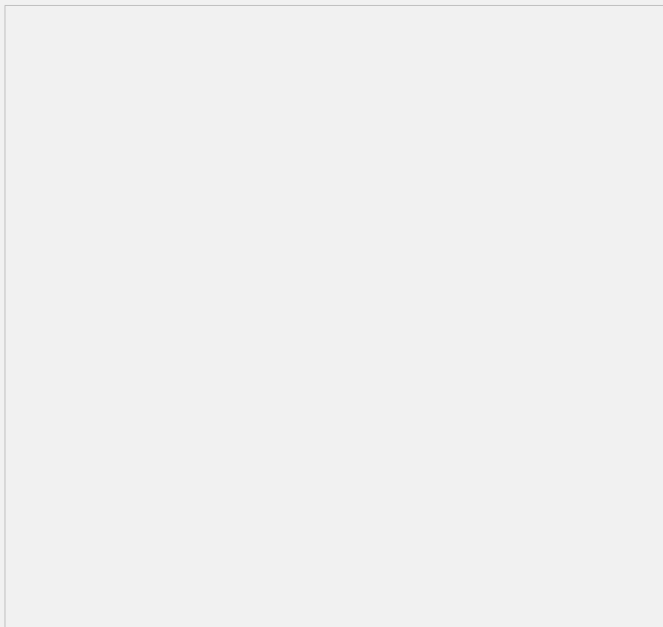


SR66SR66-X系列路由器VRRP公网地址不通 导致业务中断经验案例

一、组网：



二、问题描述：

客户总部原先网络出口为一台SR6604作为IPSEC网关，还有一台Juniper设备作为NAT出口，客户现在新增一台设备SR6604路由器，希望与原SR6604做VRRP，并且将NAT配置移到SR6604上。总部通过电信接口与分支网点建立IPSEC连接，供网店与总部互访。

变更完成后，现场测试业务一切正常，但是过了半个小时左右发现IPSEC业务中断，客户从公网ping 电信VRRP虚地址100.0.0.100不通，ping SR6604-1电信实地址100.0.0.1也不通，但是ping SR6604-2电信实地址通，ping SR6604-1电信联通实地址通。客户通过联通地址登陆设备后，shutdown/undo shutdown电信接口后，业务恢复。此问题当天出现了四次，最终客户将业务回退到了Juniper设备上。

事后收集了两台设备的诊断信息以及logfile信息，通过分析操作记录以及logfile信息，定位除了原因所在。

三、过程分析：

查看logfile文件，查找shutdown/undo shutdown记录如下：

```
%@50230%Oct 18 23:20:02:415 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=10.1.3.100-User=admin; Command is shutdown
%@50244%Oct 18 23:20:04:832 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=10.1.3.100-User=admin; Command is undo shutdown
%@50696%Oct 18 23:48:55:099 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=10.1.3.100-User=admin; Command is shutdown
%@50709%Oct 18 23:48:59:021 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=10.1.3.100-User=admin; Command is undo shutdown
%@50967%Oct 19 00:10:34:302 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=10.1.3.100-User=admin; Command is shutdown
%@50972%Oct 19 00:10:37:161 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=10.1.3.100-User=admin; Command is undo shutdown
%@51465%Oct 19 00:54:29:030 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=115.234.19.178-User=admin; Command is shutdown
%@51470%Oct 19 00:54:30:850 2014 SR6604-2 SHELL/6/SHELL_CMD: -Task=vt0
-IPAddr=115.234.19.178-User=admin; Command is undo shutdown
```

查看shut/undo sh时间出现的异常，找到四次默认路由被删除的记录：

```
%@50164%Oct 18 23:15:08:613 2014 SR6604-2 RM/3/RMLOG: The default route h
as been changed or deleted, protocol is Static, nexthop address is 100.0.0.101,
```

```
output interface is GigabitEthernet3/1/7
%@50605%Oct 18 23:40:32:944 2014 SR6604-2 RM/3/RMLOG: The default route has been changed or deleted, protocol is Static, nexthop address is 100.0.0.101, output interface is GigabitEthernet3/1/7
%@50950%Oct 19 00:09:16:225 2014 SR6604-2 RM/3/RMLOG: The default route has been changed or deleted, protocol is Static, nexthop address is 100.0.0.101, output interface is GigabitEthernet3/1/7
%@51446%Oct 19 00:50:58:856 2014 SR6604-2 RM/3/RMLOG: The default route has been changed or deleted, protocol is Static, nexthop address is 100.0.0.101, output interface is GigabitEthernet3/1/7
```

查看默认路由配置信息：

```
ip route-static 0.0.0.0 0.0.0.0 100.0.0.101 track 1
```

发现该默认路由与track 1配置了联动：

```
nqa entry dianxin 1
type icmp-echo
destination ip 100.0.0.101
frequency 10000
next-hop 100.0.0.101
probe count 5
probe timeout 1000
reaction 1 checked-element probe-fail threshold-type consecutive 5 action-type trigger-only
```

由此推论，默认路由被删的原因是因为nqa检测失败。

由此我们可以推断出问题原因所在，因为某种原因（链路质量）NQA检测失败了，然后删除了该默认路由。此时次优的联通默认路由便生效了：

```
ip route-static 0.0.0.0 0.0.0.0 200.0.0.201 track 2 preference 80
```

此时从公网ping SR6604-1电信接口地址以及VRRP虚地址，回复报文查找路由表从联通接口转发出去，这样就导致转发不通。因为此时联通默认路由生效，所以从公网ping联通地址可达。SR6604-2因为NQA检测没有失败，所以默认路由依然是电信的默认路由，所以ping SR6604-2的电信接口实地址可达。

当客户回退后，链路质量变好，未出现过默认路由被删除的现象，所以问题没有复现。

四、 解决方法：

建议客户排查电信出口链路或者交换机问题。