

Release Summary

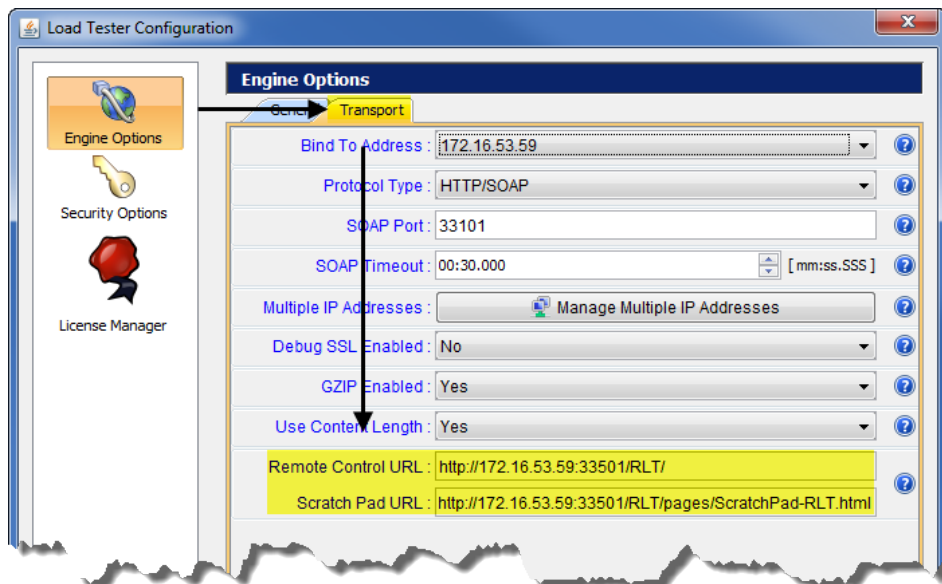
In this release, we added Remote Control information to the Configuration screen, we added support for PKCS #12 files for importing key store files, added an ID reader to the SmartEGM configuration file with a self-validating ID, and made several improvements.

Installation Modifications

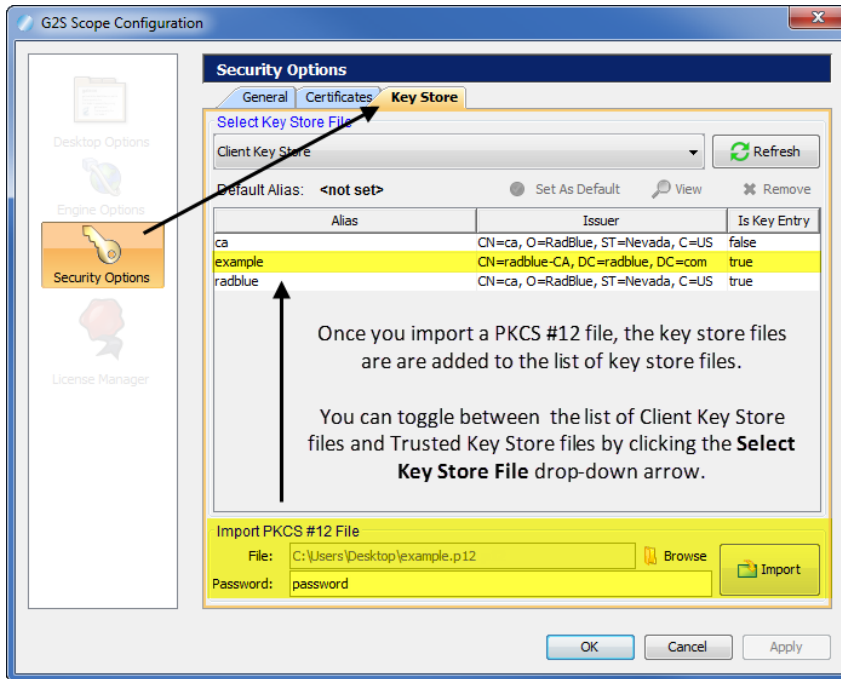
- The installer has been modified to include the correct path to the client and trusted keystore files. This change helps ensure that HTTPS calls for download and media display use the correct information.

Configuration Modifications

- You can now quickly view the URLs for the new RLT REST interface (Remote Control) and the Scratch Pad example interface by going to **Tools > Configure > Engine Options > Transport**.



- A new **Import PKCS #12 File** option (**Tools > Configure > Security Options > Key Store**) lets you quickly import the certificates stored in a P12 or PFX file into the tool's **client.jks** and **trusted.jks**. All certificates in the PKCS #12 file are imported to client.jks. Only non-key-entry certificates are imported to trusted.jks. Once the certificates are successfully imported, they can be viewed from the Key Store tab.



Transport and Security Modifications

- An issue in which the path for the keystores, causing HTTPS errors, has been corrected. RLT now loads content from HTTPS sites correctly.

