

# Wwise 2011.1

## Release Notes

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# 1 New Features

## 1.1 New Platforms Supported

Wwise 2011.1 adds support for the following platforms:

- Apple iOS
- Nintendo 3DS

## 1.2 New Voice Limitation System

The Wwise voice limitation system is greatly improved in 2011.1:

- Now possible to have a sound being over the playback limit to go virtual instead of simply be killed.
- Now possible to optionally add a global playback limit at the actor-mixer limiter level, instead of the per game object limit.
- A Project playback limit was added as a Project setting (can also be modified at runtime using the SDK function `AK::SoundEngine::SetMaxNumVoicesLimit()`)
- Virtual voices are not part of the count for the sound instance limit anymore, solving the known issue where audible sounds were occasionally kicked by inaudible sounds.

## 1.3 Solo Mute for Monitoring

Solo and Mute buttons were added for monitoring purposes in the following views:

- Mixing Desk
- Master Mixer Console
- Advanced Profiler (Voices tab)
- Property Editor
- Schematic View
- Music Segment Editor
- Soundcaster
- Query View
- Reference View
- List View (new in 2011.1)

The Solo and Mute buttons also serve as indicators when an ancestor or descendant object is muted or soloed.

The Wwise Toolbar also has a Reset Mute button and a Reset Solo button. Those can be used to reset all the mutes and the solos done in the current session.

## 1.4 List View

The new List View allows you to search, consult and edit objects in Wwise. The List View can be populated in multiples ways:

- Using the search field at the top of the list
- By dragging objects from other lists in Wwise: hold Shift when dragging to add objects instead of replacing
- By using the Show in List View context menu item when right-clicking an object
- From the Open Results in List View button in the toolbar floating search results dialog

The List View also allows editing of the properties of the objects in the list. You can choose which property or column to show by:

- Right-clicking the list header and selecting Configure Columns OR
- Clicking the View Settings button in the titlebar of the view

Double-clicking an entry in the List View opens the corresponding object for editing. You can also select one or more entries in the results list and then right-click to display a series of common commands, including multi-edit, convert, and show in Schematic View.

## 1.5 Multi-Editor improvements

The Multi-Editor now allows you to edit:

- Notes for every object type
- Attenuation ShareSet assignation
- Positioning properties
- Several new object types

## 1.6 Perforce diff tool is now configurable

In the Perforce plug-in, it is now possible to select a third-party diff application other than p4merge.

## 1.7 Configurable Soundbank Log Severities

The severity of the different messages in the soundbank log can now be changed in the Project Settings > Logs tab. Changing the severity of the messages allows more control over the return code when using the Wwise command line application (WwiseCLI.exe).

## 1.8 New Event Action: Set Game Parameter

It is now possible to create event actions that set the Game Parameter value, for a game object or globally. Additionally, the Game Parameter can be set to an absolute value or relatively to the current value, with or without a transition time.

## 1.9 Convolution Reverb EQ

The Convolution Reverb has a new EQ tab allowing you to filter-out or boost certain frequencies of the Impulse Response, providing a very precise control over the tone or coloration of the reverb.

### 1.10 Runtime Authoring

It is now possible to modify event action properties and instance limits on objects while connected to the game.

## 2 Important Migration Notes (2011.1)

Please refer to the Installation and Migration Guide for general advice about migrating projects to a new version of Wwise.

## 3 Requirements and Other Important Information

We have compiled a list of specific requirements and other important information that you should know before working with Wwise.

### 3.1 General

**External components required for installation.** The following external components are required to run Wwise:

- Microsoft® .Net Framework Version 2.0, which is included in the installation package.
- XMLLite for Windows XP Service Pack 2. To download a copy of XMLLite, visit the Microsoft web site.

**Note:** XMLLite is automatically installed with Windows XP Service Pack 3 and Windows Vista.

DirectX® February 2010 or later, which is required to run the Game Object 3D Viewer in Wwise and the Xbox 360 controller on Windows. To update your version of DirectX, visit the Microsoft web site (<http://www.microsoft.com/directx>).

