

Karthick VM

Batch – CIS -1.3

Mock Assessment -2 – Networks

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You are a Network Engineer working for LTIMindtree.,

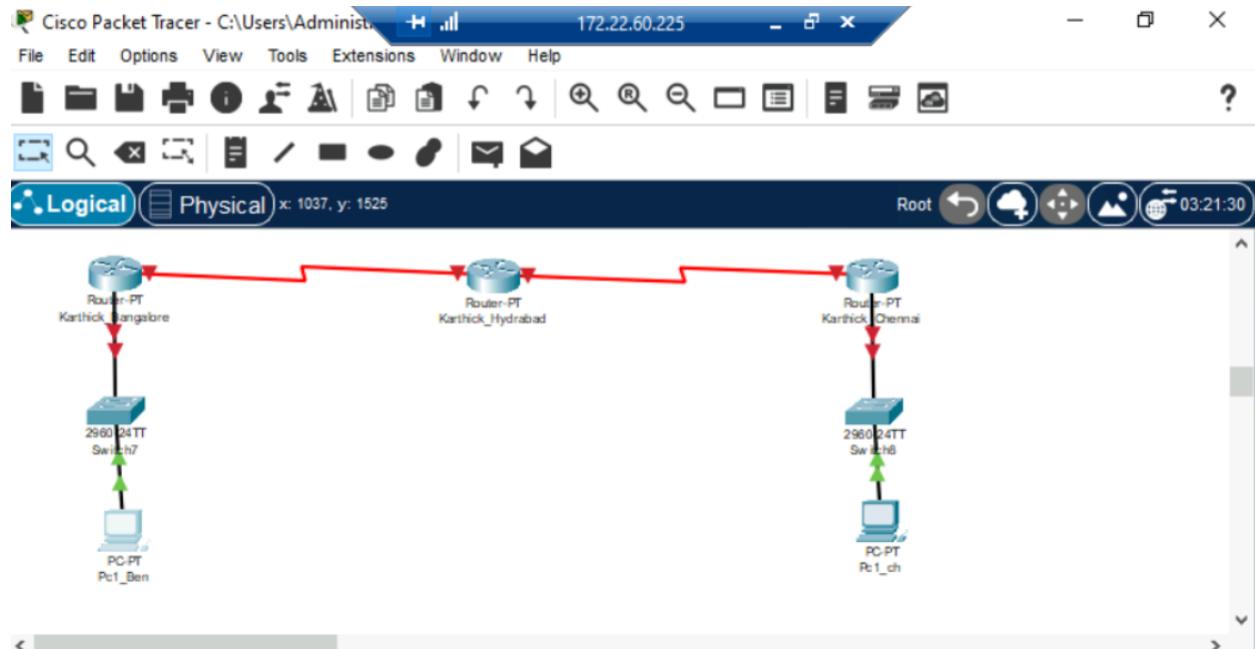
a growing IT company with three offices:

- Head Office (HO) – Located in Bangalore
- Branch Office 1 (BO1) – Located in Hyderabad
- Branch Office 2 (BO2) – Located in Chennai

Each office is connected through leased lines, and you are tasked to implement a dynamic routing protocol to ensure that all networks in all branches can communicate efficiently.

