

If this is your First-Time-Use of MAPS™ IuPS application, then we recommend you follow all the steps explained in MAPS™ IuPS-Quick-Install-Guide to install MAPS™ IuPS application before proceeding with the steps below

To simulate IuPS Signaling with Mobile Traffic you must install Mobile Traffic Core application (MobileIPCorex64.exe) and corresponding license (ETH101) after completing the installation process follow the below steps


Verification


Functional verification of MAPS™ IuPS application requires a system with 2 NIC cards for loopback testing. MAPS™ IuPS is configured as **RNC** [Radio Network Controller] on one NIC and **SGSN** [Serving GPRS Support Node] on the other.

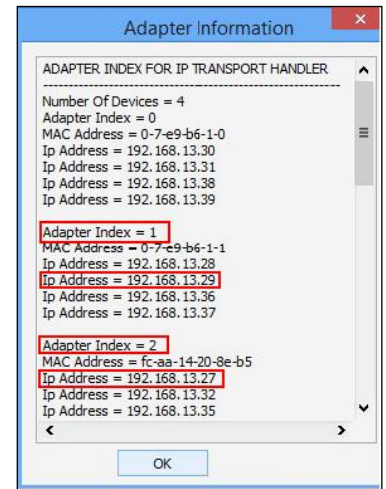
Note down the IP address of NIC1 and NIC2 on the Test PC, and in this example the IP addresses used and configured are:

- NIC1 IP address is 192.xx.xx.29, and configured as SGSN
- NIC2 IP address is 192.xx.xx.27, and configured as RNC

First MAPS™ IuPS (GUI) – (SGSN)

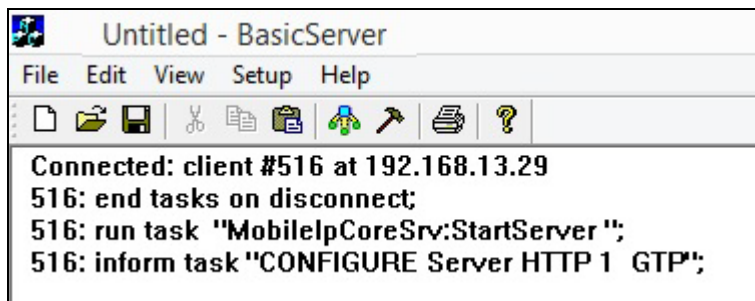
- Right-click on **MAPS-IuPS** application shortcut icon created on the desktop and select 'Run as Administrator' to invoke the application. The first instance of MAPS™ instance is configured for **Call Reception**.
- While invoking the first MAPS-IuPS instance, verify the following in the Protocol Selection window -
 - **Protocol Standard** is set to **UMTS IUPS**
 - **Protocol Version** is set to **3GPP**
 - Select **Node** as **SGSN**. Click **Ok**
- By default, **Testbed Setup** window is displayed. Click  and select **TestBed Default** and check for the parameter default values as listed below:
 - The **Display Adapter Info** option from the **Help** menu displays all the network adapters available in the system. Choose and set the **Adapter Index** value displayed against the IP address in use.
 - **M3UA Termination Type** is set to **IPSP**, to handle server association
 - Set **Traffic** to **Enabled**.
 - Set **SCTP Mode** to **Server**.
 - Set **SGSN IP Address** to 192.xx.xx.29 (NIC1 IP address)
 - Set **SGSN Port** is **2905**
 - By default, **SGSN Point Code** is set to **2.2.2**
 - Set **RNC IP address** to 192.xx.xx.27 (NIC2 IP address)
 - Set **RNC Port** to **2905**
 - By default, **RNC Point Code** is set to **1.1.1**

Click  **Save** button and overwrite the **TestBedDefault** configuration file.

