RadBlue Load Tester
Version 25

[Released: 05 DEC 2012]

Questions?
Log on to the RadBlue Forum: **http://radblue.mywowbb.com/**

Release Notes

Release Summary

For release 25, we added schema support for G2S version 2.1, updated the Java requirement for RLT, and made several corrections and improvements.

For detailed information on using RLT, see the RLT User Guide or RLT Help.

New Features

- For this release, we added schema support for G2S version 2.1, which means that this product will now use the G2S 2.1 schema by default. Since the G2S 2.1 schema is backwards compatible with G2S 1.1, this should be a non-issue for most people, but it lets us start adding in the new classes and functionality that are available in this new version of the protocol. You'll see these new G2S 2.1 features noted in the release notes with a ***New for 2.1!*** prefix.
- The **audit meters** and **communications** classes have been implemented in accordance with the 2.1 protocol. Additional classes will be implemented in subsequent releases.
- A list of all third-party software used by RadBlue and links to their licensing agreements has been added to the Products page of the RadBlue website.

Installation Modifications

- All RadBlue products now require **Java SE 7u7** or higher. If the installer cannot find this version on your computer, you are prompted to download and run the Java installer, or navigate to the correct Java version. Oracle moved to Java 7 nearly a year ago, so it is now stable enough that we are moving there as well. This should have minimal effect on your environment, but keeps our products on modern versions of the underlying technology.

Engine Modifications

- ***New for 2.1!*** RST now supports the *underlyingTransportState* attribute in the `communications.commsStatus` command, and generates all associated events.

  Note RST does **not** support the derivedTransportState attribute in the `communications.commsStatus` command because it requires the *noResponseTimer* value, and RST does not support that attribute. Instead, the *derivedTransportState* attribute will be set to **G2S_notReported**.

- RLT now complies with section 4.2.4 of the *GSA Point To Point SOAP/HTTPS Transport and Security Specification 1.2* by adding support for Triple-DES (Data Encryption Standard).
- RLT has been updated to support TLS (Transport Layer Security) 1.2.

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SmartEGM Modifications

- ***New for 2.1!*** The SmartEGM now returns a `communications.closeCommsAck` when it receives a `communications.closeComms` command. The SmartEGM waits five seconds before closing and re-opening the communication channel to the host.
- ***New for 2.1!*** The SmartEGM configuration file now saves or restores the `edm:list-state-date-time` attribute for the `eventHandler`, `meters`, `commChange` and `optionConfig` devices. This attribute corresponds to the *`listStateDateTime`* attribute in the `communications.descriptorList` command.
- The SmartEGM has been modified to exclude devices when processing `communications.getDescriptor` and `communications.getClassDescriptor` commands that have:
  - active devices when the *includeActive* attribute is **false**.
  - inactive devices when the *includeInactive* attribute is **false**.
- ***New for 2.1!*** The SmartEGM configuration file now supports the `edm:config-date-time` and `edm:config-complete` attributes. These attributes correspond to the *configDateTime* and *configComplete* attributes that were added to the `commConfig.commConfigProfile` and `commConfig.commConfigStatus` commands.

  The `commConfig` delta compiler has been modified to set the *configDateTime* attribute for each device that is modified by the `commConfig` change.
- ***New for 2.1!*** An `edm:communications-multicast-supported` attribute has been added to the SmartEGM configuration option `edm:communications-config` that determines the *multicastSupported* attribute for the `communications.commsProfile` command.

  Note that the SmartEGM configuration file will not load and an error will be generated if the `edm:communications-multicast-supported` attribute is set to **false** and any of the devices in the configuration file have `edm:supports-multicast` attributes set to **true**.
- ***New for 2.1!*** Audit meters are now supported in the SmartEGM configuration file:

```
<!-- The Audit Meters Device -->

<edm:audit-meters
xmlns:edm="http://www.radblue.com/egm-data-model/schemas/v1.0.0/"
edm:config-id="0" edm:configuration-id="0" edm:device-active="true"
edm:device-id="1" edm:egm-enabled="false" edm:egm-locked="false"
edm:host-enabled="true"

edm:host-locked="false" edm:owner-id="1" edm:product-id="" edm:product-name=""
edm:release-number="" edm:serial-number="" edm:vendor-id="" edm:vendor-name=""
edm:minimal-audit-meters="false">

<edm:comment xmlns:edm="http://www.radblue.com/egm-data-model/schemas/v1.0.0/" >

<edm:guest-hosts
xmlns:edm="http://www.radblue.com/egm-data-model/schemas/v1.0.0/" >

</edm:audit-meters>
```

  If the *edm:minimal-audit-meters* attribute value in the audit meters is **true**, the host can subscribe to class-level meters for all classes plus device-level meters for all active devices within the `gamePlay` class. If the value is **false,** RST supports all meters.