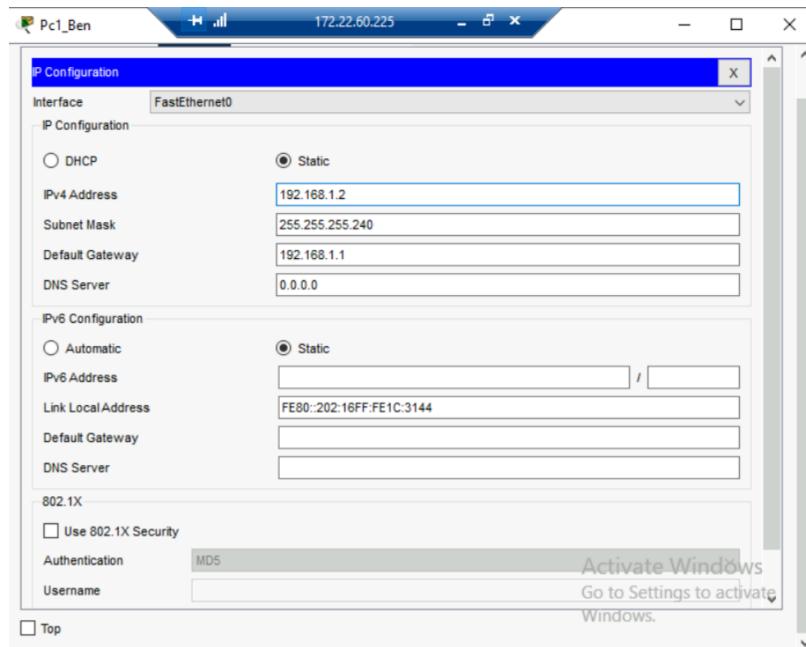
1.Create Topology, Assign IP Address, Give name to Routers(Yourname\_Bangalore),Enable secret and telnet password.

