V7交换机Voice Vlan自动模式配置方法（命令行版）
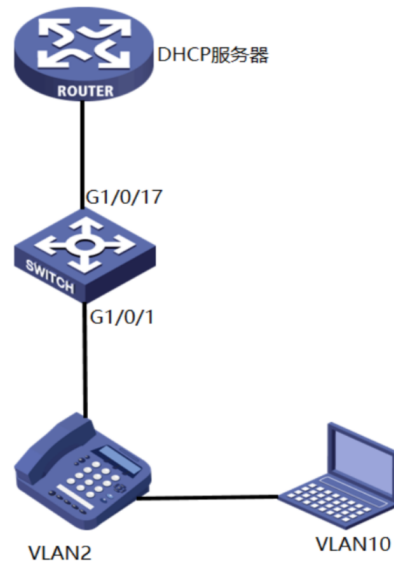
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1 配置需求或说明

1.1 适用产品系列

本案例适用于支持Voice Vlan 功能的V7交换机，确认设备是否支持Voice vlan，可在新华三官网的"产品技术"中确认，V5、V7交换机

具体分类及型号可以参考"1.1 Comware V5、V7平台交换机分类说明"。

1.2 配置需求及实现的效果

为了保障语音数据能够优先转发，需要将语音电话和PC地址区分开，将语音电话地址设置成192.168.2网段划分到VLAN2，将PC地址设置成192.168.10网段划分到VLAN10，路由器作为DHCP服务器给语音电话和PC下发IP地址。

2 组网图

3 配置步骤

3.1 配置交换机

\#开启POE，为话机供电
<H3C>system-view
[H3C]interface GigabitEthernet1/0/1

[H3C-GigabitEthernet1/0/1]poe enable

[H3C-GigabitEthernet1/0/1]quit

#创建话机所属VLAN2以及PC所属VLAN10

[H3C]vlan 2

[H3C-vlan2]quit

[H3C]vlan 10

[H3C-vlan10]quit

#设置允许通过的OUI地址为MAC地址前缀为6ca8-4900-0000，即当报文的前缀为6ca8-4900-0000时，设备会把它当成语音报文来处理

[H3C]voice-vlan mac-address 6ca8-4900-0000 mask ffff-ff00-0000

description avaya

#将端口GigabitEthernet1/0/1设定为Hybrid端口,开启使能端口Voice VLAN功能

[H3C]interface GigabitEthernet 1/0/1

[H3C-GigabitEthernet1/0/1]port link-type hybrid

[H3C-GigabitEthernet1/0/1]voice-vlan 2 enable

#设置PC所属vlan为vlan10

[H3C-GigabitEthernet1/0/1]port hybrid pvid vlan 10

[H3C-GigabitEthernet1/0/1]port hybrid vlan 10 untagged

[H3C-GigabitEthernet1/0/1]quit

#设备连接dhcp服务器的接口1/0/17,允许VLAN2，VLAN10通过

[H3C]interface GigabitEthernet 1/0/17

[H3C-GigabitEthernet1/0/17]port link-type trunk

[H3C-GigabitEthernet1/0/17]port trunk permit vlan 2 10

[H3C-GigabitEthernet1/0/17]quit

#保存配置

[H3C]save force

3.2 配置DHCP服务器

#创建VLAN2，VLAN10及其对应的VLAN接口，为该虚接口配置IP地址

```
<H3C> system-view
[H3C]vlan 2
[H3C-vlan2]quit
[H3C]vlan 10
[H3C-vlan10]quit
[H3C] interface Vlan-interface 2
[H3C-Vlan-interface2]ip address 192.168.2.1 255.255.255.0
[H3C-Vlan-interface2]quit
[H3C] interface Vlan-interface 10
[H3C-Vlan-interface10]ip address 192.168.10.1 255.255.255.0
[H3C-Vlan-interface2]quit
```
#设备连接交换机的接口1/0/7,允许VLAN2，VLAN10通过
```
[H3C]interface GigabitEthernet 1/0/7
[H3C-GigabitEthernet1/0/7]port link-type trunk
[H3C-GigabitEthernet1/0/7]port trunk permit vlan 2 10
[H3C-GigabitEthernet1/0/7]quit
```
#设置话机VLAN2的DHCP地址池
```
[H3C]dhcp server ip-pool vlan2
[H3C-dhcp-pool-vlan2]network 192.168.2.0 mask 255.255.255.0
[H3C-dhcp-pool-vlan2]gateway-list 192.168.2.1
[H3C-dhcp-pool-vlan2]quit
```
#设置PCVLAN10的DHCP地址池
```
[H3C]dhcp server ip-pool vlan10
[H3C-dhcp-pool-vlan10]network 192.168.10.0 mask 255.255.255.0
[H3C-dhcp-pool-vlan10]gateway-list 192.168.10.1
[H3C-dhcp-pool-vlan10]dns-list 114.114.114.114
[H3C-dhcp-pool-vlan10]quit
```
#保存配置
```
[H3C]save force
```

4 实验结果验证

#交换机上查验证结果，查看话机是否加入到VLAN2

dis mac-address

MAC Address	VLAN ID	STATE	Port/Nickname	AGING
3897-d630-676b	10	Learned	GE1/0/17	Y
3897-d630-676b	2	Learned	GE1/0/17	Y
6ca8-4986-6d59	2	Learned	GE1/0/1	Y
0068-eb95-3683	10	Learned	GE1/0/1	Y

#查看voice vlan 配置是否生效

dis voice-vlan mac-address

Oui Address	Mask	Description
0003-6b00-0000	ffff-ff00-0000	Cisco phone
00e0-7500-0000	ffff-ff00-0000	Polycom phone
6ca8-4900-0000	ffff-ff00-0000	avaya

#默认voice vlan默认为auto(自动模式)

dis voice-vlan state

 Current Voice VLANs: 1

 Voice VLAN security mode: Security

 Voice VLAN aging time: 1440 minutes

 Voice VLAN enabled port and its mode:

PORT	VLAN	MODE	COS	DSCP
GE1/0/1	2	AUTO	6	46

#DHCP服务器上查看话机和PC获取的动作

% Jan 1 09:19:59:333 2019 DHCP DHCPS/5/DHCPS_ALLOCATE_IP: DHCP server information: Server IP = 192.168.2.1, DHCP client IP = 192.168.2.2, DHCP client

hardware address = 6ca8-4986-6d59, DHCP client lease = 86400.

dis dhcp server ip-in-use all

Pool utilization: 0.59%

 IP address   Client-identifier/   Lease expiration   Type
                  Hardware address

 192.168.2.2   6ca8-4986-6d59   Jan   9   2013   09:19:59
Auto:COMMITTED

 192.168.10.4   0068-eb95-3683   Jan   9   2013   09:19:42
Auto:COMMITTED