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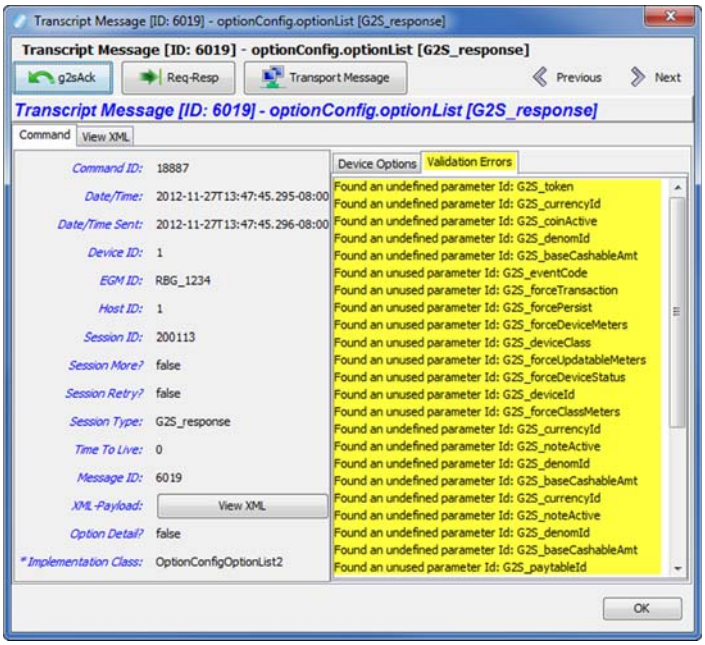
- ***New for 2.1!*** If you want to disable namespace negotiation in a SmartEGM configuration file, go to the `edm:communications` element and change the *edm:suppress-namespace-negotiation* attribute to **true**. This means that the *negotiateNamespaces* attribute is not set in `communications.commsOnLine` command.

Transcript Modifications

- A **Validation Errors** tab that displays semantically incorrect `optionConfig.optionList` responses has been added to the `optionConfig.optionList` details screen in the Message Transcript. You can access the details screen by double-clicking the row in the Message Transcript for the message you want to view.



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RadBlue Load Tester
Version 24

[Released: 03 OCT 2012]

Questions?
Log on to the RadBlue Forum: **http://radblue.mywowbb.com/**

Release Notes

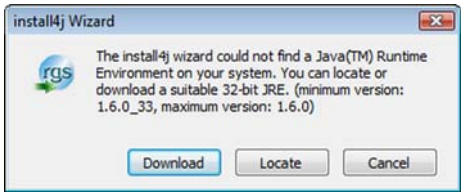
Release Summary

For release 24, we improved database performance, added three new metrics, and made several usability improvements and corrections. Note that Java 1.6.0_33 is now required to run RLT.

For detailed information on using RLT, see the RLT User Guide or RLT Help.

Installation Modifications

- **Java 1.6.0_33** is now required to run RadBlue products. If your computer does not have this version installed, you are prompted to download and run the Java installer, or to navigate to the correct Java version.



Engine Modifications

- An issue in which RLT failed to persist the data model for all EGMs has been corrected.
- An issue with RLT not transitioning to the sync state after receiving the `communications.commsOnLineAck` command has been corrected.
- An issue in which RLT did not save the device owner when the host ID was changed to zero (0), making the EGM the device owner, has been corrected.
- Database performance has been improved to more quickly handle operations that involve editing 100 or more EGMs at once.

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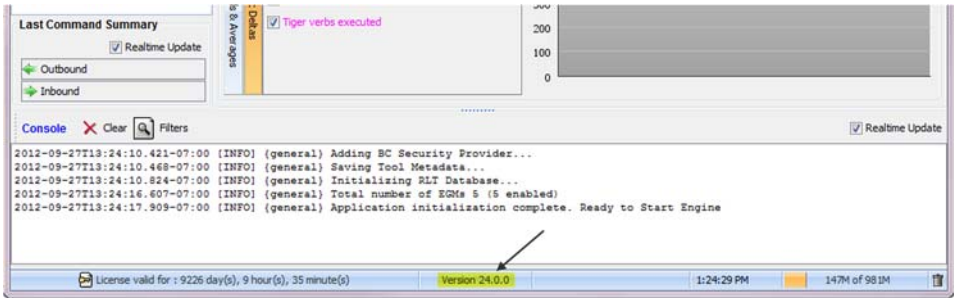
User Interface Modifications

- The RLT version number is now located at the bottom of the RLT screen.