User Interface Modifications

- Error messages that display in the **GSA Message Validator**, accessed through the Tools option on the menu bar, have been improved with clearer information when XML is invalid or the G2S message does not conform to the protocol.
- The performance of the Debug Console has been improved to display messages more efficiently, especially during long runs of the tool.

SmartEGM Modifications

- An error that occurred when the SmartEGM configuration file was deleted and added back with the same EGM ID, in the same RLT session, has been corrected. The reference to the previous SmartEGM is now deleted correctly.
- If the SmartEGM configuration file contains multiple WAT devices, a `G2S_WTX008 Unacknowledged Transaction in Log` error is generated for each WAT device *only*. Previously, the SmartEGM checked all devices. Also, the entire WAT log is now checked for unacknowledged transactions for each device rather than the last log entry.
- You can now configure the ID reader device in the SmartEGM configuration file to self-validate an ID. If the `G2S_idValidMethod` parameter value for the ID reader device is `G2S_self`, the ID reader self-validates the ID and a `G2S_IDE101 Valid ID Presented` event is sent to the host. The SmartEGM validates the ID with the following information:
 - **idFullName:** " "
 - **idGender:** UNKNOWN
 - **idLossLimit:** 0
 - **idNumber:** card ID number
 - **idPreferName:** " "
 - **idValidSource:** SELF
 - **localeId:** cabinetProfile.localeId
 - **playerId:** card ID number

Transcript Modifications

- Attributes that have been deprecated in G2S 2.1 now display in a strike-through font in the Message Transcript detail screen's Command view. The command details screen can be accessed by double-clicking any message in the Message Transcript.



Release Summary

In this release, we added an interface to let you control RLT remotely, added support for G2S 2.1 vouchers, added a Use Existing License feature to the RLT installer, added metrics and made enhancements to the SmartEGM, Message Transcript and user interface.

Did you know? ...

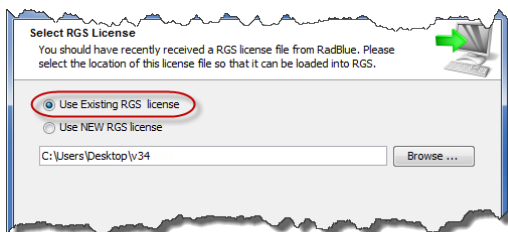
You can export metric data into an XML file that can then be imported into the analysis tool of your choice. Simply go to the Metrics screen and click **Export Metrics** in the top-right corner.

New Features

- A new REST (Representational State Transfer) interface ("Remote Control") allows you to control RLT remotely to test a G2S host and analyze the G2S messages that are produced by that host. The REST interface is included with the standard RLT license. For more information on the RLT REST interface, contact [RadBlue Support](#).
- **New for 2.1!** RLT now supports vouchers for G2S 2.1.
Note that **RLT does not support multiple voucher devices**. Therefore, RLT does not support the `cashOutToVoucher` and `redeemPrefix` attributes in the `voucher.voucherProfile` command and the `G2s_voucherOptions3` option group.

Installation Modifications

- For version 34 and higher, if you install a version of RLT over an existing version, you now have the option of using the existing license. If you do not want to use the existing license, you can browse to a new license. Note that this option is only available when you install RLT over a previous installation. All components of the previous installation are removed by the installer except the license file and any backup files.

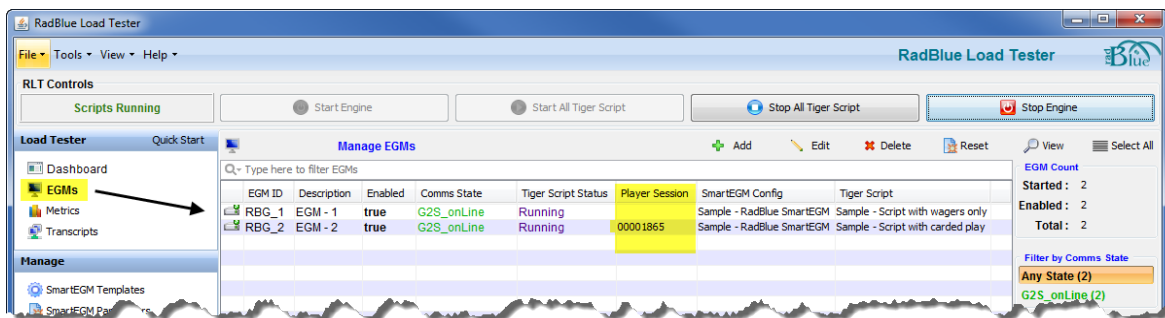


Configuration Modifications

- A new security option has been added that lets you fine-tune certificate requirements for the tool. Select **Require Client Certificate** if the other endpoint *must* have a certificate or it fails authentication. If this option is cleared, the other endpoint is not asked to send its client certificate. By default, this option is selected.
- The following configuration options (**Tools > Configure > Engine Options > General**) no longer require a restart of RLT:
 - Validate Messages
 - EGM Batch Size
 - EGM Batch Delay
 - Auto Start Tiger Script
 - Tiger Script Batch Size
 - Tiger Script Batch Delay
 - Persist EGM Data Model
 - Auto Snapshot Metrics
 - Screen Refresh Rate
 - End Player Sessions

