



RadBlue System Tester Version 13

[Released: 06 DEC 2010]

Questions?

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

Release Notes

Release Summary

For this version, we added a new attribute to the SmartEGM configuration file and made some usability improvements to RST.

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

Functional Modifications

- A new *edm:command-id-reset* attribute has been added to the SmartEGM configuration file. This attribute lets you reset the Command ID sequence to **1** just before the `commsOnline` command is sent.

Set this attribute to **true** to reset the Command ID or set this **false** if you do not want to reset the Command ID. By default, this attribute is set to **false**.

In the following example, the command ID will reset before the `commsOnline` command is sent

```
<!-- The G2S COMMUNICATIONS Device -->

<edm:communications edm:device-id="1" edm:device-active="true"
edm:configuration-id="0" edm:comms-on-line-ack-timeout="30000"
edm:host-enabled="true" edm:egm-enabled="true" edm:egm-locked="false"
edm:host-locked="false" edm:owner-id="1" edm:config-id="0" edm:vendor-id="Unknown"
edm:product-id="Undefined" edm:release-number="Undefined"
edm:vendor-name="Undefined" edm:product-name="Undefined"
edm:serial-number="Undefined" edm:command-id-reset="true">

</edm:communications>
```

- RST now accepts HTTPS as a valid download protocol. The RST must have a certificate signed by the same CA as the download server. The certificate can be loaded through the **Configure > Security Options** screen. If you want to use two different certificate authorities (for example, one for G2S communications and one for the download server), contact [RadBlue](#).

Engine Modifications

- Previously, the maximum length of the *G2S_acceptNoMix* attribute in the SmartEGM configuration file was set to zero. The configuration should be a string enumeration of *G2S_acceptAlways*, *G2S_acceptSameExpiration*, *G2S_acceptNoMix* or *G2S_acceptNever* (see table 3.11 of the *G2S Message Protocol v1.0.3*).
- RST was incorrectly updating EGM-issued meters for system-issued vouchers. RST now correctly updates system-issued meters for system-issued vouchers.

User Interface Modifications

- 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 System Tester

Version 12

[Released: 08 NOV 2010]

Questions?

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

Release Notes

Release Summary

For this version, we overhauled WAT processing, made changes to the Device Events tab, added a new Send Commands tab and created a new method of entering third-party options in the smartegm-config.xml file. In addition, we added error codes to support the `setOptionConfig` command, added device events to the Tiger script and addressed several issues.

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

Engine Modifications

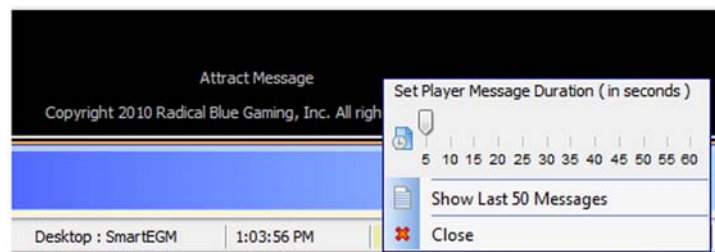
- Previously, the EGM allowed the user to play a progressive game even though the progressive device was disabled. The Play Progressive Game screen now displays an error if the progressive device that is selected is disabled.
- If an `setEventState` command is sent that disables the `eventHandler`, the SmartEGM no longer continues to send `eventReport` commands.
- An issue in which a `G2S_CBE205` (EGM Enabled and Playable) cabinet event was sent erroneously has been corrected.
- Previously, when the `setMeterSub` request was sent during the startup sequence, it used wildcards to subscribe to all meters, but the `meterSubList` response that was returned contained wildcards instead of an actual list of meters. Now, the `meterSubList` contains a list of all meters to which the host has subscribed.
- Wager meters now include meter definitions, if requested.
- The EGM lock and state manager was revisited, and should now process disables and locks correctly (in accordance with the G2S protocol specification), sending appropriate events at the proper times.
- Numerous changes were made to RST events to correct errors that were discovered by the Tester Toolkit.
- RST now checks for the WAT device log during EGM start-up to check the `watState`. If the `watState` is not `G2S_commitAked`, will send `commitTransfer` command to the host with `watEgmException` set to **1 - Transfer error from host**.

- The SmartEGM configuration file (smartegm-config.xml) has a new method of entering third-party options. This change allows more control over how the option list is generated.

The cabinet class in the new smartegm-config file exemplifies the new method. However, you can modify any other class, as needed, to take advantage of this new functionality. Go to the cabinet class section of the smartegm-config.xml (**RST installation directory > smart-conf > smart-egm**) to see the changes.

