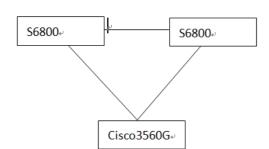
STP 产品特性 **韦家宁** 2020-04-16 发表

组网及说明

本案例使用S6800与思科3560G对接PVST的典型组网配置案例,其中S6800为主根,同时也部署了IR F、与思科3560G部署了链路聚合,为了进一步防止物理环路,因此在S6800与思科3560G部署PVST



S6800版本信息如下:

<6800>dis version

H3C Comware Software, Version 7.1.045, Release 2418P05

Copyright (c) 2004-2015 Hangzhou H3C Tech. Co., Ltd. All rights reserved.

H3C S6800-4C uptime is 234 weeks, 1 day, 5 hours, 28 minutes

Last reboot reason: USER reboot

Boot image: flash:/s6800-cmw710-boot-r2418p05.bin Boot image version: 7.1.045, Release 2418P05

Compiled Jun 09 2015 12:06:42

System image: flash:/s6800-cmw710-system-r2418p05.bin System image version: 7.1.045, Release 2418P05

Compiled Jun 09 2015 12:06:42

Slot 1:

Uptime is 26 weeks,0 days,8 hours,29 minutes

S6800-4C with 2 Processors BOARD TYPE: S6800-4C DRAM: 4096M bytes FLASH: 1024M bytes PCB 1 Version: VER.A PCB 2 Version: VER.A Bootrom Version: 214 CPLD 1 Version: 002 CPLD 2 Version: 003

Release Version: H3C S6800-4C-2418P05

Patch Version: None Reboot Cause: UserReboot [SubSlot 0] Main Board

[SubSlot 1] 24*SFP Plus(MacSec) + 2*QSFP Plus [SubSlot 2] 24*SFP Plus(MacSec) + 2*QSFP Plus

Slot 2:

Uptime is 26 weeks,0 days,8 hours,15 minutes

S6800-4C with 2 Processors BOARD TYPE: S6800-4C DRAM: 4096M bytes FLASH: 1024M bytes PCB 1 Version: VER.A PCB 2 Version: VER.A Bootrom Version: 214

CPLD 1 Version: 002 CPLD 2 Version: 003

Release Version: H3C S6800-4C-2418P05

Patch Version: None
Reboot Cause: UserReboot

[SubSlot 0] Main Board

[SubSlot 1] 24*SFP Plus(MacSec) + 2*QSFP Plus [SubSlot 2] 24*SFP Plus(MacSec) + 2*QSFP Plus

<6800>

思科3560G版本信息如下:

sh version

 ${\sf Cisco\ IOS\ Software,\ C3560\ Software\ (C3560\ -IPSERVICES\ -M),\ Version\ 12.2(35)SE5,\ RELEASE\ SOnly of the property of the property$

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, 12 weeks, 4 days, 8 hours, 53 minutes

System returned to ROM by power-on

System restarted at 01:32:29 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

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

* 1 52 WS-C3560G-48TS 12.2(35)SE5 C3560-IPSERVICES-M

Configuration register is 0xF

配置步骤

S6800的MAC如下(使用IIdp查看): <6800>dis IIdp local-information Global LLDP local-information: Chassis ID : 741f-4a92-a2e7 System name : 6800

System description: H3C Comware Platform Software, Software Version 7.1.045,

Release 2418P05 H3C S6800-4C

Copyright (c) 2004-2015 Hangzhou H3C Tech. Co., Ltd. All

rights reserved.

System capabilities supported : Bridge, Router, Customer Bridge, Service Bridge

System capabilities enabled : Bridge, Router, Customer Bridge

S6800配置如下:

stp instance 0 root primary stp vlan 4 to 5 7 12 400 root primary stp mode pvst stp global enable

思科3560的配置如下:

spanning-tree mode pvst

查看S6800的STP根信息:

<6800>dis stp root

VLAN	I ID Root Bridge ID	Ext	PathCost	IntPathCost Root Po	ort
1	32768.741f-4a92-a2	e7 0	0		
4	0.741f-4a92-a2e7	0	0		
5	0.741f-4a92-a2e7	0	0		
7	0.741f-4a92-a2e7	0	0		
12	0.741f-4a92-a2e7	0	0		
196	32768.741f-4a92-a	2e7 0	0		
400	0.741f-4a92-a2e7	0	0		
555	32768.741f-4a92-a	2e7 0	0		

查看思科3560的STP信息:

show spanning-tree root

Vlan	Root ID	Cost	Time A	\ge	Dly	Ro	ot Port
VLAN0004	4 741f.4a	92.a2e7	3	2	20	15	Po1
VLAN0005	5 741f.4a	92.a2e7	3	2	20	15	Po1
VLAN0012	12 741f.4a	a92.a2e7	3	2	20	15	Po1
VLAN0400	400 741f.4	a92.a2e	7 3	2	20	15	Po1

