EHWIC-4G-LTE-V

MC7750 LTE Modem Firmware Upgrade Procedure

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1 Introduction

The Cisco LTE with integrated LTE for the Verizon Wireless network (**EHWIC-4G-LTE-V**) use the MC7750 LTE modem. A new modem firmware version is now available and recommended by Verizon Wireless for the modem, which also provides improved stability for the LTE connection. For these reasons, IOS release **15.2(4)M3** and subsequent releases will be compatible with the new LTE modem firmware. This means that any ISR model 1900, 2900, or 3900 with Verizon Wireless LTE must upgrade the firmware on the LTE eHWIC.

The current modem firmware version on the MC7750 LTE modem is 01.00.09.03 and should be upgraded to 03.05.10.06 for compatibility with IOS 15.2(4)M3 and later. This document highlights the different procedures to upgrade the LTE modem firmware and IOS depending on the deployment model. There are two methods to upgrade the LTE modem firmware and IOS image.

For existing field deployments where LTE is not the primary WAN interface or not the only ISR WAN interface, the manual upgrade process is recommended.

- For existing field deployments where a network administrator has out-of-band or local access to the ISR, the manual upgrade process is recommended.
- For cases where an ISR has yet to be deployed, the manual upgrade process is recommended.
- For existing field deployments where LTE is the only WAN interface, and there is no local or out-of-band administrative access to the ISR, an automated upgrade method using an IOS EEM script is recommended. The EEM script will upgrade the modem firmware and reload the ISR with the IOS image compatible with the new firmware release.

There is an open issue for modems upgraded from LTE Modem Firmware Version SWI9600M_01.00.09.03 to Modem Firmware Version SWI9600M_03.05.10.06. OTA-DM (Over the Air Device Management) will no longer update the APN update on the LTE modem. Section 5 contains more information regarding the work-around for this issue.

Firmware 3.5.10.6 should not be used with C819G-4G-V until further notice. In the interim, the IOS LTE Interim Release with modem firmware 1.0.9.3 should be used. For access to the IOS LTE Interim Release, send an email to interim_lte_image@cisco.com with your cisco.com userid.

2 Downloading the LTE Modem Firmware and IOS images

2.1 Firmware download

The link below contains the LTE modem firmware image:
http://software.cisco.com/download/release.html?i=!y&mdfid=284772061&softwareid=284285628&release=3.5.10.6&os=

Download the image, copy the firmware to ISR flash, and follow the upgrade instructions in section 3.

2.2 IOS download

The link below contains IOS images for 15.2(4)M3 and later:
http://software.cisco.com/download/navigator.html?mdfid=282786697&dvdid=0&flowid=39006

Click on “Cisco IOS 15.2M&T” option in the third column and follow the choices for routers>branch>router.

The rightmost column will display the series of ISR (1900, 2900, 3900). Choose the appropriate series. Once chosen, click the “IOS software” link on the following page, download the appropriate image, and copy the image to ISR flash.

3 Procedure for manual upgrade of modem firmware and IOS image

Below are the steps to manually upgrade the MC7750 LTE modem firmware from 01.00.09.03 to 03.05.10.06

A) Boot router with IOS 15.2(4)M2 or the IOS interim image (universalk9-mz.SSA.V152_4_M_LTE available via email request to interim_lte_image@cisco.com along with a cisco.com ID.

B) Download the following files onto the router flash:

New Modem firmware:

MC7750_VZW_03.05.10.06_00.cwe

New IOS image: c*xxx*-universalk9-mz.SPA.152-4.M3 (xxx vary by ISR model)

C) Verify that both the files are present in the router flash before beginning the modem firmware upgrade (via IOS enable-mode "show flash" command).

D) Enable logging console (IOS enable mode command "term mon") in order to view the status of the upgrade. Initiate the modem firmware upgrade process using the following IOS enable-mode command:

For Verizon LTE eHWIC

Router#microcode reload cellular 0 <slot_number> modem-provision flash:MC7750_VZW_03.05.10.06_00.cwe

The LTE modem firmware upgrade procedure takes a maximum of 15 minutes, on average 5 minutes.

