

组网及说明

S12508与思科3925对接NTP典型组网配置，其中S12508为时钟源，思科3925为客户端

S12508版本信息如下：

```
H3C Comware Software, Version 7.1.070, Release 1110P02
Copyright (c) 2004-2018 New H3C Technologies Co., Ltd. All rights reserved.
H3C S12508X-54QC-EI uptime is 31 weeks, 3 days, 21 hours, 12 minutes
Last reboot reason : Cold reboot
```

```
Boot image: flash:/S12508x-cmw710-boot-r1110p02.bin
Boot image version: 7.1.070, Release 1110P02
  Compiled Aug 14 2018 11:00:00
System image: flash:/S12508x-cmw710-system-r1110p02.bin
System image version: 7.1.070, Release 1110P02
  Compiled Aug 14 2018 11:00:00
```

思科3925版本信息如下：

```
sh version
Cisco IOS Software, C3900 Software (C3900-UNIVERSALK9-M), Version 15.1(4)M4, RELEASE SO
FTWARE (fc1)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2012 by Cisco Systems, Inc.
Compiled Tue 20-Mar-12 21:28 by prod_rel_team
```

ROM: System Bootstrap, Version 15.0(1r)M13, RELEASE SOFTWARE (fc1)

```
tmis_a_product uptime is 1 year, 45 weeks, 2 days, 18 hours, 43 minutes
System returned to ROM by address error at PC 0x46BC960, address 0x4E008130 at 02:55:49 UTC
Sun Apr 29 2012
System restarted at 20:15:58 UTC Tue Jul 17 2018
System image file is "flash0:c3900-universalk9-mz.SPA.151-4.M4.bin"
Last reload type: Normal Reload
```

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
<http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Cisco CISCO3925-CHASSIS (revision 1.0) with C3900-SPE100/K9 with 995328K/53248K bytes of memory.

```
Processor board ID FGL16171537
3 Gigabit Ethernet interfaces
4 Serial interfaces
1 terminal line
4 Channelized E1/PRI ports
DRAM configuration is 72 bits wide with parity enabled.
255K bytes of non-volatile configuration memory.
```

250880K bytes of ATA System CompactFlash 0 (Read/Write)

License Info:

License UDI:

```

-----
Device#  PID          SN
-----
*0      C3900-SPE100/K9    FOC16154QK4

```

Technology Package License Information for Module:'c3900'

```

-----
Technology  Technology-package  Technology-package
           Current    Type      Next reboot
-----
ipbase     ipbasek9    Permanent  ipbasek9
security   None        None       None
uc         None        None       None
data       datak9      Permanent  datak9

```

Configuration register is 0x2102

配置步骤

S12508 NTP时钟源配置信息如下:

```

clock protocol none
ntp-service enable
ntp-service refclock-master 2

```

```

interface Vlan-interface4
ip address 10.190.4.254 255.255.255.0
vrrp vrid 4 virtual-ip 10.190.4.1
vrrp vrid 4 priority 105
packet-filter 3002 inbound
packet-filter 3002 outbound

```

思科3925 NTP配置如下:

```
ntp server 10.190.4.1 source GigabitEthernet0/0
```

S12508查看NTP显示信息:

```

dis ntp sessions
source      reference  stra reach poll now offset delay disper
-----
[25]10.190.8.252  LOCL      1 255 64 51 -28825 0.9002 18.218
[12345]LOCAL(0)  LOCL      1 255 64 42 0.0000 0.0000 0.9155
Notes: 1 source(master), 2 source(peer), 3 selected, 4 candidate, 5 configured.
Total sessions: 2

```

```

dis ntp status
Clock status: synchronized
Clock stratum: 2
System peer: LOCAL(0)
Local mode: client
Reference clock ID: 127.127.1.0
Leap indicator: 00

```

Clock jitter: 0.000000 s
Stability: 0.000 pps
Clock precision: 2^-21
Root delay: 0.00000 ms
Root dispersion: 10.98633 ms
Reference time: e27ced67.56daf74f Sat, May 30 2020 14:34:15.339
System poll interval: 64 s

思科3925查看NTP显示信息:

show ntp status

Clock is synchronized, stratum 3, reference is 10.190.4.1
nominal freq is 250.0000 Hz, actual freq is 250.0039 Hz, precision is 2**16
reference time is E27CEF76.DEED43EC (14:43:02.870 UTC Sat May 30 2020)
clock offset is 0.1260 msec, root delay is 0.76 msec
root dispersion is 25.42 msec, peer dispersion is 7.43 msec
loopfilter state is 'CTRL' (Normal Controlled Loop), drift is -0.000015876 s/s
system poll interval is 1024, last update was 443 sec ago.

show ntp associations

address	ref clock	st	when	poll	reach	delay	offset	disp
*~10.190.4.1	127.127.1.0	2	458	512	377	0.761	0.126	7.432

* sys.peer, # selected, + candidate, - outlyer, x fallesticker, ~ configured

配置关键点

- 1、 确保时钟源和时钟客户端路由可达。
- 2、 时钟源及时钟客户端都需要开启NTP功能。
- 3、 时钟客户端指定时钟源为NTP服务器。
- 4、 时钟源所在的设备配置为时钟源。