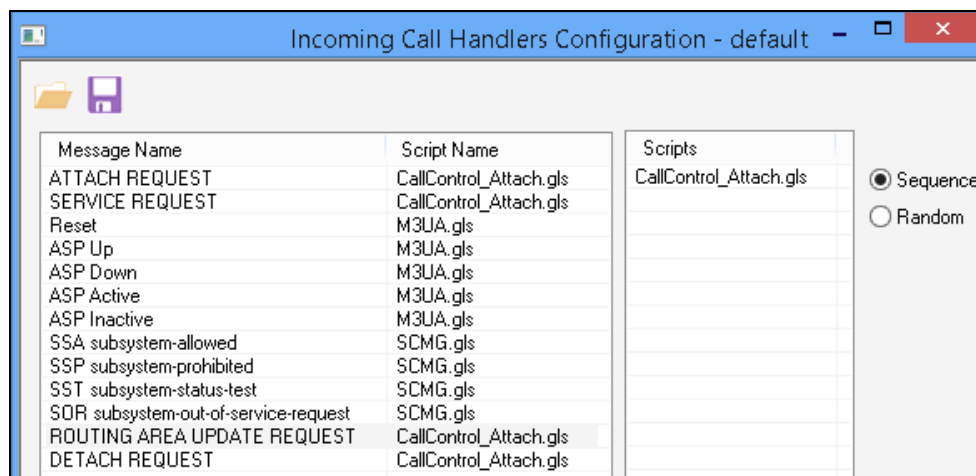


Config	Value
SGSN Configurations	
Traffic Adapter Index	1
M3UA Termination Type	IPSP
SGSN	
SGSN 1	
Traffic	Enabled
SCTP Mode	server
SGSN IP Address	192.168.13.29
SGSN GTP IP Address	192.168.15.191
GTP Port For Traffic	2152
SGSN Port	2905
PLMN Identifiers	
Mobile Country Code	001
Mobile Network Code	01
MTP Parameters	
SGSN Point Code	2.2.2
Signaling Link Selection	1
Network Indicator	International
RNC Parameters	
Supported RNCs	
Supported RNCs 1	
RNC IP Address	192.168.13.27
RNC Port	2905
RNC Point Code	1.1.1
Location Area Identifier	
TrafficType	MobileTraffic
Adaptor Index For External Gateway	0
Protocol Configuration Options	
End User Configuration	MS_Profiles.xml

- Start the SGSN TestBed Setup. Observe that the **Mobile IP Core Server** window is automatically invoked, and MAPS™ SGSN will connect to the MAPS™ Mobile Core IP server and initiate GTP session.

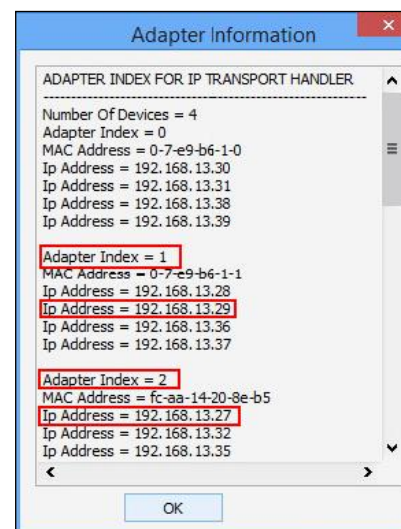




- On the same MAPS-IuPS main window, from **Configuration** menu → select **Incoming Call Handler Configuration** and invoke the window. Verify that **CallControl_Attach.gls** script is set against **ATTACH REQUEST**, **SERVICE REQUEST**, **DETACH REQUEST** messages. Exit from the window.



Second MAPS™ IuPS (GUI) – (RNC)

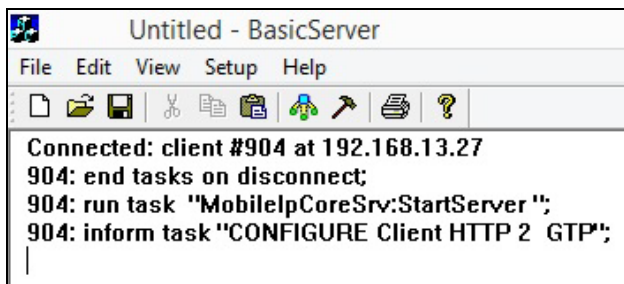
- Right-click on **MAPS-IuPS** application shortcut icon created on the desktop and select 'Run as Administrator' to invoke the application. The second instance of MAPS™ is configured for **Call Generation**.
- While invoking the second MAPS-IuPS instance, verify the following in the Protocol Selection window -
 - Protocol Standard** is set to **UMTS IUPS**
 - Protocol Version** is set to **3GPP**
 - Select **Node** as **RNC**. Click **Ok**



- By default, **Testbed Setup** window is displayed. Click  and select **TestBed Default** and check for the parameter default values as listed below:
 - The **Display Adapter Info** option from the **Help** menu displays all the network adapters available in the system. Choose and set the **Adapter Index** value displayed against the IP address in use.
 - M3UA Termination Type** is set to **IPSP**, to handle client association.
 - Set **Traffic** to **Enabled**.
 - Set **SCTP Mode** to **Client**
 - Set **RNC IP Address** to 192.xx.xx.27 (NIC2 IP address)
 - Set **RNC Port** is **2905**
 - Set **RNC Point Code** is **1.1.1**
 - Set **SGSN IP address** to 192.xx.xx.29 (NIC1 IP address)
 - Set **SGSN Port** to **2905**
 - Set **SGSN Point Code** is **2.2.2**
 - Click  **Save** button and overwrite the **TestBedDefault** configuration file.

