

某局点LSQM1FWDSC0防火墙插卡升级重启后仍显示为老版本

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组网及说明

不涉及

告警信息

不涉及

问题描述

现场FW插卡拆堆叠升级 (R8514P14---8560P40) 过程中, 出现设备重启后仍然加载老版本的问题。查看记录版本是指定成功的。

```
Software images on slot 1:
Current software images:
  sda0:/BLADE4FW-CM710-BOOT-R8514P14.bin
  sda0:/BLADE4FW-CM710-SYSTEM-R8514P14.bin
Main startup software images:
  sda0:/BLADE4FW-CM710-BOOT-R8560P40.bin
  sda0:/BLADE4FW-CM710-SYSTEM-R8560P40.bin
  sda0:/BLADE4FW-CM710-SECESCAN-R8560P40.bin
Backup startup software images:
  None
Software images on slot 2:
Current software images:
  sda0:/BLADE4FW-CM710-BOOT-R8514P14.bin
  sda0:/BLADE4FW-CM710-SYSTEM-R8514P14.bin
Main startup software images:
  sda0:/BLADE4FW-CM710-BOOT-R8560P40.bin
  sda0:/BLADE4FW-CM710-SYSTEM-R8560P40.bin
  sda0:/BLADE4FW-CM710-SECESCAN-R8560P40.bin
Backup startup software images:
  None
<JT755JR23HJFWHC006>
```

过程分析

分析现场日志发现版本指定成功后, 设备有重启记录。这次重启并非是现场计划的重启, 而是交换机也在本次升级计划中。

交换机重启后, FW插卡失去供电也重启了。

SW master先重启, FW slot2在主交换机上, 对应日志:

```
%@9083389%Mar 16 23:03:06:975 2024 JT755JR23HJFWHC006 HA/5/HA_STAN
DBY_TO_MASTER: Standby board in slot 1 changed to master.
%@9083390%Mar 16 23:03:07:063 2024 JT755JR23HJFWHC006 DEV/3/BOARD_
REMOVED: Board was removed from slot 2, type is LSQM1FWDSC0.
%@9083391%Mar 16 23:03:07:358 2024 JT755JR23HJFWHC006 RDDC/5/RDDC_
ACTIVENODE_CHANGE: Redundancy group 1 active node changed to node 1 (slot
1).
%@9083392%Mar 16 23:03:08:037 2024 JT755JR23HJFWHC006 ACG/4/APR_LIC
ENSE_UNAVAILABLE:
The feature ACG has no available license.
%@9083393%Mar 16 23:03:09:356 2024 JT755JR23HJFWHC006 NTP/5/NTP_LEA
P_CHANGE: System Leap Indicator changed from 3 to 0 after clock update.
%@9083394%Mar 16 23:03:09:356 2024 JT755JR23HJFWHC006 NTP/5/NTP_STR
ATUM_CHANGE: System stratum changed from 16 to 8 after clock update.
%@9083395%Mar 16 23:03:12:892 2024 JT755JR23HJFWHC006 OSPFV3/5/OSP
Fv3_NBR_CHG: OSPFv3 100 Neighbor 10.54.248.5(Reth255) received LoadingDon
e and its state from LOADING to FULL.
%@9083396%Mar 16 23:03:18:686 2024 JT755JR23HJFWHC006 OSPF/5/OSPF_
NBR_CHG: OSPF 100 Neighbor 10.54.255.134(Reth255) changed from LOADING t
o FULL.
%@9083397%Mar 16 23:05:25:178 2024 JT755JR23HJFWHC006 SSSH/6/SSHS_L
OG: Accepted password for chenxi323@crcaa from 10.0.14.192 port 42330.

%@9083398%Mar 16 23:05:25:196 2024 JT755JR23HJFWHC006 SSSH/6/SSHS_
CONNECT: SSH user chenxi323@crcaa (IP: 10.0.14.192) connected to the server
successfully.
%@9083399%Mar 16 23:05:25:404 2024 JT755JR23HJFWHC006 SHELL/5/SHELL
_LOGIN: chenxi323@crcaa logged in from 10.0.14.192.
```

%@9083400%Mar 16 23:09:07:062 2024 JT755JR23HJFWHC006 OSPFV3/6/OSPFv3_LAST_NBR_DOWN: OSPFv3 100 Last neighbor down event: Router ID: 10.54.248.5 Local interface ID: 45 Remote interface ID: 7103 Reason: OspfV3 ifachange.

