

CADSWES Maintenance Accomplishment Report Compilation -- July 2015

Phil, original draft: 8-11-2015; revision 8-12-2015 (added two "unfunded development" tasks).

July 2015 Maintenance Highlights:

1. RiverWare 6.7 Pre-release
2. Six (6) bug fixes.
3. Development: Workspace configuration: Initial Workspace View Scroll Locations and Zoom Levels
4. Development: Time Aggregation Series Slot Redesign
5. Upgrade of Reprise license software from version 10 to version 11.3
6. Ongoing: Monitoring and maintaining daily RiverWare regression tests.
7. Ongoing: Installation Process and Licensing development and administration.

Report contributors:

- Substantive content from: Jessica, Neil, David.
- Bug fix items from: Neil (2), David (2), Phil (2).
- Indicated that they had no *maintenance* accomplishments to report this month: Mitch, Patrick, Bill, Tim.

(II) RiverWare Software Maintenance

- A. Releases, Patches and Snapshots
- B. Software Updates, Bug fixes (not associated with new development)
- C. Development tool improvements; issue tracking software; modelcomp
- D. Enhancements or changes to regression tests (not part of development tasks)
- E. Download, Install and Release Processes
- F. Updates to license software/procedures
- G. Updates to download/install/configure user documentation
- H. Modification to Web pages for downloads and installs

(II.A) Releases, Patches and Snapshots

The following releases were generated this month:

- Pre-release – version 6.7.
- RiverWare Development Snapshots: None.

RiverWare 6.7 Pre-release was sent to all RiverWare Users on July 17, 2015 for testing and acceptance. This involved writing release notes, regenerating the help PDFs, updating the builds areas, creating the release executable, updating the website, and sending out the release notification. Release notes can be found on the RiverWare.org website.

(II.B) Software Updates, Bug fixes (not associated with new development)

The following bugs were fixed:

- Bug 5612: Two runs are fine, third run produces an error
- Bug 5657: Default workspace location when loading a model is not correct.
- Bug 5660: Negative Diversion due to Soil Moisture. A new slot Soil Moisture Gain Loss was added to track the soil moisture water lost when the irrigated acreage is reduced from the previous timestep.
- Bug 5662: Abort run notification dialog presents bogus timestep context for optimization runs
- Bug 5655: Expression slot diagnostics with no context which turn on when PRINT statements are enabled
- Bug 5663: Script not able change a method to None. [fixed with 5641].

Unfunded Development:

Workspace configuration: Initial Workspace View Scroll Locations and Zoom Levels

Development for this feature was started in June 2015, and completed in July. A new persistent configuration allows the user to indicate how each of the three workspace views are initially scrolled and zoomed after saving and reloading a RiverWare model file. The following can be specified for each workspace view:

- Zoom, a selection among the available zoom levels.
- Location, one of:
 - Lower Left Corner
 - Last Save Location
 - Center-Most Object
 - Center on [Specified Object]

Additional "Open Model in View" controls were added to allow the user to specify how the initially displayed view (of the three workspace views) is determined. The user can choose between these two options:

- "Last Saved Workspace View". This is the default setting. It implements the prior behavior with respect to the initially shown view after loading a model. The current view at the time of the last model save is restored as the current view.
- "Specify View". This setting causes the view selected within the new configuration dialog ("Initial Workspace Appearance") to be the initially shown view after loading a model.

This enhancement addressed Gnats 5657, "Default workspace location when loading a model is not always correct."

This overall feature is described in this document:

- **Initial Workspace View Appearance Configuration / RiverWare 6.7 / July 2015**

R:\doc\workspace\2015\InitialWorkspaceViewAppearance.docx

Unfunded Development:

Time Aggregation Series Slot Redesign

The Time Aggregation Series Slot configuration controls were redesigned. Previously the input slot selection and the aggregation function were picked with GUI controls in the open slot dialog. These have been moved to the aggregation configuration dialog box, which now has all aggregation-related configuration controls for this slot.

This redesign also incorporates these other changes:

(1) The "SUM" function was removed for FLOW units (and other unit types having an explicit "per time" factor). The other available aggregation functions are: Ave, Min, Max, First, Last.

(2) The units for the aggregation series are now explicitly settable by the user, instead of being automatically assigned. The user can choose between:

(a) Use Unit Scheme Default

(b) Use Custom Setting:

Units: [combo box] Scale: [1, 10, 100, 1000, 0.1]

Precision [integer spinner] Format: [Float, Scientific].

(The Scale combo box is editable, so other unit scale values can be used).

(II.C) Development tool improvements; issue tracking software; modelcomp

None reported for July 2015.

(II.D) Enhancements or changes to regression tests (not part of development tasks)

The regression tests continue to be maintained on a daily basis. This involves updating the regression tests to exercise new developments in the code. Also, as new code is added to the development area, the model comparisons performed in the nightly regression tests usually show differences (for example, because a new method category may have been added). When this occurs, the regression tests need to be updated to reflect the current state of the development area so model comparisons do not fail. In addition, every week, the daily history of each regression test is analyzed to determine if the run time or model size has significantly changed because of new development.

(II.E) Download, Install and Release Processes

- Set up the Reprise release file folders (64-bit and 32-bit) in the snapshot directory to include the new RLM 11.3 release files. These release files are linked into the IS project files for creating the snapshot install files.

- Set up the release file folders (64-bit and 32-bit) in the prerelease directory to contain all the release files for creating the prerelease install files.
- InstallShield project files:
 - Set up the snapshot IS project files (64-bit and 32-bit) to include the new RLM 11.3 release files. The new release files include the license server program files, user guide, and a DLL file.
 - Created brand new IS project files (64-bit and 32-bit) for creating the 6.7 prerelease install files.

(II.F) Updates to license software/procedures

A new version of Reprise license software (version 11.3) was incorporated into the CADSWES development process. Both 32-bit and 64-bit tar files were made of the relevant libraries and dlls. These were added to the win-config.pl script that is used to update the tools directory of development machines. The RiverWare code base was modified to compile with the new version of Reprise and these changes were committed to both the RiverWare 6.7 and the master development branches of the RiverWare code. The 32-bit and 64-bit overnight builds machines were updated for the changes and instructions were sent to all developers regarding the updates. Other task details related to this Reprise license software are enumerated below.

- Maintaining RiverWare licenses for internal development systems. This is an ongoing task.
- Reprise:
 - Setting up Reprise Activation Pro License Center and database. (*only minor progress this month*).
 - RLM License Generation (rlmgen) tool.
 - Updated the instruction file "RiverWare License Key Creation Guide (with rlmgen)". Verified that version and location for all license program files are up to date.
 - Incorporated the new RLM 11.3 release into RiverWare 6.7.
 - Provided to Neil with the new 11.3 version configuration files for incorporating the new RLM version into the RiverWare development process. Tested and verified the new binary that contain the new RLM version.
 - Updated document RLM for RiverWare Configuration and Build Guide. Verified and modified the license program file version and location to the latest version.
- Updated RiverWare License File Creation Guide. Verified that version and location for all license program files are up to date. This procedure document is for internal use only.

(II.G) Updates to download/install/configure user documentation

- Continue working on the online user document "Obtaining a RiverWare Viewer license key." (*only minor progress this month*).

(II.H) Modification to Web pages for downloads and installs

None reported for July 2015.

--- (end) ---