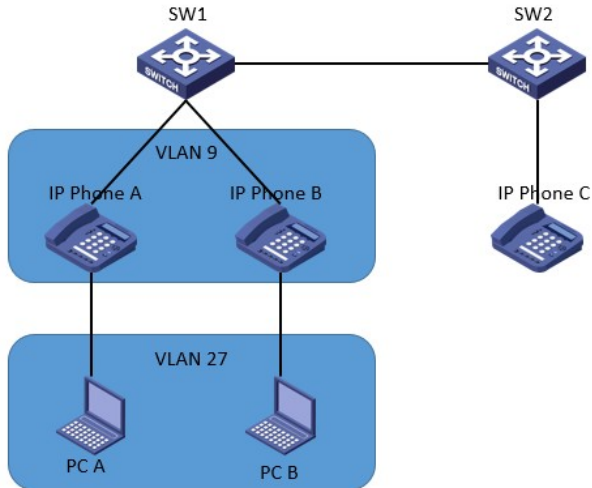


知 S5130-EI交换机下联话机自动识别voice-vlan自动获取IP地址失败问题案例

VLAN 语音 赵杰 2016-09-18 发表

客户需求：客户使用我司S5130-EI作为接入交换机，HW的IP电话连接到交换机端口，IP电话下连业务PC，HW的IP电话属于vlan 9（voice-vlan），业务PC属于vlan 27。客户要求IP电话和业务PC通过DHCP方式自动获取地址，IP电话使用即插即用方式，通过LLDP协议协商voice-vlan。



S5130-EI的配置：

```
#
voice-vlan track lldp
voice-vlan mac-address 20f1-7c00-0000 mask ffff-ff00-0000 description huaweiA
voice-vlan mac-address 244c-0700-0000 mask ffff-ff00-0000 description huaweiB
#
lldp global enable
#
interface GigabitEthernet1/0/1
port link-mode bridge
port link-type trunk
port trunk permit vlan 1 9 27
port trunk pvid vlan 27
undo voice-vlan mode auto
voice-vlan 9 enable
storm-constrain broadcast ratio 5 2
storm-constrain control shutdown
stp edged-port
poe enable
loopback-detection enable vlan 9 27
loopback-detection action shutdown
#
```

问题现象：IP电话可以获取地址，下联业务PC无法获取IP地址。

分析过程如下：

1、交换机端口同时下联IP电话和PC模式时，交换机端口需要将voice-vlan配置为auto模式：

```
voice-vlan mode auto
```

2、连接话机的端口配置为hybrid模式，并在接口下配置mac-vlan enable：

```
#
interface GigabitEthernet1/0/1
port link-mode bridge
port link-type hybrid
undo port hybrid vlan 1
port hybrid vlan 27 untagged
port hybrid pvid vlan 27
voice-vlan 9 enable
stp edged-port
poe enable
mac-vlan enable
```

```

#
交换机接口配置更改之后重新测试，IP电话和业务PC都能自动获取到地址，但是IP电话获取地址的时间很长，大概要5到6分钟才能获取到IP地址，在交换机logbuffer中看到端口有不停UPdown的日志：
%Jan 10 05:57:38:680 2013 TX-13B-02 IFNET/3/PHY_UPDOWN: GigabitEthernet1/0/31 link status is down.
%Jan 10 05:57:38:680 2013 TX-13B-02 IFNET/5/LINK_UPDOWN: Line protocol on the interface GigabitEthernet1/0/31 is down.
%Jan 10 05:57:39:780 2013 TX-13B-02 POE/1/PSE_PORT_ON_OFF_CHANGE:
Trap : PSE 4, IfIndex 31, Detection Status 1.
%Jan 10 05:58:00:137 2013 TX-13B-02 POE/1/PSE_PORT_ON_OFF_CHANGE:
Trap : PSE 4, IfIndex 31, Detection Status 3.
%Jan 10 05:58:00:368 2013 TX-13B-02 IFNET/3/PHY_UPDOWN: GigabitEthernet1/0/31 link status is up.
%Jan 10 05:58:00:369 2013 TX-13B-02 IFNET/5/LINK_UPDOWN: Line protocol on the interface GigabitEthernet1/0/31 is up.
%Jan 10 05:58:07:165 2013 TX-13B-02 IFNET/3/PHY_UPDOWN: GigabitEthernet1/0/31 link status is down.
%Jan 10 05:58:07:168 2013 TX-13B-02 IFNET/5/LINK_UPDOWN: Line protocol on the interface GigabitEthernet1/0/31 is down.
.....
%Jan 10 06:03:02:973 2013 TX-13B-02 LLDP/6/LLDP_CREATE_NEIGHBOR: Nearest bridge agent new neighbor created on Port GigabitEthernet1/0/31 (IfIndex 31), Chassis ID is 10.131.8.17, Port ID is 20f1-7c42-dff1.

```

3、经过确认mac-vlan与voice-vlan不能同时配置，重新更改交换机口配置如下：

```

#
mac-vlan mac-address 20f1-7c00-0000 mask ffff-ff00-0000 vlan 9
mac-vlan mac-address 244c-0700-0000 mask ffff-ff00-0000 vlan 9
#
interface GigabitEthernet1/0/1
port link-mode bridge
port link-type hybrid
undo port hybrid vlan 1
port hybrid vlan 9 27 untagged
port hybrid pvid vlan 27
stp edged-port
poe enable
mac-vlan enable
#

```

更改接口配置之后再次测试，IP电话与业务PC都可以正确获取对应vlan的地址。

更改交换机配置解决问题：

```

#
mac-vlan mac-address 20f1-7c00-0000 mask ffff-ff00-0000 vlan 9
mac-vlan mac-address 244c-0700-0000 mask ffff-ff00-0000 vlan 9
#
voice-vlan track lldp
voice-vlan mac-address 20f1-7c00-0000 mask ffff-ff00-0000 description huaweiA
voice-vlan mac-address 244c-0700-0000 mask ffff-ff00-0000 description huaweiB
#
lldp global enable
#
interface GigabitEthernet1/0/1
port link-mode bridge
port link-type hybrid
undo port hybrid vlan 1
port hybrid vlan 9 27 untagged
port hybrid pvid vlan 27
stp edged-port
poe enable
mac-vlan enable
#

```