

# Release Notes (10.1.2.0162)

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## System Requirements

### Operating system: Windows

- Windows 7 SP1
- Windows 8
- Windows 8.1
- Windows 10

### Operating system: Mac OS X

- Mac OS X 10.9 and higher

### Operating system: Linux:

- 64 bits distribution with a 2.6 Kernel and glibc 2.12
- csh (C-shell)
- binutils

### Processor

- CPU 64-bit Intel® or AMD® multi-core processor

### Memory

- 4 GB RAM minimum, 8 GB of RAM memory is highly recommended

### Disk Space

- 2 GB available hard disk space for installation

### GPU Acceleration

- CUDA 3.0
- OpenCL 1.1
- 32 KB minimum local memory size
- 2 GB minimum VRAM (VRAM limits the size of simulations you can run on)

### Miscellaneous

- 3 button mouse
- Hardware-accelerated OpenGL® graphics card

## Improvements

RF-4178 Dyverso - Rigid material algorithms have been changed to avoid floating point errors which result in erroneous behavior sometimes.

## Limitations

RF-146 Object emitter, XML import/export - Object Emitter in vertex or faces mode does not export the selection

RF-156 General - Maximum number of threads is 128

RF-157 General - BDC files are not interchangeable between machines with different endianness.

RF-158 General - FLW files are not interchangeable between machines with different endianness.

RF-160 General - Scene Animation.SD doesn't hold new objects created during the simulation.

RF-300 Hybrido fluids - Proxy files cannot be exported with the GridDomain on cache mode

RF-333 XML import/export - Initial State for objects cannot be reused when exporting scene as XML because it is embedded into the .FLW file.

RF-514 Caronte - Interaction with planes is not good

RF-562 Grid splash & Foam, Grid wet & Foam - Mist can't be created for Splash&Foam and Wet&Foam nodes.

RF-1330 Commands - Commands organizer should accept graphs

RF-1568 Caronte integration, Hybrido- A node of type HY\_Domain in cache mode doesn't affect neither rigid nor soft body objects.

RF-1574 C++ SDK - The maxwell related SDK functions that are now available in Python are not available in C++.

RF-1735 Maxwell Integration - RealFlow crashes during Maxwell voxelization when memory is exceeded

RF-1988 Graphs - FieldSave node cannot save several fields inside a single file. Unlike FieldRealLoad.

RF-2169 FLW read/write, User interface - The options to hide/show the nodes of the scene from the menu "View->Show" are not saved with the project.

TF-2170 FLW read/write, User interface - The option "Selection Highlighting" from the menu "View->Show" is not saved with the project.

RF-3328 XML import/export - Text geometry cannot be exported on XML.

RF-4035 RealWave, Spreadsheets - There is no spreadsheet content for RealWave.

RF-4094 Alembic - Alembic cameras are only imported if there is some additional object in the same Alembic file.

RF-4108 Dyverso, Wetmaps - It is not possible to generate wetmaps of elastic and rigid Dyverso objects during simulation time.

## Fixed bugs

RF-4049 Dyverso, Retimer - Dyverso retimed simulations do not interpolate the particle positions.

RF-4128 Spline, Spline emitter - Moving an object in an ortogonal view may bring the object to undefined coordinates in the axis perpendicular to the view.

RF-4166 Filter daemon - Some Filter daemon expressions involving several non valid variables may crash RealFlow.

RF-4168 RealWave - RealWave foam texture resolution value is not preserved on command line simulation if RealWave geometry is not included in the scene.

RF-4169 Dyverso emitters - Emission Mask in "From collision objects" mode takes into account disabled objects.

RF-4170 User interface - Color formatting of some of the browse file dialogs of the project manager are wrong in Linux.

RF-4173 Dyverso emitters - Dyverso Bitmap emitter crashes on playback when a texture is associated to the emitter.

RF-4176 Maxwell Integration - Maxwell image based lightning file browsers do not let the user select a non-HDR file.

RF-4179 Dyverso - some rigid shapes could be erroneously updated when more than 60 elements are simulated within the same domain and OpenCL is enabled.

RF-4181 Dyverso - Viscous and Viscoelastics are exploding due to the rotation and tensor channels are not being loaded properly when changing between CPU and GPU and there is an initial state

RF-4184 Noise field daemon - Noise Field daemon forces do not change depending on the node transformation for Dyverso fluids.