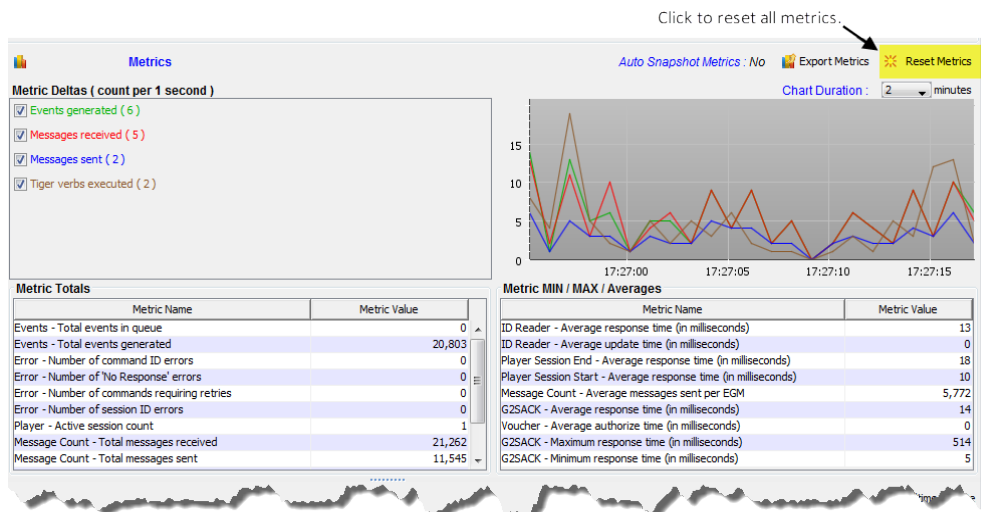
User Interface Modifications

- A new Player Session column has been added to the Manage EGMs screen. As a player session is started or ended, this column is updated with the associated ID Reader identifier.



- By default, SmartEGM templates and Tiger Scripts, accessed through the Manage section on the left-hand side of the screen, are now sorted by **ID**.

- A new **Player - Active session count** metric has been added under Metric Total on the Metrics screen. This metric is a count of all active player sessions when the metric screen refreshes. This metric is included in the metric export.
 - Two new Metric MIN/MAX/Averages have been added to the Metrics screen:
 - **Player Session Start - Average response time (in milliseconds):** Average time from a `player.playerSessionStart` command to a `player.playerSessionStartAck` command.
 - **Player Session End - Average response time (in milliseconds):** average time from a `player.playerSessionEnd` command to a `player.playerSessionEndAck` command.
- These metrics are included in the metric export.
- A new **Reset Metric** button on the Metrics screen lets you reset all RLT metrics to zero as needed.



Tiger Scripting Modifications

- Starting a Tiger Script no longer creates a warning in the debug log, even if it is started before scheduled start time.

SmartEGM Modifications

- If the `voucher.validationData` list is empty, the SmartEGM EGM-disables the voucher device.
- The `voucher.getValidationData` command is only sent *if* there are no outstanding issue voucher log records *and* the `voucher.validationData` list is below the `voucherProfile.minLevelVallds`. or the `voucher.validationData` list needs to be refreshed.
- If the host sends an empty `voucher.validationData` list with a `deleteCurrent` attribute set to **true**, the RST deletes the entire list and schedules a `voucher.getValidationData` request.
- The SmartEGM has been modified to retry `voucher.issueVoucher`, `voucher.redeemVoucher` and `voucher.commitVoucher` commands. Note that this is the only place in the SmartEGM where commands are retried.
- The SmartEGM has been modified to retry `voucher.issueVoucher` and `voucher.commitVoucher` at `voucherProfile.timeToLive` frequency until the host acknowledges the commands.
- The SmartEGM has been modified to retry `voucher.redeemVoucher` commands at the `voucher.voucherProfile.timeToLive` frequency until the host acknowledges or the `voucher.voucherProfile.voucherHoldTime` has expired. If the SmartEGM stops retrying the `voucher.redeemVoucher` command, it rejects the voucher as a host time-out and attempts to commit the voucher.
- The SmartEGM now persists the `voucher.validationData` command. Included in the list is the date when the `voucher.validationData` list needs a refresh and when it expires.
- The SmartEGM cannot redeem a voucher if the voucher device is EGM-disabled.
- The SmartEGM has been modified to reuse the last voucher log entry if the last entry was for a failed committed redeem request.

Transcript Modifications

- On the Command tab for the `cabinet.setOperatingHours` command and the `cabinet.operatingHoursList` command, accessed by double-clicking that command in the Message Transcript, a standard Time value is now displayed instead of a Time value in milliseconds.
- Issues with the **Set Comment** and **Filters** options on the EGM Transcript screen have been corrected. They now function as expected.

