

知 S12508F-AF交换机接口配置完ipv6地址状态为TENTATIVE

IPv6 薛佳宇 2022-06-15 发表

组网及说明

两台S12508F-AF做VRRP，交换机版本为：Version 7.1.070, Release 2716

问题描述

S12508F-AF交换机接口配置完ipv6地址状态为TENTATIVE

```
<H3C01>dis ipv6 interface Vlan-interface 900
```

Vlan-interface900 current state: UP

Line protocol current state: UP

IPv6 is enabled, link-local address is FE80::AAAA:7666:FEEE:FA01 [DUPLICATE]

Global unicast address(es):

2409:8888:5556:1222:6111::15, subnet is 2409:8888:5556:1222:6111::10/125 [TENTATIVE]

过程分析

1、检查接口无特殊配置

```
<H3C01>dis cu int Vlan-interface 900
#
interface Vlan-interface900
ipv6 address 2409:8888:5556:1222:6111::15/125
vrrp ipv6 vrid 1 virtual-ip FE80::AAAA:7666:FEEE:FC01 link-local
vrrp ipv6 vrid 1 virtual-ip 2409:8888:5556:1222:6111::14
#
```

2、开启debug查看nd报文交互

```
<H3C01>debugging ipv6 nd packet interface Vlan-interface 900
<H3C01>t d
<H3C01>t m
```

等待一段时间后，发现没有vlan-int 900的报文交互，此时重新给vlan-int 900配置地址

```
*Jun 15 04:01:07:499 2022 H3C01 ND/7/ND_PACKET: -MDC=1;
Sent NS packet:
Interface: Vlan900      First VLAN ID: 0  Second VLAN ID: 0
SrcEthMAC: 0000-0000-0000  SrcIP: ::
DstEthMAC: 0000-0000-0000  DstIP: ff02::1:ff05:fa01
LinkId: 0xffff  VsilIndex: 0xffffffff

%Jun 15 04:01:07:500 2022 H3C01 ND/6/ND_DUPADDR: -MDC=1; Duplicate address: fe80::AAAA:
7666:FEEE:fa01 on the interface Vlan-interface900

*Jun 15 04:01:07:500 2022 H3C01 ND/7/ND_PACKET: -MDC=1;
Received NA packet:
Interface: Vlan900      First VLAN ID: 900  Second VLAN ID: 0
SrcEthMAC: 0000-5e00-0201  SrcIP: fe80::AAAA:7666:FEEE:fa01
DstEthMAC: 3333-0000-0001  DstIP: ff02::1
LinkId: 0xffff  VsilIndex: 0xffffffff
```

可以看到，vlan-int900发了NS报文后，有收到NA报文，源地址是fe80::AAAA:7666:FEEE:fa01(vlan-int900的链路本地地址)，同时设备也提示了fe80::AAAA:7666:FEEE:fa01地址冲突。
查看NA报文的源mac为0000-5e00-0201，这个mac为VRRP的虚拟mac，因此怀疑有设备的vrrp虚拟链路本地地址与本设备vlan-int900的链路本地地址冲突，首先检查本设备不存在。

与现场协商，登陆另一台S125设备，检查配置发现确实存在冲突：

```
[H3C02-Vlan-interface900]dis thi
#
interface Vlan-interface900
ipv6 address 2409:8888:5556:1222:6111::16/125
vrrp ipv6 vrid 1 virtual-ip FE80::AAAA:7666:FEEE:FA01 link-local
vrrp ipv6 vrid 1 virtual-ip 2409:8888:5556:1222:6111::14
vrrp ipv6 vrid 1 priority 120
#
```

协调另一侧设备删除vrrp ipv6 vrid 1 virtual-ip FE80::AAAA:7666:FEEE:FA01 link-local后，本端接口重新配置IPV6地址状态正常：

```
<H3C01>dis ipv6 interface Vlan-interface 900
Vlan-interface900 current state: UP
Line protocol current state: UP
IPv6 is enabled, link-local address is FE80::AAAA:7666:FEEE:FA01
Global unicast address(es):
  2409:8888:5556:1222:6111::15, subnet is 2409:8888:5556:1222:6111::10/125
```

解决方法

协调另一侧设备删除vrrp ipv6 vrid 1 virtual-ip FE80::AAAA:7666:FEEE:FA01 link-local后，将vrrp的虚拟链路本地地址修改为其他地址，本端接口重新配置IPv6地址状态正常：

```
<H3C01>dis ipv6 interface Vlan-interface 900
```

```
Vlan-interface900 current state: UP
```

```
Line protocol current state: UP
```

```
IPv6 is enabled, link-local address is FE80::AAAA:7666:FEEE:FA01
```

```
Global unicast address(es):
```

```
2409:8888:5556:1222:6111::15, subnet is 2409:8888:5556:1222:6111::10/125
```

注意：IPv6的vrrp 虚拟链路本地地址需要手动配置，配置时要注意这个地址不要跟接口的链路本地地址冲突。