RF-4185 User interface - Dock icon progress bar is not properly computed on Mac displays without retina support.

RF-4186 Command Line Version - Scenes saved through scripting on command line mode (with a RealFlow Node license) cannot be opened again.

RF-4189 Dyverso - Elasticity parameter of Dyverso Viscoelastic does not seem to affect during simulation.

RF-4190 XML import/export - XML import crashes if XML file contains a C++ plugin daemon.

RF-4201 User interface - Pasting code in a long script makes RealFlow take too much time to react.

RF-4202 Node parameters window - Sometimes wave or mesh parameter panel remains disabled after simulation has finished.

RF-4203 Python API - Repeated usage of the getNearestPointToObject() and getNearestObject() Python particle functions may lead to a crash.

RF-4204 RealWave - RealWave rotation is not preserved if RealWave geometry is not included in the scene.

RF-4205 C++ API, Python API - Calling to scene.executeCommand() on the SimulationPre stage keeps the GUI enabled during the simulation.

RF-4206 Crown daemon, Dyverso - Crown daemon does not work with Dyverso if OpenCL or CUDA are enabled.

RF-4207 User interface - Enabling a export resource for a node with the right click menu does not update the parameter list.

RF-4208 Node cloning - Max Particles parameter for Dyverso domains is not duplicated on node clone.

RF-4209 Magic daemon - Duplicating and linking a Magic daemon to a Dyverso fluid and then removing the connection makes RealFlow crash on sim.

RF-4212 K isolated daemon - Duplicating and linking a k Isolated daemon to a Dyverso fluid and then removing the connection makes the kIsolated daemon stop working.

RF-4213 Graphs - FaceGetChannel and VertexGetChannel graph node crash if input mesh is a null ObjectMesh.

RF-4214 Parameters manipulation, Spline - Setting the "Reverse" parameter of a spline always reverses its current state, even if the new value is the same.

RF-4215 Command Line Version - The "." indicator of simulation progress in the command line is printed just right after the previous message. It should be printed after a new line.

RF-4216 Crown daemon - Surface tension in the Crown daemon is not working when the GPU is enabled.

RF-4218 Python API - Python scene.getSplines() function is incorrectly spelled as getSpliness()

RF-4219 Python API - Python Face.setTextureCoordinates() function does not show any error when arguments are wrong.

RF-4220 Graphs - Graph node ColorGradientFromArrayKnots does not properly create the gradient color knots.

RF-4221 Graphs - Graph node Color4RgbFromHsv does not set output color alpha component to 1.0.

RF-4224 Caronte - Caronte is not working when there are a couple of objects like passives.

RF-4225 Alembic, Caronte - If an Alembic MultiBody is set to Passive Rigid Body the scene crashes on load

RF-4226 Dyverso - GPU Dyverso simulations with three or more linked fluids may crash or freeze RealFlow.

RF-4229 Command Line Version, Dyverso emitters - Calling to getParameter() function of a Dyverso emitter crashes on command line mode.

RF-4231 User interface - Actions "Zoom All", "Zoom Selected" and "Center Selected" are not working for objects that are parented.

RF-4232 General - RealFlow crashes sometimes when loading a scene from a batch script.

RF-4233 OpenGL general visualization - Textures applied to meshes with a low amount of height or width pixels show artifacts when not displayed in Tiling mode.

RF-4234 Node parameters window - "Val min" and "Val max" parameters of Dyverso Bitmap emitter do not make sense.

RF-4235 C++ SDK, Dyverso, Python SDK - Changes applied to Dyverso particle channels through C++ and Python SDK are ignored if GPU simulation is enabled.

RF-4236 C++ SDK, Dyverso, Python SDK - Changes applied to Dyverso particle channels on graphs are ignored if GPU simulation is enabled

RF-4238 General - When "conform\_tensor" and "rotation" channels are enabled on Export Central for Dyverso domains a warning is show to the user prompting him to enable its computation in the Particle Channels tab.

RF-4239 Relationship Editor - Links between regular objects and MultiBodies are displayed as directional instead of bidirectional in Relationship Editor.

