

升级蜂窝网网关和调制解调器固件

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简介

本文档介绍升级Cisco 5G蜂窝网关(CG)CG522-E及其调制解调器固件的过程。

先决条件

基本了解Cisco 5G产品组合和Cisco IOS®升级过程。

要求

思科建议您了解以下内容：

- CG522-E操作和设置。

使用的组件

- CG522-E(17.9.6)

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。

背景信息

CG522-E支持2种类型的Cisco IOS®,Cisco IOS® XE（低于17.6.x）和Cisco IOS CG（来自17.6.x）。Cisco IOS XE与CG522-E上的Cisco IOS CG之间的主要区别是Cisco IOS XE支持IPv6和GUI（从17.10.1a起同样支持），而Cisco IOS CG不支持这些功能功能。同样的方法和步骤也可用于升级CG418-E蜂窝网关。

一步映像升级

1.将映像文件复制到CG设备所连接的交换机。

2.在CG上，输入命令：

```
<#root>
```

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

3.重新启动CG:

```
<#root>
```

```
CellularGateway#
```

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

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

```
yes
```

4.检查升级后的映像：

```
<#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.

多步骤映像升级

1.将映像下载到CG:

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

2.安装映像：

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

3.激活映像：

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

4.重新启动CG:

```
<#root>
```

```
CellularGateway#
```

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

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

```
yes
```

5.检查升级后的映像：

```
<#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.

思科CG522-E调制解调器固件升级

1.识别调制解调器型号：

<#root>

show cellular 1 hardware

示例：

<#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

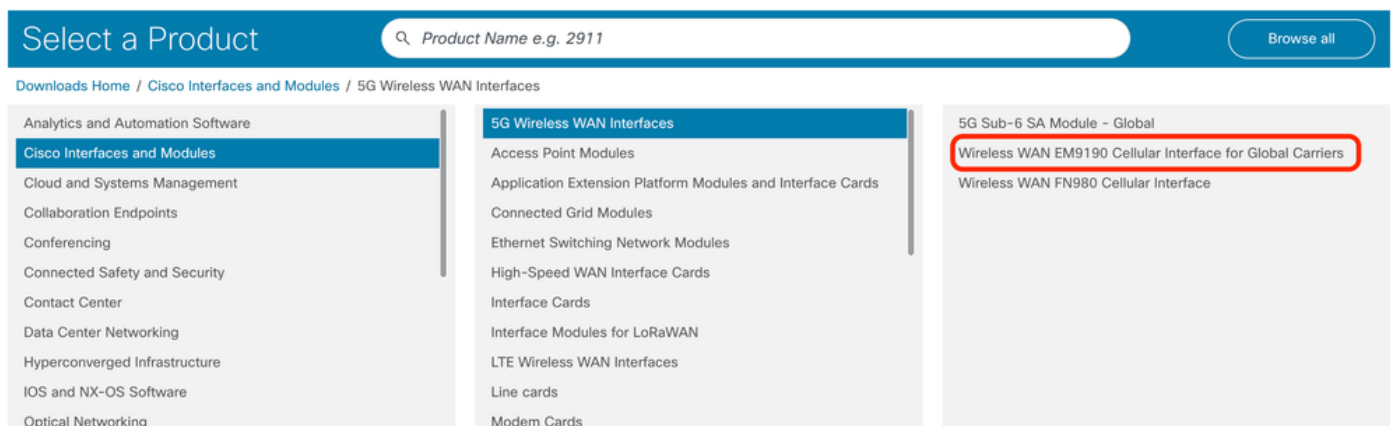
Carrier = GENERIC

OEM PRI Version = 001.009

Modem Status = MODEM_STATE_DNS_ACQUIRED

2.从software.cisco.com下载正确的文件。

对于此示例：



对于EM9190调制解调器，有3个可用于固件升级的文件：

1. CWE (基于固件文件)
2. NVU (运营商PRI文件)
3. NVU (OEM优先级文件)

示例：

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

Q 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

03.04.03.00

01.07.13.00

Wireless WAN EM9190 Cellular Interface for Global Carriers

Release 03.10.07.00

Related Links and Documentation

My Notifications

Firmware Upgrade Guide

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

在下一页中，您可以在左侧看到可用的软件版本。在右侧，您可以看到同一软件版本有多个可用文件。根据所使用的载体选择适当的图像。如果列表中不存在已使用的运营商，则必须使用Generic映像。

例如：

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
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
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
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
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
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
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
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

c. NVU (OEM PRI文件)

示例：

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 OEM PRI Firmware - EM9190_001.009

Q Search...