Note that the RST now automatically saves smartegm-config.xml files with old-style option configs to the new option config method when the -updated.xml file is created.

- RST now supports `setOptionChange` error code G2S_OCX15 (Non-Modifiable Parameter Change Requested by Host), which occurs if the host tries to initiate a change to a parameter when the `canModRemote` attribute is set to **false**.
- RST now supports a table of default values for optionConfig table (for example, the currency data tables).
- The WAT class implementation in RST underwent a complete review, resulting in numerous changes, including the following:
 - ◆ Lock text displayed to the player now clears when the `lockOut` is removed or expires.
 - ◆ The WAT Account Transfer interface is automatically updated to only allow transfer FROM-EGM when accessing a "frozen" account.
 - ◆ **Get Key Pair** is not relevant for host-controlled WAT devices.
 - ◆ The `cashOutToWat` attribute is automatically set to **true** by the EGM when a player is authenticated during the `getWatAccounts` processing. This attribute is automatically cleared when the player's ID is removed.
 - ◆ If the `hashType` is changed in the WAT Profile for an EGM-controlled WAT device, the RST now automatically sends a `getKeyPair` command to the host.
- The RST player display handler has been improved:
 - ◆ The display handler will properly accommodate multiple messages being sent to the display while the first message is currently being displayed. In Release 12, the player display now has an inbound queue that is one message deep, and which is always overwritten by new messages. This means the RST processes the most recent waiting message whenever a displayed message times out. To access all received messages, right-click on the RST Player Display.
 - ◆ If a device is disabled and then enabled, the message displayed to the player clears when the device is enabled (if it is still being displayed to the player).



- The following error codes are now supported for the setOptionChange command:

Table 1 Supported setOptionChange error codes.

Error Code	Description
G2S_OCX001	Invalid Device Class/Device Identifier
G2S_OCX007	Invalid Apply Condition
G2S_OCX008	Invalid Disable Condition
G2S_OCX009	Disable Condition Not Specified
G2S_OCX011	Invalid Option Group for Device
G2S_OCX012	Invalid Option for Option Group
G2S_OCX013	Invalid Value Selected for Option
G2S_OCX014	Invalid paramId for Option
G2S_OCX015	Non-Modifiable Parameter Change Requested by Host
G2S_OCX017	Invalid Change Request

- The following device events have been added to the Tiger script:

Table 2 Tiger Script device events added in version 12.

Class	Device Event
Cabinet	AUXILIARY_DOOR_CLOSED
	AUXILIARY_DOOR_OPENED
	BACKUP_BATTERY_LOW
	CABINET_DOOR_CLOSED
	CABINET_DOOR_OPENED
	CABINET_FAULTS_CLEARED
	CASH_OUT
	EGM_POWER_LOST
	EGM_POWER_UP
	EGM_STATE_AUDIT_MODE
	EGM_STATE_DEMO_MODE
	EGM_STATE_OPERATOR_DISABLED
	EGM_STATE_OPERATOR_LOCKED
	EGM_STATE_OPERATOR_MODE
	EXIT_OPERATOR_MENU

Table 2 Tiger Script device events added in version 12.

Class	Device Event
	GENERAL_CABINET_TILT
	GENERAL_MEMORY_FAILURE
	HARD_METERS_DISCONNECTED
	HARD_METERS_RECONNECTED
	LOGIC_DOOR_CLOSED
	LOGIC_DOOR_OPENED
	NVM_FAILURE
	OPERATOR_RESET_CABINET
	OPERATOR_CHANGED_CABINET_CONFIG
	POWER_OFF_AUXILIARY_DOOR_OPEN
	POWER_OFF_CABINET_DOOR_OPEN
	POWER_OFF_LOGIC_DOOR_OPEN
	SERVICE_LAMP_OFF
	SERVICE_LAMP_ON
	VIDEO_DISPLAY_ERROR
Coin Acceptor	ACCEPTOR_FAULT
	ACCEPTOR_JAMMED
	CLEAR_ALL_FAULTS
	COIN_ACCEPTOR_CONNECTED
	COIN_DROP_DOOR_OPEN
	COMPONENT_FAULT
	DIVERTER_FAULT
	FIRMWARE_FAULT
	ILLEGAL_ACTIVITY_DETECTED
	LOCKOUT_MALFUNCTION
	MECHANICAL_FAULT
	NON_VOLATILE_MEMORY_FAULT
	OPTICAL_FAULT
	COIN_ACCEPTOR_DISCONNECTED

Table 2 Tiger Script device events added in version 12.