- You can now view the XML file for each loaded SmartEGM template, located in the **Manage SmartEGM Templates** list (**Manage** > **SmartEGM Templates**). Note that templates cannot be edited through the XML viewer.
- An issue in which the EGM list did not refresh when EGMs were stopped using the right-click function has been corrected.
- The following metrics have been added to **Metric MIN/MAX/Averages**, accessed through the **Metric Totals & Averages** bar on the **Dashboard**:
  - **ID Reader - Average reponse time (in milliseconds)** is the time between RLT sending a `getIdValidation` request and receiving a `setIdValidation` response from the host.
  - **ID Reader - Average update time (in milliseconds)** is the time between RLT sending the original (see above) `getValidationID` request and receiving an optional `setIdValidation` command from the host as a request.
  - **Voucher - Average authorize time (in milliseconds)** is the time between RLT sending a `redeemVoucher` request and receiving an `authorizeVoucher` response from the host.

Tiger Scripting Modifications

- Previously, the Tiger verb `Human.createVoucherToDatabase` had no limit on disk space, memory or CPU. Now, the data for this verb is confined to 500 records.
- The `tiger:remote-key-off-timeout` attribute has been deprecated and replaced with the `tiger:key-off-timeout` attribute in the following Tiger verbs:
  - `tiger:Human.playSimpleGame`
  - `tiger:Human.playSimpleCentralGame`
  - `tiger:Human.playPaytableGame`

  The `tiger:remote-key-off-timeout` defines how long to wait for a `setRemoteKeyOff` command before timing out. If a time out occurs, the `handpay-action` value is used.

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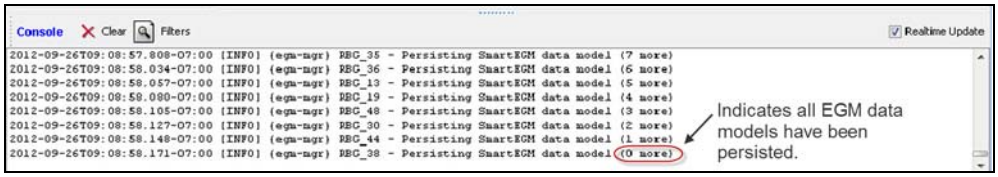
Transcript Modifications

- The **Debug Log** has been renamed to **Debug Console**.
- When you stop RLT, the Debug Console now indicates when RLT has persisted (saved) each EGM's data model. When **(0 more)** is displayed, all EGMs have been persisted and you can exit RLT.



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RadBlue Load Tester
Version 23

[Released: 08 AUG 2012]

Questions?
Log on to the RadBlue Forum: **http://radblue.mywowbb.com/**

Release Notes

Release Summary

For release 23, we added backup files to help make upgrades easier, made several usability improvements and corrected minor issues.

For detailed information on using RLT, see the RLT User Guide or RLT Help.

Installation Modifications

- An issue that caused multiple errors to be logged during the RLT installation has been corrected.
- When RLT is uninstalled, a backup folder is now created in the RLT directory that saves the installation's security and configuration parameters. When a subsequent RLT version is installed, the installer uses the backed up data to populate security and configuration settings, so you do not need to re-key the information into the new installation. Additional files are also saved, so you can retain EGM and configuration information are retained between versions.

  Backup files are not available for versions using student licenses, which always use the default values for upgrades.

  Backup files are located in the RLT installation directory. The following information is saved when RLT is uninstalled:

  - all Java Keystore Files (JKS)
  - database containing EGMs, Tiger Scripts and configuration files
  - configuration options
  - RLT license

Engine Modifications

- When the *hostCarryOver* attribute in the `playerSessionStartAck` command is non-zero, RLT now updates the player log and sends the `G2S_PRE111 (Player Carryover Set)` event.
- An issue that occurred when the `G2S_PRE103 (Session Ended)` event was generated has been corrected.
- Previously, RST was not sending event reports to a new host created through the `commConfig.setCommChange` command. Now, RST re-registers all of the device events, with all of the event handlers, after a `commConfig.setCommChange` command or a `download.setscript` command is received. In addition, new event queues are created for new hosts.