E. Once the upgrade is completed, you will see the following message on the ISR console:

F/W Upgrade: Complete Successfully

Once you see this message, verify that the modem is now on the new firmware by using the appropriate enable-mode IOS command:

For the Verizon LTE EHWIC

Router#**show cellular 0/<slot_number>/0 hardware**

e.g:

Router#show cellular 0/0/0 hardware
Modem Firmware Version = SWI9600M_**03.05.10.06**
Modem Firmware built = 2012/11/12 15:07:45
…

If the firmware upgrade does not succeed, the following output would be seen from the previous command:

Router#show cellular 0/0/0 hardware
Modem Firmware Version = SWI9600M_**01.00.09.03**
…

Reload the ISR and start the process again from step A. If the firmware upgrade fails 3 times, contact Cisco TAC.

F. Once the modem firmware upgrade has been verified, the ISR must be reloaded with the IOS image c*xxx*-universalk9-mz.SPA.152-4.M3 or later

After ISR reload, verify that the new IOS is running via the IOS command "show version" e.g.

Router1#show version
Cisco IOS Software, C1900 Software (C1900-UNIVERSALK9-M), Version 15.2(4)M3 …

3.1 Sample modem firmware upgrade and messages

Below is an example of an upgrade procedure on an 1900 platform. It is important to enable console logging to view these messages.

```
Router#microcode reload cellular 0/0/0 0 modem-provision
flash:MC7750_VZW_03.05.10.06_00.cwe
Reload microcode? [confirm] <hit enter key>
Log status of firmware download in router flash?[confirm] <hit enter key>
Firmware download status will be logged in flash:fwlogfile
Microcode Reload Process launched for Cellular 37946756; hw type = 0x6F3
Router#
**************************************************
 The interface will be Shut Down for Firmware Upgrade
 This will terminate any active data connections.
**************************************************
Modem radio has been turned off
**************************************************
 Modem will be upgraded!
 Upgrade process will take up to 15 minutes. During
 this time the modem will be unusable.
 Please do not remove power or reload the router during
 the upgrade process.
**************************************************
Sending F/W[MC7750_VZW_03.05.10.06_00.cwe] to the card [41569157 bytes]:
Firmware file: MC7750_VZW_03.05.10.06_00.cwe sent to the card

The current modem F/W App Version: SWI9600M_01.00.09.03AP R2492
CARMD-EN-10526 2011/07/01 19:31:09
The current modem F/W Boot Version: SWI9600M_01.00.09.03BT R2492
CARMD-EN-10526 2011/07/01 19:28:52
The current modem Carrier String: 5
The current modem Device ID: MC7750
The current modem Package Identifier:
```

MC7750_01.00.09.03_00_vzw_020.006_001

The current modem SKU ID: 1584083

FW UPgrade: In the progress.

*Feb 21 23:39:35.407: %CELLWAN-2-MODEM_DOWN: Cellular0/0 modem is now DOWN.

F/W Upgrade: Complete Successfully

*Feb 21 23:42:00.475: %CELLWAN-2-MODEM_UP: Cellular0/0 modem is now UP.

*Feb 21 23:42:00.475: %CELLWAN-2-MODEM_DOWN: Cellular0/0 modem is now DOWN.

*Feb 21 23:42:05.475: %CELLWAN-2-MODEM_UP: Cellular0/0 modem is now UP.

Modem radio has been turned on

Router#show cellular 0/0/0 hardware | incl Modem Firmware Version

Modem Firmware Version = SWI9600M_03.05.10.06

4 Procedure for modem firmware and IOS image upgrade using the EEM script

4.1 Pre-requisites before beginning the modem firmware upgrade

Below is a list of steps that need to be taken before beginning the modem firmware upgrade:

A. The ISR first needs to be upgraded to IOS 15.2(4)M2 or the IOS interim image (universalk9-mz.SSA.V152_4_M_LTE available via email request to interim_lte_image@cisco.com along with a cisco.com ID).

B. Download the following files onto the router flash:

New Modem firmware:

MC7750_VZW_03.05.10.06_00.cwe

New IOS image: c*xxx*-universalk9-mz.SPA.152-4.M3

Verify that both the files are present in the router flash before beginning the modem firmware upgrade.

C. Delete any "boot system flash:" configuration commands from the running configuration (IOS config-mode command "no boot system flash…")

D. Copy the EEM scripts from section 4.3 into the ISR running configuration (from IOS configuration mode).

E. Verify that the policy is registered by using the enable-mode command:
Router# show event manager policy registered

F. Verify that every line of the script has been registered since sometimes The editor used to access the router console, truncates the actions of the script entered.