**Note:** If you have an older version of DirectX, Wwise will run normally, but the Game Object 3D Viewer will not be available and you will not be able to test motion in Wwise.

**Visual Studio DLL Dependencies.** The following versions of Microsoft Visual Studio are used to build the Wwise libraries:

- VC 2008 version: 9.0.30729.1 Wwise libraries have a dependency on a specific version of the CRT DLL. If you are using a different version of Visual Studio, or if you do not want your game to depend on that version of the CRT DLL, you can link to the libraries from the Debug (StaticCRT), Profile (StaticCRT) and Release (StaticCRT) folders instead. For more information on the Visual Studio DLL dependencies, refer to the “Platform Requirements” section of the SDK documentation.

## 3.2 Motion Devices

**Connect game controllers to high power USB ports.** Motion devices need to be connected to a high power USB port. If the USB port does not have sufficient power to run the motion device, the system will unmount the device to protect both the operating system and the device itself. The USB ports in the front of a computer are generally not powerful enough to run a motion device, so you should connect them to the USB ports at the back of the computer.

## 3.3 Project Migration

**Wwise Installation and Migration Guide.** When you are ready to upgrade to a newer version of Wwise, you need to follow a coordinated protocol to ensure that your projects created in the previous version are migrated smoothly to the newer version. For more information, it is strongly recommended that you refer to the Wwise Installation and Migration Guide, before you upgrade.

## 3.4 SoundBanks

**SoundBanks version has been updated.** The version of the SoundBanks has been updated since the previous Wwise versions. This means that you will need to regenerate all your SoundBanks so that they are compatible with the current version of Wwise.

# 4 Known Issues and Limitations

Audiokinetic is constantly working to provide you with the highest quality software; however, you should be aware of the limitations and issues in this version of Wwise.

## 4.1 Wwise Known Limitations

The following list describes the limitations in this version of Wwise.

- Audio Busses
  - If you are ducking a bus that is playing a series of short sounds within a looped sequence container set to Continuous, you may experience a loss in ducking between the short sounds or at the loop point of the container. To avoid this behavior, you can either add sample accurate transitions between the sounds within the container, or set the ducking recovery time to anything but zero.
- Audio File Management
  - The audio pipeline uses real-time sample rate conversion nodes when playing sounds that differ from the platform's native sample rate (48 kHz for Windows, Xbox 360 and PLAYSTATION 3). To prevent possible conversion rate aliasing artefacts, content that does not require pitch-shifting such as music should be converted to match that of the native platform. For Windows, it is also possible to have a native format of 24 kHz using the audio quality option that is available from the SDK.
  - The Vorbis encoder library may result in poor audio quality for sounds using sample rates below 16 kHz. The Vorbis codec was specifically tuned for higher sample rates and performs very well above 16kHz. Audio quality below the 16kHz sampling rate, however, can vary considerably depending on the encoding settings used and the audio asset itself.