RF-4241 C++ SDK, Graphs, Python SDK - It is not possible to remove a curve expression with Python, C++ or graphs leaving the expression empty.

## Known bugs

RF-359 Caronte integration - Caronte simulations aren't deterministic unless RF gets reopen every time

RF-364 Caronte integration - Conflict on 'Create Initial State' among .bdc and animation.sd

RF-377 Caronte integration - Changes on scale scene with rigids have issues if not done on reset

RF-445 Commands - RF crashes at shutdown when the file for a command plugin is removed from the plugins folder and that command plugin was previously loaded into RF using the commands organizer, only happen when a scene is loaded before closing.

RF-452 RealWave - RealWave waterline of objects is not correctly computed with choppy Statistical Spectrum waves.

RF-458 General - Object name must be removed from Multijoints if the object is changed to dynamics NO.

RF-474 General - BDC files are overwriting when simulating with the objects in cache mode

RF-485 General - Objects with an Initial State created are reseted to initial state even they are Inactive

RF-524 Multibody - SD scene update does not seem to work with Multibodies

RF-625 Multijoint - Create/Recreate button removes joints for all MJ nodes, to create the new joints for the actual Multijoint node.

RF-638 Caronte integration - Remove object from the Objects A, B or C lists of servos and joints when it stops being of the appropriated type

RF-679 MultiServos - Multiservo linear doesn't work properly with the Free Z parameter to Yes.

RF-680 Particle-based fluids - Max particles in Splash emitter doesn't have any effect

RF-720 SD read/write - Including an object to collision with sph particles in the middle of the simulation changes its original position. There is not any Dynamic object.

RF-833 Caronte integration - Dynamics objects, if they are cached, should be read the BDC information before re-writing the BDC file again

RF-838 Retimer - When only the scene animation.sd is being exported, the default settings of the retimer exclude them of the result.

RF-847 Curve Editor - Expressions with references are not updated when the related parameter changes and is not animated.

RF-852 General - A daemon can be parent to with a RigidBody but not with a SoftBody.

RF-853 Caronte - Imported animated objects to use them as softbodies, can't be set with an initial speed.

RF-858 Caronte - All parameters of servos need recreation of servo after edition

RF-859 Caronte - Editing target of servo after some simulation makes Reaction time and Overreaction delta values to fail

RF-866 Binary loader emitter, Retimer - Retimer should work with unsimulated binary loaders.

RF-874 Python SDK - scene.stopSimulation() doesn't work if simulation is started from a Batch Script

RF-876 Particle mesh (Standard) - UV in md meshes is not working properly

RF-895 MultiServos - Name of some parameters in servos panel must be changed.

RF-899 Simulation Flow architecture - Particles created at the same frame (or last substep) cannot be removed from "Simulation Flow".

RF-918 K age daemon - k Age daemon should accept float values for better precision.

RF-919 Fibers emitter - Fibers emitter should have a seed # to be deterministic.

RF-925 RealWave - Objects are not affecting to the RW as custom object if the sd has orientation's transformation.

RF-950 Caronte - joints plasticity acquired rate param no used

RF-953 Caronte integration - Pannel values of axial vectors (like angular velocity) are wrongly interpreted when using right-handed axes systems.

RF-954 Caronte integration - Joints behaviour is lost when loading a simulation. Also, loading the simulation is too slow.

RF-959 SD read/write - Changing the topology for a SD from a 3D program and doing reset, the object dissappear in RealFlow.

RF-969 Animation curves - We can add keys for an imported SD even though the SD<>Curve is not enabled.

RF-977 Caronte - Simulating by command line don't set the values for the Characteristic Distance properly.

RF-981 User interface - Statistic Panel not showing Existent/Emitted info on HY-SPH elements

RF-984 Caronte - Apply force factor fracture is not working properly cause the object is fully broken when simulating.

RF-989 SD read/write - Animation SD and BDC are not read properly when a dynamic object is in Cache mode.

RF-993 Caronte - Characteristic distance is not properly updated when simulating by command line.

RF-994 SD read/write - Exporting the animation.SD for an dynamic object, is overwritten even though it is in Cache mode.

RF-996 Caronte - Simulating by command line, the break condition is not working properly.

