

# 在HSRPv2配置示例的跟踪选项

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## 简介

本文描述如何配置IPv6 (HSRPv2)组的一暂挂热备份路由协议(HSRP)能跟踪对象和根据对象状态更改HSRP优先级。

其中每一被跟踪的对象有在跟踪命令行界面(CLI)指定的一唯一号码。HSRPv2使用此编号跟踪一个特定对象。跟踪进程周期地轮询值更改的被跟踪的对象并且立即发送所有更改(和在值上下)对HSRPv2，或者或，在指定的延迟后。本文使用[interface命令的跟踪](#)为了配置将被跟踪的接口。

## 先决条件

### 要求

尝试进行此配置之前，请确保满足以下要求：

- 配置HSRP知识;参考[配置HSRP](#)欲知更多信息。
- 实现IPv6寻址和基本连通性基础知识;参考[实现IPv6寻址和基本连通性](#)欲知更多信息。
- [增强版对象跟踪](#)基础知识
- 在HSRP IPv6可以配置前，在接口必须启用HSRPv2。
- 在能将配置的HSRP IPv6的设备必须启用IPv6单播路由。

### 使用的组件

在本文的配置根据运行Cisco IOS软件版本15.0(1)的Cisco7200系列路由器。

### 规则

有关文档规则的信息，请参阅 [Cisco 技术提示规则](#)。

## 配置

R2和R3路由器连接对R1通过serial interfaces。R2和R3快速以太网接口配置与HSRP IPv6，在这种情况下R2作为活动路由器，并且R3作为备用路由器。在路由器R2中，跟踪进程配置跟踪接口线路通信协议的状态serial interfaces 1/0：万一R2 serial interfaces S1/0断开，R3路由器更改其状态从待机到激活。

**注意：**有关本文档所用命令的详细信息，请使用[命令查找工具](#)（[仅限注册用户](#)）。

## 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 配置](#)
- [路由器 R2 配置](#)
- [路由器R3配置](#)

### 路由器 R1 配置

```
↓  
version 15.0  
↓  
hostname R1  
↓  
ipv6 unicast-routing  
ipv6 cef  
↓  
↓  
interface Serial1/0  
  no ip address  
  ipv6 address 2010:10:10:10::1/64  
  serial restart-delay 0  
↓  
↓  
interface Serial1/1  
  no ip address  
  ipv6 address 2011:11:11:11::1/64  
  serial restart-delay 0  
↓  
end
```

### 路由器 R2 配置

```
↓  
version 15.0  
↓  
hostname R2  
↓  
ipv6 unicast-routing  
ipv6 cef  
↓  
track 1 interface Serial1/0 line-protocol
```

```
!--- Tracking process 1 is configured in the router !---  
to track state of the interface line protocol !--- of  
serial interface 1/0 ! interface Serial1/0 no ip address  
ipv6 address 2010:10:10:10::2/64 serial restart-delay 0  
! ! interface FastEthernet2/0 no ip address duplex auto  
speed auto ipv6 address 1010:1:1:1::10/64 standby  
version 2 standby 10 ipv6 autoconfig !--- Assigns a  
standby group and standby IP address. standby 10 preempt  
delay minimum 45 !--- The preempt command allows the  
router to become the !--- active router when it has the  
priority higher than all the other !--- HSRP-configured  
routers. Without this command, even if a router has  
higher !--- priority value, it will not become an active  
router. !--- The delay minimum value causes the local  
router to postpone !--- taking over the active role for  
a minimum of 45 seconds. standby 10 track 1 decrement 10  
!--- Configures HSRP to track an object and change the  
Hot Standby !--- priority on the basis of the state of  
the object. !--- In this example, the HSRP tracks the  
interface s1/0 mentioned !--- in the track process 1. !-  
-- Decrement value specified the amount by which the Hot  
Standby !--- priority for the router is decremented (or  
incremented) when the tracked object !--- goes down (or  
comes back up). The range is from 1 to 255. The default  
is 10. ! end
```

## 路由器R3配置

```
!  
version 15.0  
!  
hostname R3  
!  
ipv6 unicast-routing  
ipv6 cef  
!  
interface Serial1/0  
no ip address  
ipv6 address 2011:11:11:11::2/64  
serial restart-delay 0  
!  
interface FastEthernet2/0  
no ip address  
duplex auto  
speed auto  
ipv6 address 1010:1:1:1::11/64  
standby version 2  
standby 10 ipv6 autoconfig  
standby 10 priority 95  
standby 10 preempt delay minimum 45  
!  
end
```