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- The `mdAccessToken` must now be unique across all mediaDisplay devices.

User Interface Modifications

- You can now delete all game outcome and SmartEGM parameters at once with the new **Delete All** option on the Manage SmartEGM Parameters and Manage Game Outcome screens. In addition, the **Add** option has been changed to **Load**.

Transcript Modifications

- A **Refresh** button has been added to EGM Transcript. Click **Refresh** to update the drop-down list of available EGMs.

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RadBlue Load Tester
Version 22

[Released: 04 JUN 2012]

Questions?
Log on to the RadBlue Forum: **http://radblue.mywowbb.com/**

Release Notes

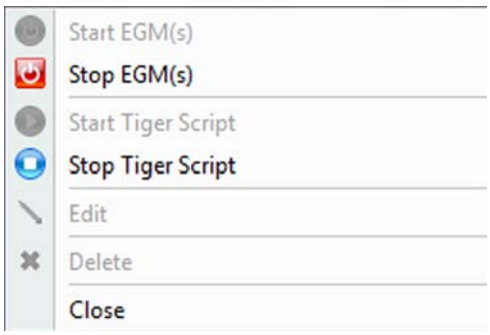
Release Summary

For release 22, we added the ability to start and stop EGMs and Tiger scripts individually, we added a RealTime Update option to the Last Command Summary, we added new configuration options, enhanced the EGM metrics and added a Debug Log.

For detailed information on using RLT, see the RLT User Guide or RLT Help.

Functional Modifications

- A right-click option lets you start and stop individual EGMs, start and stop the Tiger script associated with each EGM, access the EGM Details screen (Edit), and delete an EGM.



- Two new options have been added to **Tools** > **Configure** > **Engine Options**:
  - **Tiger Script Batch Size** - Number of Tiger scripts to bring online at once.
  - **Batch Delay** - Amount of time RLT waits between bringing each batch online. This option allows you to stagger Tiger scripts.
  - **Auto Start Tiger Script** - Indicates whether or not to automatically start each EGM's Tiger script when the startup algorithm completes.
- The **Last Command Summary** lets you see that commands are being sent between RLT and the host system(s). You can now clear the new **Realtime Update** checkbox as needed to stop the flow of inbound and outbound messages in the display to better view the messages that are being sent between RLT and the host system.
- You can now close RLT and keep EGMs running in the background. You can launch the RLT user interface at any time by clicking the RLT icon in the system tray.

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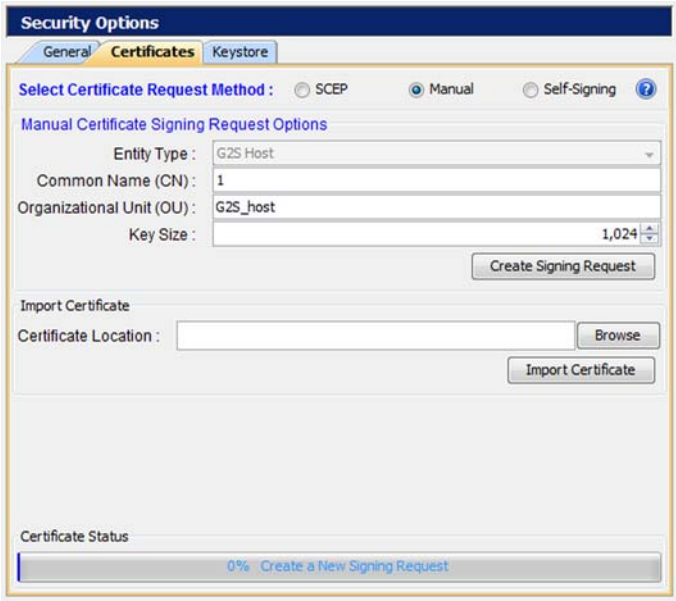
Engine Modifications

- An issue in which RLT was not using multiple IP addresses when the multiple IP address feature was enabled has been corrected.