G. The EEM script will generate syslog messages. Please enable console logging to view the same.

4.2 Running the EEM script

Once steps A through C of the pre-requisites are completed, the modem firmware upgrade procedure is started using the following enable-mode command:

Router#event manager run *FW <slot_number>*

For 1900, 2900, 3900 platforms with EHWICs, the slot number indicates the ISR slot where EHWIC-4G-LTE-V is inserted (seen via IOS command "show ip interface brief | incl Cell")

e.g For a **1941** ISR with EHWIC-4G-LTE-V in slot 1 which needs to be upgraded, the cli will be

Router#event manager run FW 1

The EEM script will upgrade the modem firmware from **01.00.09.03** to **03.05.10.06**. Following the modem upgrade, the script will load the corresponding IOS image and reload the router. The total upgrade time including router reload is approximately 25 minutes. During this time, the corresponding cellular interface will not be accessible. After the upgrade, log back into the router and verify that the upgrade was successful. If the upgrade was successful, you should see the following output:

Router#show cellular 0 hardware
Modem Firmware Version = SWI9600M_**03.05.10.06**
Modem Firmware built = 2012/11/12 15:07:45

Router1#show version
Cisco IOS Software, C1900 Software (C1900-UNIVERSALK9-M), Version 15.2(4)M3
…

4.3 EEM script

Copy the EEM scripts below into the ISR running configuration as indicated in step 4.1 step D with the following edit (if needed).

The EEM script is written assuming that the ISR is initially running the IOS interim image for LTE. If the router is running IOS 15.2(4)M2, replace the following line in the script before executing:

```
action 1.3.4 set old_IOS "c$platform-universalk9-mz.SSA.V152_4_M_LTE"
```

with

```
action 1.3.4 set old_IOS "c$platform-universalk9-mz.SPA.152-4.M2"
```

Script1:

```
event manager applet FW authorization bypass
event none maxrun 1200
action 1.0 if $_none_argc ne "1"
action 1.0.1  syslog msg "Incorrect number of arguments passed. Please check and try
again"
action 1.0.2 exit
action 1.0.3 end
action 1.1 cli command "enable"
action 1.2 set slot_number "$_none_arg1"
action 1.3 cli command "show version | incl System image file"
action 1.3.1 regexp "(.*)c(.*)-universalk9-(.*)\"" "$_cli_result" _match _sub1 _sub2 _sub3
action 1.3.2 set platform "$_sub2"
action 1.3.3 set current_IOS "c$_sub2-universalk9-$_sub3"
action 1.3.4 set old_IOS "c$platform-universalk9-mz.SSA.V152_4_M_LTE"
action 1.3.5 set new_IOS "c$platform-universalk9-mz.SPA.152-4.M3"
action 1.3.6 set firmware "MC7750_VZW_03.05.10.06_00.cwe"
action 1.3.7 set old_firmware "SWI9600M_01.00.09.03"
action 1.3.8 set new_firmware "SWI9600M_03.05.10.06"
action 1.4 if $platform eq "800"
action 1.4.1 set cellular_interface 0
action 1.5 else
action 1.5.1 set cellular_interface "0/$slot_number/0"
action 1.5.2 end
action 1.6 cli command "show cellular $cellular_interface hardware | incl Modem
Firmware Version"
```

```
action 1.7 string first "$new_firmware" "$_cli_result"
action 1.8 if $_string_result ge 0
action 1.8.1 syslog msg "Modem is already on new firmware $new_firmware. Exiting upgrade!!"
action 1.8.2 exit
action 1.8.3 end
action 2.1 if $current_IOS ne $old_IOS
action 2.1.1 syslog msg "Current IOS version is incorrect. Please run $old_IOS before starting upgrade. Exiting upgrade!!"
action 2.1.2 exit
action 2.2 end
action 2.3 cli command "show flash: | incl $new_IOS"
action 3.0 string first "$new_IOS" "$_cli_result"
action 3.1 if $_string_result lt 0
action 3.1.1 syslog msg "$new_IOS is not present in flash. Exiting upgrade!!"
action 3.1.2 exit
action 3.2 end
action 3.3 cli command "show flash: | incl $firmware"
action 5.0  string first "$firmware" "$_cli_result"
action 5.1 if $_string_result lt 0
action 5.1.1 syslog msg "$firmware is not present in flash. Exiting upgrade!!"
action 5.1.2 exit
action 5.2 end
action 5.3 cli command "configure terminal"
action 5.4 cli command “no boot system”
action 5.5 cli command “end”
action 6.1 cli command "microcode reload cellular 0 $slot_number modem-provision flash:$firmware" pattern "confirm"
action 6.2 cli command "y"
action 6.3 wait 400
action 6.4 cli command "event manager run router_reload $old_IOS $new_IOS $old_firmware $cellular_interface"
action 6.5 wait 120
action 6.6 exit
```

