排除IOS XE SD-WAN升級故障:空間不足

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簡介

本文檔介紹當Cisco IOS® XE SD-WAN升級因儲存容量不足而失敗時診斷和解決問題的過程。

必要條件

WAN邊緣路由器

需求

思科建議您瞭解以下主題:

- 思科軟體定義廣域網路(SD-WAN)
- Cisco IOS® XE命令列介面(CLI)

對於Cisco IOS XE SD-WAN升級資訊使用CLI或vManage升級Cisco IOS XE SD-WAN路由器

採用元件

本檔案根據這些軟體和硬體版本:

- 路由器c1111-8P
- 軟體版本17.3.2
- 軟體版本17.3.4
- 處於控制器模式的路由器

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除(預設))的組態來啟動。如果您的網路運作中,請確保您瞭解任何指令可能造成的影響。

狀況

1. 無法將路由器型號c1111-8p升級到17.3和17.5之前的其它版本。

2. 請考慮以下錯誤:

<#root>

Not enough space under

bootflash

for image download and package expansion on image installation. Required space: 1207202432 Available s Not enough space in

SD-WAN installer

filesystem. Please remove one of the installed images and try again. SD-WAN installer filesystem size

3. 升級失敗,如下圖所示:

| ie in the second se | [6-Aug-2021 17:24:58 UTC] Installing and activating software image [6-Aug-2021 17:25:05 UTC] Current active partition: 17.03.02.0.3785 [6-Aug-2021 17:25:06 UTC] Configuring upgrade confirm timer to 15 minutes [6-Aug-2021 17:25:06 UTC] Software image: c1100-universalk9.17.03.03.SPA.bin [6-Aug-2021 17:25:06 UTC] Software image download may take upto 360 minutes [6-Aug-2021 17:25:13 UTC] Not enough space under bootflash for image download and | | | | | ≦ (⊕Sign in | | | | | | |
|--|--|--|---|---|---|--|--|--|--|--|--|--|
| | | | | | | ا 🐵 | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| package expansion on image installation. Required space: 1207202432 Available space: 659275776. Image installation failed. | | | | | | | | | | | | |
| Search Options | [6-Aug-2021 17:25:14 UTC] Failed to process device request - Error type : application Error tag : operation-failed Error info : <error-info></error-info> | | | | | Total | | | | | | |
| Hostname | | | | | odel | vManage IP | | | | | | |
| 8 | 10.144.85.119 | 410306192 | WAN Edge | C1111-8 | > | | | | | | | |
| <pre>[6-Aug-2021 17:24:58 UTC] Installing and activating software image [6-Aug-2021 17:25:05 UTC] Current active partition: 17.03.02.0.3785 [6-Aug-2021 17:25:06 UTC] Configuring upgrade confirm timer to 15 minutes [6-Aug-2021 17:25:06 UTC] Software image: c1100-universalk9.17.03.03.SPA.bin [6-Aug-2021 17:25:06 UTC] Software image download may take upto 360 minutes [6-Aug-2021 17:25:06 UTC] Software image download may take upto 360 minutes [6-Aug-2021 17:25:06 UTC] Software image download may take upto 360 minutes</pre> | | | | | | | | | | | | |
| | earch Options Hostname E ting softwa ion: 17.03. onfirm time universalk ad may take | [6-Aug-2021 17:24:58 UTC] Insta [6-Aug-2021 17:25:05 UTC] Curre [6-Aug-2021 17:25:06 UTC] Soft [6-Aug-2021 17:25:06 UTC] Soft [6-Aug-2021 17:25:06 UTC] Soft [6-Aug-2021 17:25:13 UTC] Not package expansion on image in 659275776. Image installation fa [6-Aug-2021 17:25:14 UTC] Faile Error type : application Error tag : operation-failed Error tinfo : <error-info> <bachevent>install</bachevent> <bachevent>info earch Options to 10:44.85.119 ting software image lion: 17.03.02.0.3785 onfirm timer to 15 minutes universalks.77.03.03.59A.bin ad may take upto 360 minutes</bachevent></error-info> | [6-Aug-2021 17:24:58 UTC] Installing and activating [6-Aug-2021 17:25:05 UTC] Current active partition: [6-Aug-2021 17:25:06 UTC] Configuring upgrade co [6-Aug-2021 17:25:06 UTC] Software image downlo [6-Aug-2021 17:25:06 UTC] Software image downlo [6-Aug-2021 17:25:13 UTC] Not enough space unde package expansion on image installation. Required 659275776. Image installation failed. [6-Aug-2021 17:25:14 UTC] Failed to process device Error type : application Error tag : operation-failed Error info : <error-info> <bad-element>install</bad-element> </error-info> Hostname 10.144.85.119 410306192 ting software image lon: 17.03.02.0.3785 10.144.85.119 410306192 ad way take upto 360 minutes 400 minutes 400 minutes | [6-Aug-2021 17:24:58 UTC] Installing and activating software image [6-Aug-2021 17:25:05 UTC] Current active partition: 17.03.02.0.3785 [6-Aug-2021 17:25:06 UTC] Configuring upgrade confirm timer to 15 minute [6-Aug-2021 17:25:06 UTC] Software image: c1100-universalk9.17.03.03.SPA. [6-Aug-2021 17:25:06 UTC] Software image download may take upto 360 m [6-Aug-2021 17:25:13 UTC] Not enough space under bootflash for image do package expansion on image installation. Required space: 1207202432 Avai 659275776. Image installation failed. [6-Aug-2021 17:25:14 UTC] Failed to process device request - Error type : application Error tinfo : <error-info> <bd><bd><bd>> bad-element>install (-error-info> * 10.144.85.119 410306192 WAN Edge ting software image ting software image universalk9.17.03.03.SPA.bin ad may take upto 360 minutes</bd></bd></bd></error-info> | [6-Aug-2021 17:24:58 UTC] Installing and activating software image [6-Aug-2021 17:25:05 UTC] Current active partition: 17.03.02.0.3785 [6-Aug-2021 17:25:06 UTC] Configuring upgrade confirm timer to 15 minutes [6-Aug-2021 17:25:06 UTC] Software image: c1100-universalk9.17.03.03.SPA.bin [6-Aug-2021 17:25:06 UTC] Software image: c1100-universalk9.17.03.03.SPA.bin [6-Aug-2021 17:25:06 UTC] Software image: c1100-universalk9.17.03.03.SPA.bin [6-Aug-2021 17:25:13 UTC] Not enough space under bootflash for image download and package expansion on image installation. Required space: 1207202432 Available space: 659275776. Image installation failed. [6-Aug-2021 17:25:14 UTC] Failed to process device request - Error type : application Error type : application Error tipe : application Error tipe : application Fort ring : <error-info> universalk9.17.03.03.SPA.bin Hostname Image: tripe image ion: 17.03.02.0.3785 Ion: 14.85.119 410306192 WAN Edge C1111-8F ting software image universalk9.17.03.3.SPA.bin ad may take upto 360 minutes universalk9.17.03.03.SPA.bin</error-info> | [6-Aug-2021 17:24:58 UTC] Installing and activating software image 16 [6-Aug-2021 17:25:05 UTC] Current active partition: 17.03.02.0.3785 [6-Aug-2021 17:25:06 UTC] Configuring upgrade confirm timer to 15 minutes [6-Aug-2021 17:25:06 UTC] Software image: c1100-universalk9.17.03.03.SPA.bin [6-Aug-2021 17:25:06 UTC] Software image download may take upto 360 minutes [6-Aug-2021 17:25:06 UTC] Software image download may take upto 360 minutes [6-Aug-2021 17:25:13 UTC] Not enough space under bootflash for image download and package expansion on image installation. Required space: 1207202432 Available space: 659275776. Image installation failed. [6-Aug-2021 17:25:14 UTC] Failed to process device request - Error type : application Error type : application Error tinfo : <error-info> <br <="" th=""/></error-info> | | | | | | |

