

升級蜂窩網關和資料機韌體

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簡介

本檔案介紹升級Cisco 5G行動閘道(CG)CG522-E及其資料機韌體的程式。

必要條件

基本瞭解Cisco 5G產品組合和Cisco IOS®升級過程。

需求

思科建議您瞭解：

- CG522-E操作和設定。

採用元件

- CG522-E(17.9.6)

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。

背景資訊

CG522-E支援2種型別的Cisco IOS®、Cisco IOS® XE（17.6.x之前）和Cisco IOS CG（17.6.x之前）。Cisco IOS XE和CG(CG522-E上的Cisco IOS CG之間的主要區別是Cisco IOS XE支援IPv6和GUI（從17.10.1a開始同樣受支援），而Cisco IOS CG不支援這些功能功能。同樣的方法和步驟也可以用於升級CG418-E蜂窩網關。

單步映像升級

1.將映像檔複製到CG裝置所連線的交換器。

2.在CG上，輸入命令：

```
<#root>
```

```
gw-action:request software upgrade tftp://tftp_IP/image_name
```

3.重新啟動CG:

```
<#root>
```

```
CellularGateway#
```

```
gw-action:request system reboot
```

```
System is about to reload, Continue? [no,yes]
```

```
yes
```

4.檢查升級的映像：

```
<#root>
```

```
CellularGateway#
```

```
show gw-system:system partition
```

Primary Image

```
Partition      = image2
File name      = cg-ipsservices-17.15.1a.SPA.bin
Version       = 17.15.1a.0.240234.1724203070..Bengaluru
Build Date    = Wed Aug 21 01:17:50 2024
Install Date  = Wed Aug  9 04:21:20 2023
Boot Status   = Boot Successful.
```

Backup Image

```
Partition      = image1
File name      = cg-ipsservices-17.09.04.SPA.bin
Version       =
```

17.09.04

.0.0.1691563291..Bengaluru

Build date = Wed Aug 09 06:41:31 2023
Install Date = Fri Jun 22 11:13:22 2018
Boot Status = Boot Successful.

多步驟映像升級

1.將映像下載到CG:

```
gw-action:request software download tftp://tftp_IP/image_name
```

2.安裝映像：

```
gw-action:request software install image_file
```

3.啟用影象：

```
gw-action:request software activate image_file
```

4.重新啟動CG:

```
<#root>
```

```
CellularGateway#
```

```
gw-action:request system reboot
```

```
System is about to reload, Continue? [no,yes]
```

```
yes
```

5.檢查升級的映像：

```
<#root>
```

```
CellularGateway#
```

```
show gw-system:system partition
```

Primary Image
Partition = image2
File name = cg-ipservices-17.15.1a.SPA.bin
Version =

17.15.1a

.0.240234.1724203070..Bengaluru
Build Date = Wed Aug 21 01:17:50 2024
Install Date = Wed Aug 9 04:21:20 2023
Boot Status = Boot Successful.

Backup Image
Partition = image1
File name = cg-ipservices-17.09.04.SPA.bin
Version = 17.09.04.0.0.1691563291..Bengaluru
Build date = Wed Aug 09 06:41:31 2023
Install Date = Fri Jun 22 11:13:22 2018
Boot Status = Boot Successful.

Cisco CG522-E資料機韌體升級

1.識別數據機型號：

<#root>

show cellular 1 hardware

範例：

<#root>

CellularGateway#

show cellular 1 hardware

Modem Firmware Version = SWIX55C_03.09.11.00 7bf975 jenkins

Device Model ID = EM9190

International Mobile Subscriber Identity (IMSI) = 268069668483162
International Mobile Equipment Identity (IMEI) = 356805515034835
Integrated Circuit Card ID (ICCID) = 89351060001115740710
Mobile Subscriber Integrated Services Digital Network Number (MSISDN) =
Factory Serial Number (FSN) = 4H4282826003B1
Current Modem Temperature = 46 deg C
PRI SKU ID = 1104703