%@9083401%Mar 16 23:09:07:063 2024 JT755JR23HJFWHC006 OSPFV3/5/OSPFv3_NBR_CHG: OSPFv3 100 Neighbor 10.54.248.5(Reth255) received KillNbr and its state from FULL to DOWN.

%@9083402%Mar 16 23:09:13:874 2024 JT755JR23HJFWHC006 OSPFV3/5/OSPFv3_NBR_CHG: OSPFv3 100 Neighbor 10.54.248.5(Reth255) received LoadingDone and its state from LOADING to FULL.

%@9083403%Mar 16 23:10:27:423 2024 JT755JR23HJFWHC006 SHELL/5/SHELL_LOGOUT: chenxi323@crcaa logged out from 10.0.14.192.

%@9083404%Mar 16 23:11:14:747 2024 JT755JR23HJFWHC006 SSSH/6/SSHS_LOG: User chenxi323@crcaa logged out from 10.0.14.192 port 42330.

%@9083405%Mar 16 23:11:14:747 2024 JT755JR23HJFWHC006 SSSH/6/SSHS_DISCONNECT: SSH user chenxi323@crcaa (IP: 10.0.14.192) disconnected from the server.

%@9083406%Mar 16 23:12:16:310 2024 JT755JR23HJFWHC006 OSPFV3/5/OSPFv3_NBR_CHG: OSPFv3 100 Neighbor 10.54.248.5(Reth255) received SeqNumberMismatch and its state from FULL to EXSTART.

%@9083407%Mar 16 23:12:16:346 2024 JT755JR23HJFWHC006 OSPFV3/5/OSPFv3_NBR_CHG: OSPFv3 100 Neighbor 10.54.248.5(Reth255) received LoadingDone and its state from LOADING to FULL.

%@9083408%Mar 16 23:13:09:279 2024 JT755JR23HJFWHC006 CFGMAN/5/CFGMAN_CFGCHANGED: -EventIndex=563-CommandSource=snmp-CONfigSource=startup-CONfigDestination=running; Configuration changed.

%@9083409%Mar 16 23:26:47:255 2024 JT755JR23HJFWHC006 IFNET/3/PHY_UPDOWN: Physical state on the interface GigabitEthernet1/0/1 changed to up.

%@9083410%Mar 16 23:26:47:255 2024 JT755JR23HJFWHC006 STM/6/STM_LINK_UP: IRF port 1 came up.

%@9083411%Mar 16 23:26:47:255 2024 JT755JR23HJFWHC006 IFNET/5/LINK_UPDOWN: Line protocol state on the interface GigabitEthernet1/0/1 changed to up.

%@9083412%Mar 16 23:27:27:536 2024 JT755JR23HJFWHC006 STM/2/STM_LINK_TIMEOUT: IRF port 1 went down because the heartbeat timed out.

%@9083413%Mar 16 23:27:27:536 2024 JT755JR23HJFWHC006 STM/3/STM_LINK_DOWN: IRF port 1 went down.

%@9083414%Mar 16 23:27:38:537 2024 JT755JR23HJFWHC006 STM/6/STM_LINK_UP: IRF port 1 came up.

%@9083415%Mar 16 23:27:57:868 2024 JT755JR23HJFWHC006 STM/5/STM_AUTOMATIC_UPDATING: Don't reboot the slot 2. It is loading files.

