



RST Version 36 Release Notes

Release Date: 10 DEC 2013

Release Summary

In this release, we added support for the Smart Card class, added an option to import PKCS #12 files, added message disruption actions to the Tester Toolkit, corrected issues and made improvements to the SmartEGM configuration file.

New Features

RST now supports the smart card class.

Since implementation of the smart card class requires the use of a proprietary Smart Card Application Protocol (SCAP), RadBlue has implemented the smart card class with its own version of a SCAP. This implementation demonstrates the smart card class between RST and RGS. Also, depending on your host or EGM implementation, there are three ways that you can use the RadBlue smart card:

1. If the EGM does not support SCAP, RGS can be the smart card device owner.
2. If EGM supports a proprietary SCAP implementation, RGS can be a guest of the smart card device.*
3. If the host supports no SCAP, RST can be used as the EGM.

See the [RST User Guide](#) or **RST Help** for information on using the RadBlue smart card implementation.

Your proprietary SCAP can be implemented in the tools as a custom project. [Contact RadBlue](#) for more information.

If you do not have RGS or RST, you can [request a free student license](#). These two products communicate with each other by default, so set up and configuration is minimal.

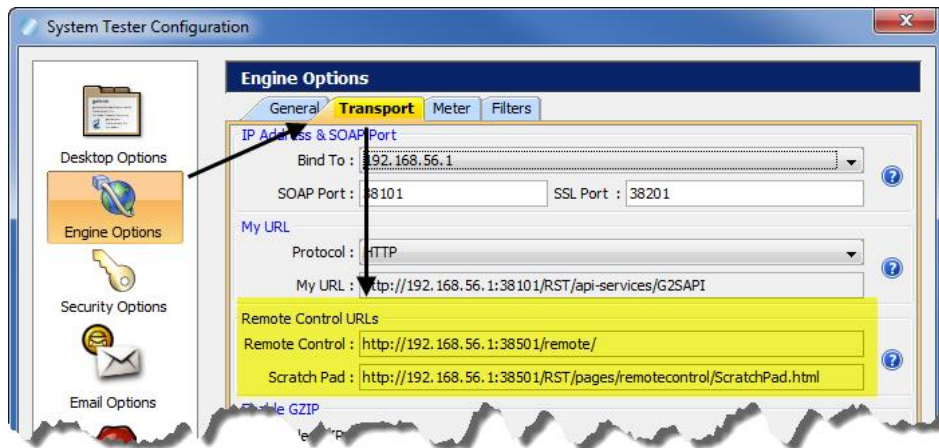
Installation Modifications

- To eliminate confusion, the following redundant files have been removed from the **conf** directory in the RST installation folder:
 - client.jks
 - client-student.jks
 - trusted.jks
 - trusted-student.jks

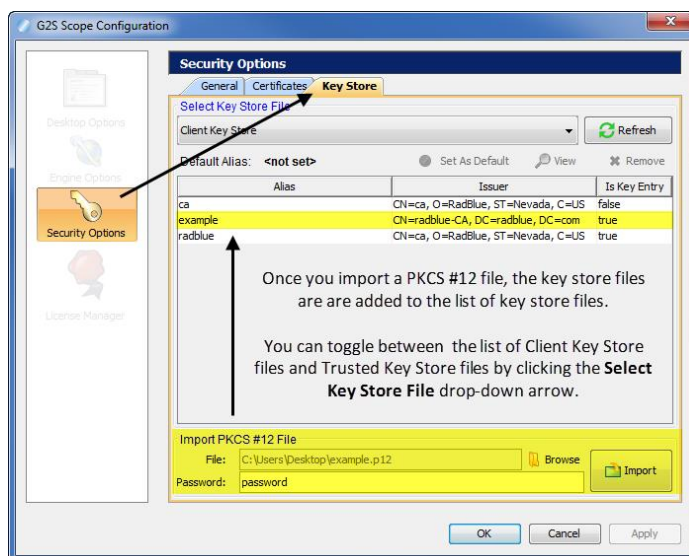
The JKS files that RST uses continue to reside in the **egm-1** and **egm-2** folders, also located in the **conf** directory.

Configuration Modifications

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



- 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.

