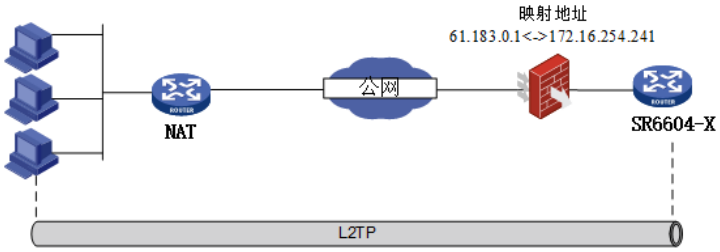
某局点AAA服务器分配地址冲突导致L2TP拨入SR66异常经验案例

L2TP Radius **吕甲南** 2016-07-27 发表



SR6604-X 版本R3303P04

某局点SR6604-X L2TP拨号异常。上午用户L2TP拨入没问题，都能拨入。下午拨入用户大概800人左右，有比较多的用户拨不上。

基本环境

测试时PC使用账号xxxx拨不上，使用另一个账号就可以拨上了，账号是允许10个人同时登陆的，地址为AAA服务器分配。怀疑AAA服务器分配地址异常导致。

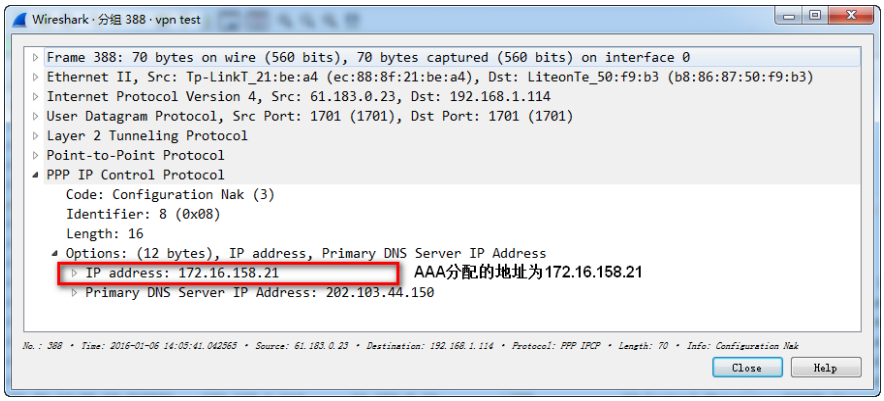
SR66地址:61.183.0.1（该地址为防火墙的地址，映射到SR66地址为172.16.254.241）

测试PC地址:192.168.1.114

测试账号：xxxx 密码：xxxxxx

过程分析

```
527 2016-01-06 14:06:00.920635  192.168.1.114  61.183.0.1      PPP LCP    78 Identification
528 2016-01-06 14:06:00.937680  61.183.0.1      192.168.1.114   PPP CHAP   86 Challenge (NAME='CRM2.5-VPN2', VALUE=0xbe77a24d634afa360f0
529 2016-01-06 14:06:00.937796  61.183.0.1      192.168.1.114   PPP LCP    62 Echo Request
530 2016-01-06 14:06:00.938510  192.168.1.114   61.183.0.1      PPP CHAP   84 Response (NAME='         ', VALUE=0xead72f780256acd34383c8
531 2016-01-06 14:06:00.938727  192.168.1.114   61.183.0.1      PPP LCP    62 Echo Reply
532 2016-01-06 14:06:01.026269  61.183.0.1      192.168.1.114   PPP CHAP   81 Success (MESSAGE='Welcome to CRM2.5-VPN2.')
533 2016-01-06 14:06:01.026269  61.183.0.1      192.168.1.114   PPP IPCP   64 Configuration Request
534 2016-01-06 14:06:01.027511  192.168.1.114   61.183.0.1      PPP IPV6CP 68 Configuration Request
535 2016-01-06 14:06:01.027724  192.168.1.114   61.183.0.1      PPP IPCP   88 Configuration Request
536 2016-01-06 14:06:01.027895  192.168.1.114   61.183.0.1      PPP IPCP   64 Configuration Ack
537 2016-01-06 14:06:01.094549  61.183.0.1      192.168.1.114   PPP LCP    60 Protocol Reject
538 2016-01-06 14:06:01.094551  61.183.0.1      192.168.1.114   PPP IPCP   76 Configuration Reject
539 2016-01-06 14:06:01.095345  192.168.1.114   61.183.0.1      PPP IPCP   70 Configuration Request   请求地址
540 2016-01-06 14:06:01.169862  61.183.0.1      192.168.1.114   PPP IPCP   70 Configuration Nak       分配地址
541 2016-01-06 14:06:01.170174  192.168.1.114   61.183.0.1      PPP IPCP   70 Configuration Request   确认地址
566 2016-01-06 14:06:03.889178  192.168.1.114   61.183.0.1      PPP IPCP   70 Configuration Request
583 2016-01-06 14:06:07.230777  61.183.0.1      192.168.1.114   PPP LCP    58 Termination Request     SR66直接拆线
584 2016-01-06 14:06:07.231156  192.168.1.114   61.183.0.1      PPP LCP    58 Termination Ack
586 2016-01-06 14:06:07.237184  192.168.1.114   61.183.0.1      L2TP       80 Control Message - CDN (tunnel id=479, session id=14700)
631 2016-01-06 14:06:17.262509  192.168.1.114   61.183.0.1      L2TP       80 Control Message - CDN (tunnel id=479, session id=14700)
668 2016-01-06 14:06:27.272088  192.168.1.114   61.183.0.1      L2TP       80 Control Message - CDN (tunnel id=479, session id=14700)
```