Script2:

```
event manager applet router_reload authorization bypass
event none maxrun 120
action 1.0 set old_IOS "$_none_arg1"
action 1.1 set new_IOS "$_none_arg2"
action 1.2 set old_firmware "$_none_arg3"
action 1.3 set cellular_interface "$_none_arg4"
action 1.4 cli command "enable"
action 2.0 cli command "show cellular $cellular_interface hardware | inc Modem
Firmware Version"
action 2.1 set _string_result "0"
action 2.2 string first "$old_firmware" "$_cli_result"
action 2.3 if $_string_result ge "0"
action 2.3.1 set boot_IOS "$old_IOS"
action 2.3.2 syslog msg "Firmware did not Upgrade successfully. Please try again after
reload"
action 2.4 else
action 2.4.1 set boot_IOS "$new_IOS"
action 2.4.2 syslog msg "Firmware upgraded successfully. value= $_string_result"
action 2.4.3 end
action 2.5 cli command "configure terminal"
action 2.5.1 cli command "boot system flash:$boot_IOS"
action 2.5.2 cli command "config-register 0x2102"
action 2.5.3 cli command “interface cellular $cellular_interface”
action 2.5.4 cli command “no shut”
action 2.5.5 cli command "end"
action 2.5.6 cli command "write memory"
action 2.5.7 reload
```

4.4 Post Upgrade Procedure

The EEM script makes configuration changes as part of the upgrade procedure. These changes are as follows:

- **The EEM script configures the ISR** to **boot with** 15.2(4)M3 **after the firmware upgrade has completed.** This change should remain. **For example with a 2901/2911/2921 ISR, it would be**

boot system flash:c2900-universalk9-mz.SPA.V152-4.M3

- The EEM script changes the config register to 0x2102. This change should remain as this is the appropriate value for an ISR to load the startup-config.
- Once the upgrade is successful, the EEM scripts should be REMOVED via the following IOS config-mode commands:

  Router#config term

  Router(config)#no event manager applet FW

  Router(config)#no event manager applet router_reload

  Router(config)#end

  Router#write memory

4.5 Error scenarios

If the LTE modem firmware upgrade did not complete successfully, perform the following based on the appropriate case:

Case 1: Check if the following output is observed after the upgrade procedure

Router#show cellular 0/1/0 hardware | incl Modem Firmware Version
Modem Firmware Version = SWI9600M_01.00.09.03

Router#show version | incl System image
System image file is "flash:c2900-universalk9-mz.SSA .152-4.M3"

If the above outputs are observed, it implies that the modem firmware upgrade failed. In this case:

- Reload the ISR with the previous IOS image:
  c*xxx*-**universalk9-mz.SSA.V152_4_M_LTE**
  or c*xxx*-**universalk9-mz.** SPA.152-4.M2.bin
- For manual upgrade, repeat the procedure beginning from section 3 or
- For EEM upgrade, remove the EEM script (see step 4.4), and repeat the procedure beginning from section 4

Case 2: If the following output is observed after the upgrade procedure

Router#show cellular 0/1/0 hardware | incl Modem Firmware Version
Modem Firmware Version = SWI9600M_01.00.09.03

Router#show version | incl System image
System image file is "flash:c2900-universalk9-mz.SSA.V152_4_M_LTE"
or
System image file is "flash:c2900-universalk9-mz.SPA.V152_4_M2"

The modem firmware upgrade failed. In this case:

- For manual upgrade, repeat the procedure beginning from section 3 or
- For EEM upgrade, remove the EEM script (see step 4.4), and repeat the procedure beginning from section 4

Case 3: If the following output is observed after the upgrade procedure

Router#show cellular 0/1/0 hardware | incl Modem Firmware Version
Modem Firmware Version = SWI9600M_03.05.10.06

Router#show version | incl System image
System image file is "flash:c2900-universalk9-mz.SSA.V152_4_M_LTE"
or
System image file is "flash:c2900-universalk9-mz.SPA.152-4.M2.bin"

The modem firmware upgrade succeeded, but the wrong IOS image was loaded onto the router. In this case:

- Ensure a single “boot system flash: command is configured, pointing to the IOS image cxxx-universalk9-mz.SPA.152-4.M3, by deleting any other “boot system: commands (IOS config-mode command “no boot system flash…”)

- Perform a “write memory” enable-mode command, and reload the router with new IOS image (enable-mode command “reload”).