查看S6800的STP端口状态:

<6800>dis stp brief

VLAN ID Port		Role STP State Protection
4	Bridge-Aggregation7	DESI FORWARDING NONE
4	Bridge-Aggregation8	DESI FORWARDING NONE
4	Bridge-Aggregation9	DESI FORWARDING NONE
4	Bridge-Aggregation10	DESI FORWARDING NONE
4	Bridge-Aggregation11	DESI FORWARDING NONE
4	Bridge-Aggregation12	DESI FORWARDING NONE
4	Bridge-Aggregation13	DESI FORWARDING NONE
4	Bridge-Aggregation14	DESI FORWARDING NONE
4	Bridge-Aggregation15	DESI FORWARDING NONE
4	Bridge-Aggregation16	DESI FORWARDING NONE
4	Bridge-Aggregation18	DESI FORWARDING NONE
5	Bridge-Aggregation7	DESI FORWARDING NONE
5	Bridge-Aggregation8	DESI FORWARDING NONE
5	Bridge-Aggregation9	DESI FORWARDING NONE
5	Bridge-Aggregation10	DESI FORWARDING NONE
5	Bridge-Aggregation11	DESI FORWARDING NONE
5	Bridge-Aggregation12	DESI FORWARDING NONE
5	Bridge-Aggregation13	DESI FORWARDING NONE
5	Bridge-Aggregation14	DESI FORWARDING NONE
5	Bridge-Aggregation15	DESI FORWARDING NONE

5	Bridge-Aggregation16	DESI FORWARDING NONE
5	Bridge-Aggregation18	DESI FORWARDING NONE
7	Bridge-Aggregation7	DESI FORWARDING NONE
7	Bridge-Aggregation8	DESI FORWARDING NONE
7	Bridge-Aggregation9	DESI FORWARDING NONE
7	Bridge-Aggregation14	DESI FORWARDING NONE
7	Bridge-Aggregation15	DESI FORWARDING NONE
7	Bridge-Aggregation18	DESI FORWARDING NONE
12	Bridge-Aggregation7	DESI FORWARDING NONE
12	Bridge-Aggregation8	DESI FORWARDING NONE
12	Bridge-Aggregation9	DESI FORWARDING NONE
12	Bridge-Aggregation10	DESI FORWARDING NONE
12	Bridge-Aggregation11	DESI FORWARDING NONE
12	Bridge-Aggregation12	DESI FORWARDING NONE
12	Bridge-Aggregation13	DESI FORWARDING NONE
12	Bridge-Aggregation14	DESI FORWARDING NONE
12		DESI FORWARDING NONE
12	Bridge-Aggregation15	DESI FORWARDING NONE
12	Bridge-Aggregation16	
	Bridge-Aggregation18	DESI FORWARDING NONE
12 196	Ten-GigabitEthernet1/1/12	DESI FORWARDING NONE
	Bridge-Aggregation7	DESI FORWARDING NONE
196	Bridge-Aggregation8	DESI FORWARDING NONE
196	Bridge-Aggregation9	DESI FORWARDING NONE
196	Bridge-Aggregation18	DESI FORWARDING NONE
400	Bridge-Aggregation7	DESI FORWARDING NONE
400	Bridge-Aggregation8	DESI FORWARDING NONE
400	Bridge-Aggregation9	DESI FORWARDING NONE
400	Bridge-Aggregation10	DESI FORWARDING NONE
400	Bridge-Aggregation11	DESI FORWARDING NONE
400	Bridge-Aggregation12	DESI FORWARDING NONE
400	Bridge-Aggregation13	DESI FORWARDING NONE
400	Bridge-Aggregation14	DESI FORWARDING NONE
400	Bridge-Aggregation15	DESI FORWARDING NONE
400	Bridge-Aggregation16	DESI FORWARDING NONE
400	Bridge-Aggregation18	DESI FORWARDING NONE
555	Bridge-Aggregation7	DESI FORWARDING NONE
555	Bridge-Aggregation8	DESI FORWARDING NONE
555	Bridge-Aggregation9	DESI FORWARDING NONE
555	Bridge-Aggregation18	DESI FORWARDING NONE
555	Ten-GigabitEthernet1/1/17	DESI FORWARDING NONE
555	Ten-GigabitEthernet1/1/18	DESI FORWARDING NONE
555	Ten-GigabitEthernet2/1/17	DESI FORWARDING NONE
555	Ten-GigabitEthernet2/1/18	DESI FORWARDING NONE
<680	0>	

查看思科3560的STP端口状态:

show spanning-tree detail active

VLAN0004 is executing the ieee compatible Spanning Tree protocol Bridge Identifier has priority 32768, sysid 4, address ecc8.8239.bd80 Configured hello time 2, max age 20, forward delay 15 Current root has priority 4, address 741f.4a92.a2e7 Root port is 56 (Port-channel1), cost of root path is 3 Topology change flag not set, detected flag not set Number of topology changes 7 last change occurred 1d10h ago Times: hold 1, topology change 35, notification 2 hello 2, max age 20, forward delay 15 Timers: hello 0, topology change 0, notification 0, aging 300