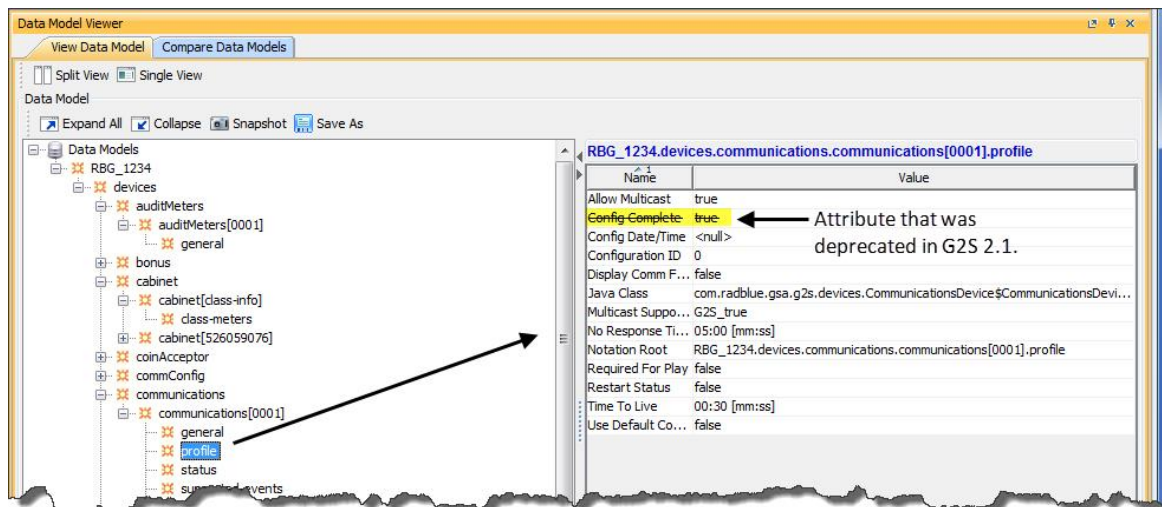


Transport and Security Modifications

- An issue in which the path for the keystores, causing HTTPS errors, has been corrected. RST 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.
- A new **Key Off Timeout** countdown displays on the EGM Status panel, under the Device Class field, when RST locks up, that counts down to the key off timeout. You can modify the timeout when you simulate gameplay (Play Simple Game, Play Paytable Game, Play Central Game or Play Progressive Game) by changing the value of the **Key Off Time Out** field value.
Once the key off timeout reaches zero, the key off handpay lockup is cleared (EGM Status changes back to **G2S_enabled** and the Device Class changes back to **G2S_gameplay**).
- The performance of the Debug Console has been improved to display messages more efficiently, especially during long runs of the tool.
- Attributes that have been deprecated in G2S 2.1 now display in a strike-through font in the Data Model Viewer (DMV).



Tester Toolkit Modifications

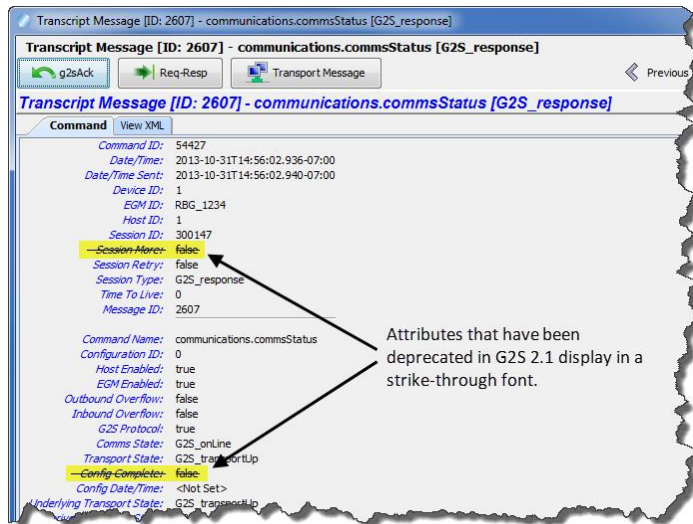
- The following actions have been added to the Actions field on the Message Disruption panel, (under Message Disruption Definition > Disruption Parameters):
 - **Resend - send SOAP Fault but don't process message**
Select this setting to cause the RST transport layer to generate a SOAP fault and to not respond to the request message.
 - **G2S_APX007 (Class Not Supported)**
 - **G2S_APX008 (Command Not Supported)**
 - **G2S_APX014 (Unknown Class Encountered)**
 - **G2S_APX015 (Unknown Command Encountered)**
- Note:** These APX errors are returned in the `g2sAck` response to a message.

SmartEGM Modifications

- You can now run a gat verification on any of the components that are reported by RST.
- An issue in which the meter updates for cancel-credit handpay commands were being double-posted has been corrected.
- 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.

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.



- Comments associated with a message are now displayed next to the Command and View XML tabs when you view the message details as well as in the Message Transcript object.



