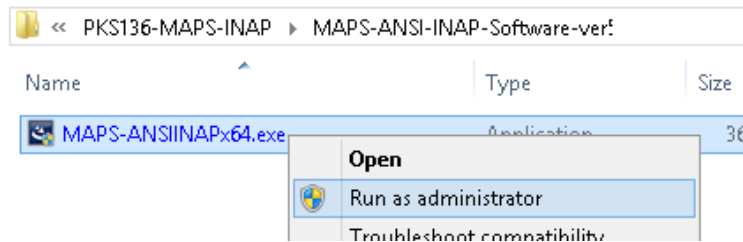


## Software and License Installation

### START WITH DONGLE UNPLUGGED FROM MACHINE

Perform Software installation first, followed by dongle license installation.

- System Requirements – Windows® 7 and higher Operating System. Core i3 to i7 (or equivalent) CPU, 4 GB Memory, USB 2.0 Ports.
- Plug-in the USB installation stick (pen drive) provided with the shipment package by GL Communications.
- From the USB installation stick (pen drive), navigate to folder \PKS136-MAPS-INAP\MAPS-ANSI-INAP-Software-verXX. right-click *MAPS-ANSIINAPx64.exe*, and select "**Run as administrator**". Follow the onscreen instructions and complete the installation.




- From the installation USB stick (pen drive), go to \GL-Dongle-License-Installer folder. Right-click on dongle license installable **GLDongleLicenseInstaller\_x64.exe** and select "**Run as administrator**". Follow the onscreen instructions and complete the installation
- Plug the dongle to the USB 2.0 port of your computer. Windows® should install all required drivers automatically. A red light should appear on the dongle indicating that it is functioning correctly from a physical point of view.
- It is recommended to reboot the system after the software installation. If you had problems with installation so far, refer to [Troubleshoot](#) section explained in this document.
- You can verify if the required licenses are installed. Navigate to *C:\Program Files\GL Communications Inc\GLDONGLE* directory, execute *appl\_list.exe* and confirm that the PKS136 (MAPS-SIGTRAN SS7 INAP) license is listed.


## Verification

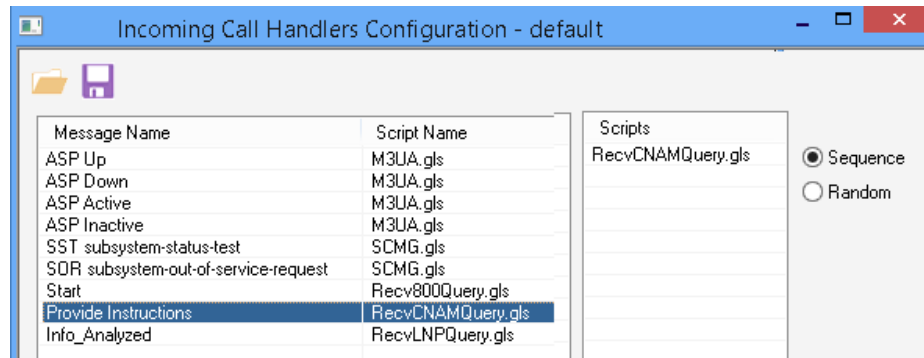
For functional verification, 2 instances of MAPS™ ANSI INAP applications can be invoked on a single PC with same IP address for source and destination nodes. The following steps explain MAPS™ ANSI INAP configuration on the same PC in loopback mode simulating IN services.

On first instance, MAPS™ is configured as **gsmSCF** (Service Control Function), and on the second instance, MAPS™ is configured as **gsmSSF** (Service Switching Function) nodes generating supported IN service messages.