PRI Version = 030.044_006

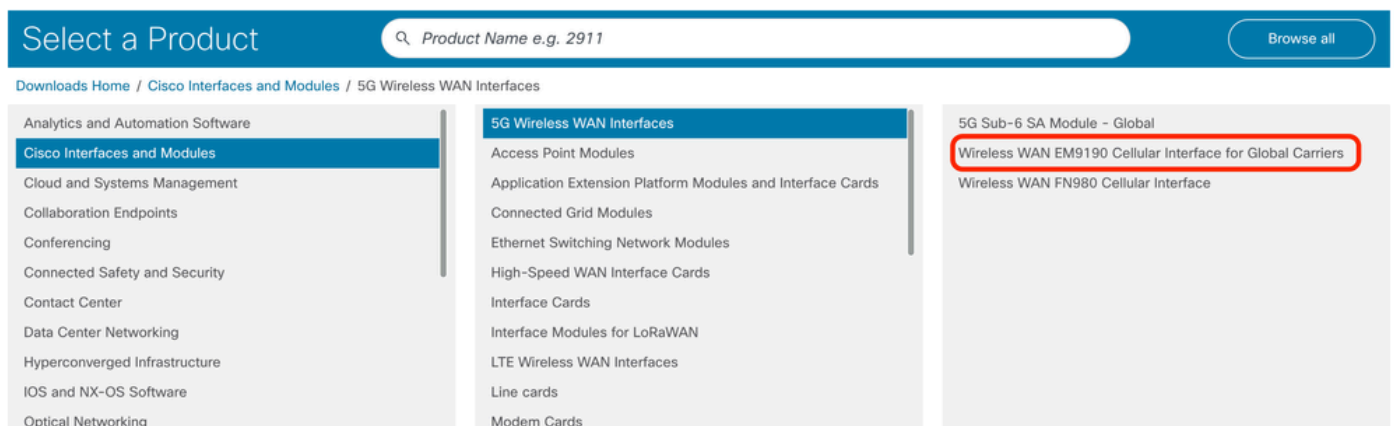
Carrier = GENERIC

OEM PRI Version = 001.009

Modem Status = MODEM_STATE_DNS_ACQUIRED

2. 從software.cisco.com下載正確的檔案。

在本例中：



對於EM9190數據機，有3個可用於韌體升級的檔案：

1. CWE (基於韌體檔案)
2. NVU (運營商PRI檔案)
3. NVU (OEM PRI檔案)

範例：

Software Download

Downloads Home / Cisco Interfaces and Modules / 5G Wireless WAN Interfaces / Wireless WAN EM9190 Cellular Interface for Global Carriers

Select a Software Type

- Cellular Modem Firmware
- Cellular OEM PRI Firmware

Software Download

Downloads Home / Cisco Interfaces and Modules / 5G Wireless WAN Interfaces / Wireless WAN EM9190 Cellular Interface for Global Carriers / Cellular Modem Firmware- 03.10.07.00

Q Search...

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Latest Release

03.10.07.00

03.04.03.00

03.09.11.00

01.07.13.00

All Release

03.10.07.00

03.09.11.00

03.04.03.00

01.07.13.00

Wireless WAN EM9190 Cellular Interface for Global Carriers

Release 03.10.07.00

Related Links and Documentation

Firmware Upgrade Guide

My Notifications

File Information	Release Date	Size
03.10.07.00 modem firmware for EM9190 modem. Note: See Firmware Upgrade Guide for minimal firmware version requirement for this upgrade. EM9190_03.10.07.00_cw6 Advisories	15-Aug-2023	86.46 MB
T-Mobile carrier PRI, based on 03.10.07.00 modem firmware, for EM9190 modem. Note: See Firmware Upgrade Guide for minimal firmware version requirement for this upgrade. EM9190_03.10.07.00_TMO_030.052_000_mvu Advisories	15-Aug-2023	0.03 MB

在下一頁中，您可以在左側看到可用的軟體版本。在右側，您可以看到適用於同一軟體版本的多個檔案。根據所使用的載體選擇適當的影像。如果清單中不存在已用載波，則必須使用Generic映像。

舉例來說：

Search...

Expand All Collapse All

Latest Release

03.10.07.00

03.04.03.00

03.09.11.00

01.07.13.00

All Release

03.10.07.00

03.09.11.00

03.09.11.00

03.04.03.00

03.04.03.00

01.07.13.00

Wireless WAN EM9190 Cellular Interface for Global Carriers

Release 03.09.11.00

Related Links and Documentation
[Firmware Upgrade Guide](#)