- Connection Establishment

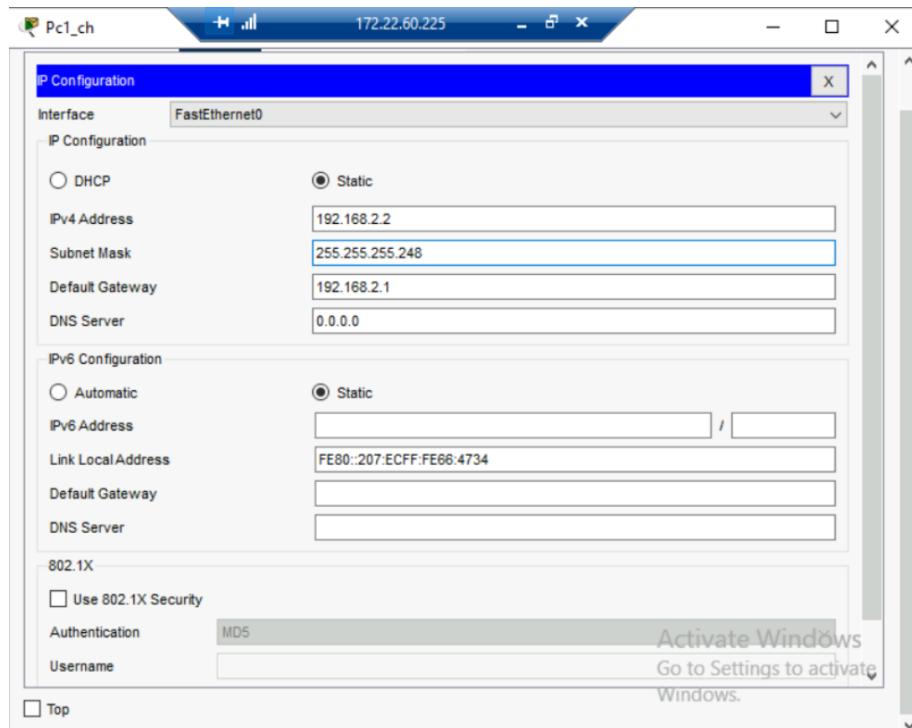


- IP Addressing

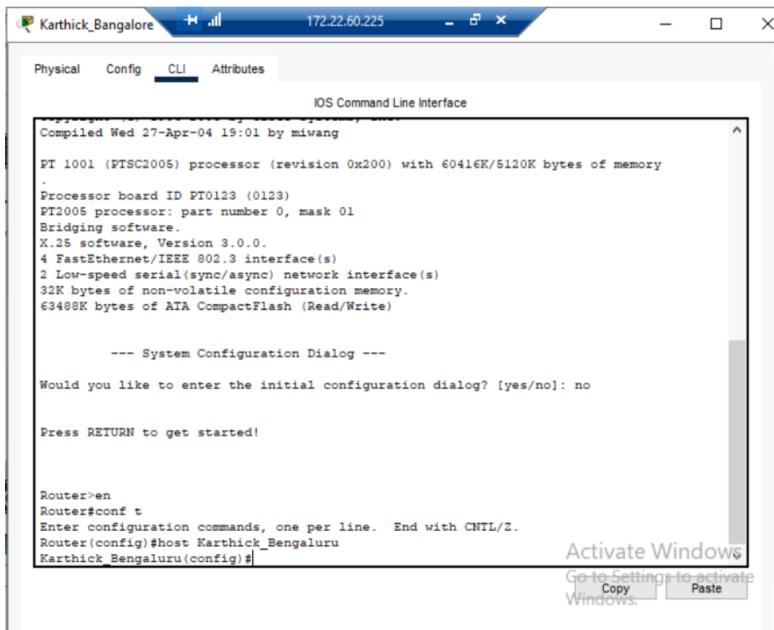
- PC1 – Bengaluru



- Pc1 - Chennai



- Give name to Routers(Yourname\_Bangalore)



```

Compiled Wed 27-Apr-04 19:01 by miwang

PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

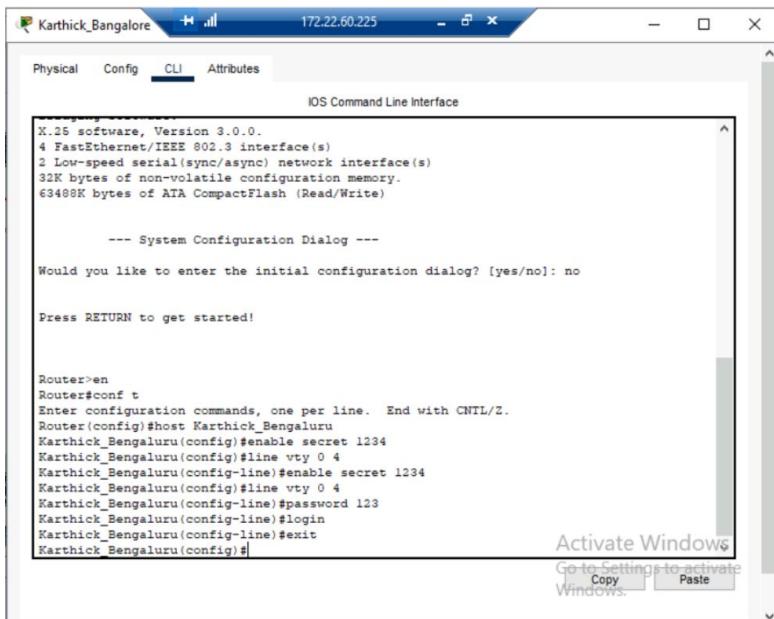
Press RETURN to get started!

Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host Karthick_Bengaluru
Karthick Bengaluru(config)#

```

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- Enable Password



```

X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#host Karthick_Bengaluru
Karthick_Bengaluru(config)#enable secret 1234
Karthick_Bengaluru(config)#line vty 0 4
Karthick_Bengaluru(config-line)#enable secret 1234
Karthick_Bengaluru(config-line)#line vty 0 4
Karthick_Bengaluru(config-line)#password 123
Karthick_Bengaluru(config-line)#login
Karthick_Bengaluru(config-line)#exit
Karthick_Bengaluru(config)#

```

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- Configuring the router

#### ○ Bengaluru

Karthick\_Bangalore 172.26.225

IOS Command Line Interface

```
Karthick_Bangaluru(config)#  
Karthick_Bangaluru(config-if)#int fa0/0  
Karthick_Bangaluru(config-if)#ip address 192.168.1.1 255.255.255.240  
Karthick_Bangaluru(config-if)#no shutdown  
Karthick_Bangaluru(config-if)#exit  
Karthick_Bangaluru(config)#int se2/0  
Karthick_Bangaluru(config-if)#ip address 10.0.0.1 255.0.0.0  
Karthick_Bangaluru(config-if)#no shutdown  
  
*LINK-5-CHANGED: Interface Serial2/0, changed state to down  
Karthick_Bangaluru(config-if)#exit  
Karthick_Bangaluru(config)#  
Karthick_Bangaluru(config)#  
Karthick_Bangaluru(config)#  
Karthick_Bangaluru(config)#
```

