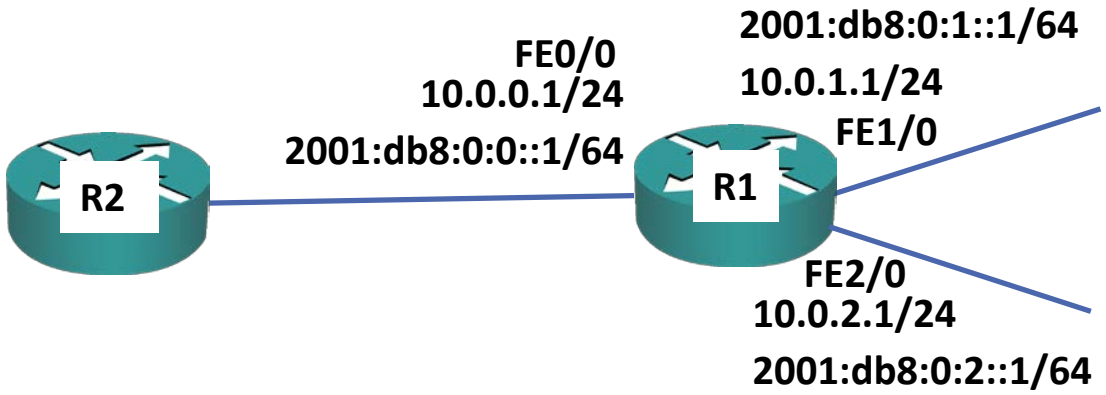
EIGRP Verification



IPv4 EIGRP Verification – show ip protocols

```
R1#show ip protocols
*** IP Routing is NSF aware ***

Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP-IPv4 Protocol for AS(100)
    Metric weight K1=1, K2=0, K3=1, K4=0, K5=0
    NSF-aware route hold timer is 240
    Router-ID: 10.0.0.1
    Topology : 0 (base)
      Active Timer: 3 min
      Distance: internal 90 external 170
      Maximum path: 4
      Maximum hopcount 100
      Maximum metric variance 1

  Automatic Summarization: disabled
  Maximum path: 4
  Routing for Networks:
    10.0.0.0/16
  Passive Interface(s):
    FastEthernet2/0
  Routing Information Sources:
    Gateway         Distance      Last Update
  Distance: internal 90 external 170
```

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EIGRP for IPv6 Verification – show ipv6 protocols

```
R1#show ipv6 protocols
IPv6 Routing Protocol is "connected"
IPv6 Routing Protocol is "ND"
IPv6 Routing Protocol is "eigrp 100"
EIGRP-IPv6 Protocol for AS(100)
  Metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  NSF-aware route hold timer is 240
  Router-ID: 10.0.0.1
  Topology : 0 (base)
    Active Timer: 3 min
    Distance: internal 90 external 170
    Maximum path: 16
    Maximum hopcount 100
    Maximum metric variance 1

  Interfaces:
    FastEthernet0/0
    FastEthernet1/0
    FastEthernet2/0 (passive)
  Redistribution:
    None
```

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IPv4 EIGRP Verification – show ip eigrp interfaces

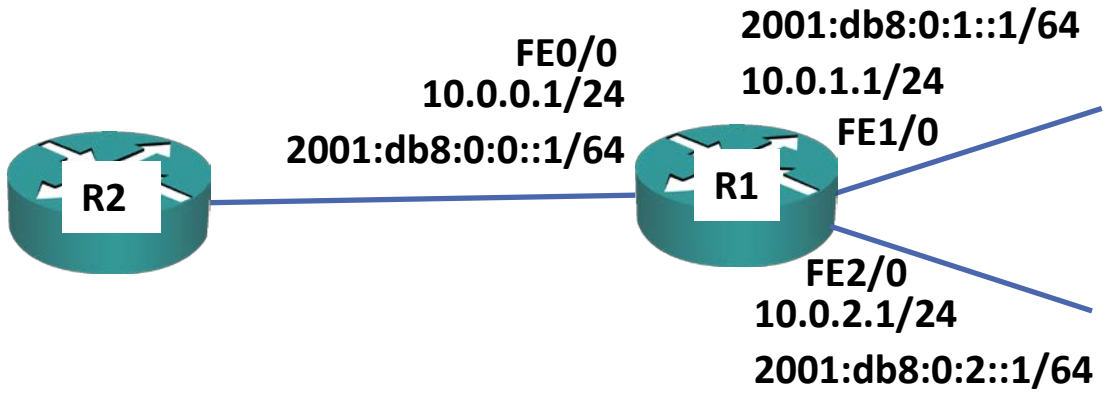
```
R1#show ip eigrp interfaces
EIGRP-IPv4 Interfaces for AS(100)
                              Xmit Queue   PeerQ        Mean   Pacing Time   Multicast    Pending
Interface              Peers  Un/Reliable  Un/Reliable  SRTT   Un/Reliable   Flow Timer   Routes
Fa0/0                    1        0/0         0/0         55        0/1           224          0
Fa1/0                    0        0/0         0/0          0        0/0             0          0
```