Port 56 (Port-channel1) of VLAN0004 is forwarding
Port path cost 3, Port priority 128, Port Identifier 128.56.
Designated root has priority 4, address 741f.4a92.a2e7
Designated bridge has priority 4, address 741f.4a92.a2e7
Designated port id is 128.526, designated path cost 0

Timers: message age 1, forward delay 0, hold 0 Number of transitions to forwarding state: 1 Link type is point-to-point by default BPDU: sent 16, received 14183861

VLAN0005 is executing the ieee compatible Spanning Tree protocol Bridge Identifier has priority 32768, sysid 5, address ecc8.8239.bd80 Configured hello time 2, max age 20, forward delay 15 Current root has priority 5, address 741f.4a92.a2e7 Root port is 56 (Port-channel1), cost of root path is 3 Topology change flag not set, detected flag not set Number of topology changes 105 last change occurred 1d10h ago Times: hold 1, topology change 35, notification 2 hello 2, max age 20, forward delay 15 Timers: hello 0, topology change 0, notification 0, aging 300

Port 1 (GigabitEthernet0/1) of VLAN0005 is forwarding
Port path cost 4, Port priority 128, Port Identifier 128.1.

Designated root has priority 5, address 741f.4a92.a2e7

Designated bridge has priority 32773, address ecc8.8239.bd80

Designated port id is 128.1, designated path cost 3

Timers: message age 0, forward delay 0, hold 0

Number of transitions to forwarding state: 1

Link type is point-to-point by default

BPDU: sent 27441037, received 0

Port 29 (GigabitEthernet0/29) of VLAN0005 is forwarding
Port path cost 4, Port priority 128, Port Identifier 128.29.
Designated root has priority 5, address 741f.4a92.a2e7
Designated bridge has priority 32773, address ecc8.8239.bd80
Designated port id is 128.29, designated path cost 3
Timers: message age 0, forward delay 0, hold 0
Number of transitions to forwarding state: 1
Link type is point-to-point by default
BPDU: sent 27448522, received 0

Port 56 (Port-channel1) of VLAN0005 is forwarding
Port path cost 3, Port priority 128, Port Identifier 128.56.
Designated root has priority 5, address 741f.4a92.a2e7
Designated bridge has priority 5, address 741f.4a92.a2e7
Designated port id is 128.526, designated path cost 0
Timers: message age 1, forward delay 0, hold 0
Number of transitions to forwarding state: 1
Link type is point-to-point by default
BPDU: sent 24, received 13552850

VLAN0012 is executing the ieee compatible Spanning Tree protocol
Bridge Identifier has priority 32768, sysid 12, address ecc8.8239.bd80
Configured hello time 2, max age 20, forward delay 15
Current root has priority 12, address 741f.4a92.a2e7
Root port is 56 (Port-channel1), cost of root path is 3
Topology change flag not set, detected flag not set
Number of topology changes 0 last change occurred 1d09h ago
Times: hold 1, topology change 35, notification 2
hello 2, max age 20, forward delay 15
Timers: hello 0, topology change 0, notification 0, aging 300

Port 56 (Port-channel1) of VLAN0012 is forwarding
Port path cost 3, Port priority 128, Port Identifier 128.56.
Designated root has priority 12, address 741f.4a92.a2e7
Designated bridge has priority 12, address 741f.4a92.a2e7
Designated port id is 128.526, designated path cost 0

Timers: message age 2, forward delay 0, hold 0 Number of transitions to forwarding state: 1 Link type is point-to-point by default BPDU: sent 1, received 59911

VLAN0400 is executing the ieee compatible Spanning Tree protocol Bridge Identifier has priority 32768, sysid 400, address ecc8.8239.bd80 Configured hello time 2, max age 20, forward delay 15 Current root has priority 400, address 741f.4a92.a2e7 Root port is 56 (Port-channel1), cost of root path is 3 Topology change flag not set, detected flag not set Number of topology changes 18 last change occurred 1d10h ago Times: hold 1, topology change 35, notification 2 hello 2, max age 20, forward delay 15 Timers: hello 0, topology change 0, notification 0, aging 300

Port 56 (Port-channel1) of VLAN0400 is forwarding
Port path cost 3, Port priority 128, Port Identifier 128.56.
Designated root has priority 400, address 741f.4a92.a2e7
Designated bridge has priority 400, address 741f.4a92.a2e7
Designated port id is 128.526, designated path cost 0
Timers: message age 1, forward delay 0, hold 0
Number of transitions to forwarding state: 1
Link type is point-to-point by default
BPDU: sent 199, received 13456980

至此, S6800与思科3560对接PVST典型组网配置案例已完成!

配置关键点