

Default Route de la configuración en el EIGRP

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Introducción

Este documento describe cómo configurar las rutas predeterminado en el Enhanced Interior Gateway Routing Protocol (EIGRP).

Prerequisites

Requisitos

Comprensión básica del EIGRP.

Componentes Utilizados

Este documento no tiene restricciones específicas en cuanto a versiones de software y de hardware.

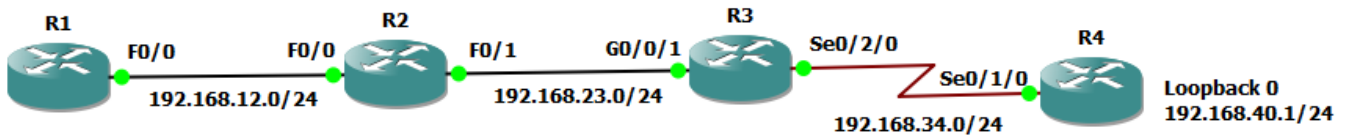
Configurar

Los métodos siguientes están disponibles hacer publicidad del default route en el EIGRP que se explican en este artículo:

1. Usando la ruta predeterminado y la redistribución.

2. Usando la dirección de resumen.

Diagrama de la red



Configuración

Aquí el r1, el r2 y el R3 del Routers se configuran con el EIGRP y ningún EIGRP se está ejecutando entre el R3 y el R4.

Configuración del r1

```
!  
router eigrp 1 network 192.168.12.0  
!
```

R1#show ip route

```
Codes: 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
```

Gateway of last resort is not set

```
C 192.168.12.0/24 is directly connected, FastEthernet0/0  
D 192.168.23.0/24 [90/30720] via 192.168.12.2, 00:10:27, FastEthernet0/0
```

Configuración del r2

```
!  
router eigrp 1  
 network 192.168.12.0  
 network 192.168.23.0  
!
```

R2#show ip route

```
Codes: 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
```

Gateway of last resort is not set

```
C 192.168.12.0/24 is directly connected, FastEthernet0/0
C 192.168.23.0/24 is directly connected, FastEthernet0/1
```

Configuración R3

```
!
router eigrp 1
 network 192.168.23.0
!
```

R3#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
a - application route
+ - replicated route, % - next hop override
```

Gateway of last resort is not set

```
D 192.168.12.0/24
 [90/28416] via 192.168.23.2, 00:05:16, GigabitEthernet0/0/1
192.168.23.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.23.0/24 is directly connected, GigabitEthernet0/0/1
L 192.168.23.3/32 is directly connected, GigabitEthernet0/0/1
192.168.34.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.34.0/24 is directly connected, Serial0/2/0
L 192.168.34.3/32 is directly connected, Serial0/2/0
```

Method-1 usando la ruta predeterminado y la redistribución

Configuración

Este método describirá cómo hacer publicidad de la ruta predeterminado en el EIGRP usando la Static Default ruta.

```
!
router eigrp 1
 network 192.168.23.0
!
```

R3#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
a - application route
+ - replicated route, % - next hop override
```

Gateway of last resort is not set

```
D 192.168.12.0/24
[90/28416] via 192.168.23.2, 00:05:16, GigabitEthernet0/0/1
192.168.23.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.23.0/24 is directly connected, GigabitEthernet0/0/1
L 192.168.23.3/32 is directly connected, GigabitEthernet0/0/1
192.168.34.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.34.0/24 is directly connected, Serial0/2/0
L 192.168.34.3/32 is directly connected, Serial0/2/0
```

R3#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
a - application route
+ - replicated route, % - next hop override
```

Gateway of last resort is 192.168.34.4 to network 0.0.0.0