- An issue in which the **Clear Display** option in the Message Transcript cleared the transcript display as well as the EGM selector list has been corrected. The **Clear Display** option now clears the transcript messages from the table only. The **Clear Database** option removes all transcript records from the transcript database, clears transcript messages from the table and clears the EGM selector list.



RST Version 34 Release Notes

Release Date: 01 OCT 2013

Release Summary

In this release, we added support for G2S 2.1 vouchers, added a Use Existing License feature to the RLT installer, added a new configuration option and made enhancements to the SmartEGM.

Did you know....

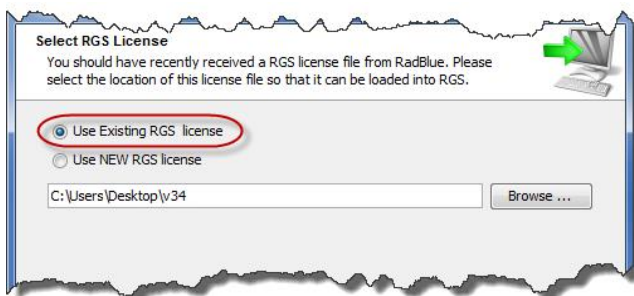
You can filter certain frequently occurring commands from the Message Transcript through RST Configuration screen (**Tools > Configure > Engine Options > Filters**). Once selected, the filter persists until it is cleared. Note that you can filter any commands through the Filters option on the Message Transcript. That filter, however, does not persist through reinstall of the tool.

New Features

- **New for 2.1!** RST now supports vouchers for G2S 2.1.
Note that **RST does not support multiple voucher devices**. Therefore, RST 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 RST 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 RST 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.
- An issue in which the the Protocol type was not saved (**Tools > Configure > Engine Options > Transport > My URL**) has been corrected.

Engine Modifications

- An issue in which records for the second instance (EGM-2) of RST were not being logged has been corrected. Now, all logs are appended with a number (1 or 2) to differentiate between the first and second instance of the tool.
- **New for 2.1!** The following commands now generate a G2S_PRX002 - Transaction No Longer Active error when the *transactionId* references a player ID that is not active:
 - `player.setCarryOver`
 - `player.setHostPoints`
 - `player.setPointBalance`
 - `player.setPlayerOverride`

User Interface Modifications

- The **Get Progressive Host Info.** option has been removed from the Player Verbs tab on the SmartEGM layout. It has been replaced by a **Send getProgressiveHostInfo** option on the Send Command tab. This option sends a `progressive.getProgressiveHostInfo` command to the host, requesting information on the specified host.

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.
- 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.



RST Version 32 Release Notes

Release Date: 06 AUG 2013

Release Summary

In 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 corrected minor issues.

Did you know....

The Compare option in the Message Transcript lets you view the details of two messages, side-by-side. You can view the message content in three different formats: a user-friendly format, an XML format and an XML format with the differences between the two messages highlighted in **red**.

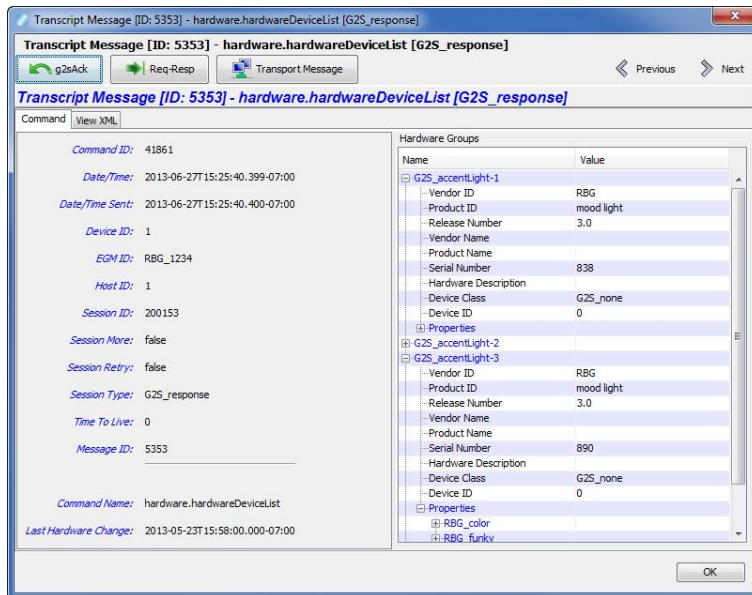
New Features

- **New for 2.1!** RST 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 view the hardware device information in RST on the **Devices** tab under **SmartEGM > Main**.