RF-1016 RealWave - RealWave Displacement texture dimensions parameter

RF-1019 Maxwell Integration - Maxwell takes long time to update the view when there is just one viewport working on Windows.

RF-1046 Fractures - External transition decay should be Internal transition decay for the Internal group inside fracture by radial parameters.

RF-1047 Fractures - The twist parameter should accept negative values [-1, 1]. Now it is only accepting positive values. Fractures by radial

RF-1060 Caronte - Changing the values for Elasticity and Friction to 1.0 produces a slow simulation, but faster if we stop the simulation and resimulate.

RF-1061 Caronte - Unlimited Force for joints doesn't mean unlimited force. Name should be changed.

RF-1070 File export - RealFlow crashes in command line when there is no HDD space

RF-1076 Relationship Editor - When uncollapsing a Group in the Relationship Editor, the text label of its members appears in a wrong place, especially the first time.

RF-1079 General - Email notification hangs RealFlow selected when running on GUI

RF-1080 RealWave - Imported objects as Realwave "Custom", are not affected by other objects if the position and rotation for the RealWave is different to 0,0,0

RF-1082 Video preview - Viewport behind previous window is updating when making a video preview.

RF-1089 Movie Player window - RealFlow is crashing when cancelling to create a video from movie player.

RF-1095 Maxwell Integration - Maxwell is not picking up the meshes that are displayed using the "DisplayMesh" simulation graph nodes.

RF-1112 Caronte integration - Fracture tool voronoi uniform is using "extrusion effect" unexpectedly.

RF-1121 Grid splash & Foam, Grid wet & Foam - The exported sequence is not divided into two sequences, one for "\_splash", "\_wet" and the other "\_foam."

RF-1141 C++ SDK, Python SDK, Simulation Graph - Removing a standard emitter node during simulation (via scripting or graph) crashes RealFlow.

RF-1145 Simulation Graph - Exploding a Compound might put the nodes inside mixed with the existing ones at the current level. At least those nodes should remain selected for their repositioning.

RF-1158 XML import/export - Importing a RealWave via XML on a scene that already has one doesn't work as expected when overwriting

RF-1159 Caronte - Changing the normals to reversed for dynamics objects is working bad when selecting active or passive

RF-1188 Fractures - Fracture tool radial is not working properly.

RF-1189 Fractures - Fracture by points is not working properly.

RF-1211 Retimer - Sometimes RealFlow crashes when clicking on the Input/Output section of the retimer if the scene animation.sd file export is enabled on Export Central.

RF-1245 Graphs - Graph Notes alpha is reset to strange values when changing background colors

RF-1310 OpenGL general visualization - VBO active in ATI graphic cards changes the viewport background color

RF-1322 Hybrido - Use cache for Displacement will make crash RealFlow

RF-1332 Command Line Version, User interface - RealFlow is crashing when creating a folder and it can't be created.

RF-1344 RealWave - RealWave custom wave collision testing is wrong.

RF-1346 Import objects - OBJ import uses LW axis setup

RF-1404 Hybrido mesh algorithm - The attenuation of the displacement based on the splashity is not working well.

RF-1443 RealWave, RealWave Object splash - Connecting from Object Splash to RealWave will make crash RealFlow.

RF-1525 Export Central, Job Manager - Disabling RFS from Export Central sends the FLW to the Job Manager instead of a script. There should be no checkbox.

RF-1535 Maxwell Integration - FIRE is slower with 20% quality than with 100%

RF-1579 Graphs - Graph nodes that write to file should have some control over the buffersize.

RF-1621 Graphs, Hybrido, RealWave - Ocean Statistical Spectrum "Time scale" out of sync

RF-1622 Graphs, Hybrido, RealWave - Ocean Statistical Spectrum "Vertical scale" out of sync

RF-1647 Graphs - Graphs including the ConditionIf node might lead to an infinite loop when connecting something to it.

RF-1655 Hybrido mesh algorithm - Splash attenuation creates noise patterns

RF-1656 Graphs - Numeric pins with passthroughs don't clean properly their old stored data.

RF-1661 Graphs - Floor and Ceil math nodes should allow the passthrough of their inputs.

RF-1665 Graphs - Most arithmetic operations with data of Color4 type return unexpected values for the alpha component.