Config	Value
RNC Configurations	
Traffic Adapter Index	2
M3UA Termination Type	IPSP
RNC	1
RNC 1	
Traffic	Enabled
SCTP Mode	client
RNC IP Address	192.168.13.27
RNC GTP IP Address	192.168.15.200
GTP Port For Traffic	2152
RNC Port	2905
PLMN Identifiers	
Mobile Country Code	001
Mobile Network Code	01
Location Area Identifiers	
MTP Parameters	
RNC Point Code	1.1.1
Signaling Link Selection	1
Network Indicator	International
RNC Address Indicator	International
SGSN Parameters	
SGSN IP Address	192.168.13.29
SGSN Port	2905
SGSN Point Code	2.2.2
SGSN Address Indicator	International
TrafficType	MobileTraffic
End User Configuration	MS_Profiles.xml

- Start** the RNC TestBed Setup. Observe that the **Mobile IP Core Server** window is automatically invoked, and MAPS™ RNC will connect to the MAPS™ Mobile Core IP to initiate GTP session.

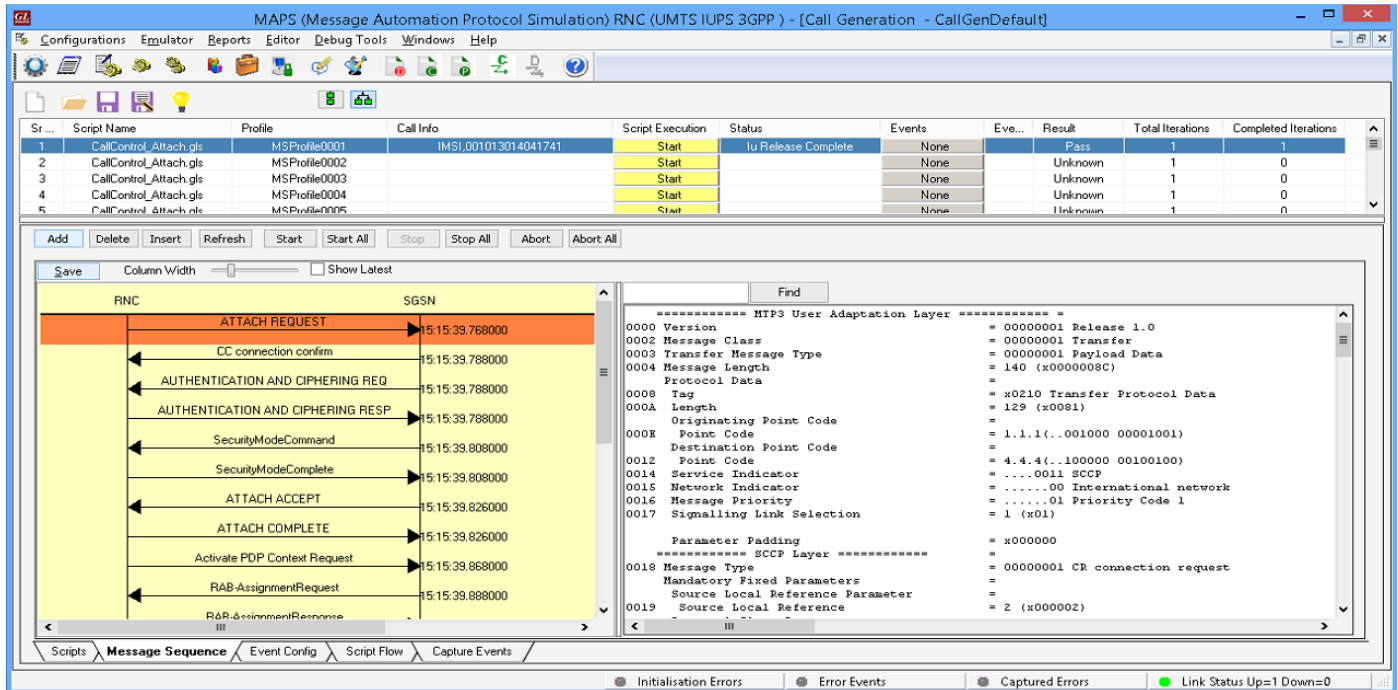


- On both the MAPS instances main window, from **Reports** menu → select **Link Status** option to verify the link status. Verify that the **SCTP Link** Status is **UP** (indicated in Green color) before placing the call. Refer to [troubleshoot](#) section in [MAPS™ IuPS Quick Install Guide](#). Exit from this window.

