

组网及说明

S5820与思科3560对接NTP典型组网配置，其中S5820为时钟源，思科3560为客户端

S5820版本信息如下：

H3C Comware Software, Version 7.1.045, Release 2418P06
Copyright (c) 2004-2015 Hangzhou H3C Tech. Co., Ltd. All rights reserved.
H3C S5820V2-48S uptime is 241 weeks, 2 days, 5 hours, 0 minutes
Last reboot reason : USER reboot

Boot image: flash:/s5820v2_5830v2-cmw710-boot-r2418p06.bin
Boot image version: 7.1.045, Release 2418P06
Compiled Aug 07 2015 15:40:53
System image: flash:/s5820v2_5830v2-cmw710-system-r2418p06.bin
System image version: 7.1.045, Release 2418P06
Compiled Aug 07 2015 15:40:53

思科3560版本信息如下：

Cisco IOS Software, C3560 Software (C3560-IPSERVICES-M), Version 12.2(35)SE5, RELEASE SO
FTWARE (fc1)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 19-Jul-07 18:15 by nachen
Image text-base: 0x00003000, data-base: 0x01300000

ROM: Bootstrap program is C3560 boot loader
BOOTLDR: C3560 Boot Loader (C3560-HBOOT-M) Version 12.2(25r)SEE4, RELEASE SOFTWARE
(fc1)

JMTJ-K-1 uptime is 2 years, 18 weeks, 6 days, 13 hours, 6 minutes
System returned to ROM by power-on
System restarted at 01:44:59 UTC Fri Jan 19 2018
System image file is "flash:c3560-ipservices-mz.122-35.SE5/c3560-ipservices-mz.122-35.SE5.bin"

cisco WS-C3560G-48TS (PowerPC405) processor (revision F0) with 122880K/8184K bytes of memo
ry.
Processor board ID FOC1442Z4EH
Last reset from power-on
3 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 : EC:C8:82:39:BD:80
Motherboard assembly number : 73-10214-06
Power supply part number : 341-0107-01
Motherboard serial number : FOC1442737L
Power supply serial number : AZS143501Q2
Model revision number : F0
Motherboard revision number : A0
Model number : WS-C3560G-48TS-E
System serial number : FOC1442Z4EH
Top Assembly Part Number : 800-27479-03
Top Assembly Revision Number : A0
Version ID : V05
CLEI Code Number : COMBG10BRA
Hardware Board Revision Number : 0x09

Switch Ports Model SW Version SW Image

Configuration register is 0xF

配置步骤

S5820 NTP时钟源配置信息如下:

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

```
interface loopback 0
ip address 10.190.0.13 255.255.255.255
quit
```

思科3560 NTP配置如下:

```
ntp server 10.190.0.13 source Vlan400
```

S5820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3560查看NTP显示信息:

sh ntp status

```
Clock is synchronized, stratum 3, reference is 10.190.0.13
nominal freq is 119.2092 Hz, actual freq is 119.2104 Hz, precision is 2**18
reference time is E27CEE7.3FF6A41B (14:40:55.249 UTC Sat May 30 2020)
clock offset is -0.0129 msec, root delay is 1.63 msec
root dispersion is 11.40 msec, peer dispersion is 0.26 msec
```

sh ntp associations

```
  address      ref clock  st when poll reach delay offset disp
*~10.190.0.13  127.127.1.0  2 81 128 377 1.6 -0.01 0.3
* master (syncd), # master (unsyncd), + 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。