User Interface Modifications

- Two new metrics have been added to the RLT dashboard:
  - **Tiger Script Status**, accessed by clicking the Tiger Script Status bar, displays the current status for the Tiger Scripts associated with all EGMs (whether currently communicating with the host system or not).
  - **EGM Communication State**, accessed by clicking the Communication State bar, displays the communication state for all EGMs. State options are: closed, opening, sync, online, closing and lost.
- The following changes have been made to the **Security Options** screen. You can access this screen by going to **Tools** > **Configure** > **Security Options**.
  - A new **Certificates** tab contains all certificate configuration options. When you select a certificate option, that certificate type's information displays in the panel below the Certificate Method Request.



  - The **Accept All Certificates** option has been moved from the **General** tab to the **Self-Signing** panel on the **Certificates** tab.
  - The Third-Party certificate option has been renamed to **Manual**.

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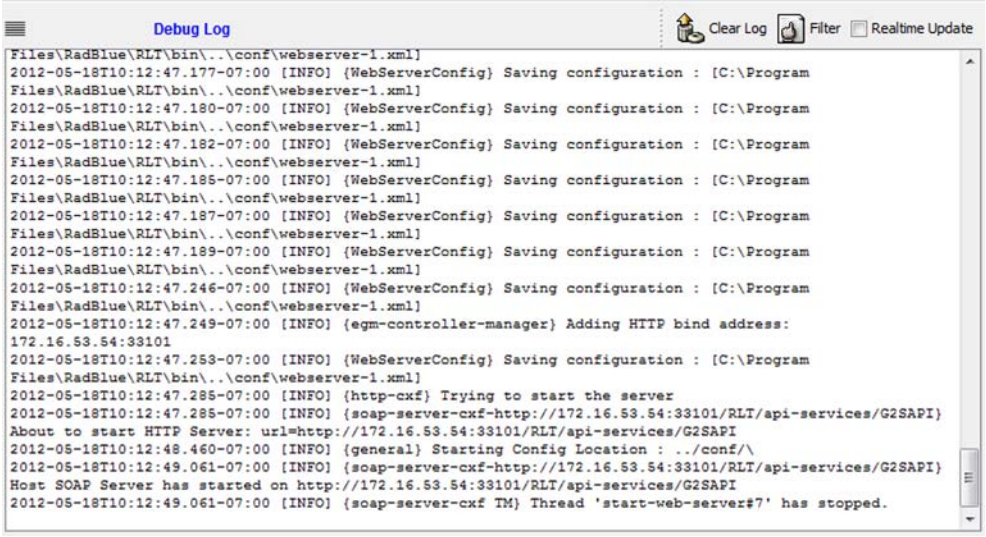
Transcript Modifications

- A **Debug Log** is now available in RLT. The Debug Log displays all informational, warning and critical errors that occur in the tool.



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RadBlue Load Tester
Version 21

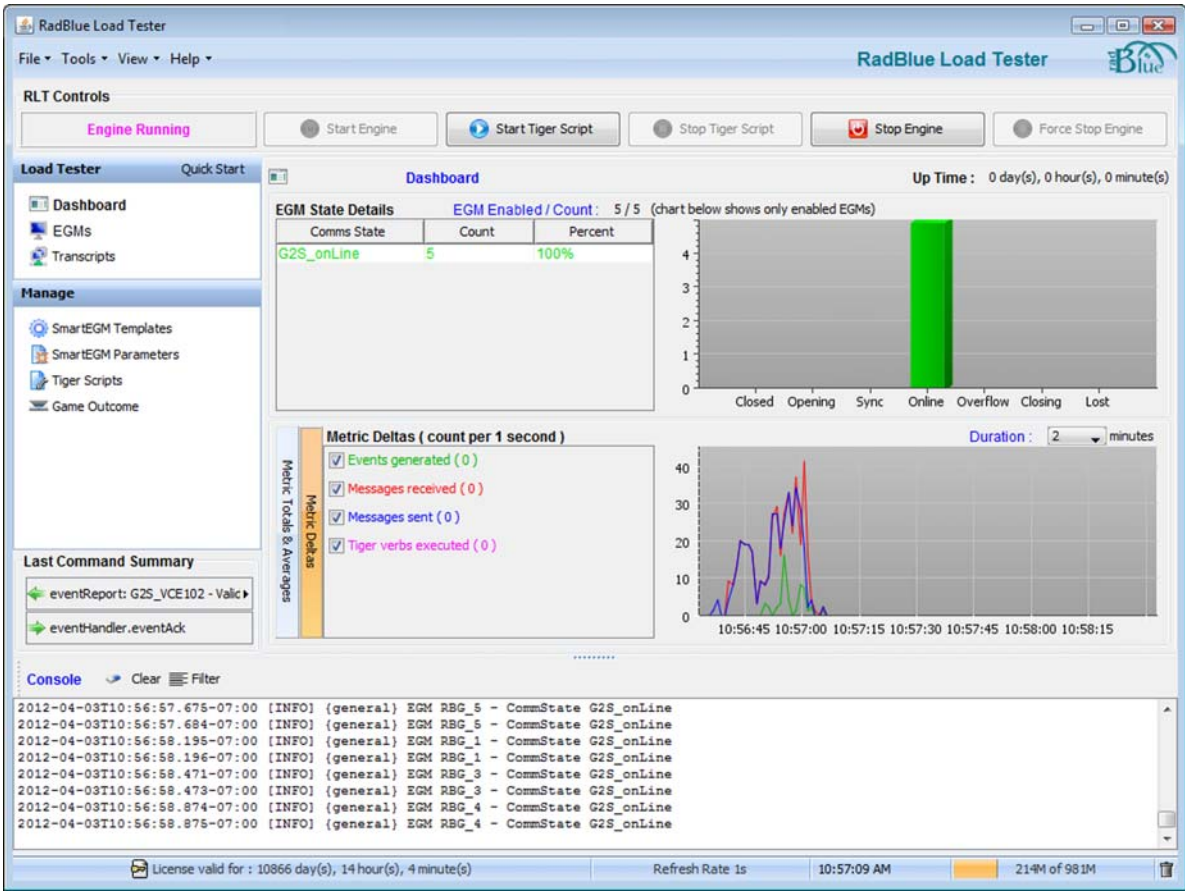
[Released: 04 APR 2012]