L2TP协商已经到了分配地址和确认地址的阶段，正常情况PC发送Configuration Request确认地址，如果该地址可以使用，则SR66回复Configuration Ack。

故障时，SR66收到PC发出的Configuration Request确认地址，确认的地址为172.16.158.21。SR66查询该地址是否合法，发现已经有其他用户正在使用该地址，SR66上提示地址冲突然后主动发送Termination Request让该客户下线。

```
  ===============display ip routing-table===============
============================================================
Routing Tables: Public
    Destinations : 830    Routes : 833

Destination/Mask    Proto  Pre  Cost        NextHop         Interface
172.16.158.21/32    Direct 0    0           172.16.158.21   VT1
```

故障时的诊断中可以看到该地址已经有客户端正在使用。

%Jan 6 14:06:28:116 2016 CRM2.5-VPN2 RDS/6/RDS_SUCC: -Slot=2; -IfName=**Virtual-Template1:315**-VlanId=0-MACAddr=00:00:00:00:00:00-IPAddr=N/A-IPv6Addr=N/A-UserName=**xxxx@xxx**; User got online successfully.

Jan 6 14:06:39:022 2016 CRM2.5-VPN2 PPP/7/debug2: -Slot=2;

PPP Packet:

Virtual-Template1:315 Input IPCP(8021) Pkt, Len 20

State ackrcvd, code ConfReq(01), id 11, len 16

IP Address(3), len 6, val ac109e15

Primary DNS Server Address(81), len 6, val ca672c96

*Jan 6 14:06:39:022 2016 CRM2.5-VPN2 PPP/7/debug2: -Slot=2;

PPP Event:

Virtual-Template1:315 IPCP RCR+(Receive Config Good Request) Event

state ackrcvd

*Jan 6 14:06:39:023 2016 CRM2.5-VPN2 PPP/7/debug2: -Slot=2;

PPP Error:

Virtual-Template1:315 IPCP : **Ipcp_upcheck: Peer IP address conflicts!**

*Jan 6 14:06:39:023 2016 CRM2.5-VPN2 PPP/7/debug2: -Slot=2;

PPP Event:

Virtual-Template1:315 LCP Close Event

state opened

*Jan 6 14:06:39:023 2016 CRM2.5-VPN2 PPP/7/debug2: -Slot=2;

PPP State Change:

Virtual-Template1:315 LCP : opened --> closing

*Jan 6 14:06:39:023 2016 CRM2.5-VPN2 PPP/7/debug2: -Slot=2;

PPP Packet:

Virtual-Template1:315 Output LCP(c021) Pkt, Len 8

State closing, code **TermReq(05)**, id 3, len 4

从debug中分析，SR66收到ConfReq确认地址后，SR66检测到地址冲突提示**Ipcp_upcheck: Peer IP address conflicts!**，SR66主动发出TermReq让客户下线。

从debug中分析，有较多的用户下线，原因都是分配的地址冲突导致。

```
Virtual-Template1:807 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:813 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:807 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:807 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:767 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:315 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:315 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:315 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:767 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:741 IPCP : Ipcp_upcheck: Peer IP address conflicts!
Virtual-Template1:789 IPCP : Ipcp_upcheck: Peer IP address conflicts!
```

在AAA服务器上查看日志，在拨入的时间点，获取的地址在AAA服务器上已经有用户正在使用了。

方法一：排查AAA服务器分配地址冲突的原因。

方法二：可以修改为SR66设备为L2TP用户分配地址。