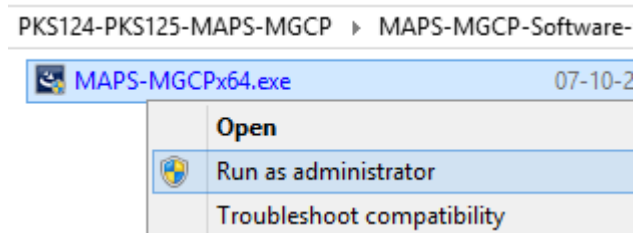


Software and License Installation

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 \PKS124-PKS125-MAPS-MGCP\MAPS-MGCP-Software-verXX folder, right click on **MAPS-MGCPx64.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:
 - PKS124 (MGCP Conformance Test Suite)
 - PKS102 (PacketGen RTP Soft Core)*

***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 of MAPS-MGCP on single PC in loopback mode, the user may prepare a single MAPS™ computer with an additional virtual IP Address for the same NIC. Contact your system administrator to avoid IP address conflicts before you perform the steps below.

The configuration explained below allows **MAPS-MGCP** application to act as **MGC** (Media Gateway Controller) as well as **MG** (Media Gateway) nodes.





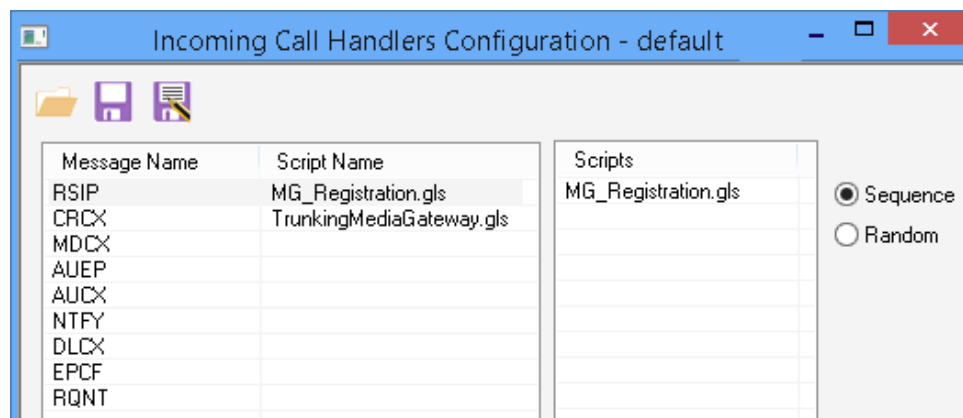
Note: To setup an additional virtual IP Address for the same NIC follow the steps below:


- Click **Start** → **Control Panel** → **View Network Status and Tasks** (under Network and Internet) → click on **Ethernet**
- In the Ethernet Status dialog, click **Properties** button
- Select **Internet Protocol Version 4 (IPv4)** from the list of connections and click on **Properties** button
- Click on **Advanced** button to open **Advanced TCP/IP Settings** dialog
- Click on **Add** button under the **IP Settings** tab to add additional IP Address

- Enter the second virtual IP Address, subnet mask, and click **Add**.
- Click **Ok** on all the windows to accept the new settings