## 验证

请使用**show standby**命令在R2和R3路由器为了验证配置。

## 路由器 R2

```
R2#show standby FastEthernet2/0 - Group 10 (version 2)  
State is Active 5 state changes, last state change  
00:26:03 Virtual IP address is FE80::5:73FF:FEA0:A  
Active virtual MAC address is 0005.73a0.000a Local
```

```
virtual MAC address is 0005.73a0.000a (v2 IPv6 default)
Hello time 3 sec, hold time 10 sec Next hello sent in
1.872 secs Preemption enabled, delay min 45 secs Active
router is local Standby router is
FE80::C802:AFF:FE10:38, priority 95 (expires in 8.048
sec) Priority 100 (default 100) Track object 1 state Up
decrement 10 Group name is "hsrp-Fa2/0-10" (default)
```

### 路由器 R3

```
R3#show standby FastEthernet2/0 - Group 10 (version 2)
State is Standby 4 state changes, last state change
00:26:25 Virtual IP address is FE80::5:73FF:FEA0:A
Active virtual MAC address is 0005.73a0.000a Local
virtual MAC address is 0005.73a0.000a (v2 IPv6 default)
Hello time 3 sec, hold time 10 sec Next hello sent in
0.176 secs Preemption enabled, delay min 45 secs Active
router is FE80::C801:14FF:FEF4:38, priority 100 (expires
in 9.888 sec) MAC address is ca01.14f4.0038 Standby
router is local Priority 95 (configured 95) Group name
is "hsrp-Fa2/0-10" (default)
```

为了显示跟踪信息，请使用[show track命令](#)在路由器R2。

### 路由器 R2

```
R2#show track 1 Track 1 Interface Serial1/0 line-
protocol Line protocol is Up 3 changes, last change
00:28:39 Tracked by: HSRP FastEthernet2/0 10 !---
Displays the information about the objects that !--- are
tracked by tracking process 1. R2#show track int brief
Track Object Parameter
Value Last Change
1 interface Serial1/0 line-protocol
Up 00:31:19
!--- Displays the information about the tracked
interface.
```

万一活动路由器(在本例中的R2)断开，如此表所显示，备用路由器立即更改其状态对激活：

### 当活动路由器(R2)去在下...

```
路由器 R2R2(config)#interface s1/0
R2(config-if)#shut
R2(config-if)#
*May 21 20:56:54.223: %TRACKING-5-STATE: 1 interface
Se1/0 line-protocol Up->Down
R2(config-if)#
*May 21 20:56:56.203: %LINK-5-CHANGED: Interface
Serial1/0, changed state to administratively down
*May 21 20:56:57.203: %LINEPROTO-5-UPDOWN: Line protocol
on Interface Serial1/0, changed state to down
R2(config-if)#
*May 21 20:57:43.087: %HSRP-5-STATECHANGE:
FastEthernet2/0 Grp 10 state Active -> Speak
R2(config-if)#
*May 21 20:57:54.479: %HSRP-5-STATECHANGE:
FastEthernet2/0 Grp 10 state Speak -> Standby

!--- When the interface goes down, the active router
changes !--- its state to Standby. 路由器 R3R3#
*May 21 20:56:53.419: %HSRP-5-STATECHANGE:
FastEthernet2/0 Grp 10 state Standby-> Active
```

```
!--- The standby router is now the active router.
R3#show standby FastEthernet2/0 - Group 10 (version 2)
State is Active 5 state changes, last state change
00:02:32 Virtual IP address is FE80::5:73FF:FEA0:A
Active virtual MAC address is 0005.73a0.000a Local
virtual MAC address is 0005.73a0.000a (v2 IPv6 default)
Hello time 3 sec, hold time 10 sec Next hello sent in
0.080 secs Preemption enabled, delay min 45 secs Active
router is local Standby router is
FE80::C801:14FF:FEF4:38, priority 90 (expires in 9.664
sec) Priority 95 (configured 95) Group name is "hsrp-
Fa2/0-10" (default)
```

## 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技术支持](#)
- [配置在IPv6的第一份跳跃冗余协议](#)
- [热备份路由协议\(HSRP\) : 常见问题](#)
- [RFC 2281 - Cisco热备份路由协议\(HSRP\)](#)
- [技术支持和文档 - Cisco Systems](#)