- Hyderabad

Karthick\_Hydrabad

172.22.60.225

IOS Command Line Interface

```
Press RETURN to get started!

Router>en
Router>conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Karthick_Hydrabad
Karthick_Hydrabad(config)#int se2/0
Karthick_Hydrabad(config-if)#ip address 10.0.0.2 255.0.0.0
Karthick_Hydrabad(config-if)#no shutdown

Karthick_Hydrabad(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Karthick_Hydrabad(config-if)#exit
Karthick_Hydrabad(config)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Karthick_Hydrabad(config)#int se3/0
Karthick_Hydrabad(config-if)#ip address 11.0.0.1 255.0.0.0
Karthick_Hydrabad(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Karthick_Hydrabad(config-if)#exit
Karthick_Hydrabad(config)#

 Top
```

- Chennai

```

4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Karthick_Chennai
Karthick_Chennai(config)#int se3/0
Karthick_Chennai(config-if)#ip address 11.0.0.2 255.0.0.0
Karthick_Chennai(config-if)#no shutdown

Karthick_Chennai(config-if)#
*LINK-5-CHANGED: Interface Serial3/0, changed state to up
Karthick_Chennai(config-if)#exit
Karthick_Chennai(config)#

```

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Top

## 2. Configure OSPF with Same Area-0 and show routing table, neighbor table

- Configuring ospf routing protocol at routers → Bengaluru

```

!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
password 123
login
!
!
!
end

Karthick_Bengaluru(config)#
*LINK-5-CHANGED: Interface Serial2/0, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

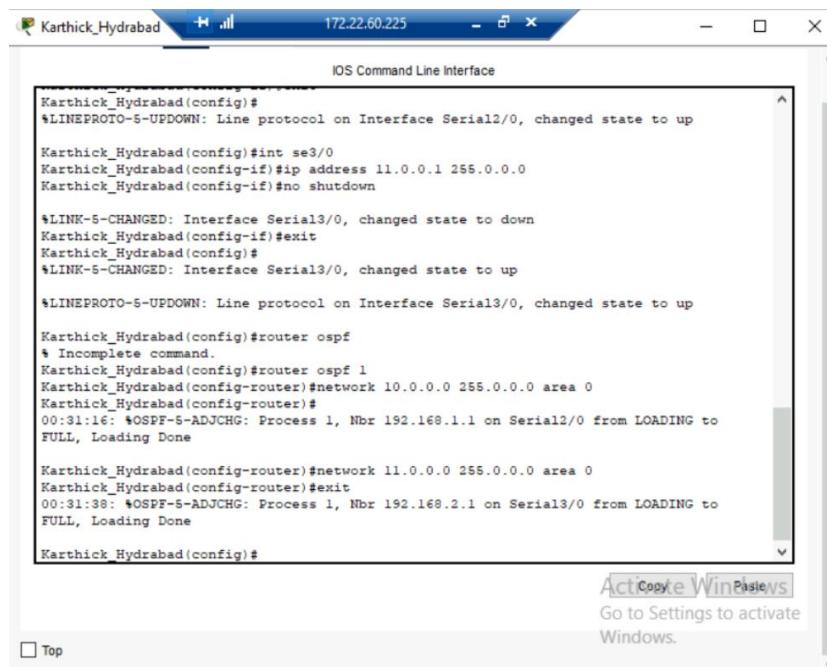
Karthick_Bengaluru(config)#router ospf 1
Karthick_Bengaluru(config-router)#network 192.168.0.0 255.255.255.240 area 0
Karthick_Bengaluru(config-router)#network 10.0.0.0 255.255.255.240 area 0
Karthick_Bengaluru(config-router)#exit
Karthick_Bengaluru(config)#

```

Go to Settings to activate Windows.

