Media Sequencer Release Notes

Version 5.5

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Technical Support

For technical support and the latest news of upgrades, documentation, and related products, visit the Vizrt web site at www.vizrt.com.

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Contents

These are the release notes for the Media Sequencer (MSE) version 5.5.1. This document describes the user-visible changes that have been done to the software since release 5.5.0.

1 Media Sequencer 5.5.1

Release Date: 2023-11-30

1.1 Fixed Issues

- Fixed an issue with unclear error message when Wibu license could not be acquired. The error message now contains correct use count and expiration date information, and additional licenses no longer show as "NOT_SET" (MSE-8967).
- MSE now creates a new element with the default alternative concept and variant specified on the master template when an element is created via REST API or Intelligent Interface without specifying the alternative concept or alternative variant (MSE-7883).
- Fixed an issue where an invalid HTTP request could cause MSE to hang (MSE-8964).
- Fixed a possible program termination when renaming a channel in a superchannel arm/fire profile (MSE-9003).
- Fixed an issue where MSE does not always relay viz command timeout error to Viz Multiplay. This issue caused Viz Multiplay to hang when an error occurred while saving a preset scene composed of multiple presets (MSE-9005).
- Removed the channel naming restriction. Users can rename channels with any name they want (MSE-9006).
- Check and prevent invalid renderer node configurations to send any command (MSE-9012).
- Fixed possibility that MSE becomes unresponsive. This problem could occurred when a PepTalk connection is disconnected while serializing a VDOM node (MSE-9032).
- Fixed an error when installing Media Sequencer on a clean machine (MSE-9055).
- Fixed a possible hang when running the Media Sequencer installer with --silent (MSE-9052).

1.2 Improvements

- Use fewer threads in vcp_service actor to improve overall performance on CPUs with fewer cores (MSE-9045).
- Update Wibu Codemeter Runtime to version 7.60d (MSE-9090).
- Ensure content-type of error responses are 'text/plain' to prevent browser from unintentionally executing any script injected into response body (MSE-9100).

2 Media Sequencer 5.5.0

Release Date: 2023-07-06

These are the release notes for the Media Sequencer (MSE) version 5.5. This document describes the user-visible changes that have been done to the software since release 5.4.2.

Note

Comprehensive documentation of the Media Sequencer in the *MSE Manual*. When the sequencer is running, this manual is available at http://localhost:8580/mse_manual.html. You can also access the manual by opening the local file www/mse_manual/index.html in the MSE install directory.

Since version 3.1, Media Sequencer is only available as a 64-bit software.

2.1   System Requirements

Software

Supported operating systems:

- Server: Windows Server 2012 R2 (with Update 2999226) or higher.
- Workstation: Windows 10 or higher.

Since Media Sequencer 5.5.0 is 64-bit software, it can only be run on 64-bit versions of Windows.

Operating systems that have reached their end of life cycle and are no longer officially supported by their manufacturers, are not supported for use with the MSE.

A Media Sequencer used with a Viz Pilot system needs to access the database which Viz Pilot uses. For Viz Pilot version 6 or older, this is an Oracle database, which previous Media Sequencers had to connect to directly.

While this configuration remains supported, Media Sequencer 4.0 and Viz Pilot 7 introduced the ability for the Media Sequencer to connect to the Pilot Data Server instead. The Pilot Data Server introduced in Viz Pilot 7 can in turn, run with either an Oracle backend or a Viz Graphic Hub backend.

When a Media Sequencer is set to connect directly to the Oracle database, an Oracle Database Client (Runtime or Administrator) is needed. Administrators must take care to install the 64-bit version of the Oracle Database Client.

Microsoft .Net

The Media Sequencer requires Microsoft .Net framework 4.7.2 (full) or newer to be installed on the machine. The installer notifies the user if .Net 4.7.2 is not found.

Licensing

As of version 5.4.0, Media Sequencer requires WIBU licensing. The Wibu CodeMeter runtime must be installed and configured, to make Media Sequencer licenses available. CodeMeter is installed as part of the new bundle installer.

Selecting which license container to use and which licenses to enable is configured from the Media Sequencer launcher. The launcher generates a license configuration file *licenses.json* in the Media Sequencer data directory. A Media Sequencer core license is required to launch. Additional licenses must be enabled for running the sequencer as a central Gateway, or for licensing the Viz Multiplay client.

As of version 5.5.0, Media Sequencer supports Viz License version 3 (movable licenses), in addition to the already supported Viz License version 2 introduced with 5.4.0. The launcher has been changed to allow selecting between version 2 and version 3 licenses, in the case where both are available.