影像1

| TASK VIEW | | | | | | | | | | | | | |
|---|--|---|---|--------------------------|-------------------|--------------------------|---|--|--|--|--|--|--|
| Software Install 🖉 Validation Success 👻 | | | | | | | | | | | | | |
| Total Task: 1 Failure : 1 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Q | | Search Options 🗸 | | | | | | | | | | | |
| > | Status | Message | Hostname | System IP | Site ID | Device Type | Device Model | | | | | | |
| ~ | 😵 Failure | Failed to process software install | | | 142085 | WAN Edge | C1111-8P | | | | | | |
| | [23-Sep-2022 18:00:17 UTC] Not [23-Sep-2022 18:00:17 UTC] Will Error type : application Error type : application Error tag : operation-failed Error info : cerror-info chad-element-installc/bad-ele c/error-info | erough space in SDAW initialer filesystem. P led to process device request - ements | lease remove one of the installed image | ges and try again. SOWAM | v installer files | ystem size - 306672 Kilo | bytes, Available space - 196006 kilobytes, Bequired space - 245002 kilobytes. | | | | | | |

影像2

4. 只安裝了一個版本。使用命令 show sdwan software 進行驗證。

範例

edge#show sdwan software VERSION ACTIVE DEFAULT PREVIOUS CONFIRMED TIMESTAMP -----

疑難排解

1.使用以下命令刪除不必要的檔案:

<#root>

```
delete /force /recursive bootflash:/
<directory>
```

/

<file ext>

您可以刪除下一個檔案清單。它們是內部日誌,用於進行故障排除。

注意:如果確定沒有其他調查正在進行中,請刪除這些調查。

<#root>

bootflash:/

vmanage-admin

/

*.tar.gz

bootflash:/

core

/

*.core.gz

bootflash:/

core

/

*.tar.gz

bootflash:/

syslog

- /
- *

bootflash:/

tracelogs

- /
- *
- *

bootflash:/

crashinfo_*

範例

delete /force /recursive bootflash:/tracelog/* delete /force /recursive bootflash:/ vmanage-admin/*.tar.gz



<#root>

bootflash:/

.sdwaninstaller

bootflash:/

.sdwaninstallerfs

bootflash:/

.cdb_backup folder

bootflash:/

sdwan folder

bootflash:/

*pkg

bootflash:/

*.conf.

2. Reboot幫助釋放bootflash記憶體,如示例所示。

注意:重新啟動期間控制層面和資料層面抖動。

*** Before Reboot *** edge#show sdwan software VERSION ACTIVE DEFAULT PREVIOUS CONFIRMED TIMESTAMP ----

解決方法

如果之前的操作無法升級路由器c1111-8p,請執行後續步驟。

問題1

如果升級問題與以下錯誤「Not enough space under bootflash」相關,請參閱以下說明。

步驟 1. 啟用IOx。

Config-transaction iox commit end

步驟 2.運行下一個命令,將IOx日誌從bootflash移動到快閃記憶體。

app-hosting move system techsupport to flash:

步驟 3. 停用IOx。

Config-transaction no iox commit end 範例

<#root>

Before IOx enabling

edge#dir Directory of bootflash:/ <snipped> 2908606464 bytes total (

646643712 bytes free

) edge#

After IOx disabling

edge#dir Directory of bootflash:/ <snipped> 2908606464 bytes total (

```
1671614464 bytes free
```

) edge#

步驟 4. 繼續升級。

request platform software sdwan software install bootflash:<version.bin> request platform software sdwan software activate <IOS version> request platform software sdwan software upgrade-confirm request platform software sdwan software set-default <IOS version>

₽ 提示:透過vManage<u>升級SD-WAN cEdge路由器(使用CLI或vManage)進行</u>升級

問題2

如果升級問題與以下錯誤「SD-WAN安裝程式檔案系統中空間不足」有關,請參閱以下說明。

步驟 1. 登入shell。

有關詳細資訊,請參閱。

步驟 2. 轉到.sdwaninstaller/images目錄。使用Linux命令查詢和刪除舊檔案。

<#root>

cd /bootflash/

.sdwaninstaller

/

images

ls -l rm -rf <old file>

步驟 3. 使用Linux指令從shell結束。

exit

步驟 4. 繼續升級。

request platform software sdwan software install bootflash:<version.bin> request platform software sdwan software activate <IOS version> request platform software sdwan software upgrade-confirm request platform software sdwan software set-default <IOS version>



範例

**** Before to Clean Up **** [23-Sep-2022 18:08:05 UTC] Installing software image [23-Sep-2022 18:08:09

警告

透過vManage GUI升級期間可能存在的問題:

空間不足

修復:驗證bootflash並刪除所有不使用的映像。您可以使用命令透過CLI檔案刪除所有軟體套件 # delete bootflash:*17.03.01*.

此指令會刪除名稱為17.03.01的所有檔案。

Edge#delete bootflash:*17.03.01* Delete filename [*17.03.01*]? Delete bootflash:/isr4300-firmware_dream

您也可以從USB磁碟機開機、從bootflash刪除所有影像、將bin檔案複製到bootflash,然後重新啟動。



注意:如果路由器處於控制器模式,所有來自與資料包相關的IOS-XE命令都不會工作。



註:透過CLI更改引導變數在控制器模式下也處於停用狀態。您可以將裝置移至自主模式、升級,然後再移回控制器模式。

該映像已存在於路由器中

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您可以透過vManage GUI或CLI並使用命令show sdwan software驗證版本是否存在。

修復:透過vManage GUI或使用request platform software sdwan software remove <Name>命令刪除未使用的映像。

路由器中有三個以上的映像

您可以透過vManage GUI或CLI使用命令show sdwan software驗證版本是否存在。

修復:透過vManage GUI或使用 request platform software sdwan software remove <Name>命令刪除未使用的映像。

相關資訊

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- 使用CLI或vManage升級SD-WAN cEdge路由器
- <u>思科技術支援與下載</u>

關於此翻譯

思科已使用電腦和人工技術翻譯本文件,讓全世界的使用者能夠以自己的語言理解支援內容。請注 意,即使是最佳機器翻譯,也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準 確度概不負責,並建議一律查看原始英文文件(提供連結)。