S3X00V2/S3110系列交换机三层组播配置方法（命令行版）

组播VPN　闫宁　2020-10-10 发表

组网及说明

1 配置需求或说明

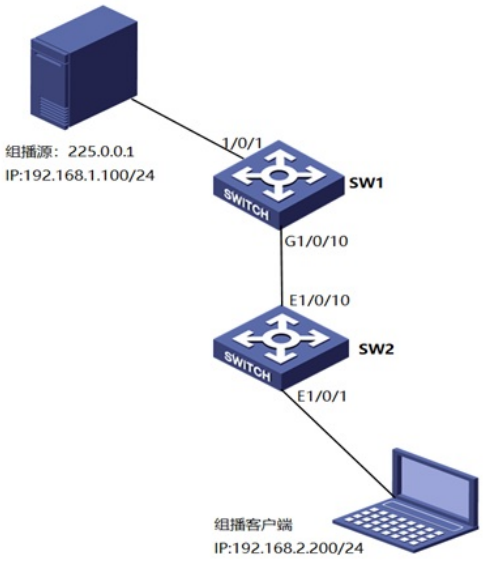
1.1 适用产品系列

本案例适用于如S3100V2-26TP-SI、S3100V2-26TP-EI、S3600V2-28TP-EI、S3600V2-28TP-SI、S3110-26TP-PWR等S3100V2、S3600V2、3110系列的交换机。

1.1 配置需求

公司内部部署了一台组播源，为保证终端能正常接收组播源传输的业务，需在所经交换机上开启组播功能。

2 组网图



配置步骤

3 配置步骤

3.1 配置SW1的IP地址和互联路由

<H3C>system-view

#新建互联VLAN10

[H3C]vlan 10

#将10口加入到VLAN10

[H3C]interface Ethernet1/0/10

[H3C-Ethernet1/0/10]port access vlan 10

[H3C-Ethernet1/0/10]quit

#配置交换机间互联地址

[H3C]interface Vlan-interface10

[H3C-Vlan-interface10]ip address 172.16.10.1 255.255.255.0

[H3C-Vlan-interface10]quit

#配置与组播源互联地址

[H3C]interface Vlan-interface1

[H3C-Vlan-interface1]ip address 192.168.1.1 255.255.255.0

[H3C-Vlan-interface1]quit

#配置组播源与组播客户端互联路由

[H3C]ip route-static 192.168.2.0 255.255.255.0 172.16.10.2

3.2 SW1上开启组播路由功能，接口下使能PIM DM

#开启组播路由功能

[H3C]multicast routing-enable

#设备互联接口使能PIM-DM功能

[H3C]interface Vlan-interface10

[H3C-Vlan-interface10]pim dm

[H3C-Vlan-interface10]quit

#连接组播源接口使能PIM功能

[H3C]interface Vlan-interface1

[H3C-Vlan-interface1]pim dm

[H3C-Vlan-interface1]quit

[H3C]save

配置SW2的IP地址和互联路由

<H3C>system–view

#新建互联VLAN10

[H3C]vlan 10

#将10口加入到VLAN10

[H3C]interface GigabitEthernet 1/0/10

[H3C-GigabitEthernet1/0/10]port access vlan 10

[H3C-GigabitEthernet1/0/10]quit

#配置交换机间互联地址

[H3C]interface Vlan-interface10

[H3C-Vlan-interface10]ip address 172.16.10.2 255.255.255.0

[H3C-Vlan-interface10]quit

#配置与组播客户端互联地址

[H3C]interface Vlan-interface1

[H3C-Vlan-interface1]ip address 192.168.2.1 255.255.255.0

[H3C-Vlan-interface1]quit

#配置组播源与组播客户端互联路由

[H3C]ip route-static 192.168.1.0 255.255.255.0 172.16.10.1

3.3 SW2上开启组播路由功能，设备互联接口使能PIM-DM，组播接受者接口使能IGMP

#开启组播路由功能

[H3C]multicast routing-enable

#互联接口接口使能PIM-DM功能

[H3C]interface Vlan-interface10

[H3C-Vlan-interface10]pim dm

[H3C-Vlan-interface10]quit

#连接组播客户端接口使能IGMP功能

[H3C]interface Vlan-interface1

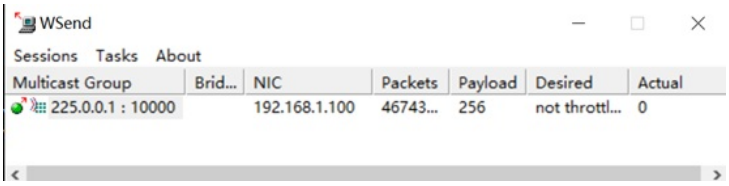
[H3C-Vlan-interface1]igmp enable

[H3C-Vlan-interface1]quit

[H3C]save

3.4 检查配置结果

组播源：



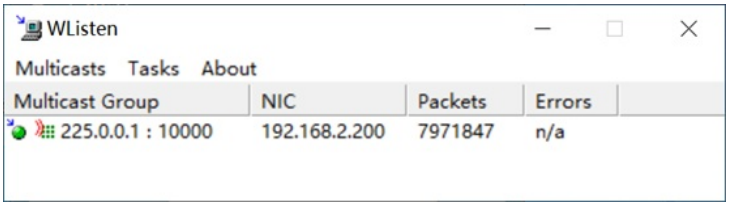
通过使用display pim routing-table命令查看SW1 PIM路由表信息。

```
dis  pim routing-table
 VPN-Instance: public net
 Total 0 (*, G) entry; 1 (S, G) entry

 (192.168.1.100, 225.0.0.1)
     Protocol: pim-dm, Flag: LOC ACT
     UpTime: 00:00:17
     Upstream interface: Vlan-interface1
         Upstream neighbor: NULL
         RPF prime neighbor: NULL
```

Downstream interface(s) information:
Total number of downstreams: 1
1: Vlan-interface10
Protocol: pim-dm, UpTime: 00:00:07, Expires: never

组播客户端：



通过使用display pim routing-table命令查看SW2 PIM路由表信息。

```
<H3C>dis pim routing-table
VPN-Instance: public net
Total 2 (*, G) entries; 1 (S, G) entry

(*, 225.0.0.1)
    Protocol: pim-dm, Flag: WC EXT
    UpTime: 00:05:45
    Upstream interface: NULL
        Upstream neighbor: NULL
        RPF prime neighbor: NULL
    Downstream interface(s) information: None

(192.168.1.100, 225.0.0.1)
    Protocol: pim-dm, Flag: EXT ACT
    UpTime: 00:08:12
    Upstream interface: Vlan-interface10
        Upstream neighbor: 172.16.10.1
        RPF prime neighbor: 172.16.10.1
    Downstream interface(s) information: None

(*, 239.255.255.250)
    Protocol: pim-dm, Flag: WC EXT
    UpTime: 00:05:42
    Upstream interface: NULL
        Upstream neighbor: NULL
        RPF prime neighbor: NULL
    Downstream interface(s) information: None
```

配置关键点