Release Summary

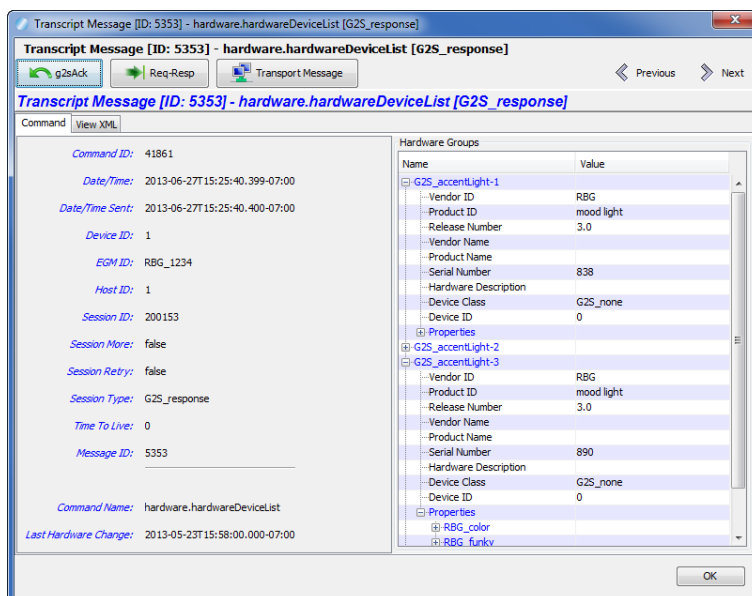
For this release, we updated the required Java version, added support for the Hardware class, added a new directory for Tiger Scripting for storing ID and voucher databases and added an option to remove player cards when a Tiger Script is stopped.

Did you know? ...

RLT is now as easy to install as RST and can run up to 200 simulated EGMs on one computer.

New Features

- **New for 2.1!** RLT now supports the **Hardware** class.
- The Hardware class has been added to the SmartEGM configuration file. A sample hardware device has been created with sample data. You can change the hardware device information as needed by editing the **smartegm-config-gsa.xml** file. For information on how to edit a SmartEGM configuration file, see the [RLT User Guide](#) or RLT Help.
- You can view hardware command details in the Message Transcript.



Installation Modifications

- All RadBlue products now require **Java SE 7u25** 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. This update should have minimal effect on your environment, but keeps our products on modern versions of the underlying technology.

Configuration Modifications

- A new configuration option, **End Player Sessions**, has been added to RLT(**Tools > Configure > Engine Options**). Select **Yes** to force the end of all active player sessions on EGMs when a Tiger Script(s) stops. If this option is set to **No**, player sessions *may or may not* be ended when a Tiger Script(s) stops.

User Interface Modifications

- An issue with the time display at the bottom of the screen not keeping the time accurately has been corrected.

Tiger Scripting Modifications

- A new `tiger:DataModel.clearVoucherDatabase` verb has been added. This verb removes all records from the specified voucher database.
- The examples for the `tiger:duration` attribute in the `tiger:repeat` verb have been corrected in the [Tiger Scripting Reference](#).
- The location of the Voucher database has been moved to **/user-data/voucher-`<name>`.xml**. The voucher database is used with the following Tiger verbs:
 - `DataModel.clearVoucherDatabase`
 - `Human.createVoucherToDatabase`
 - `Human.insertVoucherFromDatabase`
 - `if-voucher-available`

IMPORTANT NOTE!

If you use your own voucher database file, you will now have to place the file in the **/user-data/voucher-`<name>`.xml** location. The user-data directory will **not** be deleted when RLT is uninstalled.

- The location of the ID database has been moved to **/user-data/id-<name>.xml**.

The ID database is used with the following Tiger verbs:

- `Human.insertIDFromDatabase`
- `Human.removeIDtoDatabase`

IMPORTANT NOTE!

If you use your own ID database file, you will now have to place the file in the **/user-data/id-<name>.xml** location. The user-data directory will **not** be deleted when RLT is uninstalled.

Release Summary

For this release, we updated the required Java version, corrected transcript issues and corrected an issue with the `cabinetStatus` command.

Installation Modifications

- All RadBlue products now require **Java SE 7u17** 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. This update should have minimal effect on your environment, but keeps our products on modern versions of the underlying technology.

Tiger Scripting Modifications

- An issue in which the following `cabinetStatus` command attributes were not being populated properly has been corrected:
 - *generalFault*
 - *generalMemoryFault*
 - *nvStorageFault*
 - *videoDispalyFault*

Transcript Modifications

- If the tool receives a date/time with the seconds parsed greater than milliseconds, the time/date is truncated to milliseconds in the transcripts. For example:

The date/time `2013-04-30T08:03:46.1234567890-07:00`

displays as `2013-04-30T08:03:46.123-07:00` in the transcript.

You can view the longer date/time format on the **XML** tab of the command object. To access the command object, double-click any message in the transcript.