RF-1666 OpenGL general visualization - OS X viewport font looks misaligned.

RF-1670 Graphs - Graphs Messages window does not show messages belonging to child compounds.

RF-1687 Graphs - SetImageChannel node doesn't seem to work properly if the 'image channel' source has more than 1 channel.

RF-1688 Batch script - Clicking on the right column of the script editor autocompletion popup does not open the help for that function.

RF-1689 Graphs, Node parameters window - SetNodeParameter graph node should refresh the parameter list.

RF-1711 General - RF cannot be executed when installed in a folder with blanks

RF-1722 Movie Player window - Movie Player won't open files with padding lower than the number of frames.

RF-1747 Graphs - Clicking on Evaluate Node or Evaluate Pin instead of running a graph does not work properly if there are GetParticles nodes.

RF-1757 Camera - Modifying a camera view directly on the viewport does not set the scene as modified.

RF-1758 Camera - Modifying a camera view with the viewport should be undoable.

RF-1760 Graphs - MeshClip nodes seem to corrupt the mesh UV values.

RF-1769 RealWave - Realwave interaction with objects is wrong when chopinness is activated

RF-1789 Maxwell Integration - Weird slow start of rendering

RF-1791 File export, IDOC - Hybrido Domain does not recognize the \$(IDOC) macro for exporting/importing data.

RF-1794 Maxwell Integration - Maxwell window has nothing inside at the time of its creation.

RF-1868 SD read/write - RealFlow is not able to update the sd if we lost the network conection.

RF-1885 Graphs - RealFlow crashes when the graph node "MeshDisplaceFromImage" is using an "uv" map where one of the components is 1.

RF-1886 Alembic, Graphs - ParticleLoad graph node does not load properly Alembic files that come from a standard emitter simulation.

RF-1905 Built-in objects - Capsule object is not symmetrical

RF-1909 K sphere daemon, K volume daemon - Fit to Object doesn't allow to choose emitters as objects for some K daemons

RF-1984 Drag force daemon - Force Limit parameter for Drag Daemon is not working

RF-1987 Graphs - Field3D files generated during a Hybrido Domain simulation cannot be loaded with a FieldRealLoad graph node.

RF-1998 Maxwell Integration - use default material if path is invalid (coming from windows i.e.)

RF-2013 General - File Name Prefix, from File Name Options is missing from graphs.

RF-2021 Python API - activeExportData and isExportDataActive functions are missing for some node types like waterline

RF-2022 Shelves Manager - Up and down keyboard arrows do not let you move along the content of the shelves/commands list in the Shelves Manager. (Mac OS X)

RF-2034 Simulation Flow window - Script files on Simulation Flow don't show any error when the file is missing.

RF-2158 Graphs, Simulation Flow window - Simulation Flow Graphs should save the viewport geometry.

RF-2168 Relationship Editor - Multijoints shouldn't be linked with no nodes in the RelationShip Editor

RF-2173 Hybrido mesh integration - Hybrido meshes are not exported properly to ABC when using use displacement

RF-2183 Movie Player window - RealFlow is crashing if we cancel "save video" in the movie player.

RF-2210 Movie Player window - Movie Player crashes exporting video if some of the frames has a different size.

RF-2231 File export - Animation.sd and bdc for imported geometry as Multibody or ABC multibody are not saved by command line.

RF-2255 Relationship Editor - Relationship Editor groups self-connection threshold is too sensitive.

RF-2285 Grid splash - Max particles for secondary splash emitter is not working

RF-2304 Python Editing, Shelves - Dragging a piece of Python code from a Script Editor to a shelf removes the code from the editor. It can be brought back with CTRL+Z

RF-2305 Python Editing - Python Find dialog remains behind the script editor when it is modal.

RF-2375 Arnold Integration - particle meshes don't have correct uv's

RF-2398 Multijoint - Adding Multibodies to Multijoints and checking the Disable collisions by pairs parameter makes that the objects are dessapearing of the objects list.

RF-2431 3D platform plug-ins - Preview with Maxwell by command line is not rendering the obj files.

RF-2457 OpenGL general visualization - Exported OpenGL viewport images during simulation are might show a frame offset.

RF-2549 Caronte - A simple caronte simulation with quality set to 100 results in weird rotation values for the objects.