EIGRP for IPv6 Verification – show ipv6 eigrp interfaces

```
R1#show ipv6 eigrp interfaces
EIGRP-IPv6 Interfaces for AS(100)
                              Xmit Queue   PeerQ        Mean   Pacing Time   Multicast    Pending
Interface             Peers   Un/Reliable  Un/Reliable  SRTT   Un/Reliable   Flow Timer   Routes
Fa0/0                   1         0/0        0/0          76        0/1           304          0
Fa1/0                   0         0/0        0/0           0        0/0             0          0
```

IPv4 EIGRP Verification - show ip eigrp neighbor

```
R2#show ip eigrp neighbors
EIGRP-IPv4 Neighbors for AS(100)
H   Address                 Interface              Hold Uptime   SRTT   RTO  Q  Seq
                                                   (sec)         (ms)       Cnt Num
0   10.0.0.1                Fa0/0                    12 00:15:21   59   354  0  4
```



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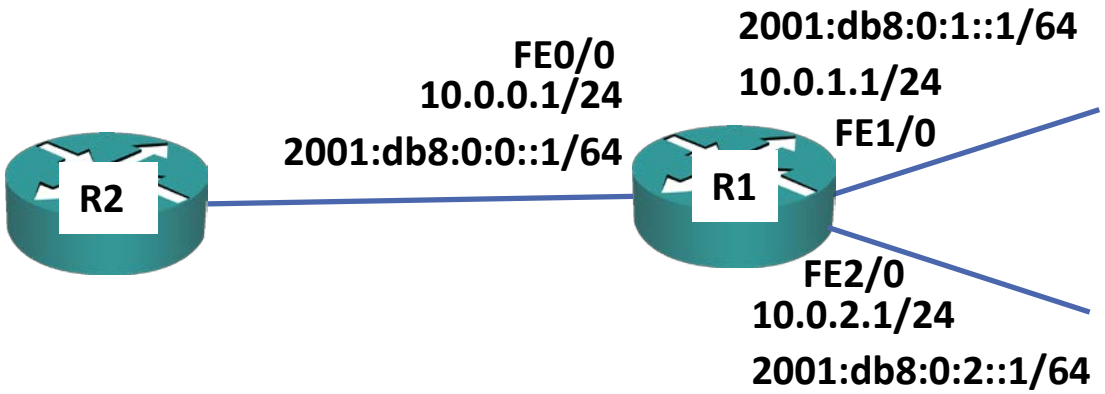
EIGRP for IPv6 Verification - show ipv6 eigrp neighbor

```
R2#show ipv6 eigrp neighbor
EIGRP-IPv6 Neighbors for AS(100)
H   Address                 Interface              Hold Uptime   SRTT   RTO  Q  Seq
                                                   (sec)         (ms)       Cnt Num
0   Link-local address:     Fa0/0                    13 00:15:05   80   480  0  4
    FE80::C801:3FFF:FE30:0
```



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IPv4 EIGRP Verification - show ip route

```
R2#show ip route
Codes: L - local, C - connected, S - static, 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
       i - IS-IS, su - IS-IS summary, 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, H - NHRP, l - LISP
       + - replicated route, % - next hop override

Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 4 subnets, 2 masks
C        10.0.0.0/24 is directly connected, FastEthernet0/0
L        10.0.0.2/32 is directly connected, FastEthernet0/0
D        10.0.1.0/24 [90/30720] via 10.0.0.1, 00:13:41, FastEthernet0/0
D        10.0.2.0/24 [90/30720] via 10.0.0.1, 00:13:42, FastEthernet0/0
```

