



RadBlue G2S Scope Version 13

[Released: 06 DEC 2010]

Questions?

Log on to the RadBlue Forum: <http://radblue.mywowbb.com/>

Release Notes

Release Summary

In this release, we've added two new script verbs to the Custom Scripting module in the Tester Toolkit and corrected several minor issues.

For more information on the features and modifications discussed in this document, see the [RGS User Guide](#).

Functional Modifications

- Two additional script verbs have been added to the Custom Scripting module in the optional Tester Toolkit:
 - ♦ The **Run Script** verb lets you insert a wizard-driven script, configured through the Script Runner, into your custom script.

When you move the Run Script verb into the Custom Script Commands section, you are prompted to select a Script Runner script. The custom script you select is run at the point in the script you insert it. Changes to wizard driven scripts must be made through the Script Runner. Changes made to scripts in Script Runner are applied immediately to scripts inserted into custom scripts.
 - ♦ The **Notice** verb lets you create an informational message that is displayed to the user, in the Script Runner, at the point in the script you insert it. The notice displays on the Notice & Prompts tab until another notice or prompt is displayed.
- Each script, algorithm and response you create in the Tester Toolkit is now stored as an XML file. These files are located in [**installation directory**] >**custom-config**.

Engine Modifications

- RGS will now transition EGM to the sync state when disabling the comms device, until the commsStatus is received, acknowledging that the change has been implemented.
- As part of the standard startup sequence, RGS now sends a `eventHandler.clearEventSub` command before sending the `eventHandler.setEventSub` command. The `setEventSub` command is then followed by a `getEventSub` command so the Advanced Transcript Analyzer can test to make sure the EGM interpreted the event subscription properly.
- The **Advanced Transcript Analyzer** now verifies that transaction IDs are in the correct sequence, and checks for meter violations related to VCE103 and VCE108.

User Interface Modifications

- By default, the **Balanced Meter** tab in the Tester Toolkit's Custom Scripting feature now displays the result (pass/fail) of all tests.
- Amount fields have been changed from millicents to a dollar value. You can enter dollars, cents and millicents, using a DD.CC.MMM format. For example:

If you type . . .	The field value will be . . .
1	1.00
1.	1.00
1.0	1.00
1.00.1	1.00.100
1.00.01	1.00.010
1.00.001	1.00.001

Transcript Modifications

- Previously, the same filtering options applied to all instances of the Transcript object within the tool. Now, each instance of the Transcript object can be filtered differently.



RadBlue G2S Scope Version 12

[Released: 08 NOV 2010]

Questions?

Log on to the RadBlue Forum: <http://radblue.mywowbb.com/>

Release Notes

Release Summary

In this release, we've added an optional Tester Toolkit module, which will greatly extend your testing and improve the quality of your G2S implementation. We've also made several engine improvements and corrected some issues.

For more information on the features and modifications discussed in this document, see the [RGS User Guide](#).

Functional Modifications

- You can now create a SmartEGM configuration file for any EGM by clicking the **Save As** button on the **View Data Model** tab (**Databases > Data Model Viewer**).
- The Tester Toolbox, an optional feature set for RGS, is now available. This module lets you customize and extend RGS testing functionality for improved troubleshooting of G2S-based applications.

The Tester Toolkit consists of five powerful features that will extend your G2S testing:

- ♦ **Startup Algorithm** - Gives you complete control of the RGS startup algorithm. You can rearrange the order of commands, send multiple copies of commands, change the attribute settings on commands, and send multiple commands in a single G2S message.
- ♦ **Response Manager** - Lets you control how the RGS responds to any G2S request from the EGM. Using the Response Manager, you can instruct the RGS to return a proper response, an application error (general, class-specific or one you create) or even drop the message.
- ♦ **Script Runner** - Complex scripts that you can configure quickly through a scripting wizard.
- ♦ **Custom Scripting** - Create powerful scripts of any G2S host-initiated commands through an easy-to-use graphical interface. Custom Scripting can be used by test engineers to develop complex scripts that can then be run over and over by testers.
- ♦ **Advanced Transcript Analyzer** - Adds incredible functionality to ensure that the commands being sent by the EGM are semantically valid.

See the [Tester Toolkit User Guide](#) for details.

Engine Modifications

- Class-level commands (such as `getLog*`) are now only sent once per class by the startup algorithm.
- An issue with the extended `progressive.progressiveProfile` command has been corrected.
- The value of the `G2S_payGameResults` attribute has been corrected. It is now a valid value.
- If the **deleteCurrent** option (**Configure > Engine Options**) is set to **true**, RGS now sends the EGM a full list of validation IDs in every `validationData` response. RGS uses the `maxVallds` attribute from the `voucherProfile` to determine how many validation IDs the EGM can accept
- Previously, when sending the `getSupportedEvents` command, if you limited to a specific device class to determine supported events, the **Send Command eventHandler.getEventSub** screen allowed you to specify *only* items that were included in the last `supportedEventsList` command

The **Send Command eventHandler.getEventSub** screen has been modified to only populate from `eventHandler.getSupportedEvents` commands that are a wildcard request (or additive). If you limit the request, the response received does not limit subsequent `getEventSub` commands.

