

组网及说明

S12508与思科2960对接NTP典型组网配置，其中S12508为时钟源，思科2960为客户端

S12508版本信息如下：

H3C Comware Platform Software

Comware Software, Version 5.20, Release 1828P05

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H3C S12508 uptime is 58 weeks, 4 days, 15 hours, 32 minutes

Last reboot reason : User reboot

思科2960版本信息如下：

Cisco IOS Software, C2960 Software (C2960-LANBASEK9-M), Version 12.2(50)SE5, RELEASE SOFTWARE (fc1)

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

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Compiled Tue 28-Sep-10 13:44 by prod_rel_team

Image text-base: 0x00003000, data-base: 0x01400000

ROM: Bootstrap program is C2960 boot loader

BOOTLDR: C2960 Boot Loader (C2960-HBOOT-M) Version 12.2(44)SE5, RELEASE SOFTWARE (fc1)

WAI-F4-XZC-1 uptime is 31 weeks, 5 days, 17 hours, 28 minutes

System returned to ROM by power-on

System restarted at 23:02:23 china Sun Oct 20 2019

System image file is "flash:c2960-lanbasek9-mz.122-50.SE5/c2960-lanbasek9-mz.122-50.SE5.bin"

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 WS-C2960G-48TC-L (PowerPC405) processor (revision H0) with 65536K bytes of memory.

Processor board ID FOC1520W67N

Last reset from power-on

3 Virtual Ethernet interfaces

48 Gigabit Ethernet interfaces

The password-recovery mechanism is enabled.

64K bytes of flash-simulated non-volatile configuration memory.

Base ethernet MAC Address : 58:35:D9:46:4B:00

Motherboard assembly number : 73-10300-12

Power supply part number : 341-0098-02

Motherboard serial number : FOC15183794

Power supply serial number : DCA151090N8

Model revision number : H0

Motherboard revision number : A0

Model number : WS-C2960G-48TC-L
System serial number : FOC1520W67N
Top Assembly Part Number : 800-27071-06
Top Assembly Revision Number : D0
Version ID : V06
CLEI Code Number : COMB800BRA
Hardware Board Revision Number : 0x01

Switch Ports Model	SW Version	SW Image
* 1 48 WS-C2960G-48TC-L	12.2(50)SE5	C2960-LANBASEK9-M

Configuration register is 0xF

配置步骤

S12508 NTP时钟源配置信息如下:

```
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2960 NTP配置如下:

```
ntp server 10.190.9.1
```

S12508查看NTP显示信息:

```
dis ntp status  
Clock status: synchronized  
Clock stratum: 2  
Reference clock ID: 127.127.1.0  
Nominal frequency: 100.0000 Hz  
Actual frequency: 100.0000 Hz  
Clock precision: 2^14  
Clock offset: 0.0000 ms  
Root delay: 0.00 ms  
Root dispersion: 43.43 ms  
Peer dispersion: 10.00 ms  
Reference time: 08:26:28.027 UTC May 30 2020(E27C9734.072367E4)
```

```
dis ntp sessions  
source reference str reach poll now offset delay disper  
*****  
[12345]127.127.1.0 LOCL 1 255 64 44 0.0 0.0 1.0  
note: 1 source(master),2 source(peer),3 selected,4 candidate,5 configured  
Total associations : 1
```

思科2960查看NTP显示信息:

```
sh ntp status  
Clock is synchronized, stratum 3, reference is 10.190.9.1  
nominal freq is 119.2092 Hz, actual freq is 119.2105 Hz, precision is 2**18  
reference time is E27C97F1.62CE2420 (16:29:37.385 china Sat May 30 2020)
```

clock offset is -1.0792 msec, root delay is 2.90 msec
root dispersion is 46.17 msec, peer dispersion is 1.60 msec

sh ntp associations

```
      address      ref clock  st when poll reach delay offset disp
*~10.190.9.1    127.127.1.0  2 70 128 377  2.9 -1.08  1.6
* master (synced), # master (unsynced), + selected, - candidate, ~ 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。