

使用“prefix-list”的IPv6流量过滤配置示例

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[规则](#)

[配置](#)

[网络图](#)

[配置](#)

[验证](#)

[故障排除](#)

[相关信息](#)

简介

本文档提供IPv6前缀列表的示例配置。在本例中，路由器R1和R2配置了IPv6编址方案，并通过串行链路连接。两台路由器上启用的路由协议是IPv6 OSPF。为了生成网络，路由器R2中配置了10个环回地址，并且两台路由器（R1和R2）上配置的环回地址都使用[ipv6 ospf process-id area area-id \[instance instance-id\]](#)命令相互通告。在本例中，需要拒绝源自路由器R2的环回8和环回9接口的到达路由器R1的显式路由。

此配置示例使用[ipv6 prefix-list list-name](#)命令在路由器R1上创建名为ipv6_all_addresses的IPv6前缀列表。

在本例中，在IPv6 OSPF上，使用[distribute-list prefix-list list-name](#)命令以在配置的协议上应用前缀列表。

先决条件

要求

尝试进行此配置之前，请确保满足以下要求：

- 具备与 IPv6 寻址方案相关的知识
- 对IPv6[实施OSPF的知识](#)

使用的组件

本文档中的信息基于Cisco IOS®软件版本15.1上的Cisco 7200^系列路由器（用于路由器R1和R2的配置）。

规则

有关文档规则的信息，请参阅 [Cisco 技术提示规则](#)。

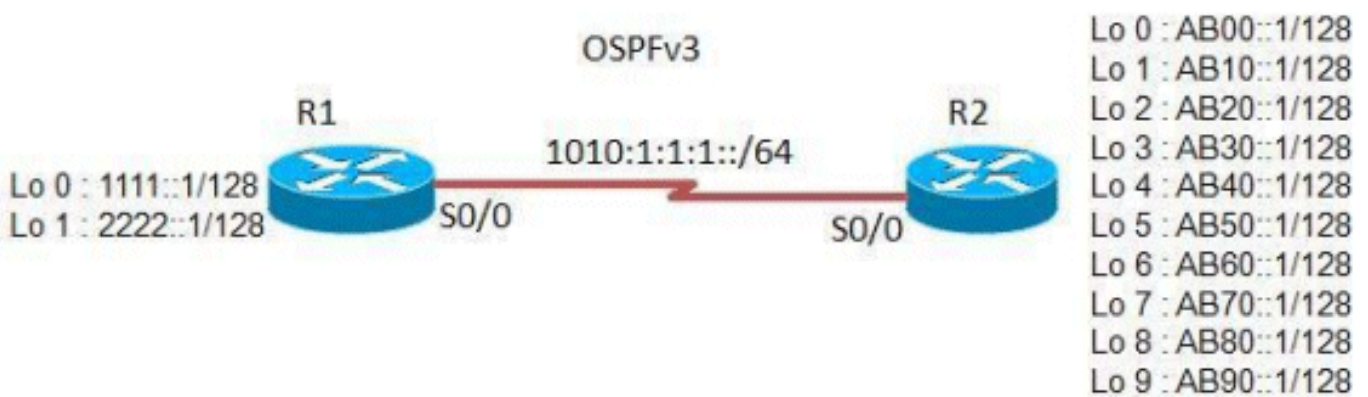
配置

本部分提供有关如何配置本文档所述功能的信息。

注意：使用命令[查找工具](#)([仅限注册客户](#))可查找有关本文档中使用的命令的详细信息。

网络图

本文档使用以下网络设置：



配置

本文档使用以下配置：

- [路由器 R1](#)
- [路由器 R2](#)

路由器 R1

```
R1#show running-config
version 15.0
!
hostname R1
!
ip cef
!
!
ipv6 unicast-routing
!-- Enables the forwarding of IPv6 packets. ! interface
Loopback0 no ip address ipv6 address 1111::1/128 ipv6
ospf 10 area 0 !--- Enables OSPFv3 on the interface and
associates !--- the interface looback1 to area 0. !
interface Loopback1 no ip address ipv6 address
2222::1/128 ipv6 ospf 10 area 0 ! interface Serial0/0 no
ip address ipv6 address 1010:1:1:1::11/64 ipv6 ospf 10
area 0 clock rate 2000000 !! ipv6 router ospf 10
router-id 2.2.2.2 log-adjacency-changes distribute-list
```

```

prefix-list ipv6_all_addresses in
Applies the prefix list ipv6_all_addresses !--- to OSPF
for IPv6 routing updates that are received on an
interface. !--- Use this command in router configuration
mode.

!
ipv6 prefix-list ipv6_all_addresses seq 10 permit
AB00::1/128
!--- Creates a prefix-list named ipv6_all_addresses. !---
- Seq 10 denotes the sequence number of the !--- prefix
list entry being configured. !--- permit/deny
permits/denies the network !--- that matches the
condition.

ipv6 prefix-list ipv6_all_addresses seq 20 permit
AB10::1/128
ipv6 prefix-list ipv6_all_addresses seq 30 permit
AB20::1/128
ipv6 prefix-list ipv6_all_addresses seq 40 permit
AB30::1/128
ipv6 prefix-list ipv6_all_addresses seq 50 permit
AB40::1/128
ipv6 prefix-list ipv6_all_addresses seq 60 permit
AB50::1/128
ipv6 prefix-list ipv6_all_addresses seq 70 permit
AB60::1/128
ipv6 prefix-list ipv6_all_addresses seq 80 permit
AB70::1/128
ipv6 prefix-list ipv6_all_addresses seq 90 deny
AB80::1/128
ipv6 prefix-list ipv6_all_addresses seq 100 deny
AB90::1/128
!--- Denies the routes AB80::1/128 & AB90::1/128. ! end