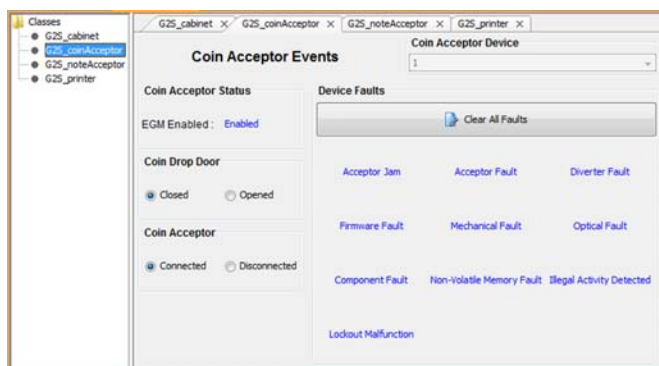
Class	Device Event
	COIN_DROP_DOOR_CLOSED
	OPERATOR_CHANGED_COIN_ACCEPTOR_CONFIG
Note Acceptor	ACCEPTOR_FAULT
	ACCEPTOR_JAMMED
	CLEAR_ALL_FAULTS
	COMPONENT_FAULT
	FIRMWARE_FAULT
	ILLEGAL_ACTIVITY_DETECTED
	MECHANICAL_FAULT
	NON_VOLATILE_MEMORY_FAULT
	NOTE_ACCEPTOR_CONNECTED
	OPTICAL_FAULT
	STACKER_DOOR_OPEN
	STACKER_FAULT
	STACKER_FULL
	STACKER_JAMMED
	STACKER_NEARLY_FULL
	STACKER_REMOVED
	VALIDATOR_TOTALS_RESET
	NOTE_ACCEPTOR_DISCONNECTED
	OPERATOR_CHANGED_NOTE_ACCEPTOR_CONFIG
	STACKER_DOOR_CLOSED
	STACKER_INSERTED
Printer Device	CLEAR_ALL_FAULTS
	COMPONENT_FAULT
	FIRMWARE_FAULT
	MECHANICAL_FAULT
	NON_VOLATILE_MEMORY_FAULT
	OPTICAL_FAULT

Table 2 Tiger Script device events added in version 12.

Class	Device Event
	PAPER_EMPTY
	PAPER_JAM
	PAPER_LOW
	PRINT_HEAD_OPEN
	PRINTER_CHASSIS_OPEN
	PRINTER_CONNECTED
	OPERATOR_CHANGED_PRINTER_CONFIG
	PRINT_HEAD_CLOSED
	PRINTER_CHASSIS_CLOSED
	PRINTER_DISCONNECTED

User Interface Modifications

- A new **Send Commands** tab lets you send EGM-initiated `optionList`, `commsHostList`, `getMcastKeyUpdate` and `getCountdownOverride` commands. These commands were previously located on the Device Events tab.
- The **Send CommsHostList** option on the Send Commands tab will be enabled *only* if there is a comm Config device.
- The **Device Events** tab has been modified with the addition of a tree-structure control, a new cabinet events option (including employee mode) and a user-friendly layout for each device option screen.



Transcript Modifications

- Previously, the amount values in the `handpay.handpayRequest` command view did not match the content in the actual message. The values in the `handpay.handpayRequest` command view now correctly reflect the message content.



RadBlue System Tester Version 11

[Released: 02 AUG 2010]

Questions?

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

Release Notes

Release Summary

For this version, we made improvements to the transcript, enhanced performance of debug version of RST and corrected an issue with the average payback percentage.

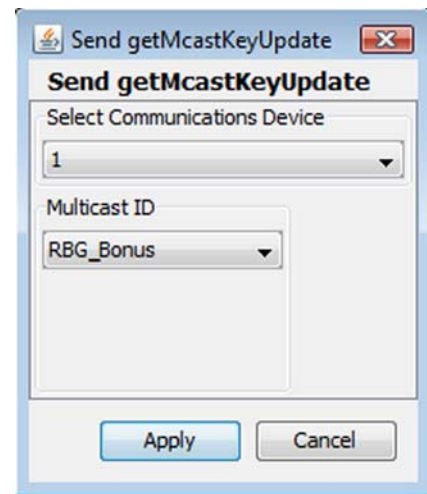
For more information on the features and modifications discussed in this document, see the [RST User Guide](#).