My Notifications

File Information	Release Date	Size	
03.09.11.00 modem firmware for EM9190 modem. This is the same file as EM9190_03.09.11.00-002.cwe posted on 27-Feb-2023. Only the filename got changed. Note: See Firmware Upgrade Guide for minimal FW version requirement for this upgrade. EM9190_03.09.11.00.cwe Advisories	15-Aug-2023	87.34 MB	Download Cart File
AT&T PRI for EM9190 modem. This is the same file as EM9190_03.09.11.00-001_ATT_030.046_001.nvu posted on 11-Apr-2023. Only the filename got changed. Note: See Firmware Upgrade Guide for minimal firmware version requirement for this upgrade. EM9190_03.09.11.00_ATT_030.046_001.nvu Advisories	15-Aug-2023	0.06 MB	Download Cart File
Bell carrier PRI, based on 03.09.11.00 modem firmware, for EM9190 modem. Note: See Firmware Upgrade Guide for minimal firmware version requirement for this upgrade. EM9190_03.09.11.00_BELL_030.007_001.nvu Advisories	15-Aug-2023	0.07 MB	Download Cart File
NTT DoCoMo carrier PRI, based on 03.09.11.00 modem firmware, for EM9190 modem. Note: See Firmware Upgrade Guide for minimal firmware version requirement for this upgrade. EM9190_03.09.11.00_DOCOMO_030.041_003.nvu Advisories	15-Aug-2023	0.05 MB	Download Cart File
Generic PRI for EM9190 modem. This is the same file as EM9190_03.09.11.00-001_GENERIC_030.044_006.nvu posted on 27-Feb-2023. Only the filename got changed. Note: See Firmware Upgrade Guide for minimal FW version requirement for this upgrade EM9190_03.09.11.00_GENERIC_030.044_006.nvu Advisories	15-Aug-2023	0.05 MB	Download Cart File
KDDI carrier PRI, based on 03.09.11.00 modem firmware, for EM9190 modem. Note: See Firmware Upgrade Guide for minimal firmware version requirement for this upgrade. EM9190_03.09.11.00_KDDI_030.025_001.nvu Advisories	15-Aug-2023	0.07 MB	Download Cart File
SoftBank carrier PRI, based on 03.09.11.00 modem firmware, for EM9190 modem. Note: See Firmware Upgrade Guide for minimal firmware version requirement for this upgrade. EM9190_03.09.11.00_SOFTBANK_030.031_004.nvu Advisories	15-Aug-2023	0.03 MB	Download Cart File
Verizon PRI for EM9190 modem. This is the same file as EM9190_03.09.11.00-001_VERIZON_030.046_003.nvu posted on 27-Feb-2023. Only the filename got changed. Note: See Firmware Upgrade Guide for minimal FW version requirement for this upgrade EM9190_03.09.11.00_VERIZON_030.046_003.nvu Advisories	15-Aug-2023	0.07 MB	Download Cart File

c. NVU (OEM PRI檔案)

範例：

Software Download

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Select a Software Type

[Cellular Modem Firmware](#)

[Cellular OEM PRI Firmware](#)

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Latest Release
EM9190_001.009
All Release
EM9190_001.009

Wireless WAN EM9190 Cellular Interface for Global Carriers

Release EM9190_001.009

[My Notifications](#)

Related Links and Documentation
[Firmware Upgrade Guide](#)

File Information	Release Date	Size
This OEM PRI file is only for EM9190 modem. It is compatible with modem firmware 03.04.03.00 and above. EM9190_1104703_03.09.11.00_Cisco_001.009 NVU Advisories	15-Aug-2023	0.02 MB

要更新所有3個版本（基於韌體、運營商PRI和OEM PRI），需要分別執行2次韌體升級過程：

1. 第一次使用.CWE（基於韌體檔案）和.NVU（運營商PRI檔案）在一個資料夾中。
2. 第二次使用.NVU（OEM PRI檔案），位於1個資料夾中。

3.確保CG已升級到最新的Cisco IOS。

4.下載用於EM9190數據機的最新.CWE和.NVU（電信級PRI）檔案，並確保這些檔案儲存在CG上。

5.在flash中創建資料夾。名稱必須與韌體或韌體不同：

```
<#root>
```

```
gw-action:
```

```
request file create_dir firm_new
```

範例：

```
<#root>
```

```
CellularGateway#
```

```
gw-action:request file create_dir firm_new
```


Created Directory at: firm_new

6.將.CWE和.NVU (運營商PRI) 檔案複製到CG快閃記憶體：

```
gw-action:request file copy source tftp://
```

/

```
destination/storage/firm_new/
```

範例：

<#root>

CellularGateway#

```
gw-action:request file copy source tftp://192.168.1.2/fw.bin destination/storage/firm_new/fw.bin
```