- Minor artefacts may result when the Wwise loop fixing algorithm specified in some formats' conversion settings is applied. These artefacts, which result from slight time-stretching or pitch-shifting in the algorithm, are less noticeable for sources with a long duration.
  - During the audio conversion process, loop regions that are shorter than the sample boundaries (format-specific) are removed.
  - Looping music clips may lose timing accuracy each time the loop point is crossed due to loop fixing. However, the Play and Stop position in the segment are always sample accurate.
  - It is not recommended to try to align the last and the first samples of two contiguous XMA-converted clips.
- Containers
    - Although you may use a switch container as a child of a random or sequence container with sample accurate transitions, transitions will not be sample accurate if the switch container plays more than one sound simultaneously.
    - The maximum number of children in any type of container is 65535. Although Wwise lets you create more than 65535 in the authoring application, no parent-child link can be made between the parent and the child above this limit. Without the link, these child objects cannot receive any notification updates during playback, including changes to volume, positioning, and so on.
    - There are several restrictions and limitations that currently exist when using the crossfade, sample accurate, and trigger rate transitions with random and sequence containers. For a complete list, refer to the [Wwise Knowledge Base](#).
    - If the playback instance limit is reached for a random or sequence container using Trigger Rate as the transition type, the currently playing sound as well as the container itself will be killed.
    - Sample accurate transitions of random or sequence containers are ignored on the Wii platform with source plug-ins and Vorbis formats.
- Effects
    - Since you cannot apply a crossfade when bypassing or un-bypassing an effect, you may experience clicking when using the Enable/Disable Bypass event action.
- Interactive Music
    - A music switch transition rule cannot use both the options “Sync To - Same Time as Playing Segment” and “Use transition segment”. Whenever “Use transition segment” is enabled, “Sync To - Entry Cue” is used instead.
    - The Break event action has no effect on objects of the Interactive Music hierarchy. Its functionality may be reproduced with the help of a music switch container.
    - The empty space on a track before a clip will be considered as the clip's pre-entry, possibly causing music transitions to occur later.
    - Run-time sample rate conversion makes sounds longer by approximately 12 samples per minute, causing slight inconsistencies for music objects. Sources in the following sample rates are affected: 44100Hz, 22050Hz, 11025Hz.
    - The wave data displayed in the Music Segment Editor for a converted file represents the original file and not the converted file.
    - The cumulative length of stingers played over “nothing” within the same switch of a music switch container is limited to 12.4 hours. If a change in switch occurs, the cumulative time counter is reset to zero. To avoid this problem:

- \* Do not use stingers over “nothing”. Any stinger that is not scheduled to play “immediately” is dropped when “nothing” is playing.
- \* If you use stingers over “nothing”, you should replace “nothing” with a music playlist container looping over an empty segment.
- Source starvation may cause music tracks to be desynchronized.
  
- Interface
  - Some views in Wwise are cropped on Japanese systems and potentially other languages as well. This can also occur if you modify the font DPI in Windows. To fix this issue, you can download new registry files from the [Wwise Knowledge Base](#) or revert the font size to the standard Windows setting.
  
- Live Edition
  - Some operations are not allowed during playback or when connected to a game, but are erroneously possible to edit using the List View or the Multi-Edit features. These operations include:
    - \* Modifying the Output bus or the Override bus option.
    - \* Enabling/Disabling voice limitation system.
  - Editing these during playback could cause instability in the game and could require restarting the sound engine to recover.
  
- PlayStation 3 platform
  - In order for streamed Vorbis files to play correctly on the PlayStation 3, the granularity of the I/O must be a multiple of 16 bytes.
  
- Positioning
  - The time base used in Wwise to record changes in positioning is independent of the time base used by your computer’s sound card. As a result, the changes in positioning may not be synchronized to the sound that is played.
  - If you add or remove a point along the path during playback, the sound will continue to play, but there will be no propagation. The next time you play back the sound, the changes that you made will be applied.
  - Wwise uses an “equal power” schema to ensure that no audio source exceeds 0dB in any speaker. As a result, all stereo sounds set to 2D positioning will be played 3dB quieter by Wwise. To maintain the same mixing reference, boost the 2D sounds by 3dB.
  
- Projects
  - When a project is saved to a mapped network drive, performance may be seriously affected. If you decide to save your projects to a mapped network drive, Audiokinetic will not support these projects.
  - When “User Account Control” (UAC) is enabled on Windows Vista more recent versions, Wwise sample projects installed under “Program Files” or “Program Files (x86)” can’t be opened with the 64-bit version of the Wwise authoring application because of permission issues. While these projects can be opened with the 32-bit version of the Wwise authoring application even when UAC is enabled, we strongly advise against it as the cache, Originals, and GeneratedSoundBanks folders will be “virtualized”, and will thus be using the wrong folders. To workaroud this issue, do one of the following:



- \* Move the project to a location where you have full read/write permissions. Note that the IntegrationDemo executable will search for SoundBanks in the relative path where they would normally be generated, so you should also move the IntegrationDemo executable, if you plan to use it. (This option is recommended).
- \* Disable UAC. Since UAC is a security feature introduced in Windows Vista, we do not suggest disabling it as it may render your computer vulnerable to malicious software and other forms of attacks.