Questions?
Log on to the RadBlue Forum: **http://radblue.mywowbb.com/**

Release Notes

Release Summary

For release 21, we have re-designed the RLT user interface to give you all the testing power and flexibility you need in a new, easy-to-use package. Gone is the unwieldy database - we now install and manage the database for you. Once you have completed the effortless installation, you can add and configure EGMs through a wizard or add the EGMs through the RLT interface. Start your EGMs with the click of a button, add automated scripting with the click of another button, and watch the status and metrics of your EGMs on the Dashboard.



For detailed information on using RLT, see the RLT User Guide or RLT Help.

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Get Started Using RLT

When you launch RLT for the first time, if you don't have any EGMs configured, the Load Tester Configuration Wizard lets you quickly add EGMs and configure their associated information (for example, SmartEGM file and Tiger script). The following information assumes that you have already added EGMs to RLT, using the default sample configuration.

1. Configure the EGM connection to the host(s).

   If you are not using your own custom EGM configuration file, you can quickly modify the target host(s) used by the default configuration file. Note that the default configuration file is associated with all of your newly created EGMs.

   a. Click the **SmartEGM Templates** option on the **Manage** menu.

   b. Click to select the **Sample – RadBlue SmartEGM** template from the **Manage SmartEGM Templates** list. Directly below the list, the host and device information for the configuration template display.

   c. To edit a host, select the host and click **Edit Host**. Change the host identifier, description and URL for the host system as needed.

   d. Click **Save**.

   e. Repeat this process for as many hosts as required.

2. Verify that RLT is using the correct "from" address.

   Go to: **Tools** > **Configure** > **Engine Options** > **Transport** > **Bind To Address**. If not, click the drop-down arrow and select the correct address.

3. Return to the **Dashboard**.

4. To start all of your EGMs, click **Start Engine** under RLT Controls.

   Use the **Console** at the bottom of the screen to view activity and errors.

5. Look at the **EGM State Details** on the Dashboard, and confirm that all EGMs move to the **G2S_online** state.

6. Once all of your EGMs are online, start automated testing by clicking **Start Tiger Script** under RLT Controls.

   - The **Last Command Summary** lets you see that commands are being sent between RLT and the host system(s).
   - **Metric Deltas**, accessed by clicking the **Metric Deltas** bar, displays specific message types (sent, received and Tiger) and the number of events queued in a real-time graph. Click the Duration drop-down to change the amount of time displayed by the graph.
   - **Metric Totals**, accessed by clicking the **Metric Totals & Averages** bar, displays values for various metrics, including event queue size and count, several errors, total messages received and total messages sent. In addition, it displays averages for messages sent for each EGM and `g2sAck` response times.

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