```

注意：前缀列表具有以下命名限制：

- 不能与现有访问列表同名。
- 不能是名称“detail”或“summary”，因为它们是show ipv6 prefix-list命令中的关键字。

路由器 R2

```

R2#show running-config
version 15.0
!
hostname R2
!
ip cef
!
ipv6 unicast-routing
!
interface Loopback0
no ip address
ipv6 address AB00::1/128
ipv6 ospf 10 area 0
!
interface Loopback1
no ip address
ipv6 address AB10::1/128
ipv6 ospf 10 area 0

```

```
!  
interface Loopback2  
  no ip address  
  ipv6 address AB20::1/128  
  ipv6 ospf 10 area 0  
!  
interface Loopback3  
  no ip address  
  ipv6 address AB30::1/128  
  ipv6 ospf 10 area 0  
!  
interface Loopback4  
  no ip address  
  ipv6 address AB40::1/128  
  ipv6 ospf 10 area 0  
!  
interface Loopback5  
  no ip address  
  ipv6 address AB50::1/128  
  ipv6 ospf 10 area 0  
!  
interface Loopback6  
  no ip address  
  ipv6 address AB60::1/128  
  ipv6 ospf 10 area 0  
!  
interface Loopback7  
  no ip address  
  ipv6 address AB70::1/128  
  ipv6 ospf 10 area 0  
!  
interface Loopback8  
  no ip address  
  ipv6 address AB80::1/128  
  ipv6 ospf 10 area 0  
!  
interface Loopback9  
  no ip address  
  ipv6 address AB90::1/128  
  ipv6 ospf 10 area 0  
!  
interface Serial10/0  
  no ip address  
  ipv6 address 1010:1:1:1::10/64  
  ipv6 ospf 10 area 0  
  clock rate 2000000  
!  
ip forward-protocol nd  
!  
!  
ipv6 router ospf 10  
  router-id 1.1.1.1  
  log-adjacency-changes  
!  
end
```

验证

要检验路由器R1收到的路由，请使用[show ipv6 route ospf](#)命令。

show ipv6 route ospf

在路由器 R1 中

```
R1#show ipv6 route ospf
IPv6 Routing Table - 13 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
O   AB00::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
OI  AB10::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
OI  AB20::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
OI  AB30::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
OI  AB40::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
OI  AB50::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
OI  AB60::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
OI  AB70::1/128 [110/64]
    via FE80::C007:EFF:FE58:0, Serial0/0
!--- Note that the routes AB80::1/128 and AB90::1/128 !-
-- originated from lo 8 and lo 9 are not listed here.
```

要显示有关IPv6前缀列表或前缀列表条目的信息，请使用[show ipv6 prefix-list detail](#)命令。

show ipv6 prefix-list

在路由器 R1 中

```
R1#show ipv6 prefix-list detail
Prefix-list with the last deletion/insertion:
ipv6_all_addresses
ipv6 prefix-list ipv6_all_addresses:
  count: 10, range entries: 0, sequences: 10 - 100,
  refcount: 3
  seq 10 permit AB00::1/128 (hit count: 1, refcount: 5)
  seq 20 permit AB10::1/128 (hit count: 1, refcount: 1)
  seq 30 permit AB20::1/128 (hit count: 1, refcount: 2)
  seq 40 permit AB30::1/128 (hit count: 1, refcount: 1)
  seq 50 permit AB40::1/128 (hit count: 1, refcount: 3)
  seq 60 permit AB50::1/128 (hit count: 1, refcount: 1)
  seq 70 permit AB60::1/128 (hit count: 1, refcount: 2)
  seq 80 permit AB70::1/128 (hit count: 1, refcount: 1)
  seq 90 deny AB80::1/128 (hit count: 1, refcount: 2)
  seq 100 deny AB90::1/128 (hit count: 1, refcount: 1)

R1#show ipv6 prefix-list summary
Prefix-list with the last deletion/insertion:
ipv6_all_addresses
ipv6 prefix-list ipv6_all_addresses:
  count: 10, range entries: 0, sequences: 10 - 100,
  refcount: 3
!--- This command displays detailed or !--- summarized
information about all IPv6 prefix lists.
```

[命令输出解释程序 \(仅限注册用户 \) \(OIT\) 支持某些 show 命令。](#) 使用 OIT 可查看对 show 命令输出的分析。

[故障排除](#)

目前没有针对此配置的故障排除信息。

[相关信息](#)

- [IPv6配置指南 , Cisco IOS版本15.1 M&T](#)
- [IPv6流量过滤访问列表配置示例](#)
- [IPv6 技术支持](#)
- [技术支持和文档 - Cisco Systems](#)