- Remote Connections

- If the IP address of a computer changes while the Remote Connections dialog box is open, the computer will be displayed in the Available list using the LAN IP address instead of the usual “Local Host” IP address. If you connect to this computer, this computer will be added to the History list using the LAN IP address even if the same computer is already in the list using the “Local Host” IP address. Wwise doesn’t recognize that these two entries are the same remote computer. The next time you use Wwise, both entries will remain in the History list. Despite the duplication, you can connect to the computer using either entry.
- Refer to this Wwise Knowledge Base article for information on troubleshooting the remote connection: <http://kb.gowwise.com/questions/137>

- SDK

- Debug versions of the Wwise SDK sample effect and source plug-ins cannot be used with the Wwise authoring tool.

- SoundBanks

- If a sound exists in more than one SoundBank, a transition will not be applied between the two instances of the sound when one SoundBank is unloaded and another one is loaded. In this case, the first instance of the sound will stop and the second instance will start from the beginning.
- Note: Using the PrepareEvent mechanism will prevent this sort of problem from happening.

- Streaming

- If the hard disk on the Xbox 360 and the PlayStation 3 have not been read for a while, you may experience longer read times than normal. When this occurs during critical streaming situations, notifications of source starvation will be sent to the Wwise error log.

- Wii platform

- The value returned by AK::StreamMgr::IAkLowLevelIOHook::GetBlockSize() must be a multiple of 32 (bytes) in order to play back ADPCM files.
- On the Wii platform, streamed audio files with file and loop lengths of less than 20ms may not play correctly.

## 4.2 Wwise Known Issues

The following list describes the relevant outstanding issues that could not be resolved in this version of Wwise.

- Audio Conversion

- **WG-19165:** AAC encoding may crash or stall when run from a remote desktop.
- Audio Files
  - **WG-11260:** Audio from file with too many markers fails to play. If the marker data chunk in the file header is larger than the granularity of the file streaming, the code fails to read the header.
- Blend Containers
  - **WG-15390:** A sound within a blend container may not be triggered if it follows a sound that failed to play.
  - **WG-15729:** Playback may fail when chaining multiple containers in continuous mode and step mode and finally Blend Containers with multiple sounds.
- Contents Editor
  - **WG-14785:** Objects displayed in the Contents Editor are not sorted alphabetically, which can make it difficult to find objects quickly.
- Effects
  - **WG-10527:** Real-time effect is layered on top of rendered effect when connected to a game.
  - **WG-14931:** Rendered effects are not listed in the Edit tab of the SoundBank Editor.
- Game Object 3D Viewer
  - **WG-15054:** Game objects with multiple positions are not shown in the Game Object 3D viewer.
  - **WG-16246:** The Game Sync Monitor doesn't update as expected until you add or remove a watch from the Watches list.
- Game Simulator
  - **WG-16071:** Game Simulator is not detecting game pad inputs on Vista 64 bit.
- General
  - **WG-15941:** When using certain UI schemes in Vista, the property sliders may not react as expected.
  - **WG-19096:** Playing new sound in Wwise may reset in-progress state transition.
- Integrity Report
  - **WG-15569:** The integrity report message “Streamed XMA files do not support region loops” may be displayed even when the audio file doesn't contain a region loop.
- Interactive Music
  - **WG-6432:** “Same Time as Playing Segment” option is ignored if “Use Transition Segment” is enabled.
  - **WG-14711:** Two ‘bar’, ‘beat’ or ‘grid’ notifications may be sent in a row at segment synchronization points.