### First MAPS™ ANSI INAP (GUI) – (gsmSCF)

- Right click on **MAPS ANSI INAP** application icon created on desktop and select "**Run as administrator**". This instance of MAPS™ is configured for **Call Reception**
- While invoking the MAPS™ ANSI INAP instance, verify the following in the [Protocol Selection](#) window -
  - **Protocol Standard** is set to **ANSIINAP**
  - **Protocol Version** to **ANSI**
  - Select **Node** as **gsmSCF**
  - Select **Transport** as **M3UA**. Click **Ok**
- By default, [Testbed Setup](#) window is displayed. Click  and select **SelfTest** and check for the following parameter default values:
  - By default, **M3UA Termination Type** is set to **ASP**, to maintain **SCTP Client** association

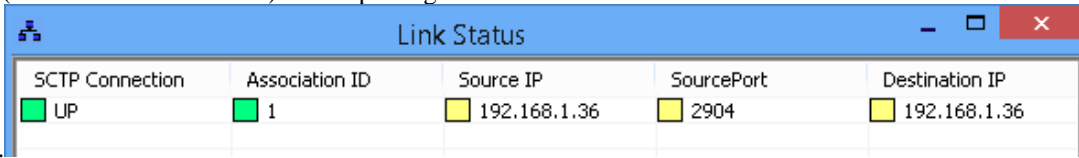
- Set **SCF IP Address** to PC IP address
- Set **SCF Port** to **2904**
- Set **SCF Point Code** to **3.3.3**
- Set **Node Type** to **SSF**
- Set **Destination IP Address** to PC IP address
- Set **Destination Port** to **2905**
- Set **Destination Point Code** to **2.2.2**. Click  **Save** button and overwrite the **SelfTest** file.
- From MAPS™ ANSI INAP main window, select **Configuration > Incoming Call Handler Configuration**. Verify that the **RecvCNAMQuery.gls** script is loaded against the **Provide Instructions** message. Exit from the window.



## Second MAPS™ ANSI INAP (GUI) – (gsmSSF)



- To invoke another MAPS ANSI INAP instance, right click on **MAPS ANSI INAP** application icon created on desktop and select "**Run as administrator**". This instance of MAPS™ is configured for **Call Generation**.
- While invoking the second MAPS™ ANSI INAP instance, verify the following in the Protocol Selection window -
  - Protocol Standard is set to **ANSIINAP**
  - Protocol Version to **ANSI**
  - Select **Node** as **gsmSSF**
  - Select **Transport** as **M3UA**. Click **Ok**
- By default, Testbed Setup window is displayed. Click  and select **SelfTest** and check for the following parameter default values:
  - By default, **M3UA Termination Type** is set to **SGP**, to maintain SCTP **Server** association
  - Set **SSF IP Address** to PC IP address
  - Set **SSF Port** to **2905**
  - Set **SSF Point Code** to **2.2.2**
  - Set **Node Type** to **SCF**
  - Set **Destination IP Address** to PC IP address
  - Set **Destination Port** to **2904**
  - Set **Destination Point Code** to **3.3.3**. Click  **Save** button and overwrite the **SelfTest** file.
- **Start** the test bed on both the MAPS™ instances