Top

- Hyderabad



```

IOS Command Line Interface

Karthick_Hyderabad(config)#
*LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Karthick_Hyderabad(config)#int se3/0
Karthick_Hyderabad(config-if)#ip address 11.0.0.1 255.0.0.0
Karthick_Hyderabad(config-if)#no shutdown

*LINK-5-CHANGED: Interface Serial3/0, changed state to down
Karthick_Hyderabad(config-if)#exit
Karthick_Hyderabad(config)#
*LINK-5-CHANGED: Interface Serial3/0, changed state to up

*LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Karthick_Hyderabad(config)##router ospf
* Incomplete command.
Karthick_Hyderabad(config)##router ospf 1
Karthick_Hyderabad(config-router)#network 10.0.0.0 255.0.0.0 area 0
Karthick_Hyderabad(config-router)#
00:31:16: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.1.1 on Serial2/0 from LOADING to
FULL, Loading Done

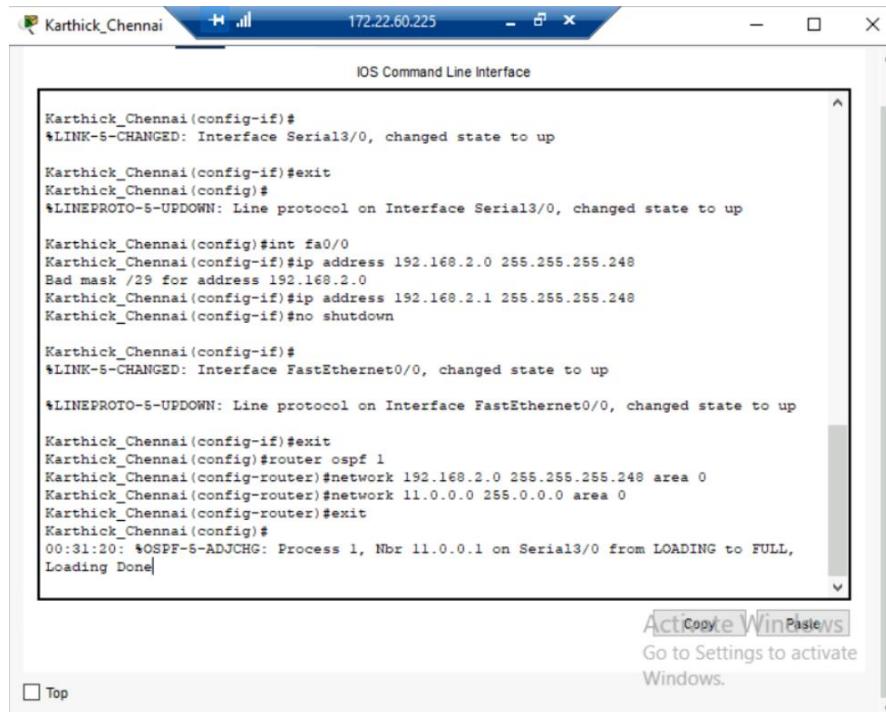
Karthick_Hyderabad(config-router)#network 11.0.0.0 255.0.0.0 area 0
Karthick_Hyderabad(config-router)#exit
00:31:38: %OSPF-5-ADJCHG: Process 1, Nbr 192.168.2.1 on Serial3/0 from LOADING to
FULL, Loading Done

Karthick_Hyderabad(config)#

