

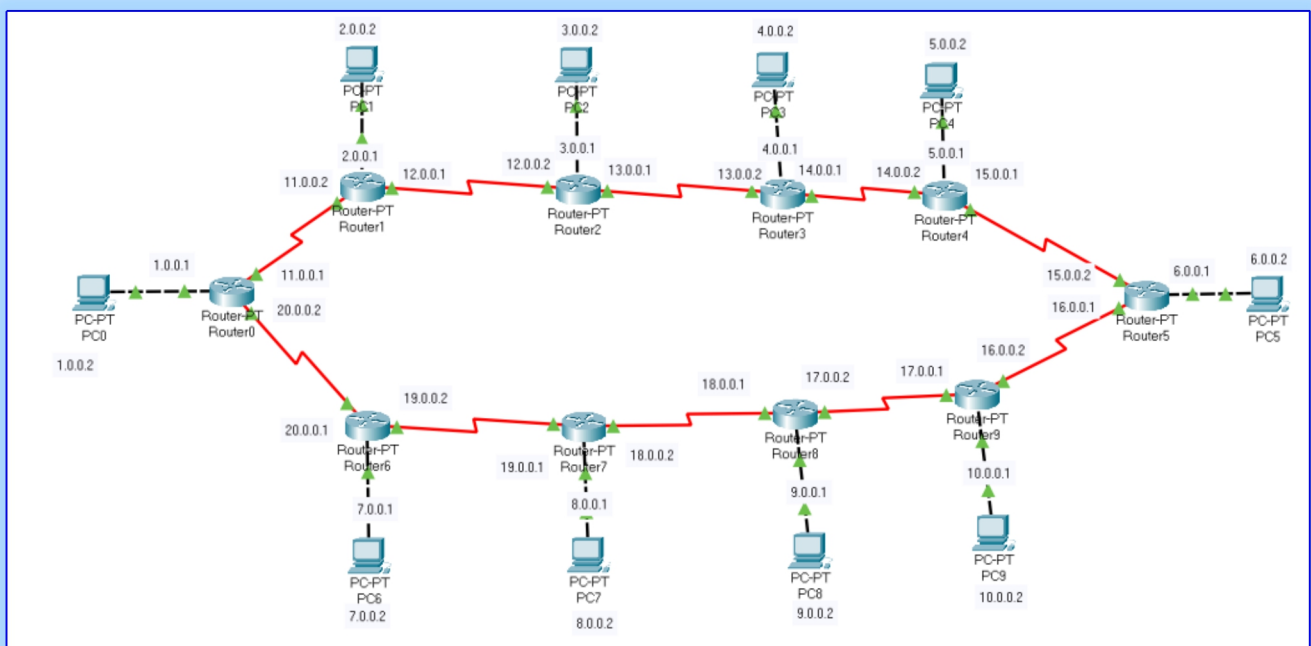
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DATE - 9-6-2021

# OSPF TASK

## STEPS INVOLVED

- FIRST USING DEVICES PRESENT IN PACKET TRACER PREPARE THE NECESSARY TOPOLOGY.
- ASSIGN THE IPs TO PCs AND ROUTERS AND ALSO ASSIGN THE OSPF PACKET FOR THE INDIVIDUAL ROUTERS.
- NOW CREATE A PACKET AND SHOW SUCCESSFUL TRANSMISSION OF THE PACKET.

## TOPOLOGY



(PLEASE ZOOM IN)

## ASSIGNING THE IPs TO THE PCs

The screenshot shows the configuration window for PC0. The 'Config' tab is active, and the 'IP Configuration' section is expanded. The 'Interface' dropdown is set to 'FastEthernet0'. Under 'IP Configuration', the 'Static' radio button is selected. The fields are filled with: IPv4 Address: 1.0.0.2, Subnet Mask: 255.0.0.0, Default Gateway: 1.0.0.1, and DNS Server: 0.0.0.0. Under 'IPv6 Configuration', the 'Static' radio button is also selected. The fields are: IPv6 Address: (empty), Link Local Address: FE80::20C:CFFF:FE5B:7B0D, Default Gateway: (empty), and DNS Server: (empty). The '802.1X' section has 'Use 802.1X Security' unchecked, 'Authentication' set to 'MD5', and 'Username' and 'Password' fields empty. A 'Top' button is at the bottom left.

