

## 知 某局点6800无法同步时间

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### 组网及说明

新增ntp同步配置，125从公网ntp服务器同步时间，125作为服务器向68同步时间。S68

```
[XAS27&28.PRI.LF-OSS]dis cu | in ntp
```

```
clock protocol ntp
```

```
ntp-service enable
```

```
ntp-service source Vlan-interface360
```

```
ntp-service unicast-server 10.3.54.1
```

S125

```
[AGGS01&02.PRI.LF-OSS]dis cu | in ntp
```

```
clock protocol ntp mdc 1
```

```
ntp-service enable
```

```
ntp-service unicast-server 220.192.72.250 priority
```

```
ntp-service unicast-server 220.192.72.249
```

## 问题描述

查看68状态为init, 工程师反馈125时间同步正常

```
[6800]dis ntp sessions
```

```
   source      reference      stra reach poll now offset delay disper
*****
[5]10.3.54.1   INIT          16  0  64  6 0.0000 0.0000 0.0000
```

Notes: 1 source(master), 2 source(peer), 3 selected, 4 candidate, 5 configured.

Total sessions: 1

## 过程分析

首先查看68与时间服务器是否互通，不互通则时间同步失败

本次查看可以ping通

```
[6800]ping 10.3.54.1
```

```
Ping 10.3.54.1 (10.3.54.1): 56 data bytes, press CTRL_C to break
```

```
56 bytes from 10.3.54.1: icmp_seq=0 ttl=255 time=1.392 ms
```

```
56 bytes from 10.3.54.1: icmp_seq=1 ttl=255 time=1.251 ms
```

```
56 bytes from 10.3.54.1: icmp_seq=2 ttl=255 time=1.392 ms
```

```
56 bytes from 10.3.54.1: icmp_seq=3 ttl=255 time=1.249 ms
```

```
56 bytes from 10.3.54.1: icmp_seq=4 ttl=255 time=1.253 ms
```

debug ntp all查看ntp报文的交互情况，发现68对ntp报文检查不通过

```
*Mar 22 10:19:27:749 2022 6800 NTP//PACKET_SEND:  
packet to 10.3.54.1, length: 48  
leap: 3, version: 4, mode: 3, vrfindex: 0  
stratum: 16, poll: 6, precision: 2^-18  
rdel: 0.000, rdsp: 1008.408, refid: INIT  
reftime: 00000000.00000000 Mon, Jan 1 1900 8:00:00.000  
orgtime: e5e3b050.00000000 Tue, Mar 22 2022 10:17:52.000  
rectime: e5e3b06c.c020525d Tue, Mar 22 2022 10:18:20.750  
xmtime: e5e3b0af.bf966ed9 Tue, Mar 22 2022 10:19:27.748
```

```
*Mar 22 10:19:27:750 2022 6800 NTP//PACKET_RECV:  
packet from 10.3.54.1 to 10.3.54.28 on Vlan-interface360  
leap: 0, version: 4, mode: 4, vrfindex: 0  
stratum: 4, poll: 6, precision: 2^-22  
rdel: 15.533, rdsp: 62620.911, refid: 220.192.72.250  
reftime: e5e3b088.00000000 Tue, Mar 22 2022 10:18:48.000  
orgtime: e5e3b0af.bf966ed9 Tue, Mar 22 2022 10:19:27.748  
rectime: e5e3b093.00000000 Tue, Mar 22 2022 10:18:59.000  
xmtime: e5e3b093.00000000 Tue, Mar 22 2022 10:18:59.000  
inptime: e5e3b0af.c016dba7 Tue, Mar 22 2022 10:19:27.750
```

```
*Mar 22 10:19:27:751 2022 6800 NTP//ACL: Access restrict: 0x00000008.
```

```
*Mar 22 10:19:27:751 2022 6800 NTP//AUTH: Received a packet at 72233, from 10.3.54.1, mode 4, key ID 00000000, length 48, authentication result 0
```

```
*Mar 22 10:19:27:751 2022 6800 NTP//VALID: The packet from 10.3.54.1 failed the validity tests 0x00011640.
```

从debug信息中可以发现，125发来的ntp报文的两个时间误差参数rdel: 15.533, rdsp: 62620.911过大，导致68不接受时间同步

一般来说，只有同时满足如下条件，交换机才会进行时间同步

$rdel/2 + rdsp < 16$  and  $rdsp < 16$  ,  $rdel < 16$

## 解决方法

通过以上分析，判断为125发出的ntp报文存在问题。在125上重置下ntp进程，时间同步成功

```
[probe]process restart name ntpd
```