- An issue in which the Message Transcript was reporting application errors incorrectly in the Summary column (for example, when sending an invalid attribute value in a message) has been corrected. The error is now noted correctly, for example:

```
optionConfig.error [G2S_OCX013, Invalid Value Selected For Option  
- G2S_none is invalid for eventSubscriptions]
```

Release Summary

In this release, we added a new Metrics screen, made managing EGMs more user-friendly, updated the required Java version and made minor improvements.

Installation Modifications

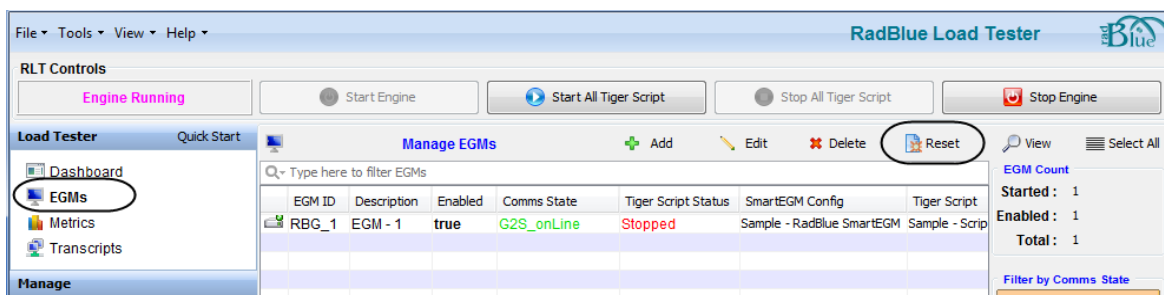
- All RadBlue products now require **Java SE 7u11** or higher. If the installer cannot find this version on your computer, you are prompted to download and run the Java installer, *or* navigate to the correct Java version. This update should have minimal effect on your environment, but keeps our products on modern versions of the underlying technology.

Engine Modifications

- In an ongoing effort to ensure that RadBlue tools use the latest technologies, RLT has been updated to Apache CXF version 2.7.2. This change should not affect tool performance or operation.
- The process for cleaning up the **logs** directory when the tool is started has been improved.

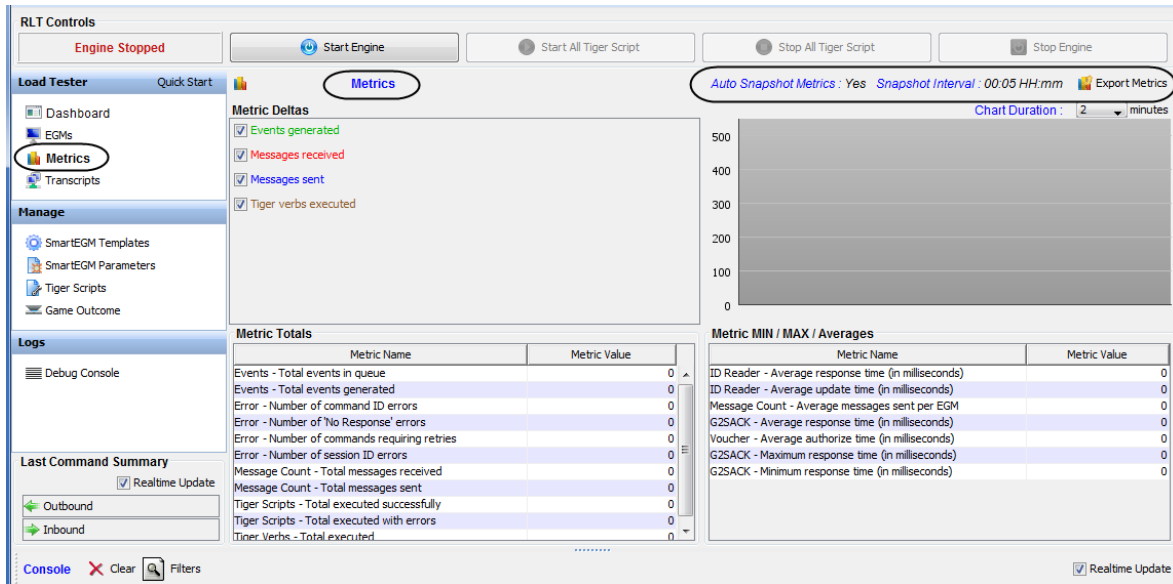
User Interface Modifications

- The **Manage EGMs** screen has been enhanced so you can reset multiple EGM data models with a single click. After you select the EGMs you want to reset, click the new **Reset** button. You can also access this function by right-clicking any EGM in the list.