Expand All Collapse All

Latest Release

EM9190_001.009

All Release

EM9190_001.009

Wireless WAN EM9190 Cellular Interface for Global Carriers

Release EM9190_001.009

Related Links and Documentation

My Notifications

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	15-Aug-2023	0.02 MB

Advisories

要更新所有3个版本（基于固件、运营商PRI和OEM PRI），需要分别执行2次固件升级过程：

- 第一次使用.CWE（基于固件文件）和.NVU（运营商PRI文件）在一个文件夹中。
- 第2次，使用.NVU（OEM PRI文件）放在1个文件夹中。
- 确保CG升级到最新的Cisco IOS。
- 下载用于EM9190调制解调器的最新.CWE和.NVU（运营商PRI）文件，并确保这些文件存储在CG上。
- 在闪存中创建文件夹。名称必须不同于固件或防火墙：

<#root>

gw-action:

request file create_dir firm_new

示例：

<#root>

CellularGateway#

gw-action:request file create_dir firm_new

Created Directory at: firm_new

6.将.CWE和.NVU(运营商PRI)文件复制到CG闪存：

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

/

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

示例：

<#root>

CellularGateway#

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

7.验证.CWE和.NVU (运营商PRI) 文件是否已正确下载到新创建的文件夹中：

<#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.验证当前固件和运营商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

