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

Quick Checkout Procedure

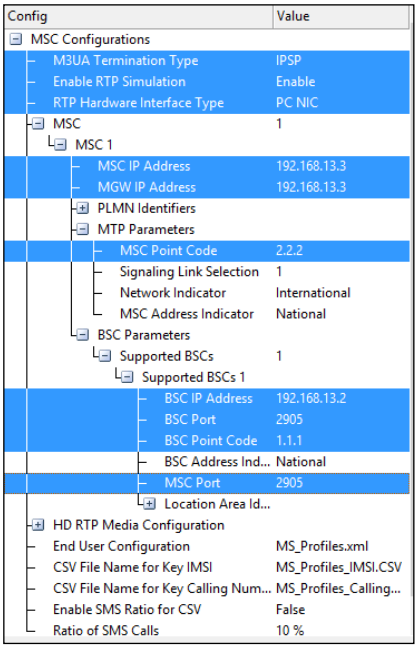
Functional verification of MAPS™ GSMA application requires a system with 2 NIC cards for loopback testing. MAPS™ GSMA is configured as **MSC** [Mobile Switching Centre] on one NIC and as **BSC** [Base Station Controller] on the other to simulate GSM A interface procedures and RTP traffic

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

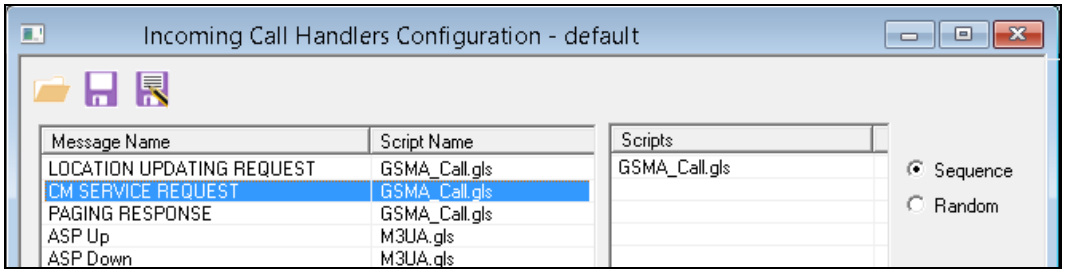
- NIC1 IP address is 192.xx.xx.3, and configured as MSC
- NIC2 IP address is 192.xx.xx.2, and configured as BSC

First MAPS™ GSMAIP (GUI) – (MSC)

- Click to invoke ***MAPS-GSMAIP*** application using shortcut icon on the desktop. This instance of MAPS™ is configured for ***Call Reception.***
- While invoking the first MAPS™ GSMAIP instance, verify the following in the **Protocol Selection** window -
  - ***Protocol Standard*** is set to ***GsmAIp***
  - ***Protocol Version*** to ***GSM900***
  - Select ***Node*** as ***MSC***
  - Select ***Transport*** as ***M3UA***. Click ***Ok***
- By default, **Testbed Setup** window is displayed. Click and select ***TestBedDefault*** and check for the parameter default values as listed below:
  - ***M3UA Termination Type*** is set to ***IPSP***, to handle server association.
  - ***Enable RTP*** Simulation
  - ***RTP Hardware Interface Type*** as "PC NIC"
  - Set ***MSC IP Address*** to 192.xx.xx.3 (NIC 1 IP address)
  - Set ***MGW IP Address*** to 192.xx.xx.3 (NIC 1 IP address)
  - Verify that ***MSC Point Code*** is set to ***2.2.2***
  - Set ***BSC IP Address*** to 192.xx.xx.2 (NIC 2 IP address)
  - Verify that ***BSC Port*** is set to ***2905***
  - Verify that ***BSC Point Code*** is set to ***1.1.1***
  - Verify that ***MSC Port*** to ***2905***
  - Click **Save** button.



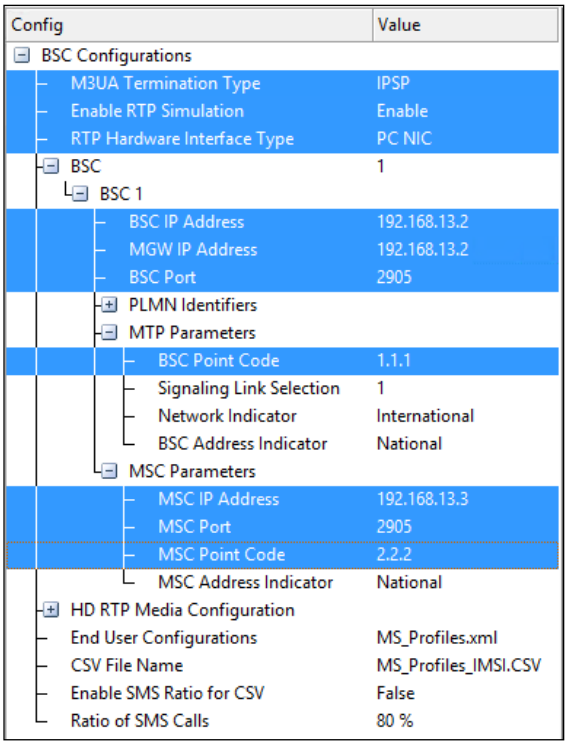
- From MAPS™ GSMAIP main window, select ***Configuration → Incoming Call Handler Configuration*** and verify that the ***GSMA_Call.gls*** script is loaded against LocationUpdate and CM Request messages.