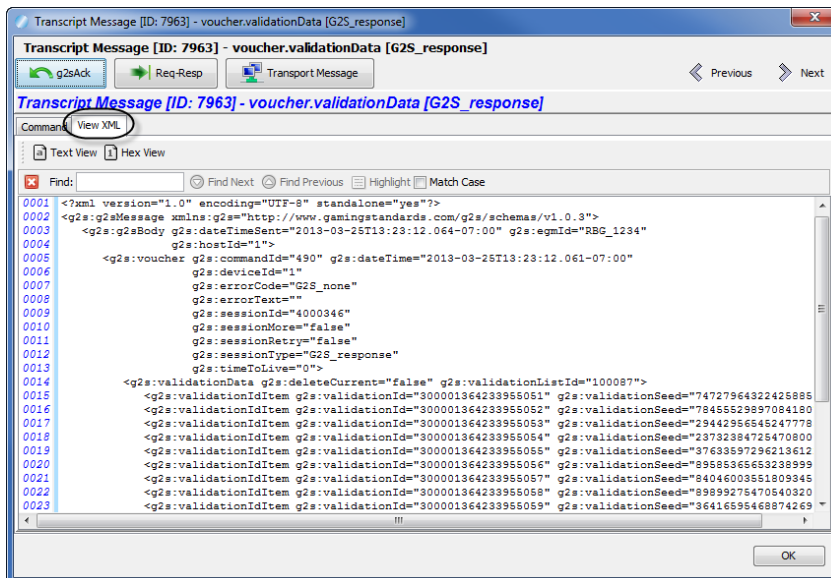
- There is a new **Metrics** screen that displays only metric information. New to this screen are two features:

- An **Export Metrics** option that, with one click, opens a box for you to quickly export the RLT metric data to a file.
- An **Auto Snapshot Metrics** feature showing you, at a glance, whether Auto Snapshot is enabled and the current snapshot interval time.



Transcript Modifications

- The detail screen in the Message Transcript has been streamlined from two **View XML** options to one. The View XML button on the Command tab has been removed. To view the message's XML, click the **View XML** tab.



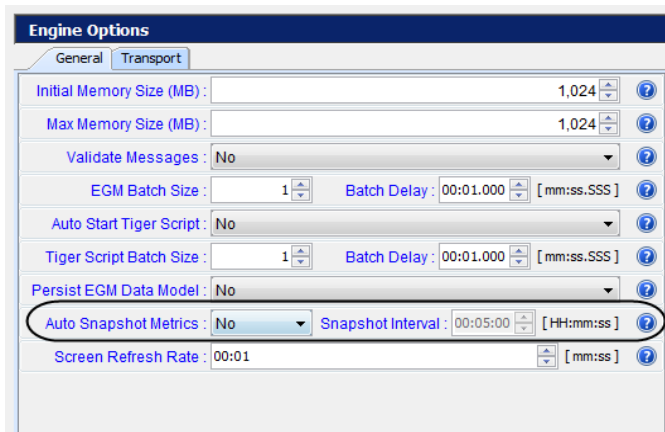
Release Summary

In this release, we updated more classes for G2S 2.1, modified security options, improved the metrics display and added the ability to export performance metric data.

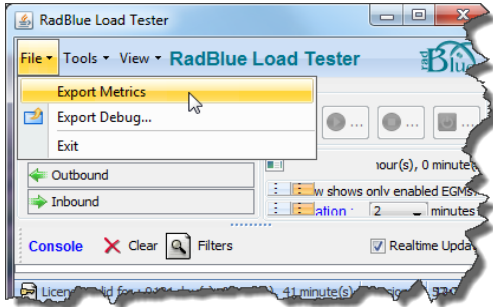
New Features

- **New for 2.1!** The following classes have been updated in accordance with the 2.1 protocol:
 - gat
 - optionConfig
 - eventHandler
 - meters
- Improvements have been made to how you access and view performance metric data.
- A new **Auto Snapshot Metrics** option (**Tools > Configure > Engine Options > General**) lets you automatically save RLT metrics and export them to a file. Use the **Snapshot Interval** to specify the time between snapshots. Metrics are sent to:

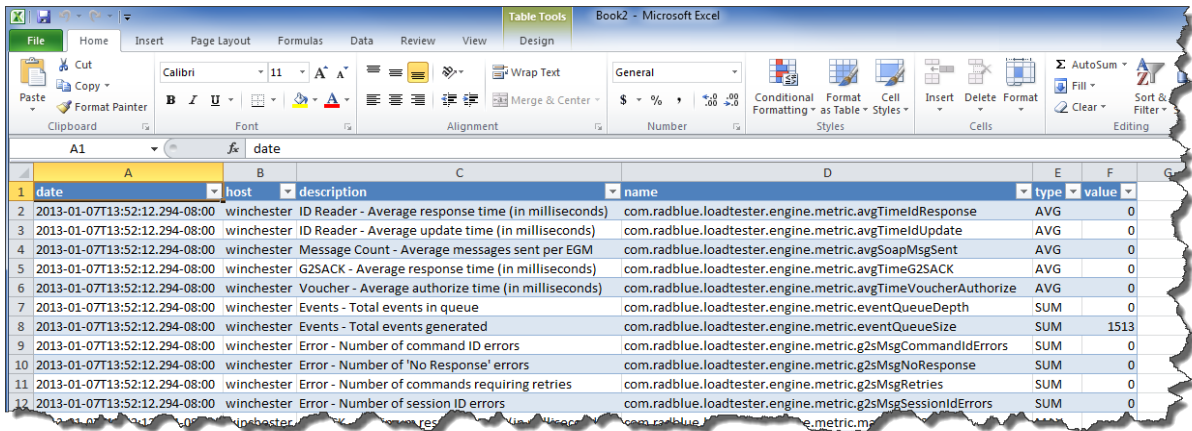
[Installation Directory]\logs\metric-snapshot-<COMPUTER_NAME>.csvs