PC0

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 1.0.0.2

Subnet Mask: 255.0.0.0

Default Gateway: 1.0.0.1

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::20C:CFFF:FE5B:7B0D

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

## ASSIGNING IPs TO THE ROUTERS

The screenshot shows the configuration window for Router0. The 'Config' tab is active, and the 'FastEthernet0/0' interface is selected in the left sidebar. The 'FastEthernet0/0' configuration panel shows: Port Status: On (checked), Bandwidth: 100 Mbps (selected), Duplex: Full Duplex (selected), MAC Address: 0090.2B0D.2521, IP Configuration: IPv4 Address: 1.0.0.1, Subnet Mask: 255.0.0.0, and Tx Ring Limit: 10. The 'Equivalent IOS Commands' section at the bottom shows a terminal session with the following commands: Router>enable, Router#, Router#configure terminal, Enter configuration commands, one per line. End with CNTL/Z., Router(config)#interface FastEthernet0/0, and Router(config-if)#. A 'Top' button is at the bottom left.

Router0

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

FastEthernet0/0

Port Status: ☒ On

Bandwidth: ☒ 100 Mbps ☐ 10 Mbps

Duplex: ☐ Half Duplex ☒ Full Duplex

MAC Address: 0090.2B0D.2521

IP Configuration

IPv4 Address: 1.0.0.1

Subnet Mask: 255.0.0.0

Tx Ring Limit: 10

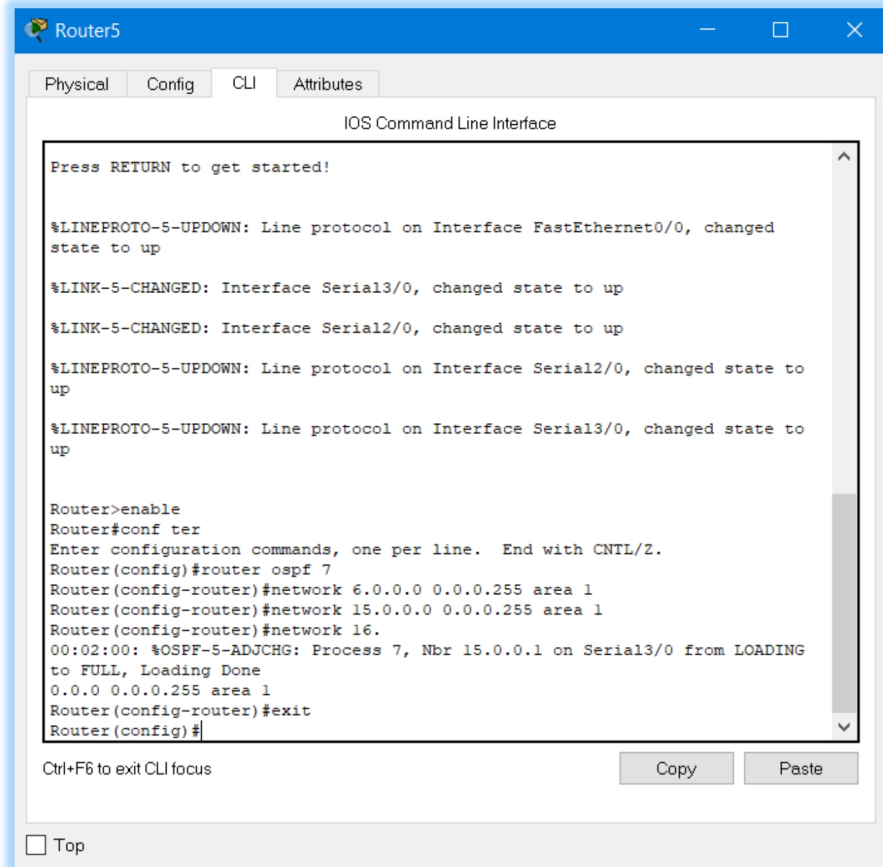
Equivalent IOS Commands

```
to FULL, Loading Done

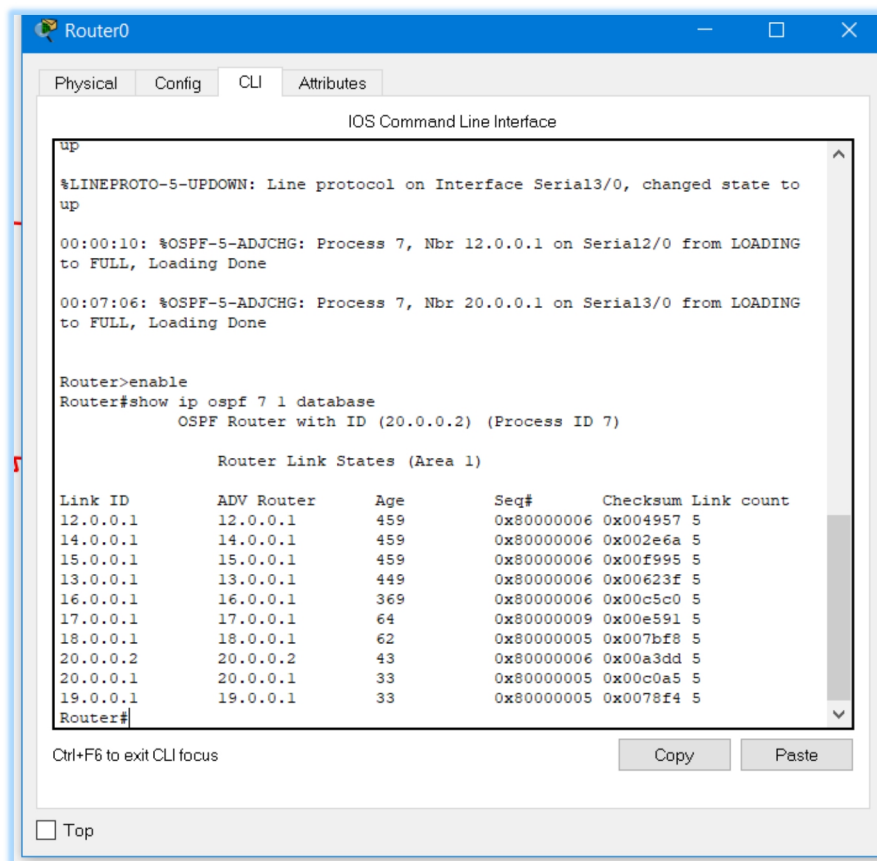
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