- From MAPS™ GSMAIP (MSC) main window, select ***Editor*** > ***Profile Editor.*** Click and select ***"MS_Profiles".*** Check for the following parameter default values.
  - Select ***MSProfile0001*** profile from left pane
  - Set ***Type of Call*** to ***Terminate MO Call***
  - Set ***Service Type for MT Call = Speech Call*** to allow voice traffic over signaling
  - Scroll down to ***Traffic Configuration*** → set ***Traffic Type*** to ***Auto Traffic File***. This option allows to automatically send and receive voice files.
  - Set the ***Traffic Direction*** to ***Tx Rx*** *type*
  - Click on ***Save*** button. Exit from the Profile Editor window.

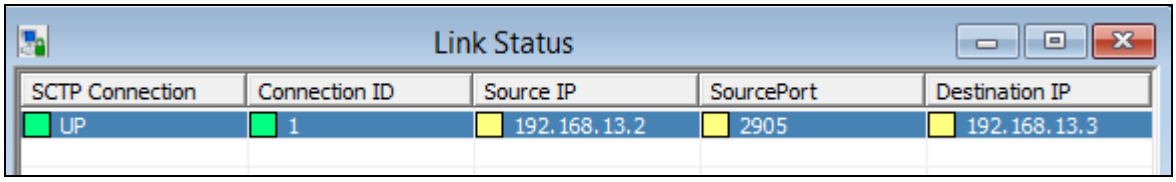
Second MAPS™ GSMAIP (GUI) – (BSC)

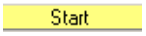
- Click to invoke ***MAPS-GSMAIP*** application using shortcut icon on the desktop. This instance of MAPS™ is configured for ***Call Generation***
- While invoking the second MAPS™ GSMAIP instance, verify the following in the **Protocol Selection** window -
  - ***Protocol Standard*** is set to ***GsmAIp***
  - ***Protocol Version*** to ***GSM900***
  - Select ***Node*** as ***BSC***
  - Select ***Transport*** as ***M3UA***. Click ***Ok***
- By default, **Testbed Setup** window is displayed. Click and select ***BSC_RTP_NIC*** and check for the parameter default values as listed below:
  - ***M3UA Termination Type*** is set to ***IPSP***, to handle client association.
  - ***Enable RTP*** Simulation
  - ***RTP Hardware Interface Type*** as "PC NIC"
  - Set ***BSC IP Address*** to 192.xx.xx.2 (NIC 2 IP address)
  - Set ***MGW IP Address*** to 192.xx.xx.2 (NIC 2 IP address)
  - Verify that ***BSC Port*** is set to ***2905***
  - Verify that ***BSC Point Code*** is set to ***1.1.1***
  - Set ***MSC IP address*** to 192.xx.xx.3 (NIC 1 IP address)
  - Verify that ***MSC Port*** is set to ***2905***
  - Verify that ***MSC Point Code*** is set to ***2.2.2.*** Click **Save** button.



- From MAPS™ GSMAIP (BSC) main window, select ***Editor*** → ***Profile Editor.*** Click and select ***"MS_Profiles".*** Check for the following parameter default values.
  - Select ***MSProfile0001*** profile from left pane
  - Set ***CM Service Type*** to ***Mobile Originating Call Establishment***
  - Set ***Location Update Type*** to ***Normal location updating***
  - Scroll down to ***Traffic Configuration*** → set ***Traffic Type*** to ***Auto Traffic File***. This option allows to automatically send and receive voice files.
  - Set the ***Traffic Direction*** to ***Tx Rx*** *type*
  - Click on the ***Save*** button. Exit from the Profile Editor window.

- ***Start*** the testbed on both the MAPS™ GSM A IP (MSC and BSC) instances.
- 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. If SCTP connection is not up, then refer to Troubleshoot section explained in this document.



- In the second MAPS™ instance (**BSC**) main window, click  icon and invoke **Call Generation** window
- By default, you will observe multiple call instances loaded with ***GSMA_Call.gls*** script and ***MSProfile00**** profiles respectively.
- Select the first instance loaded with ***GSMA_Call.gls*** script and ***MSProfile0001*** profile and click  button.
- Return to first instance of MAPS™ GSMAIP (**MSC**), click ***Call Reception***  icon and observe that the calls are automatically received running the Rx script**.**
- Wait for the calls to terminate, and verify the call flow under the **Message Sequence** tab 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.