- An issue with the GZIP payload has been resolved.
- An issue in which the command view on the `optionConfigModeStatus` transcript details screen did not match the message content has been corrected.
- The following improvements have been made to the `download.packageLogList` command view in the transcript:
 - ♦ The **Device ID** column has been removed (only one download device is allowed).
 - ♦ A misspelling in the **Transaction ID** column header has been corrected.
 - ♦ The **Package Transfer** column has been changed to **Transfer Type**.
 - ♦ The `transferType` attribute displays if there is a `packageTransferLog` element (blank if there is not).
 - ♦ The contents of the Package Activity column now display the `activityType` attribute if there is a `packageActivityLog` element (blank if there is not).
- An issue in which a `meters.setMeterSub` command was sent even if no meter subscription was selected from the Meter Sub Type section (End of Day or Periodic) has been corrected.
- RGS now accepts the `IdStatus` enum facet of `G2s_lost`.
- Previously, if the EGM configuration was changed, the data model was not reset by the `commsClosing` command. The data model for an EGM now resets correctly.
- Several improvements have been made to the WAT implementation, so it functions more like an actual EGM.

- Improvements to the RGS WAT implementation include the following:
 - ♦ `initiateRequest` - Amounts can now be entered in cents (rather than millicents). In addition, values are now preloaded for the player currently at the EGM.
 - ♦ Deposits can now be made to "frozen" accounts.
 - ♦ **hostException=3 (Insufficient funds)** is now returned when a withdrawal is attempted that exceeds the player's available balance.
 - ♦ RGS now uses the `watProfile` information to determine if authentication (such as a PIN) is required for a `getWatAccounts` request. If you subscribe to WTE005 and WTE006, RGS automatically requests a new `watProfile` whenever the WAT configuration is modified at the EGM.
 - ♦ RGS now uses the WAT account details in the player database to determine if authentication is required for the account when the player requests a WAT balance.
 - ♦ The WAT authentication code was overhauled. It now works properly in all cases, including **G2S_none**.
 - ♦ `keyPair` logic was revisited and improved. There's now a **keyPairDatabase** control on the Databases layout that lets you work with the RGS keyPairs.

User Interface Modifications

- Log data is now displayed in the order it is found in the XML. Use the **Filter** option to sort data once it is displayed.



RadBlue G2S Scope Version 11

[Released: 02 AUG 2010]

Questions?

Log on to the RadBlue Forum: <http://radblue.mywowbb.com/>

Release Notes

Release Summary

In this release, we've added a new Key Pair Database, new configuration options and created an easy method for exporting an EGM data model.

For more information on the features and modifications discussed in this document, see the [RGS User Guide](#).

Installation Note

The computer you install RGS on must have a network connection. If it does not, you will **not** be able to send multicast commands successfully.

Known Issue

Issue: When you open RGS using the RGS-Developer desktop, the desktop is blank.

Workaround: To populate the desktop, maximize the application by clicking the box in the upper right corner of the screen.

To switch between the RGS and the RGS-Developer desktops, go to **Configure > Desktop Options > Default Desktop**. Click the drop-down arrow to select the desktop you want to use, click **OK**, and restart RGS.

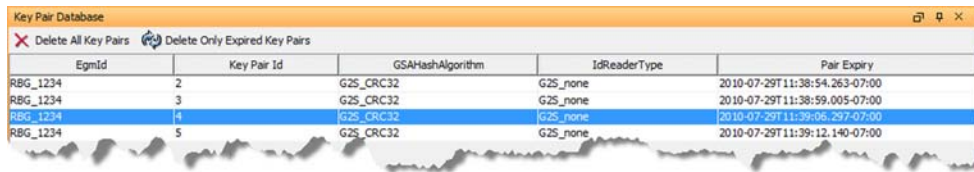
Configuration Modifications

- Two new configuration options have been added to the **Engine Options** screen (**Configuration > Engine Options**):
 - ♦ **Default Time To Live** - Time, in milliseconds, from when a command was originated before RGS disregards it. The default is 30 seconds (30000 milliseconds).
 - ♦ **Default Timeout** - Time, in milliseconds, RGS waits for the `g2sAck` response from the EGM. The default is 30 seconds (30000 milliseconds).

Functional Modifications

- RGS now supports WAT authentication by checking the `authCode` attribute in the `wat.getWatAccounts` and `wat.getWatBalance` commands.

- A new **Key Pair Database (Databases > Key Pair Database)** allows you to view the key pairs stored by RGS. You can delete all key pairs or only expired key pairs.



EgmId	Key Pair Id	GSAHashAlgorithm	IdReaderType	Pair Expiry
RBG_1234	2	G2S_CRC32	G2S_none	2010-07-29T11:38:54.263-07:00
RBG_1234	3	G2S_CRC32	G2S_none	2010-07-29T11:38:59.005-07:00
RBG_1234	4	G2S_CRC32	G2S_none	2010-07-29T11:39:06.297-07:00
RBG_1234	5	G2S_CRC32	G2S_none	2010-07-29T11:39:12.140-07:00

- A **Save As** option has been added to the **Data Model Viewer (DMV)** that lets you export an EGM data model to a SmartEGM configuration file (smartegm-config.xml) that you can then use with the RadBlue System Tester (RST) or the RadBlue Load Tester (RLT). For example, if:
 - ♦ you don't have full-time access to a real EGM, you can save the data model from a real EGM and then load it into RST.
 - ♦ you want RLT to mimic real EGMs, you can save multiple data models from real EGMs and load them into RLT.
 - ♦ you have a real EGM, but it does not allow you the same access and control for testing as the RST. Simply save an EGM data model through RGS, and then load it into RST.