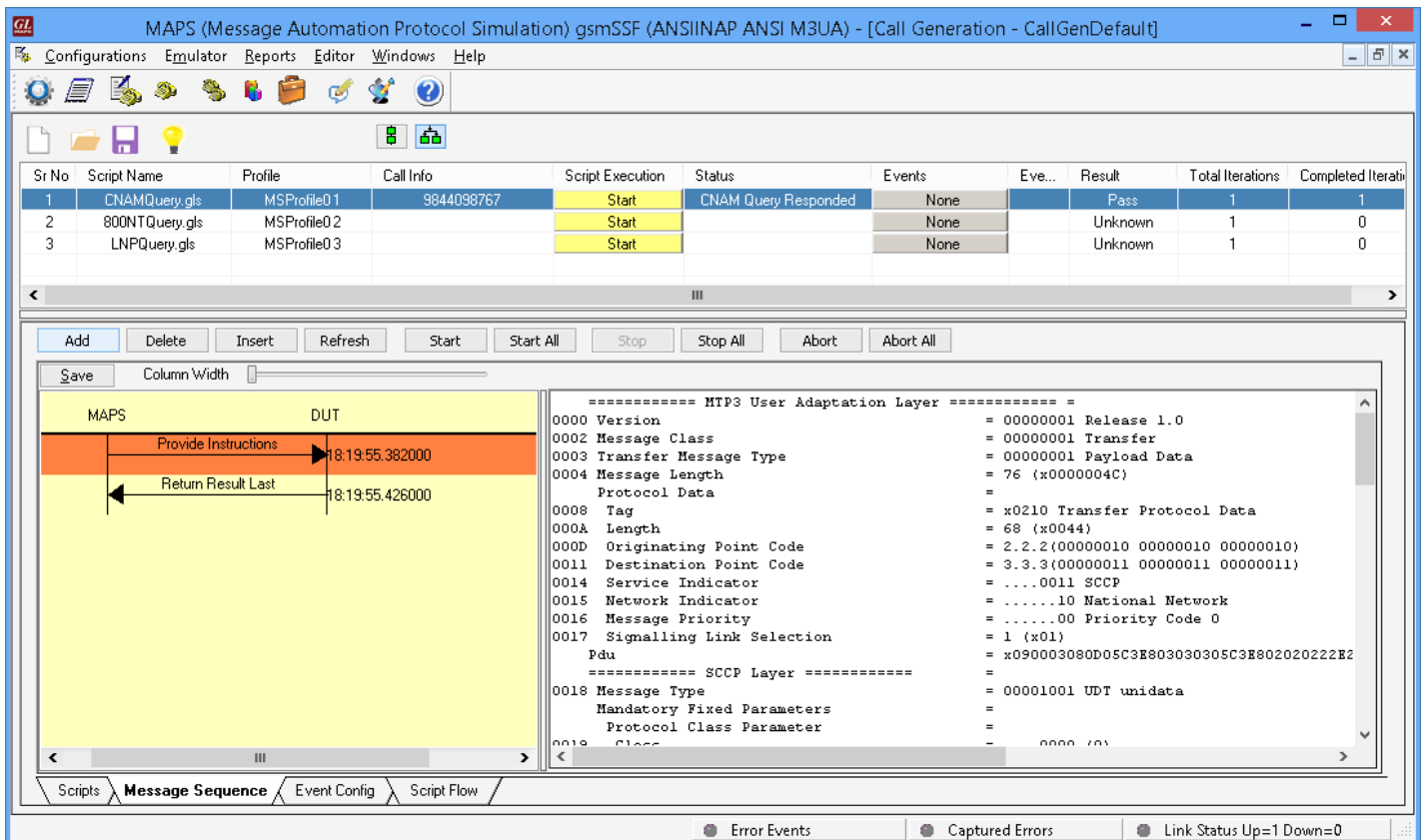
- On both the MAPS instances main window, from **Reports** menu > invoke **Link Status** window. Verify that the **Link Status** is **UP** (indicated in Green color) before placing the



SCTP Connection	Association ID	Source IP	SourcePort	Destination IP
UP	1	192.168.1.36	2904	192.168.1.36

call.

- On both the MAPS™ instances main window, click  icon and invoke **Call Reception** window. Verify that M3UA script is activated.
- In the second MAPS™ instance (gsmSSF) window, click  icon and invoke **Call Generation** window.
- By default, you will observe multiple call instances loaded with scripts (CNAMQuery.gls, LNPQuery.gls, and 800NTQuery.gls) and **MSProfile\*\*** respectively.
- Select the first instance loaded with **CNAMQuery.gls** script and **MSProfile01** profile and click **Start** button.
- In the first MAPS™ instance (gsmSCF) window, in the **Call Reception** window. Observe that the call is automatically received running the Rx script.
- Wait for the call to terminate, and verify the **Message Sequence** flow at both generation and reception end.
- Select any message in the ladder diagram and observe the respective decode message on the right pane for the respective message.