The MSE can be configured to alert about license expiration in two ways, either via email (SMTP) or via Graphic Hub journal messages. This can be configured from the License Alert configuration, available from the launcher when the MSE is running.

For information about how to configure MSE licenses and license alerts, refer to the MSE WIBU licensing documentation (available from the Windows start menu).

Hardware

System requirements for hosting the Media Sequencer.

Workload	Processor	Memory
Standard	2 cores / 4 threads	6 GB
Demanding	4 cores / 8 threads	12 GB

Running other resource-intensive software on the same machine is not recommended as it can slow down the Media Sequencer.

Virtualization

The Media Sequencer may be run inside a virtual machine. We recommend following the table above when allocating resources to the virtual machine. For time critical operations we recommend to use the Element Scheduling REST API to trigger frame accurate playout.

Applications and Components Recommended with this Release

- Viz Trio 4.1.0 or higher
- Viz Multiplay 3.1.0 or higher
- Viz Pilot 8.9.1 or higher
- Viz Pilot Edge 3.0.0 or higher
- Template Builder 3.0.0 or higher
- Pilot Data Server 9.0.0 or higher
- Preview Server 4.6.0 or higher
- Graphic Hub 3.9.1 or higher
- Graphic Hub REST 2.9.1 or higher
- Graphic Hub ImEx Agent 2.1.1 or higher
- Viz Engine and Viz Artist 5.1.1 or higher
- Viz One 7.5.0 or higher

The Media Sequencer has been designed to have backward compatibility with the older version of the components. We work hard to keep the Media Sequencer backward compatible, however, for some older versions of the Delphi-based clients (for example, Director and Viz Trio), we highly recommend upgrading these clients to a more recent version.

2.2   Silent Installation

Silent installation allows the Media Sequencer to be installed without user interaction.

To perform silent installation, open a command shell as an administrator and run the Media Sequencer bundle installer with the -s or --silent option.

It is also possible to select features to be installed from the command line.

To get all options available, run the Media Sequencer bundle installer with the --help option.

Example command:

```
MediaSequencer.BundleInstaller-5.5.0.xxxxx.exe -s
```

Example command to install Media Sequencer with Gateway controller:

```
MediaSequencer.BundleInstaller-5.5.0.xxxxx.exe -s --mse-gw-controller
```

A license configuration file licenses.json in the Media Sequencer data directory (C:\ProgramData\Vizrt\Media Sequencer) is required to run Media Sequencer. If licenses.json is missing, the installer will prompt the user to create it using Media Sequencer Launcher.

To avoid this user interaction, before running the silent installation, copy licenses.json from another successful Media Sequencer installation to the Media Sequencer data directory. See License section for more information.

2.3   Removed Functionality

Deprecated Plugins

Plugins are sometimes deprecated with a new release of the MSE. These plugins will no longer be available in the next release. You need to migrate away from using them.

The following plugins are deprecated in this release:

- None.

2.4   Media Sequencer Core Enhancements And Fixes

Support for Viz Licensing library (wibu wrapper) version 3

- MSE now supports Version 3 licenses as well as Version 2 licenses. The launcher GUI has been updated to show both license versions. An additional field "core_license" has been added to licenses.json. This enables the user to specify MSE_CORE or 3_MSE_CORE license version. The user can also now specify Version 3 licenses of additional licenses (MSE-8842).

License Container Configuration on Media Sequencer Launcher

- Ensured the license list in the Media Sequencer launcher is cleared when there are no license containers available after refresh (MSE-8519).
- Added license container options for any local container (0,0,0), as well as any network container (0,0,1) when configuring licenses from the Media Sequencer launcher (MSE-8489).
- Adjusted license container names in Media Sequencer launcher. The container names is now formatted like this: "3-123 (Network license)" (MSE-8523).
- Installer now set Code Meter as Media Sequencer service dependency (MSE-8597).

Licensing error handling

- Handled possible errors when reading license alerter config (MSE-8736).
- Improved error messages about licensing (MSE-8477, MSE-8601).

Added support for Viz Arc actions

A new handler that plays out Viz Arc action by POSTing to a Viz Arc execution link has been added. There is added support for adding a Viz Arc element to a playlist using mos. <mosExternalMetadata> is then used. See Media Sequencer user manual for more information (MSE-8771).

Fixed Possible Crash after Unexpected Text Node below an Element Node

Some problematic client setup may insert text nodes under element nodes' default_alternatives and data nodes. It may crash Media Sequencer. All possible crashes have been fixed (MSE-8537, MSE-8544).

The Animated Preview Now Displays the Transition Logic Element Correctly

Animated preview might sometimes display a transition logic element incorrectly. This issue has been fixed (MSE-8539).