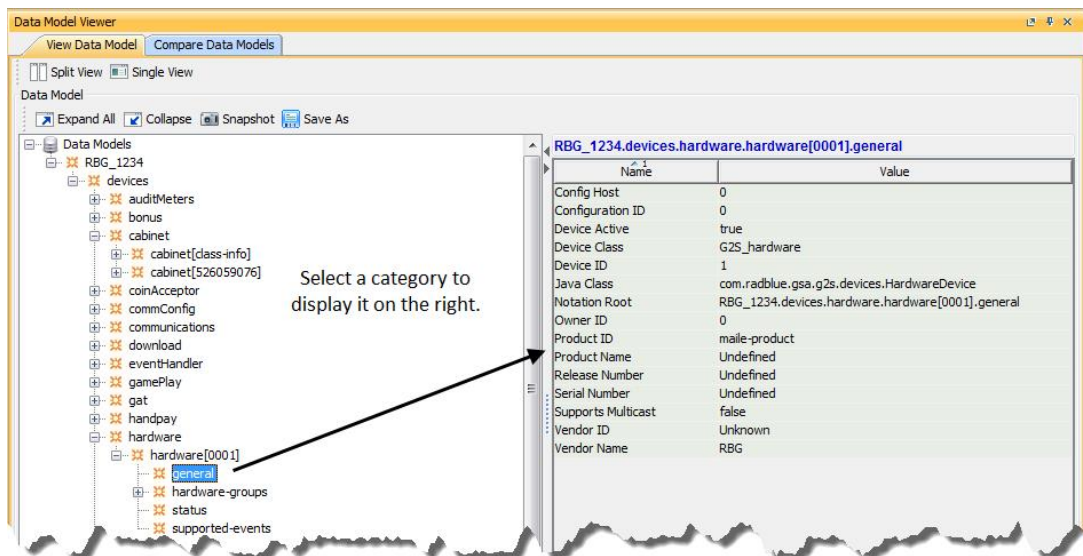
Device Class	Device ID	Owner Host	Configure Host	EGM Enabled	Host Enabled
G2S_coinAcceptor	1	1	1	True	True
G2S_commConfig	1	1	1	True	True
G2S_communications	1	1	1	True	True
G2S_download	1	1	1	True	True
G2S_eventHandler	1	1	1	True	True
G2S_gamePlay	1	1	1	True	True
G2S_gamePlay	2	1	1	True	True
G2S_gamePlay	3	1	1	True	True
G2S_gamePlay	4	1	1	True	True
G2S_gamePlay	5	1	1	True	True
G2S_gamePlay	6	1	1	True	True
G2S_gat	1	1	1	True	True
G2S_handpay	1	1	1	True	True
G2S hardware	1	0	0	True	True
G2S_hopper	1	1	1	True	True
G2S_idReader	1	1	1	True	True

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 [RST User Guide](#) or RST Help.

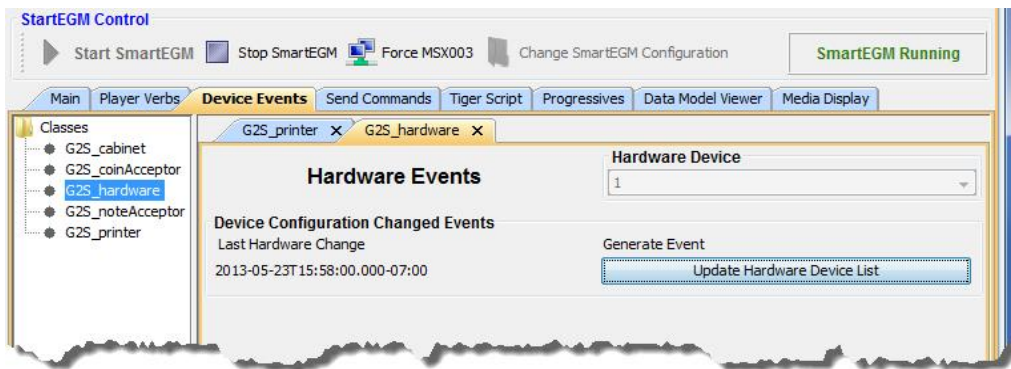
- You can view hardware command details in the Message Transcript.



- The Hardware class has been added to the Data Model Viewer (DMV).



- A G2S_hardware sub-tab has been added to the Device Events tab.



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.

Engine Modifications

- An calculation issue that led to a discrepancy between the class-level and device-level meters for Average Payback Percentage (`G2S_avgPaybackPct`), in the `G2S_GPE103 - Primary Game Started` event 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 user-data directory **will be deleted** when RST is uninstalled. 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 be deleted** when RST is uninstalled.