RF-2552 File export - OpenVDB files written by RealFlow seem to have the "n\_x" and "n\_z" metadata values flipped.

RF-2554 General - RealFlow crashes on a Japanese Mac OS X environment on launch.

RF-2674 Import objects - When an object is missing while loading a RealFlow file, the import message title is "Import Scene" instead of "Import Object".

RF-2691 Simulation pipeline - An animated object converted to Active rigid body, won't reset the geometry properly.

RF-2703 Command Line Version - The first frame of the range specified for a simulation using the command line is not writing out the first frame in the range unless the starting frame is 0.

RF-2723 Graphs - When a compound pin is removed, its Compound Interface node should be removed if it becomes empty.

RF-2748 Hybrido, OpenGL general visualization - Vorticity is not painted properly on Hybrido particles in viewport.

RF-2757 Fibers emitter - Reset to initial state for Fibers doesn't work properly

RF-2758 Fibers emitter - Fibers is not working fine when moving the timeline and we resimulate again

RF-2810 Import objects - The actual frame is updated when importing geometry with Import... option.

RF-2853 Graphs - Renaming a node does not rename its occurrences in graphs.

RF-2873 Movie Player window - Movie Player should grab all the user interaction during Video export.

RF-2895 Fibers emitter - Max Particles parameter won't affect for Fibers.

RF-2904 Ocean Force daemon - Bounding box for Ocean Force Field daemon can't be scaled directly in the viewport.

RF-2935 Fractures - Fracture Tool - Voronoi Uniform doesn't work correctly (OS X)

RF-2936 Fractures - Phong shading is wrong with all fracture tools

RF-3013 Multibody - Initial States are not working properly for Multibodies

RF-3096 File export, Grid bubbles & Foam - RealFlow is crashing when writing rpc for bubbles and there is not space to save to disk.

RF-3176 Spline emitter - Copy spline from a text is getting the scale font and not the last transformation we did for the spline

RF-3203 User interface - Dragging + ALT, from Single View titled toward viewport will rotate the point of view for the viewport

RF-3360 Maxwell Integration - Global Intensity in Maxwell Settings mustn't affect to IBL illumination.

RF-3373 Grid displacement - Some displacement algorithm parameter values generate wrong displacement values.

RF-3374 Relationship Editor, XML import/export - Links from nodes inside groups are not properly recreated (visually) when importing an XML scene file.

RF-3380 Grid Foam, Hybrido - RealFlow is crashing when simulating foam by command line and there is not space to save data.

RF-3430 Object emitter - When emitting by texture in an object emitter, particles emitted at gray pixels of the texture may be created over other recently created particles at the same position.

RF-3457 Maxwell Integration - Render crashes RealFlow on Windows if a material extension is missing.

RF-3518 Graphs, Grid mist - It is not possible to paint geometry (or points) from a graph in OpenGL viewport inside the bounding box of a Mist node.

RF-3658 Dyverso, K collision daemon - Split on collision, in the KCollision daemon, is not working for Dyverso particles. All particles are removed instead splitting.

RF-3740 Relationship Editor - Relationship Editor performance is very poor when moving a group with a very high amount of children.

RF-3804 Curve Editor - If we have applied a key for a parameter and the parameter doesn't change its value, the Fit View in the Curve Editor won't work.

RF-4124 OpenGL general visualization - In some cases, a big portion of OpenGL preview appears blacked out when using Microsoft Remote Desktop.

RF-4180 Filter daemon - The attached scene is crashing RealFlow when simulating.

RF-4182 Particle VDB Mesh - Clipping meshes is not working properly for Particles mesher if there are at least two object to do the clipping.

RF-4183 Multibody, Objects - Solid Outside is not working correctly when there is a multibody with at least two objects in it.

RF-4188 OpenGL general visualization - Particles are not rendered as spheres on top view when axis setup is set to Maya-Houdini.

RF-4217 K isolated daemon - Having two or more k Isolated daemons linked to the same fluid makes the isolation value grow as many times as the number of k Isolated linked daemons.

RF-4237 Dyverso, Maxwell Integration - Dyverso elastics state is not properly rendered when sending a Maxwell preview to command line if animation is baked only in the global animation.sd file.