

知 S5500与思科3750对接OSPF典型组网配置案例

OSPF 韦家宁 2020-04-01 发表

组网及说明



组网说明:

在日常项目实施过程中，经常遇到不同厂商设备的互联，因此本案例使用H3C S5500交换机与思科3750交换机对接OSPF路由协议。

IP地址规划表如下:

设备名称	端口	IP地址	子网掩码	备注
S5500	Gi 1/0/1	10.0.0.1	30	
	Loopback 0	1.1.1.1	32	
Cisco3750	Gi 1/0/1	10.0.0.2	30	
	Loopback 0	2.2.2.2	32	

H3C S5500版本信息如下:

```
<H3C>dis version
H3C Comware Platform Software
Comware Software, Version 5.20, Release 5206
Copyright (c) 2004-2013 Hangzhou H3C Tech. Co., Ltd. All rights reserved.
H3C S5500-58C-HI uptime is 0 week, 0 day, 0 hour, 10 minutes
```

H3C S5500-58C-HI with 2 Processors

1024M bytes SDRAM

4096K bytes Nor Flash Memory

512M bytes Nand Flash Memory

Hardware Version is REV.C

CPLD Version is 003

Bootrom Version is 211

[SubSlot 0] 48GE+4SFP+2SFP PLUS Hardware Version is REV.C

<H3C>

思科3750版本信息如下:

```
Switch#sh version
Cisco IOS Software, C3750 Software (C3750-IPSERVICES-M), Version 12.2(35)SE5, RELEASE SO
FTWARE (fc1)
Copyright (c) 1986-2007 by Cisco Systems, Inc.
Compiled Thu 19-Jul-07 19:15 by nachen
Image text-base: 0x00003000, data-base: 0x01280000
```

ROM: Bootstrap program is C3750 boot loader

BOOTLDR: C3750 Boot Loader (C3750-HBOOT-M) Version 12.2(25r)SEE4, RELEASE SOFTWARE (fc1)

Switch uptime is 8 minutes

System returned to ROM by power-on

System image file is "flash:c3750-ipservices-mz.122-35.SE5/c3750-i

00:08:14: %LINK-5-CHANGED: Interface Vlan1, changed state to administratively down
services-mz.122-35.SE5.bin"

cisco WS-C3750G-48TS (PowerPC405) processor (revision H0) with 118784K/12280K bytes of memory.

Processor board ID FOC1446Y09V

Last reset from power-on

1 Virtual Ethernet interface

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:F3:00

Motherboard assembly number : 73-10218-10

Power supply part number : 341-0107-01

Motherboard serial number : FOC14453BA2

Power supply serial number : AZS143207R7

Model revision number : H0

Motherboard revision number : A0

Model number : WS-C3750G-48TS-E

System serial number : FOC1446Y09V

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(35)SE5	C3750-IPSERVICES-M

Configuration register is 0xF

Switch#

配置步骤

H3C S5500配置如下:

```
<H3C>sys
```

System View: return to User View with Ctrl+Z.

```
[H3C]sysname S5500
```

```
[S5500]int loopback 0
```

```
[S5500-LoopBack0]ip address 1.1.1.1 32
```

```
[S5500-LoopBack0]quit
```

```
[S5500]int GigabitEthernet 1/0/1
```

```
[S5500-GigabitEthernet1/0/1]port link-mode route
```

```
[S5500-GigabitEthernet1/0/1]des <connect to cisco3750>
```

```
[S5500-GigabitEthernet1/0/1]ip address 10.0.0.1 30
```

```
[S5500-GigabitEthernet1/0/1]quit
```

```
[S5500]ospf 1 router-id 1.1.1.1
```

```
[S5500-ospf-1]area 0.0.0.0
```

```
[S5500-ospf-1-area-0.0.0.0]network 10.0.0.1 0.0.0.0
```

```
[S5500-ospf-1-area-0.0.0.0]network 1.1.1.1 0.0.0.0
```

```
[S5500-ospf-1-area-0.0.0.0]quit
```

```
[S5500-ospf-1]quit
```

思科3750配置如下:

```
Switch>ena
```

```
Switch#conf t
```

Enter configuration commands, one per line. End with CNTL/Z.

```
Switch(config)#hos cisco3750
```

```
cisco3750(config)#ip routing
```

```
cisco3750(config)#int gi 1/0/1
```

```
cisco3750(config-if)#no switchport
```

```

cisco3750(config-if)#des <connect to S5500>
cisco3750(config-if)#ip address 10.0.0.2 255.255.255.252
cisco3750(config-if)#no shutdown
cisco3750(config-if)#exit
cisco3750(config)#int loopback 0
cisco3750(config-if)#ip address 2.2.2.2 255.255.255.255
cisco3750(config-if)#no shutdown
cisco3750(config-if)#exit
cisco3750(config)#router ospf 1
cisco3750(config-router)#router-id 2.2.2.2
cisco3750(config-router)#network 10.0.0.2 0.0.0.0 area 0
cisco3750(config-router)#network 2.2.2.2 0.0.0.0 area 0
cisco3750(config-router)#exit

```

查看S5500的OSPF邻居信息:

```
[S5500]dis ospf peer
```

```

      OSPF Process 1 with Router ID 1.1.1.1
      Neighbor Brief Information

```

Area: 0.0.0.0

Router ID	Address	Pri	Dead-Time	Interface	State
2.2.2.2	10.0.0.2	1	33	GE1/0/1	Full/DR

查看思科3750的OSPF邻居信息:

```
cisco3750#sh ip ospf nei
```

Neighbor ID	Pri	State	Dead Time	Address	Interface
1.1.1.1	1	FULL/BDR	00:00:37	10.0.0.1	GigabitEthernet1/0/1

查看S5500的路由表:

```
[S5500]dis ip routing-table
```

```
Routing Tables: Public
```

```
Destinations : 6 Routes : 6
```

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
1.1.1.1/32	Direct	0	0	127.0.0.1	InLoop0
2.2.2.2/32	OSPF	10	2	10.0.0.2	GE1/0/1
10.0.0.0/30	Direct	0	0	10.0.0.1	GE1/0/1
10.0.0.1/32	Direct	0	0	127.0.0.1	InLoop0
127.0.0.0/8	Direct	0	0	127.0.0.1	InLoop0
127.0.0.1/32	Direct	0	0	127.0.0.1	InLoop0

查看思科3750的路由表:

```
cisco3750#sh ip route
```

```
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
```

```
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
```

```
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
```

```
E1 - OSPF external type 1, E2 - OSPF external type 2
```

```
i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2
```

```
ia - IS-IS inter area, * - candidate default, U - per-user static route
```

```
o - ODR, P - periodic downloaded static route
```

```
Gateway of last resort is not set
```

```
1.0.0.0/32 is subnetted, 1 subnets
```

```
O 1.1.1.1 [110/1] via 10.0.0.1, 00:02:31, GigabitEthernet1/0/1
```

```
2.0.0.0/32 is subnetted, 1 subnets
```

```
C 2.2.2.2 is directly connected, Loopback0
```

```
10.0.0.0/30 is subnetted, 1 subnets
```

```
C 10.0.0.0 is directly connected, GigabitEthernet1/0/1
```

```
cisco3750#
```

至此，S5500与思科3750对接OSPF典型组网配置案例已完成！

配置关键点