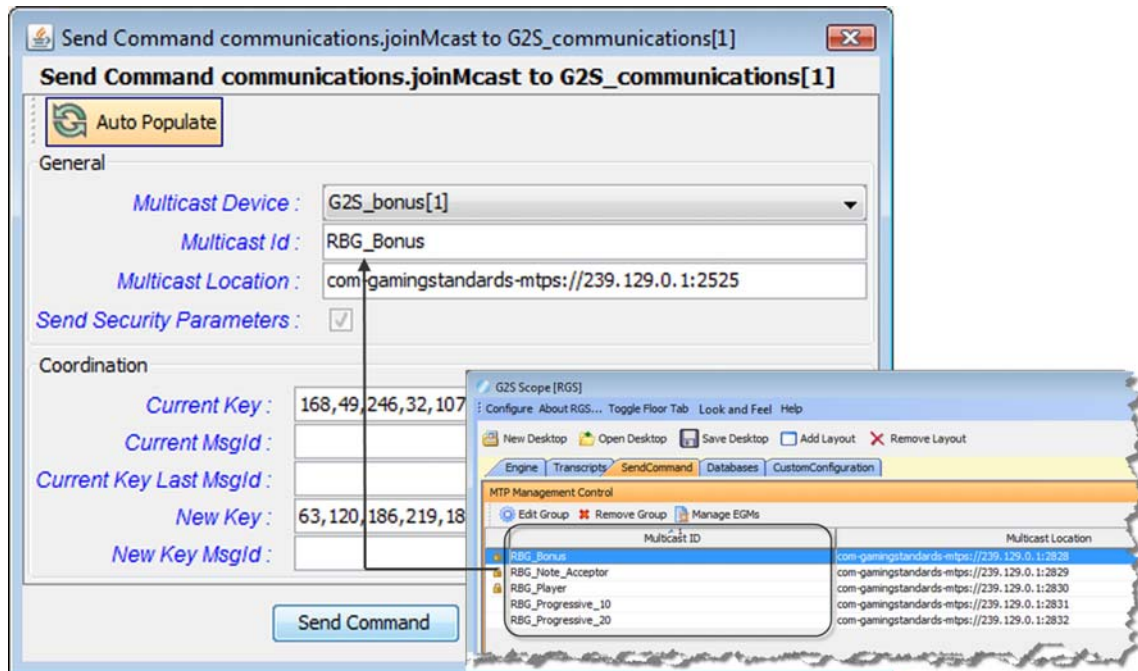
Engine Modifications

- An issue in which the G2S_PGX006 Progressive Hit Rejected by Host error was not being sent by RGS has been corrected. RGS now handles unknown progressive IDs correctly.
- The `t_cabinetStyles` data type is now an extensible list, which eliminates errors that were appearing in the debug log when a custom `cabinetStyle` attribute was sent in the `cabinetProfile` command.
- The RGS now supports the following attributes in the `wat.initiateTransfer` command:
 - ♦ *withdrawOk*
 - ♦ *cashDepositOk*
 - ♦ *promoDepositOk*
 - ♦ *nonCashDepositOk*
 - ♦ *selectAmt*
 - ♦ *defaultAmt*
 - ♦ *withdrawMax*
 - ♦ *depositMax*

If any of these attributes denies a transfer, RGS will respond with a transfer authorization of zero (0) dollars, with a **99 (Transfer Denied – No Reason Given)** error.

User Interface Modifications

- When Auto-Populate is pressed on the **Send Command communications.joinMcast** screen (**Send Command > G2S_communications > joinMcast**), the **Multicast ID** field is populated with the selected device's ID from the MTP Management Control panel *if* the device is active.



Note that, if the communications device for the host supports multicast (*allowMulticast* attribute is **true**), the Multicast Device drop-down displays all devices. If the selected device does not support multicast, you cannot join a multicast group for that device.

Transcript Modifications

- The detail view of the `optionList` command has been updated to show the requested EGM device list in a format that allows you to drill down into individual options.
- Additional command information has been added to the Comments column for Multicast commands.
- When the Transcript Message window is moved or resized, the tool now retains the new size and position when other rows are selected.
- The rows of the **Device Meters** tab on the `eventReport` command detail view now automatically resizes all rows so the columns do not need to be resized manually.

If the columns are adjusted, the tool retains the changes when other meter sets are viewed.

- An issue in which the transcript consumed excessive amounts of system resources has been corrected. The transcript is, once again, well-behaved.



RadBlue G2S Scope Version 10

[Released: 07 JUN 2010]

Questions?

Log on to the RadBlue Forum: <http://radblue.mywowbb.com/>

Release Notes

Release Summary

In this release, we improved usability for multicast commands and added an option that lets you quickly export debug logs when troubleshooting RGS issues. In addition, we've corrected several minor issues.

For more information on the features and modifications discussed in this document, see the [RGS User Guide](#).

Functional Modifications

- A new **Export Debug** option, located on the Debug Log tab, lets you create a .zip file containing all the files that the RadBlue support team needs to troubleshoot product issues. When you click **Export Debug**, a **Debug-[product-x.x.x].zip** file is exported to your computer's desktop.