Sr No	Script Name	Profile	Call Info	Script Execution	Status	Events	Eve...	Result	Total Iterations	Completed Iterati
1	CNAMQuery.gls	MSProfile01	9844098767	Start	CNAM Query Responded	None		Pass	1	1
2	800NTQuery.gls	MSProfile02		Start		None		Unknown	1	0
3	LNPQuery.gls	MSProfile03		Start		None		Unknown	1	0

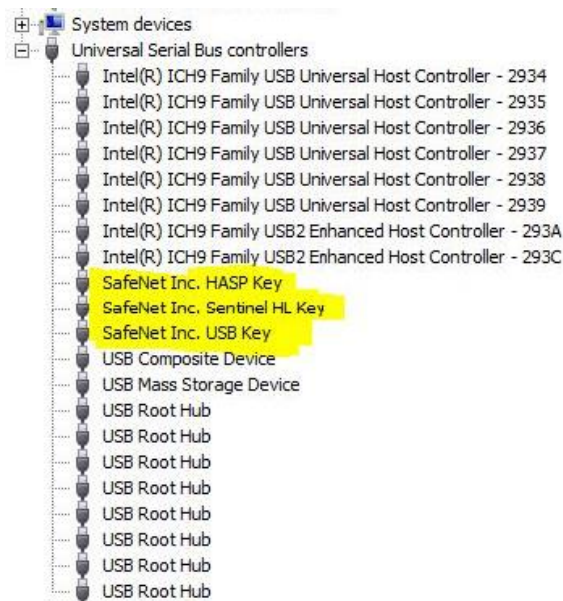
  

```

===== MTP3 User Adaptation Layer =====
0000 Version = 00000001 Release 1.0
0002 Message Class = 00000001 Transfer
0003 Transfer Message Type = 00000001 Payload Data
0004 Message Length = 76 (x0000004C)
      Protocol Data
0008 Tag = x0210 Transfer Protocol Data
000A Length = 68 (x0044)
000D Originating Point Code = 2.2.2(00000010 00000010 00000010)
0011 Destination Point Code = 3.3.3(00000011 00000011 00000011)
0014 Service Indicator = ....0011 SCCP
0015 Network Indicator = .....10 National Network
0016 Message Priority = .....00 Priority Code 0
0017 Signalling Link Selection = 1 (x01)
      Pdu
===== SCCP Layer =====
0018 Message Type = 00001001 UDT unidata
      Mandatory Fixed Parameters
      Protocol Class Parameter
0019 Class = 0000 (01)
  
```

## Troubleshoot

- **Error: “Security Error: Application is not licensed”**, if you see this error while invoking MAPS™ ANSI INAP application, it indicates a problem with either your dongle or license file.
  - First verify that the dongle is plugged in and the red light is **ON**
  - To use MAPS™ 64-bit version – use **GLDongleLicenseInstaller\_x64.exe** utility to install licenses
  - Navigate to **C:\Program Files\GL Communications Inc\GLDONGLE**
  - Run **haspinfohl.exe**. Verify that Status is **OK** and make a note of the Serial #.
  - Run **appl\_list.exe**. Verify that there is a line in the table reading **PKS136 MAPS-SIGTRAN SS7 INAP** with the serial number you noted above.
  - If the dongle does not appear in **haspinfohl.exe**, verify that it appears as a USB device in the **Windows Device Manager**. If it does not appear even in the device manager, remove the dongle and plug it into a different USB port, preferably one directly on the motherboard.
- If USB dongle is appearing as Unknown device or detected under other devices in device manager list, it is recommended to perform the windows updates for OS to detect the USB GL Dongle as seen in below image.



- If you cannot resolve the issues, please contact GL Communications at [info@gl.com](mailto:info@gl.com) for technical support.