Fixed Animated Preview May Incorrectly Reset TL Scene State after Take Non-TL

This issue has been fixed (MSE-8554).

Provide Easy Access to WIBU Licensing Document

Provide a link to the WIBU licensing document (mse_wibu_licensing.html) from MSE manual and from MSE launcher for easier access by users (MSE-8616).

Fixed Permanent Licenses Are Notified As Expired

Fixed the problem where MSE misinterpreted permanent licenses as expired. If no expiration date (is 0), MSE displays the license expiration date as "Invalid expiration date" but does not treat it as expired (MSE-8606).

Added Description Field to VdomSync Config GUI

The rows of synchronization operations now include a new field called "Description." Users can populate this field with a brief description to assist operators in identifying the configured synchronization operation (MSE-8656).

Support Superchannel Arm/Fire Mode

The Media Sequencer now supports for superchannel arm/fire mode where content is loaded to superchannels on 'arm' command while actual transitions start on 'fire' command. Users may 'arm' contents to multiple superchannels then send a 'fire all' command to immediately synchronize transitions of all superchannels (MSE-7770).

Fixed Gateway Controller Issue with Permanent Licenses

Fixed an issue with Gateway controller when a Wibu license without expiration date was used. The Gateway controller now shows a warning message instead of an error message, and the GUI is no longer disabled (MSE-8659).

Improved Communication Security

(MSE-8503).

- The http_server plugin now supports HTTPS protocols. The certificate and private key can be configured using the MSE Launcher GUI.

- The http_server plugin now supports peptalk-websocket and channel state websocket on both WebSocket (ws) and WebSocket Secure (wss) protocols. These new resources can be discovered from the MSE service document.
- When MSE communicates with other servers via HTTPS protocols, MSE now verifies servers' certificates against the Windows certificate store by default. The certificate verification can be disabled per handler using the Handler settings.

Avoid Overloading Viz Engine on Graphic Channels

- Send commands sequentially to Viz Engine when initializing graphic channels in videowalls to avoid overloading Viz Engine which may in turn cause the Viz Engine to stop responding to commands. This is an attempt to avoid the black output (around 2 seconds) problem where Viz Engine did not respond to commands on graphic channels; therefore, MSE sent a 'SCENE SAVE_AS' command to Viz Engine which has the black output visual side-effect (MSE-8750).

Update VdomConfig GUI Theme

Update VdomConfig GUI theme to modern Vizrt theme (MSE-8651).

Show MSE Manual in VdomConfig GUI

MSE Manual is now visible in VdomConfig GUI. With the 'MSE Manual' button, users can easily look up help documentation when configuring MSE (MSE-8643).

Allow Changing Log Level without Restarting MSE

The log level settings can be changed without restarting MSE. For more information, see the MSE manual > Logging > Log level settings (MSE-8744).

Provide a Context Menu to Change Log Level Settings

The log level settings can be configured easily in VdomConfig by right-clicking at a handler node and select 'Change log level' menu (MSE-7365).

Improve the 'Apply' Button in VdomConfig GUI

The behavior of the 'Apply' button in VdomConfig GUI has been improved to modify Vdom document without replacing the existing ones. With this new behavior, users can avoid restarting MSE when modifying handlers settings (MSE-8770). Note that some settings will still require a MSE re-init / restart.

Add the 'Replace' Button in VdomConfig GUI

Add the 'Replace' button in VdomConfig GUI to modify the Vdom document by replacing the entire entry with the new document. This behavior is useful for debugging purposes where users need to simulate the replace events (MSE-8797).

Jump to Node by Typing Name in VdomConfig GUI

When the vdom tree (left panel) is focused, typing characters now jumps to the node whose name begins with the typed characters (MSE-8789).

Improve MSE Manual Documentation

The MSE Manual has been migrated to a new format using Sphinx and Furo. This provides a more modern look and feel, and improved navigation. The MSE Manual has also been cleaned up and restructured in order to improve overall organization and clarity (MSE-8745, MSE-6101).

Fixed Playout States of Superchannels are Reset By Another Videowall

Resetting state of a preset scene also resets states of all superchannels in the same profile. If a profile contains multiple videowalls, all superchannels are reset even for superchannels of other videowalls. This issue has been fixed by resetting only superchannels of the same videowall id (MSE-8835).

Select features to be installed from Media Sequencer bundle installer command line

You can now select the features to be installed, from the command line. To get all available command line options, run the Media Sequencer bundle installer with the --help option (MSE-8847).

2.5   New Plugins

- viz_arc plugin. See previous note about Viz Arc support.