- **WG-15728:** When a transition segment is added to the Any to Any transition and then removed, the music segment and corresponding media file is still included in the SoundBank, in error.
- **WG-16261:** If a double switch reversal occurs during the playback of a music switch container that has music switch containers as children, the wrong music segment may be played.
- **WG-16269:** Effect tails are trimmed when effects are inserted in objects of the interactive music hierarchy.
- iOS:
  - **WG-19007:** Encoding and playing 0.1 sources on iOS might produce static noise or silence. 0.1 source should be avoided.
- Motion
  - **WG-14852:** Motion FX objects do not work as expected within a Dialogue Event.
- Multi-Channel Creator
  - **WG-16302:** Sample loop markers within a source file are not kept in the multi-channel files generated by the Multi-Channel Creator.
- Obstruction/Occlusion
  - **WG-15678:** When updating the Obstruction/Occlusion curves in Wwise while connected to a game, the curve information is not propagated to the game, as expected.
- Playback Limit
  - **WG-15124:** Playback limit involving Motion busses may continue to be applied even though it is greyed out in the Wwise application.
- Profiler
  - **WG-14176:** The RR and RL columns on the Listeners tab of the Advanced Profiler are inverted.
  - **WG-15476:** Error message missing in the profiler when Wwise detects two similar media files that don't have the same size.
  - **WG-15617:** When an error occurs in the profiler, Wwise displays the event ID, but not the event name.
- Projects
  - **WG-14579:** Projects may become corrupted when migrating a project that contains a missing plug-in.
- RTPCs
  - **WG-14506:** Audio glitches may occur when using a Peak Limiter as well as a Parametric EQ that has an output level driven by an RTPC.
- SDK/Sound Engine
  - **WG-15451:** Wwise libraries may not be compatible with some compilers as a result of certain libraries using the Whole Program Optimization.

- **WG-15501:** Memory address may be reused by switch container after a game object is unregistered causing Wwise to play a different sound than is expected.
  - **WG-15537:** Race condition may exist that causes the sound engine to crash when connected remotely to your game.
  - **WG-15805:** The casing of the file AkAssert.h is used inconsistently in the SDK; either AKAssert.h or AkAssert.h.
  - **WG-16185:** Speaker volume matrix callback is not called for 2D sounds in IsInitiallyUnderThreshold.
- SoundBanks
    - **WG-12087:** Game parameters used by control busses are not included in the Initialization bank.
    - **WG-13305:** SoundBank output text files become inconsistent when a project contains two switches/states with the same name in two different groups.
    - **WG-14186:** When SoundBanks are generated, Wwise loses registered game objects registered by the SoundFrame preventing sounds from playing.
- Source Plug-ins
    - **WG-16232:** Clipping may occur when using the Pink or Red noise color setting within the SoundSeed Air - Woosh source plug-in.
- Wii
    - **WG-15250:** Glitches may occur when pausing music segments on the Wii platform due to inconsistencies between the music and lower engines.
    - **WG-17439:** Breaking a looping and streaming sound with a very small looping region on the Wii can cause the sound to stop with the error: "File or loop region is too small to be played properly".
- Workgroups
    - **WG-15558:** When using the Perforce plug-in, the file history scrolls unnecessarily as the information is received.
    - **WG-15559:** When using the Perforce plug-in, the history returned by P4 truncates the description removing useful information.
    - **WG-16257:** Wwise may crash when loading a work unit that includes an audio source with a space at the beginning of its filename.

## 5 Complete Changelist

The following sections list and describe the changes made to Wwise between version 2010.3.3 and version 2011.1.

### 5.1 New platforms supported

- Apple iOS
- Nintendo 3DS

## 5.2 Platform SDK updates

- Xbox 360: updated to XDK 20500 (February 2011).
- PS3: updated to SDK 360.001
- iPhone/iPad minimum Deployment version is iOS 4.0
- **WG-16940** Perforce Plugin is now using Perforce 2010.1 SDK

## 5.3 API Changes

Sound Engine:

- **WG-18768** AK\_MAX\_ENVIRONMENTS\_PER\_OBJ is now 3 on the Wii to reflect the platform limit of 3 busses.
- **WG-19024** New API functions to manage a callback to be called at every audio frame: AK::SoundEngine::RegisterGlobalCallback and AK::SoundEngine::UnregisterGlobalCallback.
- **WG-18509** New feature: Option to avoid initializing and terminating platform network library (sockets) in sound engine. Check AK::Comm::Init function.
- **WG-18753** Removed AK\_USE\_PLUGIN\_ALLOCATOR macro, which is not necessary anymore.
- **WG-19020** Visual Studio Property Sheets are now available for building plug-ins for the Wwise Authoring application, in SDK/source/Build/PropertySheets.