```
S* 0.0.0.0/0 [1/0] via 192.168.34.4
D 192.168.12.0/24
[90/28416] via 192.168.23.2, 00:59:18, GigabitEthernet0/0/1
192.168.23.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.23.0/24 is directly connected, GigabitEthernet0/0/1
L 192.168.23.3/32 is directly connected, GigabitEthernet0/0/1
192.168.34.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.34.0/24 is directly connected, Serial0/2/0
L 192.168.34.3/32 is directly connected, Serial0/2/0
```

Note: En esta situación una declaración de la red no se puede utilizar dentro del EIGRP para hacer publicidad de 0.0.0.0 porque no está conectada directamente.

Redistriution de la Static ruta se hace bajo el EIGRP como se muestra abajo:

R3#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
a - application route
+ - replicated route, % - next hop override
```

Gateway of last resort is 192.168.34.4 to network 0.0.0.0

```
S* 0.0.0.0/0 [1/0] via 192.168.34.4
D 192.168.12.0/24
[90/28416] via 192.168.23.2, 00:59:18, GigabitEthernet0/0/1
192.168.23.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.23.0/24 is directly connected, GigabitEthernet0/0/1
L 192.168.23.3/32 is directly connected, GigabitEthernet0/0/1
192.168.34.0/24 is variably subnetted, 2 subnets, 2 masks
C 192.168.34.0/24 is directly connected, Serial0/2/0
```

L 192.168.34.3/32 is directly connected, Serial0/2/0

Verificación

R1#show ip route

Codes: 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

Gateway of last resort is 192.168.12.2 to network 0.0.0.0

```
C 192.168.12.0/24 is directly connected, FastEthernet0/0
D 192.168.23.0/24 [90/30720] via 192.168.12.2, 00:14:01, FastEthernet0/0
D*EX 0.0.0.0/0 [170/286720] via 192.168.12.2, 00:00:39, FastEthernet0/0
```

R2#show ip route

Codes: 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

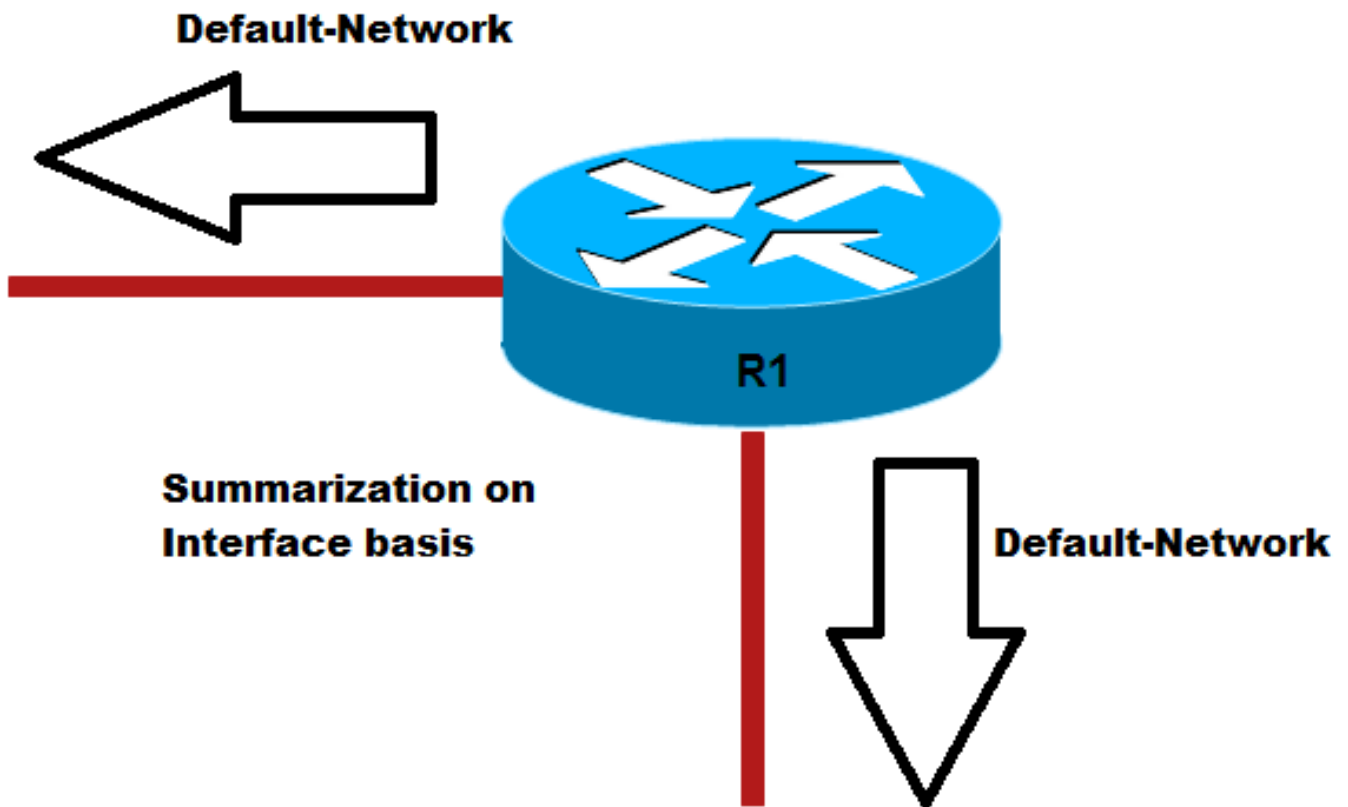
Gateway of last resort is 192.168.23.3 to network 0.0.0.0

```
C 192.168.12.0/24 is directly connected, FastEthernet0/0
C 192.168.23.0/24 is directly connected, FastEthernet0/1
D*EX 0.0.0.0/0 [170/284160] via 192.168.23.3, 00:04:44, FastEthernet0/1
```