%@9083416%Mar 16 23:27:59:051 2024 JT755JR23HJFWHC006 DEV/2/BOARD_STATE_FAULT: Board state changed to Fault on slot 2, type is unknown.

%@9083417%Mar 16 23:28:17:885 2024 JT755JR23HJFWHC006 DEV/4/BOARD_LOADING: Board in slot 2 is loading software images.

%@9083418%Mar 16 23:28:28:620 2024 JT755JR23HJFWHC006 DEV/5/LOAD_FINISHED: Board in slot 2 has finished loading software images.

%@9083419%Mar 16 23:28:49:570 2024 JT755JR23HJFWHC006 DEV/4/BOARD_LOADING: Board in slot 2 is loading software images.

%@9083420%Mar 16 23:31:41:966 2024 JT755JR23HJFWHC006 DEV/5/LOAD_FINISHED: Board in slot 2 has finished loading software images.

%@9083421%Mar 16 23:32:00:643 2024 JT755JR23HJFWHC006 STM/5/STM_AUTOMATIC_UPDATE_FINISHED: File loading finished on slot 2.

因此，就存在如下情况，FW在版本都已经指定P40的情况下，slot2重启了加载新版本，但是slot1运行版本还是老版本。版本不一致导致slot2融入堆叠失败，实验室进行复现发现情况如下：

```

<H3C>disp irf
MemberID  Role  Priority  CPU-Mac  Description
-----
1          Loading 1      9c06-1bff-3145
*+2       Master 1      3c8c-40be-9b60  ---
-----
* indicates the device is the master.
+ indicates the device through which the user logs in.

The bridge MAC of the IRF is: 3c8c-40be-9b5e
Auto upgrade          : yes
Mac persistent        : 6 min
Domain ID              : 0
<H3C>%Mar 20 08:29:51:838 2024 H3C STM/5/STM_AUTO_UPDATE_FINISHED:
-Context=1; File loading finished on slot 1.
%Mar 20 08:29:56:476 2024 H3C IFNET/3/PHY_UPDOWN: -Context=1; Physical
state on the interface GigabitEthernet2/0/10 changed to down.
%Mar 20 08:29:56:476 2024 H3C IFNET/5/LINK_UPDOWN: -Context=1; Line
protocol state on the interface GigabitEthernet2/0/10 changed to down.
%Mar 20 08:29:56:477 2024 H3C STM/3/STM_LINK_DOWN: -Context=1; IRF port
2 went down.
%Mar 20 08:29:56:481 2024 H3C DEV/3/BOARD_REMOVED: -Context=1; Board
was removed from slot 1, type is unknown.

```

即两台设备版本差异过大的情况下，堆叠融合是失败的。后续重启另外一台两台设备堆叠成功，加载的还是老版本。

```

<H3C>disp irf
MemberID  Role  Priority  CPU-Mac  Description
-----
1          Standby 1      9c06-1bff-3145  ---
*+2       Master 1      3c8c-40be-9b60  ---
-----
* indicates the device is the master.
+ indicates the device through which the user logs in.

The bridge MAC of the IRF is: 3c8c-40be-9b5e
Auto upgrade          : yes
Mac persistent        : 6 min
Domain ID              : 0
<H3C>disp boot
<H3C>disp boot-loader
Software images on slot 1:
Current software images:
flash:/f1000fw-cmw710-boot-E9345P08.bin
flash:/f1000fw-cmw710-system-E9345P08.bin
Main startup software images:
flash:/f1000fw-cmw710-boot-E9345P08.bin
flash:/f1000fw-cmw710-system-E9345P08.bin
Backup startup software images:
flash:/f1000fw-cmw710-boot-R9323P20.bin
flash:/f1000fw-cmw710-system-R9323P20.bin
Software images on slot 2:
Current software images:
flash:/f1000fw-cmw710-boot-E9345P08.bin
flash:/f1000fw-cmw710-system-E9345P08.bin

```

解决方法

交换机升级完成后，再指定FW版本。防止其中一台FW插卡重启之后版本不一致。