2.6   Plugin Enhancements And Fixes

http_server

- Implemented REST API resource mosplaylist that can be used to perform MOS request or MOS release on PUT. The mosplaylist resource can be discovered from the directory entries representing MOS playlists (MSE-8513).
- Added a new query parameter named 'type' to the mos resource of the REST API. The new query parameter makes it possible to do an HTTP GET and get the Directory Entry resource link for a specified MOS playlist. See the REST documentation for details (MSE-8542).
- Fixed groups of instance "relative" have wrong representation in hierarchy_collection. They should be represented as an atom feed with category "group" markup and contain "down" links (MSE-8528).
- Fixed the problem where new directories created through REST gets empty names in Director (MSE-8673).
- Fixed "continue_count" is not updated when scheduling commands using State Operation resource (via channel_state) (MSE-8644).
- Fixed unexpected Sequencer program termination when receiving a GET directory resource request which URL pointing to a text node. This situation can only be found when clients manually construct request URLs (MSE-8749).
- The REST API has been extended to support creating and updating profiles and outputs. This functionality also includes support for creating superchannel-based video wall configurations for profiles. For more information, refer to the REST API documentation (MSE-8275).
- In order to create and update master templates with the REST API, support for BGFX Mastertemplate has been implemented. This functionality makes it possible to POST a new master template to a template collection, and to update an existing template collection entry with PUT requests (MSE-8584).
- The commands 'playlist_initialize', 'playlist_activate', 'playlist_deactivate' and 'playlist_viz_cleanup' have been added to the Profile Command REST resource. These commands are an alternative to the existing 'initialize' command that implies a playlist

activation and the existing 'cleanup' command, that implies a playlist deactivation. These new commands works with a playlist/show (MSE-8911).
· Atom categories are now used to expose type information for playable elements (MSE-8866).
· A new element <viz:vdom_path> has been added to the Element Collection Entry and Hierarchy Collection Entry resources to provide the vdom path to the vdom node represented by the REST resource (MSE-8825).
· Fixed a possible unexpected program termination when REST clients send POST requests to Profile Command resource with an empty body (MSE-8957).

2.7 Known Issues

This section describes issues that have been reported but not resolved.

Issue with "Out" Command when Performing Frame Accurate Playout of Transition Logic with Video

If you do frame accurate "out" and then two "take" operations of transition logic elements with video, the second video will not start from the beginning of the clip (MSE-7046).

MSE may Report the Main Thread Slow on the Re-initialization Process

MSE may report the main thread to be slow while it is re-initializing. This issue typically occurs when the Viz Pilot database is at a remote location.

Inaccurate Video Availability Progress if the Video Clip is Deleted from a Publishing Point

Availability progress of a video clip is not immediately reset to zero when the related video clip is deleted from a publishing point. This is due to the limitation of the Viz One API feedback (ME-664).

Ordering of Fields in Payloads and Models Not Respected

Media Sequencer does not respect ordering of fields and fielddefs in VDF payloads and models, meaning that for example, a payload inserted using the REST interface may have the fields in a different order when later obtained from the REST interface. This has no consequence for playout, but may cause unexpected reordering of fields and fielddefs in software used to display or edit payloads or models (MSE-6565).

Superchannels May Become Stuck in Transitioning State when Arm/Fire Non-Existing Video Clips

When operating in superchannel arm/fire mode, the Media Sequencer requires feedback from the Viz Engine to ensure that the Viz Engine has finished transitioning between playing and pending subchannels before sending next commands; otherwise, the next commands may affect the incorrect subchannel. The Media Sequencer holds any new commands during transitioning until it receives transition completed feedback from the Viz Engine. When a user arms a non-existent video clip, the Viz Engine does not notify the Media Sequencer that the clip is not available. If the user continues to fire this non-existent video clip, the Media Sequencer will stop executing new commands until the "viz_feedback_timeout_seconds" is reached. This "viz_feedback_timeout_seconds" can be configured in superchannel_manager handler settings (MSE-8414).

Live-Source May Play Incorrectly On Superchannel Arm/Fire Mode

Because a live-source channel is a global resource in Viz Engine, it can only be controlled by one superchannel at a time. If a live-source channel is playing on one superchannel but later accessed by another superchannel, the latter superchannel seizes (takes control) the live-source channel from the first superchannel. When this stealing mechanism happens during superchannel

transitioning, the live-source channel may play incorrectly, for example, the live-source channel may not be played at all or it may be played on both superchannels (MSE-8452).

Superchannel Fire Does Not Work on Removed Elements

Superchannel fire does not work if the armed element has been removed from the vdom document (MSE-8935).

3 Documentation

Documentation for the Media Sequencer are available in the bundle installer on the Vizrt FTP.

Once installed, documentation is available within the MSE, see the note above.

4 Support

Support is available at the Vizrt Support Portal.