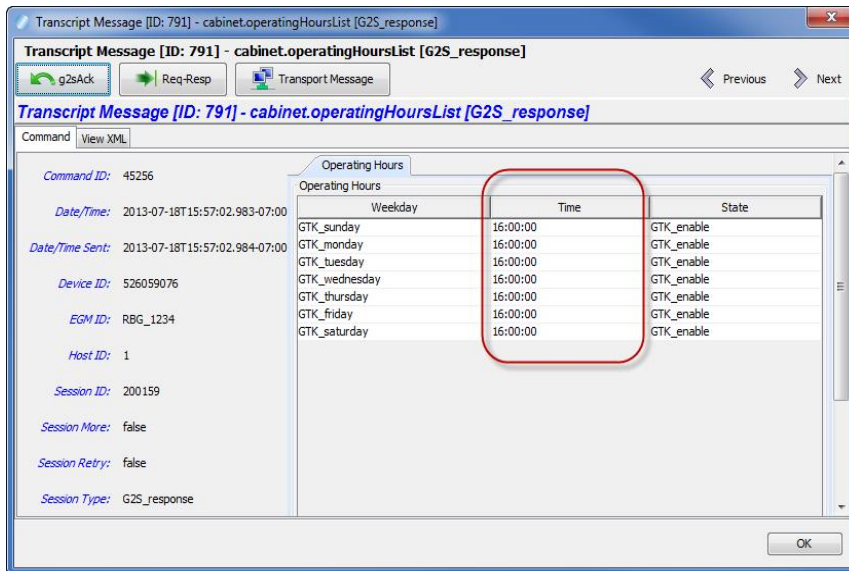
- The location of the ID database has been moved to **/user-data/id-<name>.xml**.
The ID database is used with the following Tiger verbs:
 - `Human.insertIDFromDatabase`
 - `Human.removeIDtoDatabase`

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 be deleted** when RST is uninstalled.

Transcript Modifications

- In the Message Transcript, the Time column value for the detail view of the `cabinet.operatingHoursList` command now displays in military time.





RST Version 30 Release Notes

Release Date: 04 JUN 2013

Release Summary

In this release, we updated the required Java version, added a new Engine configuration option, added 2.1 support for all message-level error codes in `g2sAck` commands, added the ability to import and export the tool configuration and corrected minor issues.

Did you know....

4 GB is now the **minimum** Memory requirement for computers running RST.

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.

Configuration Modifications

- **Current RST Offset [HH:MM:SS.MMM]** - Set the RST time offset from the system clock, which is part of the *dateTime* calculation applied to all messages sent by RST. The calculation for the *dateTime* stamp is:
PC time + offset [Current RST Offset value] + setDateTime offset
Use this option if you want to test an incorrect *dateTime* value.
Note: This value is updated when a `cabinet.setDateTime` command is received from the host.

Engine Modifications

- **New for 2.1!** All message-level error codes that can be returned in a `g2sAck` message are now supported.

User Interface Modifications

- The following changes have been made to the **Data Model Viewer**:
 - Coin Acceptor currency and device meters are now updated correctly.
 - Handpay meters are now updated correctly.
- Two new options, accessed through the File option on the menu bar, let you export all RST configuration options and import those options into another instance of RST. With these options, you can now quickly configure new instances of RST.
 - **Export Configuration...** - Select to export all configuration settings for the tool, including security certificates. The resulting ZIP file can then be imported into another version of the same tool.
 - **Import Configuration...** - Select to import all configuration settings for the tool, exported from another version of the same tool, including security certificates. This option is used when you want to quickly set up a specific configuration for the tool that is already set up in another version of the tool.

Tiger Scripting Modifications

- An issue in which a debug log entry was made for each coin dispensed through the `dispenseCoins` verb has been corrected. Now, the total value of dispensed coins is calculated, and the debug log is updated with that value.
- An issue in which the following `cabinetStatus` command attributes were not being populated properly has been corrected:
 - *generalFault*
 - *generalMemoryFault*
 - *nvStorageFault*
 - *videoDispalyFault*

SmartEGM Modifications

- The student versions of the SmartEGM configuration file (`-student-edition.xml`, `-student-edition-1.1.0-am.xml` and `-student-edition-rpa.xml`) have been updated to support the most recent RST updates and enhancements.