Attach the .zip file to an email, along with a description of the issue, and send it to support@radblue.com.

or

Go to www.radblue.com/support, complete the support form, attach the .zip file and click **Send**. You will be contacted about your support issue within one business day.

Engine Modifications

- An issue in which RGS incorrectly detected duplicate player ID numbers has been corrected.
- In issue in which RGS generated DMV-related error messages when a `commConfig.commConfigModeStatus` command was received has been corrected.
- In previous releases, the **WAT Pay Method** on the **Send Command watinitiateRequest to G2S_wat** screen default to **G2S_payCredit** regardless of which pay method was selected. The selected pay method is now sent in the `wat.initiateRequest` command.

User Interface Modifications

- Extraneous device information has been removed from the **Send Command eventHandler.getEventSub** screen to improve usability.
- An issue in which data failed to populate the Player Database screen has been corrected.
- In previous versions, the Player Database was not updated when bonus points were awarded by the EGM. The effect was that the player would lose those points when the player card was removed. The Player Database now updates as bonus points are accrued.

- Two fields have been added to the **WAT Account Editor: Expire Credits** and **Expire Date/Time**.

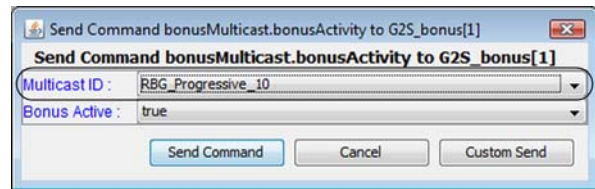
To access the new fields:

1. Click the **Databases** tab.
2. Click **Player Database**.
3. Select the player account you want to modify, and click **Edit Player**.
4. Click **Player WAT Accounts**.
5. Select the WAT account you want to modify, and click **Edit Account**

WAT Account Editor	
Account Id :	A-2222
Account Description :	Promo Credit Account
Cashable Amount :	0
Promo Amount :	50,000,000
Non-Cashable Amount :	0
Frozen :	false
Auth Required :	false
Withdrawal OK :	true
Cash Deposit OK :	true
Promo Deposit OK :	true
Non-Cash Deposit OK :	true
Select Amount :	true
Default Withdrawal Amount :	2,000,000
Withdrawal Max :	20,000,000
Deposit Max :	500,000,000
Expire Credits :	false
Expire Date/Time :	+10 minutes
<div>Save Cancel</div>	

6. Modify the WAT account fields as required.
 - Expire Credit** - Click the drop-down, and select whether promotional WAT credits expire (**true**) or not (**false**).
 - Expire Date/Time** - Type a date/time offset for when the WAT credits expire. This field is required *only* if the **Expire Credits** field is set to **true**.
 The Expire Date/Time value is expressed in the format **+n [seconds | minutes | hours | days | months]**. For example, "+20 hours" indicates that the WAT credits expire from the current date/time plus 20 hours.
7. Click **Save** to save your changes and exit the WAT Account Editor.

- You can now select from a drop-down list of currently active multicast IDs for the following commands:
 - ♦ `bonus.bonusActivity` via Multicast
 - ♦ `bonus.setBonusMessage` via Multicast
 - ♦ `bonus.setBonusAward` via Multicast
 - ♦ `noteAcceptor.getNoteAcceptorStatus` via Multicast
 - ♦ `noteAcceptor.getNoteAcceptorState` via Multicast
- Each of these commands can be accessed through the **Send Command** object.



Transcript Modifications

- An issue in which the command filter (**Filter** option) caused some commands not to be displayed in the transcript (making it appear that the commands were not received by the tool) has been corrected.
- Minor spelling errors have been corrected on the `wat.getWatProfile` command view.
- The command view for the `wat.initiateTransfer` command now displays the correct pay method.



RadBlue G2S Scope Version 9

[Released: 07 APR 2010]

Questions?

Log on to the RadBlue Forum: <http://radblue.mywowbb.com/>

Release Notes

Release Summary

In this release, we added a comparison feature to the Data Model Viewer, added new options for sending custom command and command content, and made several minor improvements.

For more information on the features and modifications discussed in this document, see the [RGS User Guide](#).

Functional Modifications

- A new **Compare Data Models** feature in the Data Model Viewer (DMV) allows you to make a copy of an EGM's data model (snapshot), perform a series of tests, after which a second snapshot is created. You can then compare the two snapshots to see all changes that occurred in the EGM as a result of the testing that was performed.

When you compare two snapshots, the information is displayed in a separate Compare Snapshot Deltas tab and organized by information type (options, meters and status). You can add comments to the comparison output and print the current view of the active tab.

All information displayed in the Data Model Viewer is *read-only* and cannot be modified. RGS does not request all EGM data at startup, so some information may be missing from the data model until RGS receives that information. If you are using the optional Custom Configuration module, you can request all EGM data or data for specific classes *on demand*.

Generate multiple comparisons.

Denotes snapshots being compared.