MAPS™ MGCP configured as MG

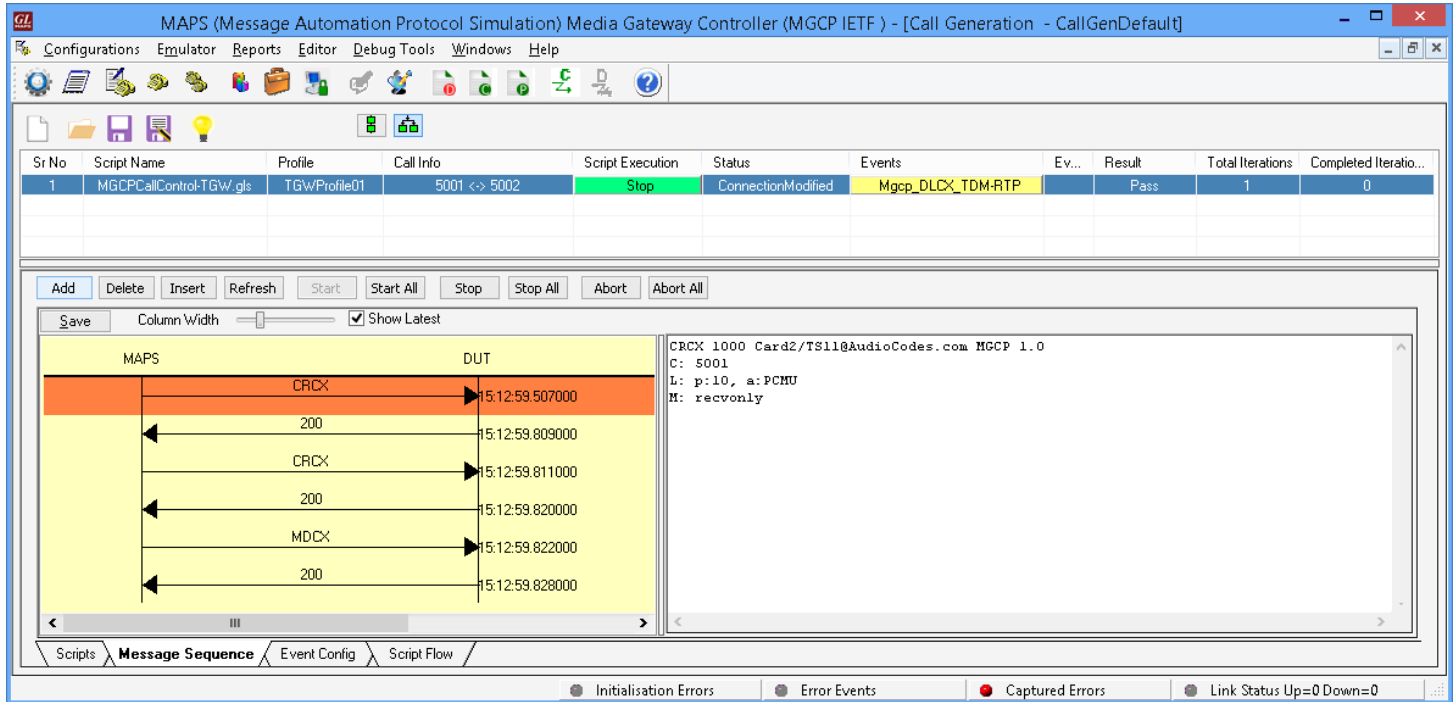
- Click on MAPS-MGCP application shortcut icon created on the desktop and select 'Run as Administrator'. This instance of MAPS™ is configured for *Call Reception*.
- While invoking the first MAPS-MGCP instance, verify the following in the Protocol Selection window -
 - Protocol Standard as **MGCP**
 - Protocol Version as **IETF**
 - Select Node as **Media Gateway**
 - Click **OK**
- By default, Testbed Setup window is displayed. Click  and select **TestBedDefault_TGW** configuration and check for the parameter default values as listed below:
 - Set the **MG IP Address** to PC IP address 1 (192.168.1.36)
 - Set **MG Port** to **2427**
 - Set the **MGC IP Address** to PC IP address 2 (192.168.1.95)
 - Set **MG Port** to **2427**
 - Set **Enable RTP Simulation** to **True**
 - Set **RTP Hardware Interface Type** = **PC NIC**
 - Set the **Media IP Address** to PC IP address 1 (192.168.1.36)
 - Click on the **Save**  button.
- From MAPS-MGCP (MG) main window, select **Configuration > Incoming Call Handler Configuration**. Verify that the **TrunkingMediaGateway.gls** script is loaded against **CRCX** message. Exit from the window.



- From MAPS-MGCP (MG) main window, select **Editor > Profile Editor**. By default, **MG_Profiles** is loaded in the window. Verify the **following settings**:
 - Set Codec Options = PCMU
 - Set Traffic Type = Auto Traffic File
 - Set Traffic Direction = TxRx
 - Click on the **Save**  button. Exit from the Profile Editor window.

MAPS™ MGCP configured as MGC

- Click on MAPS-MGCP application shortcut icon created on the desktop and select 'Run as Administrator'. This instance of MAPS™ is configured for **Call Generation**.
- While invoking the second MAPS-MGCP instance, verify the following in the **Protocol Selection** window -
 - Protocol Standard as **MGCP**
 - Protocol Version as **IETF**
 - Select Node as **Media Gateway Controller**
 - Click **OK**
- By default, **Testbed Setup** window is displayed. Click  and select **TestBedDefault_TGW** configuration and check for the parameter default values as listed below:
 - Set the **MGC IP Address** to PC IP address 2 (192.168.1.95)
 - Set **MGC Port** to **2427**
 - Set **Trunking Gateway** to **1** and click on **Apply**
 - Trunking Gateway 1 → Set **IP Address** to PC IP address 1 (192.168.1.36)
 - Set **Port** to **2427**
 - Click on the **Save**  button.
- **Start** the testbed setup on both the MAPS (MG and MGC) instances. Verify that the RTP core console window is displayed properly. If the SIP/RTP Core console does not invoke with the MAPS™ Testbed start-up, refer to [Troubleshoot](#) section explained in this document.
- From the second MAPS-MGCP (MGC) instance, click the **Call Generation**  icon on main window, and invoke the **Call Generation** window.
- By default, you will observe a single call instance loaded with **MGCPCallControl-TGW.gls** script and **TGWProfile01** profile displayed in the Call Generation window. Select the call instance and click  button to execute the script.
- On the other MAPS-MGCP instances (MG) main window, click **Call Reception**  icon and observe the calls being received running the **TrunkingMediaGateway.gls** answer scripts.
- Once call gets terminated, verify the **Message Sequence Flow** by selecting the call objects 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™ MGCP 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 *PKS124 MGCP Conformance Test Suite* 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 the SIP/RTP Core console does not invoke with the MAPS™ TestBed start-up, check for the following:
 - RTP Soft Core licenses may not be installed for the dongle used. Run *appl_list.exe* available in the *C:\Program Files\GL Communications Inc\GLDONGLE* directory. Verify that there is a line in the table reading *PKS102 PacketGen RTP Soft Core* with the serial number you noted above.
 - Verify that the MGC IP Address and RTP IP Address in the testbed parameters are configured with the proper system IP address.
- If you cannot resolve the issues, please contact GL Communications at info@gl.com for technical support.