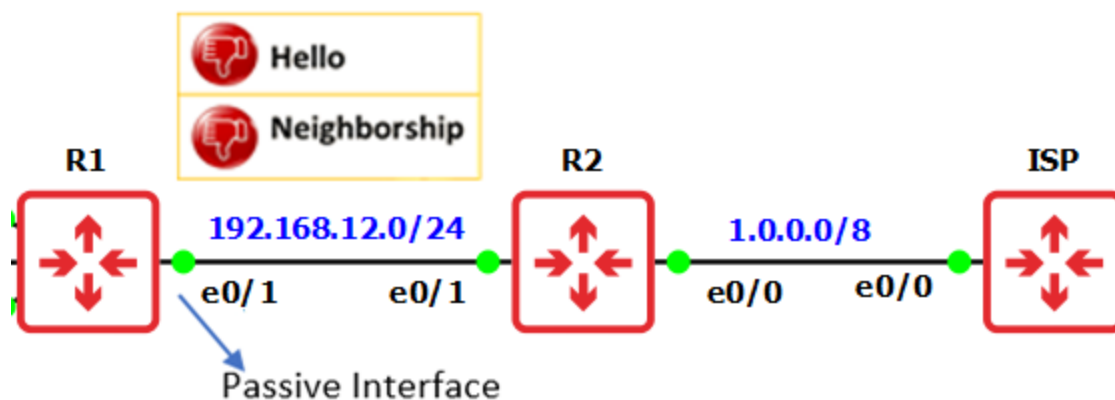
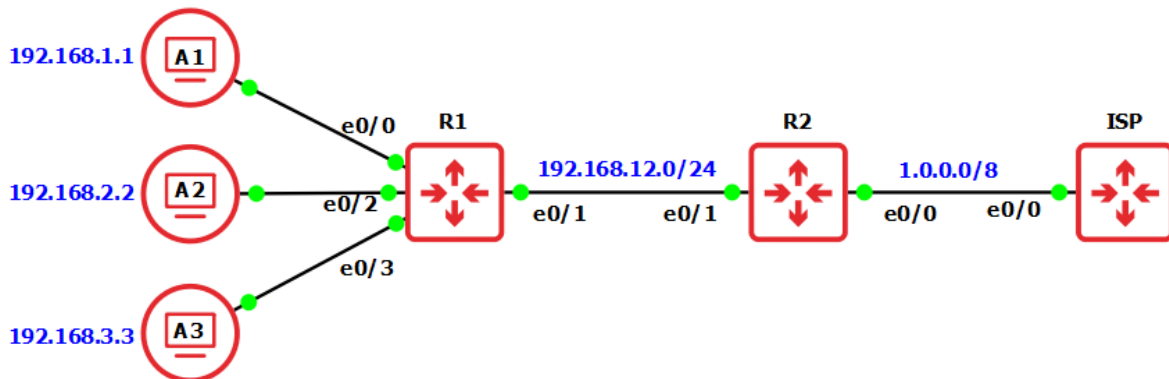


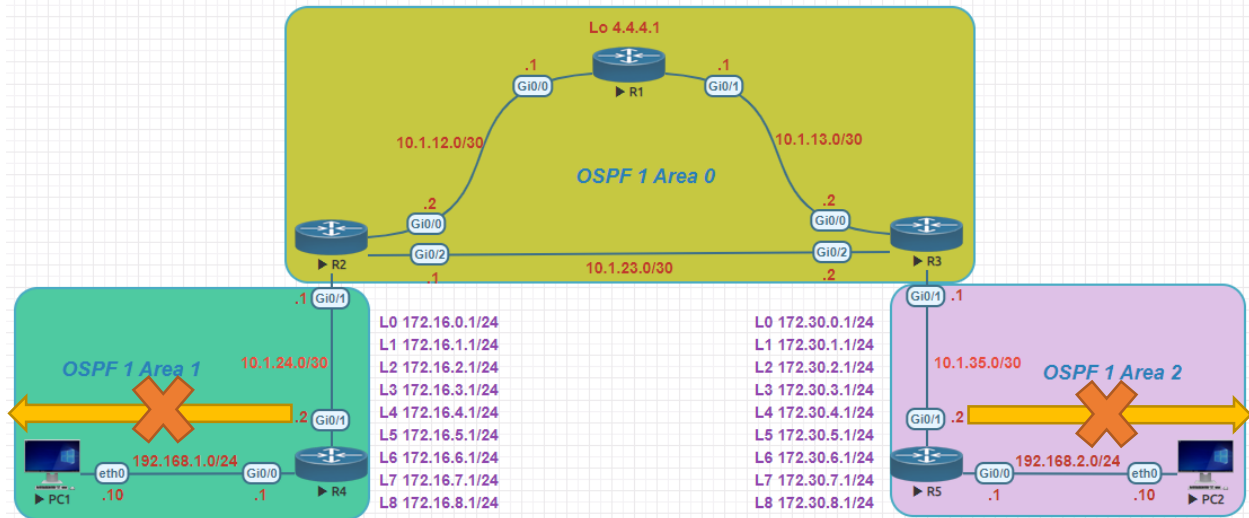
Passive Interfaces:

- o Passive-Interface command is used to disable sending updates on specific interface.
- o Passive-Interface command behavior varies from one protocol to another protocol.
- o Mostly the passive-interface command restricts the outgoing advertisements only.
- o Configure all interfaces to be passive using the passive-interface default command.
- o Individually use no passive-interface command on interfaces want to send updates.

Passive Interface & OSPF:

- o Passive-interface command stops both outgoing & incoming routing updates.
- o In the OSPF, the passive-interface has a similar behavior to EIGRP protocol.
- o Command causes Router to stop sending & receiving hello packets on interface.
- o The passive-interface command stops sending the outgoing hello packets.
- o The Router cannot form any neighbor relationship via the passive interface.





R4 OSPF Passive Interface Configuration

```
R4(config)#router ospf 1
R4(config-router)#passive-interface gigabitEthernet 0/0
R4(config-router)#exit
```

R5 OSPF Passive Interface Configuration

```
R5(config)#router ospf 1
R5(config-router)#passive-interface gigabitEthernet 0/0
R5(config-router)#exit
```

Show and Verification Commands

```
R4#show ip ospf interface gigabitEthernet 0/0
R4#show ip protocols | begin ospf
R5#show ip ospf interface gigabitEthernet 0/0
R5#show ip protocols | begin ospf
```

```
R4#show ip protocols | begin ospf
Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 172.16.8.1
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    10.1.24.0 0.0.0.3 area 1
    172.16.0.0 0.0.255.255 area 1
    192.168.1.0 0.0.0.255 area 1
  Passive Interface(s):
    GigabitEthernet0/0
  Routing Information Sources:
    Gateway         Distance         Last Update
  Distance: (default is 110)
```

```

R4#show ip ospf interface g0/0
GigabitEthernet0/0 is up, line protocol is up
  Internet Address 192.168.1.1/24, Area 1, Attached via Network Statement
  Process ID 1, Router ID 172.16.8.1, Network Type BROADCAST, Cost: 1
  Topology-MTID      Cost      Disabled      Shutdown      Topology Name
    0                1        no           no           Base
  Transmit Delay is 1 sec, State DR, Priority 1
  Designated Router (ID) 172.16.8.1, Interface address 192.168.1.1
  No backup designated router on this network
  Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5
  oob-resync timeout 40
  No Hellos (Passive interface)
  Supports Link-local Signaling (LLS)
  Cisco NSF helper support enabled
  IETF NSF helper support enabled
  Index 1/11/11, flood queue length 0
  Next 0x0(0)/0x0(0)/0x0(0)
  Last flood scan length is 0, maximum is 0
  Last flood scan time is 0 msec, maximum is 0 msec
  Neighbor Count is 0, Adjacent neighbor count is 0
  Suppress hello for 0 neighbor(s)

```

After apply OSPF passive Interface there will be no more OSPF Hello packet on PC1 and PC2.

The screenshot shows the Wireshark interface for PC1_eth0. The packet list pane displays two captured OSPF Hello Packets:

No.	Time	Source	Destination	Protocol	Length	Info
4	25.110034952	192.168.1.1	224.0.0.5	OSPF	90	Hello Packet
6	35.040746522	192.168.1.1	224.0.0.5	OSPF	90	Hello Packet

The packet details pane for the selected packet shows the following structure:

- Frame 4: 90 bytes on wire (720 bits), 90 bytes captured (720 bits) on interface eth0, id 0
- Ethernet II, Src: 50:0b:00:05:00:00 (50:0b:00:05:00:00), Dst: IPv4mcast_05 (01:00:5e:00:00:05)
- Internet Protocol Version 4, Src: 192.168.1.1, Dst: 224.0.0.5
- Open Shortest Path First
 - OSPF Header
 - OSPF Hello Packet
 - OSPF LLS Data Block