User Interface Modifications

- The **Send getMcastKeyUpdate** screen field names have been updated for improved usability.

The **Send getMcastKeyUpdate** option allows you to send a `communications.getMcastKeyUpdate` command, which causes the SmartEGM to update its security parameters.

- If the SmartEGM configuration file does not contain any WAT devices, the **WAT Transfers** tab will now be disabled.



Engine Modifications

- An issue in which RST did not correctly update and report the average payback percentage for game play device 0 has been corrected. The `avgPaybackPct` attribute is now calculated correctly.
- The debug version of RST has been improved for faster performance.
- The voucher engine now correctly uses the `expireNonCash` and `expireCashPromo` attributes in the `voucherProfile` to determine the `expireDays` and `expireDataTime` attributes when a new promotional or non-cashable voucher is created.

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 System Tester Version 10

[Released: 07 JUN 2010]

Questions?

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

Release Notes

Release Summary

For this version, we added an option that lets you quickly export debug logs when troubleshooting RST issues and corrected some minor issues.

For more information on the features and modifications discussed in this document, see the [RST 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.

User Interface Modifications

- In previous versions, changes to the **SSL Port** field value (**Configure > Engine Options > SSL IP Address & SSL Port**) were not saved. This issue has been corrected.
- The XSD file for the SmartEGM(`[installation directory] > docs > tiger-script > namespaces > http_www_radblue_com_g2s_egm-data-model_schemas_v1_0_0`) has been updated to replace erroneous `<tiger:pause>` references with the correct `<core:pause>` element.

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 System Tester Version 9

[Released: 07 APR 2010]

Questions?

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

Release Notes

Release Summary

For version 9, we've created a new installer that can be used for all RST versions, added extra meters to several events and corrected minor Transcript issues.

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

Installation Modifications

- A new RST installer now determines the product version through your license. This allows us to have a single installer for multiple versions of the product. If you were previously using a custom installer, you can now use the general installer available on the RadBlue web site.
- You can view XML schema Help files used with RST by navigating to the **docs** folder in the RST installation directory *or* navigate to:

Start > All Programs > RadBlue System Tester > XSD Docs

XSD Help files are available for Tiger Scripting, G2S, EGM data model configuration, and SmartEGM package definition.

- The file names of the SmartEGM configuration files installed with RST have changed. GSA configuration files now contain a "-gsa" identifier. Third-party configuration files are also appropriately identified.
 - ♦ smartegm-config-gsa-central.xml
 - ♦ smartegm-config-gsa-mult-events-per-msg.xml
 - ♦ smartegm-config-gsa-rpa.xml
 - ♦ smartegm-config-gsa-student-edition-rpa.xml
 - ♦ smartegm-config-gsa-student-edition.xml
 - ♦ smartegm-config-gsa-with-ssl.xml
 - ♦ smartegm-config-gsa.xml

Functional Modifications

- The DMV user interface now handles and displays nested complex parameters from option lists. Each parameter is displayed using the parameter name.
- In previous versions, options could be defined in the SmartEGM configuration file for third-party devices, but RST would ignore them. Third-party device options are now read and sent to the host like standard options.

Engine Modifications

- The G2S_gamesSinceDoorClosedCnt and G2S_gamesSincePowerResetCnt meters have been added to the GPE112 event.

User Interface Modifications

- A new verb, `tiger:sendMyCommand`, has been added to the Tiger script. The `sendMyCommand` verb lets you send a custom command that is wrapped with the G2S class and G2S message elements before sending. The G2S information completed automatically by RST 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.

For more information, see the [Tiger Scripting Reference](#).

- Currency, gameDenom and wager meters have been added to several events.

Table 1 gamePlay Class

Event Code	Meter Set	Action
GPE103 Primary Game Start	gameDenom	wageredAmt increases by the initialWager value. avgPaybackPct is updated to reflect wager. theoPaybackAmt is incremented by wager times the payback percent for the wager category played.
	wager category	wageredAmt increases by the initialWager value.
GPE104 Wager Changed	gameDenom	wageredAmt increases by the wager change value. avgPaybackPct is updated to reflect wager change. theoPaybackAmt is incremented by wager times the payback percent for the wager category played.
	wager category	wageredAmt increases by the wager change value.
GPE105 Primary Game End	Alternately, the updates for GPE103 and GPE104 (above) can be done at Primary Game End (but not in both places). If done here, use the finalWager value.	
GPE112 Game Ended	gameDenom	playedCnt increments by 1.
	wager category	playedCnt increments by 1.

