

知 S7503E DHCP回复出现错误

VLAN DHCP/DHCP Relay 转发不通 杨志涛 2018-12-08 发表

组网及说明

无

问题描述

手机从vlan23上来后一直获取不到地址，但是该vlan下别的终端可以正常拿到地址，故障终端的MAC地址是f0db-e2a5-c235

过程分析

根据现场的故障现象，我们怀疑是DHCP的问题，在设备上debugging dhcp server all，我们看到

```
*Nov 22 16:07:07:457 2018 core_7503E DHCP/7/PACKET:
```

```
From 0.0.0.0 port 68, interface Vlan-interface23
```

```
Message type: REQUEST (1)
Hardware type: 1, Hardware address length: 6
Hops: 0, Transaction ID: 3566393750
Seconds: 0, Broadcast flag: 0
Client IP address: 0.0.0.0 Your IP address: 0.0.0.0
Server IP address: 0.0.0.0 Relay agent IP address: 0.0.0.0
Client hardware address: f0db-e2a5-c235
Server host name: not configured
Boot file name: not configured
DHCP message type: DHCPDISCOVER (1)
```

```
*Nov 22 16:07:08:040 2018 core_7503E DHCP/7/PACKET:
```

```
To 10.74.104.221 port 68, interface Vlan-interface23
```

```
Message type: REPLY (2)
Hardware type: 1, Hardware address length: 6
Hops: 0, Transaction ID: 3566393750
Seconds: 0, Broadcast flag: 0
Client IP address: 0.0.0.0 Your IP address: 10.74.104.221 //VLAN27
Server IP address: 0.0.0.0 Relay agent IP address: 0.0.0.0
Client hardware address: f0db-e2a5-c235
Server host name: not configured
Boot file name: not configured
DHCP message type: DHCPOFFER (2)
```

```
*Nov 22 16:07:09:098 2018 core_7503E DHCP/7/PACKET:
```

```
From 0.0.0.0 port 68, interface Vlan-interface23
```

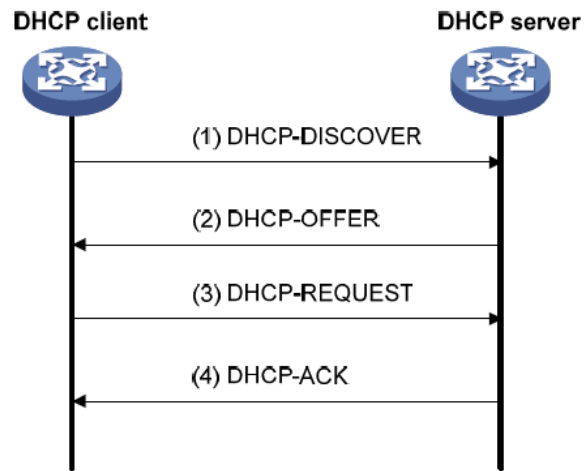
```
Message type: REQUEST (1)
Hardware type: 1, Hardware address length: 6
Hops: 0, Transaction ID: 3566393750
Seconds: 2, Broadcast flag: 0
Client IP address: 0.0.0.0 Your IP address: 0.0.0.0
Server IP address: 0.0.0.0 Relay agent IP address: 0.0.0.0
Client hardware address: f0db-e2a5-c235
Server host name: not configured
Boot file name: not configured
DHCP message type: DHCPREQUEST (3)
```

```
*Nov 22 16:07:09:099 2018 core_7503E DHCP/7/PACKET:
```

```
To 255.255.255.255 port 68, interface Vlan-interface23
```

```
Message type: REPLY (2)
Hardware type: 1, Hardware address length: 6
Hops: 0, Transaction ID: 3566393750
Seconds: 2, Broadcast flag: 1
Client IP address: 0.0.0.0 Your IP address: 0.0.0.0
Server IP address: 10.74.102.126 Relay agent IP address: 0.0.0.0
Client hardware address: f0db-e2a5-c235
Server host name: not configured
Boot file name: not configured
```

图1-2 IP 地址动态获取过程



查看75E上DHCP的交互过程，终端从VLAN 23 上请求DHCPDISCOVER (1)，设备侧给终端回复的地址也是从VLAN 23 下发的，但是回复的地址确是VLAN 27的地址，这就导致终端获取不到地址，从而关联失败。通过命令dis dhcp server free-ip查看，地址池中还有剩余地址。

解决方法

后续研究得知，当终端上线的VLAN上的IP超期后，如果其他VLAN上有address range配置，并且有租约记录，那么会分配其他VLAN的租约地址。

如果VLAN都配置了address range或都没有配置，则不会触发这个问题。
这种属于软件问题，在7568P01及之后的版本解决，升级到7577P02版本。