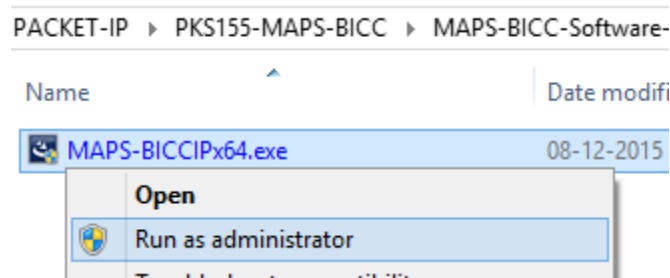


Software and License Installation

DO NOT CONNECT USB DONGLE TO THE PC FIRST. Perform Software installation first, followed by License installation and then plug-in the USB hardware dongle to the PC.

- PC Requirements
 - Windows® 7 and above Operating System (**64 bit Only**).
 - Core i3 to i7 (or equivalent), 4 GB Memory, NIC, and USB 2.0 Ports.
- Plug-in the **USB Installation Stick** (pen drive) to the PC. This is provided with the shipment package by GL Communications.
- Navigate to \PKS155-MAPS-BICC\MAPS-BICC Software folder, right click **MAPS-BICCIPx64.exe** and select **Run as Administrator**. Follow the onscreen instructions and complete the installation.



- Navigate back to root directory in USB installation stick (pen drive) to **GL-Dongle License Installer** folder, execute **GLDongleLicenseInstaller_x64.exe**. Follow the onscreen instructions and complete the installation.
- NOW PLUG-IN the USB Dongle to the PC 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 the device is functioning correctly and ready to use.
- 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 following licenses are listed:
 - PKS155 (MAPS-BICC Emulator)
 - PKS102 (PacketGen RTP Soft Core)* or PKS109 (HD RTP Traffic) *
 - PKS200 (RTP Pass Through Mode Fax Emulation) – for fax traffic only
 - PKS202, FAX PORT LICENSES (2) – for fax traffic only
- It is recommended to reboot the system after the software installation.

***Note:** Additional licenses may be required for optional codec. Please verify that all licenses purchased are displayed using the appl_list.exe utility.





Verification

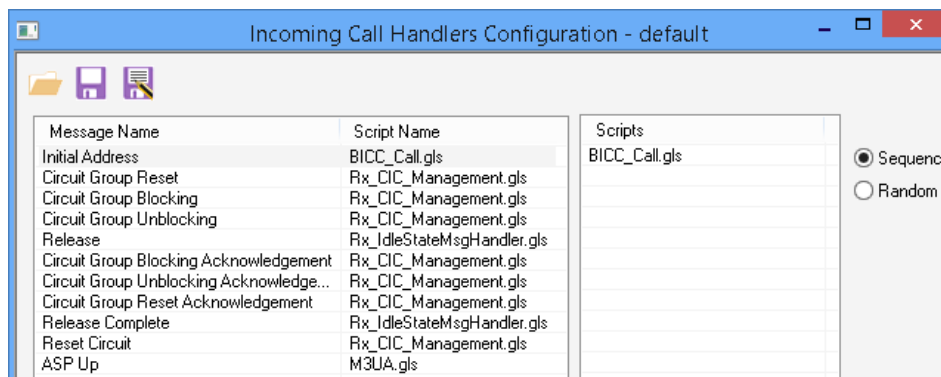
For functional verification, 2 instances of **MAPS™ BICC IP** application can be configured on a single PC.

The configuration explained below allows **MAPS™ BICC IP** application to act as **Serving Nodes** to generate BICC call control messages on the same PC in loopback mode.

