

解决Catalyst 9130 AP加入问题

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简介

本文档介绍在控制器加入过程中接入点停滞在Code upgrade的特定使用案例。

先决条件

要求

Cisco 建议您了解以下主题：

- Cisco WLC 9800的基础知识
- Cisco Wave2和/或11AX AP的基础知识
- 对Catalyst 9800 WLC的AP加入过程有很好的了解。

使用的组件

本文档中的信息基于以下软件和硬件版本：

- Catalyst 9800-L WLC、Cisco IOS® XE Cupertino 17.9.3
- Catalyst C9130AXI-E接入点

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您的网络处于活动状态，请确保您了解所有命令的潜在影响。

拓扑

此故障排除流程适用于以本地模式连接的AP或以分支站点的flex connect模式连接的AP。



拓扑故障排除

使用案例

本文档讨论一个特定的使用案例，在该案例中，接入点完成其发现和加入阶段，但停滞于图像数据检查阶段。此问题是由于无线LAN控制器和接入点之间推送的代码升级导致出现错误消息“No space left on device”（设备无空间）。

A. 接入点已完成发现阶段：

```
Feb 13 11:11:21 kernel: [*02/13/2024 11:11:21.4662] CAPWAP State: Discovery Feb 13 11:11:21 kernel: [*02/13/2024 11:11:21.4662] CAPWAP State: Discovery
```

B. DTLS设置启动和加入过程完成日志：

```
Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.0002] CAPWAP State: DTLS Setup Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6405] Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6405] CAPWAP State: Join Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6422] Sending Join request to 10.228.104.4 through port 5248 Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6454] Join Response from 10.228.104.4 Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6489] Received Join request from 10.228.104.4 Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6489] DTLS timer 30 Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6489] TLV ID 2216 not found Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6489] TLV-DEC-ERR-1: No proc for 2216
```

C. 完成加入过程后，接入点进入图像数据阶段。在此阶段，您可以观察从控制器到AP的映像传输，该传输失败，并出现错误消息“No space left on device”。

```
Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6709] CAPWAP State: Image Data Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6712] AP image version 8.10.112.0 backup 0.0.0.0, Control plane image version 8.10.112.0 Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.6712] Version does not match. Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.7111] do PRECHECK, part1 is active part2 is active Feb 13 11:11:31 upgrade: /tmp space: OK available 80268, required 40000
```

Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.7322] upgrade.sh: /tmp space: OK available 80268, require
Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.7326] wtpImgFileReadRequest: request ap1g6a, local /tmp/p
Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.7337] Image Data Request sent to 10.228.104.4, fileName [
Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.7351] Image Data Response from 10.228.104.4
Feb 13 11:11:31 kernel: [*02/13/2024 11:11:31.7351] AC accepted join request with result code: 0
Feb 13 11:11:31 LED: State received is Dis_join_completed
Feb 13 11:11:31 LED: State received is Software_upgrade_progress
Feb 13 11:11:31 LED: LED state Changed from LED_CYCLIC_GRO_LED to LED_BLINKING_BLUE
Feb 13 11:11:45 kernel: [*02/13/2024 11:11:31.7393] <.....
Feb 13 11:11:53 kernel: [*02/13/2024 11:11:45.3443]
Feb 13 11:12:07 kernel: [*02/13/2024 11:11:53.9200]
Feb 13 11:12:16 kernel: [*02/13/2024 11:12:07.5228]Discarding msg CAPWAP_WTP.
Feb 13 11:12:25 kernel: [*02/13/2024 11:12:18.7413]
Feb 13 11:12:43 kernel: [*02/13/2024 11:12:25.5137]
Feb 13 11:13:06 kernel: [*02/13/2024 11:12:43.6235]Discarding msg C
Feb 13 11:13:07 kernel: [*02/13/2024 11:13:07.0982] ...Discarding msg CAPWAP_WTP_EVENT_REQUEST(type 9)
Feb 13 11:13:07 kernel: [*02/13/2024 11:13:07.5458] Discarding msg CAPWAP_WTP_EVENT_REQUEST(type 9) in
Feb 13 11:13:07 kernel: [*02/13/2024 11:13:07.5965] Discarding msg CAPWAP_WTP_EVENT_REQUEST(type 9) in
Feb 13 11:13:09 kernel: [*02/13/2024 11:13:07.6044]
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:09.9353]> 84387840 bytes, 62742 msgs, 1195 las
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.0817] Last block stored, IsPre 0, WriteTaskId 0
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.0847] wtpProcessImageDataRequest(10): fileName ap1g6a, pr
Feb 13 11:13:21 upgrade: Start doing upgrade arg1=PREDOWNLOAD arg2= arg3= ...
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.1278] do PREDOWNLOAD, part1 is active part
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.1419] upgrade.sh: Start doing upgrade arg1=PREDOWNLOAD ar
Feb 13 11:13:21 upgrade: Using image /tmp/part.tar on axel-qca ...
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.1945] upgrade.sh: Using image /tmp/part.tar on axel-qca .
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.1947] sh: write error: No space left on device
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.1997] tar: write error: No space left on device
Feb 13 11:13:21 upgrade: ERROR: Image type mismatch. Expected:ap1g6a Got:
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.2247] upgrade.sh: ERROR: Image type mismatch. Expected:ap
Feb 13 11:13:21 upgrade: Cleanup for do_upgrade...
Feb 13 11:13:21 upgrade: /tmp/upgrade_in_progress cleaned
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.2411] upgrade.sh: Cleanup for do_upgrade...
Feb 13 11:13:21 upgrade: Cleanup tmp files ...
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.2581] upgrade.sh: /tmp/upgrade_in_progress cleaned
FebFeb 13 11:13:21 kernel: [*02/13/2024 11:13:21.3072] capwap-upgrade script returned failure when call
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.3073] Discarding msg CAPWAP_WTP_EVENT_REQUEST(type 9) in
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.3074] CAPWAP SM handler: Failed to process message type 1
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.3074] Failed to handle capwap control message from contro
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.3074] Failed to process encrypted capwap packet 0x55aaaa2
Feb 13 11:13:21 kernel: [*02/13/2024 11:13:21.3074] Failed to send capwap message 0 to the state machin
Feb 13 11:13:22 LED: State received is Software_upgrade_fail
Feb 13 11:13:22 LED: LED state Changed from LED_BLINKING_BLUE to LED_GREEN
Feb 13 11:13:25 kernel: [*02/13/2024 11:13:25.6121] Invalid event 56 & state 10 combination.
Feb 13 11:13:25 kernel: [*02/13/2024 11:13:25.6121] Failed to handle timer message.
Feb 13 11:13:28 kernel: [*02/13/2024 11:13:28.4629] Re-Tx Count=1, Max Re-Tx Value=5, SendSeqNum=5, Num
Feb 13 11:13:28 kernel: [*02/13/2024 11:13:28.4629]
Feb 13 11:13:31 kernel: [*02/13/2024 11:13:31.3139] Re-Tx Count=2, Max Re-Tx Value=5, SendSeqNum=5, Num
Feb 13 11:13:31 kernel: [*02/13/2024 11:13:31.3139]
Feb 13 11:13:34 kernel: [*02/13/2024 11:13:34.1648] Re-Tx Count=3, Max Re-Tx Value=5, SendSeqNum=5, Num
Feb 13 11:13:34 kernel: [*02/13/2024 11:13:34.1648]
Feb 13 11:13:37 kernel: [*02/13/2024 11:13:37.0157] Re-Tx Count=4, Max Re-Tx Value=5, SendSeqNum=5, Num
Feb 13 11:13:37 kernel: [*02/13/2024 11:13:37.0157]
Feb 13 11:13:39 kernel: [*02/13/2024 11:13:39.8666] Re-Tx Count=5, Max Re-Tx Value=5, SendSeqNum=5, Num
Feb 13 11:13:39 kernel: [*02/13/2024 11:13:39.8666]
Feb 13 11:13:42 kernel: [*02/13/2024 11:13:42.7175] Max retransmission count exceeded, going back to DI
Feb 13 11:13:42 kernel: [*02/13/2024 11:13:42.7175] Dropping msg CAPWAP_ECHO_REQUEST, type = 1, len = 0
Feb 13 11:13:42 kernel: [*02/13/2024 11:13:42.7185]
Feb 13 11:13:42 kernel: [*02/13/2024 11:13:42.7185] CAPWAP State: DTLS Teardown
Feb 13 11:13:42 kernel: [*02/13/2024 11:13:42.7303] Aborting image download(0x0): Dtls cleanup, ap1g6a
Feb 13 11:13:42 kernel: [*02/13/2024 11:13:42.7952] do ABORT, part1 is active part

Feb 13 11:13:42 upgrade: Cleanup tmp files ...

Feb 13 11:13:42 kernel: [*02/13/2024 11:13:42.8145] upgrade.sh: Cleanup tmp files ...

解决方案

有多种解决方案可以解决此问题：

第 1 项.首先，在升级到17.7+. 1之前升级到具有修复程序的中间映像。升级到17.3.5 2.继续升级到17.7+。

第 2 项.手动DE解决方法：mount -o remount , size=100M /tmp/这需要设备访问。

这两种方法都适用，使用选项2时，您可能需要与TAC的帮助。

关于此翻译

思科采用人工翻译与机器翻译相结合的方式将此文档翻译成不同语言，希望全球的用户都能通过各自的语言得到支持性的内容。

请注意：即使是最好的机器翻译，其准确度也不及专业翻译人员的水平。

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