```

Top      [Copy](#) [Paste](#) [Windows](#)  
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- Chennai



```

IOS Command Line Interface

Karthick_Chennai(config-if)#
*LINK-5-CHANGED: Interface Serial3/0, changed state to up

Karthick_Chennai(config-if)#exit
Karthick_Chennai(config)#
*LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Karthick_Chennai(config)#int fa0/0
Karthick_Chennai(config-if)#ip address 192.168.2.0 255.255.255.248
Bad mask /29 for address 192.168.2.0
Karthick_Chennai(config-if)#ip address 192.168.2.1 255.255.255.248
Karthick_Chennai(config-if)#no shutdown

Karthick_Chennai(config-if)#
*LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Karthick_Chennai(config-if)#exit
Karthick_Chennai(config)##router ospf 1
Karthick_Chennai(config-router)#network 192.168.2.0 255.255.255.248 area 0
Karthick_Chennai(config-router)#network 11.0.0.0 255.0.0.0 area 0
Karthick_Chennai(config-router)#
00:31:20: %OSPF-5-ADJCHG: Process 1, Nbr 11.0.0.1 on Serial3/0 from LOADING to FULL,
Loading Done

```

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- Neighbor Table

```
Karthick_Chennai#  
Karthick_Chennai#  
Karthick_Chennai#show ip ospf neighbor  
  
Neighbor ID      Pri   State        Dead Time     Address       Interface  
11.0.0.1          0     FULL/      -           00:00:33    11.0.0.1     Serial3/0  
Karthick_Chennai#
```

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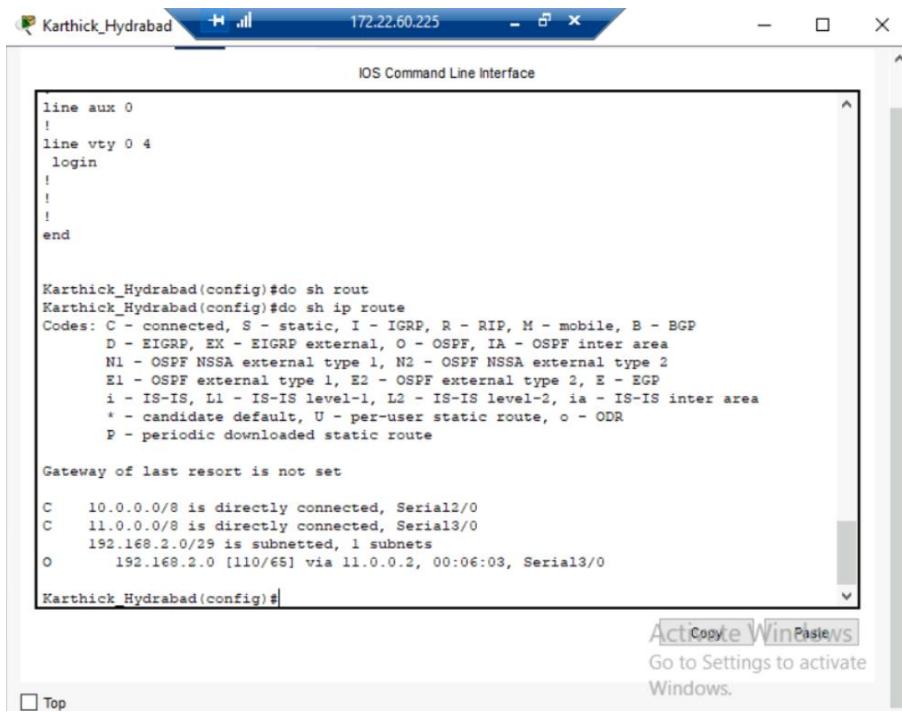
```
Karthick_Bengaluru(config)#do show ip ospf neighbor  
  
Neighbor ID      Pri   State        Dead Time     Address       Interface  
11.0.0.1          0     FULL/      -           00:00:36    10.0.0.2     Serial2/0  
Karthick_Bengaluru(config)#  
Karthick_Bengaluru(config)#  
Karthick_Bengaluru(config)#
```

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```
Karthick_Hyderabad(config)#do show ip ospf neighbor  
  