7.驗證.CWE和.NVU (運營商PRI) 檔案是否正確下載到新建立的資料夾中：

<#root>

CellularGateway#

```
gw-action:request file list fw_folder
```

```
-rw-r--r-- 50575 May 19 06:57 EM9190_03.09.11.00-001_GENERIC_030.044_006.nvu
```

```
-rw-r--r-- 91579911 May 19 06:50 EM9190_03.09.11.00-002.cwe
```

CellularGateway#

8.驗證當前韌體和運營商PRI版本：

<#root>

CellularGateway#

show cellular 1 hardware

Modem Firmware Version = SWIX55C_01.07.13.00 000000

jenkins

Device Model ID = EM9190

International Mobile Subscriber Identity (IMSI) = 123456700004023

International Mobile Equipment Identity (IMEI) = 356805510129085

Integrated Circuit Card ID (ICCID) = 8952530076180184023

Mobile Subscriber Integrated Services Digital Network Number (MSISDN) =

Factory Serial Number (FSN) = 4H1531500901A1

Current Modem Temperature = 35 deg C

PRI SKU ID = 1104703

PRI Version = 016.006_004 Carrier = GENERIC

OEM PRI Version = 001.006

Modem Status = MODEM_STATE_NETWORK_READY

CellularGateway#

CellularGateway#

CellularGateway# show cellular 1 firmware Firmware

Activation Mode = AUTO

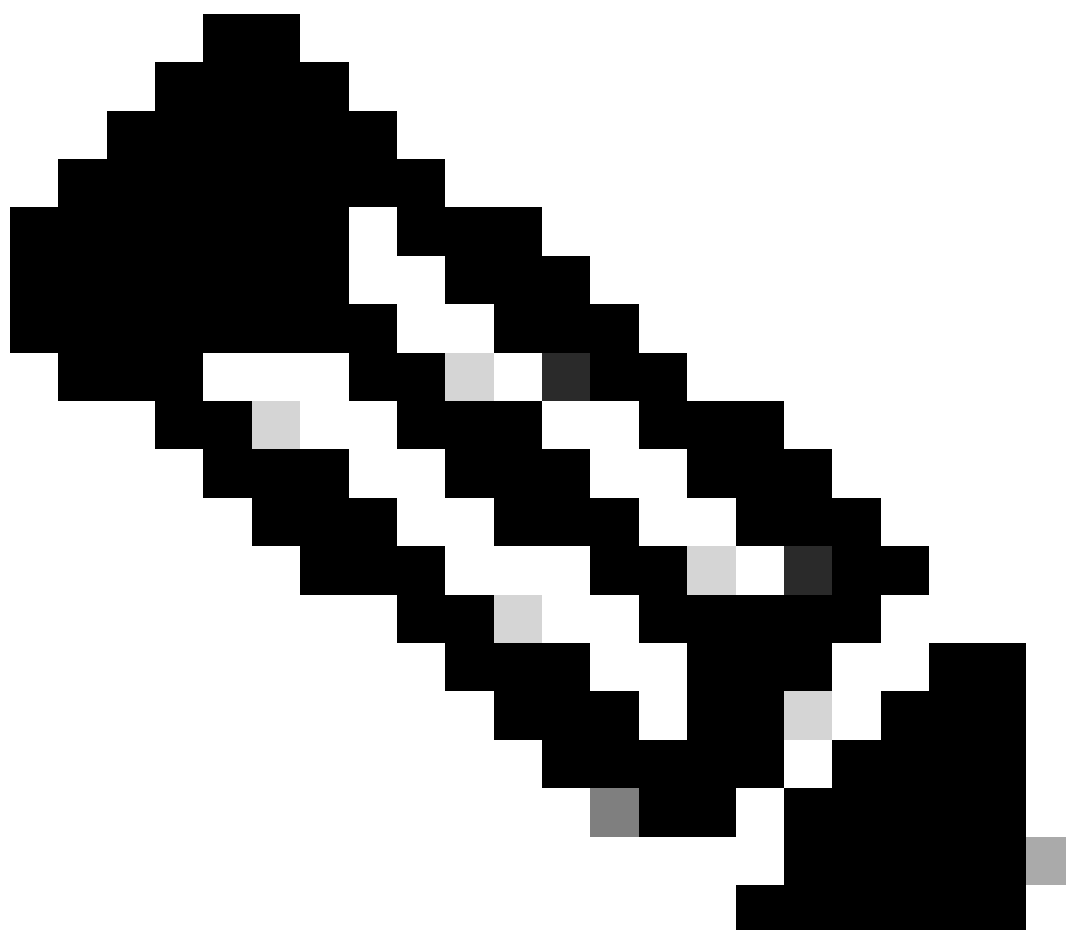
INDEX CARRIER FW VERSION PRI VERSION STATUS

