

组网及说明

S10510与思科3925对接NTP典型组网配置, 其中S10510为时钟源, 思科3925为客户端

S10510版本信息如下:

H3C Comware Software, Version 7.1.070, Release 7536P05

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H3C S10510 uptime is 92 weeks, 2 days, 4 hours, 3 minutes

Last reboot reason : USER reboot

Boot image: flash:/S10500-CMW710-BOOT-R7536P05.bin

Boot image version: 7.1.070, Release 7536P05

Compiled Mar 28 2017 16:00:00

System image: flash:/S10500-CMW710-SYSTEM-R7536P05.bin

System image version: 7.1.070, Release 7536P05

Compiled Mar 28 2017 16:00:00

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 SOFTWARE (fc1)

Technical Support: <http://www.cisco.com/techsupport>

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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

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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

S10510 NTP时钟源配置信息如下:

```
clock protocol none
```

```
ntp-service enable
```

```
ntp-service refclock-master 2
```

```
interface Vlan-interface100
```

```
description YunWeiGuanLi
```

```
ip address 10.190.8.1 255.255.255.192
```

```
quit
```

思科3925 NTP配置如下:

```
ntp server 10.190.8.1 source GigabitEthernet0/0
```

S10510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 10.190.8.1
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
*~10.190.8.1 127.127.1.0 2 458 512 377 0.761 0.126 7.432
* sys.peer, # selected, + candidate, - outlyer, x falseticker, ~ 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。