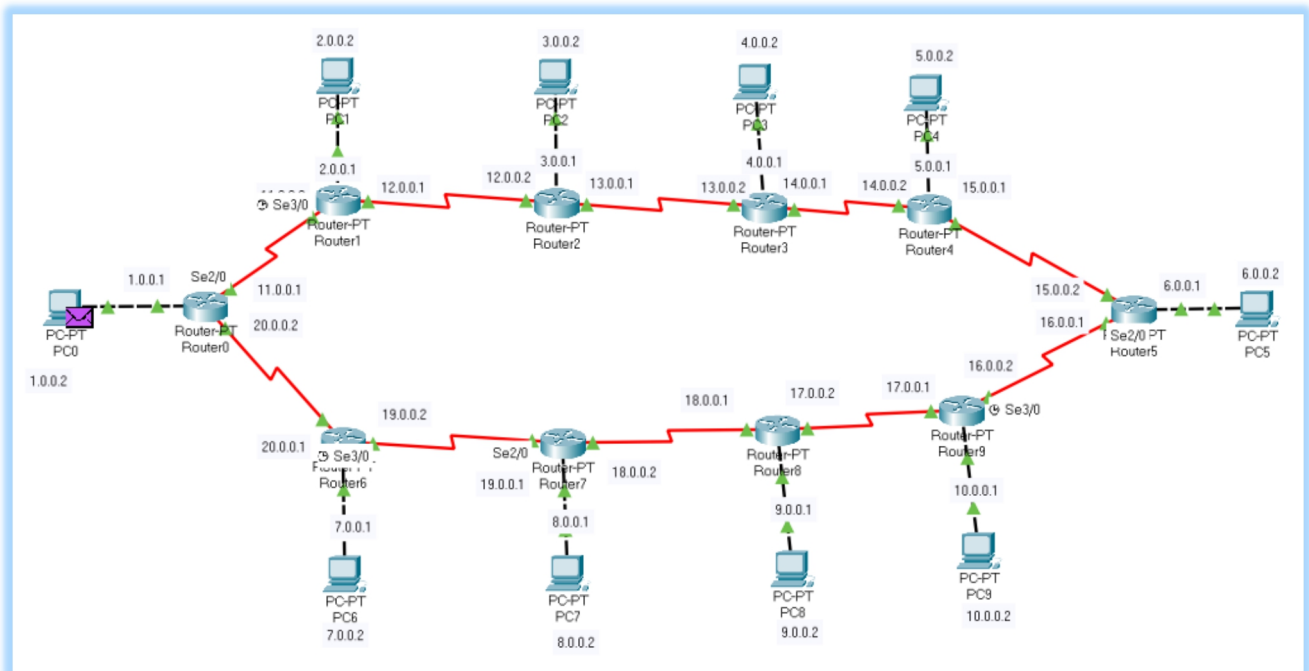
## ASSIGNING THE OSPF PACKET FOR THE ROUTERS



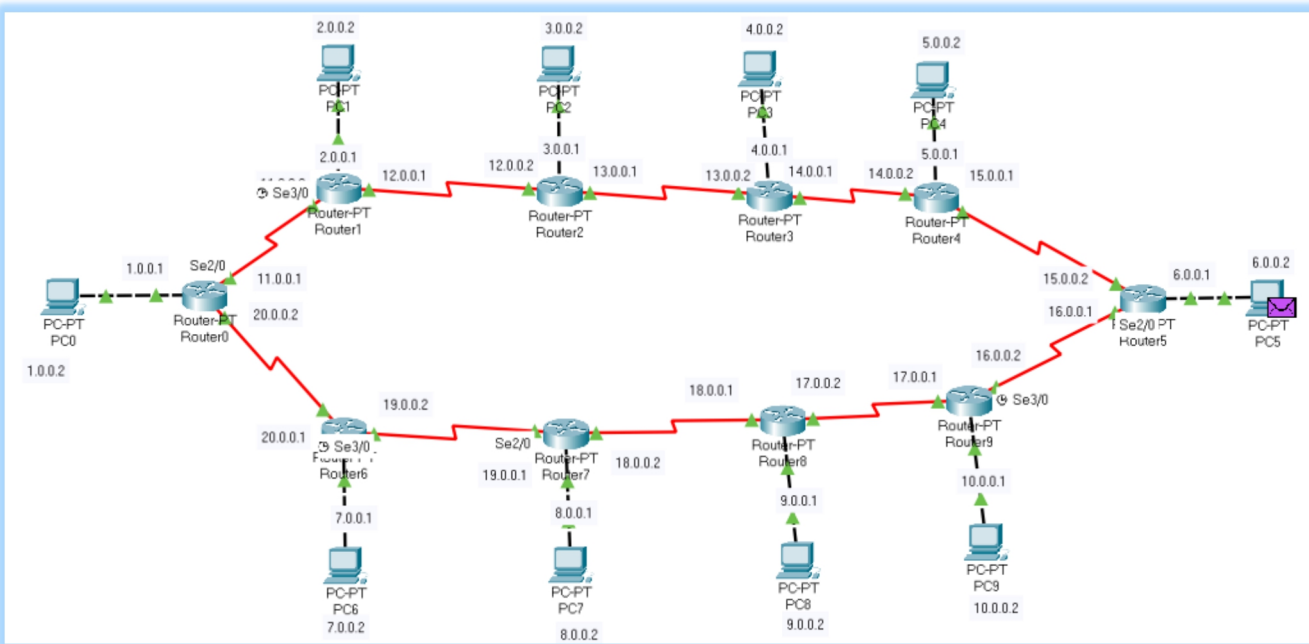
## THE OSPF DATABASE AFTER COMPLETE ASSIGNMENTS



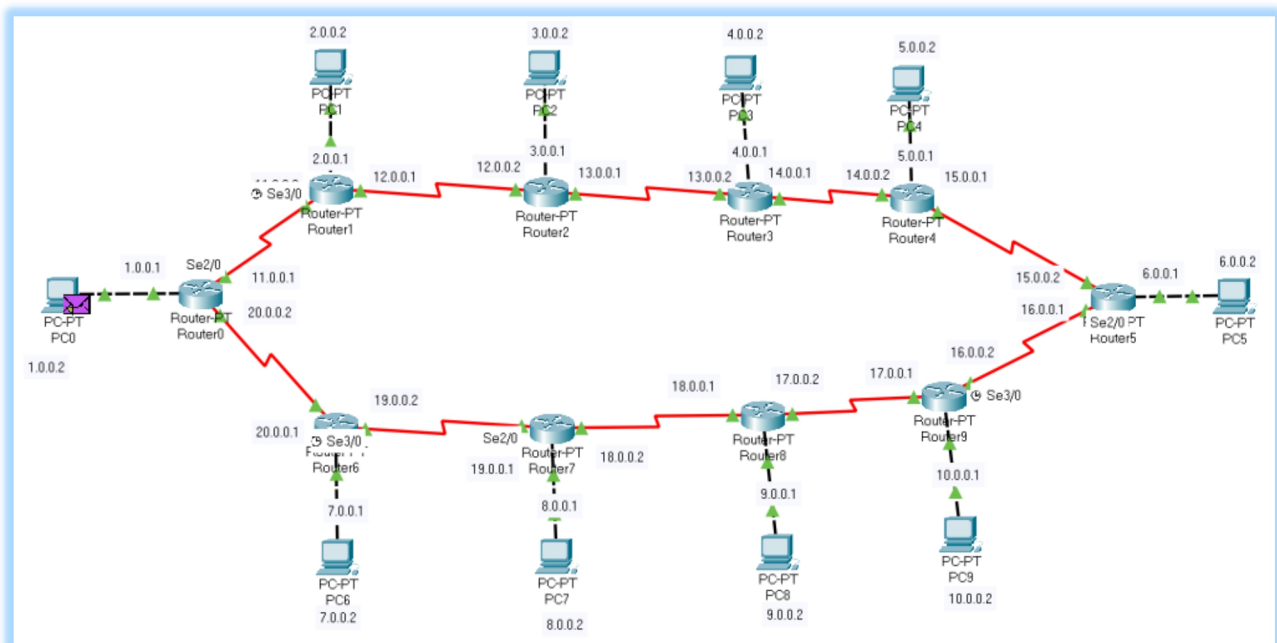
## CREATE A PACKET



## PACKET REACHES THE DESTINATION



## SUCCESSFUL PACKET TRANSMISSION



## STEPS INVOLVED IN PACKET TRANSMISSION

Simulation Panel				
Event List				
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	—	PC0	ICMP
	0.001	PC0	Router0	ICMP
	0.002	Router0	Router6	ICMP
	0.003	Router6	Router7	ICMP
	0.004	Router7	Router8	ICMP
	0.005	Router8	Router9	ICMP
	0.006	Router9	Router5	ICMP
	0.007	Router5	PC5	ICMP
	0.008	PC5	Router5	ICMP
	0.009	Router5	Router4	ICMP
	0.010	Router4	Router3	ICMP
