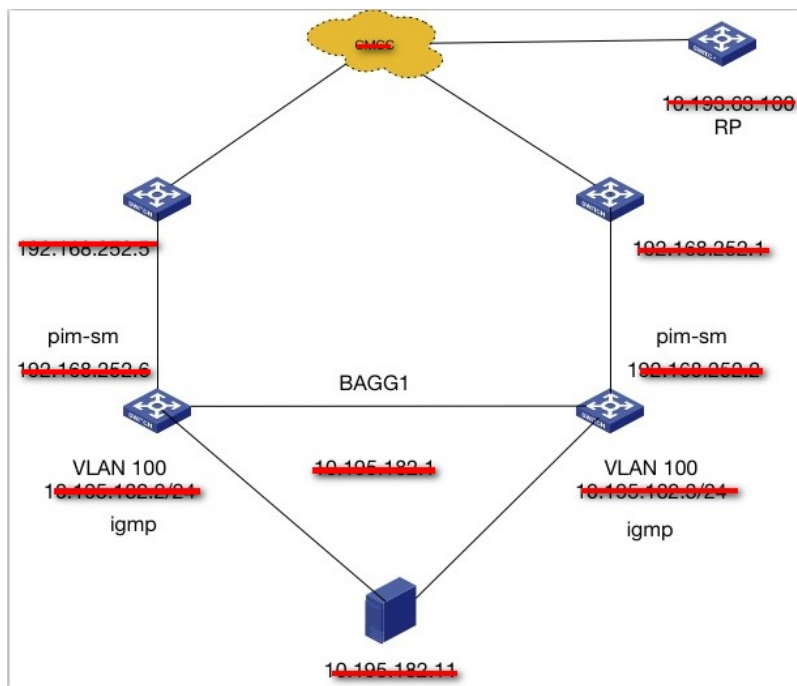


某局点S7610x服务器切换到备网卡时组播流量不通问题

肖倩艳 2018-03-29 发表

某局点客户反馈S7610x版本是R7556，服务器切换到备网卡时组播流量不通，现场组网如下



服务器地址是10.195.x.11两个网卡工作在主备模式，两台S7606做VRRP是服务器网关，网关地址是10.195.x.1,10.195.x.2是主设备。

分析现场组网知，只是服务器切换网卡时，vrrp主备并不会切换，服务器网关还是s7610x-1。流量走向应该是组播源-----7610x-1----链路聚合1---到7610x-2-----teng1/0/1---到服务器。

排查过程如下：

第一步

先排查两个设备的组播表项，其中涉及到的地址如下

组播组是238.123.x.3

组播源地址是172.24.x.139

组播客户端即服务器地址是10.195.x.11

vrrp主上查询结果：

```
[IPTV_08_08_S7610x-1]dis igmp group
```

IGMP groups in total: 8

Vlan-interface100(10.195.182.2):

IGMP groups reported in total: 8

Group address	Last reporter	Uptime	Expires
238.123.x.3	10.195.x.11	00:11:16	00:02:23

```
[IPTV_08_08_S7610X-1]dis arp 10.195.x.11
```

Type: S-Static D-Dynamic O-Openflow R-Rule M-Multiport I-Invalid

IP address	MAC address	VID	Interface/Link ID	Aging Type
10.195.x.11	98f2-b330-d5e8	100	BAGG1	148 D

```
[IPTV_08_08_S7610x-1]dis pim routing-table 238.123.x.3
```

Total 8 (*, G) entries; 8 (S, G) entries

Total matched 1 (*, G) entries; 1 (S, G) entries

(*, 238.123.x.3)

RP: 172.24.x.100

Protocol: pim-sm, Flag: WC

UpTime: 1w:2d

Upstream interface: Vlan-interface1001

Upstream neighbor: 192.168.x.5

RPF prime neighbor: 192.168.x.5

Downstream interface information:

Total number of downstream interfaces: 1

1: Vlan-interface100

Protocol: static igmp, UpTime: 1w:2d, Expires: -

(172.24.x.139, 238.123.x.3)

```

RP: 172.24.x.100
Protocol: pim-sm, Flag: SPT ACT
UpTime: 1w:2d
Upstream interface: Vlan-interface1001
    Upstream neighbor: 192.168.x.5
    RPF prime neighbor: 192.168.x.5
Downstream interface information:
Total number of downstream interfaces: 1
    1: Vlan-interface100
        Protocol: pim-sm, UpTime: 1w:2d, Expires: -
[IPTV_08_08_S7610X-1]dis igmp-snooping group 238.123.x.3 vlan 100
Total 1 entries.
VLAN 100: Total 1 entries.
(0.0.0.0, 238.123.x.3)
Host ports (1 in total):
    BAGG1 (00:03:17)
[IPTV_08_08_S7610X-1]display l2-multicast ip group 238.123.43.3 vlan 100
Total 1 entries.
VLAN 100: Total 1 entries.
(0.0.0.0, 238.123.43.3)
Attribute: dynamic, success
Host ports (1 in total):
    BAGG1 (D, SUC)
VRRP备上查询结果:
<IPTV_08_08_S7610X-2>dis igmp group
IGMP groups in total: 8
Vlan-interface100(10.195.x.3):
IGMP groups reported in total: 8
Group address Last reporter Uptime Expires
238.123.x.3 10.195.x.11 00:14:11 00:03:40
<IPTV_08_08_MGVideo_S7610X-2>dis arp 10.195.182.11
Type: S-Static D-Dynamic O-Openflow R-Rule M-Multiport I-Invalid
IP address MAC address VID Interface/Link ID Aging Type
10.195.x.11 98f2-b330-d5e8 100 XGE1/0/1 187 D
<IPTV_08_08_S7610X-2>display pim routing-table 238.123.x.3
Total 8 (*, G) entries; 6 (S, G) entries
Total matched 1 (*, G) entries; 0 (S, G) entries
(*, 238.123.x.3)
RP: NULL
Protocol: pim-sm, Flag: WC NIIF
UpTime: 00:15:38
Upstream interface: NULL
Upstream neighbor: NULL
RPF prime neighbor: NULL
Downstream interface information: None//由于网关还是主设备，因此备设备上没有组播路由表项，流量从主设备到备设备走的二层组播表项，是正常的
<IPTV_08_08_S7610X-2>dis igmp-snooping group 238.123.x.3 vlan 100
Total 1 entries.
VLAN 100: Total 1 entries.
(0.0.0.0, 238.123.x.3)
Host ports (1 in total):
    XGE1/0/1
<IPTV_08_08_S7610X-2>display l2-multicast ip group 238.123.x.3 vlan 100
Total 1 entries.
VLAN 100: Total 1 entries.
(0.0.0.0, 238.123.x.3)
Attribute: dynamic, success
Host ports (2 in total):
    XGE1/0/1 (D, SUC)
    BAGG1 (R, SUC)
分析两个设备的组播路由表项和二层组播表项都是正常的。
第二步
只能根据流量走向，在对应接口做流统，确认丢包位置。
#

```

```

acl advanced 3000
rule 0 permit udp source 172.24.x.139 0
#
traffic classifier udp operator and
if-match acl 3000
#
traffic behavior udp
accounting packet
#
qos policy udp
classifier udp behavior udp
#
7610x-1上的流统结果如下
[IPTV_08_08_S7606-1]dis qos po interface
Interface: Ten-GigabitEthernet2/0/1
Direction: Outbound
Policy: udp
Classifier: udp
Operator: AND
Rule(s) :
If-match acl 3000
Behavior: udp
Accounting enable:
70436 (Packets)
7610x-2上的流统结果如下
[IPTV_08_08_S7606-2]dis qos po int
Interface: Ten-GigabitEthernet1/0/1///连接服务器接口
Direction: Outbound
Policy: udp
Classifier: udp
Operator: AND
Rule(s) :
If-match acl 3000
Behavior: udp
Accounting enable:
53 (Packets)
Interface: Ten-GigabitEthernet2/0/1链路聚合1 物理接口
Direction: Inbound
Policy: udp
Classifier: udp
Operator: AND
Rule(s) :
If-match acl 3000
Behavior: udp
Accounting enable:
70436 (Packets)
从上述结果可以看出流量已经到7610x-2，但是被丢弃了。
现在得找找7610x-2丢弃组播报文的原因了
此时查看设备组播相关配置
#
igmp-snooping
#
vlan 100
description To-Video
#
vlan 1000 to 1001

#
interface Vlan-interface100
ip address 10.195.x.3 255.255.255.0
igmp enable
vrrp vrid 100 virtual-ip 10.195.x.1
#
interface Vlan-interface1001

```

```
description to-multicast-NE5000E-02
ip address 192.168.x.2 255.255.255.252
pim sm
#
```

发现vlan100虚接口组播组管理协议IGMP是开启的，但是此时组播流量应该是二层转发的，让现场工程师尝试取消上述配置测试，测试结果是删除IGMP配置之后服务器备用网卡是可以收到组播流量的。现场7610x-2 vlan100开启IGMP是为了网关切换到此设备时用的，是不能删除的。最后和研发沟通，目前S7610x当前版本R7556是不支持上述组网的，建议更改组网。和现场沟通更改组网为IRF堆叠模式问题解决。