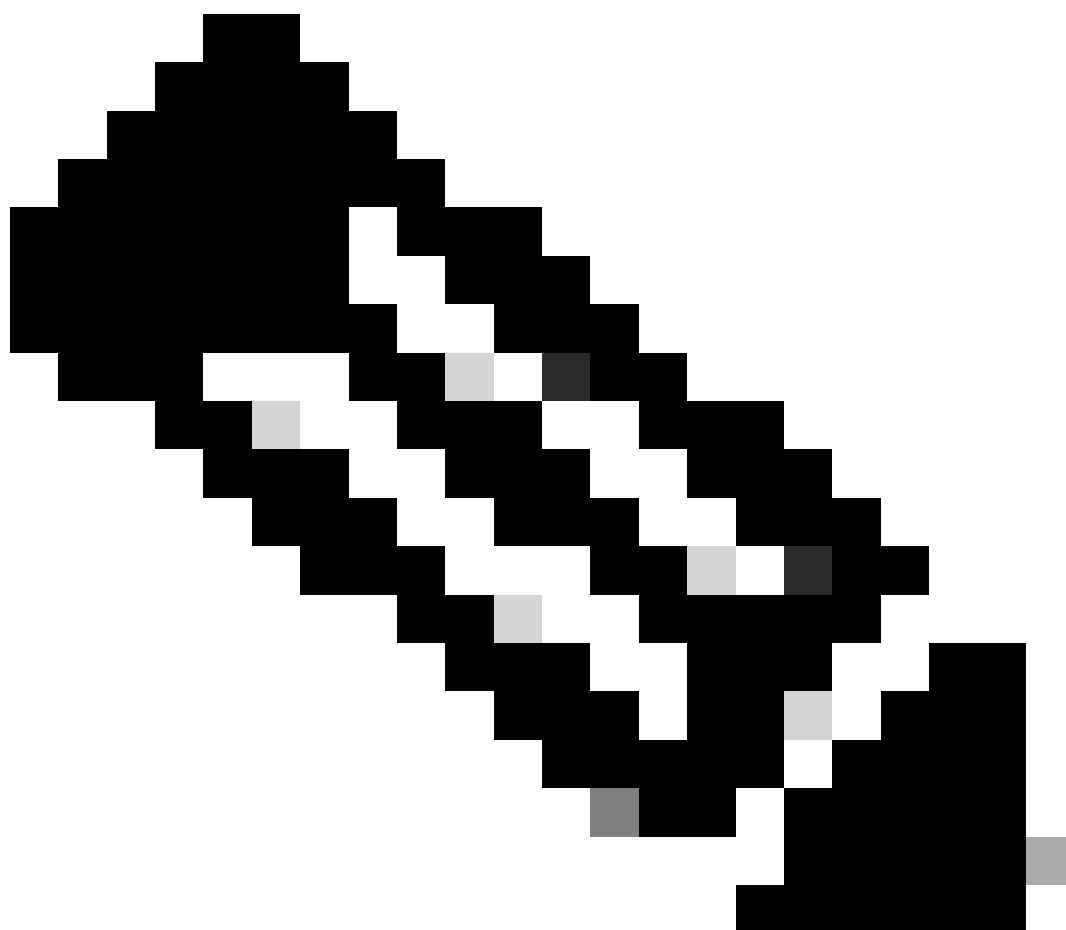
INDEX CARRIER FW VERSION PRI VERSION STATUS

1 GENERIC 01.07.13.00_GEN 016.006_004 ACTIVE

CellularGateway#

9.使用命令启动调制解调器固件升级：

cellular 1 upgrade firmware <created_earlier_folder_directory>



注意：在固件升级过程中，请勿断开电源或重新加载路由器。

示例：

```
<#root>
```

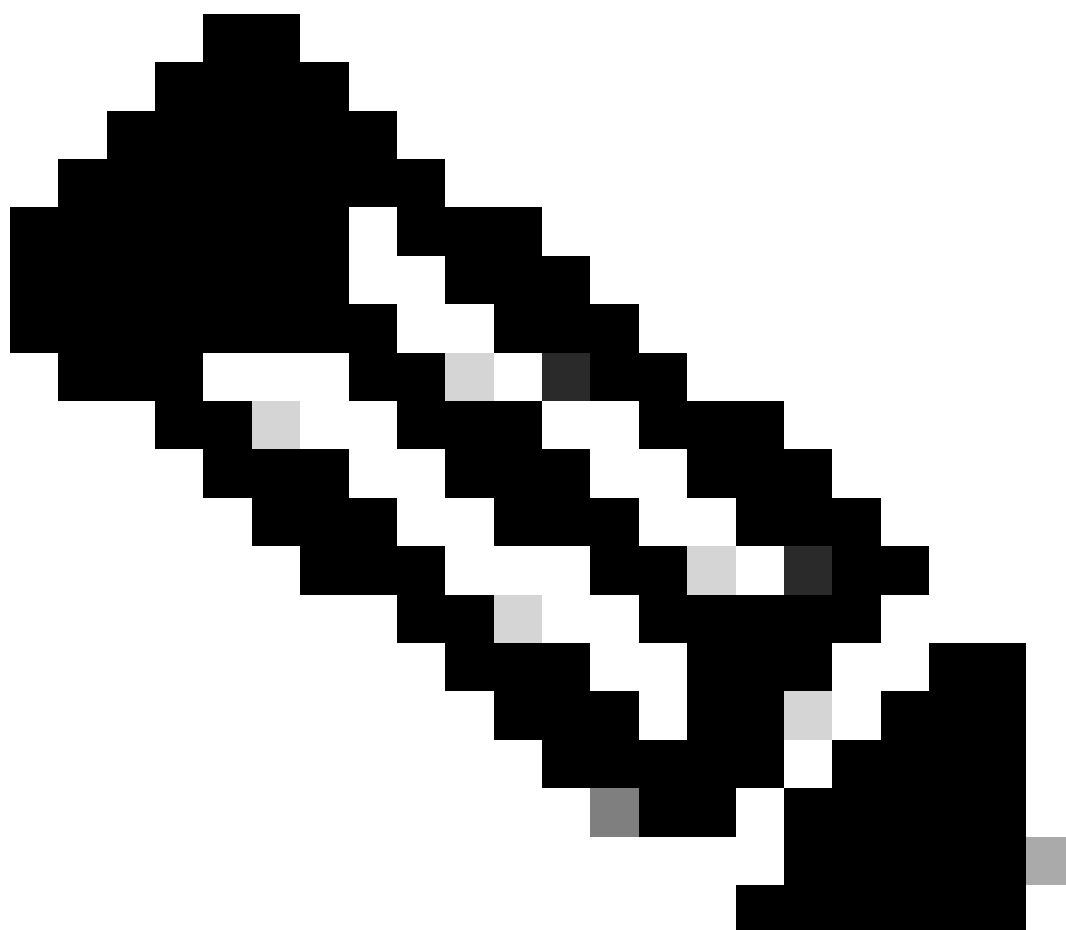
```
CellularGateway#
```

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

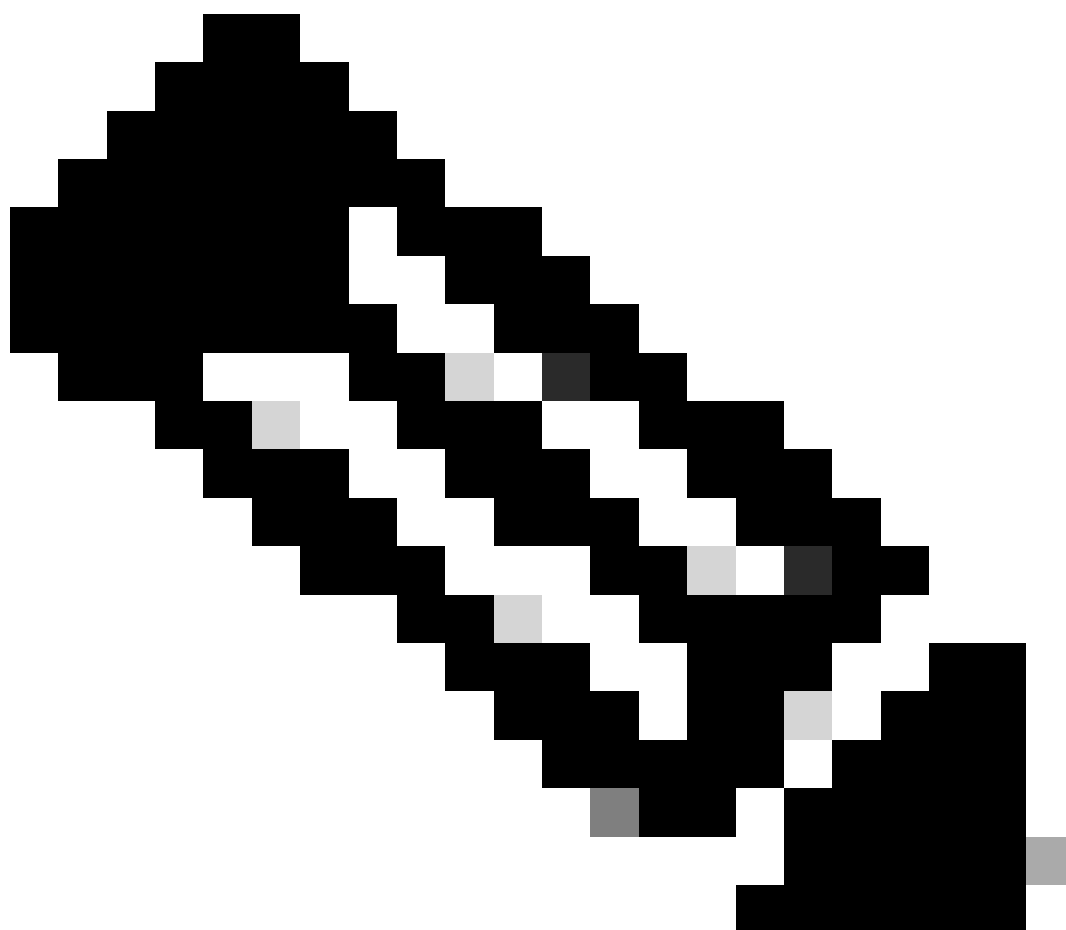
```
status inprogress response
```

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

```
CellularGateway#
```



注意：请确保仅将所需的固件文件保存在已创建的文件夹中，以避免多个版本存储在同一个文件夹中时发生冲突。



注：对于SWI EM9190调制解调器，如果当前版本为01.07.08，请先升级到01.07.13，然后再升级到最新版本。

10.验证调制解调器固件和运营商PRI是否已成功升级：

<#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.对于OEM PRI升级，对OEM PRI的.NVU文件重复相同的步骤。

结论

建议始终运行适用于蜂窝网网关的最新软件版本和最新的调制解调器固件，因为它包含蜂窝网运营商支持所需的最新PRI文件。

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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