

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

## 1) Place network devices

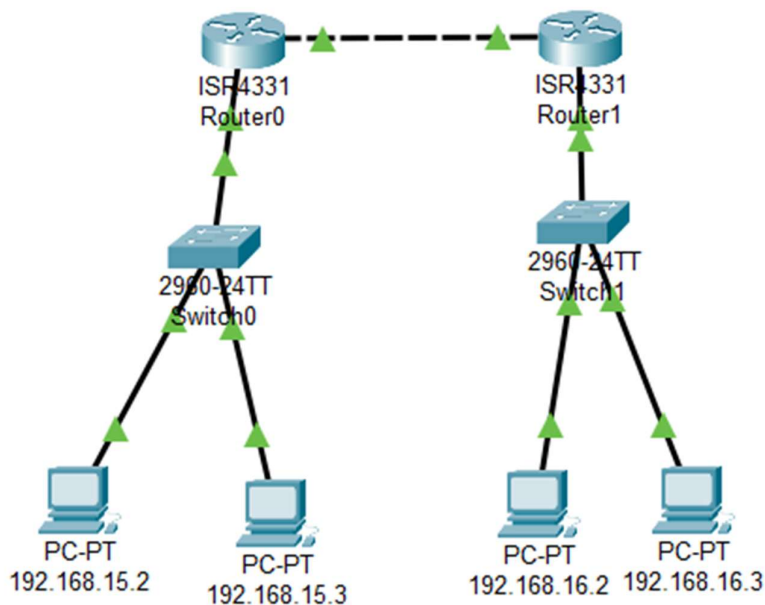
- From the End Devices menu, drag 4 PCs (rename them as C1, C2, C3, C4).
- From the Switches menu, drag 2 switches (rename them Switch1, Switch2).
- From the Routers menu, drag 2 routers (e.g. 4331) — name them Router1 and Router2.

## 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**

```
Router (config)#  
Router (config)#  
Router (config)#router ospf 1  
Router (config-router)#network 192.168.15.0 0.0.0.255 area 0  
Router (config-router)#exit  
Router (config)#  
Router (config)#  
Router (config)#
```

The screenshot shows the configuration window for Router0, specifically the 'Config' tab for interface GigabitEthernet0/0/0. The left sidebar contains a tree view with categories: GLOBAL, ROUTING, SWITCHING, and INTERFACE. Under INTERFACE, GigabitEthernet0/0/0 is selected. The main area displays the following settings:

