

配置default-route在EIGRP

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[配置](#)

[网络图](#)

[配置](#)

[R1](#)

[R2](#)

[R3](#)

[方法1。请使用默认路由和再分配](#)

[验证](#)

[方法2。请使用Summary-address](#)

[验证](#)

[故障排除](#)

简介

本文描述如何配置在增强的内部网关路由选择协议(EIGRP)的默认路由。

先决条件

要求

Cisco建议您有EIGRP知识。

使用的组件

本文档不限于特定的软件和硬件版本。

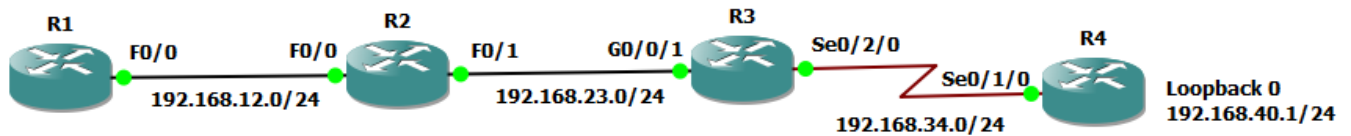
本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始(默认)配置。如果您的网络处于活动状态,请确保您了解所有命令的潜在影响。

配置

在此条款解释的这些方法是可用为了通告在EIGRP的默认路由:

1. 请使用默认路由和再分配
2. 请使用Summary-address

网络图



配置

此处路由器R1、R2和R3配置与EIGRP，并且EIGRP不在R3和R4之间运行。

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
```

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
```

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
```

方法1。请使用默认路由和再分配

此方法描述如何通告在EIGRP的默认路由与使用静态默认路由：

```
R3(config)#ip route 0.0.0.0 0.0.0.0 192.168.34.4
```

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:在这种情况下，因为没有直接地连接，网络声明不可能用于在EIGRP里面为了通告0.0.0.0。

静态路由的再分配完成在EIGRP下如显示此处：

```
R3(config)#router eigrp 1
R3(config-router)#redistribute static metric 100000 1000 255 1 1500
```

验证

使用本部分可确认配置能否正常运行。

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

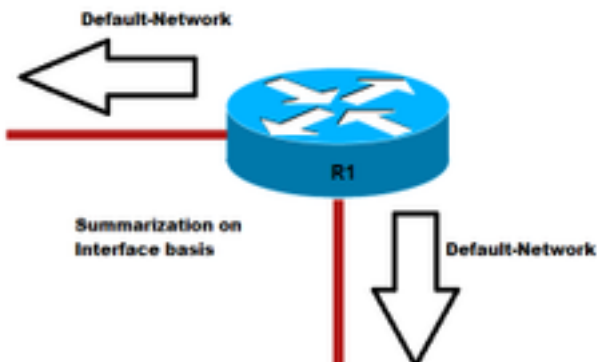
```
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
        D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
        N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
        E1 - OSPF external type 1, E2 - OSPF external type 2
        i - IS-IS, su - IS-IS summary, 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
```

方法2。请使用Summary-address

如镜像所显示，此方法使用EIGRP汇总规则。



```
!  
R3(config)#interface gigabitEthernet 0/0/1 R3(config-if)#ip summary-address eigrp 1 0.0.0.0  
0.0.0.0  
!
```

验证

使用本部分可确认配置能否正常运行。

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
```

R1和R2路由表当前显示从EIGRP学习的默认路由：

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

[故障排除](#)

目前没有针对此配置的故障排除信息。