Neighbor ID      Pri   State        Dead Time     Address       Interface  
192.168.2.1      0     FULL/      -           00:00:38    11.0.0.2     Serial3/0  
192.168.1.1      0     FULL/      -           00:00:36    10.0.0.1     Serial2/0  
Karthick_Hyderabad(config)#
```

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- Routing Table



```

line aux 0
!
line vty 0 4
login
!
!
end

Karthick_Hyderabad(config)#do sh rout
Karthick_Hyderabad(config)#do sh ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
      i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
      * - candidate default, U - per-user static route, o - ODR
      P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, Serial2/0
C    11.0.0.0/8 is directly connected, Serial3/0
      192.168.2.0/29 is subnetted, 1 subnets
O      192.168.2.0 [110/65] via 11.0.0.2, 00:06:03, Serial3/0

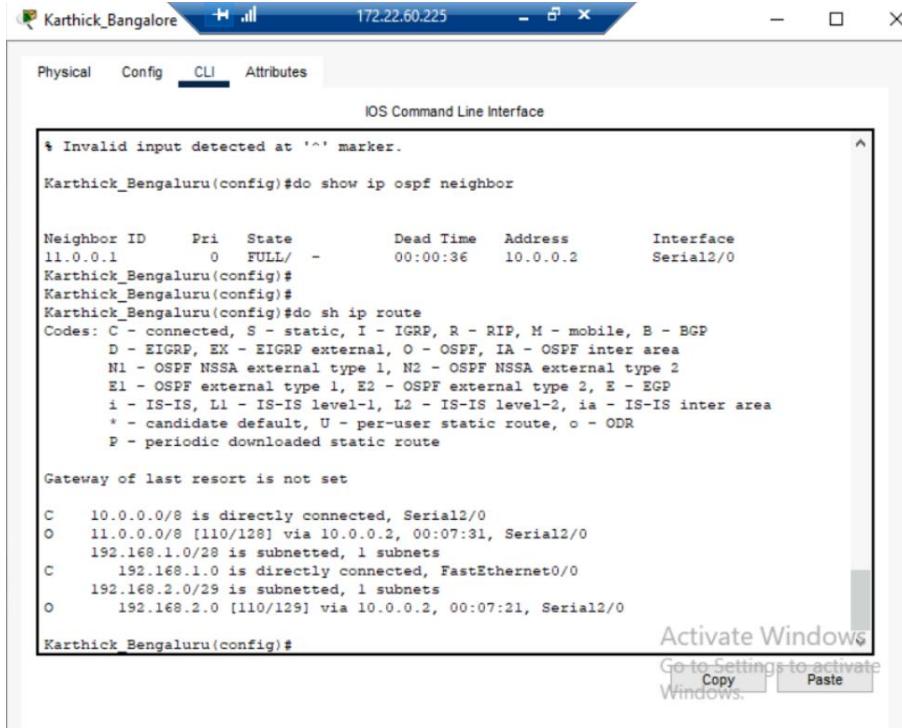
Karthick_Hyderabad(config)#

```

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Top



Physical	Config	CLI	Attributes

```

Physical   Config   CLI   Attributes

IOS Command Line Interface

% Invalid input detected at '^' marker.

Karthick_Bengaluru(config)#do show ip ospf neighbor

Neighbor ID      Pri  State          Dead Time     Address           Interface
11.0.0.1          0    FULL/        00:00:36     10.0.0.2       Serial2/0
Karthick_Bengaluru(config)#
Karthick_Bengaluru(config)#
Karthick_Bengaluru(config)#do sh ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
      i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
      * - candidate default, U - per-user static route, o - ODR
      P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, Serial2/0
O    11.0.0.0/8 [110/128] via 10.0.0.2, 00:07:31, Serial2/0
      192.168.1.0/28 is subnetted, 1 subnets
C      192.168.1.0 is directly connected, FastEthernet0/0
      192.168.2.0/29 is subnetted, 1 subnets
O      192.168.2.0 [110/129] via 10.0.0.2, 00:07:21, Serial2/0