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]
```




RST Version 28 Release Notes

Release Date: 02 APR 2013

Release Summary

In this release, we added support for G2S 1.1.0 with audit meters, added the ability to define the time zone and offset format for all messages sent from RST, updated the required Java version and made several usability improvements.

New Features

- RST has been modified to support G2S 1.1.0 with audit meters (the project schema for Austria). A SmartEGM configuration file is now available that supports audit meter devices without namespace negotiation (G2S 1.1.0 functionality). The new configuration file is named `smartegm-config-1.1.0-am`. When this file is selected, RST will use a special G2S schema rather than the G2S 2.1 schema that it uses normally.
- RST now supports time zone configuration for testing with custom time zones. Once configured, RST sends all messages using the defined time zone and offset format. When the selected time zone is Coordinated Universal Time (UTC), Zulu or Greenwich Mean Time (GMT), a "Z" appears at the end of the date/time stamp in the Message Transcript. You can change the "Z" to an offset notation (+00:00) through the Configuration screen.

The screenshot shows the 'Transcript' window in the RST application. It contains a table of message logs. A callout box points to the 'Date Received' column, stating: 'Time/Date format with a time zone -07:00 offset.'

Date Received	Message ID	From Location	To Location	Session Type	Session ID	Command ID	Device	Summary
2013-03-26T15:50:26.388-07:00	9267	Host ID 1	RBG_1234	G2S_response	4000025	672	episodicGaming[1]	episodicGaming.setEpisodicPara...
2013-03-26T15:50:26.354-07:00	9265	RBG_1234	Host ID 1	G2S_request	4000025	28653	episodicGaming[1]	episodicGaming.getEpisodicPara...
2013-03-26T15:50:24.087-07:00	9263	Host ID 1	RBG_1234	G2S_response	4000024	671	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:24.068-07:00	9261	RBG_1234	Host ID 1	G2S_request	4000024	28652	eventHandler[1]	eventReport: G2S_VCE102 - Vali...
2013-03-26T15:50:24.011-07:00	9259	Host ID 1	RBG_1234	G2S_response	4000023	670	voucher[1]	voucher.validationData
2013-03-26T15:50:23.947-07:00	9257	RBG_1234	Host ID 1	G2S_request	4000023	28654	voucher[1]	voucher.getValidationData
2013-03-26T15:50:19.606-07:00	9255	Host ID 1	RBG_1234	G2S_response	4000019	666	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.595-07:00	9253	Host ID 1	RBG_1234	G2S_response	4000018	665	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.584-07:00	9251	Host ID 1	RBG_1234	G2S_response	4000017	664	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.572-07:00	9249	Host ID 1	RBG_1234	G2S_response	4000019	666	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.557-07:00	9247	Host ID 1	RBG_1234	G2S_response	4000018	665	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.544-07:00	9245	Host ID 1	RBG_1234	G2S_response	4000017	664	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.532-07:00	9243	Host ID 1	RBG_1234	G2S_response	4000016	663	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.520-07:00	9241	Host ID 1	RBG_1234	G2S_response	4000015	662	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.509-07:00	9239	Host ID 1	RBG_1234	G2S_response	4000014	661	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.496-07:00	9237	Host ID 1	RBG_1234	G2S_response	4000013	660	eventHandler[1]	eventHandler.eventAck
2013-03-26T15:50:19.484-07:00	9235	Host ID 1	RBG_1234	G2S_response	4000012	659	eventHandler[1]	eventHandler.eventAck

Note: Date/Time fields in the user interface are in local time. G2S messages use the configured time zone and offset format for all date/time information.

A new configuration option, **Default TimeZone** (**Tools > Configure > Engine Options > General**), allows you to change the time zone used by the tool.



You can select the time zone in the following ways:

- **Scroll** through the list and select your country/city time zone *or* time preference (UTC / Zulu / GMT).
- **Type** the country/city time zone *or* time preference by clicking inside the **Default TimeZone** field and typing the first character(s) of the time zone or time preference you want. The field will auto-complete the entry. For example, if you want the time zone for Los Angeles, California, you can type: **America/L** and "Los Angeles" will be completed for you.
- **Select Display Z as 00:00** if you **do not** want to see the default "Z" at the end of the message date/time stamp in the Message Transcript, which indicates that the time uses a zero offset (UTC, Zulu or GMT).

Note: You must restart the tool for changes to the **Default TimeZone** option to take effect.

Installation Modifications

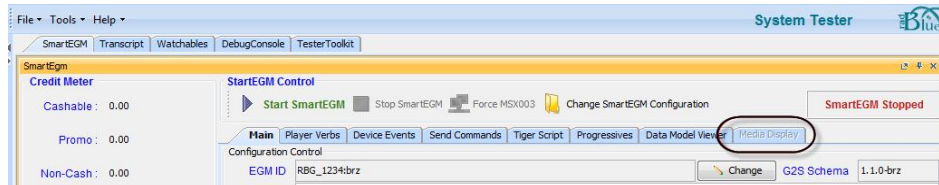
- All RadBlue products now require **Java SE 7u11** or higher. If the installer cannot find this version on your computer, you are prompted to download and run the Java installer, *or* navigate to the correct Java version. This update should have minimal effect on your environment, but keeps our products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

Engine Modifications

- In an ongoing effort to ensure that RadBlue tools use the latest technologies, RST has been updated to Apache CXF version 2.7.2. This change should not affect tool performance or operation.
- The progressive hit command now happens *after* the in-game delay in the progressive sequence, so the money wagered on the current game can be applied before the winning value is sent to the EGM.
- The process for cleaning up the **logs** directory when the tool is started has been improved.

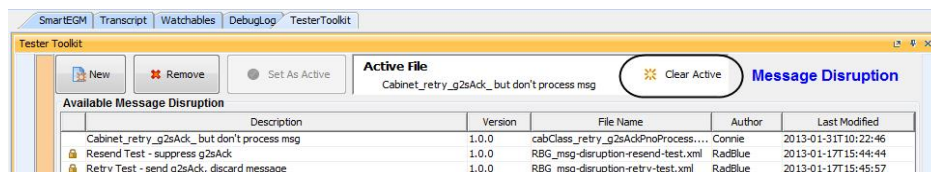
User Interface Modifications

- The Media Display tab on the SmartEGM layout is now only enabled if there is a mediaDisplay device.



Tester Toolkit Modifications

- The **Message Modification** and **Message Disruption** screens have been enhanced with a **Clear Active** button that removes the active file with the push of a button. In the example below, the **Active File** field shows a test in the Message Disruption feature. When you click **Clear Active**, the test file is removed as the active file.



SmartEGM Modifications

- The following SmartEGM configuration files are now installed with RST:
 - smartegm-config-1.1.0-am.xml** - Project schema for Austria wide-area system, using a G2S 1.1.0 schema with an audit meter device and support for audit meters.
 - smartegm-config-gsa** - Standard G2S EGM, using the G2S 2.1 schema.
 - smartegm-config-gsa-no-namespaces** - Uses a G2S 2.1 schema, but namespace negotiation is suppressed.



RST Version 26 Release Notes

Release Date: 05 FEB 2013

Release Summary

For this release, we added support for more G2S 2.1 classes, added configuration options, and added a Message Disruption feature to the optional Tester Toolkit module, including Remote Control and Tiger Scripting.

New Features

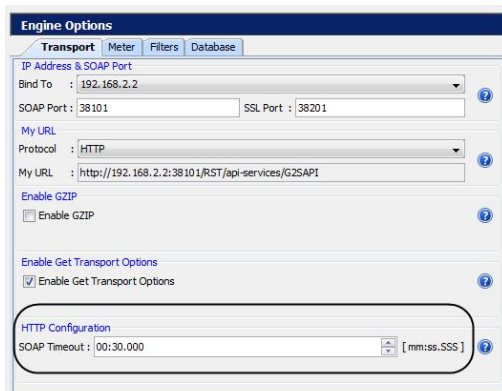
- **New for 2.1!** The following classes have been updated in accordance with the 2.1 protocol:
 - gat
 - optionConfig
 - eventHandler
 - meters

Installation Modifications

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

Configuration Modifications

- 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**.



- 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.
- 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**.
- 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>
```