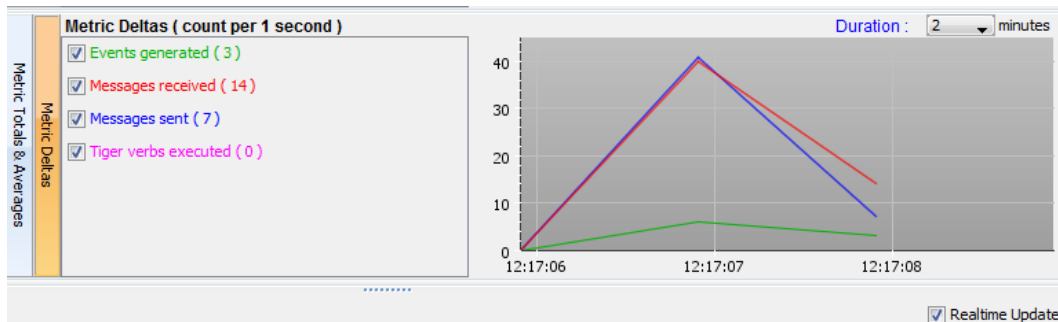
- A new **Export Metrics** option (**File > Export Metrics**) lets you export RLT metric data (displayed on the Dashboard) to an XML file from the beginning of a run until you select the option.



You can then import the XML file into an XML reader such as Microsoft Excel:



- The Metric Deltas count chart has been improved to show events, messages, and verbs in current time only. Based on the duration time (in this example, 2 minutes), the chart shows the message traffic for the duration in real-time. Previously, the chart showed duration by placing the future time at the end of the chart. For example, if our time is 12:00:00, you now see the current time for the 2-minute interval instead of seeing 12:02:00 at the end of the chart.

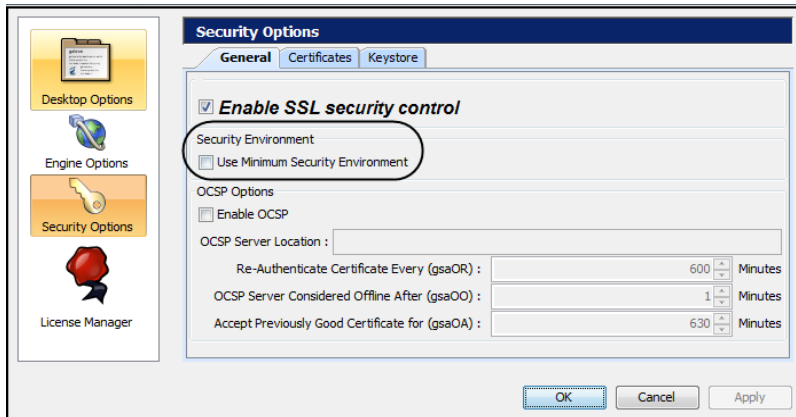


Installation Modifications

- RLT now requires a 2013 license. If you have not received a 2013 license, please contact [RadBlue Support](#).

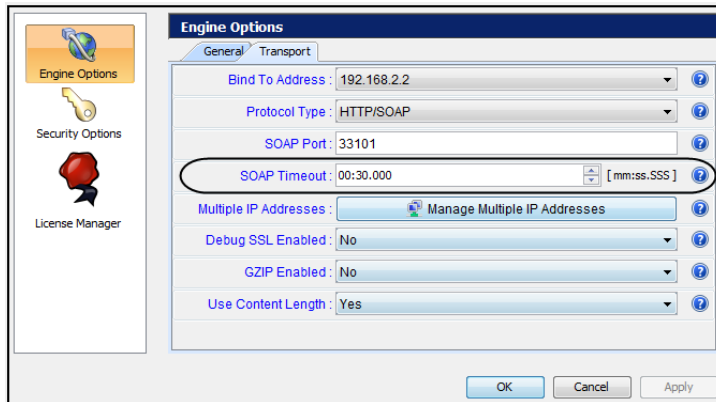
Transport and Security Modifications

- An issue in which the SCEP settings were not being saved when the HTTPS protocol was selected in the RLT installation wizard has been corrected.
- An issue has been corrected in which RLT was not sending messages using GZIP when the **GZIP Enabled?** option (**Tools > Configure > Engine Options > Transport**) was selected. RLT now sends messages using GZIP if this option is enabled.
- An issue in which the default keystore alias was not being saved has been corrected. You can set the default keystore alias by going to **Tools > Configure > Security Options > Keystore**, and clicking **Set As Default**.
- For a testing environment, you now have the option to enable minimum security. This option is found under **Tools > Configure > Security Options**.