First MAPS™ BICCIP – Client Instance (GUI)





- Click the **MAPS-BICCIP** application shortcut icon created on the desktop. The first instance of MAPS™ is configured for **Call Reception**.
- While invoking the first MAPS™ BICCIP instance, verify the following in the **Protocol Selection** window -
 - **Protocol Standard** is set to **BICC-IP**
 - **Protocol Version** to **UK**

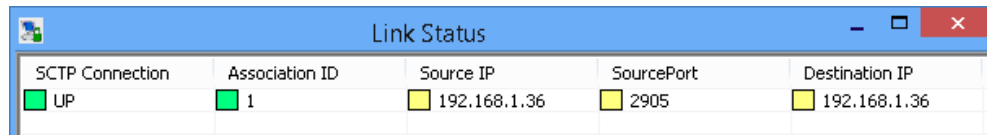
- Select **Node** as **Serving Node**
 - Select **Transport** as **M3UA**. Click **Ok**
- By default, **Testbed Setup** window is displayed. Click  and select **Client_RTP_NIC** and check for the parameter default values as listed below:
 - Verify that the **SCTP Mode** is set to **Client**,
 - **M3UA Termination Type** = **ASP** (maintain Client association)
 - **Exchange Type** = **Control**
 - **Serving Node IP Address** = PC IP address; **Serving Node Port** = **2905**
 - **Remote Serving Node IP address** = PC IP address; **Remote Serving Node Port** = **2905**
 - **Serving Node Point Code** = **1.1.1**
 - **Remote Serving Node Point Code** = **2.2.2**
 - **Enable RTP Simulation** = **True**
 - **RTP Hardware Interface Type** = PC NIC
 - **Media IP Address** = PC IP address
 - Click  **Save** button.
 - From MAPS main window, select **Editor > Profile Editor**. Click  and select **MS_Profiles** and from the left pane, choose **MSProfile01** profile. The called and calling number are configured as per the test requirements. Verify that the **Traffic Type** is set to **Auto Traffic File** and **Traffic Direction** is set to **TxRx**. Click  **Save** button and exit from the Profile Editor window.
 - On the same MAPS™ BICC IP (Client) main window, from **Configuration** menu > select **Incoming Call Handler Configuration**. Ensure that the **BICC_Call.gls** script is loaded against the **Initial Address** message. Exit from the window.





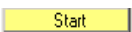
On the Second MAPS™ BICC IP - Server Instance (GUI)

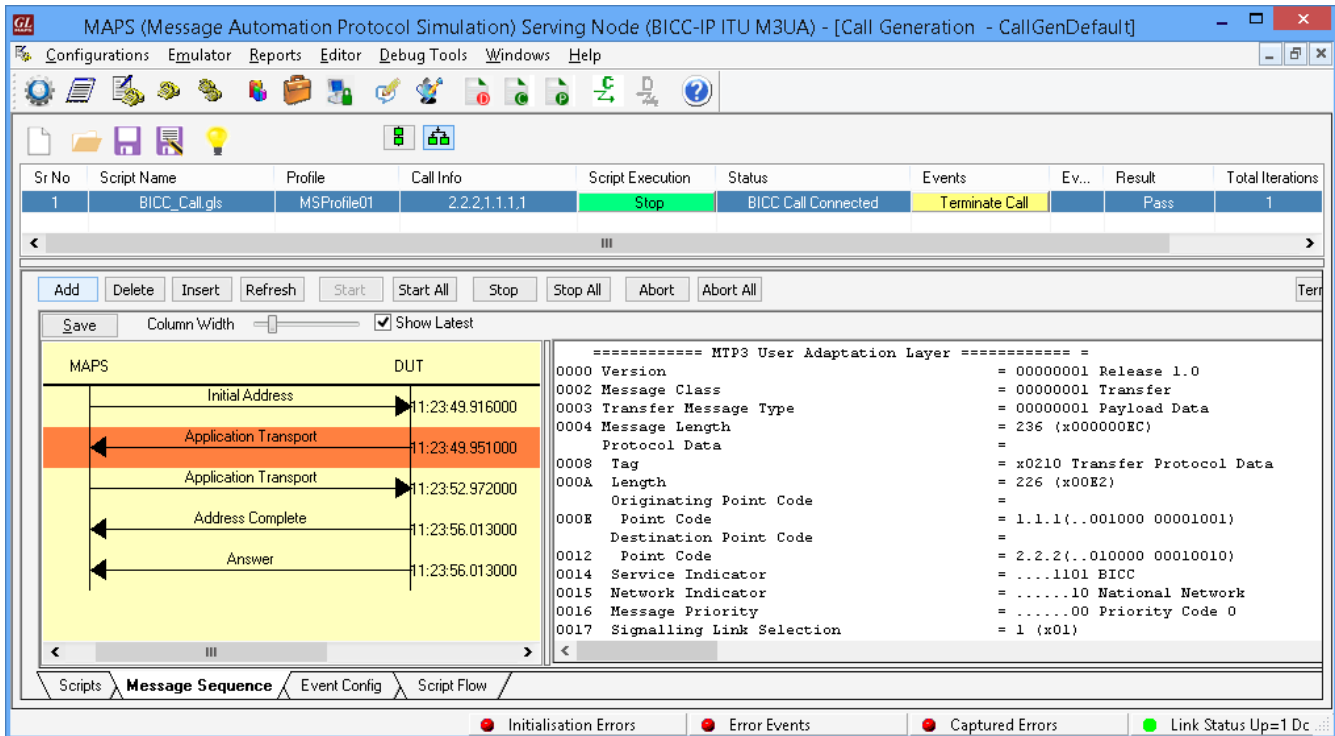
- Click the **MAPS-BICCIP** application shortcut icon created on the desktop. This instance of MAPS™ is configured for **Call Generation**.
- While invoking the second MAPS™ BICCIP instance, verify the following in the **Protocol Selection** window -
 - **Protocol Standard** is set to **BICC-IP**
 - **Protocol Version** to **UK**
 - Select **Node** as **Serving Node**
 - Select **Transport** as **M3UA**. Click **Ok**