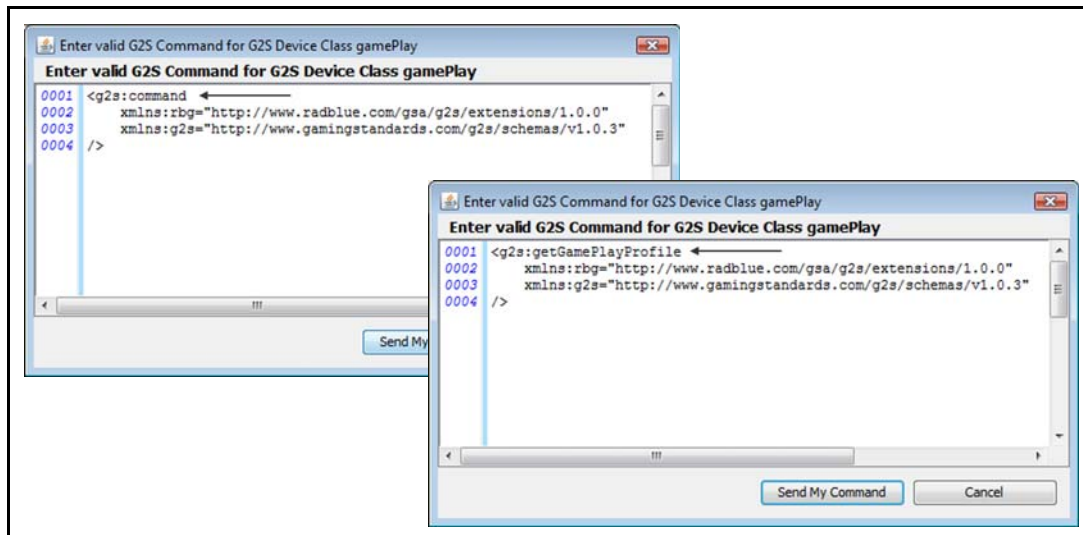
Click to print the current view.

Information is displayed by information type.

Double-click a row to add a comment.

Device	ID	Attribute	Status	Older Value	Newer Value	Delta	Comments
cabinet	526059076	G2S_gamesSinceDoorClosedCnt	Modified	0	2	2	
cabinet	526059076	G2S_gamesSinceInitCnt	Modified	0	2	2	
cabinet	526059076	G2S_gamesSincePowerResetCnt	Modified	0	2	2	
cabinet	526059076	G2S_playerCashableAmt	Modified	0	126500000	1265.00.000	start test
cabinet	526059076	G2S_wageredCashableAmt	Modified	0	6000000	60.00.000	
coinAcceptor	0001	G2S_currencyInAmt	Modified	0	1250000	12.50.000	
coinAcceptor	0001	G2S_currencyInCnt	Modified	0	125	125	
coinAcceptor	0001	G2S_currencyToDropAmt	Modified	0	1250000	12.50.000	
coinAcceptor	0001	G2S_currencyToDropCnt	Modified	0	125	125	

- A new **Send Raw XML** option, located on the Send Command layout, lets you send any content to an EGM over a G2S connection. RGS does no additional wrapping of the message, but rather, sends exactly what you have entered to the EGM.
- A new **Send My Command** option, located on the Send Command layout, lets you send a custom command that RGS then wraps with the G2S class and G2S message elements before sending. The G2S information completed automatically by RGS includes command ID, session ID and date/time values. You can also add attributes and elements in custom namespaces, if required. This option is useful when you want to send a custom command to a device exposed through the descriptor list.



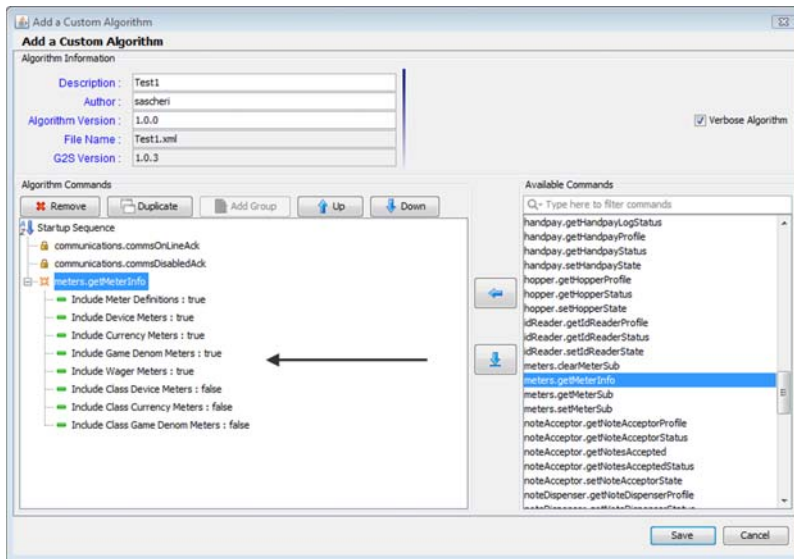
Engine Modifications

- An issue in which RGS was responding to response messages has been corrected.
- The DMV user interface now handles and displays nested complex parameters from option lists. Each parameter is displayed using the parameter name.
- An issue has been corrected in which RGS disregards any comms device other than the comms device associated with the comms channel. RGS now processes all comms devices correctly.

User Interface Modifications

- Eight new attributes have been added to the `meters.getMeterInfo` command.

If you are using the optional Custom Configuration module, you can configure the startup algorithm to define the meter sets requested by RGS.



- Several fields have been removed from the **getMeterInfo** command view in the Transcript because the information is redundant. All fields appear in the table on righthand side of screen.
- You can now enter a zero (0) value into the **Package Size** field on the **Add Package** screen.
- The **Transfer ID** field on the **addPackage** screen now allows a zero (0) value. Zero is now also the default value.
- The **communications device** has been added to the DMV tree-structured control.