Engine Modifications

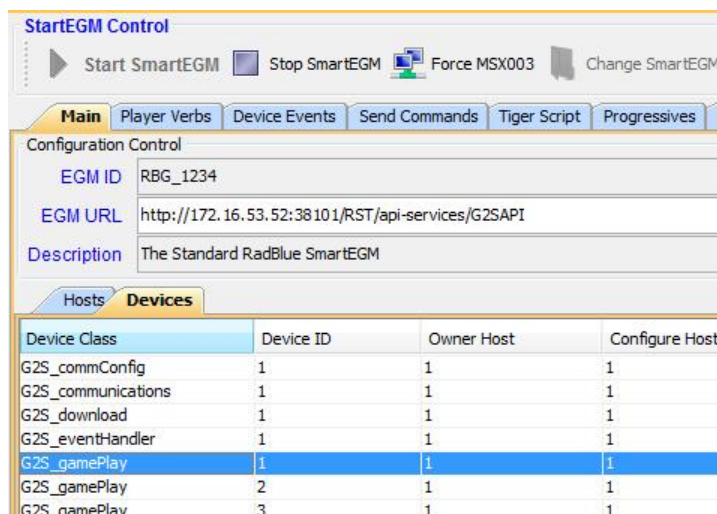
- **New for 2.1!** All message-level error codes (that can be returned in a `g2sAck` message) are now supported.
- An issue in which the tool referred to the wrong namespaces for Audit Meters (<http://www.gamingstandards.com/g2s/schemas/v1.0.3/g2sAM> instead of <http://www.gamingstandards.com/g2s/schemas/v1.0.3/ExtAM>) has been corrected.