1 GENERIC 01.07.13.00_GEN 016.006_004 ACTIVE

CellularGateway#

9.使用以下命令啟動數據機韌體升級：

cellular 1 upgrade firmware <created_earlier_folder_directory>



注意：在韌體升級過程中，請勿關閉電源或重新載入路由器。

範例：

```
<#root>
```

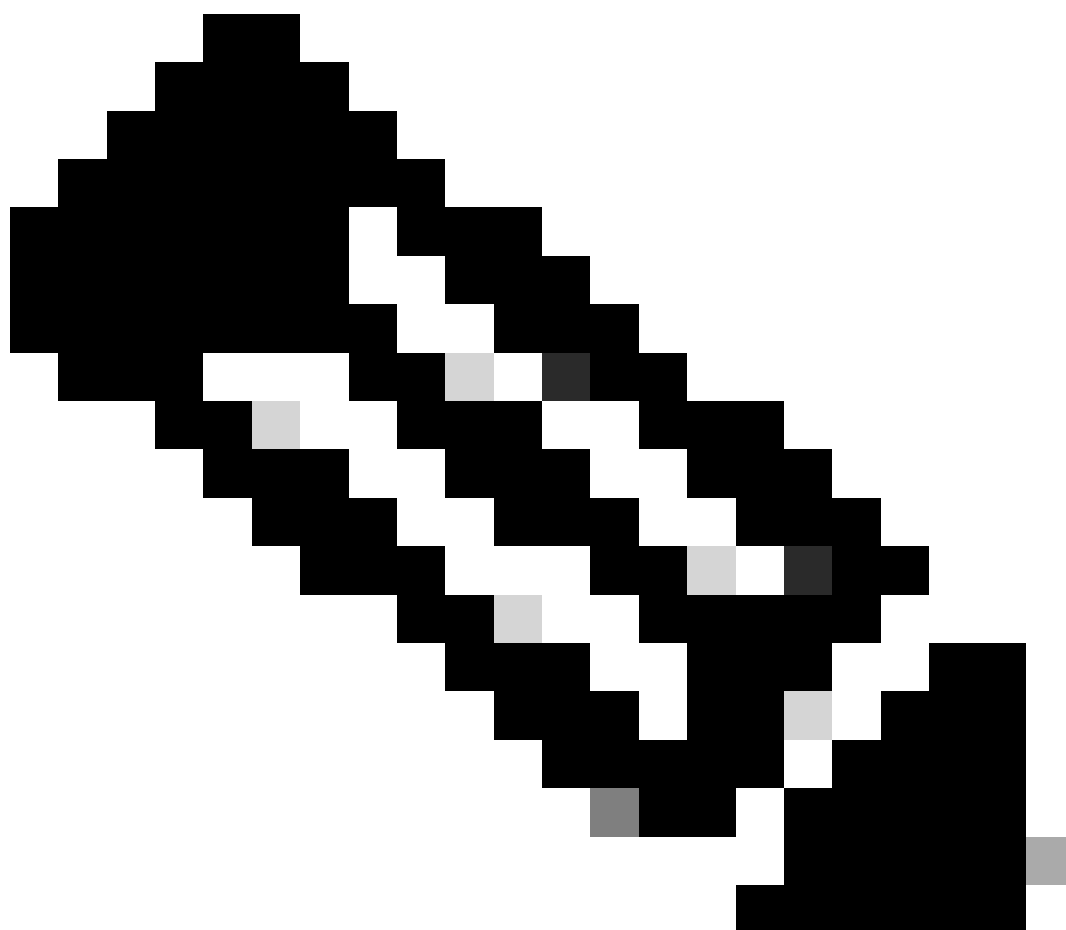
```
CellularGateway#
```

```
cellular 1 upgrade firmware /flash/firm_new
```

