

Configuración básica del protocolo EIGRP con IPv6

Parte 1

Paso 2

Para habilitar el routing del protocolo EIGRP para IPv6 en cada router debemos ingresar el siguiente comando: Router(config)# **ipv6 router eigrp autonomous-system**
Donde *autonomous-system* será 1. Luego debemos ingresar el comando: no shutdown

Paso 3

Para asignar una ID a cada router debemos ingresar el siguiente comando:
Router(config-rtr)# **eigrp router-id nro-de-id**
Dónde *nro-de-id* será un valor de 32 bits. Ejemplo: 1.1.1.1

Paso 4

Para configurar EIGRP para IPv6 en cada interfaz debemos:

1. Ingresar a la interfaz que queramos configurar
2. Ingresar el siguiente comando: **ipv6 eigrp 1**

```
R2(config)#interface g 0/0
R2(config-if)#ipv6 eigrp 1
R2(config-if)#exit
R2(config)#interface s 0/0/0
R2(config-if)#ipv6 eigrp 1
R2(config-if)#
%DUAL-S-NBRCHANGE: IPv6-EIGRP 1: Neighbor FE80::1 (Serial0/0/0) is
up: new adjacency
```

Parte 2

Paso 1

Con el comando **show ipv6 eigrp neighbors** verificamos la tabla de adyacencia

```
R1#show ipv6 eigrp neighbors
IPv6-EIGRP neighbors for process 1
```

| H | Address | Interface | Hold (sec) | Uptime | SRTT (ms) | RTO | Q Cnt | Seq Num |
|---|-----------------------------|-----------|------------|----------|-----------|------|-------|---------|
| 0 | Link-local address: FE80::2 | Se0/0/0 | 13 | 00:04:23 | 40 | 1000 | 0 | 11 |
| 1 | Link-local address: FE80::3 | Se0/0/1 | 14 | 00:01:09 | 40 | 1000 | 0 | 13 |

Paso 2

Con el comando **show ipv6 route** verificamos la tabla de routing. Las rutas de eigrp para IPv6 se indican con una D.

```

R1#show ipv6 route
IPv6 Routing Table - 10 entries
Codes: C - Connected, L - Local, S - Static, R - RIP, B - BGP
        U - Per-user Static route, M - MIPv6
        I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary
        O - OSPF intra, OI - OSPF inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2
        ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2
        D - EIGRP, EX - EIGRP external
C 2001:DB8:CAFE:1::/64 [0/0]
    via GigabitEthernet0/0, directly connected
L 2001:DB8:CAFE:1::1/128 [0/0]
    via GigabitEthernet0/0, receive
D 2001:DB8:CAFE:2::/64 [90/2170112]
    via FE80::2, Serial0/0/0
D 2001:DB8:CAFE:3::/64 [90/2170112]
    via FE80::3, Serial0/0/1
C 2001:DB8:CAFE:A001::/64 [0/0]
    via Serial0/0/0, directly connected
L 2001:DB8:CAFE:A001::1/128 [0/0]
    via Serial0/0/0, receive
D 2001:DB8:CAFE:A002::/64 [90/2681856]
    via FE80::2, Serial0/0/0
    via FE80::3, Serial0/0/1
C 2001:DB8:CAFE:A003::/64 [0/0]
    via Serial0/0/1, directly connected
L 2001:DB8:CAFE:A003::1/128 [0/0]
    via Serial0/0/1, receive
L FF00::/8 [0/0]
    via Null0, receive

