

知 两台S6850设备直连, 同时出现BFD down并且联动触发BGP down

BGP BFD zhiliao_aUqLLa 2023-07-19 发表

组网及说明

两台S6850-56HF设备直连建立iBGP, 使用BFD检测。

告警信息

%Jul 18 17:21:36:403 2023 SH-CY-A504-F05-HS6850-IL1-01 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.0/100.127.41.1, LD/RD:130/130, Interface:WGE1/0/55, SessType:Ctrl, LinkType:INET], Ver:1, Sta: INIT->UP, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:399 2023 SH-CY-A504-F05-HS6850-IL1-01 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.2/100.127.41.3, LD/RD:129/129, Interface:WGE1/0/56, SessType:Ctrl, LinkType:INET], Ver:1, Sta: INIT->UP, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:399 2023 SH-CY-A504-F05-HS6850-IL1-01 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.0/100.127.41.1, LD/RD:130/130, Interface:WGE1/0/55, SessType:Ctrl, LinkType:INET], Ver:1, Sta: DOWN->INIT, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:399 2023 SH-CY-A504-F05-HS6850-IL1-01 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.2/100.127.41.3, LD/RD:129/129, Interface:WGE1/0/56, SessType:Ctrl, LinkType:INET], Ver:1, Sta: DOWN->INIT, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:398 2023 SH-CY-A504-F05-HS6850-IL1-01 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.1 state has changed from OPENCONFIRM to ESTABLISHED.

%Jul 18 17:21:36:397 2023 SH-CY-A504-F05-HS6850-IL1-01 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.3 state has changed from OPENCONFIRM to ESTABLISHED.

%Jul 18 17:21:34:940 2023 SH-CY-A504-F05-HS6850-IL1-01 BGP/5/BGP_STATE_CHANGED_REASON: BGP.: 100.127.41.1 state has changed from ESTABLISHED to IDLE. (Reason: a notification was received from the peer, error code: Receive Notificationcode 6/0, local interface:)

%Jul 18 17:21:34:940 2023 SH-CY-A504-F05-HS6850-IL1-01 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.1 state has changed from ESTABLISHED to IDLE for a notification received: Cease/ErrSubCode Unspecified.

%Jul 18 17:21:34:938 2023 SH-CY-A504-F05-HS6850-IL1-01 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.2/100.127.41.3, LD/RD:129/129, Interface:WGE1/0/56, SessType:Ctrl, LinkType:INET], Ver:1, Sta: UP->DOWN, Diag: 1 (Control Detection Time Expired)

%Jul 18 17:21:34:937 2023 SH-CY-A504-F05-HS6850-IL1-01 BGP/5/BGP_STATE_CHANGED_REASON: BGP.: 100.127.41.3 state has changed from ESTABLISHED to IDLE. (Reason: a notification was received from the peer, error code: Receive Notificationcode 6/0, local interface:)

%Jul 18 17:21:34:937 2023 SH-CY-A504-F05-HS6850-IL1-01 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.3 state has changed from ESTABLISHED to IDLE for a notification received: Cease/ErrSubCode Unspecified.

%Jul 18 17:21:34:936 2023 SH-CY-A504-F05-HS6850-IL1-01 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.0/100.127.41.1, LD/RD:130/130, Interface:WGE1/0/55, SessType:Ctrl, LinkType:INET], Ver:1, Sta: UP->DOWN, Diag: 1 (Control Detection Time Expired)

