

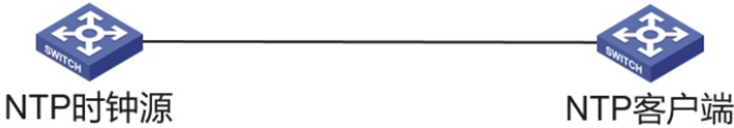
知 某局点S10500 NTP时间无法同步

NTP

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组网及说明



客户端为：S10500
时钟源为：时钟服务器

问题描述

NTP客户端无法同步服务器时间

过程分析

1. display ntp-service sessions, 若会话没有建立排查配置, 保证基础配置无误, 图中会话已建立

```
[leaf]display ntp-service sessions
source          reference          stra reach poll now offset delay disper
*****
[5]10           16      0      64      - 0.0000 0.0000 0.0000
Notes: 1 source(master), 2 source(peer), 3 selected, 4 candidate, 5 configured.
Total sessions: 1
[leaf]
```

2. debugging ntp-service packet(NTP报文调试信息开关), 来查看服务器与客户端的报文交互过程

```
<$10500>*Nov 15 13:44:41:758 2021 S10500 NTP/7/PACKET_RECV: -MDC=1;
packet from 10.0.0.1 to 10.0.0.1 on Vlan-interface1000
  leap: 0, version: 4, mode: 3, vrindex: 0
  stratum: 3, poll: 6, precision: 2^-18
  rdel: 2.747, rdsp: 17.731, refid: 10.0.0.1
  reftime: e53c7 Mon, Nov 15 2021 13:43:34.759
  orgtime: e53c7 Mon, Nov 15 2021 13:43:34.758
  rectime: e53c7 Mon, Nov 15 2021 13:43:34.759
  xmttime: e53c7 Mon, Nov 15 2021 13:44:41.756
  inptime: e53c7 Mon, Nov 15 2021 13:44:41.757

*Nov 15 13:44:41:759 2021 S10500 NTP/7/ACL: -MDC=1; Access restrict: 0x00000008.
*Nov 15 13:44:41:759 2021 S10500 NTP/7/AUTH: -MDC=1; Received a packet at 351688, from 10.0.0.1, mode 3.
*Nov 15 13:44:41:760 2021 S10500 NTP/7/PACKET_SEND: -MDC=1;
packet to 10.0.0.1, length: 48
  leap: 0, version: 4, mode: 4, vrindex: 0
  stratum: 2, poll: 6, precision: 2^-17
  rdel: 0.000, rdsp: 11.429, refid: 127.0.0.1
  reftime: e53c Mon, Nov 15 2021 13:44:08.008
  orgtime: e53c Mon, Nov 15 2021 13:44:41.756
  rectime: e53c Mon, Nov 15 2021 13:44:41.757
  xmttime: e53c Mon, Nov 15 2021 13:44:41.759
```

通过debug信息可以明显看出NTP客户端(时钟服务器)的层级比时钟源(时钟服务器)层级高(值越大, 层级越低) 上图中时钟源层级为: 3 客户端层级为: 2

NTP客户端的层级要低于NTP服务器才能正常同步

解决方法

方法一：

删除ntp-service refclock-master +层级数配置。

大多数时候ntp客户端都无需配置层级——客户端时间同步时会根据上游服务器层级自动生成自己的层级（服务器层级+1作为自己的层级）

方法二：

客户端配置更低的层级（值越大，层级越低）