- By default, **Testbed Setup** window is displayed. Click  and select **Server_RTP_NIC** and check for the parameter default values as listed below:
 - Verify that the **SCTP Mode** is set to **Server**,
 - **M3UA Termination Type** = **SGP** (maintain Server association)
 - **Exchange Type** = **Non Control**
 - **Serving Node IP Address** = PC IP address; **Serving Node Port** = **2905**
 - **Remote Serving Node IP address** = PC IP address; **Remote Serving Node Port** = **2905**
 - **Serving Node Point Code** = **2.2.2**
 - **Remote Serving Node Point Code** = **1.1.1**
 - **Enable RTP Simulation** = **True**
 - **RTP Hardware Interface Type** = PC NIC
 - **Media IP Address** = PC IP address
 - Click  **Save** button.
- From MAPS main window, select **Editor > Profile Editor**. Click  and select **MS_Profiles** and from the left pane, choose **MSProfile01** profile. The called and calling number are configured as per the test requirements. Verify that the **Traffic Type** is set to **Auto Traffic File** and **Traffic Direction** is set to **TxRx**. Click  **Save** button and exit from the Profile Editor window.
- **Start** the testbed on both the MAPS instances. At this point, the RTP core console window appears, confirming the proper initialization of RTP core.
- 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 for any issues.



SCTP Connection	Association ID	Source IP	SourcePort	Destination IP
UP	1	192.168.1.36	2905	192.168.1.36

- On both instances of MAPS- BICCIP (Server and Client) main window, click **Call Reception**  icon and observe that the **Check_SCTP_Status.gls** script is activated.
- In the second MAPS-BICCIP (Server) instance, click the **Call Generation**  icon on main window, and invoke the **Call Generation** window.
- By default, a call instance loaded with **BICC_Call.gls** script with **MSProfile01.xml** profile is displayed. Click  button to start the call generation.
- Return to first instance of MAPS- BICCIP (**Client**), in the **Call Reception** window, 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.



Troubleshoot

- **“Unknown device” error while installing USB Dongle.** If you see this error, ensure you have installed the GL Dongle License Installer software first and then plugged the USB Dongle to the PC. The USB Dongle will then be recognized as “SafeNetInc. USB Key” and appropriate drivers will get installed automatically. If problem still persists, plug the USB Dongle to a different USB2.0 port and try again.
- **“Security Error: Application is not licensed”,** if you see this error when you run MAPS™ BICCIP 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 **PKS155 MAPS-BICC Emulator** 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 you cannot resolve the issues, please contact GL Communications at info@gl.com for technical support.