MAPS (Message Automation Protocol Simulation) RNC (UMTS IUPS 3GPP) - [Link Status]				
Configurations	Emulator	Reports	Editor	Debug Tools
Windows	Help			
SCTP Connection	Connection ID	Source IP	SourcePort	Destination IP
UP	1	192.168.13.27	2905	192.168.13.29

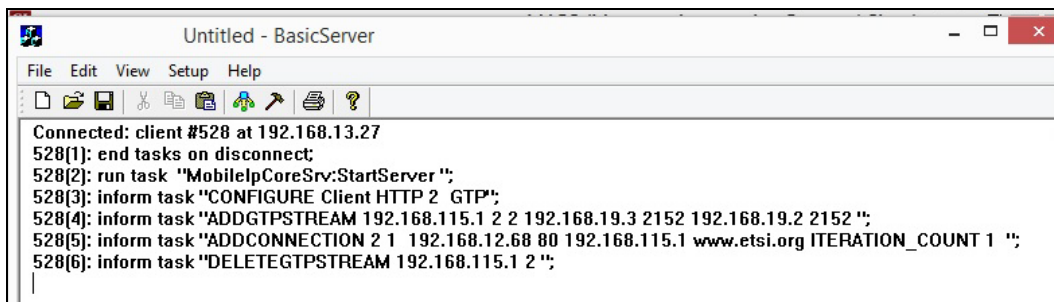
- In the second MAPS-IuPS (RNC) instance, click the **Call Generation**  icon on main window, and invoke the **Call Generation** window.

- By default, multiple call instances loaded with **CallControl_Attach.gls** script with **MSProfile00**** profiles are displayed. Select the instance loaded with **CallControl_Attach.gls** script with **MSProfile0001** profile and click **Start** button and initiate call generation.
- Wait for the call to terminate at **RNC**, in **SGSN** Call Reception window, verify the call flow under the **Message Sequence** tab at both generation and reception end.
- Uncheck 'Show Latest' option and select any message in the ladder diagram to observe the respective decode message on the right pane for the message.



Sr ...	Script Name	Profile	Call Info	Script Execution	Status	Events	Eve...	Result	Total Iterations	Completed Iterations
1	CallControl_Attach.gls	MSProfile0001	IMSI.001013014041741	Start	IuRelease Complete	None		Pass	1	1
2	CallControl_Attach.gls	MSProfile0002		Start		None		Unknown	1	0
3	CallControl_Attach.gls	MSProfile0003		Start		None		Unknown	1	0
4	CallControl_Attach.gls	MSProfile0004		Start		None		Unknown	1	0
5	CallControl_Attach.gls	MSProfile0005		Start		None		Unknown	1	0

- Observe the traffic log in the server log window on RNC.



```

Connected: client #528 at 192.168.13.27
528(1): end tasks on disconnect;
528(2): run task "MobileIPCoreSrv:StartServer ";
528(3): inform task "CONFIGURE Client HTTP 2 GTP";
528(4): inform task "ADDGTPSTREAM 192.168.115.1 2 2 192.168.19.3 2152 192.168.19.2 2152 ";
528(5): inform task "ADDCONNECTION 2 1 192.168.12.68 80 192.168.115.1 www.etsi.org ITERATION_COUNT 1 ";
528(6): inform task "DELETGTPSTREAM 192.168.115.1 2 ";

```

- Observe the traffic log in the server log window on SGSN.



```

Connected: client #524 at 192.168.13.29
524(1): end tasks on disconnect;
524(2): run task "MobileIPCoreSrv:StartServer ";
524(3): inform task "CONFIGURE Server HTTP 1 GTP";
524(4): inform task "CREATESERVER 192.168.12.68 80 ";
524(5): inform task "ADDGTPSTREAM 192.168.115.1 2 2 192.168.19.2 2152 192.168.19.3 2152 ";
524(6): inform task "DELETGTPSTREAM 192.168.115.1 2 ";

```