Transcript Modifications

- The Transcript has been updated to properly display eventReport event text. Previously, event text would not display if it contained a colon (:).
- The command view for invalid G2S messages now directs the user to view the command XML.



RadBlue G2S Scope Version 8

[Released: 08 MAR 2010]

Questions?

Log on to the RadBlue Forum: <http://radblue.mywowbb.com/>

Release Notes

Release Summary

In this release, we have made improvements that allow you to more easily use SSL in RGS. We have also added a new Data Model Viewer, a new multicast bonus activity filter, and the ability to send custom messages that you construct yourself. In addition, we've made several improvements to the user interface.

For more information on the features and modifications discussed in this document, see the [RGS User Guide](#).

Installation Modifications

- RGS now uses **Java 1.6.0_18** for both Windows and Linux versions. This version of Java *must* be installed on your computer to complete RGS installation. If the installer does not detect this version of Java on your computer, you are prompted to download it.
 - ♦ Click **Download** to download and install the new Java version before continuing with the installation.
 - ♦ Click **Locate** to browse to the **java.exe** file for version 1.6.0_18.
 - ♦ Click **Cancel** to exit the installation.

Configuration Modifications

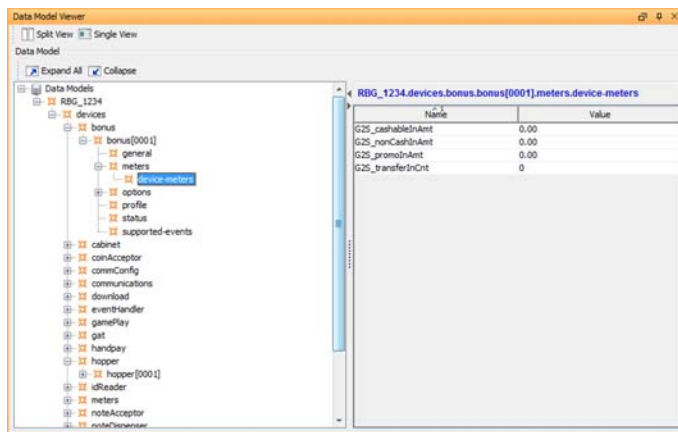
- We've improved the **Configure > Security Options** screen to make using SSL easy. You can choose one of three options:
 - ♦ **Self-Signing** - Create a self-signed certificate from the tool.
 - ♦ **SCEP** - Use SCEP to create a request that is sent to the certificate authority and automatically imports the signed certificate when it becomes available.
 - ♦ **Third-Party** - Create a request that you manually send to the certificate authority, and then manually import the signed certificate into the tool.
- The **Approve all certificates** option under **Configure > Security Options** is now disabled by default. When this option is disabled, you must have a valid certificate from the certificate authority and use an SSL connection (HTTPS).
- A **Filter Multicast G2S Bonus Activity from Transcript** option has been added to the **Configure > Engine Options** screen. Enable this option to filter G2S `bonus.bonusActivity` commands from the Transcript and Multicast Transcript *if (and only if) the bonus.bonusActivity command is sent via multicast*.

Functional Modifications

- A new **Data Model Viewer** (DMV) has been added to the Databases layout.

As commands are sent from an EGM, RGS updates its copy of the EGM's data model. For example, if an EGM's meters are incremented, the corresponding meters are updated in the RGS data model when RGS receives the appropriate event message. The data model not updating as expected could indicate an issue with G2S protocol compliance or a general implementation issue.

The RGS Data Model Viewer lets you easily see changes to the RGS data model *as they occur*. Using a tree-structure control, you can quickly drill-down to the attribute(s) or information you want to view.



RGS supports up to five EGMs and you can select the data model you want to view. A Split View option lets you view two different areas of a data model at once or view information for two different EGMs at once.

All information displayed in the Data Model Viewer is *read-only* and cannot be modified. RGS does not request all EGM data at startup, so some information may be missing from the data model until RGS

receives that information. You can request EGM data for all or data for specific classes through the Script Runner feature in the Custom Configuration module.

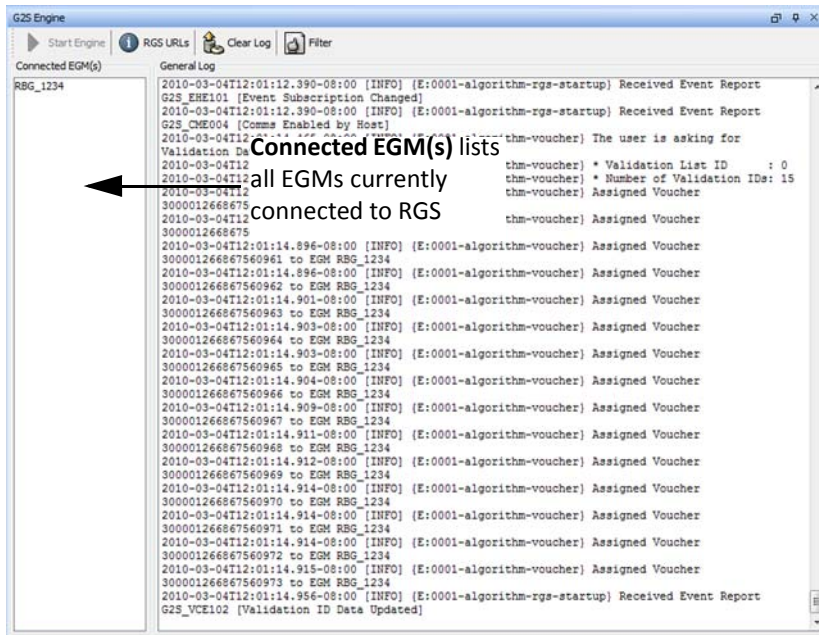
- A new **Send Raw XML** button on the Send Command layout lets you send custom G2S messages. With the Send Raw XML feature, you can introduce custom errors into your testing. Type a message directly into the dialog box or cut-and-paste a message from an XML editor.