Note **gameDenom** is the device and class. The wager category affects device meters *only*.
gameDenom meters are referenced by the gameDenom of the gamePlay device being played.
wagerMeters are referenced by the wagerCategory being played.

Table 2 coinAcceptor Class

Event Code	Meter Set	Action
CAE105 Inappropriate Coin In	currency [device + class]	Same updates as device meters, but to the currency meters (denomId+currencyId+currencyType). currencyInAmt and (currencyToDropAmt or currencyToDispenserAmt) increment by baseCashableAmt of accepted currency. currencyInCnt and (currencyToDropCnt or currencyToDispenserCnt) increment by number of coins accepted.
CAE109 Coin(s) Accepted		

Table 3 noteAcceptor Class

Event Code	Meter Set	Action
NAE114 Note Stacked	currency [device + class]	Same updates as device meters, but to the currency meters (denomId+currencyId+currencyType). currencyInAmt and (currencyToDropAmt or currencyToDispenserAmt) increment by baseCashableAmt of accepted currency. currencyInCnt and (currencyToDropCnt or currencyToDispenserCnt) increment by 1.

Table 4 hopper Class

Event Code	Meter Set	Action
HPE109 (Extra) Coins Paid	currency [device + class]	Same updates as device meters, but to the currency meters (denomId+currencyId+currencyType). currencyOutAmt increments by baseCashableAmt of (extra) coins dispensed. currencyOutCnt increments by number of (extra) coins dispensed.
HPE113 Coins Dispensed		

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 System Tester 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 RST, added a new multicast bonus activity filter, and added two new device events. In addition, we moved all S2S functionality to the new RadBlue S2S Simulator (RSS) tool.

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

Installation Modifications

- RST 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

- S2S functionality has been removed from RST. The new RadBlue S2S Simulator (RSS) provides all of the S2S features and functionality that were previously part of RST.
For more information, see the [RSS Overview](#) and [RSS User Guide](#).
- Two new options have been added to the device events panel.
 - ◆ The **Send getCountdownOverride** option sends a request for the currently active countdown override from a specified player device to the host
 - ◆ The **Send getMcastKeyUpdate** option allows you to send a `communications.getMcastKeyUpdate` command, which causes the SmartEGM to update its security parameters.
- An entry is now posted to the debug log when a host rejects the `wat.initiateTransfer` command.

Engine Modifications

- The **G2S_minLevelVallds** value has been changed from “15” to “5” in all SmartEGM configuration files, so the SmartEGM will not request additional validation IDs until five (5) validation IDs are remain unallocated.
- Previously, RST did not properly handle optionConfig parameter values that were split across multiple lines in the SmartEGM configuration file. This issue has been corrected.
- An issue has been corrected in which RST was incorrectly interpreting the seed value in the `gat.doVerification` command. This value is now interpreted correctly.
- In previous versions, RST attempted to validate the seed value for all `gat.doVerification` request. RST now validates the seed value for CRC16 and CRC32 validation requests *only*.

User Interface Modifications

- The Floor Tab has been modified to remove obsolete objects. The following objects now appear under the “General” heading:
 - ◆ SmartEGM
 - ◆ Logger Console
 - ◆ Transcript Control
 - ◆ SOAP Transcript
 - ◆ Multicast Transcript
 - ◆ Watchables Control
- Objects appearing under the “Tools” heading are unchanged.



RadBlue System Tester 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 RST to G2S protocol version 1.0.3r5, made improvements in how RST handles certain messages, improved Transcript message filtering, added a command view to the message detail in the Transcript, and made several corrections.

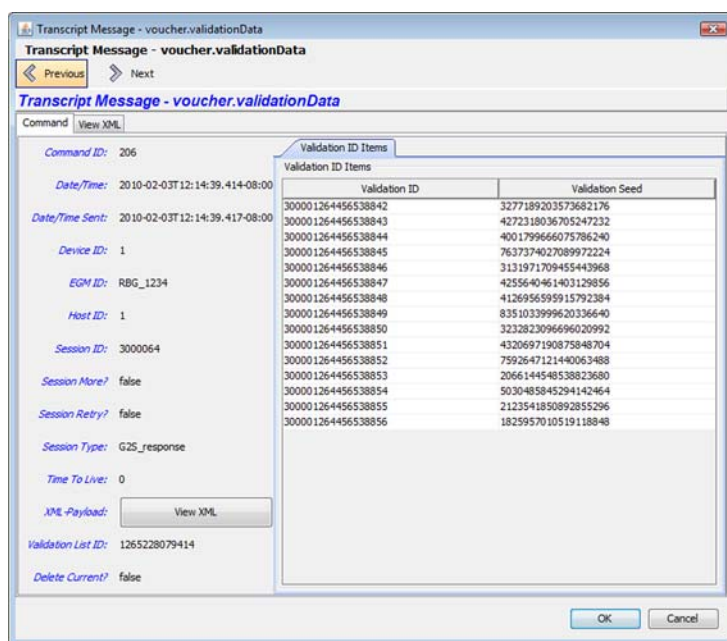
Important Notes!