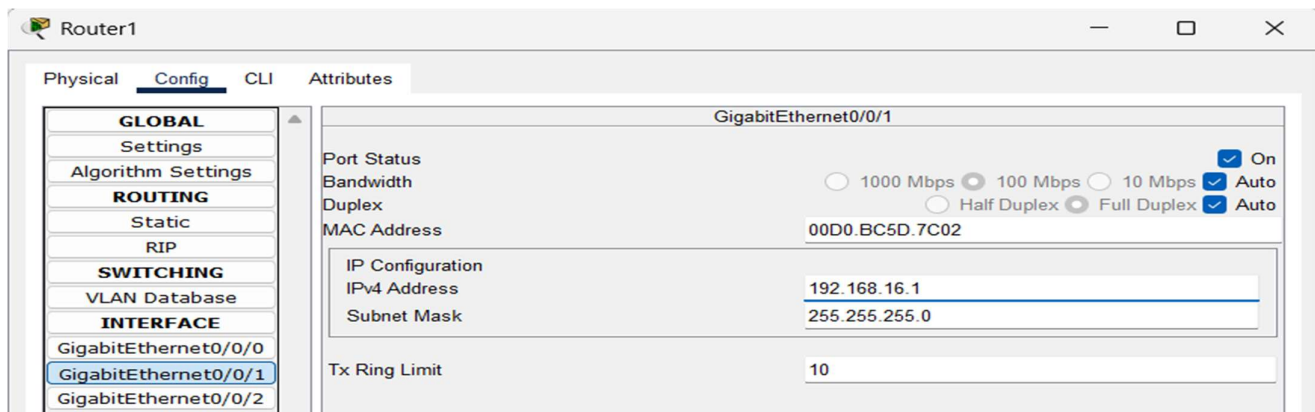
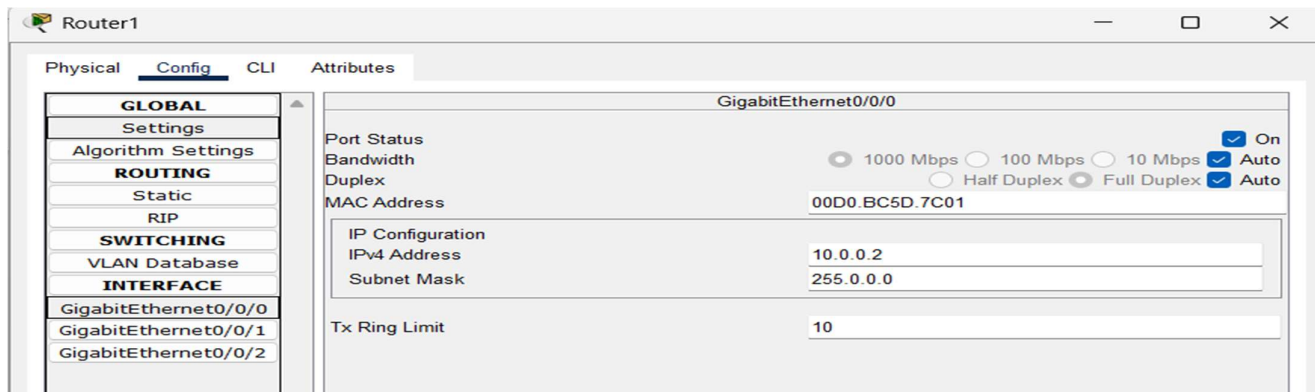
- Port Status: ☒ On
- Bandwidth: ☐ 1000 Mbps ☒ 100 Mbps ☐ 10 Mbps
- Duplex: ☐ Half Duplex ☒ Full Duplex
- MAC Address: 0003.E4DE.1B01
- IP Configuration:
  - IPv4 Address: 192.168.15.1
  - Subnet Mask: 255.255.255.0
- Tx Ring Limit: 10

The screenshot shows the configuration window for Router0, specifically the 'Config' tab for interface GigabitEthernet0/0/1. The left sidebar is the same as the previous screenshot, with GigabitEthernet0/0/1 selected under the INTERFACE category. The main area displays the following settings:

- Port Status: ☒ On
- Bandwidth: ☒ 1000 Mbps ☐ 100 Mbps ☐ 10 Mbps
- Duplex: ☐ Half Duplex ☒ Full Duplex
- 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

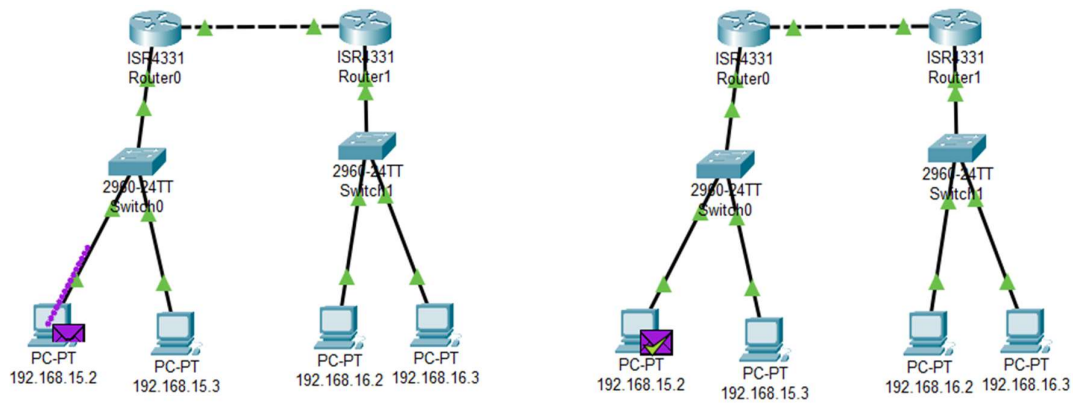
```
Router(config)#  
Router(config)#  
Router(config)#  
Router(config)#router ospf 1  
Router(config-router)#network 192.168.16.0 0.0.0.255 area 0  
Router(config-router)#exit  
Router(config)#
```



## 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)