Engine Modifications

- The RGS now limits the number of unique, connected EGMs to five (5). The sixth and subsequent unique EGM will not be allowed to proceed and an APX999 error will be sent to that EGM.
- The *lockTimeOut* attribute default value in all *setLockOut* commands has been changed to **1000** to conform to the G2S protocol.

User Interface Modifications

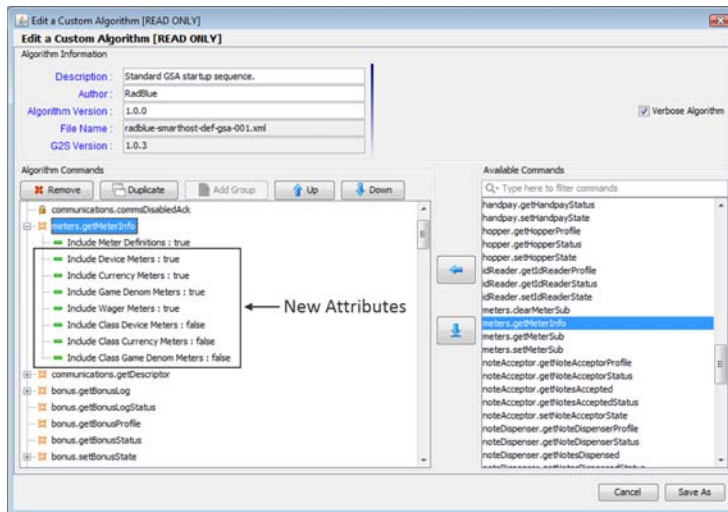
- A sidebar has been added to the G2S Engine object that displays all connected EGMs.



- Previously, the startup script allowed RGS to send an `eventHandler.setEventSub` command that did not contain any event subscriptions, which is an illegal command. This issue has been corrected.
- The **Validation Date/Time** field on the Player Editor has been removed.
- The **Voucher History Panel** has been modified with the removal of the **Action** column. In addition, an entry is no longer posted for each allocated voucher. To view allocated vouchers, select the **Voucher Database** tab.
- The **Locked Device Class** and **Locked Device ID** fields on the Command view for the `cabinet.cabinetStatus` command have been consolidated into a single **Device** field.



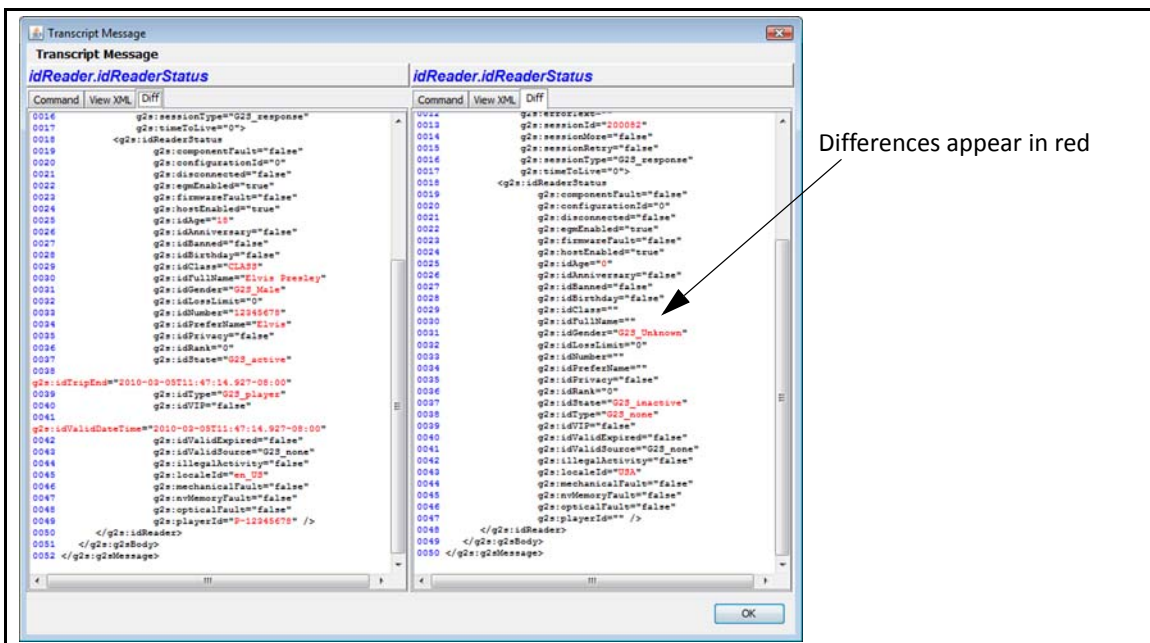
- Additional attributes for the `meters.getMeterInfo` command are now available when adding or editing a custom startup algorithm (**Custom Configuration > Startup Algorithms > Add or Edit**).



