168.16.2	ICMP		0.000	N	0	(edit)	(delete)