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

Version 1.0.3r5 is *not* backwards compatible with any previous 1.0.3 versions. In this version of RST, we moved to the G2S 1.0.3r5 schema (the latest published version). In that schema, there is a new *expireDays* attribute in the voucher class that will cause validation errors in your G2S host if you are validating messages against a prior version of the G2S schema.

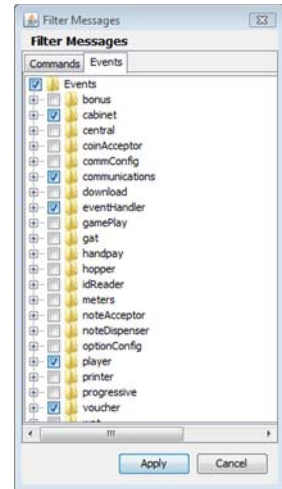
Improvements

- RST has been updated to G2S protocol version 1.0.3r5.
- Command objects are now incorporated into the detail view of Transcript messages. Simply double-click a message to view the command object and XML.



Sample command object.

- For clarity, two columns on the Devices subtab, on the SmartEGM's Main tab, have been renamed **Host Enabled** and **EGM Enabled**.
- The **Filter** option on the Transcript object now uses a tree-structured control that lets you quickly find the messages and events you want to filter.
- For the Player Verbs **Create Voucher** and **Insert Voucher**, the ID reader Device ID is now optional. The user interface allows you to select a Device ID of zero (0), which lets you send the selected message without using a device ID.
- When the SmartEGM is not running, it now sends an **MSX003** error in response to all received commands until the SmartEGM starts.



Corrections

- Non-standard EGM ID values are now displayed properly in the Transcript
- An issue in which an error would display in the debug log if an EGM ID contained a colon (:) has been corrected.
- Previously, RST did not verify whether or not an incoming G2S request was allowed to be sent as a request, and just processed the message. Now, RST rejects a response sent as a request with an APX008 error.
- The *verifyResult* attribute returned by the SmartEGM is now 0-9 and A-F. Previously, the RST used 0-9 and a-f.
- Previously, if the *issueVoucherAck* response was not received from the host, the SmartEGM would leave the meters in an inconsistent state. Now, the meters are rolled back to the correct values if the *issueVoucherAck* does not arrive.
- Previously, the SmartEGM executed download commands even if the download device was disabled. Now, RST rejects download commands if the download device is disabled.
- The functionality that allows you to send multiple eventReports in a single message now works correctly. For an example of this functionality, load and run the **smartegm-config-mult-events-per-msg.xml** configuration file.

To initiate multiple events in a single message, you need to add two additional attributes to the eventHandler device in the **smartegm-config.xml** file as follows:

```
<edm:event-handler edm:device-id="1" edm:device-active="true"
  edm:configuration-id="0" edm:host-enabled="true"
  edm:egm-enabled="true" edm:egm-locked="false" edm:host-locked="false"
  edm:chatty="true" edm:owner-id="1" edm:config-id="1" edm:vendor-id="Unknown"
  edm:product-id="Undefined" edm:release-number="Undefined"
  edm:vendor-name="Undefined" edm:product-name="Undefined"
  edm:serial-number="Undefined"
  edm:event-report-combine="true" edm:event-report-combine-count="5">
```

- When a door is closed in the SmartEGM, the door open date/time attribute now continues to reflect the date and time of the door opening. Previously, the attribute value was set to "null."
- RST now sends a `joinMcastAck` response during the rejoin (double join) of the device. If the *multicastLocation* is different during the rejoin, RST sends a CMX005 (Not Unique MulticastId) error code.

The **G2S_CME110 (Join Multicast Group)** event is sent only when a *new* device joins a multicast group, not during the rejoin.

- If a seed is not supplied for an algorithm that requires it (CRC algorithms), a G2S_GAX013 error is generated.