Method-2 usando la dirección de resumen

Configuración

Este método utiliza la regla del resumen de EIGRP.



R2#show ip route

Codes: 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

Gateway of last resort is 192.168.23.3 to network 0.0.0.0

```
C 192.168.12.0/24 is directly connected, FastEthernet0/0
C 192.168.23.0/24 is directly connected, FastEthernet0/1
D*EX 0.0.0.0/0 [170/284160] via 192.168.23.3, 00:04:44, FastEthernet0/1
```

Verificación

R3#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
 a - application route
 + - replicated route, % - next hop override

Gateway of last resort is 0.0.0.0 to network 0.0.0.0

```
D* 0.0.0.0/0 is a summary, 00:00:06, Null0 D 192.168.12.0/24 [90/28416] via 192.168.23.2,
00:15:54, GigabitEthernet0/0/1 192.168.23.0/24 is variably subnetted, 2 subnets, 2 masks C
192.168.23.0/24 is directly connected, GigabitEthernet0/0/1 L 192.168.23.3/32 is directly
connected, GigabitEthernet0/0/1 192.168.34.0/24 is variably subnetted, 2 subnets, 2 masks C
192.168.34.0/24 is directly connected, Serial0/2/0 L 192.168.34.3/32 is directly connected,
Serial0/2/0
```

La tabla de ruteo del r1 y del r2 ahora mostrará una ruta del default aprendida del EIGRP

R1#show ip route

```
Codes: 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
```

Gateway of last resort is 192.168.12.2 to network 0.0.0.0

```
C    192.168.12.0/24 is directly connected, FastEthernet0/0
D    192.168.23.0/24 [90/30720] via 192.168.12.2, 00:17:50, FastEthernet0/0
D*   0.0.0.0/0 [90/30976] via 192.168.12.2, 00:01:30, FastEthernet0/0
```

R2#show ip route

```
Codes: 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
```

Gateway of last resort is 192.168.23.3 to network 0.0.0.0

```
C    192.168.12.0/24 is directly connected, FastEthernet0/0
C    192.168.23.0/24 is directly connected, FastEthernet0/1
D*   0.0.0.0/0 [90/28416] via 192.168.23.3, 00:03:50, FastEthernet0/1
```

Troubleshooting

Actualmente, no hay información específica de troubleshooting disponible para esta configuración.