Karthick_Bengaluru(config)#

```

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```

Karthick_Chennai(config)#exit
Karthick_Chennai#
*SYS-5-CONFIG_I: Configured from console by console

Karthick_Chennai#
Karthick_Chennai#
Karthick_Chennai#show ip ospf neighbor

Neighbor ID      Pri  State          Dead Time     Address          Interface
11.0.0.1          0    FULL/ -        00:00:33    11.0.0.1        Serial3/0
Karthick_Chennai#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

O    10.0.0.0/8 [110/128] via 11.0.0.1, 00:08:24, Serial3/0
C    11.0.0.0/8 is directly connected, Serial3/0
     192.168.2.0/29 is subnetted, 1 subnets
C    192.168.2.0 is directly connected, FastEthernet0/0

Karthick_Chennai#

```

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3. Show Ping. And take telnet last PC to 1st router.

- Ping

```

C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=13ms TTL=125
Reply from 192.168.1.2: bytes=32 time=11ms TTL=125
Reply from 192.168.1.2: bytes=32 time=14ms TTL=125
Reply from 192.168.1.2: bytes=32 time=12ms TTL=125

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 11ms, Maximum = 14ms, Average = 12ms

C:\>
C:\>
C:\>
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=2ms TTL=253
Reply from 192.168.1.1: bytes=32 time=2ms TTL=253
Reply from 192.168.1.1: bytes=32 time=3ms TTL=253
Reply from 192.168.1.1: bytes=32 time=3ms TTL=253

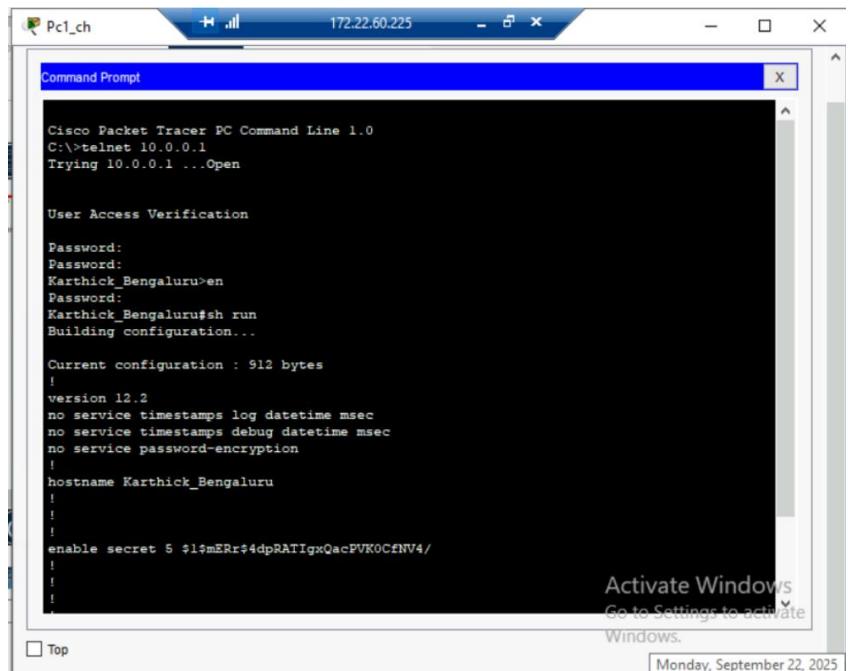
Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 3ms, Average = 2ms

```

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- Telnet Access



Pc1\_ch 172.22.60.225

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:>telnet 10.0.0.1
Trying 10.0.0.1 ...Open

User Access Verification

Password:
Password:
Karthick_Bengaluru>en
Password:
Karthick_Bengaluru$# run
Building configuration...

Current configuration : 912 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Karthick_Bengaluru
!
!
enable secret 5 #1$#mERr$4dpRATIgxQacPVK0CfNV4/
!
!
```

Activate Windows  
Go to Settings to activate  
Windows.

Monday, September 22, 2025

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