

过滤使用“前缀列表”配置示例的IPv6流量

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简介

本文为IPv6前缀列表提供一配置示例。在示例中，路由器R1和R2配置与IPv6编址方案并且通过串行链路连接。在两路由器启用的路由协议是IPv6 OSPF。为了生成网络，10环回地址在路由器R2配置，并且在两路由器配置的环回地址(R1和R2)用[IPv6 OSPF进程ID区域area-id \[instance instance-id\]](#)命令彼此通告。在本例中，起源于路由器R2环回8和环回9接口到达路由器R1的它要求拒绝显式路由。

此配置示例使用[IPv6前缀列表列表名称](#)命令为了建立名为在路由器R1的*ipv6_all_addresses*的IPv6前缀列表。

在这种情况下，在IPv6 OSPF，请使用[distribute-list前缀列表列表名称](#)命令为了运用在配置的协议的前缀列表。

先决条件

要求

尝试进行此配置之前，请确保满足以下要求：

- [IPv6编址方案](#)知识
- [实现IPv6的OSPF](#)知识

使用的组件

本文档中的信息根据在Cisco IOS软件版本15.1的Cisco 7200系列路由器(在路由器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](#)。

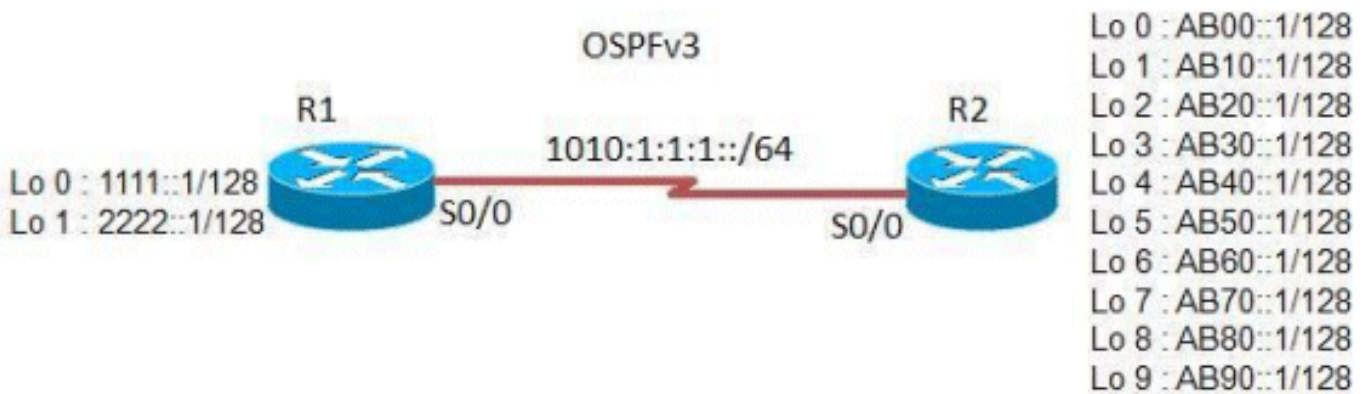
配置

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](#) ([仅限注册用户](#)) 查找有关本文档所使用命令的详细信息。

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 loopback1 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：前缀列表有这些命名限制：

- 不可以是名称和现有的访问列表一样。
- 因为他们是在显示IPv6前缀列表命令的关键字不可以是命名“详细信息”或“摘要”。

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 Serial0/0 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

为了验证路由器接收的路由R1，请使用[ospf命令的show ipv6 route](#)。

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.
```

为了显示关于IPv6前缀列表或前缀列表条目的信息，请使用[detail命令显示IPv6的前缀列表](#)。

显示IPv6前缀列表

```
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](#)
- [过滤访问控制列表配置示例的IPv6流量](#)
- [IPv6技术支持](#)
- [技术支持和文档 - Cisco Systems](#)