```

Paso 3

Con el comando show ipv6 protocols verificamos el parámetro configurado

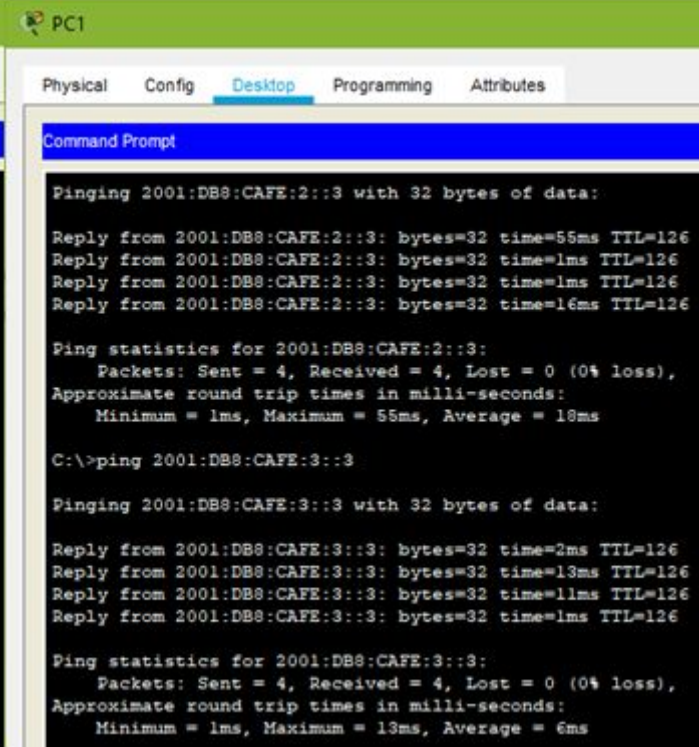
```

R1#show ipv6 route
IPv6 Routing Table - 10 entries
Codes: C - Connected, L - Local, S - Static, R - RIP, B - BGP
        U - Per-user Static route, M - MIPv6
        I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea, IS - ISIS summary
        O - OSPF intra, OI - OSPF inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2
        ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2
        D - EIGRP, EX - EIGRP external
C 2001:DB8:CAFE:1::/64 [0/0]
    via GigabitEthernet0/0, directly connected
L 2001:DB8:CAFE:1::1/128 [0/0]
    via GigabitEthernet0/0, receive
D 2001:DB8:CAFE:2::/64 [90/2170112]
    via FE80::2, Serial0/0/0
D 2001:DB8:CAFE:3::/64 [90/2170112]
    via FE80::3, Serial0/0/1
C 2001:DB8:CAFE:A001::/64 [0/0]
    via Serial0/0/0, directly connected
L 2001:DB8:CAFE:A001::1/128 [0/0]
    via Serial0/0/0, receive
D 2001:DB8:CAFE:A002::/64 [90/2681856]
    via FE80::2, Serial0/0/0
    via FE80::3, Serial0/0/1
C 2001:DB8:CAFE:A003::/64 [0/0]
    via Serial0/0/1, directly connected
L 2001:DB8:CAFE:A003::1/128 [0/0]
    via Serial0/0/1, receive
L FF00::/8 [0/0]
    via Null0, receive
R1#show ipv6 protocols
IPv6 Routing Protocol is "connected"
IPv6 Routing Protocol is "ND"
IPv6 Routing Protocol is "eigrp 1"
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Interfaces:
    GigabitEthernet0/0
    Serial0/0/0
    Serial0/0/1
  Redistributing: eigrp 1
    Maximum path: 16
    Distance: internal 90 external 170

```

Paso 4

Realizamos Ping desde la PC1 hasta las demas PC y comprobamos que se configuró eigrp correctamente



```
PC1
Physical  Config  Desktop  Programming  Attributes
Command Prompt

Pinging 2001:DB8:CAFE:2::3 with 32 bytes of data:

Reply from 2001:DB8:CAFE:2::3: bytes=32 time=55ms TTL=126
Reply from 2001:DB8:CAFE:2::3: bytes=32 time=1ms TTL=126
Reply from 2001:DB8:CAFE:2::3: bytes=32 time=1ms TTL=126
Reply from 2001:DB8:CAFE:2::3: bytes=32 time=16ms TTL=126

Ping statistics for 2001:DB8:CAFE:2::3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 55ms, Average = 18ms

C:\>ping 2001:DB8:CAFE:3::3

Pinging 2001:DB8:CAFE:3::3 with 32 bytes of data:

Reply from 2001:DB8:CAFE:3::3: bytes=32 time=2ms TTL=126
Reply from 2001:DB8:CAFE:3::3: bytes=32 time=13ms TTL=126
Reply from 2001:DB8:CAFE:3::3: bytes=32 time=11ms TTL=126
Reply from 2001:DB8:CAFE:3::3: bytes=32 time=1ms TTL=126

Ping statistics for 2001:DB8:CAFE:3::3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 13ms, Average = 6ms
```