Authoring:

- **WG-18704** The Plugin XML definition schema was changed to include some user interface elements that were previously defined in the User interface resources. Refer to plugin\_xml for more information.

## 5.4 New Features

- **WG-16008** Mute and Solo buttons are now available for every audio object in Wwise. Refer to [Solo Mute for Monitoring](#).
- **WG-18586** Multi-edit user interface has been redesigned and has coverage been increased. Refer to [Multi-Editor improvements](#).
- **WG-18315** Notes are now shown in the Multi-Editor. Clicking the notes field everywhere in Wwise now shows a popup text editor. Refer to [Multi-Editor improvements](#).
- **WG-16407** Positioning parameters are now exposed in the multi-editor. Refer to [Multi-Editor improvements](#).
- **WG-18476** Now possible to specify the diff program to use for the Perforce Plugin. Refer to [Perforce diff tool is now configurable](#).
- **WG-18610** Now possible to send voices to be virtual when over instance limit. Refer to [New Voice Limitation System](#).
- **WG-18611** Now possible to set a global, per platform Maximum number of voice instances either by the SDK or the Wwise project settings. Refer to [New Voice Limitation System](#).

- **WG-14200** Sound instance on Actor hierarchy objects can now be optionally applied globally or per game object. Refer to [New Voice Limitation System](#).
- **WG-2700** New SetGameParameter action available. It is also capable of performing RTPC over a fixed (but randomizable) period of time using predefined curves. RTPC over a fixed period of time is also available from the SDK. Refer to [New Event Action: Set Game Parameter](#).
- **WG-17239** Now possible to set the severity of the different messages appearing during the Soundbank generation. Changing the message severity can be used to control the return code at the command line while generating the soundbanks. Refer to [Configurable Soundbank Log Severities](#).
- **WG-17171** Convolution Reverb now has a new tab for equalization using curve controls applied offline to the impulse response. Refer to [Convolution Reverb EQ](#).
- **WG-18519** Convolution Reverb now has a control to allow panning the impulse response to compensate for recordings that tend to steer the image of the wet path. To create interpolation between 2 mono impulse responses to obtain a hybrid impulse response.
- **WG-18656** AAC support on Mac and iOS.
- **WG-18620** Now possible to see from the Voice tab in the advanced profiler if a voice is virtual because it is under volume threshold or if it is virtual because it is over some limit.
- **WG-18195** Now possible to specify effect shareset in the SoundBank definition import files to have the associated Impulse Response included in SoundBanks.
- **WG-18593** Sine plug-in can now route output to LFE channel, improved performance and operates on SPU on PS3 platform
- **WG-18775** The File Manager now allows move operations on a multiple selection when using Perforce or Subversion plug-ins.
- **WG-17592** New item in the Performance view to monitor the number of physical voices.
- **WG-16119** You may now edit events/actions in the authoring tool while it is connected to your game.
- **WG-16122** Advanced Settings: Now possible to edit the maximum number of voices and priority in real time.

## 5.5 Behavior and Performance Changes

- **WG-18612** Now possible to playback sounds encoded with Vorbis with no seek table even if they are set to Go Virtual and "From Elapsed time", they will restart from beginning if they come back from the virtual state.
- **WG-14879** Virtual Voices do not count anymore as active voices, preventing them to be taken into account when computing voice limits.
- **WG-19033** Guitar Distortion FX: Fuzz distortion mode handles tone parameter changes more consistently across the range.
- **WG-17561** SetMultiplePositions called with no positions will virtualize all sounds on the unpositioned game object.