RST now refers to the correct Audit Meters namespaces.

- Previously, on many events, RST 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 event now contains the status of only one device.

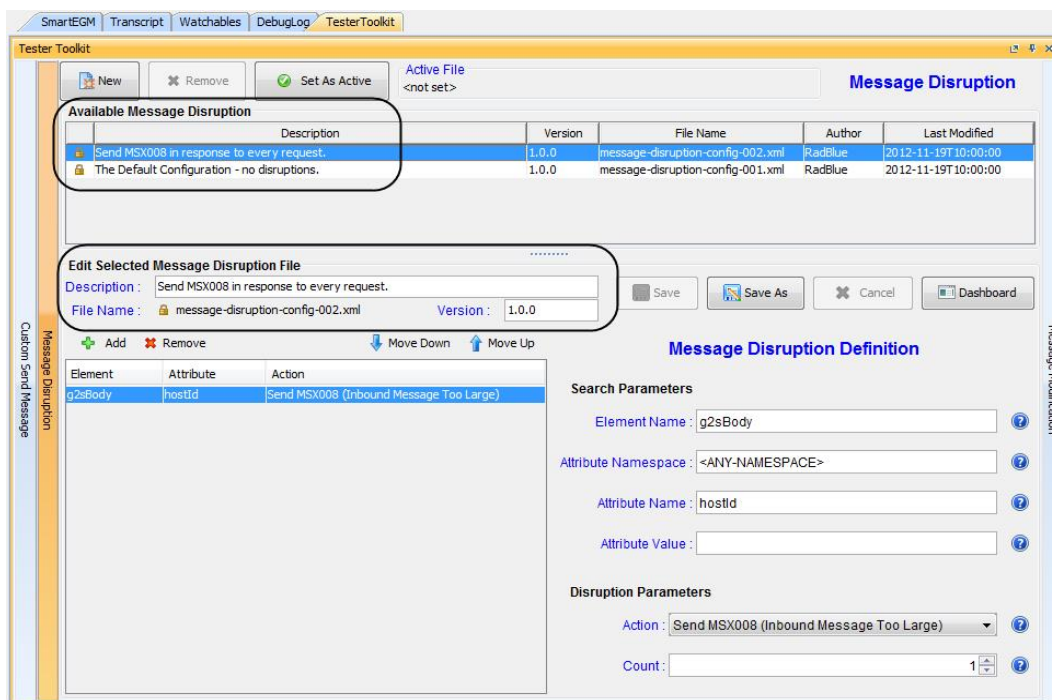
User Interface Modifications

- On the **SmartEGM layout** tab > **Main** > **Devices** tab, the `G2S_gamePlay` devices are now added to the Devices list when the RadBlue standard **package-4.zip** is downloaded and installed, appending new `gamePlay` devices defined in the package to the descriptor list.



Tester Toolkit Modifications

- A new **Message Disruption** feature lets you modify the response to specific messages received from the host. You can:
 - add a message to the *Available Message Disruption* list.
 - select that message.
 - edit and save modifications to that message (instructing the RST what to search for and how to respond).
 - view how the host responds to the message disruption through the Message Transcript.
- Once saved, the *Edit Selected Message Disruption File* screen area switches from an edit area (identifying the RST search parameters) to a *Dashboard* showing active message disruption definitions.



Tiger Scripting Modifications

- The following verbs have been added to Tiger Scripting:
 - `tiger:MessageDisruptionDefinition.add`
 - `tiger:MessageDisruptionDefinition.clearAll`

SmartEGM Modifications

General Modifications

- 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.
- 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, RST sent more than one device status element in an event (for example, `amediaDisplay` 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

- RST 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.
- RST now supports the `newoptionConfig.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**, RST 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

- RST 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`.

Remote Control Modifications

- Support for the Tester Toolkit's Message Disruption feature has been added to Remote Control. The following functions are now available:
 - Add Message Modification
 - Clear All Message Modifications
 - Delete Message Modification
 - Get All Message Modifications