	0.011	Router3	Router2	ICMP
	0.012	Router2	Router1	ICMP
	0.013	Router1	Router0	ICMP
	0.014	Router0	PC0	ICMP

## IP TABLE FOR THE TOPOLOGY

Devices	Interface	IP address
Router 0	Se2/0	11.0.0.1
	Se3/0	20.0.0.2
Router1	Se2/0	12.0.0.1
	Se3/0	11.0.0.2
Router 2	Se2/0	13.0.0.1
	Se3/0	12.0.0.2
Router 3	Se2/0	14.0.0.1
	Se3/0	13.0.0.2
Router 4	Se2/0	15.0.0.1
	Se3/0	14.0.0.2
Router 5	Se2/0	16.0.0.1
	Se3/0	15.0.0.2
Router 6	Se2/0	20.0.0.1
	Se3/0	19.0.0.2
Router 7	Se2/0	19.0.0.1
	Se3/0	18.0.0.2
Router 8	Se2/0	18.0.0.1
	Se3/0	17.0.0.2
Router 9	Se2/0	17.0.0.1
	Se3/0	16.0.0.2

PC0	Fa0/0	1.0.0.2
PC1	Fa0/0	2.0.0.2
PC2	Fa0/0	3.0.0.2
PC3	Fa0/0	4.0.0.2
PC4	Fa0/0	5.0.0.2
PC5	Fa0/0	6.0.0.2
PC6	Fa0/0	7.0.0.2
PC7	Fa0/0	8.0.0.2
PC8	Fa0/0	9.0.0.2
PC9	Fa0/0	10.0.0.2