%Jul 18 17:21:36:400 2023 SH-CY-A504-F04-HS6850-IL1-02 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.1/100.127.41.0, LD/RD:130/130, Interface:WGE1/0/55, SessType:Ctrl, LinkType:INET], Ver:1, Sta: INIT->UP, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:399 2023 SH-CY-A504-F04-HS6850-IL1-02 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.3/100.127.41.2, LD/RD:129/129, Interface:WGE1/0/56, SessType:Ctrl, LinkType:INET], Ver:1, Sta: INIT->UP, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:399 2023 SH-CY-A504-F04-HS6850-IL1-02 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.1/100.127.41.0, LD/RD:130/130, Interface:WGE1/0/55, SessType:Ctrl, LinkType:INET], Ver:1, Sta: DOWN->INIT, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:398 2023 SH-CY-A504-F04-HS6850-IL1-02 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.3/100.127.41.2, LD/RD:129/129, Interface:WGE1/0/56, SessType:Ctrl, LinkType:INET], Ver:1, Sta: DOWN->INIT, Diag: 0 (No Diagnostic)

%Jul 18 17:21:36:397 2023 SH-CY-A504-F04-HS6850-IL1-02 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.0 state has changed from OPENCONFIRM to ESTABLISHED.

%Jul 18 17:21:36:396 2023 SH-CY-A504-F04-HS6850-IL1-02 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.2 state has changed from OPENCONFIRM to ESTABLISHED.

%Jul 18 17:21:34:111 2023 SH-CY-A504-F04-HS6850-IL1-02 BGP/5/BGP_STATE_CHANGED_REASON: BGP.: 100.127.41.0 state has changed from ESTABLISHED to IDLE. (Reason: a session down event was received from BFD, error code: Send Notificationcode 6/0, local interface:)

%Jul 18 17:21:34:111 2023 SH-CY-A504-F04-HS6850-IL1-02 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.0 state has changed from ESTABLISHED to IDLE for session down event received from BFD.

%Jul 18 17:21:34:109 2023 SH-CY-A504-F04-HS6850-IL1-02 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4.1.1/100.127.41.0, LD/RD:130/130, Interface:WGE1/0/55, SessType:Ctrl, LinkType:INET], Ver:1, Sta: UP->DOWN, Diag: 1 (Control Detection Time Expired)

%Jul 18 17:21:34:005 2023 SH-CY-A504-F04-HS6850-IL1-02 BGP/5/BGP_STATE_CHANGED_REASON: BGP.: 100.127.41.2 state has changed from ESTABLISHED to IDLE. (Reason: a session down event was received from BFD, error code: Send Notificationcode 6/0, local interface:)

%Jul 18 17:21:34:005 2023 SH-CY-A504-F04-HS6850-IL1-02 BGP/5/BGP_STATE_CHANGED: BGP.: 100.127.41.2 state has changed from ESTABLISHED to IDLE for session down event received from BFD.

%Jul 18 17:21:34:003 2023 SH-CY-A504-F04-HS6850-IL1-02 BFD/5/BFD_CHANGE_FSM: Sess[100.127.4

1.3/100.127.41.2, LD/RD:129/129, Interface:WGE1/0/56, SessType:Ctrl, LinkType:INETJ, Ver:1, Sta: UP->D
OWN, Diag: 1 (Control Detection Time Expired)

问题描述

同时出现BFD down并且联动触发BGP down。

过程分析

查看设备并未发现链路相关故障。

经分析诊断文档，发现该两台设备的版本都是6555P01。

在6635及之前的版本，BFD报文处理是由CPU完成的，如果有其他使用CPU处理的协议报文突然增加，导致CPU使用率突然升高，此时可能会造成BFD闪断并联动BGP down。

```
=====display version=====
H3C Comware Software, Version 7.1.070, Release 6555P01
Copyright (c) 2004-2019 New H3C Technologies Co., Ltd. All rights reserved.
H3C S6850-56HF uptime is 103 weeks, 1 day, 0 hours, 41 minutes
Last reboot reason : Cold reboot
```

解决方法

建议客户升级版本为6710加最新的补丁可以解决该问题。

客户提到过使用配置PTP-BFD或者INT-BFD的方式解决，但暂时不建议在当前版本使用硬件BFD，因为相关的功能开发还需要完善。

现在的解决问题版本是单独绑定一个核给BFD进程，这样BFD不会因为其他进程导致震荡。

BFD闪断会联动BGP断联。
升级解决问题版本时的注意事项。