5 Workaround for APN update failure via OTA-DM

OTA-DM (Over the Air Device Management) is a feature that enables the LTE network to change the Access Point Name (APN) configured on the modem of an LTE device. The APN is an identifier that allows an LTE device to connect to a specific network. This enables LTE to provide private network connections to LTE devices across a shared wireless medium. An APN change is required for operation with the Verizon Mobile Private Network service or for Internet access with an LTE static IP address.

There is an open issue for modems upgraded from LTE Modem Firmware Version SWI9600M_01.00.09.03 to Modem Firmware Version SWI9600M_03.05.10.06. OTA-DM will no longer update the APN update on the LTE modem.

Note that if an LTE interface is operational before the upgrade, it will remain operational after the upgrade, which does not change the APN. The APN would only need to be changed if a new SIM (subscriber identification module) with a different APN is installed. If a new SIM or change to a SIM is needed, please contact your Verizon Wireless representative.

There are two methods to resolve the issue. The first is a single line IOS enable-mode command to manually change the APN. The second is a procedure to change data profiles in the LTE modem to re-enable OTA-DM.

Please note that upgrading from 1.0.9.3 to 3.5.10.6 on a currently LTE-connected ISR will not change the APN, and LTE will connect to the existing APN.

5.1 APN name change via IOS CLI

As a workaround, the following IOS enable-mode command can be used instead to manually change the APN. This is the recommended method to change the APN, and the command is only required if the APN must be changed.

The command will not appear in the running or startup configuration. The setting is stored in NVRAM of the modem and will not revert or change with an ISR power cycle. If another SIM is later inserted, with a different APN, the command must be repeated with the new APN value. To ensure the new SIM or change to a SIM is opereational, or to confirm the APN, please contact your Verizon Wireless representative.

Router# cellular <unit> lte profile create <profile_number> <APN name>

<unit> is 0/x/0 where x is the slot number

<profile_number> should be set to a value of 1

<APN Name> is the actual APN name, e.g. vzwinternet.

e.g. cellular 0/1/0 lte profile create 1 vzwinternet

Below is an example (example only, vzwinternet is the default APN and does not need to be defined):

```
C1921V_pod1#cellu 0/0/0 lte profile create 1 vzwinternet
Profile 1 already exists. Do you want to overwrite? [confirm]
Profile 1 will be overwritten with the following values:
PDP type = IPv4
APN = vzwinternet
Are you sure? [confirm]  <<hit the enter key>>
Profile 1 written to modem
.Mar  7 14:45:37.980: %LINK-3-UPDOWN: Interface Cellular0/0/0, changed state to up
.Mar  7 14:45:38.980: %LINEPROTO-5-UPDOWN: Line protocol on Interface Cellular0/0/0, changed state to
up
C1921V_pod1#sh cell 0/0/0 all
Hardware Information
====================
Modem Firmware Version = SWI9600M_03.05.10.06
Modem Firmware built = 2012/11/12 15:07:45
Hardware Version = 10
International Mobile Subscriber Identity (IMSI) = 00000
International Mobile Equipment Identity (IMEI) = 990000820021253
```

```
Integrated Circuit Card ID (ICCID) =
Mobile Subscriber International Subscriber
IDentity Number (MSISDN) = 2156945219

Profile Information
==================
Profile 1 = ACTIVE*
--------
PDP Type = IPv4
PDP address = 10.185.57.9
Access Point Name (APN) = vzwinternet
Authentication = Unknown
Username:
Password:
              Primary DNS address = 198.224.189.236
              Secondary DNS address = 198.224.188.236
--More--
```

5.2 OTA-DM APN name change workaround via AT commands

Appendix A includes the document provided by Sierra Wireless with instructions on how to re-enable OTA-DM on the LTE modem by using AT commands.