EIGRP for IPv6 Verification - show ipv6 route

```
R2#show ipv6 route
IPv6 Routing Table - default - 5 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
       B - BGP, R - RIP, H - NHRP, I1 - ISIS L1
       I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary, D - EIGRP
       EX - EIGRP external, ND - ND Default, NDp - ND Prefix, DCE - Destination
       NDr - Redirect, O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1
       OE2 - OSPF ext 2, ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP
C    2001:DB8::/64 [0/0]
      via FastEthernet0/0, directly connected
L    2001:DB8::2/128 [0/0]
      via FastEthernet0/0, receive
D    2001:DB8:0:1::/64 [90/30720]
      via FE80::C801:3FFF:FE30:0, FastEthernet0/0
D    2001:DB8:0:2::/64 [90/30720]
      via FE80::C801:3FFF:FE30:0, FastEthernet0/0
L    FF00::/8 [0/0]
      via Null0, receive
```

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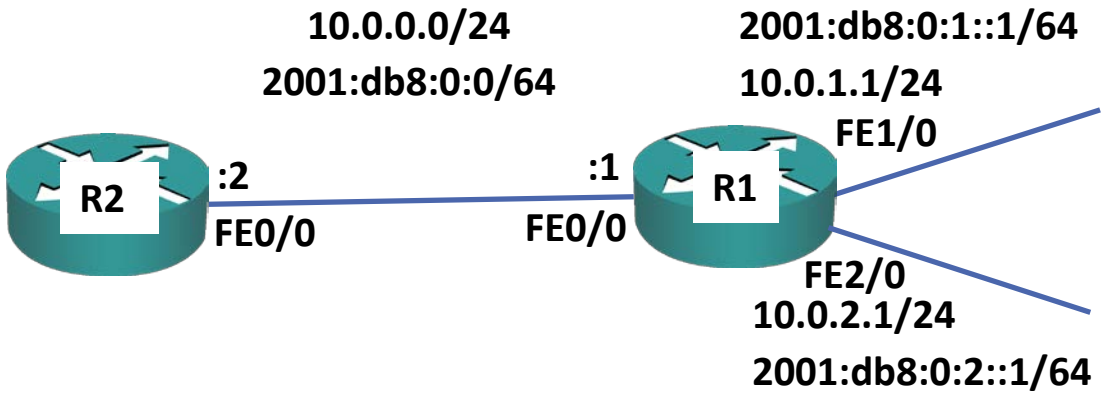
IPv4 EIGRP Verification - show ip eigrp topology

```
R2#show ip eigrp topology
EIGRP-IPv4 Topology Table for AS(100)/ID(10.0.0.2)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 10.0.1.0/24, 1 successors, FD is 30720
        via 10.0.0.1 (30720/28160), FastEthernet0/0
P 10.0.0.0/24, 1 successors, FD is 28160
        via Connected, FastEthernet0/0
P 10.0.2.0/24, 1 successors, FD is 30720
        via 10.0.0.1 (30720/28160), FastEthernet0/0
```

EIGRP for IPv6 Verification - show ipv6 eigrp topology

```
R2#show ipv6 eigrp topology
EIGRP-IPv6 Topology Table for AS(100)/ID(10.0.0.2)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status

P 2001:DB8:0:2::/64, 1 successors, FD is 30720
        via FE80::C801:3FFF:FE30:0 (30720/28160), FastEthernet0/0
P 2001:DB8::/64, 1 successors, FD is 28160
        via Connected, FastEthernet0/0
P 2001:DB8:0:1::/64, 1 successors, FD is 30720
        via FE80::C801:3FFF:FE30:0 (30720/28160), FastEthernet0/0
```

Lab



R2 Loopback 0
192.168.0.2/32
2001:db8:1:0::2/128

R1 Loopback 0
192.168.0.1/32
2001:db8:1:0::1/128