When you enable this option:

- The **Transport Layer Security (TLS) 1.0** is the *only* supported protocol for client-side TLS sessions. Note that host-side sessions are not restricted.
- The only supported cipher suite is `SSL_RSA_WITH_3DES_EDE_CBC_SHA` for both client- and host-side TLS sessions.
- You can now configure the SOAP connection timeout value, using the **mm:ss:sss** format. The default is **30** seconds. This option is found under **Tools > Configure > Engine Options > Transport**.



Engine Modifications

- A new *second-pass-validate* attribute in the **g2s-validation-manager-sample.xml** file ([**installation directory**] > **schemas** > **g2s** > [**schema directory**]) that is designed to give you a second validation pass to detect syntax errors that are not found in the first validation pass attribute. Set this attribute to **false** if the second validation pass takes too much CPU resources, or the EGM/host is in violation of the G2S schema and you are unable to fix your code. The default is **true**.

```
<?xml version="1.0" encoding="UTF-8"?>
- <schema second-pass-validation="true" validation="true" nice="true" version="2.1.0">
  <loader classname="com.radblue.gsa.g2s.core.types.SchemaLoader"/>
  <source root-package="com.radblue.gsa.g2s"/>
  - <command-classpath>
    <classpath value="com.radblue.cvt.commands"/>
  </command-classpath>
- <namespaces>
```

- An issue in which the tool referred to the wrong namespaces for Audit Meters (<http://www.gamingstandards.com/g2s/schemas/v1.0.3/g2sAM> instead of <http://www.gamingstandards.com/g2s/schemas/v1.0.3/ExtAM>) has been corrected. RLT now refers to the correct Audit Meters namespaces.

SmartEGM Modifications

General Modifications

- The SmartEGM configuration file now includes a new `edm:support-special-functions` attribute in each `gat` device. This attribute controls the state of the new `gatProfile.specialFunctions` attribute. The default is **true**.
- Previously, on many events, RLT sent more than one device status element in an event (for example, a `mediaDisplay` event would contain a `cabinet` status as well as a `mediaDisplay` status). With clarification from GSA, each `eventReport` command now contains the status of only one device.
- An issue in which the `egmEnabled` attribute in `communications.descriptorList` command for the `optionConfig` device was always set to **false**, has been corrected. The `egmEnabled` attribute value is now reported correctly.
- **New for 2.1!** The `restartStatusMode` attribute has been added to the `cabinet.cabinetProfile` command.
- After receiving a `communications.commsClosing` request, the SmartEGM now closes the connection to the host even if it receives a `G2S_MSX003` (Communications Not Online) error response. Previously, it attempted to immediately restart communications with the host.

GAT Modifications for G2S 2.1

- RLT now supports a **GAT Special Functions Option** group. The value of the `G2S_specialFunctions` parameter is also set to the value of the `gat` device's `edm:support-special-functions` attribute in the SmartEGM configuration file..
- The following attributes have been added to the `gat.gatProfile` command:
 - `configDateTime`
 - `configComplete`
 - `specialFunctions`

Note: Although `configComplete` and `configCompleteDateTime` are normally in the device's status, in the `gat` class, they were added to the device profile.

optionConfig Modifications for G2S 2.1

- A new `optionConfig.getOptionSeries` command has been added that allows a host to request options for a specific device class, starting at a specific device number, with a maximum number of devices to report.
- A new `egmLocked` attribute has been added to the `optionConfig.optionConfigModeStatus` command. The `egmLocked` attribute is set to **true** when an EGM is disabled by either the `optionConfig.enterOptionConfigMode` command or the `optionConfig.setOptionChange` command.
- RLT now supports the new `optionConfig.getOptionStatus` command sent from the host. This command verifies that a log entry exists for the specified transaction ID, and that the configuration ID matches the configuration ID in the log. If neither are **true**, RLT returns the G2S_OCX005 (Invalid Transaction Identifier) error.
- Two new attributes, `configDateTime` and `configComplete`, have been added to device statuses (where appropriate) and are also now included in `eventReports` when a status is included.
- The `setOptionChange` command no longer rejects a `startDateTime` in the past.
- The G2S_OCX001 (Invalid Device Class/Device Identifier) error is now generated when a `optionConfig.getOptionList` command cannot be processed.

meter Modifications for G2S 2.1

- RLT now supports four types of end-of-day subscriptions: `onEOD`, `onCoinDrop`, `onNoteDrop` and `onDoorOpen`.
- The SmartEGM will now return a G2S_APX009 (Command Contained at Least One Syntax/Semantic Error) error if the host sends an end-of-day meter request without specifying which meter it is requesting.
- A new `denomMeterType` attribute has been added to the `gamePlay.gamePlayProfile` command. This attribute indicates whether a `gamePlay` device denomination meter reports a total in a single denomination (`g2s_oneDenom`) or for each denomination wagered (`g2s_eachDenom`).

Note: The default value is `g2s_eachDenom`.