

## 组网及说明

S10510与思科3750对接NTP典型组网配置，其中S10510为时钟源，思科3750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3750信息如下：

Cisco IOS Software, C3750 Software (C3750-IPSERVICESK9-M), Version 12.2(52)SE, RELEASE SOFTWARE (fc3)

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Compiled Fri 25-Sep-09 08:32 by sasyamal

Image text-base: 0x01000000, data-base: 0x02E00000

ROM: Bootstrap program is C3750 boot loader

BOOTLDR: C3750 Boot Loader (C3750-HBOOT-M) Version 12.2(44)SE5, RELEASE SOFTWARE (fc1)

JCW\_C3750\_A uptime is 1 year, 18 weeks, 1 day, 9 hours, 34 minutes

System returned to ROM by address error at PC 0x1765528, address 0x0

System restarted at 05:21:37 GX Thu Jan 24 2019

System image file is "flash:/c3750-ipservicesk9-mz.122-52.SE.bin"

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cisco WS-C3750G-48TS (PowerPC405) processor (revision H0) with 131072K bytes of memory.  
Processor board ID FOC1446Y0A6

Last reset from address error  
7 Virtual Ethernet interfaces  
52 Gigabit Ethernet interfaces  
The password-recovery mechanism is enabled.

512K bytes of flash-simulated non-volatile configuration memory.

Base ethernet MAC Address : F0:25:72:81:E7:80  
Motherboard assembly number : 73-10218-10  
Power supply part number : 341-0107-01  
Motherboard serial number : FOC14434ZZ4  
Power supply serial number : AZS143207C1  
Model revision number : H0  
Motherboard revision number : A0  
Model number : WS-C3750G-48TS-E  
System serial number : FOC1446Y0A6  
Top Assembly Part Number : 800-27483-05  
Top Assembly Revision Number : D0  
Version ID : V07  
CLEI Code Number : CMMAN00ARA  
Hardware Board Revision Number : 0x09

Switch Ports Model	SW Version	SW Image
* 1 52 WS-C3750G-48TS	12.2(52)SE	C3750-IPSERVICESK9-M

Configuration register is 0xF

#### 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3750 NTP配置如下:

```
ntp server 10.190.8.1 source Loopback0
```

S10510查看NTP显示信息:

```
dis ntp sessions  
source reference strata 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3750查看NTP显示信息:

```
sh ntp status
Clock is synchronized, stratum 3, reference is 10.190.8.1
nominal freq is 119.2092 Hz, actual freq is 119.2110 Hz, precision is 2**18
reference time is E27CEE35.8C7EDE85 (14:37:41.548 GX Sat May 30 2020)
clock offset is 0.5777 msec, root delay is 1.36 msec
root dispersion is 12.39 msec, peer dispersion is 0.70 msec

sh ntp associations

      address      ref clock  st when poll reach delay offset disp
*~10.190.8.1  127.127.1.0  2 544 1024 377  1.4 0.58 0.7
* 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。