In order to use the AT commands, reverse telnet is required on the ISR. This is accomplished via serial console or Telnet/SSH from a device attached to the same LAN as the ISR, or ***via a WAN connection other than the LTE connection.***

To access the LTE modem,

- Determine the cellular interface: *cell 0/x/0* for LTE eHWIC
- Determine the line associated with the cellular interface (e.g. 3 for LTE 1921 eHWIC)
- Ensure that the line associated with the cellular interface is configured with "transport input telnet ssh" (to allow the upcoming reverse telnet)
- Determine the IP address of a loopback or LAN interface (e.g. 10.3.2.1)
- "shut" the cellular interface via command-line configuration mode
- Reverse telnet to the cellular interface by adding 2000 to the line and Telnet from the ISR console to the IP address followed by the line number e.g. "telnet 10.3.2.1 2003"
- Follow the steps in appendix A
- "no shut" the cellular interface via command line configuration
- Although the cellular interface will become active after the upgrade, it is recommended to reload the ISR.

Sample reverse telnet:

```
C1921V_pod1#sh ip int brief | i Ce
Cellular0                  10.177.254.77   YES IPCP   up                    up
C1921V_pod1#sh ip int brief | i Lo
Loopback100                10.0.0.11       YES NVRAM  up                    up
C1219V_pod1#sh line | i Ce
A     3 TTY              - inout     -    -    -      2        0 10415/0    Ce0
C1921V_pod1#sh run | b line 3
line 3
 no exec
 transport input telnet ssh
```

```
C1921V_pod1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
C1921V_pod1(config)#int cell 0
C1921V_pod1(config-if)#shut
C1921V_pod1(config-if)#
.Mar 19 04:29:10.521: %LINK-5-CHANGED: Interface Cellular0/0/0, changed state
to administratively down
.Mar 19 04:29:11.521: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Cellular0/0/0, changed state to down
C1921V_pod1(config-if)#end
C1921V_pod1#
.Mar 19 04:29:22.388: %SYS-5-CONFIG_I: Configured from console by cisco on
console
C1921V_pod1#telnet 10.0.0.11 2003
Trying 10.0.0.11, 2003 ... Open
at
OK

<<use the at command procedure in appendix A, and when done..>>
<<hit control-shift-6 keys, followed by x>>
C1921V_pod1#disc
Closing connection to 10.0.0.11 [confirm]
C1921V_pod1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
C1921V_pod1(config)#int cell 0
C1921V_pod1(config-if)#no shut
C1921V_pod1(config-if)#end
.Mar 19 04:39:31.704: %LINK-3-UPDOWN: Interface Cellular0/0/0, changed state
to down
.Mar 19 04:39:32.380: %SYS-5-CONFIG_I: Configured from console by cisco on
console
.Mar 19 04:40:23.468: %LINK-3-UPDOWN: Interface Cellular0/0/0, changed state
to up
.Mar 19 04:40:24.468: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Cellular0/0/0, changed state to up
```

Appendix A:

Workaround To Restore MC7750 OTA-DM

Purpose

When upgrading MC7750 from 1.0.9.3 to 3.5.10.6 the APN node IDs are reset to zeros this impacts FOTA updates.

The procedure below provides a workaround to restore the IDs. Procedure to Restore MC7750 NodeIDs.

Verify the Current Firmware Version

Enter ATI at the modem's AT command prompt:

```
ATI

Manufacturer: Sierra Wireless, Incorporated
Model: MC7750
Revision: 33, SWI9600M_03.05.10.06ap r5595 carmd-en-10527
2012/11/12 15:07:45
MEID: 99000056004188
ESN: 12815119146, 0x80E6B32A
IMEI: 990000560041883
IMEI SV: 1
FSN: CAJ1021014610
3GPP Release 8
+GCAP: +CIS707-A, CIS-856, CIS-856-A, +CGSM, +CLTE1, +MS, +ES,
+DS, +FCLASS


OK
```

Reconfiguring the NodeIDs

To implement the workaround, send the AT commands listed below to the modem: Ensure an operational Verizon Wireless SIM is installed.

Copy and paste the lines to the console to reduce errors.

When the command is pasted in and <enter> key is hit, the command should be displayed along with "OK". If this output is not displayed, re-paste the command.

```
at$qcpdpcfge=1,0,0,1
OK

at$qcpdpcfge=2,0,0,2
OK

at$qcpdpcfge=3,0,0,3
OK

at$qcpdpcfge=4,1,0,4
OK

at$qcpdpcfge=9,0,0,1
OK

at$qcpdpcfge=10,0,0,2
OK

at$qcpdpcfge=11,0,0,3
OK

at$qcpdpcfge=12,1,0,4
OK

at$qcpdpcfge=13,0,0,0
OK
```

Exit the reverse telnet mode (hit control-shift-6 keys, then type "disc")

(Continue with the instructions in section 5.2: "no shut" the cellular interface)