## 5.6 Miscellaneous Changes

- **WG-17945** Mac installer is now a package file instead of a DMG.
- **WG-18547** All Wwise SDK functions are now declared using the `__cdecl` on the Windows platform so projects using a different default calling convention can still link with the Wwise SDK.

## 5.7 Bug Fixes

Sound Engine:

- **WG-18671** Fixed: Possible crash when playing interactive music when all segments are excluded from the platform.
- **WG-18631** Fixed: Possible issue with AkEvent on the Wii where a waiting thread could be released even if the event wasn't signaled.
- **WG-18616** Fixed: Crash when calling GetPoolStats with an invalid pool ID.
- **WG-18311** Fixed: Environmental effects can be lost after connecting to a game.
- **WG-18973** Fixed: Leaking file handle when converting XMA and xWMA files.
- **WG-17547** Fixed: Not possible to call SetMultiplePositions with more than 84 positions.
- **WG-18870** Fixed: Occasional crash when adding game object watches while connected to game.
- **WG-18578** Fixed: Possible crash when using MeterFX plug-in in 5.1 configuration on PS3.
- **WG-17974** Fixed: Potential deadlock when CancelCallbackCookie is called upon reception of a `AK_EndOfEvent` callback.
- **WG-18625** Fixed: Stability issue with McDSP plug-ins when terminating the sound engine.
- **WG-18737** Fixed: Spread parameter ignored when sound plays at listener position.
- **WG-18930** Fixed: Total voice count in Performance Monitor also counts mixing busses.
- **WG-19019** Fixed: xWMA prefetch size (Zero-Latency mode) not computed correctly.
- **WG-18623** Fixed: Rare out of memory condition not handled properly in SoundSeed Impact plug-in.
- **WG-18847** Fixed: Rare crash with volume fades while ducking and mixing.
- **WG-18860** Fixed: (Mac Debug only) Race condition when terminating sound engine may cause an (inoffensive) assert.

Authoring:

- **WG-18922** Fixed: Potential crash in the Authoring tool when disconnecting from a game.
- **WG-18966** Fixed: Effect Rendering on the Convolution Reverb effect can sometime cause the conversion to fail.
- **WG-19109** Fixed: Advanced Profiler does not always show updated information in some tabs.
- **WG-18405** Fixed: During project migration, Wwise requires all files to be writable even if only a portion of the files need to be migrated.

- **WG-18659** Fixed: Regenerating the init bank could produce a binary different but valid bank file.
- **WG-18626** Fixed: SoundBank Editor, Edit tab: Sort is not working for first column.
- **WG-18668** Fixed: Stability issues (hangs) when the Perforce server is busy or slow.
- **WG-15557** Fixed: When using the Perforce plug-in, the message "login not necessary, no password set for this user" may be displayed unnecessarily.
- **WG-18725** Fixed: Repositioning the views in the layout can cause user interface controls to disappear.
- **WG-18364** Fixed: Presets for Effects are not loaded and saved correctly.
- **WG-18731** Fixed: Performance problem with long profiling sessions.

## 6 Need Help?

### 6.1 Using Help

Wwise Help contains detailed information on each interface element in Wwise.

To open Help from within Wwise, do one of the following:

- Click the Help icon in the title bar of any of the views or dialog boxes.
- From the menu bar, click **Help** > **Wwise Help**.
- Press **F1**.

### 6.2 Contacting Support

Audiokinetic has established a complete [online support center](#) for our maintenance and evaluation customers. The following resources are available:

- A [feedback form](#) to submit details about bugs, crashes, and/or to suggest a feature, or make any general inquiries.
- Access to all the latest product [downloads](#).
- The [Wwise Knowledge Base](#) with knowledge base articles, tips, and tricks.
- [Video tutorials](#).

You can also contact us directly at: [support@audiokinetic.com](mailto:support@audiokinetic.com).

**Note:** Email support is only available for maintenance and registered evaluation customers.

### 6.3 Got Comments?

We'd appreciate any comments or suggestions you may have about these release notes or any other piece of our documentation. Just send them to [documentation](#).