You can now set the following command attributes:

- ♦ Meter Definitions
- ♦ Device Meters
- ♦ Currency Meters
- ♦ Game Denom Meters
- ♦ Wager Meters
- ♦ Class Device Meters
- ♦ Class Currency Meters
- ♦ Class Game Denom Meters

- The **Diff** tab on the Transcript message comparison screen (accessed by selecting two messages and clicking **Compare**) has been improved so you can more easily see the differences between two messages.





RadBlue G2S Scope Version 7

[Released: 03 FEB 2010]

Questions?

Log on to the RadBlue Forum: <http://radblue.mywowbb.com/>

Release Notes

Release Summary

In this release, we updated RGS to use G2S protocol version 1.0.3r5, added Voucher History and Player objects to the Databases layout, added an Error Log object to the Engine layout, and made several corrections. A new MTP Management Control object automates the creation of multicast groups.

Important Notes!

You must have a 2010 license to use RGS versions released in 2010. This includes RGS 7. No license? Give us a call at +1.775.329.0990, or send an e-mail to support@radblue.com.

The update to G2S protocol version 1.0.3r5 adds a new attribute that may cause problems for hosts using an older schema version (see below).

Improvements

- The GSA version of RGS has been updated to G2S protocol version 1.0.3r5. RGS now supports the `issueVoucher` and `voucherLogList` commands that have the new *expireDays* attribute in the base G2S namespace.
- An MTP Management Control object has been added to the Send Command layout.

If the **Automate Multicast Host Behavior** option (**Configure > Engine Options**) is selected, RGS automatically creates default multicast groups for the connecting EGM.

From the MTP Management Control object you can manage multicast groups. By default, the following multicast groups are created for you:

- ♦ **RBG_Bonus** - RadBlue multicast group for the bonus class. This group cannot be deleted.
- ♦ **RBG_Note_Acceptor** - RadBlue multicast group for the note acceptor class. This group cannot be deleted.
- ♦ **RBG_Player** - RadBlue multicast group for the player class. This group cannot be deleted.

In addition, a multicast group is created for each progressive supported by the EGM.

From the MTP Management Control object, you can:

- ♦ Edit a Multicast Group
- ♦ Add an EGM to a Multicast Group
- ♦ Remove an EGM from a Multicast Group
- ♦ Delete a Multicast Group

See the [RGS User Guide](#) for more information.

- RGS now automatically sends a `bonus.bonusActivity` command to the EGM based on the following three **Configure > Engine Options** screen options:
 - ♦ **Automatic Bonus Updates Interval** - Type, in milliseconds, how often to send `bonusActivity` commands to the EGM.
 - ♦ **Automatic Bonus Updates Using Multicast** - Select to send broadcast messages using multicast messaging. Clear this option to send broadcast messages using point-to-point messaging.
 - ♦ **The bonusActive Flag** - Select to send a `bonusActive` command "heartbeat" to the EGM.
- A **Player Database** object has been added to the Databases layout. From the Player Database you can view and manage the details of each player and employee account in the RGS player database. The Player Database lets you manage player and employee account information, player ratings information and player Wagering Account Transfer (WAT) account information. See the [RGS User Guide](#) for more information.
- The Transcript has been modified to break out each command in a multi-command G2S message into a separate line (as if each command was received in a separate message).
- A **Voucher History** tab has been added to the Databases layout that lets you see voucher states as they move through the allocation, issuance and redemption process. See the [RGS User Guide](#) for more information.
- An **Error Log** object has been added to the Engine layout that lets you view error and warning messages *only*.
- The `getMcastList` command has been added to the startup algorithm. This command is sent before the `setCommsState` command. This is used to support the new MTP Management Control functionality.
- The **Send Command download.addPackage** and **download.uploadPackage** screen now retains the last value for the **Transfer Location** and **Transfer Parameters** fields. The **Reason Code** field on the **addPackage** interface under **Send Command > Download** is limited to 10 characters.
- If RGS is blocked at startup from launching its web service, it now attempts to restart the web service every 30 seconds.
- You can now set the filter attributes on the `eventHandler.getSupportedEvents` command through the Send Command as well as the Startup Algorithms object on the Custom Configuration layout

Corrections

- Previously, when the `setWatCashOut` request was sent from RGS, the `cashOutToWat` attribute was not being set to **true**. This attribute is now set correctly.
- The field labels on the **Send Command watinitiateRequest** user interface have been corrected.
- The RGS now responds correctly to the `getMcastKeyUpdate` command from the EGM.

- An issue in which an error would display in the debug log if an EGM ID contained a colon (:) has been corrected.
- In compliance with G2S protocol version 1.0.3r3, the **CBE109** and **CBE110** events have been removed from the **Configure > Engine Options** screen.
- Previously, RGS rejected `gat.componentList` commands containing a third-party component type value. In compliance with G2S protocol version 1.0.3r3, RGS now supports third-party component type values.
- The RGS timer that determines when an is considered lost (**Configure > Engine Options > Lost Comms Interval**) is now automatically adjusted when you change the *keepAliveInterval* through the Send Command object.