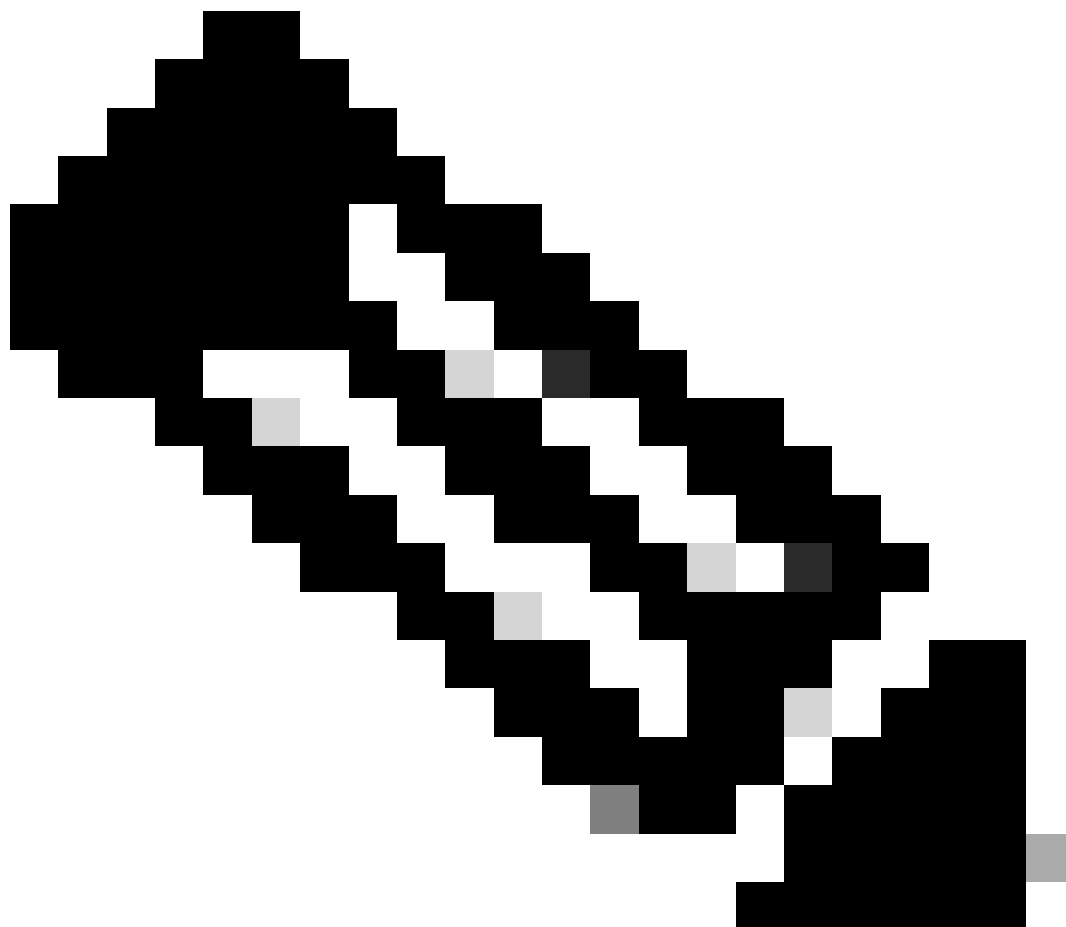
```
status inprogress response
```

```
Firmware upgrade is in progress!!!
```

```
CellularGateway#
```



注意：請確保只在建立的資料夾中保留所需的韌體檔案，以避免多個版本儲存在同一資料夾中時發生衝突。



註：對於SWI EM9190數據機，如果當前版本為01.07.08，請先升級到01.07.13，然後再升級到最新版本。

10.驗證數據機韌體和運營商PRI是否已成功升級：

<#root>

```
CellularGateway# show cellular 1 hardware
```

```
Modem Firmware Version = SWIX55C_03.09.11.00
```

```
7bf975 jenkins
Device Model ID = EM9190
International Mobile Subscriber Identity (IMSI) = 123456700004023
International Mobile Equipment Identity (IMEI) = 356805510129085
Integrated Circuit Card ID (ICCID) = 8952530076180184023
Mobile Subscriber Integrated Services Digital Network Number (MSISDN) =
Factory Serial Number (FSN) = 4H1531500901A1
Current Modem Temperature = 35 deg C
PRI SKU ID = 1104703
```

PRI Version = 030.044_006

Carrier = GENERIC

OEM PRI Version = 001.006

Modem Status = MODEM_STATE_NETWORK_READY

CellularGateway#

CellularGateway#

CellularGateway#show cellular 1 firmware

Firmware Activation Mode = AUTO

INDEX CARRIER FW VERSION PRI VERSION STATUS

1 GENERIC 03.09.11.00_GEN 030.044_006 ACTIVE

CellularGateway#

11.對於OEM PRI升級，請對.NVU檔案重複相同步驟，以便進行OEM PRI升級。

結論

建議始終運行蜂窩網關可用的最新軟體版本以及最新的數據機韌體，因為它包含蜂窩運營商支援所需的最新PRI檔案。

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）。